APPENDIX C

Biological Resources Technical Report

Biological Resources Technical Report

Belcaro at Sand Canyon Project

MAY 2026

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Acronyms and Abbreviations

Acronym	Definition
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
Esri	Environmental Systems Research Institute
FESA	Federal Endangered Species Act
GIS	geographic information system
HCP	habitat conservation plan
IPaC	Information for Planning and Conservation System
ISA	International Society of Arboriculture
NCCP	natural community conservation plan
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
OHWM	ordinary high-water mark
SSC	California Species of Special Concern
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1 Introduction

This report presents the findings of a biological resources constraints assessment conducted by Dudek for New Urban West, Inc.-Sand Canyon, LLC's (Project Applicant) proposed Belcaro at Sand Canyon (Project). The purpose of this assessment was to evaluate the existing biological conditions and potential impacts to sensitive biological resources associated with the proposed Project. This report is prepared at a level of detail sufficient to address California Environmental Quality Act (CEQA) requirements, specifically the biological thresholds of significance included in Appendix G, as well as identifying the potential need for permits for sensitive resources protected under federal and state regulations. The Project is defined as residential development and associated fuel modification, on-site roadway improvements and access, and off-site roadway improvements and access. The Study Area for biological resources for this report is defined as the parcels that comprise the residential development and on-site roadway improvements and access, and the off-site roadway improvements and access.

1.1 Project Location

The Project consists of vacant land in the easternmost portion of the City of Santa Clarita (City) and off-site roadway improvements for access, as shown in Figure 1, Regional Location and Local Vicinity. The Project is located approximately 26 miles north of downtown Los Angeles and is locally accessible via Lost Canyon Road and Oak Springs Canyon Road. Regionally, the Project is accessible from State Route 14 (SR-14) freeway via Sand Canyon Road, west of the Project. The Project is found on the Mint Canyon US Geologic Survey (USGS) 7.5-minute quadrangle, Township 4N, Range 15W, Sections 13, 14, 23, and 24.

1.2 Project Description

The Project would convert vacant parcels into a gated senior community comprised of 341 age-restricted, detached single-family homes, a 3.1-acre recreation center, and 3.7 miles of trails across approximately 194 acres. The Project would result in the creation of 420 separate lots, consisting of 341 residential lots, one recreational lot, 22 private street lots, 56 open space lots, as shown in Appendix A, Vesting Tentative Tract Map No. 84497. The Project would be subject to the provisions of section 4291 of the Public Resources Code regarding brush clearance standards around structures and the Los Angeles County Fire Department guidelines for Fuel Modification Plans. Fuel modification zones will be maintained on at least an annual basis or more often as needed to maintain the fuel modification buffer function. A heli-hydrant would be constructed on the northern portion of the Project adjacent to a trailhead parking area.

As shown in Appendix A, the proposed Project would designate Lots 366 through 420 as open space. These lots will contain natural open space, landscaping, manufactured slopes, trails, fuel modification zones, and flood control features. In addition, a conservation easement would be placed on the unimpacted portions of Lots 380, 407 and 408 (outside of the grading footprint and fuel modification limits). The fee title to Lot 380 would be dedicated to the City upon implementation of the Project. These open space lots mostly border existing natural open space outside of the Project's boundaries and would preserve a significant ridgeline (in the southeasternmost portion of the Project), conserve habitat areas, and provide a buffer and transition to the proposed developed uses of the Project. Portions of the Project are within a Significant Ecological Area (SEA) Overlay Zone and is bordered to the north and east with open space lands also located within the SEA Overlay Zone.

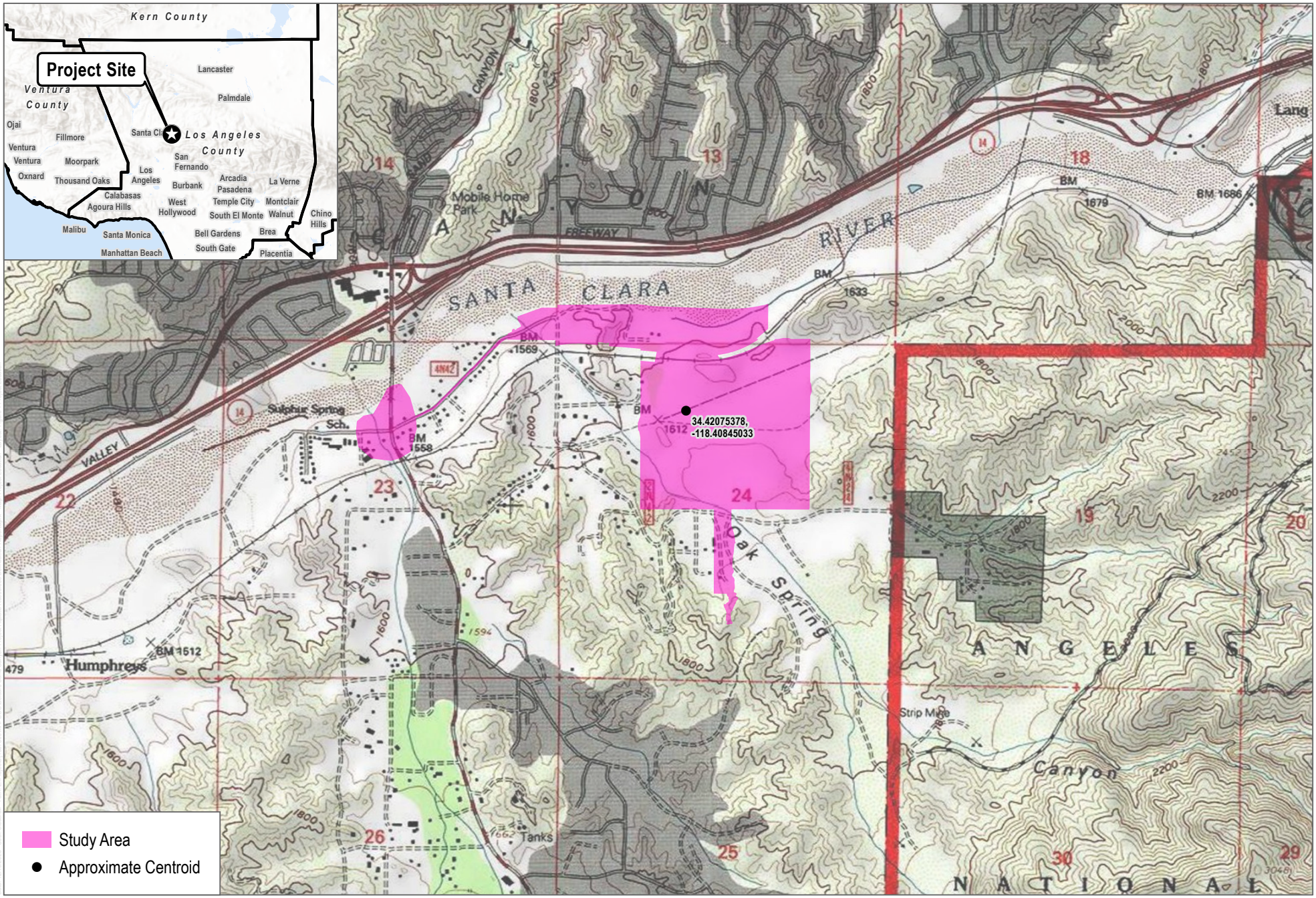
On-Site Roadway Improvements and Access

Access to the residential development portion of the Project would be via Lost Canyon Road connecting to the proposed "A" Street on-site, and a second access would be via Robinson Ranch Road, connecting to the proposed "J" Street, as shown in Appendix A. As the northern and southern portions of the Project are currently separated by an off-site railroad and are therefore unconnected, the Project would include an off-site undercrossing at proposed "A" Street to provide access between the northern and southern portions of the site, underneath the existing railroad.

Off-Site Roadway Improvements and Access

The existing, off-site Lost Canyon Road would extend into the residential development portion of the Project. However, the Project would include off-site repaving along the alignment of Lost Canyon Road until its intersection at Sand Canyon Road, and repaving of portions of Oak Springs Canyon Road located off-site. All off-site improvements in Lost Canyon Road would be within the existing Southern California Gas Company 60-foot right-of-way. The Project would include construction of a bridge at Lost Canyon Road where there is currently an Arizona crossing through Oak Springs Canyon Creek.

As stated above, portions of "J" Street would be located on-site. However, the off-site portions of "J" Street would include a southerly alignment between existing off-site residences to the west and the Sand Canyon Country Club to the east, eventually connecting to Robinson Ranch Road. The Project would include the installation of a "roundabout" or traffic circle at the intersection of Lost Canyon Road and Sand Canyon Road, as shown in Appendix A.



SOURCE: USGS Topo 7.5-Minute Series

Mint Canyon Quadrangle - Township 4N Range 15W Section 24

DUDEK

0 1,150 2,300 Feet

FIGURE 1

Project Location

Belcaro at Sand Canyon Project

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2 Regulatory Context

This section describes the regulatory framework relevant to the Project and Study Area.

2.1 Federal Regulations

Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS) for most plant and animal species, and by the National Oceanic and Atmospheric Administration, National Marine Fisheries Service for certain marine species. FESA is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend, and to provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under FESA, it is unlawful to take any listed species; "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

FESA allows for the issuance of biological opinions for listed species under Section 7, which is generally available for projects that also require other federal agency permits or approvals, and incidental take permits under Section 10, which provides for the approval of habitat conservation plans on private property where there is no other federal agency involvement. Upon development of a habitat conservation plan, USFWS can issue incidental take permits for listed species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act was originally passed in 1918 as four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the "indiscriminate slaughter" of migratory birds by market hunters and others (16 USC 703–712). Each of the treaties protects selected species of birds and provides closed and open seasons for hunting game birds. The Migratory Bird Treaty Act protects more than 800 species. Two species of eagles that are native to the United States—bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*)—were granted additional protection within the United States under the Bald and Golden Eagle Protection Act (16 USC 668–668d) to prevent these species from becoming extinct.

Section 404 of the Clean Water Act

The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Under Section 404 of the CWA, the USACE has the authority to regulate activities that could discharge fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. The U.S. Army Corps of Engineers (USACE) implements the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no net loss of wetland values or function.

Section 401 of the Clean Water Act

The State Water Resources Control Board has authority over wetlands and other waters of the U.S. through Section 401 of the CWA, as well as the Porter–Cologne Act, California Water Code Section 13000 et seq., and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the State Water Resources Control Board to the nine regional boards. The Los Angeles Regional Water Quality Control Board has authority for Section 401 compliance in the project area. A request for certification is submitted to the regional board at the same time that an application is filed with the USACE.

2.2 State Regulations

California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA), which prohibits the take of plant and animal species designated by the Fish and Game Commission as endangered or threatened in California. Under CESA, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." (Cal. Fish and Game Code Section 86.) Fish and Game Code Section 2053 stipulates that state agencies may not approve projects that will "jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy."

CESA defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." CESA defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the Commission as rare on or before January 1, 1985, is a threatened species." A candidate species is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the Commission has published a notice of proposed regulation to add the species to either list." CESA does not list invertebrate species.

Section 2081(b) and (c) of the California Fish and Game Code authorizes the take of endangered, threatened, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed species that are also state-listed species. In certain circumstances, Section 2080.1 of CESA allows CDFW to adopt a federal incidental take statement or a 10(a) permit as its own, based on its findings that the federal permit adequately protects the species and is consistent with state law.

California Fish and Game Code Sections 3503, 3505, 3511, 3513, 3801, 4700, 5050, and 5515, and 5517

In addition to the provisions of the California Endangered Species Act, the California Fish and Game Code include provisions to protect certain species of birds (e.g., egret, osprey, etc.), fish, and amphibians and reptiles. (California Fish and Game Code Sections 3505, 3511, 4700, 5050, and 5515. If a project is planned in an area where a fully protected species or a specifically protected bird occurs, an applicant must either design the project to avoid take or if applicable, apply for authorization to take the species under Sections 2081.7 or 2835 of the Fish and Game Code.

California Environmental Quality Act

CEQA requires identification of a project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. CEQA also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

Special-Status Plants and Wildlife

The CEQA Guidelines define endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15380[b][1]). A rare animal or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not currently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing as defined further in CEQA Guidelines Section 15380(c).

Special-Status Vegetation Communities

Section IV, Appendix G (Environmental Checklist Form) of the CEQA Guidelines (14 CCR 15000 et seq.) requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or the USFWS."

California Fish and Game Code, Sections 1600–1616

California Fish and Game Code, Sections 1600–1616, mandates that "it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity."

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of (1) definable bed and banks and (2) existing fish or wildlife resources. CDFW takes jurisdiction to the top of bank of the stream, or the limit of the adjacent riparian vegetation, which may include oak woodlands in canyon bottoms. Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear but reemerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an ordinary high-water mark (OHWM) to be claimed as jurisdictional. CDFW does not have jurisdiction over ocean or shoreline resources.

Under California Fish and Game Code Sections 1600–1616, the CDFW has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. CDFW also has the authority to regulate work that will deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects. Applications to the CDFW must include a complete certified CEQA document.

Porter–Cologne Water Quality Control Act

Pursuant to provisions of the Porter–Cologne Water Quality Control Act, the Regional Water Quality Control Board regulates discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code Section 13260[a]). The State Water Resources Control Board defines a water of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050[e]).

2.3 Local Regulations

City of Santa Clarita Oak Tree Ordinance

The City of Santa Clarita approved Oak Tree Ordinance No. 89-10 as a means of regulating impacts and to preserve all *Quercus* species within the City limits.

The City requires an oak tree permit for the cutting, pruning, removal, relocation, endangerment, damage, or encroachment into the protected zone of any regulated oak tree, which is defined as a tree that meets the following criteria:

(a) Any oak tree of the genus *Quercus*, including, but not limited to, valley oak (*Quercus lobata*), California live oak (*Quercus agrifolia*), canyon oak (*Quercus chrysolepis*), interior live oak (*Quercus wislizenii*) and scrub oak (*Quercus dumosa*)

(b) Exceeds six (6) inches in circumference (1.91 inches in diameter) when measured at a point four and one-half (4 ½) feet above the tree's natural grade (diameter at standard height [DSH])

Further protections are extended to heritage oak trees, which are defined as any oak tree measuring 108 inches or more in circumference (34.38 inches DSH) or, in the case of a multiple trunk oak tree, two or more trunks measuring 72 inches each or greater in circumference (22.92 inches DSH), measured 4.5 feet above the natural grade surrounding such tree (Santa Clarita Municipal Code Section 17.51.040).

The protected zone of an oak tree is defined by the City's Municipal Code as the specifically defined area totally encompassing an oak tree within which work activities are strictly controlled. Using the dripline as a point of reference, the protected zone shall commence at a point 5 feet outside of the dripline and extend inward to the trunk of the tree. In no case shall the protected zone be less than 15 feet from the trunk of an oak tree (Santa Clarita Municipal Code Section 17.51.040).

The City's Municipal Code extends protections to trees within public parkways and parkway tree influence areas, defined as areas on private property within 14 feet of paved surface on any major highway (Santa Clarita Municipal

Code Section 13.76).Conditions of the oak tree permit may include the payment of a fee or donation of boxed trees to the City or other approved public agency to be used elsewhere in the City.

County of Los Angeles Significant Ecological Area Ordinance and City of Santa Clarita Significant Ecological Area Overlay Zone

The County of Los Angeles (County) first began to inventory biotic resources and identify important areas of biological diversity in the 1970s. These biologically important areas, such as the Santa Clara River, have historically been identified in the City's General Plan and the County's Santa Clarita Valley Area Plan. The primary mechanism used by the County to conserve biological diversity is a planning overlay called Significant Ecological Areas (SEA). SEAs are defined as ecologically important land and water systems that are valuable as plant or animal communities, often important to the preservation of threatened or endangered species, and conservation of biological diversity in the County. The SEA overlay, along with the SEA conditional use permit process, are referred to as the SEA Program, which allows the County to implement its biotic resource goals through land use regulations and biological resource assessments,

The Project is within a Santa Clara River SEA but the County's SEA Ordinance does not directly apply since the Project is within the City. However, the Project is located within the City's Significant Ecological Area Overlay Zone and includes biological resources, including trees, that are protected under the City's Municipal Code Section 17.38.080 (SEA – Significant Ecological Area Overlay Zone). The SEA Overlay Zone was established to achieve the City's objective to preserve the SEA within the City limits for the public health, safety and welfare for the long-term benefit of the community, maintenance of the unique visual characteristics, resources, and ridgeline integrity. All uses of the underlying zone shall follow the requirements and restrictions associated with that zone with the approval of an SEA conformance review. The conformance review may include specific development standards to control the types of land use, density, building location and size, roadways and other infrastructure, landscape, drainage, and other elements to assure the protection of the critical and important plant and animal habitats of each SEA.

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3 Methods

Data regarding biological resources present within the Study Area were obtained through a review of pertinent literature, field reconnaissance, and tree survey; both are described in detail below.

3.1 Literature Review

The following data sources were reviewed to assist with the assessment of biological resources:

- CDFW California Natural Diversity Database (CNDDB) (CDFW 2025a)
- USFWS Information for Planning and Consultation (IPaC) (USFWS 2025a)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) (CNPS 2025a)
- U.S. Department of Agriculture-National Resources Conservation Service Web Soil Survey (USDA 2025a)
- CDFW Biogeographic Information and Observation System (CDFW 2025b)
- U.S. Department of Agriculture (USDA) Web Soil Survey (USDA 2025a).
- Biological Technical Report for Mancara Residential Project TTM 063022 (Glenn Lukos Associates 2021)

Prior to conducting the field investigation, the CNDDB and CNPS Inventory were queried based on the U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map for Mint Canyon, California where the Study Area is located (USGS 2018), as well as the surrounding eight USGS 7.5-minute quadrangle maps. The purpose of this review was to determine whether special-status plant and wildlife species are known to occur in the vicinity of or within the Study Area.

Other literature reviewed included A Manual of California Vegetation, Online Edition (CNPS 2025b); the California Natural Community list (CDFW 2025c); State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2025d); State and Federally Listed Endangered and Threatened Animals of California (CDFW 2025e); and the CDFW California Wildlife Habitat Relationships Life History Accounts and Range Maps (CDFW 2025f).

The following available resources were reviewed to assess the potential for jurisdictional waters: aerial photographs (Google Earth 2025; NETR 2025); the USGS Newhall 7.5-minute topographic quadrangle map (USGS 2018); the National Hydrography Dataset and Watershed Boundary Dataset (USGS 2025); and the USFWS National Wetland Inventory (USFWS 2025b).

3.2 Field Surveys

Table 1 lists the dates, conditions, and focus for each survey.

Table 1. Schedule of Surveys

Date	Focus	Biologists
May 25, 2023	▪ General biological reconnaissance survey	MC
October 24, 2023	▪ Jurisdictional delineation ▪ Vegetation mapping	LS, ES

Table 1. Schedule of Surveys

Date	Focus	Biologists
November 1, 2023	▪ Jurisdictional delineation ▪ Vegetation mapping	LS, ES
November 2, 2023	▪ Jurisdictional delineation ▪ Vegetation mapping	LS, ES
February 14, 2024	▪ Oak tree survey	ST, AP
February 15, 2024	▪ Oak tree survey	ST, AP
February 16, 2024	▪ Oak tree survey	ST, AP
May 15, 2024	▪ Protocol coastal California gnatcatcher surveys	MB
May 22, 2024	▪ Protocol coastal California gnatcatcher surveys	MB
May 29, 2024	▪ Protocol coastal California gnatcatcher surveys	MB
May 30, 2024	▪ Rare plant surveys	MC, TP, JR
June 11, 2024	▪ Crotch's bumble bee surveys	CA, KN, SL
June 12, 2024	▪ Protocol coastal California gnatcatcher surveys	TM
June 19, 2024	▪ Protocol coastal California gnatcatcher surveys	MB
June 28, 2024	▪ Protocol coastal California gnatcatcher surveys	MB
July 1, 2024	▪ Crotch's bumble bee surveys	CA, KN, KD
July 17, 2024	▪ Crotch's bumble bee surveys	CA, ES, KD, LB
August 7, 2024	▪ Oak tree surveys	ST
August 8, 2024	▪ Oak tree surveys	ST
August 9, 2024	▪ Oak tree surveys	ST
March 11, 2025	▪ Oak tree surveys	AC
December 1, 2025	▪ Jurisdictional delineation	MC

Biologists: AC=Aida Castro, AP=Ana Pfleeger, CA=Callie Amoaku, ES=Eilleen Salas, KD=Kathleen Dayton, KN=Kimberly Narel, LB=Luz Badillo, LS=Lily Sam, MB=Melissa Blundell, MC=Michael Cady, TM=Tommy Molioo, TP=Tracy Park, SL=Sony Leming, ST=Sarah Tian

3.2.1 General Reconnaissance

Dudek senior biologist Michael Cady conducted a general biological reconnaissance survey of the Study Area on May 25, 2023. The purpose of the field surveys was to identify commonly occurring plant or wildlife species, identify suitable habitat for special-status species, and identify aquatic resources potentially regulated under the CWA, Porter–Cologne Act, or California Fish and Game Code.

Plants

All plant species encountered during the field surveys were identified and recorded. Latin and common names for plant species with a California Rare Plant Rank (CRPR) follow the CNPS Inventory (CNPS 2025a). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2025), and common names follow the USDA NRCS Plants Database (USDA 2025b). Potential for special-status plant species to occur within the Study Area was assessed based on known geographic and elevation ranges as well as habitat and soil conditions that are known to support species occurring in the region.

Wildlife

All wildlife species, as detected during the field survey—by sight, calls, tracks, scat, or other signs—were identified and recorded. Binoculars were used to aid in the identification of observed wildlife. In addition to species observed, expected wildlife usage of the Study Area was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. Latin and common names for wildlife species referred to in this report follow Crother (2017) for reptiles and amphibians, American Ornithologists' Union Checklist (AOU 2018) for birds, Wilson and Reeder (2005) for mammals, and Moyle (2002) for fish. Potential for special-status wildlife species to occur within the Study Area was assessed based on known geographic ranges, the presence/absence of suitable habitat, and other natural history elements that might predict their occurrence.

3.2.2 Vegetation Community and Land Cover Mapping

Vegetation mapping surveys were conducted in accordance with the California Department of Fish and Wildlife (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018). Vegetation community classifications used in this report follow CDFW's List of Vegetation Alliances and Associations (or California Natural Community List) (CDFW 2025c), which is based on A Manual of California Vegetation, Second Edition (Sawyer et al. 2009) and A Manual of California Vegetation, Online Edition (CNPS 2025b). Modifications to these classifications were made to accommodate the lack of conformity of the observed communities (e.g., developed/disturbed land cover types) using Oberbauer et al. (2008) and Jones and Stokes (1993).

During vegetation mapping, stands of vegetation were identified based on visible changes in vegetation composition and density based on aerial imagery signatures, species composition, dominant and characteristic species, geographic distribution, topographic setting, and anthropogenic site conditions. After boundaries of the stands were determined, ocular estimates of absolute and/or relative covers of dominant and characteristic species were recorded. Vegetation communities were classified to alliance level per description and membership rules from A Manual of California Vegetation online, and then to association level based on dominant species present within the stand. Other land covers that did not conform to the Manual of California Vegetation or the CDFW Natural Communities List were mapped as described in Draft Vegetation Communities in San Diego County (Oberbauer et al. 2008) which identifies various land cover classifications accepted by agencies.

3.2.3 Oak Tree Survey

Dudek's International Society of Arboriculture (ISA) Certified Arborists Sarah Tian (No. WE-13677A), Aida Castro (No. WE-13396A), and Ana Pfleeger (No. WE-13583A), and field assistant Dahlia Serrato conducted the tree inventory and evaluation from February 14 to February 16 and from August 7 to August 9, 2024, and on March 11, 2025, to document tree locations and attribute information for all regulated oak trees within the survey area. The location of each individual regulated tree was mapped using the Esri ArcGIS Field Maps application on an iPhone coupled with a Trimble R1 or Arrow GPS receiver to increase positional accuracy. The arborists examined regulated oak trees that would be disturbed by the proposed development. Tree attribute data collected during the field survey included species, trunk diameter, tree height, canopy spread, general health condition, and structural condition. Trunk diameters were measured using a diameter tape, which provides adjusted numbers for diameter measurements when wrapping the tape around the circumference of a tree trunk. Diameter measurements were collected using standard protocol described by the Council of Tree and Landscape Appraisers in its Guide for Plant Appraisal 9th edition (CTLA 2000), published by the ISA. Pursuant to the Guide for Plant Appraisal 9th edition (CTLA

2000), tree health and structure were evaluated with respect to five distinct tree components: roots, trunk, scaffold branches, small branches, and foliage. Health and structure were rated using letter grades A through F. Full methodology for the tree surveys and assessments can be found in Appendix B.

3.2.4 Jurisdictional Delineation

Prior to conducting the jurisdictional delineation, USFWS National Wetland Inventory data (USFWS 2025b) was reviewed to determine if the Study Area contained any features mapped by the USFWS. Site-specific topographical data was reviewed in conjunction with aerials, both current and historical, to determine the potential presence of non-wetland waters. Current vegetation mapping was reviewed to assess whether the Study Area supported hydrophytic vegetation and potential wetlands. Jurisdictional boundaries were mapped in the field using ESRI Collector on a mobile device with submeter accuracy. Remote sensing was not used for the delineation. Full methodology for the delineation can be found in Appendix C.

U.S. Army Corps of Engineers

The USACE wetlands delineation was conducted in accordance with the 1987 USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a). A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b) was used to determine the limits of non-wetland waters. Non-wetland waters were delineated on aerial maps in conjunction with ESRI Collector on a mobile device. The widths of each non-wetland water were determined in the field according to the OHWM manual. USACE OHWM Forms were completed at representative cross-sections of non-wetland waters to capture their characteristics and widths.

Regional Water Quality Control Board

Waters of the state regulated by the RWQCB were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2021). As described in these procedures, wetland waters of the state are mapped based on the procedures in USACE's 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters are mapped at the OHWM based on the procedures defined in USACE's 2008 A Field Guide to Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b).

California Department of Fish and Wildlife

CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code Section 1602. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979).

3.3 Special-Status Plant and Wildlife Species Assessment

Endangered, rare, or threatened plant species as defined in Section 15380(b) of the CEQA Guidelines (14 CCR 15000 et seq.) are referred to as "special-status plant species" and, as used in this report, include (1) plant species listed, proposed for listing, or candidates for listing as endangered or threatened recognized in the context of CESA and the FESA (CDFW 2025d); and/or (2) plant species with a CRPR of 1 or 2 as designated by CNPS (2025a). Species with a CRPR or 3 or 4 generally do not qualify for protection under CEQA; therefore, they are not considered special-status and impacts to these species are not analyzed in this BRTR.

Endangered, rare, or threatened wildlife species as defined in Section 15380(b) of the CEQA Guidelines (14 CCR Section 15380(b)), are referred to as "special-status wildlife species" and, as used in this report, include (1) wildlife species listed, proposed for listing, or candidates for listing as endangered or threatened recognized in the context of CESA and FESA (CDFW 2025e); (2) California Species of Special Concern as designated by CDFW (2025g); and (3) mammals and birds that are fully protected species as described in the California Fish and Game Code, Sections 4700 and 3511 (CDFW 2025h).

The potential for special-status plant species to occur within the Study Area was assessed based on known geographic and elevation ranges as well as habitat and soil conditions that are known to support species occurring in the region. Potential for special-status wildlife species to occur within the Study Area was assessed based on known geographic ranges, the presence/absence of suitable habitat, and other natural history elements that might predict their occurrence. After completion of the reconnaissance surveys, the potential for special-status plant and wildlife species to occur on or near the Study Area was summarized according to the following categories. Because not all species are accommodated precisely by a given category (i.e., category definitions may be too restrictive), an expanded rationale for each category assignment is provided:

- Known to occur: the species has been documented on the property by a reliable source.
- High potential to occur: the species has not been documented on the property but is known to recently occur in the vicinity and suitable habitat is present.
- Moderate potential to occur: the species has not been documented on the property or in the vicinity, but the site is within the known range of the species and suitable habitat for the species is present.
- Low potential to occur: the species has not been documented in the vicinity or on the property, but the site is within the known range of the species; however, suitable habitat for the species on site is of low quality.
- Not expected to occur: the property is outside the known geographic or elevational range of the species and/or the site does not support suitable habitat for the species.

3.4 Focused Surveys

Based upon the results of the general field surveys and special-status plant and wildlife species assessment that were conducted, the following surveys were performed.

3.4.1 Rare Plant Surveys

Records from the CNDDB and the CNPS Inventory of Rare and Endangered Plants of California were used to compile a list of species with potential to occur on site, referred to as "target species." This list includes special-status plants (listed species and California Rare Plant Rank species) with potential to occur that have been recorded within the on-site U.S. Geological Survey quadrangles and the surrounding eight quadrangles. Per Section 3.4 of this document, the species were assessed for their potential to occur in the Study Area, which narrowed down the focal species. Focused surveys for the focal species were conducted on May 30, 2024. Prior to the surveys, reference population checks were then conducted for the focal species prior to conducting surveys to determine blooming status. The survey for special-status plants will conform to CNPS's Botanical Survey Guidelines (CNPS 2001) and CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Sensitive Natural Communities (CDFW 2018). If special-status plants were encountered, field personnel recorded data points using a mobile device with sub-meter accuracy.

3.4.2 Crotch's Bumble Bee Surveys

The surveys for Crotch's bumble bee (*Bombus crotchii*) were conducted in accordance with the CDFW survey guidance (CDFW 2023a). The survey passes were led by Callie Amoaku, who holds a Memorandum of Understanding (MOU) and Scientific Collecting Permit (SCP) to capture Crotch's bumble bee. Dudek conducted three protocol level surveys for Crotch's bumble bee spaced in June and July 2024 (June 11, July 1 and July 17). The surveys were conducted by qualified biologists with experience in surveying for CBB. Surveys occurred after sunrise and three hours before sunset and were not conducted during wet conditions (e.g., foggy, raining, or drizzling) or windy conditions (i.e., sustained winds greater than eight mph). The surveys were conducted during optimal conditions when there were sunny to partly sunny skies that were greater than 60° Fahrenheit. Suitable habitat within the Study Area was visually surveyed for one person-hour per three acres of potential habitat. Biologists walked wandering transects through these resources with a goal of observing bumble bees in passing and observing bumble bee nest sites associated with small mammal burrow or other appropriate soil cavities.

3.4.3 Protocol Coastal California Gnatcatcher Surveys

Protocol surveys for coastal California gnatcatcher (*Polioptila californica californica*) were conducted between May 15 and June 29, 2024, by two permitted biologists: Melissa Blundell (TE-97717A) and Tsutomu (Tommy) Molioo (TE-02412D). The surveys were conducted following the currently accepted protocol of the USFWS Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Protocol (USFWS 1997). The surveys included six survey passes at a minimum of 7-day intervals during the breeding season. In accordance with the protocol, no more than 80 acres of suitable habitat were surveyed by a single permitted biologist during each site visit conducted. The survey aimed for complete audible and visual coverage of all suitable coastal California gnatcatcher habitat on site, to the extent feasible. Access was limited to areas within the Project boundaries. Where potentially suitable habitat was present adjacent to the site, surveyors spent time along the boundary to detect any gnatcatchers that may be present within 500-feet of the site. Birding binoculars (e.g., 8x42 magnification) were used to aid in detecting and identifying bird species. Recorded vocalizations were used frequently to elicit a response from the species. The tape was played approximately every 50 to 100 feet. If coastal California gnatcatcher would have been detected, the playing of the tape would have ceased to avoid harassment. Full methodology for the protocol surveys can be found in Appendix D.

3.5 Surveys Limitations

Binocular surveys were conducted in areas outside of the Study Area due to trespassing concerns. Additional potential limitations of the field survey include a diurnal bias for most wildlife species and the absence of focused trapping for mammals and reptiles since trapping is generally only performed for select listed species. Surveys were conducted mostly during the daytime to maximize visibility and detection of plants and most animals. As such, birds represent the largest component of vertebrate fauna recorded during the surveys, as they are usually most active during daytime hours. In contrast, daytime surveys usually result in few observations of mammals, many of which may only be active at night, particularly rodent and bat species. Therefore, identification of mammals primarily relied on detection of surface signs such as scat, burrows, and tracks. Many species of reptiles and amphibians are similarly nocturnal and/or secretive in their habits and are difficult to observe using standard meandering transects. However, despite these limitations, the survey work conducted in the Study Area provides an adequate overall assessment of floral and faunal resources for purposes of evaluating potential biological constraints.

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4 Environmental Setting

4.1 Land Use

The Study Area is currently undeveloped land that is zoned for low-density urban residential use and non-urban residential use (City of Santa Clarita 2011). Adjacent land uses include existing low-density residential developments and an equestrian facility along the western and southwestern boundary, a golf course (Sand Canyon Country Club) along the southeastern boundary, undeveloped/open space to the north and east of the Project, and a railroad (the Antelope Valley Line) bisecting the northern parcels of the Project (City of Santa Clarita 2011). The Angeles National Forest is located approximately 0.25-miles east of the Project boundary.

4.2 Climate

The Project region has a Mediterranean climate with cool, wet winters and hot, dry summers. August is the average warmest month with an average high temperature of 92 degrees Fahrenheit (˚F) and December is the coolest month on average with a low of 42˚F. Rainfall occurs primarily between October and April, with the maximum average precipitation occurring in January. The mean annual rainfall for the region is approximately 17.35 inches of rain per year (LACPW 2025).

4.3 Topography

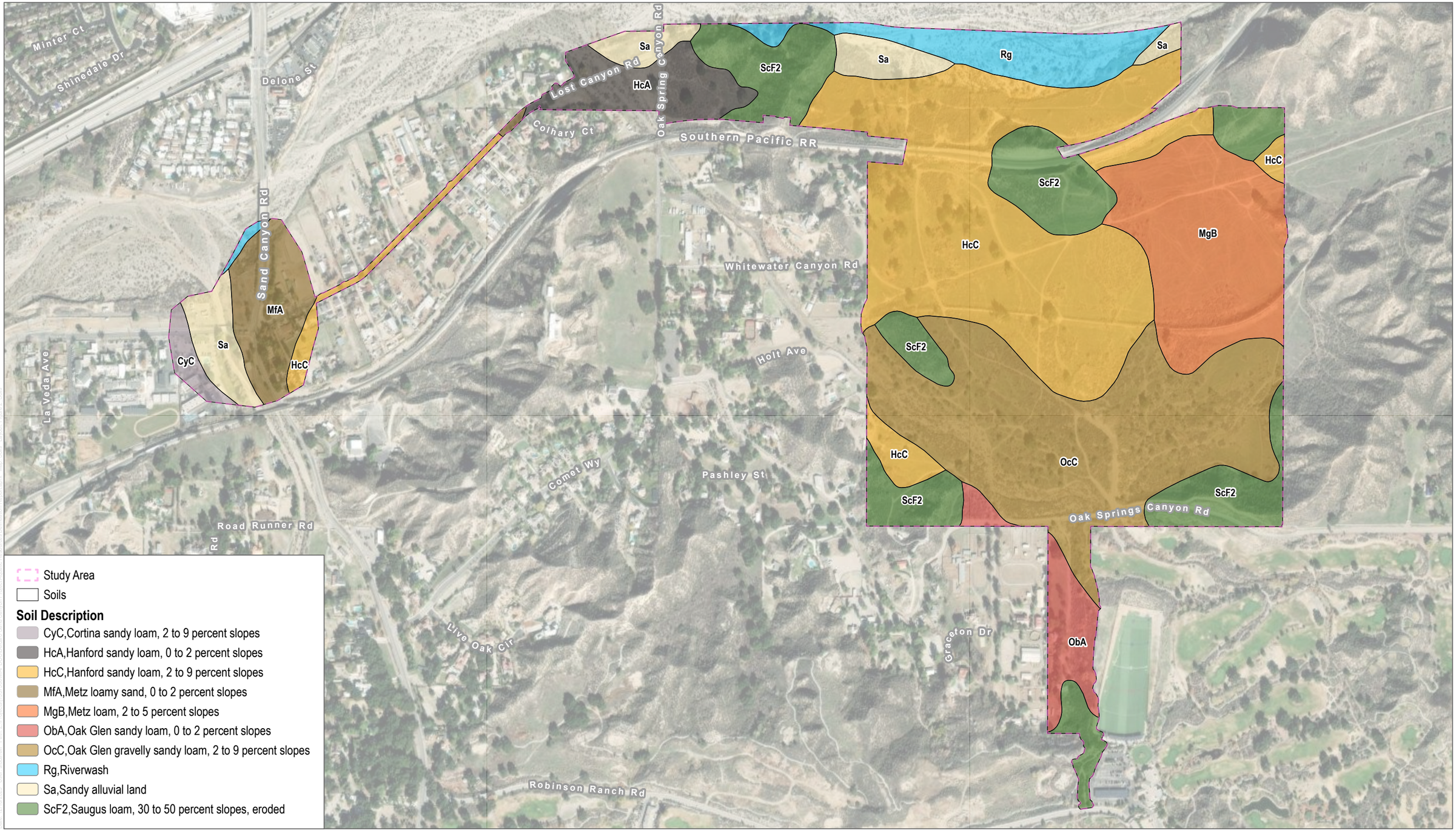
Topography within the Study Area is generally flat but undulating with slopes scattered along the Santa Clarita River, the eastern boundary of the Project, and the Project's southwestern corner. Elevation ranges from approximately 1,550 feet above mean sea level (amsl) in the northwestern corner of the Study Area to 1,730 feet amsl in the southeastern corner of the Study Area.

4.4 Soils

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2025a), the Study Area is included within the Soil Survey of the Antelope Valley Area, California (USDA 1970). There are eight soil map units mapped in the Study Area: Hanford sandy loam, 0% to 2% slopes; Hanford sandy loam, 2% to 9% slopes; Metz loam, 2% to 5% slopes; Oak Glen sandy loam, 0% to 2% slopes; Oak Glen gravelly sandy loam, 2% to 9% slopes; Saugus loam, 30% to 50% slopes, eroded; riverwash; and sandy alluvial land. Three of these soil map units are included in the USDA NRCS hydric soils list: Metz loam, 2% to 5% slopes; riverwash; and sandy alluvial land (USDA 2025a). The soil types comprising the major components of these map units are described in more detail below and the distribution of these soil map units are presented on Figure 2, Soils. Further discussion of each hydric soil is discussed below.

Hanford Series consists of very deep, well drained or somewhat excessively drained soils formed in alluvial material derived from granite. Hanford soils are found on stream bottoms, floodplains, and alluvial fans at elevations between 150 to 3,500 feet above mean sea level (amsl). Vegetation where not cultivated or built is primarily composed of annual grasses and forbs, sometimes with scattered California junipers (*Juniperus californica*) (USDA 1970, 2024c). The Study Area contains Hanford sandy loam, 0% to 2% slopes, and Hanford sandy loam, 2% to 9%

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SOURCE: Maxar 12/08/2022

DUDEK

0 275 550 Feet

FIGURE 2

Soils

Belcaro at Sand Canyon Project

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slopes throughout much of the flat, upland areas of the northern portions of the Study Area (Figure 2). Neither of these soil map units are rated as hydric (USDA 2024a).

Metz Series consists of very deep, somewhat excessively drained soils formed in alluvial material of mixed, but predominantly sedimentary rock sources. Metz soils are found on alluvial fans and floodplains at elevations between 25 to 2,500 feet amsl. Vegetation where not cultivated or built is composed of grasses, forbs, oaks (*Quercus* spp.), and willows (*Salix* spp.) (USDA 1970, 2024a). The Study Area contains Metz loam, 2% to 5% slopes, located within flat areas along the eastern boundary of the Study Area (Figure 2). This soil map unit is included in the USDA NRCS hydric soils list but is rated 'predominantly nonhydric', meaning that no major component of the map unit is rated as hydric but one minor component comprising 1% of the map unit is rated hydric (USDA 2025a).

Oak Glen Series consists of deep, well drained soils formed in alluvial material derived mainly from granitic rocks. Oak Glen soils are found on alluvial fans and toe of slopes at elevations between 3,400 to 6,000 feet amsl. Vegetation where not cultivated or built is composed of naturalized grasses and forbs, shrubs, mixed hardwoods, and pines (USDA 1970, 2024a). The Study Area contains Oak Glen sandy loam, 0% to 2% slopes, and Oak Glen gravelly sandy loam, 2% to 9% slopes, located within undulating areas in the southern portion of the Study Area (Figure 2). Neither of these soil map units are rated as hydric (USDA 2025a).

Saugus Series consists of deep, well drained soils formed from weakly consolidated sediments. Saugus soils are found on uplands made up of dissected terraces and foothills at elevations between 600 to 2,500 feet amsl. Vegetation where not cultivated or built is composed of naturalized grasses and forbs, as well as chamise or other shrubs (USDA 1970, 2025a). The Study Area contains Saugus loam, 30% to 50% slopes, eroded, located on hilly areas scattered throughout the Study Area (Figure 2). This soil map unit is not rated as hydric (USDA 2025a).

Riverwash is a land type composed of alluvial sandy to gravelly material in intermittent streambeds. Material is regularly deposited and removed during flood events or because of streambank erosion. It is not categorized as a soil type in the USDA soil survey due to its lack of value for farming. This soil map unit contains little to no vegetation in general (USDA 1970) and is mapped within the Santa Clara River along the northern boundary of the Study Area (Figure 2). This soil map unit is included in the USDA NRCS hydric soils list, rated 'predominantly hydric', meaning that all major components of the map unit are rated as hydric and at least one minor component is not rated hydric (USDA 2024a). In this case, riverwash is classified as a hydric soil due to the presence of drainageways (criterion code 4), likely associated with the Santa Clara River (USDA 2025a).

Sandy Alluvial Land is a land type primarily composed of stratified unconsolidated sandy to loamy sandy alluvial material within floodplains. This material has been deposited relatively recently by flowing water. It is not categorized as a soil type in the USDA soil survey due to its lack of value for farming. Vegetation is comprised of willows and cottonwoods (*Populus* spp.) with an understory of annual herbaceous plant species (USDA 1970). Sandy alluvial land is mapped on the edges of the Santa Clara River along the northern boundary of the Study Area (Figure 2). This soil map unit is included in the USDA NRCS hydric soils list, rated 'predominantly hydric', meaning that all major components of the map unit are rated as hydric and at least one minor component is not rated hydric (USDA 2025a). In this case, sandy alluvial land is classified as a hydric soil due to the presence of floodplains (criterion code 2) and drainageways (criterion code 4), likely associated with the Santa Clara River (USDA 2025a).

4.5 Watershed

The Study Area occurs within the eastern portion of the Santa Clara sub-basin, Hydrologic Unit Code [HUC] 18070102. The Santa Clara subbasin comprises approximately 1,626 square miles and spans across northeastern Los Angeles County and much of northern Ventura County (USGS 2025). The primary geographic and surface hydrologic feature of the watershed is the Santa Clara River, which flows west for approximately 50 miles until it reaches the Pacific Ocean near the City of Ventura. As an interrupted perennial watercourse, the Santa Clara River exhibits both intermittent and perennial flows along various reaches. The Santa Clara River occurs in the northern extent of the Study Area. Oak Spring Canyon Creek, a drainage located in the southern and western extent of the Study Area, is a direct tributary to the Santa Clara River.

The Study Area occurs within the Sand Canyon–Santa Clara River sub-watershed (HUC 180701020107) of the Headwaters of Santa Clara River watershed (HUC 1807010201). The Headwaters of Santa Clara River watershed comprises approximately 239 square miles (152,907 acres) (USGS 2025). This watershed originates in Soledad Canyon, as well as the numerous smaller canyons of the adjacent Sierra Pelona Mountains and San Gabriel Mountains, which ultimately drain into the reaches of the Santa Clara River contained within Soledad Canyon. The Sand Canyon–Santa Clara River sub-watershed is the western-most and furthest downstream unit of this watershed.

5 Results

Representative photos of the Study Area and the biological resources described in this chapter are included in Appendix E. A compendium of plant and wildlife species is included as Appendix F.

5.1 Vegetation Communities and Land Covers

Table 2 summarizes the vegetation associations and three land cover types mapped within the Study Area and their spatial distributions are presented on Figure 3, Vegetation Communities and Land Covers. Descriptions of these vegetation communities and land cover types are provided in detail below. The Study Area does contain riparian vegetation that is adjacent to aquatic features that would fall under CDFW jurisdiction: *Lepidospartum squamatum–Atriplex canescens* association; *Lepidospartum squamatum–Eriogonum fasciculatum* association; and *Populus fremontii* association. A description of these vegetation associations is further discussed in this section.

Table 2. Vegetation Communities and Land Cover Types within the Study Area

Alliance/ Land Cover Type–Common Name	Alliance–Scientific Name	Association	Sensitive[1]	Study Area (acres)
Native Upland Scrub Communities				
Big sagebrush scrub	*Artemisia tridentata* shrubland	*Artemisia tridentata–Ericameria nauseosa*	No	8.60
		Artemisia tridentata ssp. *parishii*	Yes	28.56
		Artemisia tridentata-Eriogonum fasciculatum	No	0.05
California brittle bush–ashy buckwheat scrub	*Encelia californica-Eriogonum cinereum* shrubland	*Encelia californica*	Yes	0.63
California buckwheat scrub	*Eriogonum fasciculatum* shrubland	*Eriogonum fasciculatum–Artemisia tridentata*	Yes	4.79
California sagebrush–(purple sage) scrub	*Artemisia californica-(Salvia leucophylla)* shrubland	*Artemisia californica*	No	6.79
		Artemisia californica–Salvia leucophylla	No	1.44
Deerweed–silver lupine–yerba santa scrub	*Acmispon glaber-Lupinus albifrons-Eriodictyon* spp. shrubland	*Eriodictyon crassifolium*	No	6.40
Fourwing saltbush scrub	*Atriplex canescens* shrubland	*Atriplex canescens*	No	1.53
			Subtotal Native Upland Scrub Communities[2]	*58.79*
Native Upland Chaparral Communities				
Basket bush–river hawthorn–desert olive patches	*Rhus aromatica–Crataegus rivularis–Forestiera pubescens* shrubland	*Rhus aromatica*	Yes	2.49

Table 2. Vegetation Communities and Land Cover Types within the Study Area

Alliance/ Land Cover Type–Common Name	Alliance–Scientific Name	Association	Sensitive[1]	Study Area (acres)
Chamise chaparral	*Adenostoma fasciculatum* shrubland	*Adenostoma fasciculatum*	No	2.36
		Adenostoma fasciculatum–(*Ceanothus cuneatus*)	No	15.56
		Adenostoma fasciculatum–*Eriogonum fasciculatum*	No	1.79
Holly leaf cherry–toyon–greenbark ceanothus chaparral	*Prunus ilicifolia*–*Heteromeles arbutifolia*–*Ceanothus spinosus* shrubland	*Prunus ilicifolia* ssp. *ilicifolia*	Yes	10.95
Tucker oak chaparral	*Quercus john-tuckeri* shrubland	*Quercus john-tuckeri*	No	3.59
			Subtotal[2]	*36.73*
Native Upland Woodland Communities				
Coast live oak woodland and forest	*Quercus agrifolia* woodland and forest	*Quercus agrifolia*	No	6.73
Native Riparian Communities				
Cattail marshes	*Typha* (*angustifolia, domingensis, latifolia*) *Herbaceous Alliance*	*Typha angustifolia-Typha latifolia-Typha domingensis*	No	0.06
Mulefat thickets	*Baccharis salicifolia* shrubland	*Baccharis salicifolia*	No	0.59
Scale broom scrub	*Lepidospartum squamatum* shrubland	*Lepidospartum squamatum*–*Atriplex canescens*	Yes	2.45
		Lepidospartum squamatum–*Eriogonum fasciculatum*	Yes	16.83
Fremont cottonwood forest and woodland	*Populus fremontii*–*Fraxinus velutina*–*Salix gooddingii* forest and woodland	*Populus fremontii*	Yes	1.27
		Populus fremontii–*Salix laevigata*	Yes	0.42
			Subtotal[2]	*21.63*
Semi-Natural Upland Communities[2]				
Non-native grassland	N/A	N/A	No	59.74
Upland mustards or star-thistle fields	*Brassica nigra*–*Centaurea* (*solstitialis, melitensis*) herbaceous semi-natural	*Hirschfeldia incana*	No	13.98
			Subtotal[2]	*73.71*
Non-Natural Land Cover Types				
Disturbed habitat	N/A	N/A	No	18.22

Table 2. Vegetation Communities and Land Cover Types within the Study Area

Alliance/ Land Cover Type–Common Name	Alliance–Scientific Name	Association	Sensitive[1]	Study Area (acres)
Ornamental plantings	N/A	N/A	No	2.10
Unvegetated wash and river bottom	N/A	N/A	Yes	0.78
Urban/Developed land	N/A	N/A	No	19.02
			Subtotal[2]	*40.11*
			Total[2]	**237.70**

Table Notes: N/A = Not Applicable.
1 Sensitive vegetation alliances or associations as identified in the most current California Natural Community List, released on February 27, 2025 (CDFW 2025c).
2 Totals may not sum due to rounding.

5.1.1 Native Upland Vegetation Communities

Big Sagebrush Scrub

Big sagebrush scrub alliance communities feature big sagebrush (*Artemisia tridentata*) as the dominant or co-dominant species in the shrub canopy and can also include yellow rabbitbrush (*Chrysothamnus viscidiflorus*), joint-fir (*Ephedra* spp.), California buckwheat (*Eriogonum fasciculatum*), rubber rabbitbrush (*Ericameria nauseosa*), bitter brush (*Purshia tridentata*), desert gooseberry (*Ribes velutinum*), and spineless horsebrush (*Tetradymia canescens*). Communities within this alliance typically occur in deep, well drained, loamy to sandy soils on plains, alluvial fans, toes of slopes, lower slopes, valley bottoms, hillsides, ridges, stream channels, and dry washes (CNPS 2025b).

Three associations within the big sagebrush scrub alliance were mapped in the Study Area: *Artemisia tridentata* ssp. *parishii* association, *Artemisia tridentata–Ericameria nauseosa* association, and *Artemisia tridentata-Eriogonum fasciculatum*. Big sagebrush scrub occurs throughout the central portion of the Study Area. Associated species observed within this alliance in the field included thick leaf yerba santa (*Eriodictyon crassifolium*), rubber rabbitbrush, California buckwheat, shortpod mustard (*Hirschfeldia incana*), and tree tobacco (*Nicotiana glauca*).

California Brittle Bush–Ashy Buckwheat Scrub

California brittlebush–ashy buckwheat scrub alliance communities feature California brittle bush (*Encelia californica*) and/or ashy buckwheat (*Eriogonum cinereum*) as dominant or co-dominant species in the shrub canopy, and can also include California sagebrush (*Artemisia californica*), coyote bush (*Baccharis pilularis*), bush monkeyflower (*Diplacus aurantiacus*), California buckwheat, chaparral yucca (*Hesperoyucca whipplei*), Menzies's golden bush (*Isocoma menziesii*), common deer weed (*Acmispon glaber*), laurel sumac (*Malosma laurina*), black

sage (*Salvia mellifera*), and other common coastal sage scrub species. Communities within this alliance typically occur in soils formed in sandstone, shale, or volcanic substrates on exposed, steep slopes (CNPS 2025b).

The only association within the California brittlebush–ashy buckwheat scrub alliance mapped in the Study Area was the *Encelia californica* association. California brittle bush–ashy buckwheat scrub occurs on a north-facing

slope in the southeastern corner of the Study Area. Associated species observed within this alliance in the field included purple sage (*Salvia leucophylla*), California sagebrush, and California buckwheat.

California Buckwheat Scrub

California buckwheat scrub alliance communities feature California buckwheat as the dominant or co-dominant species in the shrub canopy, and can also include California sagebrush, bush mallow (*Malacothamnus fasciculatus*), bush monkeyflower, California brittle bush, Menzies's golden bush, coyote bush, common deer weed, black sage, and white sage (*Salvia apiana*). Communities within this alliance typically occur in well drained, coarse soils on upland slopes, arroyos, channels, washes, and rarely flooded low-gradient deposits (CNPS 2025b).

The only association within the California buckwheat scrub alliance mapped in the Study Area was the *Eriogonum fasciculatum–Artemisia tridentata* association. California buckwheat scrub occurs on the gentle slopes in the southernmost tip of the Study Area. Associated species observed within this alliance in the field included shortpod mustard, white sage, and Parish's big sagebrush (*Artemisia tridentata* ssp. *parishii*).

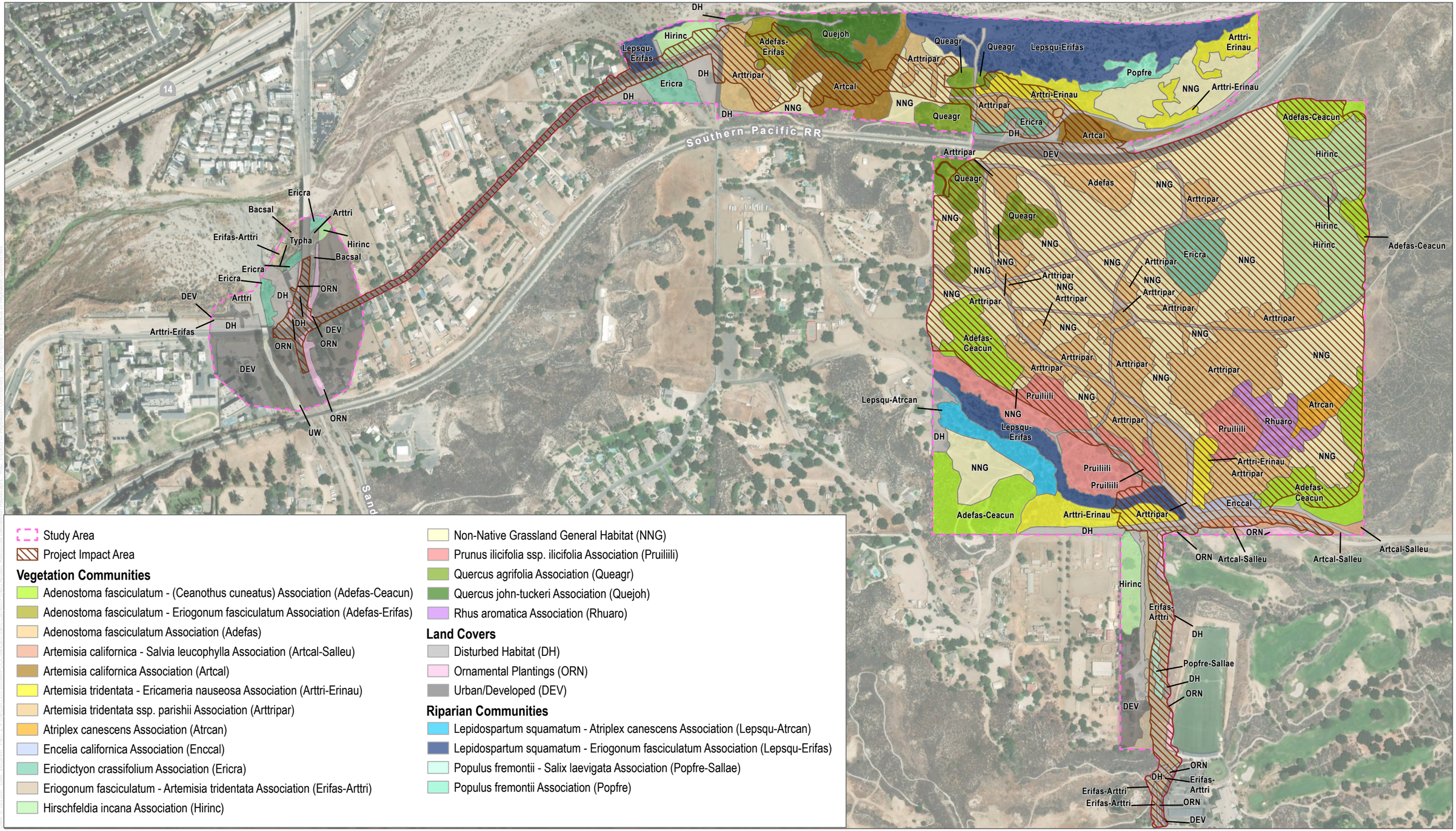
California Sagebrush–(Purple Sage) Scrub

California sagebrush–(purple sage) scrub alliance communities feature California sagebrush and sometimes purple sage as the dominant or co-dominant species in the shrub canopy. This alliance can also include chamise (*Adenostoma fasciculatum*), coyote bush, bush monkeyflower, California brittle bush, narrowleaf goldenbush (*Ericameria linearifolia*), California buckwheat, golden-yarrow (*Eriophyllum confertiflorum*), chaparral yucca, Menzies' goldenbush, laurel sumac, coast pricklypear (*Opuntia littoralis*), sugarbush (*Rhus ovata*), white sage, black sage, and poison oak (*Toxicodendron diversilobum*). Communities within this alliance typically occur in alluvial or colluvial soils on variable slopes that are usually steep and rarely flooded or low-gradient deposits along streams (CNPS 2025b).

Two associations within the California sagebrush–(purple sage) scrub alliance were mapped in the Study Area: *Artemisia californica* association and *Artemisia californica–Salvia leucophylla* association. These associations are mapped on the slopes north of the railroad, as well as the southeastern corner of the Study Area. Associated species observed within this alliance in the field included chamise, chaparral yucca, California brittle bush, and Parish's big sagebrush.

Deerweed–Silver Lupine–Yerba Santa Scrub

Deerweed–silver lupine–yerba santa scrub alliance communities feature common deer weed, bush poppy (*Dendromecon rigida*), California yerba santa (*Eriodictyon californicum*), thick leaf yerba santa, poodle-dog bush (*Eriodictyon* parryi), and/or silver lupine (*Lupinus albifrons*) as dominant or co-dominant species in the shrub canopy. This alliance can also include chamise, California sagebrush, coyote bush, buck brush (*Ceanothus cuneatus*), sand-aster (*Corethrogyne filaginifolia*), bush monkeyflower, narrowleaf goldenbush, California buckwheat, golden-yarrow, sawtooth golden bush (*Hazardia squarrosa*), slender sunflower (*Helianthus gracilentus*),



SOURCE: Maxar 12/8/2022

DUDEK

FIGURE 3

Vegetation Communites

Belcaro at Sand Canyon Project

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sugarbush, white sage, blue elderberry (*Sambucus mexicana*), and poison oak. Communities within this alliance typically occur on typically exposed and somewhat steep slopes in open settings (CNPS 2025b).

The only association within the deerweed–silver lupine–yerba santa scrub alliance mapped in the Study Area was the *Eriodictyon crassifolium* association. This association is mapped in the central and northern portion of the Study Area. Associated species observed within this alliance in the field were limited as the stands were quite monotypic, but shortpod mustard and Parish's big sagebrush were observed along the edges.

Fourwing Saltbush Scrub

Fourwing saltbush scrub alliance communities feature fourwing saltbush (*Atriplex canescens*) as dominant or co-dominant species in the shrub canopy and can also include white bursage (*Ambrosia dumosa*), cheesebush (*Ambrosia salsola*), shadscale (*Atriplex confertifolia*), allscale (*Atriplex polycarpa*), yellow rabbitbrush, bladderpod (*Peritoma arborea*), Mormon tea (*Ephedra viridis*), spiny hop sage (*Grayia spinosa*), creosote (*Larrea tridentata*), and bush seepweed (*Suaeda nigra*). Communities within this alliance typically occur in carbonate-rich, alkaline, sandy or sandy clay loams on playas, alluvial fans, rolling hills, lake deposits, or streambeds (CNPS 2025b).

The only association within the fourwing saltbush scrub alliance mapped in the Study Area was the *Atriplex canescens* association. This association is mapped in the southeastern portion of the Study Area. Associated species observed within this vegetation community included chamise and shortpod mustard.

Basket Bush–River Hawthorn–Desert Olive Patches

Basket bush–river hawthorn–desert olive patches alliance communities feature desert olive (*Forestiera pubescens*), skunkbush sumac (*Rhus aromatica*; also known as basket bush), or blue elderberry as the dominant species in the shrub canopy along with fourwing saltbush, Emory's baccharis (*Baccharis salicina*), broom baccharis (*Baccharis sergiloides*), narrowleaf goldenbush, broom snakeweed (*Gutierrezia sarothrae*), common reed (*Phragmites australis*), desert almond (*Prunus fasciculata*), sandbar willow (*Salix exigua*), and desert wild grape (*Vitis girdiana*). Communities within this alliance typically occur in silty soils to coarse sand on floodplains, streambanks, springs, river terraces, washes, swales, shallow valleys, or upland areas (CNPS 2025b).

The only association within the basket bush–river hawthorn–desert olive patches alliance mapped in the Study Area was the *Rhus aromatica* association. This association occurs in the southeastern corner of the Study Area. Associated species observed within this vegetation community in the field included golden currant (*Ribes aureum* var. *gracillimum*), blue elderberry, and shortpod mustard.

Chamise Chaparral

Chamise chaparral alliance communities feature chamise as the dominant species in the shrub canopy along with redshank (*Adenostoma sparsifolium*), manzanitas (*Arctostaphylos* spp.), ceanothus (*Ceanothus* spp.), bush monkeyflower, California buckwheat, chaparral yucca, toyon (*Heteromeles arbutifolia*), scrub oak (*Quercus berberidifolia*), interior live oak (*Quercus wislizeni*), white sage, purple sage, black sage, and poison oak. Communities within this alliance typically occur in shallow soils over colluvial material or various types of bedrock on a variety of topographic settings (CNPS 2025b).

Three associations within the chamise chaparral alliance were mapped in the Study Area: *Adenostoma fasciculatum* association, *Adenostoma fasciculatum*–(*Ceanothus cuneatus*) association, and *Adenostoma fasciculatum*–*Eriogonum fasciculatum* association. These associations are mapped on slopes throughout the edges of the Study Area. Associated species observed within this alliance in the field included soft brome (*Bromus hordeaceus*), slender oat (*Avena barbata*), golden currant, and chaparral yucca.

Holly Leaf Cherry–Toyon–Greenbark Ceanothus Chaparral

Holly leaf cherry–toyon–greenbark ceanothus chaparral alliance communities feature greenbark ceanothus (*Ceanothus spinosus*), toyon, and/or holly leaf cherry (*Prunus ilicifolia*) as dominant or co-dominant species in the shrub canopy. This alliance can also include California sagebrush, bigpod ceanothus (*Ceanothus megacarpus*), birch leaf mountain mahogany (*Cercocarpus betuloides*), pipestem clematis (*Clematis lasiantha*), bush monkeyflower, California buckwheat, California ash (*Fraxinus dipetala*), bush penstemon (*Keckiella antirrhinoides*), heartleaf keckiella (*Keckiella cordifolia*), scrub oak, hollyleaf redberry (*Rhamnus ilicifolia*), sugarbush, and black sage. Communities within this alliance typically occur in soils derived from bedrock or colluvium on steep, north-facing slopes (CNPS 2025b).

The only association within the holly leaf cherry–toyon–greenbark ceanothus chaparral alliance mapped in the Study Area was the *Prunus ilicifolia* ssp. *ilicifolia* association. This association is mapped in the southern portion of the Study Area, on undulating slopes north of Oak Spring Canyon Creek. Associated species observed within this alliance in the field include various non-native grasses in the understory, poison oak, and scattered shrubs such as Parish's big sagebrush, fourwing saltbush, and thick leaf yerba santa.

Tucker Oak Chaparral

Tucker oak chaparral alliance communities feature Tucker oak (*Quercus john-tuckeri*) as the dominant species in the shrub canopy, and can also include chamise, bigberry manzanita (*Arctostaphylos glauca*), buck brush, birch leaf mountain mahogany, narrowleaf goldenbush, rubber rabbitbrush, California buckwheat, California ash, ashy silktassel (*Garrya flavescens*), California juniper (*Juniperus californica*), interior live oak, and creeping snowberry (*Symphoricarpos mollis*). Communities within this alliance typically occur in well- to extensively- drained soils over bedrock or colluvium on upper slopes or tops of ridges (CNPS 2025b).

The only association within the Tucker oak chaparral alliance mapped in the Study Area was the *Quercus john-tuckeri* association. This association is mapped in the southern portion of the Study Area, on undulating slopes north of Oak Spring Canyon Creek. Associated species observed within this alliance in the field include various non-native grasses in the understory, poison oak, and scattered shrubs such as Parish's big sagebrush, fourwing saltbush, and thick leaf yerba santa.

Coast Live Oak Woodland and Forest

Coast live oak woodland and forest alliance communities feature coast live oak as the dominant or co-dominant species in the tree canopy and can also include bigleaf maple (*Acer macrophyllum*), blue oak (*Quercus douglasii*), California bay laurel (*Umbellularia californica*), Engelmann oak (*Quercus engelmannii*), Southern California black walnut (*Juglans californica*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), and madrone (*Arbutus menziesii*). Communities within this alliance occur in deep, sandy or loamy soils with high organic content on canyon bottoms, slopes, and flats (CNPS 2025b).

The only association within the coast live oak woodland and forest alliance mapped in the Study Area was the *Quercus agrifolia* association. This association is mapped in the northwestern portion of the Study Area. Associated species observed within this alliance in the field include various non-native grasses in the understory, poison oak, and scattered shrubs such as ripgut brome (*Bromus diandrus*), flatspine bur ragweed (*Ambrosia acanthicarpa*), and scattered Eucalyptus trees (*Eucalyptus* spp.).

5.1.2 Semi-Natural Upland Vegetation Communities

Non-Native Grassland

Oberbauer et al. (2008) states that non-native grassland has a sparse to dense cover of annual grasses, such as wild oats (*Avena* spp.), bromes (*Bromus* spp.), and fescue (*Festuca* spp.), that typically occurs on fine-textured, clay soils. Other herbaceous species may occur alongside these grasses, including California poppy (*Eschscholzia californica*), stork's bills (*Erodium* spp.), goldfields (*Lasthenia* spp.), phacelias (*Phacelia* spp.), gilias (*Gilia* spp.), and baby blue-eyes (*Nemophila menziesii*). Non-native grassland also includes land that is used as pasture for grazing (Oberbauer et al. 2008). This general habitat type is not included in the CDFW California Natural Community List (CDFW 2025c), but it was used as a vegetation community for this report because it best fit the habitat that was observed in the field.

Non-native grassland is scattered throughout flat areas and gently slopes areas of the Study Area. Species observed in the field within this habitat type included soft brome, flatspine bur ragweed, small wirelettuce (*Stephanomeria exigua*), redstem stork's bill (*Erodium cicutarium*), shortpod mustard, and dove weed (*Croton setiger*).

Upland Mustards or Star-Thistle Fields

Upland mustards or star-thistle fields alliance communities feature either black mustard (*Brassica nigra*), field mustard (*Brassica rapa*), Italian plumeless thistle (*Carduus pycnocephalus*), cardoon (*Cynara cardunculus*), Maltese star-thistle (*Centaurea melitensis*), yellow star-thistle (*Centaurea solstitialis*), Geraldton carnation weed (*Euphorbia terracina*), shortpod mustard, Dyer's woad (*Isatis tinctoria*), or cultivated radish (*Raphanus sativus*) among other similar ruderal forbs as the dominant species in the herbaceous layer. Communities within this alliance occur in clay to sandy-loam soils on a variety of disturbed landscapes, including fallow fields, rangelands, roadsides, and often have become naturalized in native communities, such as grasslands, coastal scrub, and riparian areas (CNPS 2025b).

The only association within the upland mustards or star-thistle fields alliance mapped in the Study Area was the *Hirschfeldia incana* association. This association is mapped primarily in the northeastern portion of the Study Area, but also in the southernmost extension and the northwestern corner. Associated species observed within this alliance in the field include dove weed, small wirelettuce, and scattered California buckwheat.

5.1.3 Riparian Vegetation Communities

Cattail Marshes

Cattail marsh (*Typha* (*angustifolia, domingensis, latifolia*) Herbaceous Alliance) communities include narrowleaf cattail (*Typha angustifolia*), southern cattail (*Typha domingensis*), or broadleaf cattail (*Typha latifolia*) as dominant or co-dominant species in the herbaceous layer with creeping bentgrass (*Agrostis stolonifera*), Pacific silverweed

(*Potentilla anserina ssp. pacifica*), sedges (*Cyperus* spp.), salt grass (*Distichlis spicata*), barnyardgrass, pale spike rush (*Eleocharis macrostachya*), giant horsetail (*Equisetum telmateia*), rushes (*Juncus* spp.), least duckweed (*Lemna minuta*), perennial pepper weed (*Lepidium latifolium*), water-parsley (*Oenanthe sarmentosa*), smartweed (*Persicaria lapathifolia*), dotted smartweed (*Persicaria punctata*), common reed (*Phragmites australis*), American bulrush (*Schoenoplectus americanus*), California bulrush (*Schoenoplectus californicus*), and cocklebur (*Xanthium strumarium*). This alliance has a continuous to intermittent herbaceous layer less than 5 feet (1.5 meters) in height with emergent trees such as willows (*Salix* spp.) sometimes present at low cover. Cattail marsh communities typically occur in semi-permanently flooded freshwater or brackish marshes with clayey or silty soils (CNPS 2025b).

Cattail marshes were found in the Study Area surrounding the proposed Lost Canyon Road and Sand Canyon Road roundabout. The community was located at an outlet for an underground stormwater culvert.

Mulefat Thickets

The mulefat thickets shrubland alliance consists of woodland vegetation dominated by mulefat (*Baccharis salicifolia*). This vegetation community has a continuous two-tiered canopy that is less than 5 meters (16 feet) in height and occurs often along canyon bottoms, floodplains, irrigation ditches, lake margins, stream channels, generally in areas with alluvial soils and a high water-table (CNPS 2025b). Mulefat thickets were located at an outlet for an underground stormwater culvert.

Scale Broom Scrub

Scale broom scrub alliance communities feature scale broom (*Lepidospartum squamatum*) as the dominant, co-dominant, or a conspicuous species in the shrub canopy in semi-alluvial environments, and can also include cheesebush, California sagebrush, mulefat (*Baccharis salicifolia*), bladderpod, brittle bush (*Encelia farinosa*), thick leaf yerba santa, California buckwheat, chaparral yucca, common deerweed, laurel sumac, coast prickly pear, skunkbush sumac, poison oak, and other arid scrub and wash species. Communities within this alliance occur in intermittently or rarely flooded alluvial soils along low-gradient streams, washes, or fans (CNPS 2025b).

Two associations within the scale broom scrub alliance were mapped in the Study Area: *Lepidospartum squamatum–Atriplex canescens* association and *Lepidospartum squamatum–Eriogonum fasciculatum* association. These associations are mapped within or adjacent to the stream channels for the Santa Clara River along the northern boundary or Oak Spring Canyon Creek, which cuts through the southwestern and northwestern corners of the Study Area. Associated species observed within this alliance in the field included flatspine bur ragweed, shortpod mustard, and scattered shrubs such as Parish's big sagebrush, tamarisk (*Tamarix ramosissima*), California buckwheat, rubber rabbitbrush, and thick leaf yerba santa.

Fremont Cottonwood Forest and Woodland

Fremont cottonwood forest and woodland alliance communities feature Fremont cottonwood as the dominant or co-dominant species in the tree canopy, and can also include white alder (*Alnus rhombifolia*), California sycamore (*Platanus racemosa*), Oregon ash (*Fraxinus latifolia*), velvet ash (*F. velutina*), coast live oak, sandbar willow, Goodding's willow (*Salix gooddingii*), red willow (*S. laevigata*), arroyo willow (*S. lasiolepis*), shining willow (*S. lasiandra* var. *lasiandra*), and yellow willow (*S. lutea*). Communities within this alliance typically occur on floodplains and alluvial fans; along springs, streams, and low-gradient rivers; and in lower canyons in desert mountains or in valleys with consistently high-water table (CNPS 2025b).

Two associations within the Fremont cottonwood forest and woodland alliance were mapped in the Study Area: *Populus fremontii* association and *Populus fremontii–Salix laevigata* association. These associations are mapped within the Santa Clara River stream channels, as well as in the southernmost extension of the Study Area. Associated species observed within this alliance in the field included tamarisk and mulefat.

5.1.4 Non-Natural Land Cover Types

Disturbed Habitat

Disturbed habitat refers to areas where soils have been recently or repeatedly disturbed by grading, compaction, or clearing of vegetation. Structures are typically not present within disturbed habitats, and these areas provide relatively low value for most plant and wildlife species. When vegetated, disturbed habitat supports predominantly non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (Oberbauer et al. 2008). Disturbed habitat is not a listed vegetation community under the CDFW California Natural Community List (CDFW 2025c), but it has been used in this report because it best describes what was observed in the field.

In the Study Area, disturbed habitat is mapped along unpaved roadways throughout the Study Area, as well as lots adjacent to residences or roads that appear to be regularly mowed, likely for fire hazard abatement purposes.

Ornamental Plantings

Ornamental plantings refer to areas where non-native ornamental species and landscaping schemes have been installed and maintained, usually as part of commercial or residential property/park. This habitat type typically supports myriad ornamental species, including, but not limited to, Bermudagrass (*Cynodon dactylon*), hottentot fig (*Carpobrotus edulis*), Peruvian peppertree (*Schinus molle*), Brazilian peppertree (*S. terebinthifolius*), and red apple iceplant (*Aptenia cordifolia*). Parks and ornamental plantings land cover are not a listed vegetation community under the CDFW California Natural Community List (CDFW 2025c), but it has been used in this report because it best describes what was observed in the field.

In the Study Area, ornamental plantings are mapped in the southeastern corner of the Study Area, comprising the Sand Canyon Country Club golf course facilities.

Urban/Developed Land

Urban or developed land refers to areas that have been constructed on or otherwise physically altered to the point where vegetation is no longer present. Urban or developed areas are characterized by permanent or semi-permanent structures, hardscapes, and landscaped areas that require irrigation (Oberbauer et al. 2008). Developed land is not a listed vegetation community under the CDFW California Natural Community List (CDFW 2025c) but has been used in this report because it best describes what was observed in the field.

In the Study Area, the urban/developed land cover consists of a paved road, Lost Canyon Road, in the northwestern corner and maintained areas associated with residences along the southernmost extension of the Study Area.

5.2 Special-Status Plant Species

Appendix G, Special-Status Plant Species Potentially Occurring in the Study Area, lists special-status plant species known to occur in the USGS 7.5-minute Newhall quadrangle and the surrounding eight USGS 7.5-minute quadrangles, as well as plant species included within the USFWS IPaC list generated for the Study Area (CDFW 2025a; CNPS 2025a; USFWS 2025a). Two special-status plant species, slender mariposa lily (*Calochortus clavatus* var. *gracilis*) and Peirson's morning-glory (*Calystegia peirsonii*) were recorded in the Study Area. Table 3 summarizes the regulatory status, ecological associations, and potential for the two species to occur. Seven individuals of slender mariposa lily were recorded along the southeastern boundary of the Study Area within the *Adenostoma fasciculatum*-(*Ceanothus cuneatus*) association. In the same area, eight individuals were found and mapped in 2014, but not found in 2016 or 2018, and 11 individuals were found and mapped in 2019 (Glenn Lukos Associates 2021). Eighty-one Peirson's morning-glory were observed at four locations along the northeastern and southeastern boundaries of the Study Area.

No other species were determined to have a moderate or high potential to occur in the Study Area due to not being seen during the multiple rare plant surveys conducted in the Study Area. The species not expected to occur or have low potential are assessed in Appendix G. No critical habitat for plants has been designated within the Study Area (USFWS 2025a).

Table 3. Special-Status Plant Species Occurring in the Study Area

Scientific Name	Common Name	Status[1] (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur[2]
Calochortus clavatus var. *gracilis*	slender mariposa lily	None/None/1B.2	Chaparral, Coastal scrub, Valley and foothill grassland/perennial bulbiferous herb/Mar–June (Nov)/1045–3280	Occurs. Seven individuals were documented in the southeast corner of the Study Area, where the species has previously been documented (Glenn Lukos Associates 2021).
Calystegia peirsonii	Peirson's morning-glory	None/None/4.2	Chaparral, Chenopod scrub, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland/perennial rhizomatous herb/Apr–June/100–4,920	Occurs. Eighty-one individuals were observed at four locations along the northeastern and southeastern boundaries of the Study Area.

Notes:
[1] Status Abbreviations
CRPR: California Rare Plant Rank
1B: Plants rare, threatened, or endangered in California and elsewhere
4: Watch List: Plants of limited distribution
Threat Rank:
.2 – Moderately threatened in California (20%-80% of occurrences threatened/moderate degree and immediacy of threat)

5.3 Special-Status Wildlife Species

Appendix H, Special-Status Wildlife Species Potentially Occurring in the Study Area, lists special-status wildlife species that are known to occur in the USGS 7.5-minute Newhall quadrangle and the surrounding eight USGS 7.5-minute quadrangles, as well as wildlife species included within the USFWS IPaC list generated for the Study Area (CDFW 2025a; CNPS 2025a, USFWS 2025a). Five special status species were observed within the Study Area: Crotch's bumble bee, coastal whiptail (*Aspidoscelis tigris stejnegeri*), Cooper's hawk (*Accipiter cooperii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). Nine species have a moderate or high potential to occur within the Study Area, with six of those species with potential to occur within the Study Area. Table 4 summarizes the regulatory status, ecological associations, and potential for each of the 12 species. Species that were observed or are listed under FESA or CESA are discussed further following the table.

Table 4. Special-Status Wildlife Species Occurring in the Study Area or with a Moderate or High Potential to Occur

Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur
Invertebrates				
Bombus crotchii	Crotch bumble bee	None/CSE	Open grassland and scrub communities supporting suitable floral resources	Occurs. The species were identified in the Study Area during focused surveys for bumble bees.
Fish				
Catostomus santaanae	Santa Ana sucker	FT/None	Small, shallow, cool, clear streams less than 7 meters (23 feet) in width and a few centimeters to more than a meter (1.5 inches to more than 3 feet) in depth; substrates are generally coarse gravel, rubble, and boulder	Moderate potential to occur in the Study Area. Not expected to occur in the Project. The species could occur in the northern portion of the Study Area in the Santa Clara River; however, there is no suitable habitat within the Study Area.
Gasterosteus aculeatus williamsoni	unarmored threespine stickleback	FE/FP, SE	Slow-moving and backwater areas	Moderate potential to occur in the Study Area. Not expected to occur in the Project. The species could occur in the northern portion of the Study Area in the Santa Clara River; however, there is no suitable habitat within the Study Area.

Table 4. Special-Status Wildlife Species Occurring in the Study Area or with a Moderate or High Potential to Occur

Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur
Gila orcuttii	arroyo chub	None/SSC	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud	Moderate potential to occur in the Study Area. Not expected to occur in the Project. The species could occur in the northern portion of the Study Area in the Santa Clara River; however, there is no suitable habitat within the Study Area.
Reptiles				
Anniella spp.	California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Moderate potential to occur. Suitable habitat is present in the Study Area.
Anniella stebbinsi	southern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Moderate potential to occur. Suitable habitat is present in the Study Area.
Arizona elegans occidentalis	California glossy snake	None/SSC	Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils	Moderate potential to occur. Suitable habitat is present in the Study Area.
Aspidoscelis tigris stejnegeri	coastal whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas	Occurs. The species was observed in the Study Area.

Table 4. Special-Status Wildlife Species Occurring in the Study Area or with a Moderate or High Potential to Occur

Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	High potential to occur. The species was observed during surveys in 2016 but not during subsequent surveys of the site (Glenn Lukos Associates 2021).
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Occurs. Observed foraging in the Study Area during surveys. Suitable nesting habitat is present in the *Quercus agrifolia* association located in the northwest portion of the Study Area.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Occurs. Observed during surveys in 2024 in *Adenostoma fasciculatum*-(*Ceanothus cuneatus*) association in the western portion of the Study Area.
Artemisiospiza belli belli	Bell's sage sparrow	None/WL	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	High potential to occur. Suitable habitat is present and there is a 2007 record approximately 2,000 feet from the Study Area (CDFW 2024).
Mammals				
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/SSC	Coastal sage scrub habitats in Southern California; intermediate canopy stages of shrub habitats and open shrub / herbaceous and tree / herbaceous edges	Occurs. One individual seen during 2018 surveys and suitable habitat is present.

Table 4. Special-Status Wildlife Species Occurring in the Study Area or with a Moderate or High Potential to Occur

Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur
Puma concolor (Southern California/ Central Coast Evolutionarily Significant Unit)	mountain lion	None/CST	Scrubs, chaparral, riparian, woodland, and forest; rests in rocky areas and on cliffs and ledges that provide cover; most abundant in riparian areas and brushy stages of most habitats throughout California, except deserts	High potential to occur. This wide-ranging species is expected to use the Study Area for range movement, foraging, and dispersal, but not for natal dens due to the human activity present (i.e., railroad use, golf course, State Route 14, and residential housing).

Table Notes:

[1] Status Abbreviations:
FE: Federally listed as endangered
FT: Federally listed as threatened
PFL: Proposed for federal listing
SE: State listed as endangered
CSE: Candidate for State Endangered
CST: Candidate for State Threatened
FP: California Fully Protected Species
SSC: California Species of Special Concern
WL: CDFW Watch List

Crotch's Bumble Bee

Crotch's bumble bee is one of several bumble bee species proposed (Xerces Society for Invertebrate Conservation et al. 2018) for listing as an Endangered species under California's Endangered Species Act. It is considered a candidate species under the California Endangered Species Act and receives the same protection as a listed species. Crotch's bumble bee is generally distributed through wildlands and rural areas in low to middle elevations (sea level to at least 6,000 feet) of California and exploits a wide range of habitats including native and exotic grasslands, coastal marshes, scrub lands, chaparral, oak-juniper woodlands, pinyon woodlands, and desert transition vegetation (on western margins of the Mojave and Colorado deserts). Like most bumble bees, Crotch's bumble bee nest in cavities in the soil, often abandoned rodent burrows, and the adults (queens, workers, and males), active in the daytime, all visit nectar and pollen resources (Xerces Society for Invertebrate Conservation et al. 2018). Crotch's bumble bee utilizes a diverse range of floral resources including those among Asclepiadaceae, Asteraceae, Boraginaceae, Brassicaceae, Ericaceae, Fabaceae, Hydrophyllaceae, Lamiaceae, Orobanchaceae, Plumbaginaceae, Polygonaceae, Scrophulariaceae, and Solanaceae families; and exhibit clear contextual preferences associated with flower species availability on any given time and location. Typically, *Asclepias* spp., *Salvia* spp., *Astragalus* spp., *Acmispon* spp., and *Vicia* spp. are among much preferred flowers (Xerces Society for Invertebrate Conservation et al. 2018).

Eight Crotch's bumble bee were identified within the Study Area during the focused surveys for the species. The individuals were found within *Artemisia tridentata* ssp. *parishii* association in the southern portion of the Study Area near Oak Springs Canyon Road. The individuals were observed foraging on *Phacelia* spp. Floral resources are expected to occur in the big sagebrush scrub, California brittle bush–ashy buckwheat scrub, California buckwheat scrub, California sagebrush–(purple sage) scrub, and deerweed–silver lupine–yerba santa scrub alliances in the

Study Area. More than 100 Voznesensky bumble bee (*Bombus vosnesenskii*) and six black tail bumble bee (*Bombus melanopygus*), both common species, were also observed.

Santa Ana Sucker

The Santa Ana sucker is a fish species endemic to the Los Angeles, San Gabriel, and Santa Ana watersheds and was federally listed as threatened on April 12, 2000 (65 FR 19686–19698). The Santa Ana sucker also occurs in the Santa Clara River, where it was previously assumed to be introduced; this population was not considered part of the listed entity. However, a recent genetic analysis indicates Santa Ana sucker may also be native to the Santa Clara River (Richmond et al. 2016).

Santa Ana suckers seem to have generalized stream habitat requirements but will not tolerate highly polluted or modified streams (Moyle et al. 1995). In general, the Santa Ana sucker occurs within small to medium sized (<6.7 meters wide) perennial stream channels with gravely to rocky substrates (Moyle et al. 1995) and prefers cool, (<30 degrees Celsius (°C)), shallow streams with good water quality, moderate gradient, velocity of approximately 0.3 meters/second, shallow depths (<1 meter), and streamside riparian vegetation that can provide refuge during seasonal floods and repopulation after flooding (Buth and Crabtree 1982; Baskin and Haglund 1999; NEA 2004; NatureServe 2007). The Santa Ana sucker thrives in well-oxygenated waters, and exposure to low dissolved oxygen levels may limit population size and distribution (BonTerra Psomas 2015). The life cycle of the Santa Ana sucker is adapted to streams that have peaks and ebbs in water volume throughout the year, and support a mosaic of sand, gravel, cobble, and boulder substrates in a series of riffles, runs, pools, and shallow sandy stream margins (NEA 2004; Saiki 2000). It has a protracted spawning period that begins in March and can last through July and is short lived, typically surviving only two breeding seasons (NatureServe 2007).

The species could occur in the northern portion of the Study Area in the Santa Clara River; however, there is no suitable habitat within the Study Area.

Unarmored Threespine Stickleback

Unarmored threespine stickleback is native to southwestern California and restricted to streams within a few areas of Santa Barbara, Los Angeles, and San Diego Counties (USFWS 2009). Historically, threespine stickleback occurred throughout much of the Los Angeles, San Gabriel, and Santa Ana River watersheds. The remaining native populations are within the upper Santa Clara River and its tributaries (Los Angeles County), San Antonio Creek on Vandenberg Air Force Base (Santa Barbara County), and the Shay Creek vicinity (which includes Shay Pond, Sugarloaf Pond, Juniper Springs, Motorcycle Pond, Shay Creek, Wiebe Pond, and Baldwin Lake; San Bernardino County) (USFWS 2009). The scaleless, freshwater fish measures an average of 2 inches in length and is characterized by three sharp, erectile spines at the forward part of the dorsal fin. Other distinguishing features of the stickleback include the presence of a pelvic girdle with a denticulated spine on either side, and large, lateral bony plates of varying number (0 to 35) (USFWS 1985). Unarmored threespine stickleback occurs in slow-moving reaches or quiet-water microhabitats of streams and rivers that are typically shaded by dense, abundant vegetation, or open areas with algal mats and barriers (e.g., sand bars, floating vegetation, low-flow road crossings) (USFWS 2009a). The species breeds year-round, with less activity occurring October through January (USFWS 2009a).

The species could occur in the northern portion of the Study Area in the Santa Clara River; however, there is no suitable habitat within the Study Area.

Arroyo Toad

Arroyo toad (*Anaxyrus californicus*) is listed as endangered up FESA and is a CDFW Species of Special Concern (SSC). The species is found in semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush (USFWS 2009b). It uses stream channels for breeding (typically third order) and adjacent stream terraces and uplands for foraging and wintering (USFWS 2009b). There are only two records of arroyo toad from the Santa Clara River, with the last being from 2001 (CDFW 2025a), and the river is not included as part of a recovery unit (USFWS 2009). As such, the species is not expected to occur in the Study Area.

Coastal whiptail

Coastal whiptail was observed in the Study Area and is a CDFW SSC. This species is a slim-bodied lizard with a long slender tail and can be found in a variety of habitats, including hot and dry open areas with sparse vegetation such as chaparral, woodland, and riparian areas (Nafis 2026). Coastal whiptail could occur throughout the Study Area.

Cooper's Hawk

Cooper's hawk was observed in the Study Area and is on the CDFW Watch List. The species primarily occurs in riparian areas and oak woodlands and it is known to use urban areas, occupying trees among residential and commercial (CDFW 2025f). While the species may forage throughout the Study Area, the species is likely to only nest in the *Quercus agrifolia* association.

Southern California Rufous-Crowned Sparrow

Southern California rufous-crowned sparrow was observed in the Study Area and is on the CDFW Watch List. The species is a resident in Southern California and it breeds in dry upland habitats with grass and shrub components (CDFW 2025f). The species is expected to use the native upland scrub and chaparral communities in the Study Area.

Coastal California Gnatcatcher

Coastal California gnatcatcher is listed as threatened under FESA and is a CDFW Species of Special Concern. The California gnatcatcher occurs mainly on cismontane slopes (coastal side of the mountains) in Southern California, ranging from Ventura and northern Los Angeles counties south through the Palos Verdes Peninsula to Orange, Riverside, San Bernardino, and San Diego counties. More than 99% of the known California gnatcatcher locations occurred below 2,500 feet AMSL (65 FR 63680). Because of the natural topography of the Southern California hills and mountain ranges, most of the higher-elevation locations are more inland, where population densities tend to be much lower than coastal populations.

The California gnatcatcher typically occurs in or near coastal scrub vegetation which is composed of relatively low-growing, dry-season deciduous and succulent plants. Of the 24 vegetation community associations and land covers identified within the Study Area, 11 associations totaling 76.54 acres were identified as potentially suitable gnatcatcher habitat for coastal California gnatcatchers. However, no individuals of the species were observed during the focused surveys. Overall, 42 avian species were observed. A full list of avian species observed and the full result of the survey is provided in Appendix D.

San Diego Black-Tailed Jackrabbit

San Diego black-tailed jackrabbit was observed in the Study Area and is a CDFW SSC. The species uses open grasslands, agricultural fields, and sparse coastal scrub and it is not typically found in high grass or dense brush (CDFW 2025f). The species is expected to use the vegetation communities associated with the Santa Clara River wash and potentially within the non-native grasslands of the Study Area.

5.3.1 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Corridors can also be aquatic resources that provide passage for fish. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as steppingstones for wildlife dispersal.

On a regional level, the Study Area does not occur within any designated wildlife corridors or habitat linkages identified in the South Coast Missing Linkages analysis conducted by South Coast Wildlands (2008) or CDFW's California Essential Habitat Connectivity Project (Spencer et al. 2010), as shown in the CDFW BIOS (CDFW 2025b). On a local level, the northern portion of the Study Area contains the Santa Clara River which provides fish passage when water is flowing and terrestrial wildlife movement. State Route 14 and residential development to the north and northwest create a barrier for northern movement by terrestrial wildlife and the railroad tracks that bisect the Study Area are expected to deter movement for smaller wildlife. Residential areas and a golf course are located to the south and west, which are expected to limit movement by terrestrial wildlife. Areas to the east contain hillsides with habitats that are expected to be used for terrestrial wildlife movement, including the Angeles National Forest lands located 0.25 miles to the east (CDFW 2025b).

5.3.2 Native Wildlife Nursery Sites

The vegetation within the Study Area is expected to provide nesting opportunities for numerous bird species. No diagnostic signs of bird rookeries (e.g., numerous nests, whitewash) or large maternal or overwintering bat roosts (e.g., large concentrations of guano or guano odors) were identified in the Study Area. The dominance of sparse ornamental vegetation and the lack of habitat to provide substantial foraging opportunities for birds on site or in the immediate area make rookeries unlikely. The lack of typical urban bat roosting habitat (bridges and older buildings with structural deficiencies) makes it unlikely for the Study Area to support natal roosting.

5.4 Jurisdictional Wetlands and Waters

A desktop review of the USFWS National Wetland Inventory (NWI) database (USFWS 2024b) indicated the presence of four features: Santa Clara River, Oak Spring Canyon Creek, Sand Canyon Creek, and a stormwater channel adjacent to the east of Sand Canyon Road near the roundabout. These two features were delineated in the Study Area.

5.4.1 Waters of the United States (USACE)

Approximately 15.75 acres of non-wetland waters potentially regulated by USACE were mapped within the Santa Clara River, as summarized in Table 5 and shown in Figure 4, Potential Jurisdictional Aquatic Resources-USACE.

Table 5. Potential USACE Aquatic Resource Summary for the Study Area

Feature Name	Cowardin[1]	OHWM Indicators	Acres/ Linear Feet[2]
Santa Clara River	Riverine, At-Least-Intermittent	CAST, CVS, CVC, BBS, SD, SB, SS, DP	15.75/3,138

Table Notes:
OHWM = ordinary high-water mark; CAST = change in average sediment texture; BBS = break in bank slope; CVS = change in vegetation species; CVC = change in vegetation cover; DP = drainage patterns; SB = sediment benches; SD = sediment deposition; SS = surface scour.

1 Pursuant to Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979) and USACE Cowardin Codes for ORM Data Entry (USACE 2023b).

2 Totals may not sum due to rounding.

5.4.2 Waters of the State (RWQCB)

Approximately 21.98 acres of non-wetland waters potentially regulated by RWQCB were mapped within the Santa Clara River, Oak Spring Canyon Creek, Sand Canyon Creek, and a stormwater channel adjacent to the east of Sand Canyon Road near the roundabout, as summarized in Table 6 and as shown in Figure 5, Potential Jurisdictional Aquatic Resources – RWQCB, CDFW.

Table 6. RWQCB Aquatic Resource Summary for the Study Area

Feature Name	Acreage/Linear Feet[1]
Non-Wetland Waters	
Santa Clara River	15.75/3,138
Oak Spring Canyon Creek	5.25/2,546
Sand Canyon Creek	0.81/790
Stormwater Channel	0.17/310
Grand Total	**21.98/6,784**

Table Notes: [1] Totals may not sum due to rounding.

- Study Area
- Project Impact Area
- Topography 10-foot Contours
- OHWM Transect
- Photo Points

Jurisdictional Resources

- USACE/RWQCB/CDFW (15.19 Acres)

N

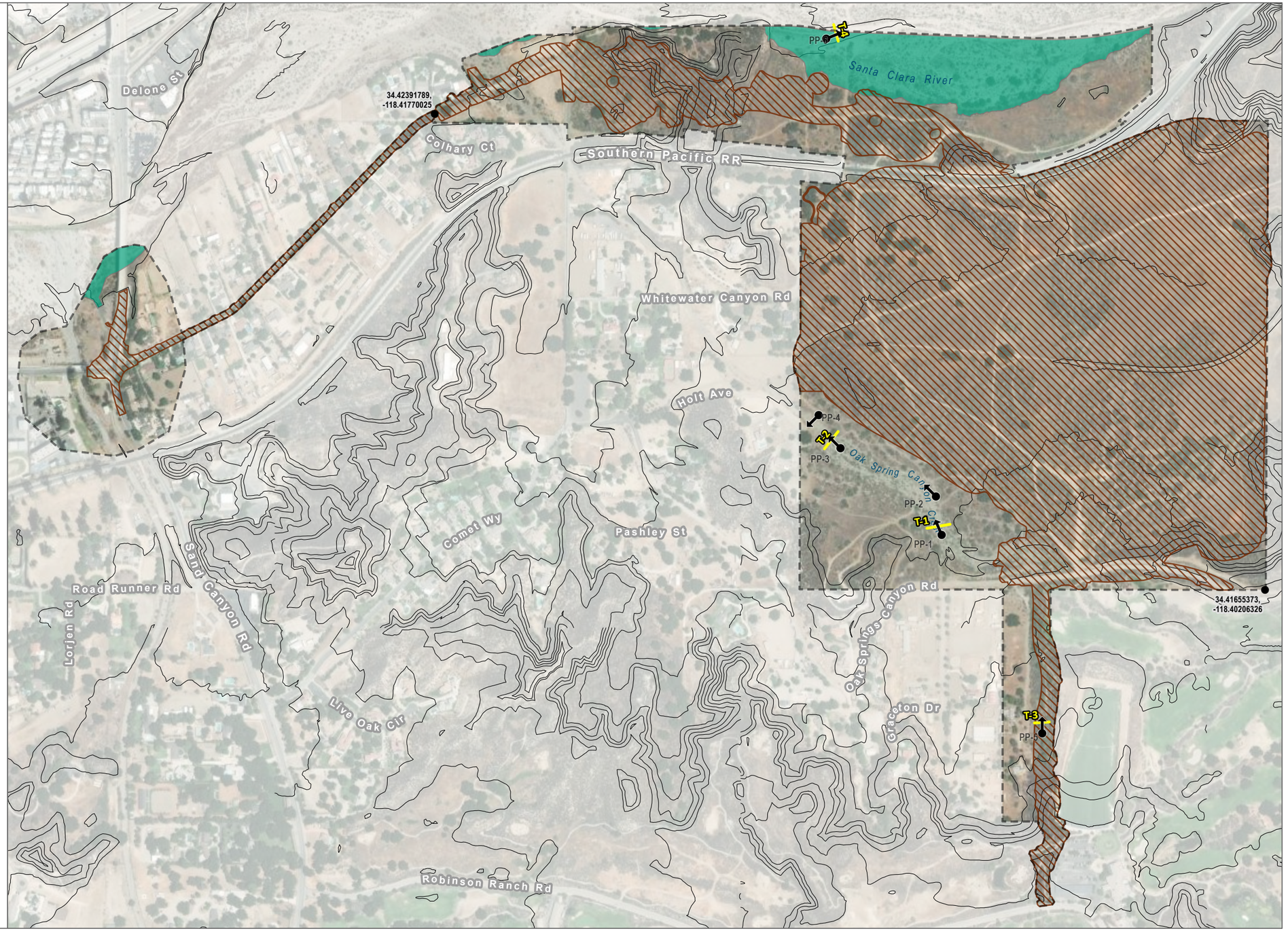
0 275 550 Feet

Coordinate System: NAD 83 State Plane Zone 5 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: NAD 83
Vertical Datum: NAVD88
1 inch = 262.5 feet

Created on February 18, 2026

Made in accordance with the Final Map and Drawing Standards for the South Pacific Division Regulatory Program as established on August 6, 2012.

Imagery Source: Maxar 2/18/2022



SOURCE: Maxar 12/8/2022

FIGURE 4

Potential Jurisdictional Aquatic Resources - USACE

Belcaro at Sand Canyon Project

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Study Area
Project Impact Area
Topography 10-foot Contours
OHWM Transect
Photo Points

Jurisdictional Resources

RWQCB

Non-wetland Waters (21.98 Acres)

CDFW

Non-wetland Waters (21.98 acres)
Riparian (3.00 acres)

Non-Jurisdictional Features

Upland Swale

N

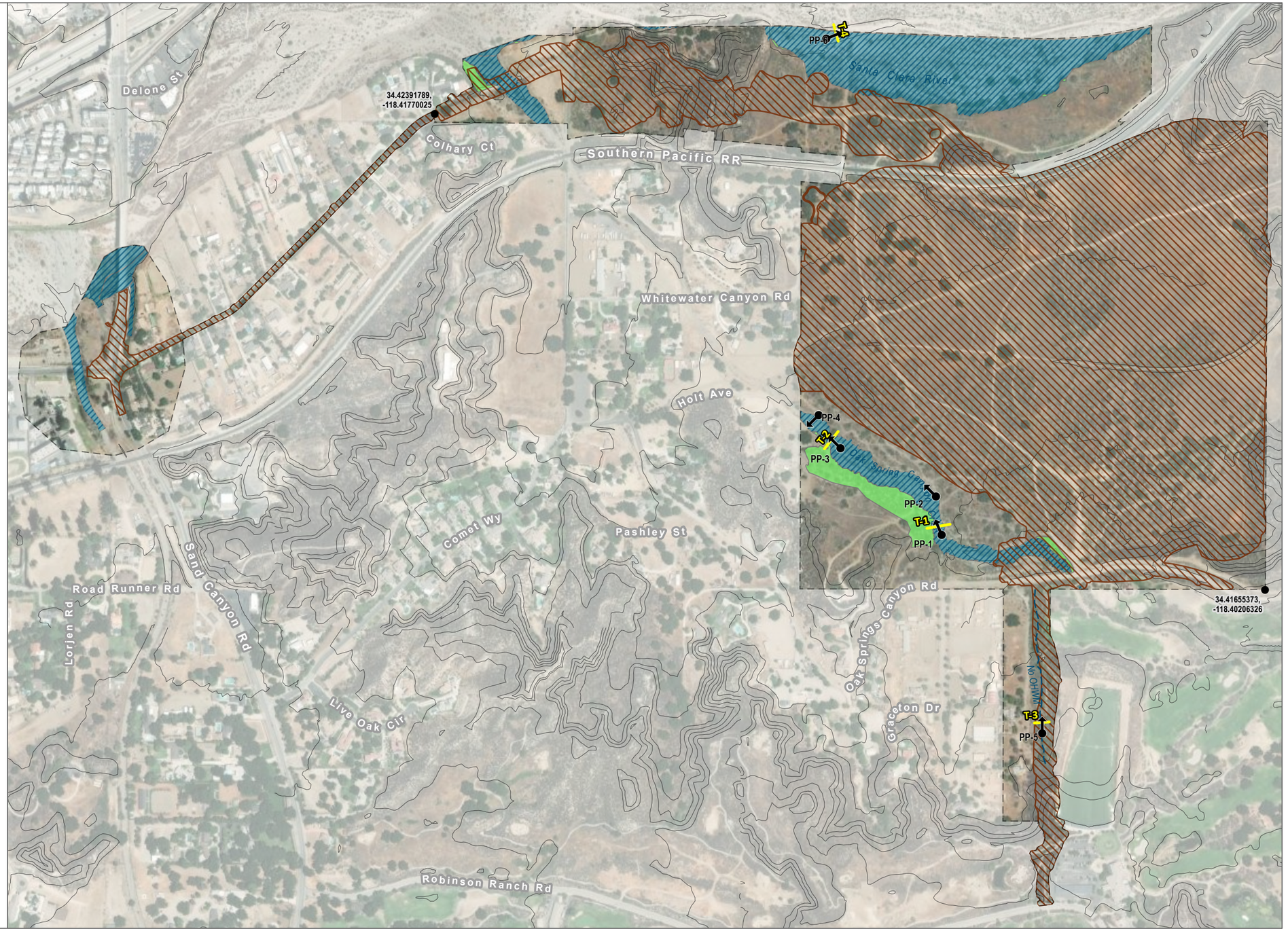
0 275 550 Feet

Coordinate System: NAD 83 State Plane Zone 5 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: NAD 83
Vertical Datum: NAVD88
1 inch = 262.5 feet

Created on February 18, 2026

Made in accordance with the Final Map and Drawing Standards for the South Pacific Division Regulatory Program as established on August 6, 2012.

Imagery Source: Maxar 12/8/2022



SOURCE: Maxar 12/8/2022

FIGURE 5

Potential Jurisdictional Aquatic Resources - RWQCB, CDFW

Belcaro at Sand Canyon Project

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5.4.3 CDFW Jurisdiction

Approximately 22.53 acres of streambed and adjacent riparian vegetation potentially regulated by CDFW were mapped within the Santa Clara River, Oak Spring Canyon Creek, Sand Canyon Creek, and a stormwater channel adjacent to the east of Sand Canyon Road near the roundabout, as summarized in Table 7 and as shown in Figure 5, Potential Jurisdictional Aquatic Resources – RWQCB, CDFW.

Table 7. CDFW Aquatic Resource Summary for the Study Area

Feature Name	Acreage/Linear Feet[1]
Streambed and Bank	
Santa Clara River	15.75/3,138
Oak Spring Canyon Creek	5.25/2,546
Sand Canyon Creek	0.81/790
Stormwater Channel	0.17/310
Subtotal	*21.98/6,784*
Adjacent Riparian Vegetation	
Santa Clara River	3.00/----
Grand Total	**24.98/6,784**

Table Notes: [1] Totals may not sum due to rounding.

5.5 Local Policies or Ordinances

5.5.1 City of Santa Clarita Oak Tree Ordinance No. 89-10

Dudek's arborists recorded 421 trees with protected zones within the Study Area. Of these, 355 trees meet the criteria for regulation under the City's Municipal Code. The remaining 66 non-jurisdictional trees, including all dead trees, do not meet the criteria for City protection. Of the 355 regulated trees, 73 trees are considered heritage trees by the City. Table 8 provides a summary of the species and regulation status of all trees mapped within the survey area. Figures showing the location of the trees can be found in Appendix B.

Table 8. Summary of All Trees

Scientific Name	Common Name	Total Trees*
Quercus agrifolia	coast live oak	202 (159) ((73))
Quercus john-tuckeri	Tucker oak	218 (195)
Quercus chrysolepis	canyon live oak	1 (1)
	Total	**421 (355) ((73))**

Notes: (X) = regulated trees; ((X)) = number of heritage trees.

As presented in Appendix B, of the 421 total trees, 116 (27.55%) trees are rated B for health, 122 (28.98%) trees are rated C for health, 108 (25.65%) trees are rated D for health, 15 (3.56%) trees are rated E for health, and 60 (14.25%) trees are rated F for health. Of the 421 total trees, 1 (0.24%) tree is rated B for structure, 259 (61.52%) trees are rated C for structure, 82 (19.48%) trees are rated D for structure, 19 (4.51%) trees are rated E for structure, and 60 (14.25%) trees are rated F for structure.

5.5.2 Significant Ecological Area Overlay Zone

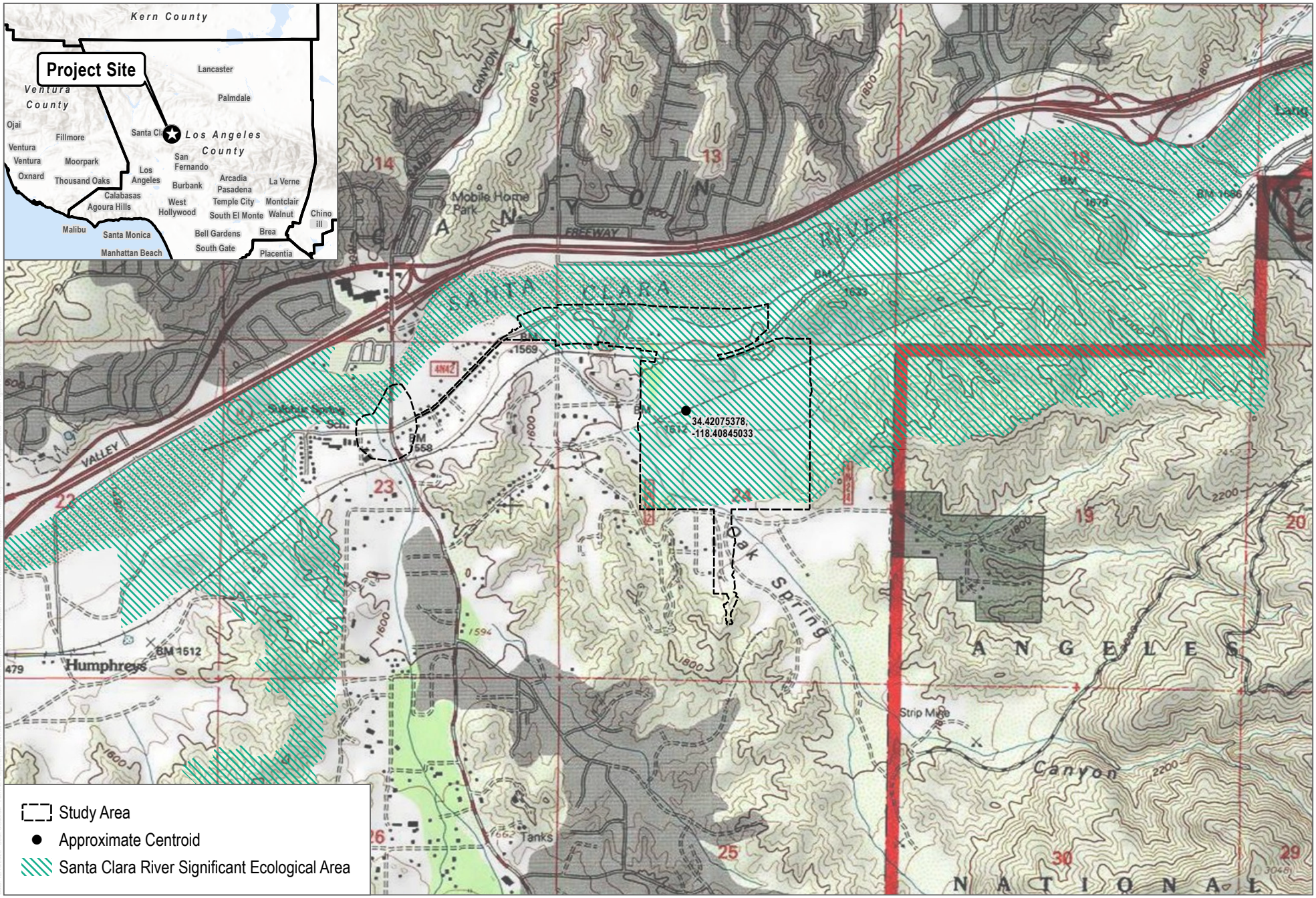
As shown in Figure 6, Significant Ecological Area, portions of the Project are within the County's designated Santa Clara River SEA. The Project is subject to the City's Municipal Code Section 17.38.080 (SEA – Significant Ecological Area Overlay Zone). It is expected that this report will be submitted to the City for a conformance review and the City will provide any additional conditions, restrictions, mitigation measures, or Project modifications that are deemed necessary to address any adverse impacts from the Project.

The Santa Clara River SEA was established to preserve sensitive plant communities that include native grassland, coast live oak riparian forest, southern willow scrub, bigcone spruce-canyon oak forest, southern sycamore-alder woodland, southern cottonwood-willow riparian woodland and forest, freshwater marsh, alluvial fan sage scrub, and vernal pool (PCR Service Corporation et al. 2000). The proposed Santa Clara River SEA encompasses the single most direct wildlife movement corridor and habitat linkage zone for wildlife movement between the Mojave Desert and higher elevations of the San Gabriel Mountains, the southern Sierran interchange zone, the Santa Susana Mountains, coast ranges, and Oxnard coastal plain (PCR Service Corporation et al. 2000). The SEA includes several sensitive plant and animal species occurring or potentially occurring within the SEA, such as slender-homed spineflower (*Dodecahema leptoceras*), unarmored three-spined stickleback (*Gasterosteus aculeatus williamsoni*), California red-legged frog (*Rana draytonii*), arroyo toad (*Anaxyrus californicus*), southwestern pond turtle (*Actinemys pallida*), least Bell's vireo (*Vireo bellii pusillus*), and southwestern willow flycatcher (*Empidonax traillii extimus*) (PCR Service Corporation et al. 2000).

The only natural population of the federally endangered unarmored three-spined stickleback is within the Santa Clara River and its tributaries (PCR Service Corporation et al. 2000). The population of federally and state endangered slender-horned spineflower in Bee Canyon is one of fewer than seven known occurrences for this species, one of only two known occurrences in the County, and one of its largest populations (PCR Service Corporation et al. 2000). The cottonwood-willow forests and woodlands, alluvial fan sage scrub, coast live oak riparian forest, and bigcone spruce-canyon oak forest communities are best represented in Los Angeles County within the proposed SEA (PCR Service Corporation et al. 2000).

5.6 Local, Regional, or State Habitat Conservation Plans

The Study Area is not within any habitat conservation plan (HCP), natural community conservation plan (NCCP), or other approved local, regional, or state habitat conservation plan (CDFW 2023b).



SOURCE: USGS Topo 7.5-Minute Series
Mint Canyon Quadrangle - Township 4N Range 15W Section 24

DUDEK

0 1,150 2,300 Feet

FIGURE 6

Significant Ecological Area

Belcaro at Sand Canyon Project

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6 Project Impacts

This chapter addresses direct and indirect impacts to biological resources that would result from the implementation of the proposed Project.

6.1 Definition of Impacts

Direct Permanent Impacts

Direct permanent impacts refer to the absolute and permanent physical loss of a biological resource due to clearing, grading, and/or construction of structures, which can be determined in four ways: (1) permanent loss of vegetation communities, land covers, and general wildlife and their habitat; (2) permanent loss of or harm to individuals of special-status plant and wildlife species; (3) permanent loss of suitable habitat for special-status species; and (4) permanent loss of wildlife movement and habitat connectivity.

Direct Temporary Impacts

Direct temporary impacts refer to a temporal loss of vegetation communities and land covers resulting from vegetation and land cover clearing, or temporary impacts to species habitat (e.g., noise from grading near bird nests and leaks or spills from construction equipment), but would terminate once the work is completed. The main criterion for direct temporary impacts is that impacts would occur for a short period of time and would either terminate or where physical changes have occurred, be reversible. Areas currently supporting native vegetation temporarily disturbed by construction activities would be restored and revegetated with a native species mix similar to that which existed prior to disturbance following completion of work in the area such that full biological function can be restored. Areas not currently supporting native vegetation would be adequately restored to prevent adverse effects such as erosion or establishment of invasive species following construction.

Indirect Impacts

Indirect impacts to biological resources are defined as those effects that occur not directly from the physical footprint of a project, but as a consequence of project-related activities that alter the surrounding environment in ways that affect biological resources. Examples of indirect impacts include edge effects, increased noise or human activity, introduction of non-native species, hydrological changes, and long-term degradation of ecological function of adjacent habitats.

For the proposed Project, it is assumed that the potential indirect impacts resulting from construction activities include fugitive dust from earthmoving activities coating leaves of plant leading to a potential decrease in photosynthesis and general human presence that may temporarily disrupt species and habitat vitality, as well construction-related soil erosion and runoff that could affect downstream resources.

6.2 Explanation of Findings of Significance

Impacts to sensitive vegetation communities or riparian habitat, special-status plant species, special-status wildlife species, wildlife corridors and habitat connectivity, and regional resource planning must be analyzed to determine whether such impacts are significant. CEQA Guidelines Section 15064(b) states that an ironclad definition of

"significant" effect is not possible because the significance of an activity may vary with the setting. However, CEQA Guidelines Section 15065(a) lists impacts that are helpful in defining whether a project may have a significant effect on the environment. Mandatory findings of significance occur when there is substantial evidence that a project could: (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, or (5) reduce the number or restrict the range of a rare or endangered plant or animal.

The following are the significance thresholds for biological resources provided in the CEQA Appendix G environmental checklist, which states that a project would potentially have a significant effect if it:

Impact BIO-1. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?

Impact BIO-2. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS?

Impact BIO-3. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact BIO-4. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites?

Impact BIO-5. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact BIO-6. Would the project conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

The evaluation of whether an impact to a particular biological resource is significant must consider both the resource itself and the role of that resource in a regional context. Substantial impacts are those that contribute to, or result in, permanent loss of an important resource, such as a population of a rare plant or animal. Impacts may be important locally because they result in an adverse alteration of existing site conditions but are considered not significant because they do not contribute substantially to the permanent loss of that resource regionally. The severity of an impact and the offsetting benefits of mitigation are the primary determinants of whether that impact can be mitigated to a less-than-significant level.

6.3 Impact BIO-1: Special-Status Species

Slender mariposa lilies and Peirson's morning glory were found on the site and the species could be directly and indirectly impacted by the Project. Crotch's bumble bee is known to forage on the Study Area and may nest there (i.e., small mammal burrows), so direct and indirect impacts could occur to the species. Three special status fish species (Santa Ana sucker, *Catostomus santaanae*; unarmored threespine stickleback, *Gasterosteus aculeatus williamsoni*; and arroyo chub, *Gila orcuttii*) have a moderate potential to occur in the Santa Clara River, but the Project is expected to only have indirect impacts on the species since suitable habitat is not present in the proposed Project footprint. Five reptile species (California legless lizard, *Anniella* spp.; southern California legless lizard, *Anniella stebbinsi*; California glossy snake, *Arizona elegans occidentalis*; coastal whiptail, *Aspidoscelis tigris stejnegeri*; and Blainville's horned lizard, *Phrynosoma blainvillii*) and one mammal (San Diego black-tailed jackrabbit, *Lepus californicus bennettii*) could be directly and indirectly impacted. Three special-status bird species (Cooper's hawk, *Accipiter cooperi*; Southern California rufous-crowned sparrow, *Aimophila ruficeps canescens*; and Bell's sage sparrow, *Artemisiospiza belli belli*) could have nests that are directly and indirectly impacted. Mountain lion (*Puma concolor*) natal dens are not expected due to this species avoiding areas with high human activity, so direct impacts are not expected, but indirect impacts could occur.

6.3.1 Direct Impacts

Slender Mariposa Lily

One special-status plant species, slender mariposa lily, occurs in the Study Area. Seven individuals were identified in 2024 by Dudek and previous surveys found eight in 2014, none in 2016 or 2018, and 11 individuals in 2019 (Glenn Lukos Associates 2021). The individuals mapped on the Study Area are expected to be associated with a population that was mapped (CNDDB Occurrence No. 138) on the parcel directly adjacent to the east of the Study Area in 2014 (CDFW 2024a). There are 143 CNDDB occurrences of the species (including 91 within 15 miles of the Study Area) and 140 herbarium records (CDFW 2025a, Calflora 2025). The number of individuals recorded in the CNNDB records range from less than 10 to almost 10,000 (CDFW 2025a). It should be noted that records are made for areas that have been surveyed, so additional suitable habitat within the range of the species are expected to support unrecorded populations. As such, the loss of the individuals on the Study Area is not expected to reduce the number or restrict the range of slender mariposa lily. Therefore, impacts to slender mariposa lily are expected to be less than significant. However, as a Project design feature, efforts will be made to translocate the bulbs to suitable habitat within the areas proposed for conservation by the Project (see MM-BIO-4) by flagging the individuals during the next blooming period and digging up the bulbs after the blooming period.

Peirson's Morning Glory

Eighty-one individual Peirson's morning glory were observed at four locations along the northeastern and southeastern boundaries of the Study Area. The species has a CRPR list 4 rank (CNPS 2025a), which means it has a limited distribution or infrequent throughout a broader area in California, and its status should be monitored regularly. There are 26 CNDDB occurrences of the species and 182 herbarium records, which are primarily located in northwest Los Angeles County (CDFW 2025a, Calflora 2025). As such, the loss of the individuals on the Study Area is not expected to reduce the number or restrict the range of Peirson's morning glory. Therefore, impacts to Peirson's morning glory are expected to be less than significant. However, as a Project design feature, efforts will be made to collect seeds following the blooming period prior to construction and the seeds spread to the areas proposed for conservation by the Project (see MM-BIO-4).

Crotch's Bumble Bee

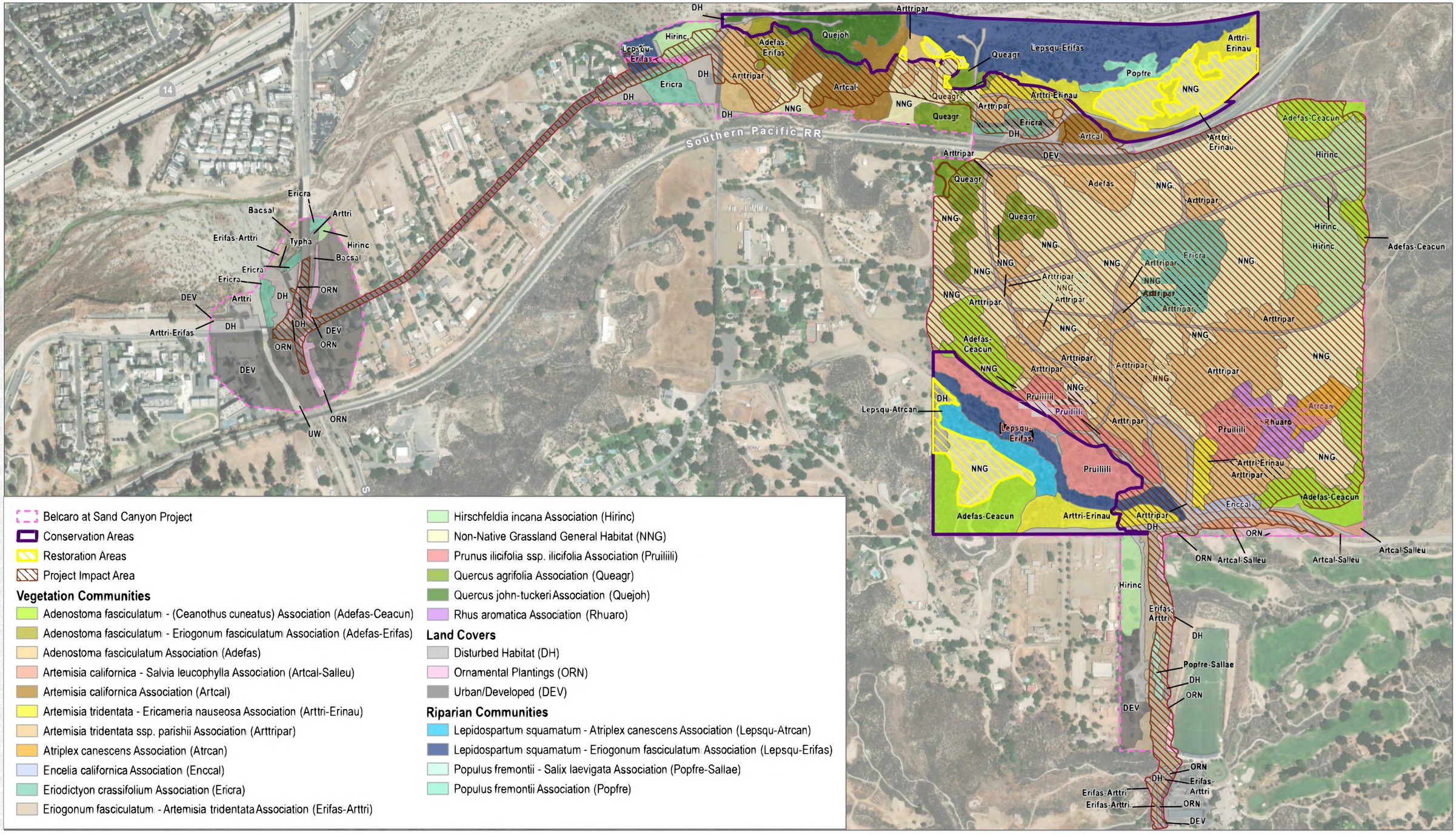
Eight Crotch's bumble bee were identified as foraging on the Study Area during focused surveys for bumble bee. More than 100 Voznesensky bumble bee and six black tail bumble bee, neither of which are considered sensitive, were also observed. Based upon the higher number of Voznesensky bumble bee foraging on site, which shows that ample foraging opportunities are present for bumble bees, a Voznesensky bumble bee nest was likely present in the Study Area or in the immediate vicinity. Based upon the relatively low number of Crotch's bumble bee and black tail bumble bee, these species likely did not have a nest on site. However, bumble bees are opportunistic and highly mobile. The species typically nests underground, so nesting individuals could be highly vulnerable to injury and mortality during construction, which could crush nests and individuals, if present on site. Harm to or the loss of individuals during construction would be significant due to reducing the rare species' numbers and would require mitigation.

If Crotch's bumble is still a candidate for listing under CESA or has been listed under CESA at the time of the start of construction of the Project, the following mitigation measure will be implemented. If the species is no longer designated as a candidate species and a formal determination that it does not warrant listing under CESA has been made at the time of the start of construction of the Project, then no mitigation is necessary. MM-BIO-1, Crotch's Bumble Bee Habitat Preservation and Minimization Measures, requires pre-construction surveys for Crotch's bumble bee nests, with buffers established around active nests until the nests are deemed inactive. MM-BIO-2, Biological Monitoring, requires fulltime monitoring during all vegetation removal and initial grading activities, and the Biological Monitor(s) would be responsible for ensuring the integrity of any buffers established for active nests. MM-BIO-3, Worker Education Awareness Program, requires that a program be developed that informs all construction personnel of the sensitive resources that occur on the Study Area and measures to avoid and minimize impacts to those resources.

Crotch's bumble bee is a generalist forager and could forage anywhere on site where suitable floral resources are present. The proposed Project would impact 15.61 acres of habitat with the potential to support foraging by Crotch's bumble bee in the form of coastal scrub, oak woodland, herbaceous, and grassland habitats, which could be a significant impact. Impacts to 15.61 acres of habitat with the potential to support this species would be a significant impact prior to mitigation under CEQA. As required by MM-BIO-4, On-site Conservation Area, and shown on Figure 7, On-site Conservation Area, the Project would preserve 50.78 acres of potential foraging and nesting habitat consisting of riparian scrub, riparian woodland, coastal scrub, chaparral, oak woodland, herbaceous, and grassland communities on site. MM-BIO-5, Habitat Mitigation and Monitoring Plan, would improve the conditions of portions of the conservation area (the 10.78 acres shown in Figure 7 that are currently non-native grasslands, upland mustards, and disturbed habitat) by providing additional foraging opportunities. Additional habitat preservation would be provided through implementation of MM-BIO-6, Off-Site Habitat Preservation. MM-BIO-7, Demarcation of Disturbance Limits, would delineate the Project footprint to help avoid any inadvertent impacts to foraging opportunities by avoiding additional impacts to native vegetation during construction.

Special-Status Fish

No direct impacts will occur to the Santa Clara River channels where unarmored threespine stickleback and Santa Ana sucker could occur. Impacts to Oak Spring Canyon Creek due to the Arizona crossing removal and bridge construction would not directly impact the two species due to the stream being ephemeral. As such, no direct impacts to unarmored threespine stickleback and Santa Ana sucker would occur.



SOURCE: Maxar 12/8/2022

DUDEK

FIGURE 7

On-Site Conservation Area

Belcaro at Sand Canyon Project

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Special-Status Terrestrial Wildlife

Five reptile species (California legless lizard, southern California legless lizard, California glossy snake, coastal whiptail, and Blainville's horned lizard) and one mammal (San Diego black-tailed jackrabbit) could be directly impacted. These species are all designated as CDFW Species of Special Concern. The loss of habitat for a special-status species is not considered as a substantial adverse effect, and therefore not considered a potentially significant impact, simply because there is an impact. That impact must also be shown to have a substantial adverse effect on the resource. In the case of an individual species, the effect of the habitat loss must be substantial and adverse relative to the range of the species (i.e., that the loss of habitat by a particular development activity would adversely affect the species as a whole, and not simply the effect that a development activity would have on a specific population). These species are vulnerable to mortality or injury during vegetation and ground disturbing activities associated with construction. It is highly unlikely that short-term construction activities could cause the greater population of these special-status species to drop below self-sustaining levels due to the relatively small area of construction activity and the short-term nature of the construction schedule. However, mortality or injury to individual species is a reasonable possibility, so direct permanent impacts are possible and would be significant. **MM-BIO-8,** Special-Status Wildlife Relocation Plan, would provide a process of clearance surveys and relocation of special-status wildlife into the onsite conservation areas (MM-BIO-4). Implementation of MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-8 would reduce direct impacts to special-status terrestrial wildlife to less than significant.

Mountain Lion

Because California mountain lion is an SC species, Project impacts resulting in direct take of California mountain lion would require an Incidental Take Permit under CESA through coordination with CDFW; however, no natal dens have been detected during field efforts that have resulted in extensive cover of the Study Area, and none are expected due to the proximity of human activity (SR-14, trains, golf course, and residential houses) deterring females from establishing natal dens (Center for Biological Diversity and the Mountain Lion Foundation 2019). As stated in Section 5.3.1, larger terrestrial wildlife movement, including mountain lion, in the vicinity of the Project is expected to occur in undeveloped lands, including the Angeles National Forest, to the east of the Project, and in the Santa Clara River Wash. The residential portions of the development are on the south side of the railroad berm, which is expected to help shield the development and its associated lighting from the Santa Clara Wash. As such. mountain lion movement in the vicinity of the Project is not expected to be significantly impacts. Therefore, no direct take of California mountain lion is expected to occur with implementation of the proposed Project.

Special-Status and Protected Nesting Bird Species

Three special-status bird species (Cooper's hawk, Southern California rufous-crowned sparrow, and Bell's sage sparrow) have suitable nesting habitat on the Study Area. Additionally, numerous other common species protected under the MBTA and California Fish and Game Code (Sections 3503, 3503.5, and 3513) have suitable nesting habitat on site. Impacts to juvenile and adults of these species are not expected; however, nesting could be disrupted if construction occurs during the breeding season. Direct impacts to nesting birds could occur because of nest abandonment, reduced reproductive success, or other disruptions to nesting. Nests, eggs, and young could also be crushed or otherwise directly affected during vegetation clearing and grading. Impacts to special-status and protected nesting bird species would be significant. **MM-BIO-9**, Nesting Bird Avoidance, would provide pre-construction surveys and buffer establishment for active nests. Implementation of MM-BIO-2, MM-BIO-3, and MM-BIO-9 would reduce direct impacts to less than significant.

6.3.2 Indirect Impacts

Special-Status Plants

Potential short-term or temporary indirect impacts to slender mariposa lily or Peirson's morning glory located in the parcel to the east of the Project could result from construction activities and include impacts related to or resulting from the activities outside of the Project limits, generation of fugitive dust, increased human activity, and the introduction of pollutants from construction equipment. Excessive dust can decrease the vigor and productivity of plants through effects on light, penetration, photosynthesis, respiration, and transpiration; increased penetration of phytotoxic gaseous pollutants; and increased incidence of pests and diseases. Additionally, invasive plant species could be introduced by the Project during construction and through landscaping installation that could alter the habitat and compete with special-status plants. There is also the potential for the introduction of invasive, non-native plant species during the long-term landscaping of the completed Project. Long-term indirect impacts could also occur due to the increased human presence and associated edge effects that may occur because of Project build-out. These indirect impacts could result in additional loss of special-status plants that could be significant. Water trucks are expected as part of Project construction, which would reduce fugitive dust. **MM-BIO-10**, Invasive Species Prevention, and **MM-BIO-11**, Landscaping Plan, would avoid and minimize the introduction of non-native plant species that could compete for habitat space with plants that the species forages on by ensuring that vehicles and equipment used during construction are weed free and prohibiting the use of invasive species in the landscaping. Implementation of MM-BIO-10 and MM-BIO-11 would reduce indirect impacts to slender mariposa lily and Peirson's morning glory to less than significant.

Crotch's Bumble Bee

Indirect impacts to Crotch's bumble bee could occur due to the introduction of non-native vegetation that could compete for habitat space with plants that the species forages on, the use of herbicides and pesticides and competition with western honeybee (*Apis mellifera*) (The Xerces Society for Invertebrate Conservation et al. 2018). MM-BIO-10 and MM-BIO-11 would avoid and minimize the introduction of non-native plant species that could compete for habitat space with plants that the species forages on by ensuring that vehicles and equipment used during construction are weed free and prohibiting the use of invasive species in the landscaping. The use of herbicides to control weeds can indirectly harm Crotch's bumble bee through removal of flowering species that once provided them with pollen and nectar resources (The Xerces Society for Invertebrate Conservation et al. 2018). Foraging bumble bees can be poisoned by pesticides when they absorb toxic substances directly through their exoskeleton, drink contaminated nectar, or gather contaminated pollen or when larvae consume contaminated pollen (The Xerces Society for Invertebrate Conservation et al. 2018). MM-BIO-4 would demonstrate recordation of a conservation easement for the on-site conservation area and requires a Conservation Management Plan (CMP). The CMP shall include a condition that discourages herbicides and pesticides, and only CDFW-approved herbicides and pesticides may be used. Research has documented that under controlled conditions, honeybees displaced native bees from flowers, altered the suite of flowers that native bees were visiting, had a negative impact on native bee reproduction, and increased the spread of disease between bees (The Xerces Society for Invertebrate Conservation et al. 2018). The CMP required by MM-BIO-4 shall also have a condition that no commercial bee operations be allowed to use the conservation area for storing their apiaries. Implementation of MM-BIO-4, MM-BIO-10, and MM-BIO-11 would reduce indirect impacts to Crotch's bumble bee to less than significant.

Special-Status Fish

Potential temporary indirect impacts to unarmored threespine stickleback, Santa Ana sucker, and arroyo chub that may occur in the Santa Clara River could result from construction activities and would include impacts from the generation of sediment and the potential introduction of chemical pollutants (including herbicides). Excessive sediment can degrade water quality making it unsuitable for the species. Chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect the habitat suitability of the water. The release of chemical pollutants can reduce the water quality downstream and degrade adjacent habitats. However, during construction, erosion-control measures would be implemented as part of the storm water pollution prevention plan (SWPPP) for the Project. Prior to the start of construction activities, the Contractor is required to file a Permit Registration Document with the State Water Resources Control Board to obtain coverage under the National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2009-009-DWQ, NPDES No. CAS000002) or the latest approved general permit. This permit is required for earthwork that results in the disturbance of one acre or more of total land area. The required SWPPP will mandate the implementation of best management practices to reduce or eliminate construction-related pollutants in the runoff, including sediment, for all exposed soils. Therefore, temporary indirect impacts to unarmored threespine stickleback, Santa Ana sucker, and arroyo chub would be less than significant due to compliance with regulations.

Special-Status Terrestrial Wildlife

As a result of Project implementation, the seven special-status wildlife species (California legless lizard, southern California legless lizard, California glossy snake, coastal whiptail, Blainville's horned lizard, San Diego black-tailed jackrabbit, and mountain lion) that occur or may occur may be indirectly impacted by short-term construction-related effects and by long-term development-related effects, which may occur as a result of both habitat degradation and effects on individuals. Potential short-term construction-related indirect impacts to wildlife habitat include fugitive dust, runoff, sedimentation, chemical pollution, and erosion. These effects could result in habitat degradation in the same manner as is described for special-status plants. Over the long term, habitat degradation could occur because of altered hydrology, altered fire regimes, and invasion of non-native plant species. In addition, increases in human activity along the open-space-urban interface could result in trampling of vegetation and/or the compaction of soils, which can affect the long-term viability of plant communities and degrade wildlife habitat.

Potential short-term and long-term indirect impacts to special-status wildlife species from habitat degradation would be less than significant. Abundant suitable habitats are present in the Project vicinity, including Angeles National Forest Lands to the east of the Study Area and the Santa Clara River wash adjacent to the Study Area. Additionally, MM-BIO-4 would preserve over 44 acres of habitat that is continuous with these open space areas. These areas will continue to provide habitat for special-status wildlife species. As a result, indirect impacts resulting from habitat degradation outside the Study Area and after development would not substantially reduce the habitat for special-status wildlife species and would not cause the special-status wildlife species populations to drop below self-sustaining levels.

Mountain Lion

CDFW has categorized most of the proposed Project footprint as having low predicted habitat for mountain lion and low suitability (CDFW 2024b); however, the species could be indirectly affected by the Project due to the loss of potential habitat used by the species and increasing the potential of mountain lion–human interactions. A study titled "Big Cats in the Big City: Spatial Ecology of Mountain Lions in Greater Los Angeles" by Seth Riley, Jeff Sikich,

and John Benson was published by the Journal of Wildlife Management in November 2021 (Riley et al. 2021). The focus of the study, as described in the article, was to better understand mountain lion habitat use near urban and managed areas, which included three predictors: home range, landscape use, and resources selection. To analyze these predictors, researchers used GPS collar telemetry data and modeling software. The Project would impact 138.63 acres of habitat with the potential to support mountain lion. For reference, the mean home range for adult male mountain lions is 91,923 acres, and the mean home range for sub-adult males is 71,178 acres (Riley et al. 2021). Therefore, even if the entire Study Area were part of the territory of a mountain lion, impacts by the Project would only consist of a very small percentage of its territory (i.e., 0.15% of the average home range for an adult male and 0.19% of the average home range for a sub-adult male). Radio-tracked mountain lions retained mean distances from development that ranged from 1,280 meters (sub-adult males) to 1,930 meters (adult males) across the four age and sex classes (adult females, adult males, sub-adult females, sub-adult males). As such, the species use of the Study Area is expected to be transient during foraging, range movement, and looking for mates.

The Angeles National Forest lands located approximately 0.25 miles to the east provide continuous habitat for mountain lion, with SR-14 expected to be a barrier to northern and southern movement by the species in the vicinity of the Project. The Sand Canyon Road overpass approximately 0.5 miles to the west-northwest of the Project and the Soledad Canyon Road underpass approximately 1.8 miles to the northeast are the nearest options for mountain lion to bypass SR-14. The species would be expected to use the Santa Clara River wash for east-west movement in the vicinity of the Project. MM-BIO-4 preserves upland areas adjacent to the Santa Clara River and Oak Spring Canyon Creek that connects to the river. Additionally, the Project proposes to replace the Arizona crossing at the intersection of Oak Spring Canyon Creek and Lost Canyon Road with a bridge, which would reduce the chance of vehicle strikes on mountain lion moving through the area. As such, the implementation of MM-BIO-4 and the Project design would reduce potential impacts to mountain lion movement to less than significant.

Following the completion of the Project, indirect and inadvertent impacts to mountain lion could occur due to human occupancy of the Study Area and people using the recreational trails in the Conservation Area. These impacts include traffic collisions, human–mountain lion interactions due to the attraction of prey, the use of rodenticides, lighting, and through increased use by recreationalists. **MM-BIO-12**, Homeowners' Association Covenants, Conditions, and Restrictions, requires that the community be informed through signage about the potential presence of mountain lions in the community. As such, with the implementation of MM-BIO-12, impacts to mountain lion from human influence would be reduced to less than significant.

6.4 Impact BIO-2: Riparian Habitat and Sensitive Communities

6.4.1 Direct Impacts

Table 9 summarizes the Project's direct impacts to vegetation communities and land covers, as shown in Figure 3. Direct impacts would occur due to removal of vegetation, alteration of soils from grading, and the development of the Project. Permanent impacts are due to vegetation removal and grading activities that result in developed areas for the Project. Temporary impacts are proposed in a 15-foot buffer adjacent to the grading limits where vegetation would be cleared but no grading would occur.

Table 9. Impacts to Vegetation Communities and Land Cover Types within the Study Area

Alliance/ Land Cover Type–Common Name	Alliance–Scientific Name	Association	Sensitive[1]	Permanent Impacts (acres)	Temporary Impacts (acres)
Native Upland Scrub Communities					
Big sagebrush scrub	*Artemisia tridentata* shrubland	*Artemisia tridentata–Ericameria nauseosa*	No	2.77	0.21
		Artemisia tridentata ssp. *parishii*	Yes	26.22	0.27
		Artemisia tridentata-Eriogonum fasciculatum	No	0	0
California brittle bush–ashy buckwheat scrub	*Encelia californica-Eriogonum cinereum* shrubland	*Encelia californica*	Yes	0.63	0
California buckwheat scrub	*Eriogonum fasciculatum* shrubland	*Eriogonum fasciculatum–Artemisia tridentata*	Yes	3.29	0
California sagebrush–(purple sage) scrub	*Artemisia californica-(Salvia leucophylla)* shrubland	*Artemisia californica*	No	3.53	0.51
		Artemisia californica–Salvia leucophylla	No	0.80	0
Deerweed–silver lupine–yerba santa scrub	*Acmispon glaber-Lupinus albifrons-Eriodictyon* spp. shrubland	*Eriodictyon crassifolium*	No	4.02	0.23
Fourwing saltbush scrub	*Atriplex canescens* shrubland	*Atriplex canescens*	No	1.53	0
			Subtotal Native Upland Scrub Communities[2]	*42.78*	*1.23*
Native Upland Chaparral Communities					
Basket bush–river hawthorn–desert olive patches	*Rhus aromatica–Crataegus rivularis–Forestiera pubescens* shrubland	*Rhus aromatica*	Yes	2.49	0
Chamise chaparral	*Adenostoma fasciculatum* shrubland	*Adenostoma fasciculatum*	No	2.36	0
		Adenostoma fasciculatum–(Ceanothus cuneatus)	No	9.51	0
		Adenostoma fasciculatum–Eriogonum fasciculatum	No	1.32	0.09

Table 9. Impacts to Vegetation Communities and Land Cover Types within the Study Area

Alliance/ Land Cover Type–Common Name	Alliance–Scientific Name	Association	Sensitive[1]	Permanent Impacts (acres)	Temporary Impacts (acres)
Holly leaf cherry–toyon–greenbark ceanothus chaparral	*Prunus ilicifolia–Heteromeles arbutifolia–Ceanothus spinosus* shrubland	*Prunus ilicifolia* ssp. *ilicifolia*	Yes	5.72	0
Tucker oak chaparral	*Quercus john-tuckeri* shrubland	*Quercus john-tuckeri*	No	0.26	0.22
			Subtotal[2]	*21.65*	*0.30*
Native Upland Woodland Communities					
Coast live oak woodland and forest	*Quercus agrifolia* woodland and forest	*Quercus agrifolia*	No	4.18	0.18
Native Riparian Communities					
Cattail marshes	*Typha* (*angustifolia, domingensis, latifolia*) *Herbaceous Alliance*	*Typha angustifolia-Typha latifolia-Typha domingensis*	No	0	0
Mulefat thickets	*Baccharis salicifolia* shrubland	*Baccharis salicifolia*	No	0	0
Scale broom scrub	*Lepidospartum squamatum* shrubland	*Lepidospartum squamatum–Atriplex canescens*	Yes	0	0
		Lepidospartum squamatum–Eriogonum fasciculatum	Yes	0.86	0.18
Fremont cottonwood forest and woodland	*Populus fremontii–Fraxinus velutina–Salix gooddingii* forest and woodland	*Populus fremontii*	Yes	0	0
		Populus fremontii–Salix laevigata	Yes	0.41	0
			Subtotal[2]	*1.27*	*0.18*
Semi-Natural Upland Communities[2]					
Non-native grassland	N/A	N/A	No	49.58	0.41
Upland mustards or star-thistle fields	*Brassica nigra–Centaurea* (*solstitialis, melitensis*) herbaceous semi-natural	*Hirschfeldia incana*	No	11.23	0.15
			Subtotal[2]	*60.81*	*0.56*

Table 9. Impacts to Vegetation Communities and Land Cover Types within the Study Area

Alliance/ Land Cover Type– Common Name	Alliance– Scientific Name	Association	Sensitive[1]	Permanent Impacts (acres)	Temporary Impacts (acres)
Non-Natural Land Cover Types					
Disturbed habitat	N/A	N/A	No	9.26	0.50
Ornamental plantings	N/A	N/A	No	0.62	0
Unvegetated wash and river bottom	N/A	N/A	No	0	0
Urban/Developed land	N/A	N/A	No	2.36	0.18
			Subtotal[2]	*12.25*	*0.68*
			Total[2]	**142.94**	**3.13**

Table Notes: N/A = Not Applicable.
[1] Sensitive vegetation alliances or associations as identified in the most current California Natural Community List, released on February 27, 2025 (CDFW 2025c).
[2] Totals may not sum due to rounding.

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Permanent (39.62 acres) and temporary (0.45 acres) impacts to of sensitive vegetation communities, for a total of 40.07 acres, would have a substantial adverse effect on the identified sensitive vegetation communities, and would be significant under CEQA and require mitigation. An additional 30.27 acres of non-sensitive, native vegetation communities, 60.81 acres of non-native vegetation communities, and 11.63 acres of land cover would be permanently impacted by the Project. An additional 1.44 acres of non-sensitive, native vegetation communities, 0.56 acres of non-native vegetation communities, and 0.68 acres of land cover would be temporarily impacted by the Project.

With the implementation of MM-BIO-4, the Project would preserve 24.39 acres of sensitive vegetation communities. MM-BIO-5 would be implemented to create 10.78 acres of *Artemisia tridentata* ssp. *parishii* association in areas of non-native vegetation. Onsite preservation and habitat creation would provide 1:1 preservation. For the remaining 4.90 acres of impacts to sensitive vegetation communities, MM-BIO-6 would provide off-site preservation of sensitive vegetation communities at 2:1. MM-BIO-7 would delineate the Project footprint to help avoid any inadvertent impacts to sensitive vegetation. As such, MM-BIO-4, MM-BIO-5, and MM-BIO-6 would provide sufficient preservation and MM-BIO-7 would protect the remaining sensitive vegetation and direct impacts to sensitive vegetation communities would be reduced to less than significant.

6.4.2 Indirect Impacts

Indirect impacts could occur through the introduction of invasive, non-native plant species during construction and for the long-term landscaping of the completed Project. MM-BIO-10 and MM-BIO-11 would require that steps be taken to avoid and minimize the introduction of invasive, non-native plant species during construction and operation of the Project. Indirect impacts could also occur during the operations of the Project by the residents of the proposed housing. MM-BIO-12 would provide rules that avoid and minimize actions by the residents that could be detrimental. With the implementation of MM-BIO-10, MM-BIO-11, and MM-BIO-12, and compliance with existing, applicable regulations, indirect impacts to vegetation communities would be reduced to less than significant.

6.5 Impact BIO-3: Jurisdictional Wetlands and Waters

6.5.1 Direct Impacts

The Project would result in permanent direct and temporary impacts to jurisdictional waters during the construction of the extension of Lost Canyon Road; construction of the bridge on Lost Canyon Road over Oak Springs Canyon Creek; construction of a bridge, retention basin, and culvert for Oak Springs Canyon Creek at Oak Springs Canyon Road; and fuel modification for structures that are near Oak Springs Canyon Creek. Table 10 includes the acres of permanent and temporary impact, which are illustrated in Figure 5 and Figure 6. The prosed road work at Sand Canyon Road and Lost Canyon Road would not impact Sand Canyon Creek and the stormwater channel adjacent to the east of Sand Canyon Road.

Table 10. Direct Impacts to Potential Jurisdictional Waters

Jurisdictional Waters Type	Direct Permanent Impacts (acres)	Direct Temporary Impacts (acres)	Direct Total Impacts (acres)
USACE waters of the United States	0.03	0.06	0.09

Table 10. Direct Impacts to Potential Jurisdictional Waters

Jurisdictional Waters Type	Direct Permanent Impacts (acres)	Direct Temporary Impacts (acres)	Direct Total Impacts (acres)
RWQCB waters of the state	0.81	0.38	1.19
CDFW streambed, bank, and riparian vegetation	1.14	0.44	1.59

MM-BIO-4 would preserve 14.24 acres of waters of the U.S. (Santa Clara River), 18.96 acres of waters of the state (Santa Clara River and Oak Springs Canyon Creek), and 21.63 acres of streambed, bank, and riparian vegetation. MM-BIO-13, Jurisdictional Waters Compensation, would require off-site compensation at a 3:1 to offset the loss of on-site waters of the U.S. and waters of the state, so 3.57 acres would be required. The Project would need to get a Streambed Alteration Agreement from CDFW, a Water Quality Certification from RWQCB, and a CWA 404 permit from USACE. These permits may have additional conditions and compensatory mitigation in addition to the mitigation measures in this report.

6.5.2 Indirect Impacts

Potential temporary indirect impacts to the Santa Clara River, Oak Springs Canyon Creek, Sand Canyon Creek, and the stormwater channel adjacent to the east of Sand Canyon Road could result from construction activities and would include impacts from the generation of fugitive dust and the potential introduction of chemical pollutants (including herbicides). Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration and transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect wetlands/ jurisdictional waters. The release of chemical pollutants can reduce the water quality downstream and degrade adjacent habitats. However, during construction, erosion-control measures would be implemented as part of the SWPPP for the Project. Prior to the start of construction activities, the Contractor is required to file a Permit Registration Document with the State Water Resources Control Board to obtain coverage under the National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2009-009-DWQ, NPDES No. CAS000002) or the latest approved general permit. This permit is required for earthwork that results in the disturbance of one acre or more of total land area. The required SWPPP will mandate the implementation of best management practices to reduce or eliminate construction-related pollutants in the runoff, including sediment, for all exposed soils. Therefore, temporary indirect impacts would be less than significant due to compliance with regulations.

6.6 Impact BIO-4: Wildlife Corridors and Nurseries

The Project would not directly impact the active water channels within the Santa Clara River wash, so fish passage would not be impacted. No rookeries or maternal or wintering bat roosts are expected, so no impacts would occur. SR-14 is expected to be a barrier to northern and southern movement by most terrestrial wildlife in the vicinity of the Project and the railroad tracks that bisect the Project may be a barrier to smaller terrestrial wildlife.

The Project, as proposed, would potentially impact local wildlife movement by impeding localized movement from undeveloped lands to the east and southeast into the Santa Clara River wash. The Angeles National Forest lands located approximately 0.25 miles to the east provide continuous habitat for wildlife, with connectivity to the Santa Clara River wash. MM-BIO-4 preserves upland areas adjacent to the Santa Clara River and Oak Spring Canyon Creek that connects to the wash. Additionally, the Project proposes to replace the Arizona crossing at the intersection of Oak Spring Canyon Creek and Lost Canyon Road with a bridge, which would reduce the chance of vehicle strikes on terrestrial wildlife moving through the area. As such, the implementation of MM-BIO-4 and the Project design would reduce potential impacts to wildlife corridors to less than significant.

6.7 Impact BIO-5: Local Ordinances

6.7.1 City Protected Trees

There is wide variation in tolerance to construction impacts among tree species, and the response of an individual tree to impacts also varies with age and condition. Impacts assessed for the Project include trees with protected zones within the proposed improvement and disturbance areas as defined in the Project plan (dated February 2024). The impact discussion in this section identifies all impacts anticipated to result to regulated oak trees based on an evaluation of tree locations compared with the Project plan. Much of the survey area will be graded to accommodate construction of the Project and necessary infrastructure (e.g., utilities, access roads, houses). Trees identified for retention and removal are graphically presented in Appendix B.

Based on grading and development plans for the proposed Project, it is estimated that of the 355 regulated oak trees, 16 (4.51%) regulated oak trees (including three heritage trees) will be removed. Project disturbance is expected to majorly encroach on the protected zones of seven (1.97%) regulated trees (including one heritage tree), and minorly encroach on the protected zones of 81 (23.1%) regulated trees (including 25 heritage trees). The remaining 250 (70.42%) regulated trees (including 25 heritage trees) trees will remain in place. Table 11 summarizes impact determinations for trees within the survey area that are subject to regulation under the City's Municipal Code.

Table 11. Summary of Regulated Tree Impact Determinations

Species	Impact Determination				Total
	Removal	Major Encroachment	Minor Encroachment	No Impact	
Canyon live oak	0	0	0	1	1
Coast live oak	13 (3)	6 (1)	72 (44)	68 (25)	159 (73)
Tucker oak	3	1	10	181	195
Total for All Regulated Trees	**16 (3)**	**7 (1)**	**82 (44)**	**250 (25)**	**355 (73)**

Table Note: (X) = heritage trees.

In total, 16 regulated trees are proposed for removal and seven regulated trees are proposed for major encroachments into their protected zone. The appraised value of the 16 removed trees is $264,480, and the appraised value of the seven major encroachments is $126,770. Although the seven major encroachment trees may survive the project given proper protective measurements, the mitigation recommendations in this report assume a worst-case scenario that these trees will be replaced. Per the City ordinance, the appraised value of the removed trees shall be applied toward planting oak trees in the developed landscape. Furthermore, per the City's

Municipal Code, mature specimen trees (24-inch, 48-inch, and 60-inch boxes) should be provided, staked or guyed on a case-by-case basis, and meet the California State Department of Forestry and Fire Protection Specification Guidelines for container-grown landscape trees (City of Santa Clarita Municipal Code Section 17.51.030). As such, Dudek recommends planting a mixture of native oak trees of various sizes (15-gallon, 24-inch, 48-inch, and 60-inch boxes) in the developed landscape and adjacent open space area with an approximate value of $391,250. To assist with project planning, the estimated cost associated with planting and maintenance (1-year maintenance period including tree staking, irrigation, mulching, and other tasks) is approximately $250 per tree for 15-gallon replacements, $550 per tree for 24-inch box replacements, $1,290 per tree for 36-inch box replacements, $4,800 per tree for 48-inch box replacements, and $10,400 per tree for 60-inch box replacements. As such, based on the appraised value of $391,250 for the site's 16 regulated oak tree removals and seven major encroachments, 712 24-inch box mitigation trees may be required, which would result in a replacement ratio of 31 trees for each removed/major encroachment tree. Following the same calculations would lead to a replacement ratio of 68:1 for 15-gallon, 13.2:1 for 36-inch box trees, 3.5:1 for 48-inch box trees, and 1.6:1 for 60-inch box trees. Per the City's Municipal Code, the minimum tree size at planting shall be 24-inch box, but substantial trees (36-inch box and larger) are strongly encouraged in front- and side-yard setback areas (City of Santa Clarita Municipal Code Section 17.51.030). The appraisal value should therefore be used for the planting of a mixture of larger trees, including 36-inch, 48-inch, and 60-inch box mitigation trees.

The Project Applicant will need to submit an application for a Class IV oak tree permit (City of Santa Clarita Municipal Code Section 17.23.170). All necessary materials, including City fees, this report, and all associated attachments, should be provided with the application. A public hearing will be required to process the oak tree permit application (City of Santa Clarita Municipal Code Section 17.25.060). **MM-BIO-14**, Oak Tree Replacement, shall provide replacement trees planted on the Project and/or offsite planting locations and/or an in-lieu of payment to the City for the remaining balance of trees that cannot be sustainably planted on the Project.

6.7.2 County of Los Angeles Significant Ecological Area Ordinance and City of Santa Clarita Significant Ecological Area Overlay Zone

The Santa Clara River SEA was established to preserve habitats and sensitive plant and wildlife species associated with the river. The Project is almost entirely sited in upland habitats, with most impacts south of the existing railroad tracks, and preserves the riparian habitats associated with the Santa Clara River. Impacts to riparian vegetation (1.20 acres) and jurisdictional waters associated with the Santa Clara River (0.04 acres) are not expected to degrade the integrity of the SEA. The Project is situated north of a golf course and to the east of a residential development, and it retains the current function of Oak Springs Canyon Creek and the Santa Clara River, so it does not cause habitat fragmentation. It minimizes edge effects on the Santa Clara River by siting the residential development south of the railroad tracks. Approximately half of the Project impacts are within non-native vegetation communities or non-natural land covers, with the other half being almost all upland vegetation communities. The riparian habitats associated with the Santa Clara River are buffered from the residential portion of the Project by the railroad tracks and the areas proposed for preservation. The Project is not expected to degrade the ecological and hydrological function of the Santa Clara River and it will benefit Oak Springs Canyon Creek by removing the Arizona crossing and replacing it with a bridge. As such, the Project conforms with the findings of the SEA ordinance.

Additionally, MM-BIO-2 requires full-time monitoring during all vegetation removal and initial grading activities. MM-BIO-3 requires that a program be developed that informs all construction personnel of the sensitive resources that

occur on the Study Area, and within the Santa Clara River SEA, and measures to avoid and minimize impacts to those resources. MM-BIO-4 requires the Project to preserve 48.30 acres of potential foraging habitat consisting of riparian scrub, riparian woodland, coastal scrub, chaparral, oak woodland, herbaceous, and grassland communities on site. MM-BIO-5 would improve the conditions of portions of the conservation area (the 9.39 acres that are currently non-native grasslands and disturbed habitat). MM-BIO-7 would delineate the Project footprint to help avoid any inadvertent impacts to foraging opportunities by avoiding additional impacts to native vegetation during construction. MM-BIO-10 and MM-BIO-11 would avoid and minimize the introduction of non-native plant species that could compete for habitat space with plants in the Santa Clara River SEA. Implementation of MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, MM-BIO-7, MM-BIO-10, and MM-BIO-11 would reduce direct impacts to SEA resources to less than significant.

6.8 Impact BIO-6: HCP/NCCP

The Project is not within any HCP, NCCP, or other approved local, regional, or state HCP (CDFW 2023). Therefore, there are no impacts to HCP, NCCP, or other approved local, regional, or state HCP.

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7 Mitigation Measures

The following mitigation measures shall be implemented during the proposed Project to reduce the significant impacts identified in Chapter 6 to a less-than-significant level. Significant direct and indirect impacts to special-status species and sensitive vegetation communities can be mitigated to less than significant with implementation of the following measures:

MM-BIO-1 Crotch's Bumble Bee Habitat Preservation and Minimization Measures

If Crotch's bumble is still a candidate for listing under CESA or has been listed under CESA at the time of the start of construction of the Project, a pre-construction survey for Crotch's bumble bee shall be conducted within the Project prior to the start of initial vegetation removal or initial grading activities occurring during the Crotch's bumble bee nesting period (February 1 through October 31). The survey shall ensure that no nests for Crotch's bumble bee are located within the construction area. The pre-construction survey shall include 1) a habitat assessment and 2) focused surveys, both of which will be based on recommendations described in the "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species," released by the California Department of Fish and Wildlife (CDFW) on June 6, 2023, or the most current at the time of construction.

If Crotch's bumble bee remains a candidate species or is designated as a threatened or endangered species under CESA, the Project Applicant will consult with CDFW whether an Incidental Take Permit is required. Any measures determined to be necessary through the Incidental Take Permit process to offset impacts to Crotch's bumble bee shall be incorporated into a habitat mitigation and monitoring plan. In the event an Incidental Take Permit is needed, mitigation for direct impacts to Crotch's bumble bee will be determined by CDFW.

The habitat assessment shall, at a minimum, include historical and current species occurrences; document potential habitat onsite including foraging, nesting, and/or overwintering resources; and identify which plant species are present. For the purposes of this mitigation measure, nest resources are defined as abandoned small mammal burrows, bunch grasses with a duff layer, thatch, hollow trees, brush piles, and man-made structures that may support bumble bee colonies such as rock walls, rubble, and furniture. If nesting resources are present in the impact area, focused surveys will be conducted.

The focused survey will be performed by a biologist who holds a Memorandum of Understanding (MOU) and Scientific Collecting Permit (SCP) for bumble bees and include at least three (3) survey passes that are not on sequential days or in the same week, preferably spaced two to four weeks apart. The timing of these surveys shall coincide with the Colony Active Period (April 1 through August 31 for Crotch's bumble bee). Surveys may occur between one hour after sunrise and two hours before sunset. Surveys will not be conducted during wet conditions (e.g., foggy, raining, or drizzling) and surveyors will wait at least one hour following rain. Optimal survey conditions are when there are sunny to partly sunny skies with temperatures that are greater than 60° Fahrenheit. Surveys may be conducted earlier if other bees or butterflies are flying. Surveys shall not be conducted when it is windy (i.e., sustained winds greater than eight mph). The biologist shall look for nest resources suitable for bumble bee use. Ensuring that all nest resources receive 100% visual coverage, the City-approved qualified biologist shall watch the nest resources for up to five minutes, looking for exiting or entering worker bumble bees. Worker bees should arrive and exit an active nest site with frequency, such that their presence would be apparent after five minutes of observation. If a bumble bee worker is detected, then a representative shall be identified to species. The biologist should be able to view several burrows at one time to sufficiently determine if bees are entering/exiting them

depending on their proximity to one another. It is up to the discretion of the biologist regarding the actual survey viewshed limits from the chosen vantage point which would provide 100% visual coverage; this could include a 30- to 50-foot-wide area. If a nest is suspected, the surveyor can block the entrance of the possible nest with a sterile vial or jar until nest activity is confirmed (no longer than 30 minutes).

Identification will include netting/capturing the representative bumble bee in appropriate insect nets, per the protocol in U.S. National Protocol Framework for the Inventory and Monitoring of Bees, by the biologist who holds the MOU and SCP for bumble bees. The bee shall be placed in a clear container for observation and photographically documented. The bee will be photographed using a macro lens from various angles to ensure recordation of key identifying characteristics. If bumble bee identifying characteristics cannot be adequately captured in the container due to movement, the container will be placed in a cooler with ice until the bumble bee becomes inactive (generally within 15 minutes). Once inert, the bumble bee shall be removed from the container and placed on a white sheet of paper or card for examination and photographic documentation. The bumble bee shall be released into the same area from which it was captured upon completion of identification. Based on implementation of this method on a variety of other bumble bee species, bees become active shortly after removal from the cold environment, so photography must be performed quickly.

If nest resources occupied by Crotch's bumble bee are detected within the construction area, no construction activities shall occur within 100 feet of the nest, or as determined by the biologist through evaluation of topographic features or distribution of floral resources. The nest resources will be avoided for the duration of the Crotch's bumble bee nesting period (February 1 through October 31). Outside of the nesting season, it is assumed that no live individuals would be present within the nest as the daughter queens (gynes) usually leave by September, and all other individuals (original queen, workers, males) die. The gyne is highly mobile and can independently disperse to outside of the construction footprint to surrounding open space areas that support suitable hibernacula resources.

A written survey report will be submitted to the City within 30 days of the pre-construction survey and shall be reviewed and approved by the City before the start of grading and construction activities. The survey report shall also be submitted to CDFW within the same timeframe for its consideration and action in accordance with applicable laws and regulations. The report will include survey methods, weather conditions, and survey results, including a list of insect species observed and a figure showing the locations of any Crotch's bumble bee nest sites or individuals observed. The survey report will include the qualifications/resumes of the surveyor(s) and biologist who holds the MOU and SCP for bumble bees, detailed habitat assessment, and photo vouchers. If Crotch's bumble bee nests are observed, the survey report shall also include recommendations for avoidance, and the location information will be submitted to the CNDDB at the time of, or prior to, submittal of the survey report.

MM-BIO-2 Biological Monitoring

Prior to the issuance of a grading permit, the Applicant shall submit the qualifications of potential Biological Monitor(s) to the City for review and approval. The Applicant shall then fund the City-approved Biological Monitor(s) during Project construction to monitor construction activities and to ensure compliance with all mitigation measures. The Biological Monitor shall be present on site during all vegetation removal and each day prior to the commencement of grading activities. The Biological Monitor shall be responsible for conducting a pre-construction clearance survey and any special-status species shall be relocated to the conservation area (see MM-BIO-4). Pre-construction clearance surveys shall be conducted prior to construction of each new phase of the development. The Biological Monitor shall monitor to ensure that wildlife does not become entrapped in excavation or trenching

areas. Safeguards shall be implemented during daytime periods of non-activity and overnight, such as placing a platform over trenches, flush with the ground surface; installing escape ramps in trenches; or installing exclusionary fencing. Should relocation of any trapped wildlife be required, construction shall be halted until the Biological Monitor arrives on site and clears the work area (in compliance with all applicable permits and authorizations).

The Biological Monitor shall regularly inspect the Project as needed after the completion of all grading activities. Monthly spot-check monitoring is anticipated to be required throughout the construction of the Project for those areas that are graded but not yet developed/landscaped. During monthly visits, the biological monitor shall address the following: (1) the potential establishment of invasive species and require weed abatement (if necessary) in accordance with MM-BIO-10; (2) address the potential establishment of native vegetation/habitat to reduce the potential for impacts between phases of construction; (3) identify deficiencies, if applicable, with any erosion control measures that have the potential to negatively impact biological resources.

Daily monitoring reports shall be prepared by the Biological Monitor that at a minimum document the results of any surveys conducted, wildlife relocations, construction activities performed, compliance issues observed, corrective actions taken during the reporting period. The monitoring reports shall include photos as appropriate and be made available to the City at their request.

MM-BIO-3 Worker Education Awareness Program (WEAP)

Prior to the initiation of the initial vegetation removal or initial grading activities, all personnel associated with those activities shall attend a worker education awareness program (program) conducted by a City-approved qualified biologist. In general, the program shall discuss any potentially occurring sensitive biological resources or species and habitat preference(s), occupied habitat in the area, life histories, as well as potential construction impacts, protection measures, and Project limits. Legal protections and regulations pertinent to the biological resources that may be present shall also be included in the program. A species and habitat fact sheet shall be developed prior to the training program and distributed at the training program to all contractors, employers and other personnel involved with the construction of the Project.

After the kickoff meeting, the Project Applicant shall notify the City-approved qualified biologist in advance if additional contractors are employed during the initial vegetation removal or initial grading activities. A sign-in sheet will be circulated for signatures to all personnel that attend the workers educational training to confirm that program materials were received and that they understand the information presented.

MM-BIO-4 On-site Conservation Area

The on-site conservation easement area ("Conservation Area") shall be designated on the final map. Additionally, a letter of intent shall be obtained from the Conservation Easement holder the qualifications for which are described below. Prior to the issuance of a grading permit, the Applicant shall demonstrate the recordation of a conservation easement, as defined by California Civil Code section 815.1, that permanently preserves 50.78 acres of open space within the Project boundaries for long-term conservation and management as a natural conservation area. Table 12 lists the vegetation communities that would be preserved, which includes 24.49 acres of sensitive vegetation communities.

Table 12. Vegetation Communities Preserved by the Project

Vegetation Community / Land Cover	Preserved via Conservation Easement
Adenostoma fasciculatum-(*Ceanothus cuneatus*) Association	4.27
Adenostoma fasciculatum-Eriogonum fasciculatum Association	0.34
Artemisia californica Association	1.69
Artemisia tridentata-Ericameria nauseosa Association	5.61
Artemisia tridentata ssp. *parishii* Association[1]	0.61
Disturbed habitat	2.55
Eriogonum fasciculatum-Artemisia tridentata Association[1]	0.01
Hirschfeldia incana Association	0.01
Lepidospartum squamatum-Atriplex canescens Association[1]	2.45
Lepidospartum squamatum-Eriogonum fasciculatum Association[1]	14.92
Non-Native Grassland General Habitat	8.22
Populus fremontii Association[1]	1.27
Prunus ilicifolia ssp. *ilicifolia* Association[1]	5.22
Quercus agrifolia Association	0.49
Quercus john-tuckeri Association	3.11
Total Acres	**50.78**

Table Note: [1] Sensitive Vegetation Community (CDFW 2025c)

Conservation Management Plan

As part of recording the conservation easement, a long-term Conservation Management Plan (CMP) applicable to the On-Site Conservation Area shall be prepared and submitted to the City for approval. The CMP shall identify the required resource management activities and the entities that shall be responsible for managing those activities in perpetuity. The CMP shall set forth the following requirements that shall be implemented by the entity that holds the conservation easement and/or manages and stewards the Conservation Area: (1) there shall be no grading or other construction activities within the Conservation Area, except for the proposed habitat enhancement/restoration, construction and maintenance of signage, and trail maintenance; (2) off-trail activities (e.g., hiking, biking, horseback riding) shall be prohibited; (3) signage shall be installed at the trailheads and at any access points to the On-site Conservation Area, which shall include information on the organization that holds the conservation easement, brief descriptions of the restoration activities, protection of biological resources, and restrictions to human activities; (4) signage shall be placed in visible locations and shall require that humans and domesticated pets shall remain within the limits of designated hiking trails, all domesticated pets shall be on leashes, owners shall clean up after domesticated pets, and that smoking is prohibited; (5) no fencing or other barriers to wildlife movement shall be installed; (6) dog waste bag dispensers and wildlife-proof receptacles for trash shall be provided at appropriate locations on the trail; ((7) commercial honeybee operations shall not be allowed to use the Conservation Area for storing their apiaries; (8) rodenticides shall be prohibited; (9) herbicides and pesticides shall be discouraged, and only those typically used for invasive plant management in California wildlands shall be allowed, per the California Invasive Plant Council & Pesticide Research Institute's Best Management Practices (BMPs) for Wildland Stewardship[1]; (10) at least one annual walk-through survey shall be

[1] California Invasive Plant Council & Pesticide Research Institute. 2015. Best Management Practices (BMPs) for Wildland Stewardship. Accessed October 2023. https://cal-ipc.org/docs/bmps/dd9jwo1ml8vttq9527zjhek99qr/BMPHerbicide.pdf.

conducted by a biologist to qualitatively monitor the general condition of on-site habitats and to check for any new introduction or expansion of invasive plant species; (11) collect and remove trash, repair vandalized signs, and rectify trespass impacts; and (12) provide annual reporting that document the conditions of the Conservation Area.

Approved work shall be outlined in the CMP and in the conservation easement, including monitoring and maintenance efforts or for other activities associated with preserve management, and prohibited activities shall be delineated. The conservation easement holder shall be a public or private sector entity which has as part of its mission the protection of the environment, including lands, plant species, and/or wildlife species, and can be expected by its organization and history to remain in existence for the foreseeable future. The entity that holds the endowment shall meet the criteria outlined in Government Code section 65968(b). Funding for implementation of the tasks in the CMP shall be provided by a traditional endowment, establishing a community facilities district or landscape management district, or through contractual obligation with the Homeowners' Association or other equivalent mechanism(s).

MM-BIO-5 Habitat Mitigation and Monitoring Plan

Prior to the issuance of a grading permit, a City-approved Restoration Biologist shall be retained by the Applicant to prepare a Habitat Mitigation and Monitoring Plan (HMMP) detailing the specific approach for each type of habitat restoration and establishment area, and special-status species transplant location, and will outline detailed performance standards and monitoring requirements for each; following the monitoring and reporting methods and performance standards listed below. The HMMP shall be submitted to and approved by the City Planning official prior to the onset of Project-related ground-disturbing activities. The acreages allotted for on-site establishment apply to a total of 10.78 acres of non-native grassland and disturbed habitat in the Conservation Area (MM-BIO-4). *Artemisia tridentata* ssp. *parishii* association, a sensitive community would be established in the area. The implementation of the HMMP will be funded and implemented by the Applicant.

Habitat Restoration/Enhancement Implementation

The following best management practices will be conducted during the implementation of the Habitat Restoration/Enhancement activities.

Schedule

Establishment of restoration/revegetation sites will be conducted during the appropriate time of year (between October 15 and January 30), with planting and/or seeding occurring immediately after the restoration sites are prepared.

Stressors

Any stressors causing habitat degradation should be addressed prior to starting restoration. This includes the removal of invasive plants and trash. Removal of invasive species will include the following:

- Removal of non-native species in patches of native habitat shall be conducted in such a way as to minimize impacts to the existing native vegetation.
- Any proposals for use of herbicide treatments should be accompanied by a plan that demonstrates:
  - that other methods of invasive species control have been tested, and that a single application of herbicide has been determined to be the best solution;

  - that there is a post application plan for revegetation and/or mulching; and
  - that the treatment is a one-time application.
- Preemergent herbicide will not be used

Plant Material

The following will be implemented:

- Details regarding the planned source of their plant material will be provided
- All stock from nurseries will be derived from plants originally collected within cis-montane Los Angeles County.
- Plant material used for habitat restoration purposes will consist of native species that are local to the immediate area of the mitigation site.
- All plant material proposed for use in a habitat restoration program will be inspected by a City-approved Restoration Biologist to ensure that all container plants are in good health and do not contain pests or pathogens that may be harmful to existing native plants or wildlife species.
- Container plants and other landscaping materials (including organic mulches) should be inspected by the City-approved Restoration Biologist to ensure they do not contain Argentine ants.
- Native seed mixes will be inspected by the City-approved Restoration Biologist prior to their application to ensure that they contain the proper species and that seed packages are in good condition and do not contain any pests or pathogens.
- Diseased or infested plant, seed, or landscape materials should be removed from the site and transported to an appropriate off-site green waste facility.
- One application of mulch will be done, except for areas that will provide nesting opportunities for native bees.

Maintenance Plan/Guidelines

A Maintenance Plan will be included that outlines the following: (1) weed control, including cleaning of equipment to prevent further spread or introduction of new weeds; (2) herbivory control; (3) trash removal; (4) irrigation system maintenance; (5) maintenance training; and (6) replacement planting.

Signage and Fencing

Signage specifications will be developed to indicate the site is a restoration/preserve area and to either indicate that trespassing is not allowed or to instruct visitors to stay on trails. Specifications on fencing to protect biological resources and restrict human access will be provided.

Monitoring Methods

Proposed plantings, enhancement/restoration, and receptor sites will be monitored for five years following the completion of seeding or planting. The monitoring program will consist of the observation and evidence of vegetative growth, observation of emergent and flowering special-status plant species where required, along with seed production for flowering plants, photo-documentation, and measurements of annual rainfall.

A City-approved Restoration Biologist restoration specialists, biologists, or horticulturists with appropriate credentials and experience in native habitat restoration shall perform monitoring. Continuity within the personnel and methodology of monitoring shall be maintained insofar as possible to ensure comparable assessments.

The City-approved Restoration Biologist will conduct monitoring surveys quarterly during the non-growing season for each enhanced or restored habitat type or particular plant species where required. During the growing period, or as soon as vegetative growth is observed, the enhancement/restoration and receptor sites will be monitored on a monthly basis through seed production for five years to document the growth of the enhanced or restored habitat type or replacement population.

Qualitative surveys, consisting of a general site walkover and habitat characterization, will be completed during each monitoring visit. General observations, such as growth, flowering, and seed production, as well as pest problems, weed establishment, mortality, and site security, will be noted in each site walkover. The City-approved Restoration Biologist will also note observations on native plant recruitment for the purpose of later discussion in the annual reports. Records will be kept of mortality and other problems such as insect damage, weed infestation, and soil loss.

Surveying Flowering and Seed Production

In the case of replacement populations for specific species, flowering individuals observed within receptor sites will be counted. As noted above, quantitative surveys may require multiple visits per month as the blooming period may be staggered along several months (i.e., vegetative growth or non-blooming individuals may not be detected until that individual has bloomed). Peak blooming periods may fluctuate year to year due to seasonal conditions, therefore multiple visits will aid in a more accurate count of flowering individuals. Each flowering individual in the restoration plots will be tallied and recorded on data sheets. The total yearly population will be calculated each year for the annual monitoring results.

Photo-Documentation

Permanent stations for photo-documentation will be established prior to or during the first annual monitoring event. Photos shall be taken each monitoring period from the same vantage point and in the same direction each year and shall reflect material discussed in the annual monitoring report.

Monitoring Schedule

During the growing period, or as soon as vegetative growth is observed, each enhancement/restoration, and receptor site will be monitored monthly through seed production for five years.

Annual Monitoring Reports

At the end of each monitoring period an annual report will be prepared for submittal to City. The report will summarize the information collected during the qualitative and quantitative monitoring. Each report will document the monitoring methods and description of the enhancement/restoration and receptor sites, provide copies of field data, photo-documentation, monitoring results, an analysis of success, and recommendations for the Project and or remedial measures if necessary.

Since seeding of particular species may not occur when planned, monitoring shall be tied to the actual implementation date (e.g., the first annual report shall be delivered on January 1st of the year following the first growing season after enhancement/restoration and/or seeding). These reports will describe the success of the relocation and will discuss the efficacy of the various methods employed to propagate this species. These reports will also include the following:

- a list of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities for that year;
- a vicinity map indicating location of the mitigation site;
- a mitigation site plan, identifying plot locations, photo station locations, etc. as appropriate;
- copies of all monitoring photographs; and
- an analysis of all qualitative and quantitative monitoring data.

Performance Standards

The performance standards set forth below are to be achieved for the mitigation and monitoring program to be considered successful. Because of the variability of growing conditions and the number of flowering individuals from year-to-year, the performance standards will be considered to have been achieved if during any of three years of the five-year monitoring period, the target acreage or population number is achieved. Thus, the annual standards provide a guide showing that the program is on a positive trajectory.

- The growing conditions and number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe translocated populations over a period of years to accurately determine survival. To this end, this plan proposes a five-year monitoring term to track flowering individuals which provides the best and easiest indicators to track that the translocation is succeeding.
- Various threats to plants must be minimized to ensure survival, and ultimate flowering of seeded individuals leading to future germination/successful reproduction.
- Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific enhancement/restoration areas and translocation/receptor sites are exhibiting a positive trajectory.

Should the performance standards be achieved early in the program, monitoring will continue for the full five years to ensure that there is no degradation of the habitat values during the five-year period.

Performance Standards for Five Year Monitoring Period

- Flowering of the total number of flowering plants originating from seed shall equal or exceed the number of container individuals counted during the two-year monitoring period (at least three years of the five-year monitoring period).
- Survival of 80-percent of established individuals.
- Habitat subject to translocation must exhibit same or less cover by non-native grasses; and forbs than during the initial planting (30-percent).

Adaptive Management

The HMMP shall include adaptive management strategies in the event the mitigation and monitoring program fails to achieve the performance standards discussed above during the five-year monitoring period, the Project Applicant will implement remedial measures to attempt to achieve the performance standards. These include installing additional container plants, broadcasting additional seeds, and extending the irrigation period.

MM-BIO-6 Off-Site Habitat Preservation

If 1:1 mitigation cannot be provided on site, mitigation for up to 4.90 acres of direct impacts to sensitive vegetation communities shall be implemented through off-site acquisition of sensitive vegetation communities, such as mitigation bank credits, and/or turnkey projects with mitigation banks (as approved by the City) prior to the issuance of the grading permit.

MM-BIO-7 Demarcation of Disturbance Limits

Prior to commencement of earthwork for each phase of Project construction, the construction limits shall be clearly demarcated (e.g., installation of flagging or temporary high visibility construction fence), as recommended by the City-approved Biological Monitor. All construction activities including equipment staging and maintenance shall be conducted within the marked disturbance limits to prevent inadvertent disturbance to sensitive vegetation communities outside the limits of work. The flagging shall be maintained throughout construction.

MM-BIO-8 Special-Status Wildlife Relocation Plan

Prior to commencement of any earthmoving activities or the pre-construction staging of equipment on the Project, the Project Applicant shall contract with a City-approved biologist to develop a Preconstruction Wildlife Survey and Relocation Plan for terrestrial reptiles, including California legless lizard, southern California legless lizard, California glossy snake, coastal whiptail, and Blainville's horned lizard; San Diego black-tailed jackrabbit is highly mobile and would be expected to leave areas of the Project on its own volition. The Preconstruction Wildlife Survey and Relocation Plan shall be submitted to the City for review prior to any ground-disturbing activities within potentially occupied habitat.

The Plan shall include, at a minimum, the following:

1. Protocols for pre-construction surveys to flush out and/or move identified special status wildlife within the Study Area, as feasible.
2. Relocation to the Onsite Conservation Area shall be the primary location, unless otherwise approved by the City.
3. The timing, frequency, and locations where surveys should be conducted.
4. Surveys will be conducted 24 hours prior to construction activities and repeated the morning of the proposed activity.
5. Surveys shall be conducted in all areas anticipated to be subject to vegetation clearing.
6. The habitat and conditions in the proposed relocation site(s).
7. The methods that would be used for trapping and relocating identified species.

8. All equipment used in the effort will be cleaned and decontaminated to minimize the spread of herpetofaunal pathogens.[2]
9. Any wildlife handling and relocation methodology from the CDFW-issued Streambed Alteration Agreement, if any, will be incorporated in the Preconstruction Survey and Relocation Plan.
10. Protocols for documentation/recordation of the species and number of animals relocated.
11. Relocations shall be logged and made available to the City, if requested.
12. Protocols for notifying CDFW if identified species cannot be relocated.
13. Attempts at relocation shall be logged and notification shall occur within 24 hours.
14. The timing and frequency of reports documenting the results of the surveys.

MM-BIO-9 Nesting Bird Avoidance

Project construction shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act and California Fish and Game Code with methods approved by the California Department of Fish and Wildlife to protect active bird/raptor nests. Vegetation removal shall occur during the non-breeding season for nesting birds (generally late September to early March) and nesting raptors (generally early July to late January) to avoid impacts to nesting birds and raptors.

For the remaining Project activities initiated during the breeding season for nesting birds (March 1–September 30) and nesting raptors (February 1–June 30), a pre-construction survey shall be conducted by the Biological Monitor (MM-BIO-2) for nesting birds and/or raptors within 3 days prior to any work within 300 feet for suitable nesting habitat for non-raptors and within 500 feet for suitable nesting habitat for raptors). If the Biological Monitor does not find any active nests immediately adjacent to the impact areas, the Project activity shall be allowed to proceed.

If the Biological Monitor finds an active nest adjacent to the construction area and determines that the nest may be indirectly impacted or breeding activities substantially disrupted, the Biological Monitor shall delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts shall be mapped on the construction plans, which will be included in the report(s) documenting the survey(s) that will be submitted to the County within three days of the completion of the survey. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by the Biological Monitor: (1) work limits shall be established within a buffer around any occupied nest (the buffer shall be 100–300 feet for nesting non-raptors and 300–500 feet for nesting raptors), unless otherwise determined by the Biological Monitor and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by the Biological Monitor. Encroachment into the buffer area around a known nest shall only be allowed if the Biological Monitor determines that the proposed activity would not disturb the nest occupants. Construction can proceed when the Biological Monitor has determined that fledglings have left the nest, or the nest has failed.

[2] Julian et al. 2020. Minimizing the Spread of Herpetofaunal Pathogens in Aquatic Habitats by Decontaminating Construction Equipment. Herpetological Review, 2020, 51(3), 472–483. https://parcplace.org/wp-content/uploads/2020/11/Julian-2020-Decontamination-for-Herps-for-large-equipment.pdf.

MM-BIO-10 Invasive Species Prevention Plan

To prevent the spread of invasive plant species during construction and until the establishment of common landscaped areas associated with the Project, the following measures shall be implemented:

- The WEAP (see MM-BIO-3) will include invasive species prevention measure implemented by the Project.
- All mobile vehicles and construction equipment shall be washed prior to entering the Project in an upland location where any seed material from invasive species will be contained and not carried onto the Project. Logs of the washing will be submitted monthly to the City.
- Following the completion of grading activities, for those areas of the Project that are graded but not yet developed/landscaped, the City-approved Biological Monitor shall conduct monthly spot checks to prevent the introduction or establishment of invasive plant species onto the graded areas (see MM BIO-2). If abundant invasive species are identified, the Biological Monitor shall inform the construction contractor about the infested area and recommend that the invasive species be removed. The recommendation will be included in the daily report.
- All vegetative material removed from the Project footprint shall be transported in a covered vehicle and will be disposed of at a certified disposal site.

MM-BIO-11 Landscaping Plan

Prior to the issuance of the first grading permit, the Applicant shall prepare a landscaping plan for the Homeowners' Association (HOA) maintained areas and submit the Landscaping Plan to the City for review and approval. The Landscaping Plan for the HOA-maintained areas shall include, but not be limited to, the following:

- Plant species list shall include scientific name, common name, plant container size, and quantities.
- Invasive plant species (designated by California Invasive Plant Council) shall not be included in the landscaping plan as they could establish off-site and have negative impacts to the adjacent habitats.
- Non-native milkweeds shall not be included in the landscaping plan as they could establish off site and have negative impacts to the adjacent habitats.
- Plant layout shall indicate the location of the plant species.
- Planting notes shall include irrigation and plant installation requirements such as mulch requirements.
- Ornamental varietals and selections of native species shall be avoided if they have the potential to hybridize with local native populations.
- Where native species are required, the species shall be indigenous native species of the region (locally indigenous native species).

MM-BIO-12 Homeowners' Association Covenants, Conditions, and Restrictions

The Homeowner's Association (HOA) Covenants, Conditions, and Restrictions (CC&Rs) shall include the following requirements to reduce potential human impacts on adjacent habitats and wildlife species:

- Invasive plant species (designated by California Invasive Plant Council) shall be prohibited on all residential lots, as they could establish off site and have negative impacts to the adjacent habitats.

- All trash/garbage waste and recycling receptacles have locking devices that discourage wildlife foraging in common areas/parks and shall encourage the use of such locking devices on residential receptacles, as feasible.
- Intentional feeding of wildlife, including mule deer, is prohibited.
- The exterior use of rodenticides is prohibited.
- Speed limits of 15 miles per hour shall be posted, and the CCRs shall require residents to comply with the posted speed limits.
- Smoking shall be prohibited in open space areas.
- The HOA shall not use balloons for any community events, and the use of balloons by individual homeowners shall be discouraged.
- Homeowner reprisals against native wildlife species (i.e., killing or harming native wildlife species in any way) if homeowner pets are killed or harmed by wildlife shall be prohibited.
- Public information signage shall be installed at the trailhead and in the recreation facility and printed information shall be provided to the Homeowners' Association (HOA) in order to: 1) educate and inform the public about wildlife, especially mountain lions present in the area; 2) advise on proper avoidance measures to reduce human-wildlife conflicts; 3) advise on proper use of open space trails in a manner respectful to wildlife (e.g., dogs on leash, proper waste disposal); and 4) provide local contact information to report injured or dead wildlife. Signage should be written in the language(s) understandable to all those likely to recreate and use the trails. Signage should not be made of materials harmful to wildlife.

MM-BIO-13 Jurisdictional Waters Compensation

Mitigation for up to 3.57 acres of direct impacts to jurisdictional waters shall be implemented through off-site acquisition, such as mitigation bank credits, and/or turnkey projects with mitigation banks (as approved by the City) following the issuance of permits from the USACE, Los Angeles RWQCB, and CDFW, and prior to the issuance of the grading permit.

MM-BIO-14 Oak Tree Replacement

Based on the appraised value of $391,250 for the site's 16 regulated oak tree removals and seven major encroachments, 712 24-inch box mitigation trees may be required, which would result in a replacement ratio of 38 trees for each removed/major encroachment tree. Following the same calculations would lead to a replacement ratio of 83:1 for 15-gallon, 16:1 for 36-inch box trees, 4:1 for 48-inch box trees, and 2:1 for 60-inch box trees. Per the City's Municipal Code, the minimum tree size at planting shall be 24-inch box, but substantial trees (36-inch box and larger) are strongly encouraged in front- and side-yard setback areas (City of Santa Clarita Municipal Code Section 17.51.030). The appraisal value should therefore be used for the planting of a mixture of larger trees, including 36-inch, 48-inch, and 60-inch box mitigation trees.

Should it be found that all the replacement trees cannot be accommodated on site, it is recommended that the applicant work with the City to identify alternative planting locations and/or provide an in-lieu of payment to the City for the remaining balance of trees that cannot be sustainably planted on the Project.

7.1 Conclusion

With implementation of the mitigation measures MM-BIO-1 through MM-BIO-14, all impacts to sensitive biological resources would be mitigated to less than significant.

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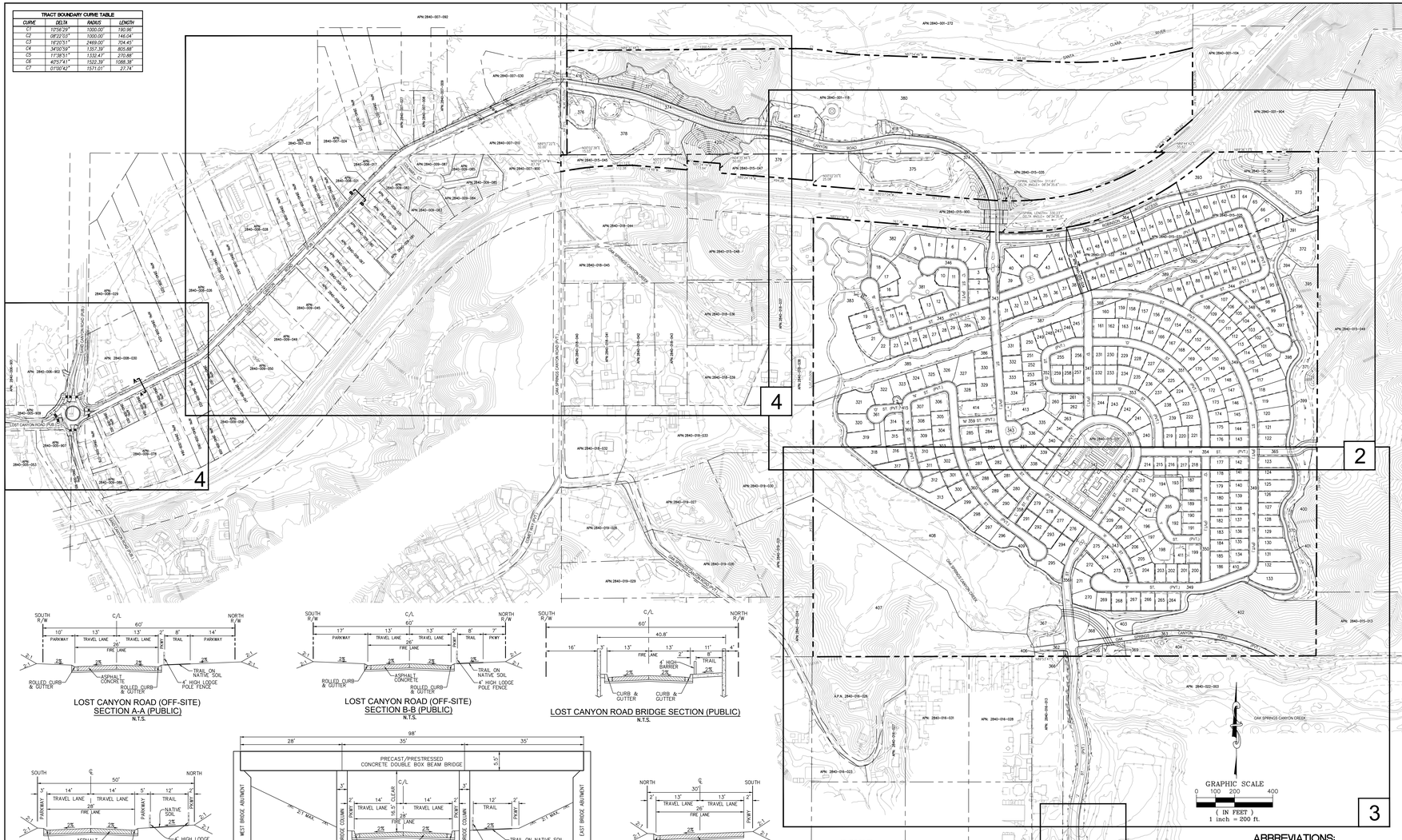
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Appendix A
Vesting Tentative Tract Map 084497

TRACT BOUNDARY CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	11°56'29"	1000.00'	190.96'
C2	09°12'03"	1000.00'	144.04'
C3	16°20'31"	2469.00'	704.45'
C4	34°00'39"	1357.39'	805.86'
C5	11°38'31"	1332.47'	270.68'
C6	40°57'41"	1522.39'	1088.38'
C7	0°00'42"	1571.01'	27.74'


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EASEMENTS:

PRELIMINARY TITLE REPORT: FIDELITY NATIONAL TITLE COMPANY ORDER NO. 00050819-989-VEN-AL EFFECTIVE DATE: APRIL 15, 2024 (AMENDED APRIL 24, 2025)

ITEM NO.	PURPOSE	FOR	IN FAVOR OF	RECORDING DATA	REMARKS
(21)	EASEMENT	POLE LINES	SOCAL EDISON	RECORDING DATE: OCTOBER 15, 1947 BOOK 25402, PAGE 111, O.R.	TO REMAIN
(24)	EASEMENT	POLE LINES	SOCAL GAS	RECORDING DATE: MARCH 28, 1958, BOOK 3235 (D-57), PAGE 180, O.R.	TO REMAIN
(25)	EASEMENT	POLE LINES & PIPE LINES	SOCAL GAS	RECORDING DATE: MARCH 28, 1958, BOOK 3236 (D-57), PAGE 183, O.R.	TO REMAIN

SHEET 4

SEE MATCH LINE

SHEET 3

SEE MATCH LINE

SHEET 2

SANTA CLARA RIVER

LOST CANYON ROAD

SORRA ACCESS ROAD

ROBINSON ACCESS ROAD

TRACT BOUNDARY

FUTURE ROBINSON DEVELOPMENT NOT A PART

FUTURE ROBINSON DEVELOPMENT TTM 65159 ROAD CONNECTION

INTERIM CONNECTION TO EXISTING TRAIL

EXISTING TRAIL

OAK SPRINGS CANYON CREEK

FEMA FLOOD ZONE AE LIMIT

CDFW/USACOE JURISDICTIONAL LIMIT

EXISTING FEMA FLOODWAY LIMIT

PROPOSED IMPROVEMENTS TO BE CONSTRUCTED BY OTHERS

PROPOSED 33' WIDE ROAD / UTILITY EASEMENT IN FAVOR OF ROBINSON DEVELOPMENT TTM 65159

PROPOSED EASEMENT IN FAVOR OF SCWA

WATER BOOSTER PUMP STATION

EXIST POWER POLE TO REMAIN

OVERHEAD POWER TO REMAIN

EXIST SCE POWER POLE TO REMAIN

EXIST GAS LINE

100' WIDE GAS EASEMENT

6' HIGH LODGE POLE FENCE

GATE

PROP. 20'X20' FIRE HYDRANT PAD

PROP. 15' DIAMETER 8' HIGH WELL-HYDRANT TANK

PROP. 24' WIDE ACCESS ROAD

PROP. 12' WIDE PUBLIC TRAIL CITY MAINTAINED

PROP. 12' WIDE PRIVATE TRAIL HOA MAINTAINED

PROP. 8' WIDE PRIVATE TRAIL HOA MAINTAINED

PROP. 12' WIDE PUBLIC TRAIL CITY MAINTAINED

PROP. 10' WIDE PUBLIC TRAIL CITY MAINTAINED

PROP. 8' WIDE PRIVATE TRAIL HOA MAINTAINED

PROP. 8' WIDE PRIVATE TRAIL HOA MAINTAINED

PROP. 12' WIDE PUBLIC TRAIL CITY MAINTAINED

PROP. 12' WIDE PRIVATE TRAIL HOA MAINTAINED

PROP. 12' WIDE PUBLIC TRAIL CITY

SEE SHEET 2 FOR MATCH LINE

SEE VIEW AT LOWER RIGHT HEREON

SEE VIEW AT UPPER LEFT HEREON

ROBINSON RANCH GOLF COURSE NOT A PART

FUTURE ROBINSON DEVELOPMENT NOT A PART

EASEMENTS:

PRELIMINARY TITLE REPORT: FIDELITY NATIONAL TITLE COMPANY ORDER NO. 00050819-989-VEN-AL EFFECTIVE DATE: APRIL 15, 2024 (AMENDED APRIL 24, 2025)

ITEM NO.	PURPOSE	FOR	IN FAVOR OF	RECORDING DATA	REMARKS
(5)	EASEMENT	UTILITIES	SANTA CLARITA WATER COMPANY	RECORDING DATE: MAY 19, 2000, RECORDING NO. 00-0777808	TO REMAIN

LOT LEGEND:

FL	INDICATES FLAG LOT
RCL	INDICATES REVERSE CORNER LOT

GRAPHIC SCALE
0 30 60 120
(IN FEET)
1 inch = 60 ft.

ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE, CARLSBAD, CA 92008
TEL: (760) 431-9896
FAX: (760) 431-9802
27413 TOURNEY ROAD SUITE 120 VALENCIA, CA 91355
TEL: (661) 799-2760
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

PLAN PREPARED FOR:
NUWI-SAND CANYON, LLC
2001 WILSHIRE BLVD. SUITE 401
SANTA MONICA, CA 90403
TEL: (916) 717-8599
ATTN: COREY HARPOLE

PLANS PREPARED BY:
ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
(760) 431-9896
PLANS PREPARED UNDER THE DIRECTION OF:
CRAIG M. WHITTEKER R.C.E. 51929 — 2/18/26 DATE
REGISTERED PROFESSIONAL ENGINEER — CRAIG M. WHITTEKER — NO. 51929 — EXP. 6-30-26 — CIVIL — STATE OF CALIFORNIA

NO.	DATE	REVISIONS	BY	APPR

SHEET 3 | CITY OF SANTA CLARITA | 6 SHEETS

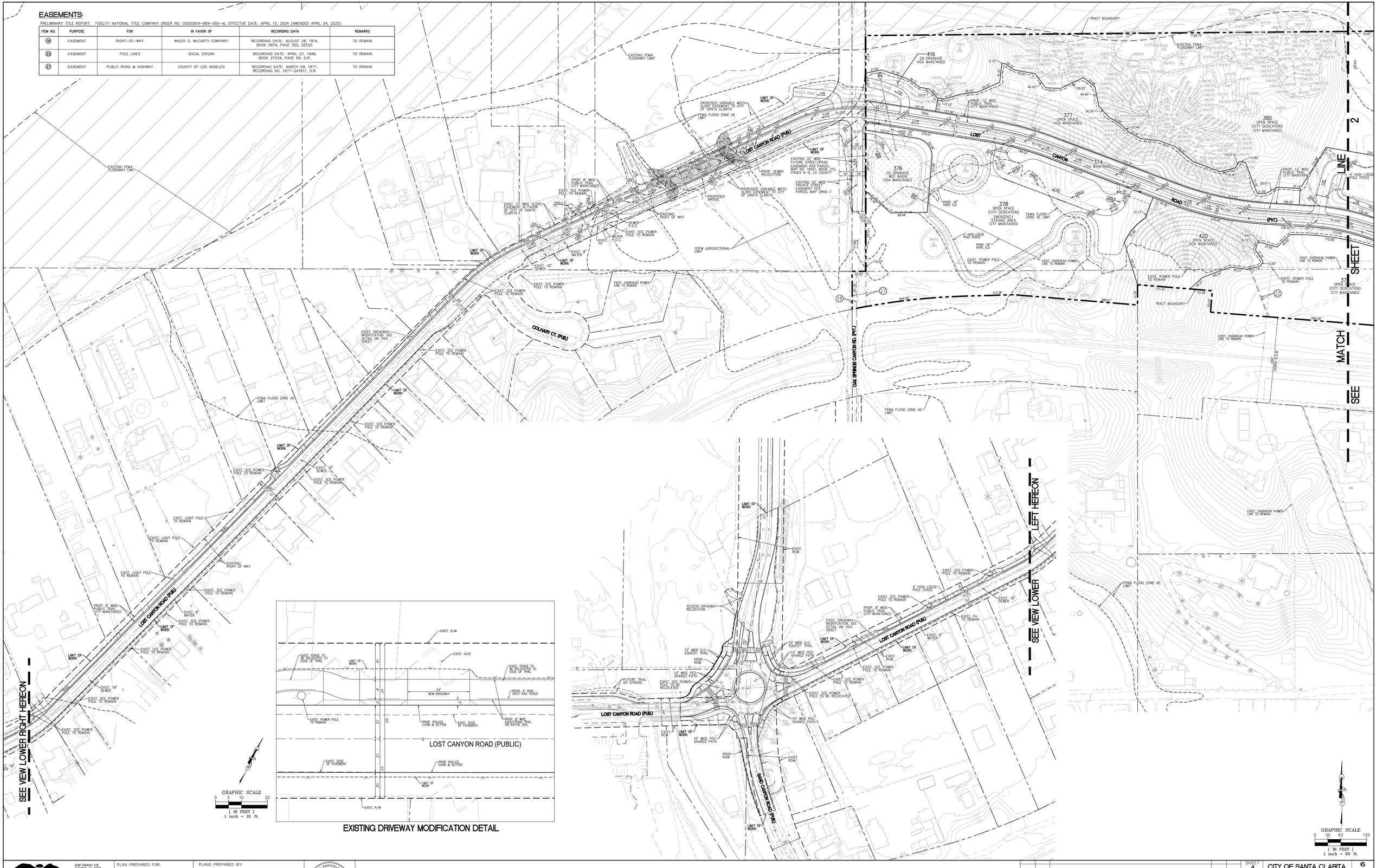
BELCARO AT SAND CANYON
VESTING TENTATIVE TRACT MAP 084497

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EASEMENTS:

PRELIMINARY TITLE REPORT: FIDELITY NATIONAL TITLE COMPANY ORDER NO. 00050819-989-VEN-AL EFFECTIVE DATE: APRIL 15, 2024 (AMENDED APRIL 24, 2025)

ITEM NO.	PURPOSE	FOR	IN FAVOR OF	RECORDING DATA	REMARKS
(18)	EASEMENT	RIGHT-OF-WAY	WALER G. McCARTY COMPANY	RECORDING DATE: AUGUST 28, 1914, BOOK 5874, PAGE 302, DEEDS	TO REMAIN
(22)	EASEMENT	POLE LINES	SOCAL EDISON	RECORDING DATE: APRIL 27, 1948, BOOK 27034, PAGE 95, O.R.	TO REMAIN
(27)	EASEMENT	PUBLIC ROAD & HIGHWAY	COUNTY OF LOS ANGELES	RECORDING DATE: MARCH 09, 1977, RECORDING NO. 1977-243511, O.R.	TO REMAIN



ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE. CARLSBAD, CA 92008 TEL: (760) 431-9896 FAX: (760) 431-9802
21403 TOURNEY ROAD SUITE 120 VALENCIA, CA 91355 TEL: (661) 799-2760
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

PLAN PREPARED FOR:
NUWI-SAND CANYON, LLC
2001 WILSHIRE BLVD. SUITE 401
SANTA MONICA, CA 90403
TEL: (916) 717-8599
ATTN: COREY HARPOLE

PLANS PREPARED BY:
ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
(760) 431-9896
PLANS PREPARED UNDER THE DIRECTION OF:
CRAIG M. WHITTEKER R.C.E. 51929 — 2/18/26 DATE

REGISTERED PROFESSIONAL ENGINEER CRAIG M. WHITTEKER NO. 51929 EXP. 6-30-26 CIVIL STATE OF CALIFORNIA

NO.	DATE	REVISIONS	BY	APPR

SHEET 4 | CITY OF SANTA CLARITA | 6 SHEETS

BELCARO AT SAND CANYON
VESTING TENTATIVE TRACT MAP 084497

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SANTA CLARA RIVER

LOST CANYON ROAD

SORRA ACCESS ROAD

ROBINSON ACCESS ROAD

TRACT BOUNDARY

FUTURE ROBINSON DEVELOPMENT TTM 65159 ROAD CONNECTION

INTERIM CONNECTION TO EXISTING TRAIL

EXISTING TRAIL

OAK SPRINGS CANYON CREEK

FUEL MOD SETBACK

MATCH LINE SEE SHEET 6

GRAPHIC SCALE
0 30 60 120
(IN FEET)
1 inch = 60 ft

ALLIANCE
LAND PLANNING & ENGINEERING INC.
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

2248 FARADAY AVE.
CARLSBAD, CA 92008
TEL: (760) 431-9896
FAX: (760) 431-9802

27413 TOURNEY ROAD
SUITE 150
VALENCIA, CA 91355
TEL: (661) 799-2760

PLAN PREPARED FOR:
NUWI-SAND CANYON, LLC
2001 WILSHIRE BLVD. SUITE 401
SANTA MONICA, CA 90403
TEL: (916) 717-8599
ATTN: COREY HARPOLE

PLANS PREPARED BY:
ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
(760) 431-9896

PLANS PREPARED UNDER THE DIRECTION OF:

CRAIG M. WHITTEKER R.C.E. 51929 — DATE 2/18/26

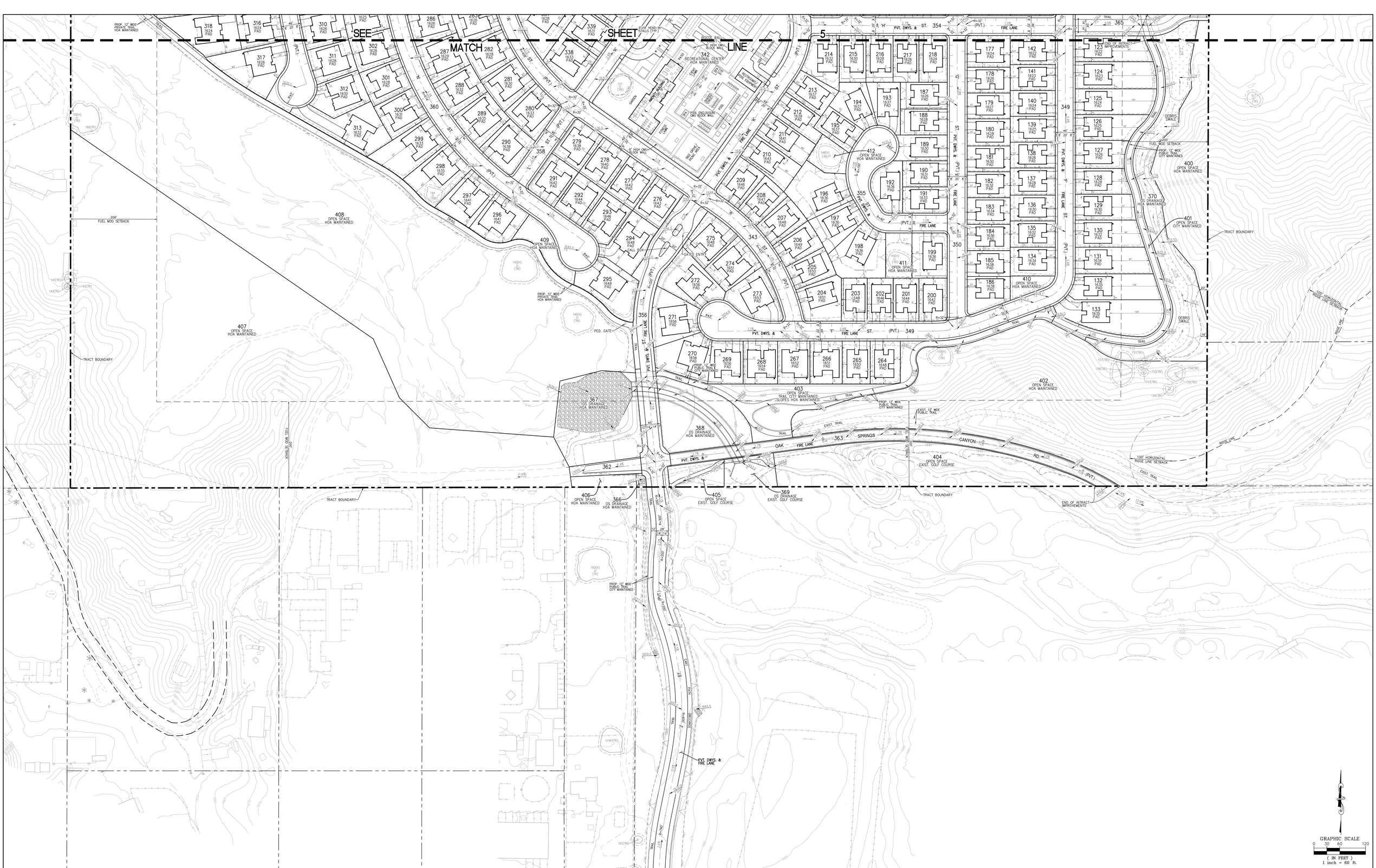
REGISTERED PROFESSIONAL ENGINEER — CRAIG M. WHITTEKER — NO. 51929 EXP. 6-30-26 — CIVIL — STATE OF CALIFORNIA

NO.	DATE	REVISIONS	BY	APPR

SHEET 5 | CITY OF SANTA CLARITA | 6 SHEETS

BELCARO AT SAND CANYON
VESTING TENTATIVE TRACT MAP 084497

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SEE SHEET 5 FOR MATCH LINE
PROP. 12' WIDE PRIVATE TRAIL HOA MAINTAINED
318 1624 PAD
316 1624 PAD
317 1628 PAD
310 1628 PAD
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312 1630 PAD
313 1632 PAD
302 1628 PAD
301 1628 PAD
300 1631 PAD
299 1633 PAD
298 1635 PAD
297 1641 PAD
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286 1628 PAD
287 1629 PAD
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281 1630 PAD
280 1633 PAD
279 1638 PAD
278 1640 PAD
277 1642 PAD
276 1643 PAD
275 1648 PAD
274 1651 PAD
273 1653 PAD
272 1656 PAD
271 1656 PAD
339 1631 PAD
338 1633 PAD
342 RECREATIONAL CENTER HOA MAINTAINED
BOCCE BALL COURT
6' HIGH CMU BLOCK WALL
MEN'S RESTROOMS
WOMEN'S RESTROOMS
TOT LOT
POOL EQUIPMENT
POOL ENCLOSURE CMU BLOCK WALL
POOL
SPA
RESTROOMS
FITNESS ROOM
MEETING ROOM
KITCHEN
MEETING ROOM ENTRANCE
8' HIGH CMU BLOCK WALL
8' HIGH CMU BLOCK WALL
GATED ENTRY
PED. GATE
PROP. 12' WIDE PUBLIC TRAIL CITY MAINTAINED
PROP. 12' WIDE PRIVATE TRAIL HOA MAINTAINED
EXIST. 16' WIDE PUBLIC TRAIL
PROP. 12' WIDE PUBLIC TRAIL CITY MAINTAINED
PROP. 12' WIDE PUBLIC TRAIL CITY MAINTAINED
PVT. DWYS. & FIRE LANE
PVT. DWYS. & ST.
ST. (PVT.)
FIRE LANE
OAK SPRINGS CANYON RD (PVT.)
END OF INTRACT IMPROVEMENTS
TRAIL
DEBRIS SWALE
FUEL MOD SETBACK
100' HORIZONTAL RIDGE LINE SETBACK
RIDGE LINE
TRACT BOUNDARY
200' FUEL MOD SETBACK
408 OPEN SPACE HOA MAINTAINED
409 OPEN SPACE HOA MAINTAINED
407 OPEN SPACE HOA MAINTAINED
410 OPEN SPACE HOA MAINTAINED
411 OPEN SPACE HOA MAINTAINED
412 OPEN SPACE HOA MAINTAINED
400 OPEN SPACE HOA MAINTAINED
401 OPEN SPACE CITY MAINTAINED
402 OPEN SPACE HOA MAINTAINED
403 OPEN SPACE TRAIL CITY MAINTAINED SLOPES HOA MAINTAINED
404 OPEN SPACE EXIST. GOLF COURSE
405 OPEN SPACE EXIST. GOLF COURSE
406 OPEN SPACE HOA MAINTAINED
366 OS DRAINAGE HOA MAINTAINED
367 OS DRAINAGE HOA MAINTAINED
368 OS DRAINAGE HOA MAINTAINED
369 OS DRAINAGE EXIST. GOLF COURSE
370 OS DRAINAGE HOA MAINTAINED
PVT. DWYS. & FIRE LANE
PVT. DWYS. & ST. 'H'
PVT. DWYS. & ST. 'F'
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PVT. DWYS. & ST. 'V'
PVT. DWYS. & ST. 'W'
PVT. DWYS. & ST. 'X'
PVT. DWYS. & ST. 'Y'
PVT. DWYS. & FIRE LANE
PVT. DWYS. & FIRE LANE
PVT. DWYS. & FIRE LANE

Appendix B
Protected Tree Report

Arborist Report

Belcaro Sand Canyon Project City of Santa Clarita, California

JANAURY 2026

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
APN	Assessor's Parcel Number
City	City of Santa Clarita
DSH	diameter at standard height
ISA	International Society of Arboriculture
project	Belcaro Sand Canyon Project

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1 Introduction

This report summarizes Dudek's evaluation and analysis of tree resources within the survey area at the proposed Belcaro Sand Canyon Project (project) site, located within the City of Santa Clarita, California (City). The survey area, defined as the area bounded by the limits of the project site, is generally located northeast of Oak Spring Canyon Road, south of California State Route 14, and west of mountainous undeveloped land (see Figure 1, Project Location).

The field inventory and assessments of the survey area's trees (development footprint) were conducted from February 14 to February 16, from August 7 to August 9, 2024, and on March 11, 2025. The focus of Dudek's field evaluations was to identify and inventory all on-site trees that are subject to regulation by the City's Municipal Code and that could be affected by the proposed development per the site plan. This report includes a discussion of tree inventory, evaluation, and analysis methods; a summary of findings; identification of anticipated impacts; and tree protection and tree impact mitigation recommendations consistent with the City's Municipal Code and the tree-removal permit process specified therein.

The City requires an oak tree permit for the cutting, pruning, removal, relocation, endangerment, damage, or encroachment into the protected zone of any regulated oak tree, which is defined as a tree that meets the following criteria:

(a) Any oak tree of the genus *Quercus*, including, but not limited to, valley oak (*Quercus lobata*), California live oak (*Quercus agrifolia*), canyon oak (*Quercus chrysolepis*), interior live oak (*Quercus wislizenii*) and scrub oak (*Quercus dumosa*)

(b) Exceeds six (6) inches in circumference (1.91 inches in diameter) when measured at a point four and one-half (4 ½) feet above the tree's natural grade (diameter at standard height [DSH])

Further protections are extended to heritage oak trees, which are defined as any oak tree measuring 108 inches or more in circumference (34.38 inches DSH) or, in the case of a multiple trunk oak tree, two or more trunks measuring 72 inches each or greater in circumference (22.92 inches DSH), measured 4.5 feet above the natural grade surrounding such tree (City of Santa Clarita Municipal Code Section 17.51.040).

The protected zone of an oak tree is defined by the City's Municipal Code as the specifically defined area totally encompassing an oak tree within which work activities are strictly controlled. Using the dripline as a point of reference, the protected zone shall commence at a point 5 feet outside of the dripline and extend inward to the trunk of the tree. In no case shall the protected zone be less than 15 feet from the trunk of an oak tree (City of Santa Clarita Municipal Code Section 17.51.040).

The City's Municipal Code extends protections to trees within public parkways and parkway tree influence areas, defined as areas on private property within 14 feet of paved surface on any major highway (City of Santa Clarita Municipal Code Section 13.76). Because no such trees were found on site, this report does not discuss these trees any further.

The analysis of potential tree impacts in this report considers the requirements outlined in the appropriate sections of the City's Municipal Code. The proposed project would involve removal of 16 regulated oak trees (including 3 heritage trees). The proposed project would further result in major encroachment into the protected zone of 7 regulated oak trees (including 1 heritage tree), and minor encroachment into the protected zone of 82 regulated

oak trees (including 44 heritage trees). The 82 minor encroachments are comprised of 41 development/grading encroachments and 41 fuel modification zone encroachments as required by the local fire jurisdiction. In total, 60 dead trees, which are not regulated by the City, are located within the project survey area, of which 17 will be removed due to their location in the project footprint. The remaining 256 trees, including 250 regulated trees (of which 25 are heritage trees) and 6 non-jurisdictional trees, would remain in place without impacts. Section 4 of this report recommends mitigation measures for anticipated tree removal and/or major encroachment based on guidelines set forth in the Guide for Plant Appraisal, 9th edition (CTLA 2000) and the Species Classification and Group Assignment manual (WCISA 2004), and protection measures for anticipated tree encroachments.

1.1 Summary

The field survey recorded 421 trees within the survey area, 355 of which are subject to regulation under the City's Municipal Code. The 355 regulated trees consist of 159 coast live oaks (*Quercus agrifolia*), 195 Tucker oaks (*Quercus john-tuckeri*), and 1 canyon live oak (*Quercus chrysolepis*). Within the 355 regulated oak trees, there are 73 heritage oak trees, all of which are coast live oaks. The 66 non-regulated trees consist of 43 coast live oaks and 23 Tucker oaks, all of which are either dead, smaller than 1.91 inches in diameter 4.5 feet above natural grade, or are not at least 4.5 feet tall. The inventoried tree locations are depicted in Appendix A, Tree Location Exhibit. The proposed project tree impacts are depicted in Appendix B, Tree Impact Exhibit.

Construction of the proposed project is expected to require removal of up to 16 regulated oak trees (including 3 heritage oak trees). The appraised value of the 16 regulated oak trees, as described in the following sections, is $264,480. Furthermore, the protected zone of 7 regulated oak trees (including 1 heritage oak tree) would be majorly encroached upon as a result of proposed grading and construction. The appraised value of the 7 major encroachment trees is $126,770. The protected zone of 82 regulated oak trees (including 44 heritage trees) would be minorly encroached upon as a result of proposed grading, construction, and fuel modification zone requirements. The appraised value of the minorly encroached trees is $2,970,050. In total, 12 dead trees, that are not regulated by the City, are located within the project footprint and will require removal to accommodate the project. The remaining 299 trees (including 6 non-jurisdictional live trees, 43 dead trees, and 250 regulated oak trees, of which 25 are heritage oak trees) would be preserved in place.

For the removal of 16 regulated oak trees, the City requires that the final appraised cost ($264,480) be applied to landscape oak tree plantings associated with the project. As such, Dudek recommends planting a mixture of 15-gallon, 24-inch, 48-inch, and 60-inch box trees in the developed landscape and available open space areas. New plantings should be appropriate native species for the site and should follow all landscaping and irrigation standards within Section 17.51.030 of the City's Municipal Code.

Additional mitigation that may be required by the City includes tree relocation, the periodic submission of affidavits by a qualified oak tree expert after construction, an objectively observable maintenance and care program, and/or payment of a fee or donation of boxed trees to the City.

Table 1 provides a summary of impact determinations for all trees surveyed for the project.

Table 1. Summary of Individual Tree Impacts

Impact	Scientific Name	Common Name	Number of Trees per Species (total)	Individual Tree Numbers	Number of Trees (total)
To Be Removed	*Quercus agrifolia*	coast live oak	8 (3)	10H, 69, 114, 144, 166, 167, 171H, 515H, 532, 533, 534,535,536	16 (3)
	Quercus john-tuckeri	Tucker oak	3	221, 382, 383	
To Be Majorly Encroached	*Quercus agrifolia*	coast live oak	6 (1)	112, 151, 157, 373H, 518, 522	7 (1)
	Quercus john-tuckeri	Tucker oak	1	258	
To Be Minorly Encroached	*Quercus agrifolia*	coast live oak	71 (43)	1H, 2, 3, 4, 5, 11H, 13H, 14, 17,19, 20, 22, 25H, 26H, 28H, 30H, 31H, 33H, 34H, 35H, 36, 37H, 38, 40H, 41, 43H, 47, 48, 53, 60H, 64H, 65H, 66H, 67H, 68H, 86H, 90H, 97H, 99H, 111H, 117H, 119, 120, 121H, 122H, 123H, 126H, 127H, 130H, 131, 132H, 135H, 136, 145, 147, 148H, 149H, 152, 153, 158, 159H, 162, 163, 164H, 374H, 375H, 381H, 519, 520, 521. 531H	82 (44)
	Quercus john-tuckeri	Tucker oak	10	154, 155, 156, 178, 179, 214, 248, 252, 253, 259	
To Be Preserved	*Quercus agrifolia*	coast live oak	106 (47)	8H, 11H, 12H, 15, 16, 18, 21, 24H, 29, 39H, 46, 49, 50, 51, 52H, 54, 55, 56, 57H, 58, 59H, 61H, 62, 63, 70, 71, 72, 73, 74, 75, 76, 78, 82, 83H, 91, 92, 94H, 95, 101, 102, 103, 105H, 107H, 109H, 110, 113, 116H, 133H, 138, 139H, 140, 146H, 160H, 161, 165, 168H, 169H, 170H, 172H, 173H, 262, 263, 316H, 317, 319H, 516H, 517 523, 527, 530	250 (25)
	Quercus chrysolepis	canyon live oak	1	524	
	Quercus john-tuckeri	Tucker oak	184	141, 142, 143, 174, 175, 176, 177, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 203, 204, 205, 206, 207, 209, 210, 211, 212A, 212B, 213, 215, 216, 217, 218, 219, 220, 222, 223,	

Table 1. Summary of Individual Tree Impacts

Impact	Scientific Name	Common Name	Number of Trees per Species (total)	Individual Tree Numbers	Number of Trees (total)
				224, 225, 226, 227, 228, 229, 230, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 246, 247, 249, 250, 251, 254, 255, 256, 257, 260, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 275, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 318, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 331, 332, 333, 334, 335, 336, 338, 339, 340, 341, 342, 344, 345, 347, 348, 349, 350, 351, 353, 354, 355, 356, 357, 358, 359, 360, 361, 363, 364, 365, 366, 367, 368, 370, 371, 372, 376, 377, 378, 379, 380, 506, 507, 508, 510, 511, 512, 513, 514	
To Be Preserved (non-jurisdictional live trees)	*Quercus agrifolia*	coast live oak	2	7, 93	6
	Quercus john-tuckeri	Tucker oak	4	276, 278, 330, 509	
To Be Removed (dead trees)	*Quercus agrifolia*	coast live oak	16	6, 9, 23, 32, 98, 118, 124, 125, 128, 129, 134, 137, 150, 500, 502, 503	17
	Quercus john-tuckeri	Tucker oak	1	261	
To Remain (dead trees)	*Quercus agrifolia*	coast live oak	25	27, 42, 44, 45, 77, 79, 80, 81, 84, 85, 87, 88, 89, 96, 100, 104, 106, 108, 115, 180, 501, 504, 505, 528, 529	43
	Quercus john-tuckeri	Tucker oak	18	191, 202, 208, 231, 244, 245, 274, 277, 279, 280, 337, 343, 346, 352, 362, 369, 525, 526	
				Total	**421(73)**

Notes: (X) = number of heritage trees; H indicates a heritage tree

1.2 Justification Statement

The proposed project necessitates the removal of 16 protected oak trees, including 3 heritage oak trees. The site plan has been carefully evaluated by the Oak Tree Consultant, project engineers, and the project applicant to ensure that oak trees are preserved on site to the greatest extent possible, without hindering the reasonable use of the land. However, preserving these 16 protected oak trees would prevent a reasonable and conforming use of the property and, as such, the trees are proposed for removal.

A total of 250 regulated oak trees, including 25 heritage oak trees, will be preserved with no encroachment, while an additional 89 regulated oak trees will be preserved but subject to encroachment (7 major encroachments and 82 minor encroachments). Protective fencing will be installed around the 291 preserved oak trees and the 89 encroached trees at the edge of the tree protection zone or at the approved construction limit to safeguard them from harmful construction activities. Construction near or within the tree protection zones will be supervised by the Oak Tree Consultant to minimize adverse impacts.

All impacts to trees that are removed or majorly encroached upon will be mitigated in compliance with the City ordinance.

1.3 Assignment

Dudek's International Society of Arboriculture (ISA) Certified Arborists performed the following tasks:

- Assessed and inventoried all regulated oak trees with protected zones within the survey area (based on the project site plan) and documented species, general health, general structural condition, size, and appearance
- Mapped the location of regulated oak trees on surveyed site base data and used GPS technology, as necessary, to develop a tree location exhibit and for planning reference
- Prepared a tree information matrix that details the attributes of each regulated oak tree and identifies the protection status
- Analyzed tree attribute data and coordinated with the client to determine tree impacts
- Evaluated tree impacts based on the project site plans (dated February 2024)
- Calculated an appraised value for each regulated oak tree identified for removal using the Guide for Establishing Values of Trees and Other Plants 9th edition, prepared by the Council of Tree and Landscape Appraisers (ISA 2000)
- Prepared this report to document the results of field surveys and impact analyses and to provide recommendations for tree protection and impact mitigation measures in accordance with the provisions of the City's Municipal Code

1.4 Project Description/Location/Setting

1.4.1 Project Location

The approximately 194-acre project site is located south of California State Route 14 at 34.419558°N and 118.406304°W within the City of Santa Clarita, California (Figure 1, Project Location).[1] The survey area consists of parcels with the following Assessor's Parcel Numbers (APNs): 2840-015-031, 2840-015-034, 2840-015-033, 2840-015-032, 2840-015-025, 2840-016-013, 2840-022-003 (partial), 2840-001-118, 2840-007-010, 2840-007-902 (partial), 2840-007-030 (partial), 2840-015-045, 2840-015-047, and 2840-015-035, as well as the right-of-way associated with Lost Canyon Road and Sand Canyon Road. The project is located within Township 4 North, Range 15 West, Sections 13, 14, 23, and 24 of the San Bernardino meridian, as depicted on the U.S. Geological Survey Mint Canyon, California, 7.5-minute topographic quadrangle map (USGS 2022). The survey area is generally located south of California State Route 14, north Robinson Ranch Road, and east of Sand Canyon Road.

1.4.2 Project Setting and Topography

Topography within the survey area is generally flat but undulating, with slopes scattered along the Santa Clarita River, the eastern boundary of the survey area, and the project's southwestern corner. Elevation ranges from approximately 1,550 feet above mean sea level in the northwestern corner of the survey area to 1,730 feet above mean sea level in the southeastern corner of the survey area. The project site is currently undeveloped and is zoned for low-density urban residential use and non-urban residential use (City of Santa Clarita 2011). Adjacent land uses include existing low-density residential developments and an equestrian facility along the western and southwestern boundary, a golf course (Sand Canyon Country Club) along the southeastern boundary, undeveloped/open space to the north and east of the project site, and a railroad (the Antelope Valley Line) bisecting the northern parcels of the survey area (City of Santa Clarita 2011). The Angeles National Forest is located approximately 0.25 miles east of the project site boundary.

1.4.3 Project Description

NUWI - Sand Canyon LLC proposes to develop a new age-restricted, 55+ single-family residential community located north and east of Oak Springs Canyon Road in the Sand Canyon Community (APNs 2840-001-118; 2840-015-045, 2840-015-047, 2840-015-035, 2840-015-025, 2840-015-032, 2840-015-033, 2840-015-034, 2840-015-031). In total, the project site comprises approximately 194 acres of undeveloped vacant land and is designated both urban residential 1 (UR1) and non-urban 5 (NU5) in the City of Santa Clarita General Plan and zoning ordinance.

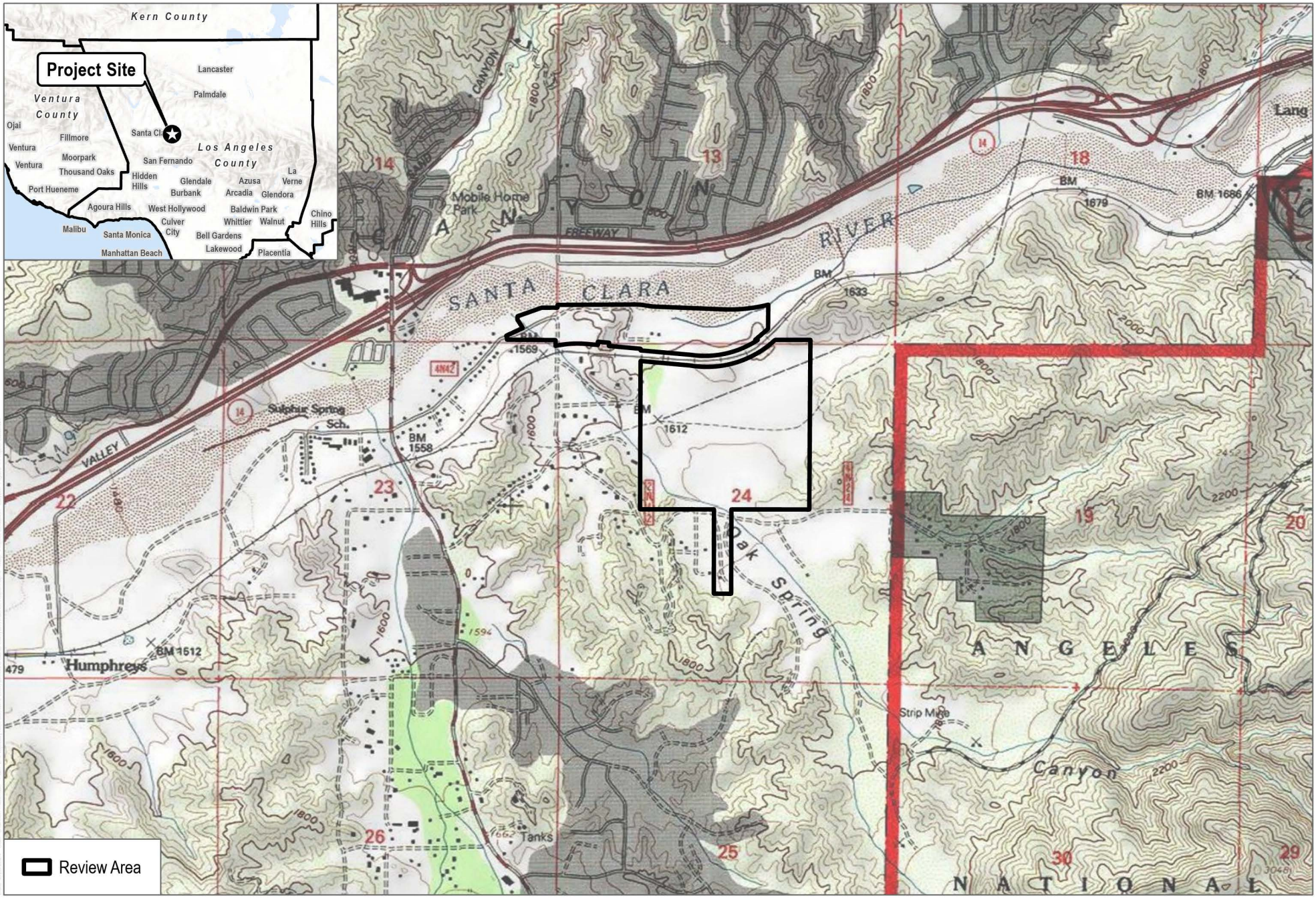
The project site is bordered by existing single-family development to the west, the Sand Canyon Country Club to the south, the Santa Clara River to the north, and undeveloped land to the east. The project will contain 359 detached residential dwelling units, a 3-acre private recreation center, a publicly accessible walking trail system, and approximately 92 acres of protected open space. The proposed residential dwelling units will be a maximum of two stories and will range in size from approximately 1,500 square feet to 3,200 square feet. Gated access to the project site from the north will be provided via an extension of Lost Canyon Road. Gated access from the south will be provided via Robinson Ranch Road and Street "J" (still to be constructed), which will run adjacent to the existing

[1] Minimum Standard Item 14 (Site Location Map).

Sand Canyon Country Club driving range north to Oak Springs Canyon Road. In addition, the project will include the construction of a roundabout at Sand Canyon Road and Lost Canyon Road

All residential development will occur south of the existing rail line on approximately 87 acres. The remaining 107 acres of the project site—55% of the property—will be preserved as open space for both active and passive recreational amenities.

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SOURCE: USGS Topo 7.5-Minute Series
Mint Canyon Quadrangle - Township 4N Range 15W Section 24

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Belcaro Sand Canyon Arborist Report

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2 Methods

The following sections describe the methods used by Dudek's ISA Certified Arborists to inventory and evaluate trees in the survey area.

2.1 Field Tree Inventory and Evaluation

Dudek's ISA Certified Arborists Sarah Tian (No. WE-13677A), Aida Castro (No. WE-13396A), and Ana Pfleeger (No. WE-13583A), and field assistant Dahlia Serrato conducted the tree inventory and evaluation from February 14 to February 16, from August 7 to August 9, 2024, and on March 11, 2025, to document tree locations and attribute information for all regulated oak trees within the survey area.

The arborists examined regulated oak trees that would be disturbed by the proposed development. Tree attribute data collected during the field survey included species, trunk diameter, tree height, canopy spread, general health condition, and structural condition. Trunk diameters were measured using a diameter tape, which provides adjusted numbers for diameter measurements when wrapping the tape around the circumference of a tree trunk. Diameter measurements were collected using standard protocol described by the Council of Tree and Landscape Appraisers in its Guide for Plant Appraisal 9th edition (CTLA 2000), published by the ISA.

Trunk diameter measurements were taken at 4.5 feet above the ground along the trunk axis, with a few common exceptions. In cases where the trunk of a tree split into multiple stems at approximately 4.5 feet above the ground, the measurement was made at the location that best represented the trunk's diameter. The arborists estimated tree height measurements, and tree canopy diameter measurements were documented by "pacing off" the measurement based on the arborists' knowledge of their stride lengths or by visually estimating the canopy width. Dripline extent measurements in eight directions (north, northeast, east, southeast, south, southwest, west, northwest) from the trunk were estimated for trees that will be encroached by the project.

Pursuant to the Guide for Plant Appraisal 9th edition (CTLA 2000), tree health and structure were evaluated with respect to five distinct tree components: roots, trunk, scaffold branches, small branches, and foliage. Health and structure were rated using letter grades A through F. A-rated trees exhibit excellent condition; this rating is typically reserved for model specimen trees with nearly ideal structure and nearly perfect health with little or no twig dieback, discoloration, or defoliation. B-rated trees exhibit normal vigor for the species, healthy foliage, no significant damage due to disease or pests, and minor if any structural issues. C-rated trees are typical, with few maladies and moderate structural issues, and may exhibit less reduced vigor in foliage and new growth. D-rated trees exhibit an unhealthy or declining appearance and/or structural problems or damage. E-rated trees exhibit poor vigor, and appear to be dying and in the last stages of life. F-rated trees are dead. Individual attributes for each tree found on the project survey site are detailed in Appendix C, Tree Information Matrix.

The location of each individual regulated tree was mapped using the Esri ArcGIS Field Maps application on an iPhone coupled with a Trimble R1 or Arrow GPS receiver to increase positional accuracy. Collected data were remotely uploaded to Dudek's servers for post-field processing and analysis. Tree attribute data, collected simultaneously with feature positions, were also linked to tree location information and stored in Esri's ArcGIS Field Maps application. Following field data collection, raw data files were then differentially corrected, managed, and exported in appropriate geographic information system (GIS) or CAD formats, suitable for further spatial analysis

and/or exhibit preparation. These data were used to create a master tree inventory data set, inclusive of all regulated oak trees, within the survey area.

Individual protected locations are presented in Appendix A, and individual tree attribute data and impact determination is presented in Appendix B and Appendix C.

2.1.1 Tree Appraisal Methods

A Dudek ISA-certified and Tree Risk Assessment Qualification credentialed arborist performed a tree appraisal evaluation in accordance with the Guide for Plant Appraisal 9th edition per the request of the City. Valuation of trees according to Guide for Plant Appraisal standards involves incorporating ratings from three main tree features: (1) species, (2) location, and (3) overall condition.

With the exception of small coast live oaks under 3.5 inches in diameter and Tucker oaks under 5.5 inches in diameter, the Trunk Formula Method outlined in the Guide for Plant Appraisal is appropriate for trees that are too large to commonly be replaced and was used to calculate appraised tree values for trees that will be removed or be majorly encroached upon.

The following variables and assumptions were applied and are consistent with the Trunk Formula Method for tree appraisal. Further, the descriptions contained herein coordinate with the tree appraisal data and calculations presented in Appendix D, Tree Appraisal (Removed and Major Encroachments).

1. **Species:** Tree species were determined during field inspections.
2. **Condition:** Tree condition was derived from field evaluations of outwardly observable health and structural characteristics. Condition ratings can range between 0% and 100%, based on evaluations of root conditions, trunk form and observable defects, branching structure, and foliage condition.
3. **Trunk Diameter:** Trunk diameters are presented in inches measured at 4.5 feet (54 inches) above grade. Composite trunk diameters were calculated for trees with multiple stems and are the product of the square root of the sum of all squared trunk diameters.
4. **Location:** Location rating is the average value of site, contribution, and placement ratings. Ratings can range from 10% to 100%. The economic, functional, and aesthetic aspects of the area in which the tree is growing affect site values. Contribution accounts for the function and aesthetic values that the tree adds to the location in which it is growing. Placement ratings indicate the effectiveness of tree locations on functional and aesthetic values.
5. **Species Rating:** Species rating was derived directly from the Species Classification and Group Assignment report published by the Western Chapter of the ISA (WCISA 2004). Values were determined, by species, for Southern California Inland Influence areas. Species ratings vary, with higher ratings assigned to native trees and lower ratings assigned to non-native, invasive species.
6. **Replacement Tree Size:** Replacement tree size values were derived from Table 11 of the Species Classification and Group Assignment report for the Southern California Subregion, based on species-specific nursery groups.
7. **Replacement Tree Cost:** Replacement tree costs were derived from Table 11 of the Species Classification and Group Assignment report for the Southern California Subregion and adjusted for inflation using the Bureau of Labor Statistics CPI Inflation calculator and equal $2,520.

8. **Installation Cost:** Installation costs were valued at $2,040/tree based on the Species Classification and Group Assignment report for the Southern California Subregion and were adjusted for inflation using the Bureau of Labor Statistics CPI Inflation calculator.
9. **Installed Tree Cost:** Installed tree cost is the sum of the replacement tree cost and the installation cost.
10. **Unit Tree Cost/in2:** Unit tree cost was derived from Table 11 of the Species Classification and Group Assignment report for the Southern California Subregion and were adjusted for inflation using the Bureau of Labor Statistics CPI Inflation calculator
11. **Appraised Trunk Area:** Appraised trunk area is the product of the squared trunk diameter value multiplied by 0.785. For trees with trunk measurements exceeding 30 inches, an adjusted trunk area value was used, as identified in Table 4.4 of the Guide for Plant Appraisal.
12. **Appraised Tree Trunk Increase:** The appraised tree trunk increase is the difference between the appraised trunk area (11) and the replacement tree size (6).
13. **Basic Tree Cost:** Basic tree cost is the result of multiplying the unit tree cost (10) and the appraised tree trunk increase (12) and adding the installed tree cost (9).
14. **Appraised Value:** The appraised value is the result of the basic tree cost discounted by the condition (2), species (5), and location (4) ratings.

One limitation to using the unit cost as published in the Western Chapter ISA Regional Guide is that it has not been adjusted for inflation and current market pricing. As such, all costs presented in the 9th edition were adjusted for inflation using the Bureau of Labor Statistics CPI Inflation calculator. It was determined that the unit cost of a 15-gallon coast live oak and 15-gallon scrub oak is $105/square inch.

After calculating the basic cost of the tree, depreciating factors are taken into consideration. The basic cost is adjusted down by the condition rating to reflect any defects in health, structure, or form for each tree. The condition rating is a subjective rating and is determined by the appraising arborist.

The total appraised value of the tree is the product of the total cross-sectional area, the unit cost of the trunk area, and the tree's depreciating factors. The detailed calculations and appraised value for each removal and major encroachment are provided in Appendix D.

As stated, small coast live oaks (under 3.5 inches in diameter) and Tucker oaks under 5.5 inches in diameter were not appraised using the trunk formula method. Due to the size and species availability (Tucker oaks are not available in sizes greater than 15-gallon) of the trees, the replacement cost method was used to determine the appraised value of the trees. Furthermore, due to the small size of available planting stock, compounding costs and years to parity were calculated for Tucker oaks. Per the 9th edition Guide for Plant Appraisal, the replacement cost method can be used to appraise the value of landscape trees, shrubs, and vines. The appraised value of a landscape plant is based on the cost of replacing a plant of the same or comparable species in the same place when a similar sized tree can be purchased and installed. Additionally, when a replacement plant or landscape will require several years before it regains its pre-casualty size and condition (parity), compounding the initial cost of repairing or restoring the damaged plant may be appropriate. As such, due to the size of available Tucker oaks, and slow growth rate, Dudek utilized parity and compounding costs. To calculate the values of the smaller trees, Dudek used the base plant cost, the number of years to parity (0.25 inches per year growth assumption), and the interest rate (6% interest rate based upon an average 20-year fixed rate for 2024) expected to be earned for investing that cost for the appropriate number of years (years to parity).

This method also includes compounded annual maintenance costs, which include the annual maintenance cost for each year until parity is achieved, the number of years maintenance would be continued, and the expected interest rate (6%). The compounded maintenance cost for each maintenance year is added to the compounded initial cost. To determine the annual compounded interest rates, Dudek utilized Table 1.1 of the Guide for Plant Appraisal (9th edition). Additional details regarding compounding cost, parity, and annual compound interest factors can by found in Appendix I of the 9th edition of the Guide for Plant Appraisal. Replacement cost values are provided in Appendix D.

2.2 Tree Impact Analysis

Following data collection, processing, and analysis efforts, an impact determination was made for each tree based on proximity to the proposed disturbance area. Impact determinations used in this report are as follows:

- To Remain (tree not affected by project)
- To Be Removed (tree to be removed)
- To Be Removed Dead (dead trees within the project footprint)
- Major Encroachment (project disturbance would occur between "the outer edge of the trunk and fifty percent (50%) of the diameter of the protected zone" (City of Santa Clarita Municipal Code Section 17.51.040)
- Minor Encroachment (project disturbance would occur "between the outermost edge of the protected zone and fifty percent (50%) of the diameter of the protected zone" (City of Santa Clarita Municipal Code Section 17.51.040)

A summary of project-related tree impacts is presented in Section 3.2, Project-Related Impacts, and impact determination status for each tree recorded in the survey area is provided in Appendix B and Appendix C.

2.3 Scope of Work Limitations

This report presents tree information as observed in the field. No root crown excavations or investigations, internal probing, or aerial canopy inspections were performed during the tree assessment. Therefore, the presence or absence of internal decay or other hidden or inaccessible inferiorities in individual trees could not be confirmed.

Data for several trees were visually estimated from a distance due to the following limitations: private property, bees, encampments, steep terrain, and/or other access issues.

3 Findings/Results

3.1 Inventory Summary

Dudek's arborists recorded 421 trees with protected zones within the project site plan. Of these, 355 trees meet the criteria for regulation under the City's Municipal Code. The remaining 66 non-jurisdictional trees, including all dead trees, do not meet the criteria for City protection. Of the 355 regulated trees, 73 trees are considered heritage trees by the City. Table 2 provides a summary of the species and regulation status of all trees mapped within the survey area.

Table 2. Summary of All Trees

Scientific Name	Common Name	Total Trees*
Quercus agrifolia	coast live oak	202 (159) ((73))
Quercus john-tuckeri	Tucker oak	218 (195)
Quercus chrysolepis	canyon live oak	1 (1)
	Total	**421 (355) ((73))**

Notes: (X) = regulated trees; ((X)) = number of heritage trees.

As presented in Appendix C, of the 421 total trees, 116 (27.55%) trees are rated B for health, 122 (28.98%) trees are rated C for health, 108 (25.65%) trees are rated D for health, 15 (3.56%) trees are rated E for health, and 60 (14.25%) trees are rated F for health. Of the 421 total trees, 1 (0.24%) tree is rated B for structure, 259 (61.52%) trees are rated C for structure, 82 (19.48%) trees are rated D for structure, 19 (4.51%) trees are rated E for structure, and 60 (14.25%) trees are rated F for structure.

Of the 355 regulated trees, 116 (32.68%) trees are rated B for health, 118 (33.24%) trees are rated C for health, 107 (30.14%) trees are rated D for health, and 14 (3.94%) trees are rated E for health. Of the 355 regulated trees, 1 (0.28%) tree is rated B for structure, 255 (71.83%) trees are rated C for structure, 81 (22.81%) trees are rated D for structure, and 18 (5.07%) trees are rated E for structure.

Of the 73 heritage trees, 46 (63.01%) trees are rated B for health, 11 (15.07%) trees are rated C for health, 13 (17.81%) trees are rated D for health, and 3 (4.11%) trees are rated E for health. Of the 73 heritage trees, 47 (64.38%) trees are rated C for structure, 20 (27.40%) trees are rated D for structure, and 6 (8.22%) trees are rated E for structure.

Of the 421 total trees within the survey area range, trunk diameters range from 1 inch to 73 inches for single-stemmed trees and from 1 inch to 91 inches for multistemmed trees (calculated using the square root of the sum of each trunk's diameter squared). Tree heights vary from 0 feet for a stump to 60 feet. Tree canopy extents range from 1 foot to 65 feet.

Of the 355 regulated trees, trunk diameters range from 2 inches to 73 inches for single-stemmed trees and from 2 inches to 91 inches for multistemmed trees (calculated using the square root of the sum of each trunk's diameter squared). Tree heights vary from 5 feet to 60 feet. Tree canopy extents range from 5 feet to 65 feet.

Of the 73 heritage trees, trunk diameters range from 34 inches to 73 inches for single-stemmed trees and from 36 inches to 91 inches for multistemmed trees (calculated using the square root of the sum of each trunk's diameter squared). Tree heights vary from 20 feet to 60 feet. Tree canopy extents range from 25 feet to 65 feet.

Appendix E, Photograph Log, provides individual photographs of each surveyed tree.

3.1.1 Tree Appraisal Summary and Conclusions

In total, Dudek appraised 355 regulated oak trees that meet the minimum requirements of the City Oak Tree Preservation Ordinance. A summary of the appraised value for each major encroachment or removal is provided in Appendix D. The final appraised cost of the 16 proposed regulated oak tree removals and 7 proposed regulated oak tree major encroachments is $391,250. Individual appraisal costs for all 355 regulated trees are provided in Appendix F, Regulated Tree Appraisals.

3.2 Project-Related Impacts

There is wide variation in tolerance to construction impacts among tree species, and the response of an individual tree to impacts also varies with age and condition. Impacts assessed for this project include trees with protected zones within the proposed improvement and disturbance areas as defined in the project site plan (dated February 2024). The impact discussion in this section identifies all impacts anticipated to result to regulated oak trees based on an evaluation of tree locations compared with the project site plan. Much of the survey area will be graded to accommodate construction of the project and necessary infrastructure (e.g., utilities, access roads, houses). Trees identified for retention and removal are graphically presented in the Tree Impact Exhibit (Appendix B).

3.2.1 Project-Related Removals (Regulated Trees)

Proposed tree removals are determined when project grading and/or improvements fall within 2 feet of the trunk of the tree. These trees are not candidates for retention based on the proximity of the project to the tree and the significant extent of proposed root damage. Based on grading and development plans for the proposed project, it is estimated that of the 355 regulated oak trees, 16 (4.51%) regulated oak trees, including 3 heritage trees, will be removed. Appendix G, Removal Photograph Log, provides individual photos of regulated oak trees proposed for removal.

3.2.2 Project-Related Removals (Dead Trees)

Proposed tree removals are determined when project grading and/or improvements fall within 2 feet of the trunk of the tree. 17 dead trees are located within the project boundary and will be removed due to their health and to accommodate the project and/or fuel modification zone requirements. The locations of these trees are presented in Appendix B. For the purposes of this report, dead trees are considered non-jurisdictional and are not protected by the City.

3.2.3 Project-Related Encroachments

3.2.3.1 Major Encroachments

Proposed major protected zone encroachments are determined when project grading and/or improvements occur "in an area between the outer edge of the trunk and fifty percent (50%) of the diameter of the protected zone" (City of Santa Clarita Municipal Code Section 17.51.040). For the purposes of this report, major encroachment was determined when improvements were located within the first 50% of the diameter of the protected zone. These trees will be retained but may experience significant damage as a result of the project. Appendix H, Major Encroachment Cross Sections, provides cross-sectional diagrams of major encroachments. Of the 355 regulated oak trees, project disturbance is expected to majorly encroach on the protected zones of 7 (1.97%) regulated oak trees (including 1 heritage tree). Appendix I, Major Encroachments Photograph Log, provides individual photos of regulated oak trees proposed for major encroachment.

3.2.3.2 Minor Encroachments

Proposed minor protected zone encroachments are determined when project grading and/or improvements occur "in an area between the outermost edge of the protected zone and fifty percent (50%) of the diameter of the protected zone" (City of Santa Clarita Municipal Code Section 17.51.040). These trees will be retained and are expected to experience minor impacts as a result of the project. Of the 355 regulated oak trees, project disturbance is expected to minorly encroach on the protected zones of 82 (23.1%) regulated trees (including 44 heritage trees). Appendix J, Minor Encroachments Photograph Log, provides individual photos of regulated oak trees proposed for minor encroachment.

3.2.4 Trees to Remain with No Impacts

Trees are expected to remain when project grading and/or improvements occur outside of the protected zone. These trees will not experience any direct impacts as a result of the project. Of the 355 regulated oak trees, 250 (70.42%) regulated trees (including 25 heritage trees) will remain in place. In addition to the 250 preserved regulated trees, a total of 43 non-regulated dead trees, located off site, and 6 non-regulated live trees will remain.

3.2.5 Summary of Impacts

Based on grading and development plans for the proposed project, it is estimated that of the 355 regulated oak trees, 16 (4.51%) regulated oak trees (including 3 heritage trees) will be removed. Project disturbance is expected to majorly encroach on the protected zones of 7 (1.97%) regulated trees (including 1 heritage tree), and minorly encroach on the protected zones of 81 (23.1%) regulated trees (including 44 heritage trees). The remaining 250 (70.42%) regulated trees (including 25 heritage trees) trees will remain in place. Table 3 summarizes impact determinations for trees within the survey area that are subject to regulation under the City's Municipal Code.

Of the 66 non-jurisdictional trees, 17 (25.75%) trees that are dead will be removed, 43 (65.15%) trees that are dead will remain, and 6 (9.09%) trees that are alive will remain.

Table 3. Summary of Regulated Tree Impact Determinations

Species	Impact Determination				Total
	Removal	Major Encroachment	Minor Encroachment	No Impact	
Canyon live oak	0	0	0	1	1
Coast live oak	13 (3)	6 (1)	72 (44)	68 (25)	159 (73)
Tucker oak	3	1	10	181	195
Total for All Regulated Trees	**16 (3)**	**7 (1)**	**82 (43)**	**250 (25)**	**355 (73)**

Note: (X) = heritage trees.

Table 4 summarizes impact determinations for trees within the survey area that are not subject to regulation under the City's Municipal Code.

Table 4. Summary of Non-jurisdictional Tree Impacts

Species	Impact Determination		Total
	Removal	No Impact	
Coast live oak	(16)	27 (25)	43 (41)
Tucker oak	(1)	22 (18)	23 (19)
Total for All Non-jurisdictional Trees	**(17)**	**49 (43)**	**66 (60)**

Note: (X) = dead trees.

3.3 Tree Appraisal – Anticipated Removals and Encroachments

The matrix presented in Appendix D presents the results of the tree appraisal calculations performed for trees identified for removal and major encroachment. As presented, individual tree appraisals followed guidelines set forth in the Guide for Plant Appraisal, 9th edition (CTLA 2000) and the Species Classification and Group Assignment manual (WCISA 2004). The appraised value calculated for the 11 regulated oak tree removals and 7 regulated oak tree major encroachments is $391,250. Table 5 summarizes individual tree appraisal values for the 16 regulated oak tree removals.

Table 5. Regulated Removal Appraised Values

Tree Number	Species	Protected Status	Condition	Appraised Value (rounded per guidelines)
10H	coast live oak	Heritage tree	B	$74,700
69	coast live oak	Protected tree	B	$3,140
114	coast live oak	Protected tree	B	$4,520
144	coast live oak	Protected tree	B	$44,800
166	coast live oak	Protected tree	B	$5,400
167	coast live oak	Protected tree	C	$2,540
171H	coast live oak	Heritage tree	B	$63,800

Table 5. Regulated Removal Appraised Values

Tree Number	Species	Protected Status	Condition	Appraised Value (rounded per guidelines)
221	Tucker oak	Protected tree	C	$2,030
382	Tucker oak	Protected tree	B	$15,700
383	Tucker oak	Protected tree	B	$4,470
515H	coast live oak	Heritage tree	D	$33,800
532	coast live oak	Protected tree	C	$1,070
533	coast live oak	Protected tree	C	$220
534	coast live oak	Protected tree	B	$860
535	coast live oak	Protected tree	C	$3,230
536	coast live oak	Protected tree	C	$4,200
			Total	**$264,480**

Table 6 summarizes individual tree appraisal values for the 7 regulated oak tree major encroachments.

Table 6. Regulated Major Encroachment Appraisal Values

Tree Number	Species	Protected Status	Condition	Appraised Value (rounded)
112	coast live oak	Protected tree	C	$30,700
151	coast live oak	Protected tree	C	$9,800
157	coast live oak	Protected tree	B	$24,700
258	Tucker oak	Protected tree	C	$10,100
373H	coast live oak	Heritage tree	B	$41,600
518	coast live oak	Protected tree	B	$6,400
522	coast live oak	Protected tree	C	$3,470
			Total	**$126,770**

Table 7 summarizes individual tree appraisal values for the 82 regulated oak tree minor encroachments.

Table 7. Regulated Minor Encroachment Appraisal Values

Tree Number	Species	Protected Status	Condition	Appraised Value (rounded)
1H	coast live oak	Heritage Tree	B	$76,400
2	coast live oak	Protected	C	$11,800
3	coast live oak	Protected	D	$4,150
4	coast live oak	Protected	C	$7,780
5	coast live oak	Protected	C	$2,490
11H	coast live oak	Heritage Tree	B	$89,800
13H	coast live oak	Heritage Tree	B	$66,800

14	coast live oak	Protected	C	$38,880
17	coast live oak	Protected	B	$37,800
19	coast live oak	Protected	B	$33,800
20	coast live oak	Protected	B	$41,600
22	coast live oak	Protected	B	$45,400
25H	coast live oak	Heritage Tree	B	$47,200
26H	coast live oak	Heritage Tree	B	$59,100
28H	coast live oak	Heritage Tree	C	$32,400
30H	coast live oak	Heritage Tree	C	$35,000
31H	coast live oak	Heritage Tree	E	$11,300
33H	coast live oak	Heritage Tree	C	$55,500
34H	coast live oak	Heritage Tree	B	$84,700
35H	coast live oak	Heritage Tree	C	$56,000
36	coast live oak	Protected	C	$26,100
37H	coast live oak	Heritage Tree	C	$56,500
38	coast live oak	Protected	C	$22,800
40H	coast live oak	Heritage Tree	C	$49,300
41	coast live oak	Protected	C	$21,300
43H	coast live oak	Heritage Tree	D	$41,400
47	coast live oak	Protected	C	$21,300
48	coast live oak	Protected	C	$26,100
53	coast live oak	Protected	C	$26,100
60H	coast live oak	Heritage Tree	B	$54,200
64H	coast live oak	Heritage Tree	C	$60,500
65H	coast live oak	Heritage Tree	B	$86,800
66H	coast live oak	Heritage Tree	B	$79,000
67H	coast live oak	Heritage Tree	D	$33,800
68H	coast live oak	Heritage Tree	D	$33,800
86H	coast live oak	Heritage Tree	D	$41,400
90H	coast live oak	Heritage Tree	D	$33,800
97H	coast live oak	Heritage Tree	C	$53,400
99H	coast live oak	Heritage Tree	B	$101,900
111H	coast live oak	Heritage Tree	C	$66,000
117H	coast live oak	Heritage Tree	B	$72,500
119	coast live oak	Protected	E	$8,700
120	coast live oak	Protected	C	$21,700
121H	coast live oak	Heritage Tree	B	$51,300
122H	coast live oak	Heritage Tree	B	$80,200
123H	coast live oak	Heritage Tree	B	$41,900
126H	coast live oak	Heritage Tree	B	$52,500
127H	coast live oak	Heritage Tree	B	$69,700
130H	coast live oak	Heritage Tree	C	$57,900
131	coast live oak	Protected	C	$21,700

132H	coast live oak	Heritage Tree	C	$49,800
135H	coast live oak	Heritage Tree	B	$59,100
136	coast live oak	Protected	B	$17,400
145H	coast live oak	Heritage Tree	B	$69,300
146H	coast live oak	Heritage Tree	B	$59,600
147	coast live oak	Protected	B	$33,800
148H	coast live oak	Heritage Tree	B	$43,500
149H	coast live oak	Heritage Tree	C	$73,800
152	coast live oak	Protected	C	$16,100
153	coast live oak	Protected	C	$8,200
154	Tucker oak	Protected	C	$4,230
155	Tucker oak	Protected	B	$3,780
156	Tucker oak	Protected	C	$2,990
158	coast live oak	Protected	C	$28,800
159H	coast live oak	Heritage Tree	E	$20,300
162	coast live oak	Protected	B	$750
163	coast live oak	Protected	B	$6,200
164H	coast live oak	Heritage Tree	E	$24,300
178	Tucker oak	Protected	C	$5,000
179	Tucker oak	Protected	C	$15,000
214	Tucker oak	Protected	C	$6,100
248	Tucker oak	Protected	C	$8,000
252	Tucker oak	Protected	C	$7,600
253	Tucker oak	Protected	C	$7,500
259	Tucker oak	Protected	C	$2,330
374H	coast live oak	Heritage Tree	D	$42,600
375H	coast live oak	Heritage Tree	D	$22,700
381H	coast live oak	Heritage Tree	B	$66,800
519	coast live oak	Protected	B	$1,880
520	coast live oak	Protected	B	$3,690
521	coast live oak	Protected	B	$7,400
			Total	**$2,970,050**

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4 Mitigation and Management Recommendations

4.1 Mitigation Recommendations

Tree Removal

In total, 16 regulated trees are proposed for removal with an appraised value of $264,480. Per the City ordinance, the appraised value of the removed trees shall be applied toward planting oak trees in the developed landscape. Furthermore, per the City's Municipal Code, mature specimen trees (24-inch, 48-inch, and 60-inch boxes) should be provided, staked or guyed on a case-by-case basis, and meet the California State Department of Forestry and Fire Protection Specification Guidelines for container-grown landscape trees (City of Santa Clarita Municipal Code Section 17.51.030). As such, Dudek recommends planting a mixture of native oak trees of various sizes (15-gallon, 24-inch, 48-inch, and 60-inch boxes) in the developed landscape and adjacent open space area with an approximate value of $264,480. To assist with project planning, the estimated cost associated with planting and maintenance (1-year maintenance period including tree staking, irrigation, mulching, and other tasks) is approximately $250 per tree for 15-gallon replacements, $550 per tree for 24-inch box replacements, $1,290 per tree for 36-inch box replacements, $4,800 per tree for 48-inch box replacements, and $10,400 per tree for 60-inch box replacements. As such, based on the appraised value of $264,480 for the site's 16 regulated oak tree removals, 481 24-inch box mitigation trees may be required, which would result in a replacement ratio of 30 trees for each removed tree. Following the same calculations would lead to a replacement ratio of 66:1 for 15-gallon, 13:1 for 36-inch box trees, 3.4:1 for 48-inch box trees, and 1.6:1 for 60-inch box trees. Per the City's Municipal Code, the minimum tree size at planting shall be 24-inch box, but substantial trees (36-inch box and larger) are strongly encouraged in front- and side-yard setback areas (City of Santa Clarita Municipal Code Section 17.51.030). The appraisal value should therefore be used for the planting of a mixture of larger trees, including 36-inch, 48-inch, and 60-inch box mitigation trees. However, it is recommended that the oak tree replacement plan include a variety of oak species and a mixture of sizes to provide a sustainable landscape.

As previously stated, there are a total of 16 regulated oak trees within or adjacent to the proposed project footprint that will require removal. To replace the site's tree resources and meet the requirements of the City Oak Tree Preservation Ordinance, it is recommended that all 16 regulated oak tree removals be replaced with a minimum size 24-inch box tree of a native species suitable for the site. Planting at the ratios determined above would result in the incorporation of a maximum of 481 24-inch box trees into the post-development landscape (30 24-inch box trees per tree removal). Based on the estimated cost associated with planting and maintenance for 1 year of $550 per 24-inch tree, the total landscape value associated with planting 481 24-inch trees is $264,550. However, the final number of mitigation trees and the ratio of mitigation trees per tree removed may be adjusted to reflect the planting of larger trees. A mixture of various-sized tree plantings is encouraged by the City and, dependent on the size of the tree replacement selected, the planting ratio may increase or decrease. Should it be found that all of the replacement trees cannot be accommodated on site, it is recommended that the applicant work with the City to identify alternative planting locations and/or provide an in-lieu of payment to the City for the remaining balance of trees that cannot be sustainably planted on the project site. Per the City, additional recommendations for mitigation are as follows:

a. Plant drought-tolerant native, ornamental, and shade trees within common landscape areas (e.g., parks, medians, entry monuments, manufactured slopes).
b. A landscape plan should be developed by a licensed landscape architect and should identify tree planting locations, nursery stock condition requirements, planting densities, species composition, planting techniques, maintenance standards, tree protection standards, tree survival criteria, monitoring protocols, and reporting standards. Monitoring should be conducted for a period of no less than 5 years, and monitoring reports documenting mitigation program success should be provided to the City annually and at the end of the mitigation period.

The mitigation requirement is based on current site plans. Changes in the site plan or condition of the trees may impact the final mitigation requirement. To that end, a project field evaluation was conducted by a third party (Q4 2025) after the completion of the inventory. The third party relayed that tree no. 166 was reported to have been removed. If this is confirmed by the City of Santa Clarita, the total tree removals for this project would be reduced to 15, and mitigation requirements would be appropriately reduced as well.

Encroachment into Protected Zone and Retained Trees

The City's Municipal Code requires that maximum effort shall be given for the retention of healthy trees, and that the following requirements are met:

a. All grading around existing trees shall be done by hand, unless otherwise approved by the Director.
b. Cutting through woody roots shall not be allowed.
c. All foundations shall step over major roots.

Additionally, the City's Municipal Code forbids difference in grade at the bases of trees and construction that results in the injury or removal of native or specimen trees unless approved by the City (City of Santa Clarita Municipal Code Section 17.51.030). Trees identified for retention must be adequately protected prior to, during, and after construction to prevent tree damage. Appendix K, Tree Protection Measures, provides additional tree protection recommendations to mitigate project impacts from construction encroachment into the protected zone of regulated trees. The measures included in Appendix K would help minimize impacts to preserved and encroached-upon trees. Appendix K includes measures to implement prior to, during, and following construction. These include measures such as exclusion fencing and worker training to avoid direct impacts to trees as well as irrigation and monthly inspections by an arborist to promote the long-term health of retained trees. Arborist monitoring during construction, when encroachments into protected zones would occur, is also recommended to minimize root disturbance and determine the best courses of action for root pruning, supplemental irrigation, branch trimming, or other measures that would minimize impacts from ground-disturbing and other potentially impactful activities. Please refer to Appendix K for detailed recommendations for trees retained on the project site.

4.2 Tree Permits

NUWI - Sand Canyon LLC will need to submit an application for a Class IV oak tree permit (City of Santa Clarita Municipal Code Section 17.23.170). All necessary materials, including City fees, this report, and all associated attachments, should be provided with the application. A public hearing will be required to process the oak tree permit application (City of Santa Clarita Municipal Code Section 17.25.060). An oak tree permit is required for

cutting, pruning, removal, relocation, endangerment, damage, or encroachment into the protected zone of any oak tree on any public or private property within the City (City of Santa Clarita Municipal Code Section 17.51.040).

5 Disclosure

This arborist report provides conclusions and recommendations based only on a visual examination of the trees within the survey area by ISA Certified Arborists and reasonable reliance on the completeness and accuracy of the information provided to the arborists. The examination did not include subterranean or internal examination of the trees.

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 them. Although trees provide many benefits to those who live near them, they also include inherent risks from breakage or failure that can be minimized but not eliminated.

Arborists cannot detect every condition that could possibly lead to the failure of a tree. Trees are living organisms subject to attack by disease, insects, fungi, weather, and other forces of nature, and conditions that lead to failure are often hidden within trees and belowground. There are some inherent risks with trees that cannot be predicted with any degree of certainty, even by a skilled and experienced arborist. Arborists cannot predict acts of nature, including, without limitation, storms of sufficient strength, which can cause an apparently healthy tree to fail. Additionally, arborists cannot guarantee that a tree will be healthy or safe under all circumstances or for any specific period. A tree's condition could change over a short or long period of time due to climatic, cultural, or environmental conditions. Further, there is no guarantee or certainty that recommendations or efforts to correct unsafe conditions will prevent future breakage or failure of a tree.

To live or work near trees is to accept some degree of risk. Neither the author of this arborist report nor Dudek assume any responsibility for or will be liable for any claims, losses, or damages for damage to any tree, death or injury to any person, or any loss of or damage to any personal or real property.

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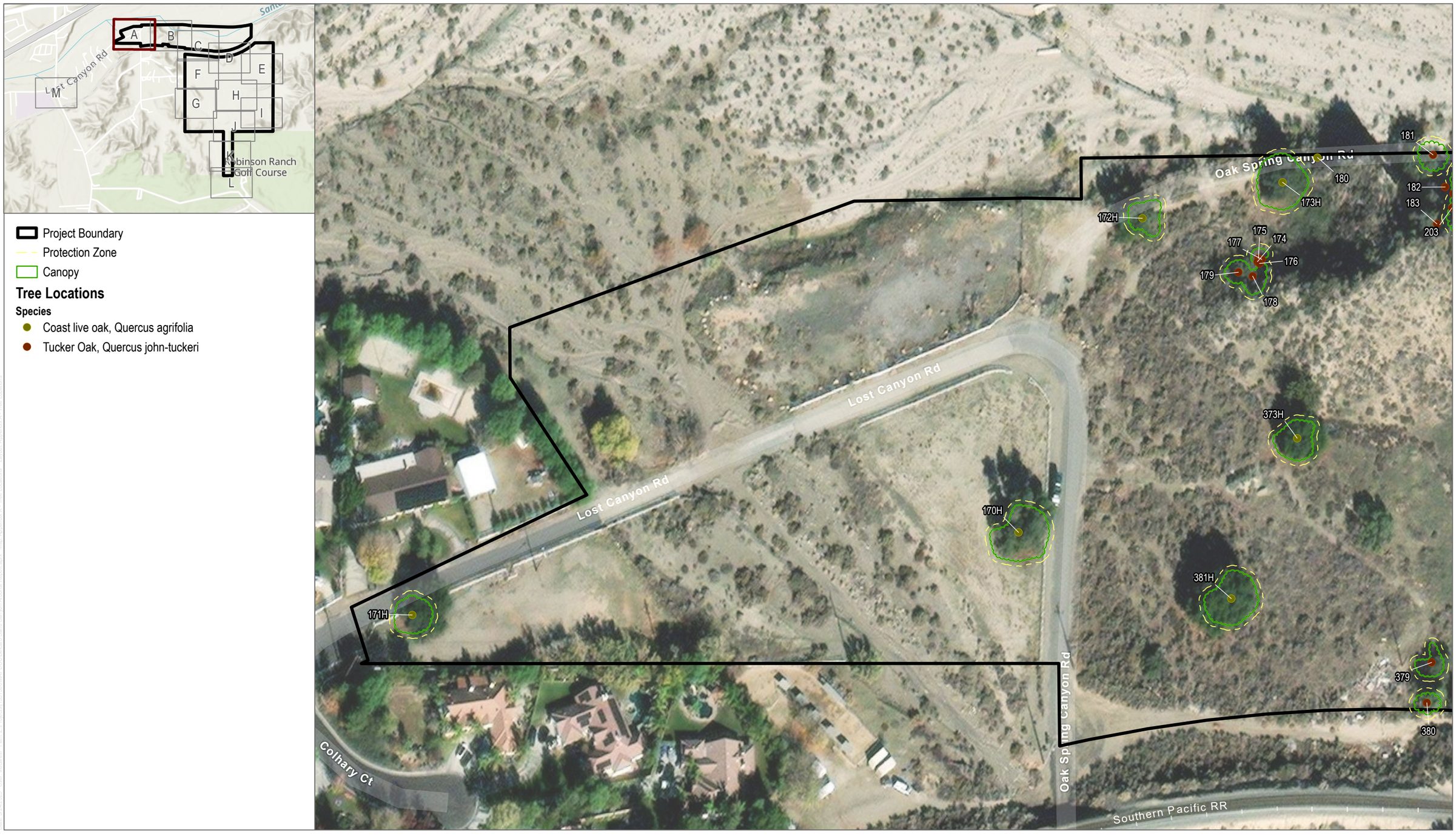
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Appendix A

Tree Location Exhibit



SOURCE: Maxar 2022

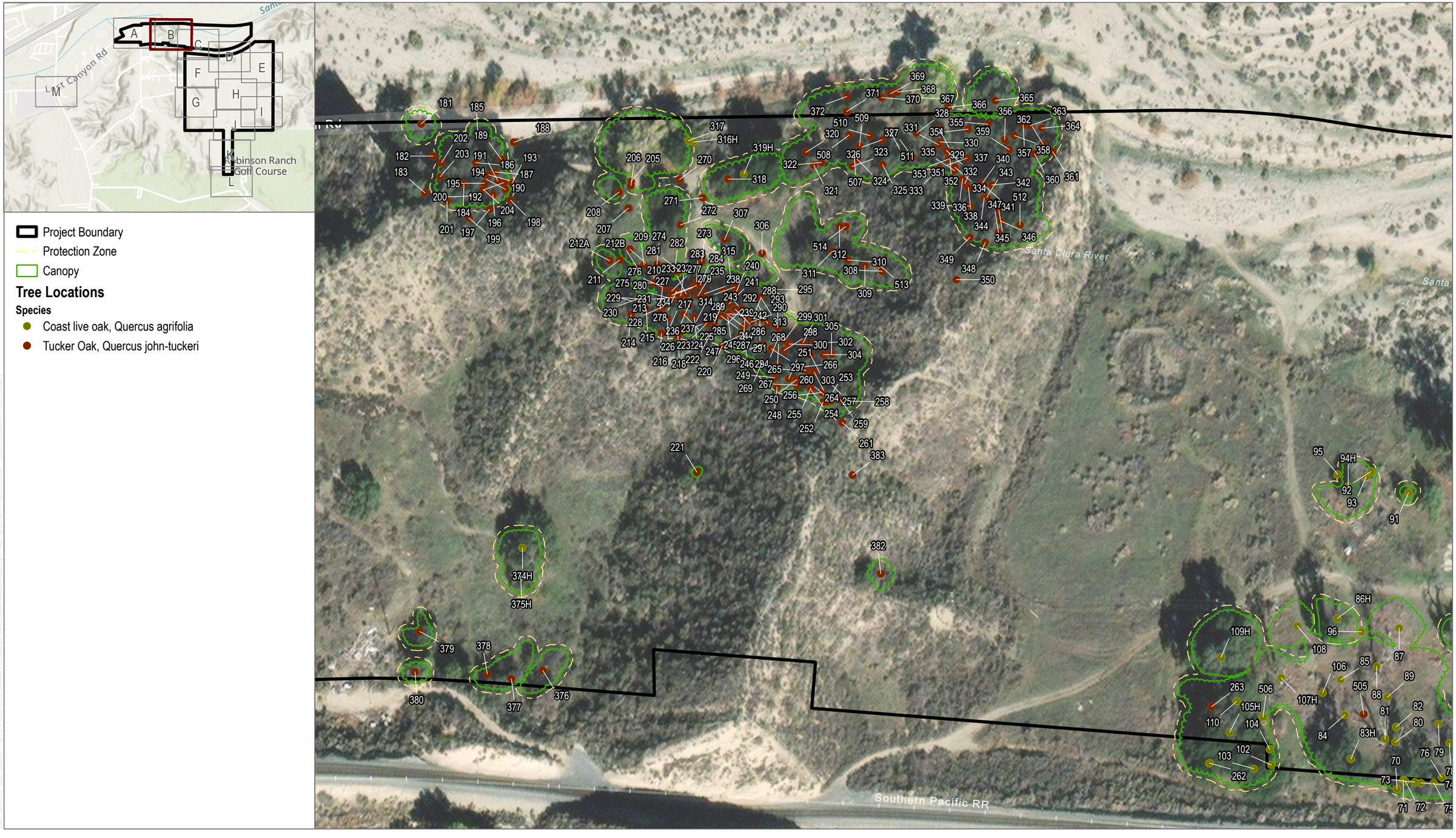
DUDEK

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Appendix A-A

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report



SOURCE: Maxar 2022

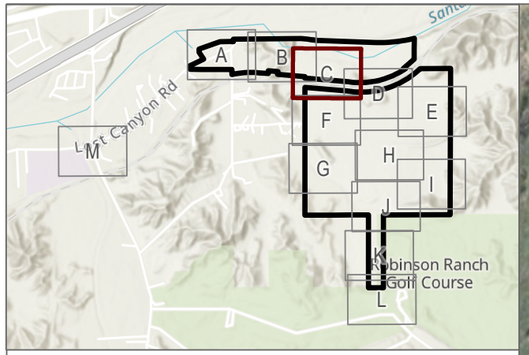
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0 50 100 Feet

Appendix A-B

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report



Project Boundary

Protection Zone

Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri

Santa Clara River

Santa Clara River

Southern Pacific RR

95 94H 92 93 91 97H 98 99H 86H 96 109H 108 87 90H 111H 112 106 85 89 263 506 505 88 107H 105H 82 81 110 104 84 83H 80 79 78 100 103 102 77 101 262 70 72 76 71 73 74 75 113 62 63 61H 37H 52H 35H 38 36 40H 39H 33H 49 34H 32 31H 44 43H 46 501 51 45 41 50 47 42 30H

SOURCE: Maxar 2022

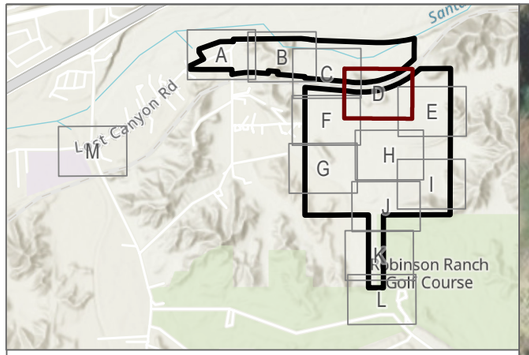
DUDEK

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Appendix A-C

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report



Project Boundary

Protection Zone

Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri



SOURCE: Maxar 2022

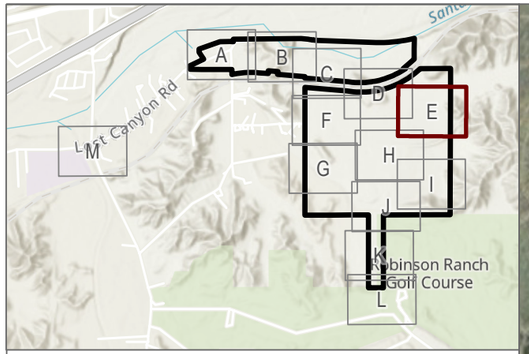
DUDEK

0 50 100 Feet

Appendix A-D

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report



Project Boundary

Protection Zone

Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia



SOURCE: Maxar 2022

DUDEK

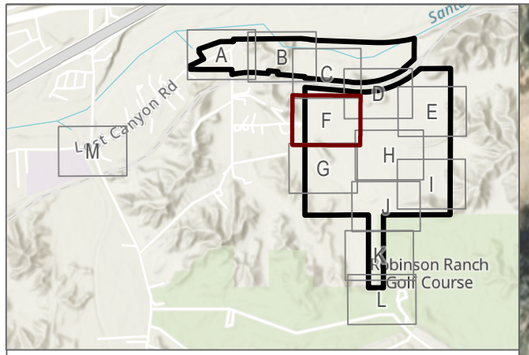
N

0 50 100 Feet

Appendix A-E

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report



Project Boundary

Protection Zone

Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia

Holt Ave

SOURCE: Maxar 2022

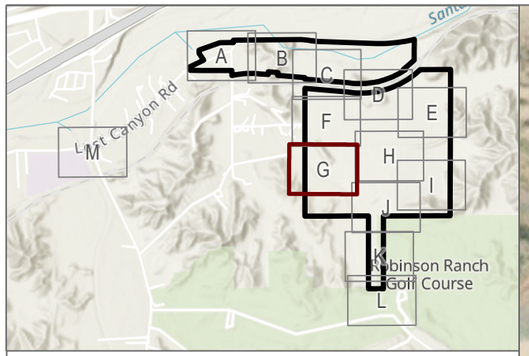
DUDEK

0 50 100 Feet

Appendix A-F

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report



Project Boundary

Protection Zone

Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri



SOURCE: Maxar 2022

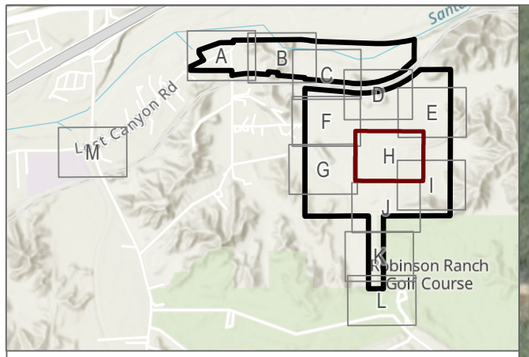
DUDEK

0 50 100 Feet

Appendix A-G

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report



Project Boundary

Protection Zone

Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri



SOURCE: Maxar 2022

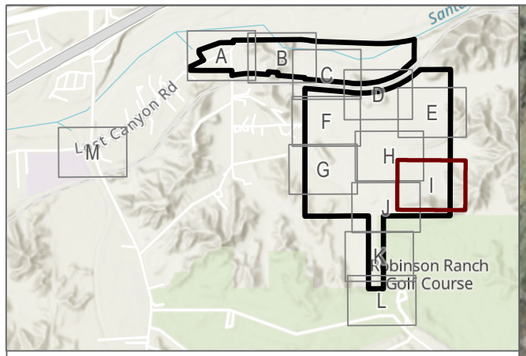
DUDEK

0 50 100 Feet

Appendix A-H

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report



Project Boundary

Protection Zone

Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri



SOURCE: Maxar 2022

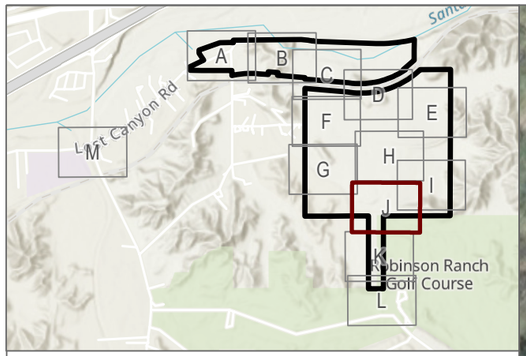
DUDEK

0 50 100 Feet

Appendix A-I

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report



Project Boundary

Protection Zone

Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia



SOURCE: Maxar 2022

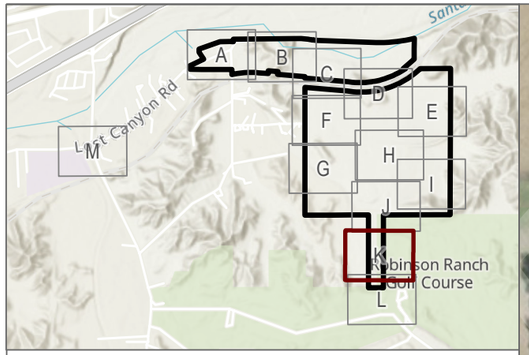
DUDEK

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Appendix A-J

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report



Project Boundary

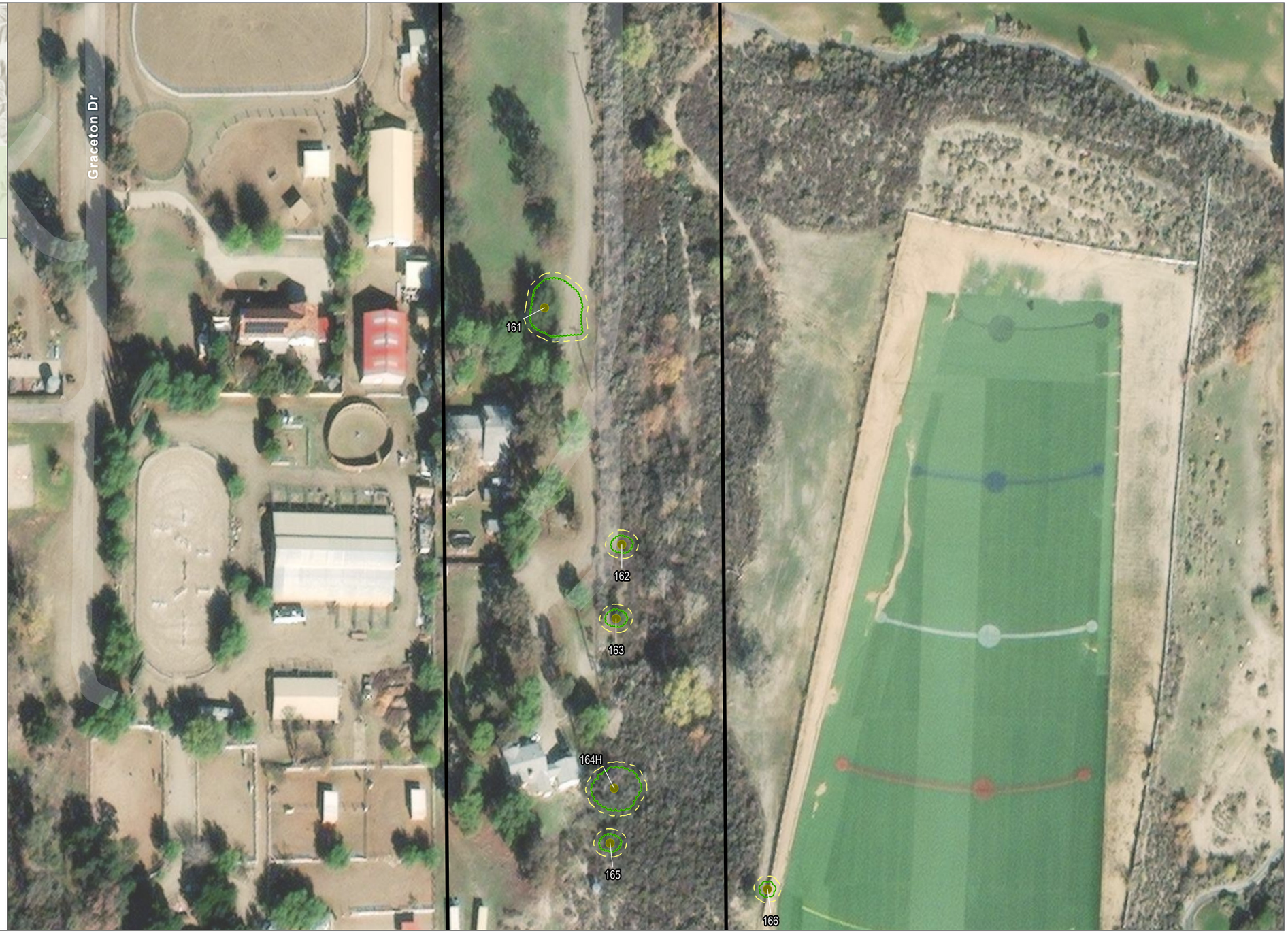
Protection Zone

Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia



SOURCE: Maxar 2022

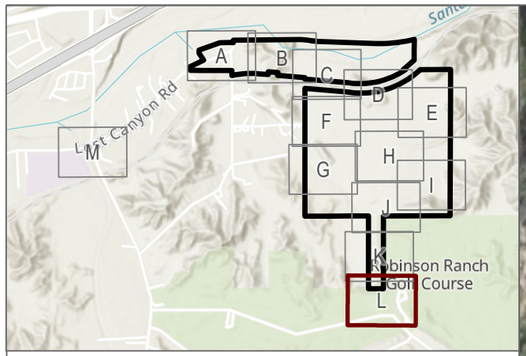
DUDEK

0 50 100 Feet

Appendix A-K

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report



Project Boundary

Protection Zone

Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri
- Canyon Live Oak, Quercus chrysolepis



SOURCE: Maxar 2022

DUDEK

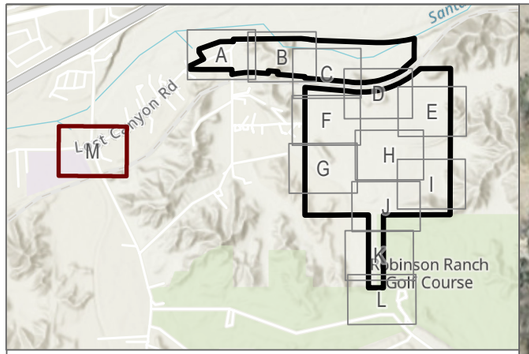
N

0 50 100 Feet

Appendix A-L

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report



Project Boundary

Protection Zone

Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia



SOURCE: Maxar 2022

DUDEK

N

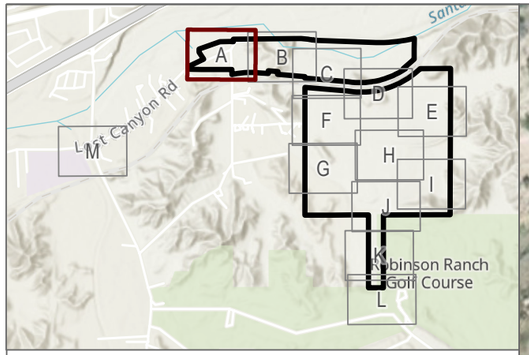
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Appendix A-M

Tree Location Exhibit

Belcaro Sand Canyon Arborist Report

Appendix B
Tree Impact Exhibit



- Project Boundary
- Project Footprint
- Protection Zone
- Canopy

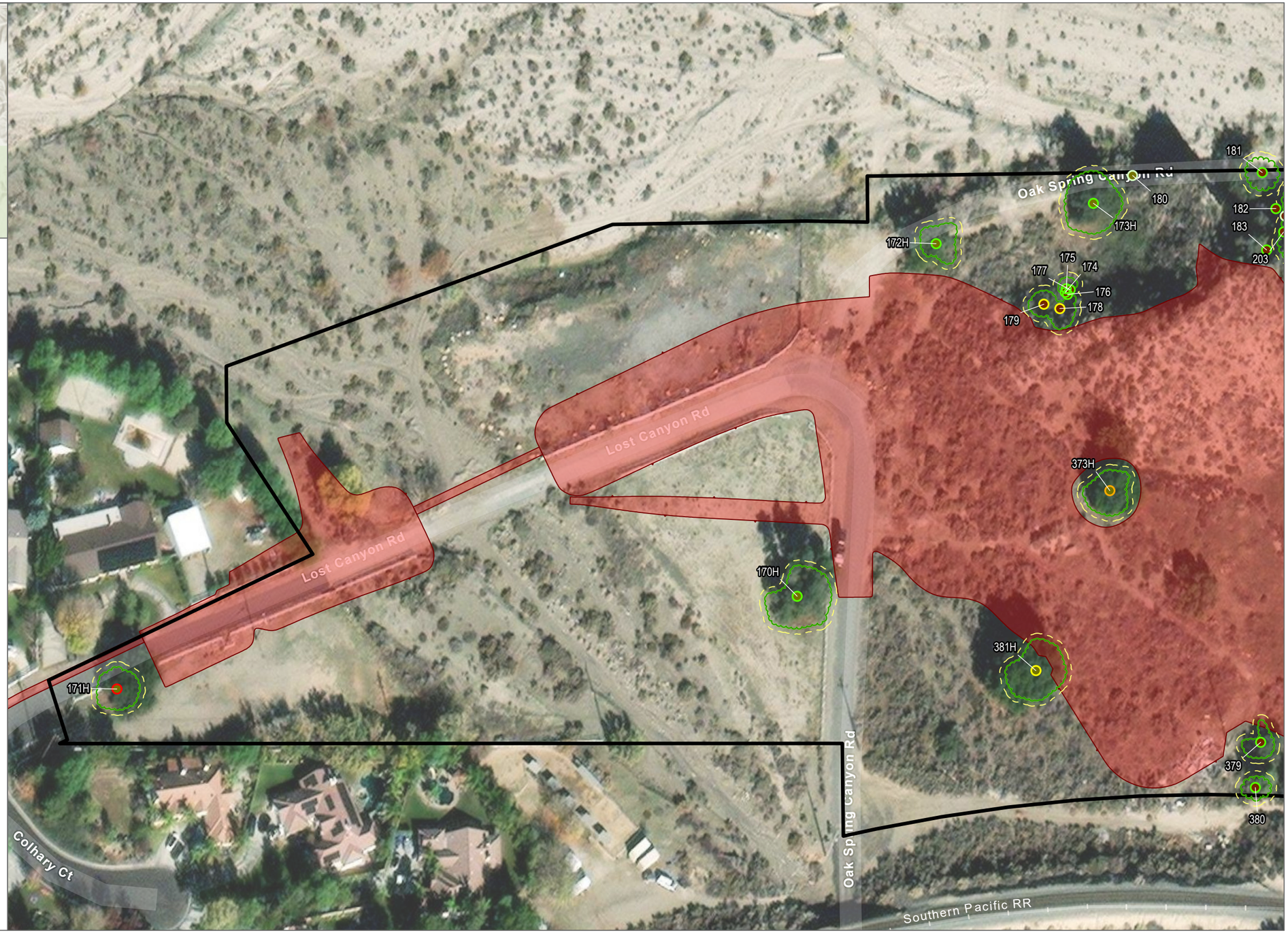
Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri

Disposition

- To Remain
- To remain (Dead)
- Major Encroachment (Development)
- Minor Encroachment (Development)
- To be Removed



SOURCE: Maxar 2022

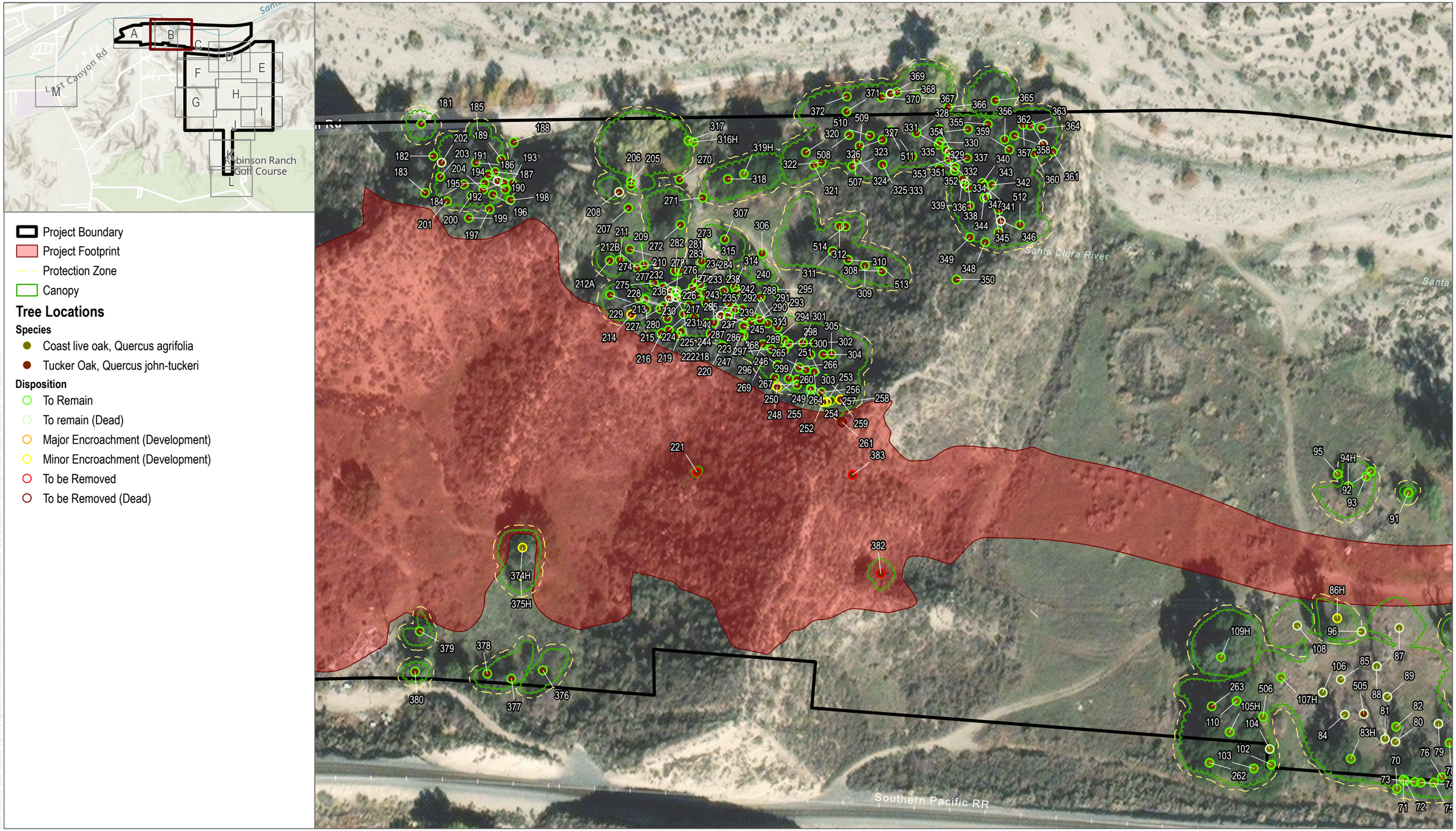
DUDEK

0 50 100 Feet

Appendix B-A

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report



SOURCE: Maxar 2022

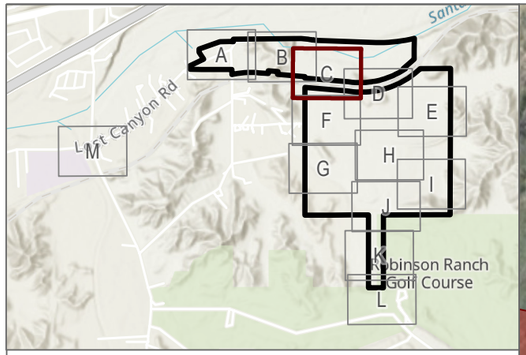
DUDEK

0 50 100 Feet

Appendix B-B

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report



- Project Boundary
- Project Footprint
- Protection Zone
- Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri
- <all other values>

G:\PROJECTS\Belcaro Sand Canyon\Arborist Report\Appendix B\Belcaro_Sand_Canyon_Report_Appendix_B_Tree_Impact_Exhibit.mxd

SOURCE: Maxar 2022

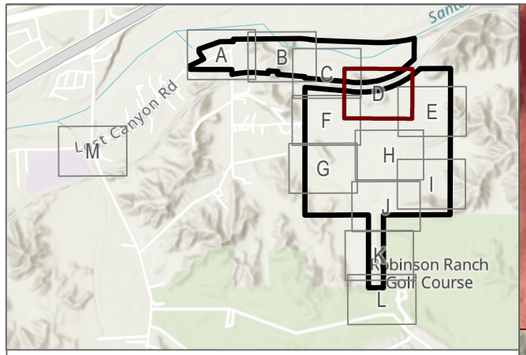
DUDEK

0 50 100 Feet

Appendix B-C

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report



- Project Boundary
- Project Footprint
- Protection Zone
- Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri

Disposition

- To Remain
- To remain (Dead)
- Major Encroachment (Development)
- Minor Encroachment (Roadside FMZ installation)
- To be Removed
- To be Removed (Dead)



SOURCE: Maxar 2022

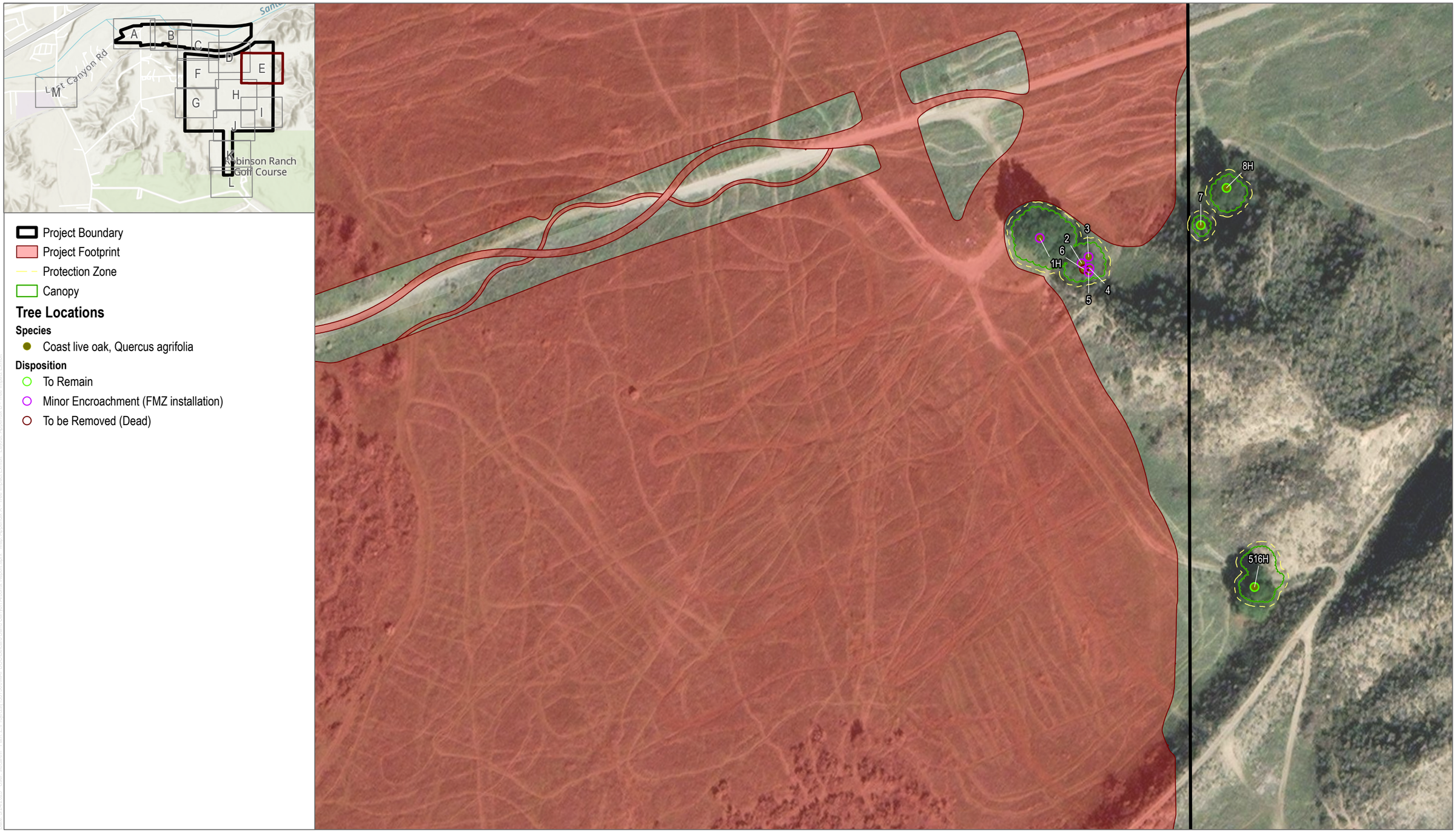
DUDEK

0 50 100 Feet

Appendix B-D

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report



SOURCE: Maxar 2022

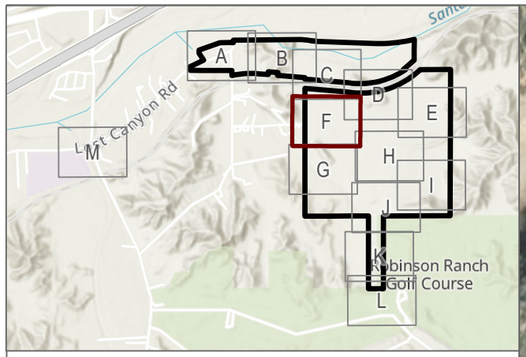
DUDEK

0 50 100 Feet

Appendix B-E

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report



- Project Boundary
- Project Footprint
- Protection Zone
- Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia

Disposition

- To Remain
- To remain (Dead)
- Minor Encroachment (Development)
- Minor Encroachment (FMZ installation)
- To be Removed
- To be Removed (Dead)



SOURCE: Maxar 2022

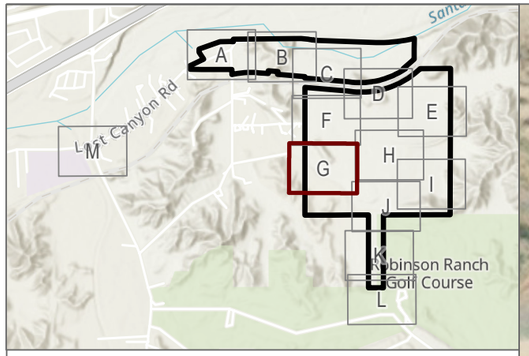
DUDEK

0 50 100 Feet

Appendix B-F

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report



- Project Boundary
- Project Footprint
- Protection Zone
- Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri

Disposition

- To Remain
- To be Removed



SOURCE: Maxar 2022

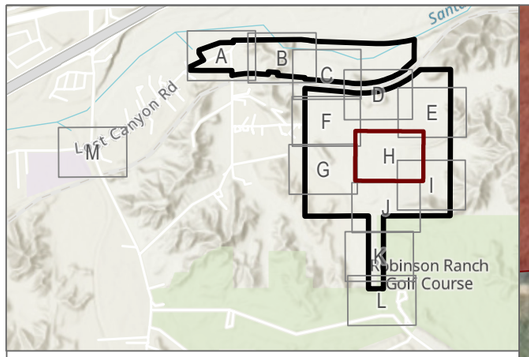
DUDEK

0 50 100 Feet

Appendix B-G

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report



- Project Boundary
- Project Footprint
- Protection Zone
- Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri

Disposition

- Minor Encroachment (Development)
- Minor Encroachment (FMZ installation)
- To be Removed (Dead)

SOURCE: Maxar 2022

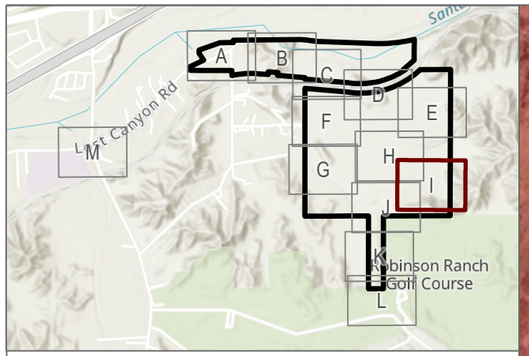
DUDEK

0 50 100 Feet

Appendix B-H

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report



- Project Boundary
- Project Footprint
- Protection Zone
- Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri

Disposition

- To Remain
- Major Encroachment (Development)
- Minor Encroachment (Development)
- Minor Encroachment (FMZ installation)

148H
149H
159H
158
157
152
151
153
154
155
156
517

SOURCE: Maxar 2022

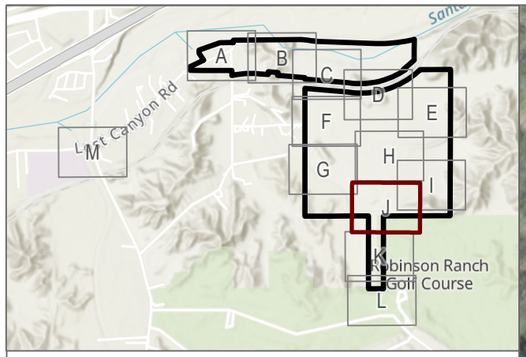
DUDEK

0 50 100 Feet

Appendix B-I

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report



- Project Boundary
- Project Footprint
- Protection Zone
- Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia

Disposition

- To Remain
- Minor Encroachment (Development)
- Minor Encroachment (FMZ installation)



SOURCE: Maxar 2022

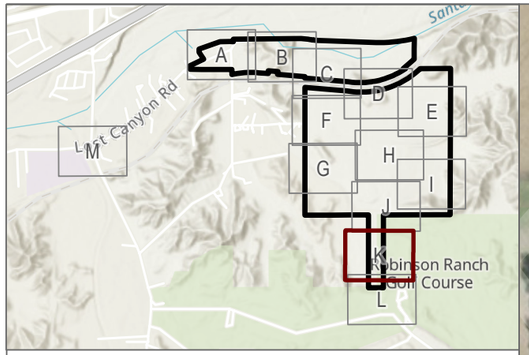
DUDEK

0 50 100 Feet

Appendix B-J

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report



Project Boundary
Project Footprint
Protection Zone
Canopy

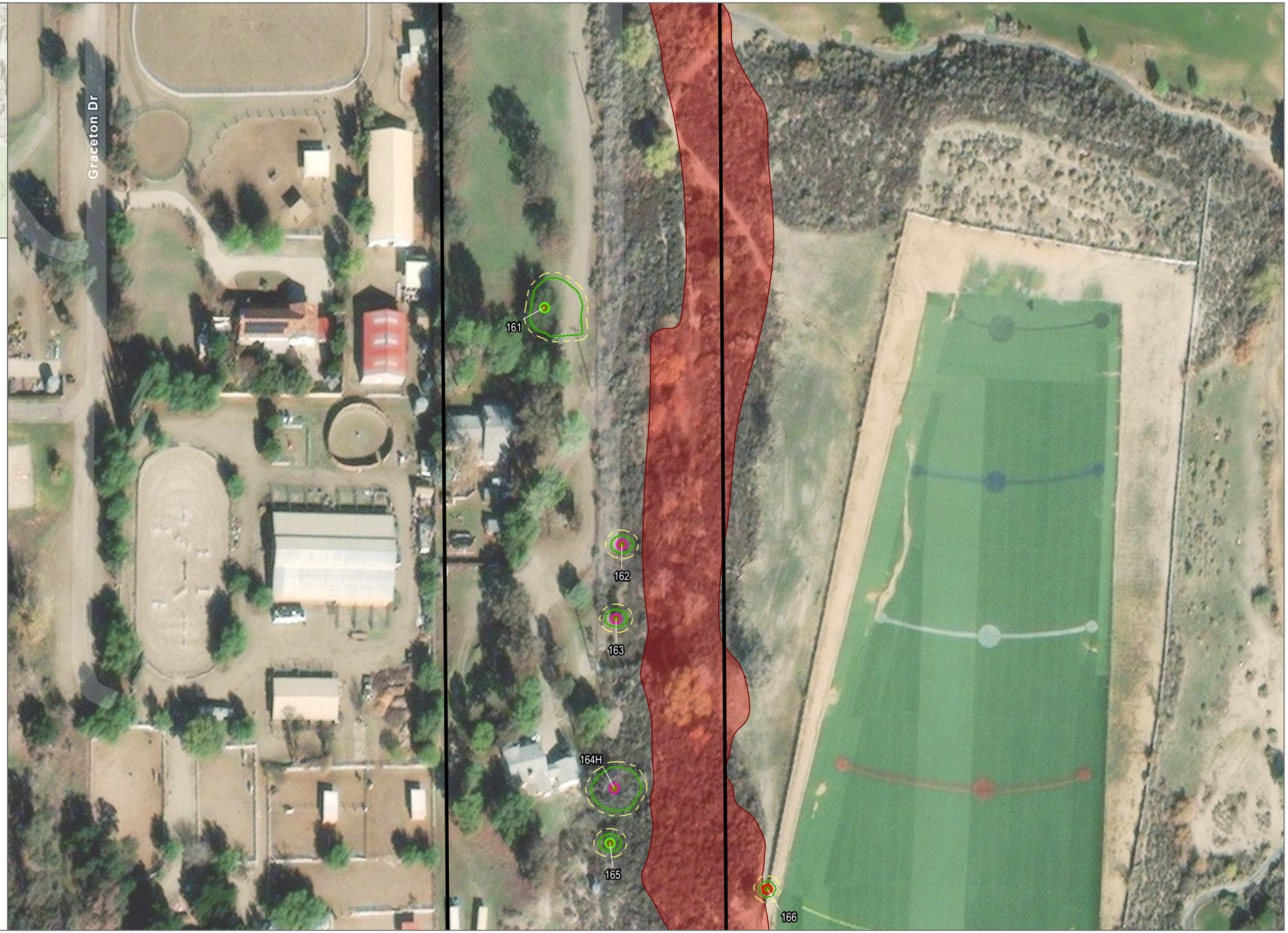
Tree Locations

Species

- Coast live oak, Quercus agrifolia

Disposition

- To Remain
- Minor Encroachment (Roadside FMZ installation)
- To be Removed



SOURCE: Maxar 2022

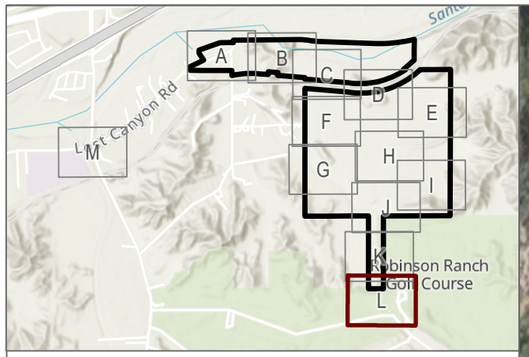
DUDEK

0 50 100 Feet

Appendix B-K

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report



- Project Boundary
- Project Footprint
- Protection Zone
- Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia
- Tucker Oak, Quercus john-tuckeri
- Canyon Live Oak, Quercus chrysolepis

Disposition

- To Remain
- To remain (Dead)
- Major Encroachment (Development)
- Minor Encroachment (Roadside FMZ installation)
- To be Removed



SOURCE: Maxar 2022

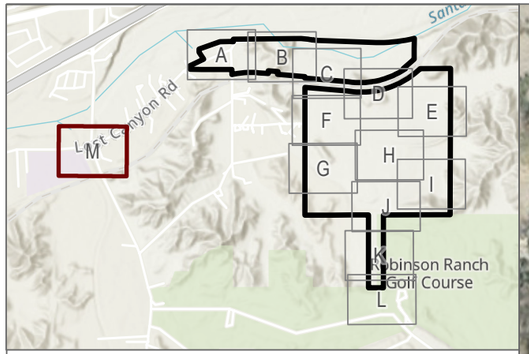
DUDEK

0 50 100 Feet

Appendix B-L

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report



- Project Boundary
- Project Footprint
- Protection Zone
- Canopy

Tree Locations

Species

- Coast live oak, Quercus agrifolia

Disposition

- Minor Encroachment (Development)
- To be Removed



SOURCE: Maxar 2022

DUDEK

N

0 50 100 Feet

Appendix B-M

Tree Impact Exhibit

Belcaro Sand Canyon Arborist Report

Appendix C
Tree Information Matrix

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
1H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	58	58	0	0	0	0	0	0	0	30	50	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (FMZ installation)
2	*Quercus agrifolia*	Coast live oak	Protected	3	20	12	9	13	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	C	C	C		Minor Encroachment (FMZ installation)
3	*Quercus agrifolia*	Coast live oak	Protected	1	14	14	0	0	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	D	D	D		Minor Encroachment (FMZ installation)
4	*Quercus agrifolia*	Coast live oak	Protected	2	17	15	9	0	0	0	0	0	0	25	20	-	-	-	-	-	-	-	-	D	C	C		Minor Encroachment (FMZ installation)
5	*Quercus agrifolia*	Coast live oak	Protected	1	9	9	0	0	0	0	0	0	0	10	15	-	-	-	-	-	-	-	-	C	D	C		Minor Encroachment (FMZ installation)
6	*Quercus agrifolia*	Coast live oak	Not protected	2	11	10	4	0	0	0	0	0	0	5	20	-	-	-	-	-	-	-	-	F	F	F	Dead stem, likely has a shared root system with nearby live stems	To be Removed (Dead)
7	*Quercus agrifolia*	Coast live oak	Not protected	1	1	1	0	0	0	0	0	0	0	10	20	-	-	-	-	-	-	-	-	E	E	E	Fell over, basal resprout	To Remain
8H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	40	40	0	0	0	0	0	0	0	30	35	-	-	-	-	-	-	-	-	B	D	C	No tag, estimated data. Bees	To Remain
9	*Quercus agrifolia*	Coast live oak	Not protected	1	40	40	0	0	0	0	0	0	0	10	25	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To be Removed (Dead)
10H	*Quercus agrifolia*	Coast live oak	Heritage Tree	4	54	40	22	22	18	0	0	0	0	35	50	-	-	-	-	-	-	-	-	B	C	B		To be Removed
11H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	70	70	0	0	0	0	0	0	0	35	50	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (FMZ installation)
12H	*Quercus agrifolia*	Coast live oak	Heritage Tree	3	91	90	13	4	0	0	0	0	0	55	50	-	-	-	-	-	-	-	-	B	C	B		To Remain
13H	*Quercus agrifolia*	Coast live oak	Heritage Tree	3	52	40	28	17	0	0	0	0	0	35	55	25	18	15	35	30	15	22	20	B	C	B		Minor Encroachment (Development)
14	*Quercus agrifolia*	Coast live oak	Protected	7	38	28	16	13	11	8	5	5	0	30	35	15	10	10	20	22	10	10	15	B	D	C		Minor Encroachment (Development)
15	*Quercus agrifolia*	Coast live oak	Protected	1	15	15	0	0	0	0	0	0	0	30	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
16	*Quercus agrifolia*	Coast live oak	Protected	6	17	12	7	6	5	4	2	0	0	30	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
17	*Quercus agrifolia*	Coast live oak	Protected	7	34	24	14	10	9	12	6	6	0	25	25	5	5	7	20	17	17	15	8	B	C	B		Minor Encroachment (Development)
18	*Quercus agrifolia*	Coast live oak	Protected	10	43	20	18	18	15	11	11	11	11,6,5	35	45	-	-	-	-	-	-	-	-	B	C	B		To Remain
19	*Quercus agrifolia*	Coast live oak	Protected	5	33	17	16	16	14	9	0	0	0	35	30	15	15	18	15	20	15	20	17	B	C	B		Minor Encroachment (Development)
20	*Quercus agrifolia*	Coast live oak	Protected	4	37	20	20	20	12	0	0	0	0	25	30	15	15	20	20	15	20	22	15	B	C	B		Minor Encroachment (Development)
21	*Quercus agrifolia*	Coast live oak	Protected	3	28	18	16	15	0	0	0	0	0	30	30	-	-	-	-	-	-	-	-	B	C	B		To Remain
22	*Quercus agrifolia*	Coast live oak	Protected	2	38	33	19	0	0	0	0	0	0	35	40	15	20	20	15	20	20	25	20	B	C	B		Minor Encroachment (Development)
23	*Quercus agrifolia*	Coast live oak	Not protected	1	50	50	0	0	0	0	0	0	0	8	15	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To be Removed (Dead)
24H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	50	50	0	0	0	0	0	0	0	25	30	-	-	-	-	-	-	-	-	B	D	C		To Remain
25H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	39	39	0	0	0	0	0	0	0	50	35	10	17	13	25	25	25	15	10	B	C	B		Minor Encroachment (Development)
26H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	46	46	0	0	0	0	0	0	0	55	45	10	20	15	30	35	40	35	10	B	C	B		Minor Encroachment (Development)
27	*Quercus agrifolia*	Coast live oak	Not protected	1	40	40	0	0	0	0	0	0	0	3	6	-	-	-	-	-	-	-	-	F	F	F	Stump	To remain (Dead)
28H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	34	34	0	0	0	0	0	0	0	45	25	15	15	22	17	18	15	10	8	C	C	C		Minor Encroachment (Development)

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
29	*Quercus agrifolia*	Coast live oak	Protected	2	23	20	12	0	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	E	E	E		To Remain
30H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	40	40	0	0	0	0	0	0	0	50	25	15	10	8	15	10	20	15	15	D	C	C		Minor Encroachment (Development)
31H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	35	35	0	0	0	0	0	0	0	20	25	5	5	8	8	8	8	15	5	E	E	E		Minor Encroachment (Development)
32	*Quercus agrifolia*	Coast live oak	Not protected	1	50	50	0	0	0	0	0	0	0	25	20	-	-	-	-	-	-	-	-	F	F	F		To be Removed (Dead)
33H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	59	59	0	0	0	0	0	0	0	50	30	15	12	10	20	30	20	25	25	C	D	C		Minor Encroachment (Development)
34H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	65	65	0	0	0	0	0	0	0	35	50	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (FMZ installation)
35H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	50	50	0	0	0	0	0	0	0	40	50	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag. Bees	Minor Encroachment (FMZ installation)
36	*Quercus agrifolia*	Coast live oak	Protected	1	30	30	0	0	0	0	0	0	0	40	40	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag. Private property	Minor Encroachment (FMZ installation)
37H	*Quercus agrifolia*	Coast live oak	Heritage Tree	6	60	30	30	24	27	17	15	0	0	40	55	13	13	13	13	13	13	13	13	D	C	C		Minor Encroachment (Development)
38	*Quercus agrifolia*	Coast live oak	Protected	1	28	28	0	0	0	0	0	0	0	40	50	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag. Private property	Minor Encroachment (FMZ installation)
39H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	38	38	0	0	0	0	0	0	0	50	40	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag. Private property	To Remain
40H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	45	45	0	0	0	0	0	0	0	50	60	30	30	30	30	30	30	30	30	C	C	C	Estimated data no tag. Private property	Minor Encroachment (Development)
41	*Quercus agrifolia*	Coast live oak	Protected	1	27	27	0	0	0	0	0	0	0	45	45	23	23	23	23	23	23	23	22.5	C	C	C	Estimated data no tag. Private property	Minor Encroachment (Development)
42	*Quercus agrifolia*	Coast live oak	Not protected	1	24	24	0	0	0	0	0	0	0	5	20	-	-	-	-	-	-	-	-	F	F	F	Fallen. Estimated data no tag. Private property	To remain (Dead)
43H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	55	55	0	0	0	0	0	0	0	45	45	30	25	25	30	25	30	35	30	D	D	D	Estimated data no tag. Private property	Minor Encroachment (Development)
44	*Quercus agrifolia*	Coast live oak	Not protected	1	35	35	0	0	0	0	0	0	0	10	20	-	-	-	-	-	-	-	-	F	F	F	Fallen. Estimated data no tag. Private property	To remain (Dead)
45	*Quercus agrifolia*	Coast live oak	Not protected	1	40	40	0	0	0	0	0	0	0	25	20	-	-	-	-	-	-	-	-	F	F	F	Estimated data no tag. Private property	To remain (Dead)
46	*Quercus agrifolia*	Coast live oak	Protected	1	27	27	0	0	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	E	E	E	Estimated data no tag. Private property	To Remain
47	*Quercus agrifolia*	Coast live oak	Protected	1	27	27	0	0	0	0	0	0	0	45	20	10	10	10	10	10	10	10	10	C	C	C	Estimated data no tag. Private property	Minor Encroachment (Development)
48	*Quercus agrifolia*	Coast live oak	Protected	1	30	30	0	0	0	0	0	0	0	55	45	23	23	23	23	23	23	23	22.5	C	C	C	Estimated data no tag. Private property	Minor Encroachment (Development)
49	*Quercus agrifolia*	Coast live oak	Protected	1	30	30	0	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	C	D	C	Estimated data no tag. Private property	To Remain
50	*Quercus agrifolia*	Coast live oak	Protected	1	30	30	0	0	0	0	0	0	0	60	45	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag. Private property	To Remain
51	*Quercus agrifolia*	Coast live oak	Protected	1	25	25	0	0	0	0	0	0	0	60	50	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag. Private property	To Remain
52H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	45	45	0	0	0	0	0	0	0	60	50	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag. Private property	To Remain
53	*Quercus agrifolia*	Coast live oak	Protected	1	30	30	0	0	0	0	0	0	0	50	45	23	23	23	23	23	23	23	22.5	C	C	C	Estimated data no tag. Private property	Minor Encroachment (Development)
54	*Quercus agrifolia*	Coast live oak	Protected	1	33	33	0	0	0	0	0	0	0	30	25	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag. Private property	To Remain
55	*Quercus agrifolia*	Coast live oak	Protected	5	16	7	7	7	7	7	0	0	0	20	20	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag. Private property	To Remain
56	*Quercus agrifolia*	Coast live oak	Protected	1	19	19	0	0	0	0	0	0	0	25	30	-	-	-	-	-	-	-	-	C	D	C		To Remain

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
57H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	35	35	0	0	0	0	0	0	0	45	45	-	-	-	-	-	-	-	-	B	C	B		To Remain
58	*Quercus agrifolia*	Coast live oak	Protected	1	15	15	0	0	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	E	E	E		To Remain
59H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	38	38	0	0	0	0	0	0	0	40	30	-	-	-	-	-	-	-	-	C	D	C	No tag	To Remain
60H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	43	43	0	0	0	0	0	0	0	40	50	15	15	10	15	25	33	35	35	B	C	B	Estimated data no tag. Private property	Minor Encroachment (Development)
61H	*Quercus agrifolia*	Coast live oak	Heritage Tree	7	66	30	30	30	30	20	15	14	0	35	60	-	-	-	-	-	-	-	-	B	C	B	No tag	To Remain
62	*Quercus agrifolia*	Coast live oak	Protected	1	12	12	0	0	0	0	0	0	0	20	15	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag. Private property	To Remain
63	*Quercus agrifolia*	Coast live oak	Protected	1	14	14	0	0	0	0	0	0	0	25	25	-	-	-	-	-	-	-	-	B	C	B	No tag	To Remain
64H	*Quercus agrifolia*	Coast live oak	Heritage Tree	4	54	51	16	3	2	0	0	0	0	35	50	20	18	23	15	28	27	20	15	C	C	C		Minor Encroachment (Development)
65H	*Quercus agrifolia*	Coast live oak	Heritage Tree	7	67	37	30	27	22	19	18	18	0	35	55	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (FMZ installation)
66H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	60	60	0	0	0	0	0	0	0	55	45	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (FMZ installation)
67H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	60	60	0	0	0	0	0	0	0	55	40	-	-	-	-	-	-	-	-	D	E	D		Minor Encroachment (FMZ installation)
68H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	60	60	0	0	0	0	0	0	0	35	35	-	-	-	-	-	-	-	-	D	E	D		Minor Encroachment (FMZ installation)
69	*Quercus agrifolia*	Coast live oak	Protected	1	8	8	0	0	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	B	C	B	Tag S	To be Removed
70	*Quercus agrifolia*	Coast live oak	Protected	4	8	6	4	3	2	0	0	0	0	15	10	-	-	-	-	-	-	-	-	C	C	C		To Remain
71	*Quercus agrifolia*	Coast live oak	Protected	1	6	6	0	0	0	0	0	0	0	15	10	-	-	-	-	-	-	-	-	B	C	B		To Remain
72	*Quercus agrifolia*	Coast live oak	Protected	10	3	1	1	1	1	1	1	1	1,1,1	15	10	-	-	-	-	-	-	-	-	B	D	C	Stump resprout	To Remain
73	*Quercus agrifolia*	Coast live oak	Protected	4	34	20	19	17	9	0	0	0	0	35	30	-	-	-	-	-	-	-	-	C	C	C		To Remain
74	*Quercus agrifolia*	Coast live oak	Protected	4	11	6	6	5	5	0	0	0	0	15	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
75	*Quercus agrifolia*	Coast live oak	Protected	1	25	25	0	0	0	0	0	0	0	30	25	-	-	-	-	-	-	-	-	B	C	B		To Remain
76	*Quercus agrifolia*	Coast live oak	Protected	2	19	14	13	0	0	0	0	0	0	35	25	-	-	-	-	-	-	-	-	D	D	D		To Remain
77	*Quercus agrifolia*	Coast live oak	Not protected	2	34	30	15	0	0	0	0	0	0	35	25	-	-	-	-	-	-	-	-	F	F	F		To remain (Dead)
78	*Quercus agrifolia*	Coast live oak	Protected	2	13	12	4	0	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
79	*Quercus agrifolia*	Coast live oak	Not protected	1	30	30	0	0	0	0	0	0	0	4	15	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To remain (Dead)
80	*Quercus agrifolia*	Coast live oak	Not protected	1	30	30	0	0	0	0	0	0	0	4	10	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To remain (Dead)
81	*Quercus agrifolia*	Coast live oak	Not protected	1	36	36	0	0	0	0	0	0	0	30	25	-	-	-	-	-	-	-	-	F	F	F		To remain (Dead)
82	*Quercus agrifolia*	Coast live oak	Protected	2	20	14	14	0	0	0	0	0	0	15	20	-	-	-	-	-	-	-	-	C	D	C	Tag W	To Remain
83H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	37	37	0	0	0	0	0	0	0	45	40	-	-	-	-	-	-	-	-	B	D	C		To Remain
84	*Quercus agrifolia*	Coast live oak	Not protected	1	33	33	0	0	0	0	0	0	0	5	15	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To remain (Dead)

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
85	*Quercus agrifolia*	Coast live oak	Not protected	1	30	30	0	0	0	0	0	0	0	3	5	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To remain (Dead)
86H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	55	55	0	0	0	0	0	0	0	35	35	10	10	15	22	18	20	15	25	D	D	D		Minor Encroachment (Development)
87	*Quercus agrifolia*	Coast live oak	Not protected	1	27	27	0	0	0	0	0	0	0	6	5	-	-	-	-	-	-	-	-	F	F	F		To remain (Dead)
88	*Quercus agrifolia*	Coast live oak	Not protected	1	60	60	0	0	0	0	0	0	0	6	25	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To remain (Dead)
89	*Quercus agrifolia*	Coast live oak	Not protected	1	30	30	0	0	0	0	0	0	0	1	3	-	-	-	-	-	-	-	-	F	F	F	Stump	To remain (Dead)
90H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	60	60	0	0	0	0	0	0	0	45	30	-	-	-	-	-	-	-	-	D	E	D		Minor Encroachment (Roadside FMZ installation)
91	*Quercus agrifolia*	Coast live oak	Protected	2	11	11	2	0	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	B	C	B		To Remain
92	*Quercus agrifolia*	Coast live oak	Protected	3	6	5	3	2	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	B	C	B		To Remain
93	*Quercus agrifolia*	Coast live oak	Not protected	2	1	1	1	0	0	0	0	0	0	7	5	-	-	-	-	-	-	-	-	C	C	C		To Remain
94H	*Quercus agrifolia*	Coast live oak	Heritage Tree	4	68	65	13	11	9	0	0	0	0	20	25	-	-	-	-	-	-	-	-	B	D	C		To Remain
95	*Quercus agrifolia*	Coast live oak	Protected	4	3	2	2	1	1	0	0	0	0	10	10	-	-	-	-	-	-	-	-	B	C	B		To Remain
96	*Quercus agrifolia*	Coast live oak	Not protected	1	15	15	0	0	0	0	0	0	0	1	2	-	-	-	-	-	-	-	-	F	F	F	Stump	To remain (Dead)
97H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	48	48	0	0	0	0	0	0	0	40	45	25	20	17	17	15	10	15	20	B	D	C		Minor Encroachment (Development)
98	*Quercus agrifolia*	Coast live oak	Not protected	1	25	25	0	0	0	0	0	0	0	4	4	-	-	-	-	-	-	-	-	F	F	F	Fragment	To be Removed (Dead)
99H	*Quercus agrifolia*	Coast live oak	Heritage Tree	2	87	75	45	0	0	0	0	0	0	35	45	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (Roadside FMZ installation)
100	*Quercus agrifolia*	Coast live oak	Not protected	1	60	60	0	0	0	0	0	0	0	15	25	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To remain (Dead)
101	*Quercus agrifolia*	Coast live oak	Protected	4	28	16	15	14	9	0	0	0	0	25	25	-	-	-	-	-	-	-	-	D	E	D		To Remain
102	*Quercus agrifolia*	Coast live oak	Protected	8	36	16	16	15	15	14	9	4	4	30	35	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag. Encampment nearby	To Remain
103	*Quercus agrifolia*	Coast live oak	Protected	5	31	24	17	4	6	4	0	0	0	45	35	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag. Encampment nearby	To Remain
104	*Quercus agrifolia*	Coast live oak	Not protected	1	20	20	0	0	0	0	0	0	0	5	20	-	-	-	-	-	-	-	-	F	F	F	Fallen over. Estimated data no tag, encampment nearby	To remain (Dead)
105H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	60	60	0	0	0	0	0	0	0	50	50	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag. Encampment nearby	To Remain
106	*Quercus agrifolia*	Coast live oak	Not protected	1	30	30	0	0	0	0	0	0	0	5	8	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To remain (Dead)
107H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	40	40	0	0	0	0	0	0	0	45	25	-	-	-	-	-	-	-	-	D	D	D		To Remain
108	*Quercus agrifolia*	Coast live oak	Not protected	1	25	25	0	0	0	0	0	0	0	3	5	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To remain (Dead)
109H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	55	55	0	0	0	0	0	0	0	45	50	-	-	-	-	-	-	-	-	D	D	D		To Remain
110	*Quercus agrifolia*	Coast live oak	Protected	1	30	30	0	0	0	0	0	0	0	15	10	-	-	-	-	-	-	-	-	C	D	C	Estimated data no tag. Encampment nearby	To Remain

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
111H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	73	73	0	0	0	0	0	0	0	30	45	-	-	-	-	-	-	-	-	C	D	C		Minor Encroachment (Roadside FMZ installation)
112	*Quercus agrifolia*	Coast live oak	Protected	4	34	32	8	5	4	0	0	0	0	25	30	15	15	10	12	15	15	15	17	B	D	C		Major Encroachment (Development)
113	*Quercus agrifolia*	Coast live oak	Protected	3	32	32	5	2	0	0	0	0	0	20	25	-	-	-	-	-	-	-	-	D	D	D		To Remain
114	*Quercus agrifolia*	Coast live oak	Protected	5	9	6	4	3	2	4	0	0	0	15	15	-	-	-	-	-	-	-	-	B	C	B		To be Removed
115	*Quercus agrifolia*	Coast live oak	Not protected	1	25	25	0	0	0	0	0	0	0	3	15	-	-	-	-	-	-	-	-	F	F	F		To remain (Dead)
116H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	54	54	0	0	0	0	0	0	0	35	35	-	-	-	-	-	-	-	-	B	D	C		To Remain
117H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	55	55	0	0	0	0	0	0	0	50	40	15	15	20	25	30	20	20	15	B	C	B		Minor Encroachment (Development)
118	*Quercus agrifolia*	Coast live oak	Not protected	1	17	17	0	0	0	0	0	0	0	4	15	-	-	-	-	-	-	-	-	F	F	F	Fallen over. No tag estimated data; private property	To be Removed (Dead)
119	*Quercus agrifolia*	Coast live oak	Protected	1	30	30	0	0	0	0	0	0	0	35	25	-	-	-	-	-	-	-	-	E	E	E	No tag estimated data; private property	Minor Encroachment (FMZ installation)
120	*Quercus agrifolia*	Coast live oak	Protected	1	30	30	0	0	0	0	0	0	0	25	25	-	-	-	-	-	-	-	-	C	D	C	No tag estimated data; private property	Minor Encroachment (FMZ installation)
121H	*Quercus agrifolia*	Coast live oak	Heritage Tree	2	41	35	22	0	0	0	0	0	0	45	45	-	-	-	-	-	-	-	-	B	C	B	No tag estimated data; private property	Minor Encroachment (FMZ installation)
122H	*Quercus agrifolia*	Coast live oak	Heritage Tree	2	61	50	35	0	0	0	0	0	0	35	45	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (FMZ installation)
123H	*Quercus agrifolia*	Coast live oak	Heritage Tree	2	36	24	27	0	0	0	0	0	0	40	40	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (FMZ installation)
124	*Quercus agrifolia*	Coast live oak	Not protected	4	46	24	25	18	25	0	0	0	0	5	25	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To be Removed (Dead)
125	*Quercus agrifolia*	Coast live oak	Not protected	1	35	35	0	0	0	0	0	0	0	10	25	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To be Removed (Dead)
126H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	42	42	0	0	0	0	0	0	0	40	30	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (FMZ installation)
127H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	53	53	0	0	0	0	0	0	0	40	45	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (FMZ installation)
128	*Quercus agrifolia*	Coast live oak	Not protected	1	65	65	0	0	0	0	0	0	0	25	50	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To be Removed (Dead)
129	*Quercus agrifolia*	Coast live oak	Not protected	1	48	48	0	0	0	0	0	0	0	10	25	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To be Removed (Dead)
130H	*Quercus agrifolia*	Coast live oak	Heritage Tree	3	51	35	32	20	0	0	0	0	0	25	25	-	-	-	-	-	-	-	-	B	D	C	Tag S	Minor Encroachment (FMZ installation)
131	*Quercus agrifolia*	Coast live oak	Protected	1	30	30	0	0	0	0	0	0	0	25	15	-	-	-	-	-	-	-	-	C	D	C		Minor Encroachment (FMZ installation)
132H	*Quercus agrifolia*	Coast live oak	Heritage Tree	2	45	34	30	0	0	0	0	0	0	35	45	-	-	-	-	-	-	-	-	C	C	C		Minor Encroachment (FMZ installation)
133H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	45	45	0	0	0	0	0	0	0	25	25	-	-	-	-	-	-	-	-	C	D	C		To Remain
134	*Quercus agrifolia*	Coast live oak	Not protected	1	45	45	0	0	0	0	0	0	0	10	20	-	-	-	-	-	-	-	-	F	F	F		To be Removed (Dead)
135H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	46	46	0	0	0	0	0	0	0	45	45	15	25	23	20	20	15	15	20	B	C	B		Minor Encroachment (Development)
136	*Quercus agrifolia*	Coast live oak	Protected	2	22	19	12	0	0	0	0	0	0	25	25	13	15	17	9	10	12	15	15	B	C	B		Minor Encroachment (Development)
137	*Quercus agrifolia*	Coast live oak	Not protected	2	53	40	35	0	0	0	0	0	0	4	25	-	-	-	-	-	-	-	-	F	F	F	Fallen down	To be Removed (Dead)

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
138	*Quercus agrifolia*	Coast live oak	Protected	5	35	20	16	16	12	14	0	0	0	25	25	-	-	-	-	-	-	-	-	B	C	B	No tag estimated data private tree	To Remain
139H	*Quercus agrifolia*	Coast live oak	Heritage Tree	5	55	25	25	25	30	14	0	0	0	35	50	-	-	-	-	-	-	-	-	B	C	B		To Remain
140	*Quercus agrifolia*	Coast live oak	Protected	4	10	5	5	5	5	0	0	0	0	10	15	-	-	-	-	-	-	-	-	B	C	B		To Remain
141	*Quercus john-tuckeri*	Tucker oak	Protected	10	8	3	3	3	3	3	2	2	2,2,2	10	15	-	-	-	-	-	-	-	-	B	C	B	No tag	To Remain
142	*Quercus john-tuckeri*	Tucker oak	Protected	5	10	5	5	4	3	4	0	0	0	10	15	-	-	-	-	-	-	-	-	C	C	C	No tag	To Remain
143	*Quercus john-tuckeri*	Tucker oak	Protected	2	9	7	5	0	0	0	0	0	0	10	15	-	-	-	-	-	-	-	-	C	C	C	No tag private property	To Remain
144	*Quercus agrifolia*	Coast live oak	Protected	5	32	20	15	14	12	9	0	0	0	40	25	-	-	-	-	-	-	-	-	B	C	B		To be Removed
145H	*Quercus agrifolia*	Coast live oak	Heritage Tree	3	53	45	27	5	0	0	0	0	0	35	50	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (FMZ installation)
146H	*Quercus agrifolia*	Coast live oak	Heritage Tree	3	46	27	34	16	0	0	0	0	0	30	50	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (FMZ installation)
147	*Quercus agrifolia*	Coast live oak	Protected	1	32	32	0	0	0	0	0	0	0	30	45	20	25	20	20	22	20	17	17	B	C	B		Minor Encroachment (Development)
148H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	37	37	0	0	0	0	0	0	0	40	50	17	15	22	23	20	20	20	25	B	C	B		Minor Encroachment (Development)
149H	*Quercus agrifolia*	Coast live oak	Heritage Tree	2	66	55	37	0	0	0	0	0	0	35	35	-	-	-	-	-	-	-	-	B	D	C		Minor Encroachment (FMZ installation)
150	*Quercus agrifolia*	Coast live oak	Not protected	1	72	72	0	0	0	0	0	0	0	50	55	-	-	-	-	-	-	-	-	F	F	F		To be Removed (Dead)
151	*Quercus agrifolia*	Coast live oak	Protected	1	18	18	0	0	0	0	0	0	0	25	25	13	13	13	13	13	13	13	12.5	C	C	C		Major Encroachment (Development)
152	*Quercus agrifolia*	Coast live oak	Protected	2	23	17	16	0	0	0	0	0	0	30	25	-	-	-	-	-	-	-	-	C	C	C		Minor Encroachment (FMZ installation)
153	*Quercus agrifolia*	Coast live oak	Protected	1	18	18	0	0	0	0	0	0	0	25	25	-	-	-	-	-	-	-	-	C	D	C		Minor Encroachment (FMZ installation)
154	*Quercus john-tuckeri*	Tucker oak	Protected	10	11	4	4	4	4	4	3	3	3,3,3	15	20	-	-	-	-	-	-	-	-	C	C	C		Minor Encroachment (FMZ installation)
155	*Quercus john-tuckeri*	Tucker oak	Protected	6	9	6	4	4	3	3	2	0	0	10	20	-	-	-	-	-	-	-	-	B	C	B		Minor Encroachment (FMZ installation)
156	*Quercus john-tuckeri*	Tucker oak	Protected	9	9	3	3	3	3	3	3	3	3,3	10	15	-	-	-	-	-	-	-	-	C	C	C		Minor Encroachment (FMZ installation)
157	*Quercus agrifolia*	Coast live oak	Protected	1	26	26	0	0	0	0	0	0	0	35	35	20	20	20	25	23	8	8	10	B	C	B		Major Encroachment (Development)
158	*Quercus agrifolia*	Coast live oak	Protected	2	32	27	17	0	0	0	0	0	0	35	35	15	12	23	27	30	20	12	15	C	C	C		Minor Encroachment (Development)
159H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	54	54	0	0	0	0	0	0	0	40	40	15	15	8	20	15	22	25	12	E	E	E		Minor Encroachment (Development)
160H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	55	55	0	0	0	0	0	0	0	45	55	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag private property	To Remain
161	*Quercus agrifolia*	Coast live oak	Protected	2	20	14	14	0	0	0	0	0	0	35	35	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag private property	To Remain
162	*Quercus agrifolia*	Coast live oak	Protected	3	3	2	2	2	0	0	0	0	0	10	8	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag private property.	Minor Encroachment (Roadside FMZ installation)
163	*Quercus agrifolia*	Coast live oak	Protected	2	13	9	9	0	0	0	0	0	0	25	15	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag private property	Minor Encroachment (Roadside FMZ installation)
164H	*Quercus agrifolia*	Coast live oak	Heritage Tree	2	65	55	35	0	0	0	0	0	0	50	60	-	-	-	-	-	-	-	-	E	E	E	Estimated data no tag private property	Minor Encroachment (Roadside FMZ installation)

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
165	*Quercus agrifolia*	Coast live oak	Protected	3	3	2	2	2	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag private property	To Remain
166	*Quercus agrifolia*	Coast live oak	Protected	7	12	6	6	4	4	4	3	3	0	10	10	-	-	-	-	-	-	-	-	B	C	B	No tag private property	To be Removed
167	*Quercus agrifolia*	Coast live oak	Protected	2	8	7	4	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C		To be Removed
168H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	70	70	0	0	0	0	0	0	0	50	55	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag private property	To Remain
169H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	70	70	0	0	0	0	0	0	0	50	55	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag private property	To Remain
170H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	70	70	0	0	0	0	0	0	0	35	55	-	-	-	-	-	-	-	-	B	C	B		To Remain
171H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	44	44	0	0	0	0	0	0	0	35	50	-	-	-	-	-	-	-	-	B	C	B		To be Removed
172H	*Quercus agrifolia*	Coast live oak	Heritage Tree	2	47	45	15	0	0	0	0	0	0	35	35	-	-	-	-	-	-	-	-	C	C	C		To Remain
173H	*Quercus agrifolia*	Coast live oak	Heritage Tree	3	55	55	2	2	0	0	0	0	0	45	45	-	-	-	-	-	-	-	-	B	C	B		To Remain
174	*Quercus john-tuckeri*	Tucker oak	Protected	2	4	4	2	0	0	0	0	0	0	10	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
175	*Quercus john-tuckeri*	Tucker oak	Protected	5	8	4	4	3	3	3	0	0	0	15	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
176	*Quercus john-tuckeri*	Tucker oak	Protected	3	6	4	3	3	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	B	C	B		To Remain
177	*Quercus john-tuckeri*	Tucker oak	Protected	7	5	4	2	2	1	1	1	1	0	15	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
178	*Quercus john-tuckeri*	Tucker oak	Protected	10	12	12	1	1	1	1	1	1	1,1,1	20	25	5	4	5	15	6	5	5	5	C	C	C		Minor Encroachment (Development)
179	*Quercus john-tuckeri*	Tucker oak	Protected	9	25	12	12	10	9	9	6	3	3,3	15	20	10	10	10	10	10	10	10	10	D	C	C		Minor Encroachment (Development)
180	*Quercus agrifolia*	Coast live oak	Not protected	1	45	45	0	0	0	0	0	0	0	4	10	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To remain (Dead)
181	*Quercus john-tuckeri*	Tucker oak	Protected	3	21	15	13	7	0	0	0	0	0	20	25	-	-	-	-	-	-	-	-	B	C	B		To Remain
182	*Quercus john-tuckeri*	Tucker oak	Protected	5	8	5	3	3	3	4	0	0	0	15	20	-	-	-	-	-	-	-	-	D	C	C	Estimated data no tag. Steep	To Remain
183	*Quercus john-tuckeri*	Tucker oak	Protected	8	21	13	6	11	8	5	2	2	1	25	25	-	-	-	-	-	-	-	-	B	C	B		To Remain
184	*Quercus john-tuckeri*	Tucker oak	Protected	2	7	6	3	0	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	D	C	C	Estimated data no tag. Steep	To Remain
185	*Quercus john-tuckeri*	Tucker oak	Protected	3	15	14	4	4	0	0	0	0	0	15	20	-	-	-	-	-	-	-	-	D	C	C		To Remain
186	*Quercus john-tuckeri*	Tucker oak	Protected	5	17	11	9	7	4	5	0	0	0	20	25	-	-	-	-	-	-	-	-	D	C	C		To Remain
187	*Quercus john-tuckeri*	Tucker oak	Protected	6	14	12	4	4	5	1	1	0	0	20	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
188	*Quercus john-tuckeri*	Tucker oak	Protected	4	17	15	7	4	3	0	0	0	0	20	25	-	-	-	-	-	-	-	-	D	C	C	Tag N	To Remain
189	*Quercus john-tuckeri*	Tucker oak	Protected	20	14	11	6	4	3	1	1	1	1,1,1,1,1,1,1,1,1,1,1,1,1,1	20	25	-	-	-	-	-	-	-	-	D	C	C		To Remain
190	*Quercus john-tuckeri*	Tucker oak	Protected	5	10	6	6	3	3	4	0	0	0	15	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
191	*Quercus john-tuckeri*	Tucker oak	Not protected	1	4	4	0	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	F	F	F		To remain (Dead)
192	*Quercus john-tuckeri*	Tucker oak	Protected	3	16	12	7	7	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	C	C	C		To Remain

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
193	*Quercus john-tuckeri*	Tucker oak	Protected	4	4	2	2	2	2	0	0	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C		To Remain
194	*Quercus john-tuckeri*	Tucker oak	Protected	2	15	12	9	0	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
195	*Quercus john-tuckeri*	Tucker oak	Protected	1	3	3	0	0	0	0	0	0	0	10	8	-	-	-	-	-	-	-	-	D	C	C		To Remain
196	*Quercus john-tuckeri*	Tucker oak	Protected	1	3	3	0	0	0	0	0	0	0	6	8	-	-	-	-	-	-	-	-	D	D	D		To Remain
197	*Quercus john-tuckeri*	Tucker oak	Protected	5	6	3	3	2	3	3	0	0	0	15	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
198	*Quercus john-tuckeri*	Tucker oak	Protected	7	8	3	3	3	3	3	3	3	0	15	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
199	*Quercus john-tuckeri*	Tucker oak	Protected	8	14	8	6	4	4	5	5	3	3	15	20	-	-	-	-	-	-	-	-	D	D	D		To Remain
200	*Quercus john-tuckeri*	Tucker oak	Protected	5	12	7	8	4	2	3	0	0	0	15	20	-	-	-	-	-	-	-	-	B	C	B		To Remain
201	*Quercus john-tuckeri*	Tucker oak	Protected	4	8	6	3	3	3	0	0	0	0	10	10	-	-	-	-	-	-	-	-	D	C	C		To Remain
202	*Quercus john-tuckeri*	Tucker oak	Not protected	6	16	7	5	11	8	2	2	0	0	5	20	-	-	-	-	-	-	-	-	F	F	F	Estimated data no tag. Steep	To remain (Dead)
203	*Quercus john-tuckeri*	Tucker oak	Protected	2	8	7	4	0	0	0	0	0	0	12	15	-	-	-	-	-	-	-	-	D	C	C	No tag steep	To Remain
204	*Quercus john-tuckeri*	Tucker oak	Protected	1	3	3	0	0	0	0	0	0	0	5	10	-	-	-	-	-	-	-	-	D	D	D		To Remain
205	*Quercus john-tuckeri*	Tucker oak	Protected	6	22	15	12	10	5	2	2	0	0	20	25	-	-	-	-	-	-	-	-	C	C	C		To Remain
206	*Quercus john-tuckeri*	Tucker oak	Protected	5	27	15	15	14	6	5	0	0	0	25	35	-	-	-	-	-	-	-	-	C	C	C		To Remain
207	*Quercus john-tuckeri*	Tucker oak	Protected	8	10	5	4	4	4	3	3	3	3	10	20	-	-	-	-	-	-	-	-	E	E	E		To Remain
208	*Quercus john-tuckeri*	Tucker oak	Not protected	1	15	15	0	0	0	0	0	0	0	4	20	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To remain (Dead)
209	*Quercus john-tuckeri*	Tucker oak	Protected	5	7	5	2	2	3	1	0	0	0	10	15	-	-	-	-	-	-	-	-	B	C	B		To Remain
210	*Quercus john-tuckeri*	Tucker oak	Protected	10	3	1	1	1	1	1	1	1	1,1,1	8	10	-	-	-	-	-	-	-	-	B	C	B		To Remain
211	*Quercus john-tuckeri*	Tucker oak	Protected	5	18	15	9	2	3	1	0	0	0	15	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
212A	*Quercus john-tuckeri*	Tucker oak	Protected	3	14	9	9	5	0	0	0	0	0	10	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
212B	*Quercus john-tuckeri*	Tucker oak	Protected	4	14	9	7	2	8	0	0	0	0	20	20	-	-	-	-	-	-	-	-	D	C	C		To Remain
213	*Quercus john-tuckeri*	Tucker oak	Protected	8	20	14	9	6	6	5	4	3	3	15	20	-	-	-	-	-	-	-	-	D	D	D		To Remain
214	*Quercus john-tuckeri*	Tucker oak	Protected	9	15	9	5	5	5	4	4	4	4,4	15	25	8	8	7	9	13	10	9	10	D	C	C		Minor Encroachment (Development)
215	*Quercus john-tuckeri*	Tucker oak	Protected	5	7	4	3	3	3	3	0	0	0	10	15	-	-	-	-	-	-	-	-	E	E	E		To Remain
216	*Quercus john-tuckeri*	Tucker oak	Protected	5	13	8	6	6	5	2	0	0	0	15	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
217	*Quercus john-tuckeri*	Tucker oak	Protected	10	8	3	3	3	3	3	2	2	2,2,2	15	20	-	-	-	-	-	-	-	-	D	C	C		To Remain
218	*Quercus john-tuckeri*	Tucker oak	Protected	6	5	2	2	2	2	2	2	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C		To Remain
219	*Quercus john-tuckeri*	Tucker oak	Protected	6	5	2	2	2	2	2	2	0	0	10	10	-	-	-	-	-	-	-	-	D	D	D		To Remain

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
220	*Quercus john-tuckeri*	Tucker oak	Protected	6	13	8	8	6	2	3	1	0	0	15	20	-	-	-	-	-	-	-	-	D	D	D		To Remain
221	*Quercus john-tuckeri*	Tucker oak	Protected	6	7	4	4	3	2	1	1	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag access issue	To be Removed
222	*Quercus john-tuckeri*	Tucker oak	Protected	4	10	5	5	5	5	0	0	0	0	10	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
223	*Quercus john-tuckeri*	Tucker oak	Protected	5	9	6	3	4	4	2	0	0	0	15	20	-	-	-	-	-	-	-	-	D	D	D		To Remain
224	*Quercus john-tuckeri*	Tucker oak	Protected	6	6	4	2	4	1	1	1	0	0	10	10	-	-	-	-	-	-	-	-	D	D	D		To Remain
225	*Quercus john-tuckeri*	Tucker oak	Protected	6	7	4	4	2	2	2	2	0	0	15	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
226	*Quercus john-tuckeri*	Tucker oak	Protected	6	10	6	6	5	2	1	1	0	0	15	20	-	-	-	-	-	-	-	-	D	D	D		To Remain
227	*Quercus john-tuckeri*	Tucker oak	Protected	5	7	5	5	2	1	1	0	0	0	10	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
228	*Quercus john-tuckeri*	Tucker oak	Protected	2	5	5	1	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C		To Remain
229	*Quercus john-tuckeri*	Tucker oak	Protected	3	16	12	9	5	0	0	0	0	0	20	25	-	-	-	-	-	-	-	-	D	C	C		To Remain
230	*Quercus john-tuckeri*	Tucker oak	Protected	3	8	7	4	2	0	0	0	0	0	10	20	-	-	-	-	-	-	-	-	D	C	C		To Remain
231	*Quercus john-tuckeri*	Tucker oak	Not protected	5	8	5	4	4	3	1	0	0	0	15	15	-	-	-	-	-	-	-	-	F	F	F		To remain (Dead)
232	*Quercus john-tuckeri*	Tucker oak	Protected	5	15	9	9	5	6	3	0	0	0	15	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
233	*Quercus john-tuckeri*	Tucker oak	Protected	1	7	7	0	0	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
234	*Quercus john-tuckeri*	Tucker oak	Protected	3	3	2	2	2	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C		To Remain
235	*Quercus john-tuckeri*	Tucker oak	Protected	6	12	6	6	5	4	4	3	0	0	15	20	-	-	-	-	-	-	-	-	D	C	C		To Remain
236	*Quercus john-tuckeri*	Tucker oak	Protected	3	9	6	6	3	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
237	*Quercus john-tuckeri*	Tucker oak	Protected	6	11	6	5	4	4	5	3	0	0	10	15	-	-	-	-	-	-	-	-	E	E	E		To Remain
238	*Quercus john-tuckeri*	Tucker oak	Protected	6	8	5	3	3	3	3	3	0	0	15	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
239	*Quercus john-tuckeri*	Tucker oak	Protected	1	4	4	0	0	0	0	0	0	0	7	10	-	-	-	-	-	-	-	-	E	E	E		To Remain
240	*Quercus john-tuckeri*	Tucker oak	Protected	15	9	8	1	1	1	1	1	1	1,1,1,1,1,1,1,1,1	10	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
241	*Quercus john-tuckeri*	Tucker oak	Protected	3	10	7	7	3	0	0	0	0	0	15	20	-	-	-	-	-	-	-	-	D	C	C		To Remain
242	*Quercus john-tuckeri*	Tucker oak	Protected	3	2	2	1	1	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	D	D	D		To Remain
243	*Quercus john-tuckeri*	Tucker oak	Protected	2	17	15	8	0	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	D	D	D		To Remain
244	*Quercus john-tuckeri*	Tucker oak	Not protected	1	12	12	0	0	0	0	0	0	0	3	3	-	-	-	-	-	-	-	-	F	F	F		To remain (Dead)
245	*Quercus john-tuckeri*	Tucker oak	Not protected	1	9	9	0	0	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	F	F	F		To remain (Dead)
246	*Quercus john-tuckeri*	Tucker oak	Protected	8	9	5	5	3	3	3	1	1	1	15	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
247	*Quercus john-tuckeri*	Tucker oak	Protected	6	8	4	4	3	3	2	2	0	0	15	15	-	-	-	-	-	-	-	-	D	D	D		To Remain

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
248	*Quercus john-tuckeri*	Tucker oak	Protected	13	16	7	6	6	6	4	4	4	3,3,3,3,3,3	15	20	11	10	11	7	9	10	9	10	C	C	C		Minor Encroachment (Development)
249	*Quercus john-tuckeri*	Tucker oak	Protected	4	15	11	6	7	3	0	0	0	0	20	20	-	-	-	-	-	-	-	-	D	D	D		To Remain
250	*Quercus john-tuckeri*	Tucker oak	Protected	2	10	10	3	0	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	D	D	D		To Remain
251	*Quercus john-tuckeri*	Tucker oak	Protected	5	5	3	3	1	1	1	0	0	0	15	10	-	-	-	-	-	-	-	-	D	D	D		To Remain
252	*Quercus john-tuckeri*	Tucker oak	Protected	3	16	9	9	9	0	0	0	0	0	15	25	13	13	13	13	13	13	13	12.5	C	C	C		Minor Encroachment (Development)
253	*Quercus john-tuckeri*	Tucker oak	Protected	2	16	11	11	0	0	0	0	0	0	25	20	10	10	10	10	10	10	10	10	C	C	C		Minor Encroachment (Development)
254	*Quercus john-tuckeri*	Tucker oak	Protected	1	4	4	0	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C		To Remain
255	*Quercus john-tuckeri*	Tucker oak	Protected	1	4	4	0	0	0	0	0	0	0	5	5	-	-	-	-	-	-	-	-	E	E	E		To Remain
256	*Quercus john-tuckeri*	Tucker oak	Protected	6	5	5	1	1	1	1	1	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C		To Remain
257	*Quercus john-tuckeri*	Tucker oak	Protected	5	20	8	11	9	10	5	0	0	0	15	25	-	-	-	-	-	-	-	-	D	D	D		To Remain
258	*Quercus john-tuckeri*	Tucker oak	Protected	5	18	9	9	8	9	5	0	0	0	15	25	13	13	13	13	13	13	13	12.5	C	C	C		Major Encroachment (Development)
259	*Quercus john-tuckeri*	Tucker oak	Protected	2	9	7	5	0	0	0	0	0	0	20	20	10	10	10	10	10	10	10	10	D	C	C		Minor Encroachment (Development)
260	*Quercus john-tuckeri*	Tucker oak	Protected	2	6	6	2	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	D	C	C		To Remain
261	*Quercus john-tuckeri*	Tucker oak	Not protected	7	5	2	2	2	2	2	2	2	0	10	10	-	-	-	-	-	-	-	-	F	F	F		To be Removed (Dead)
262	*Quercus agrifolia*	Coast live oak	Protected	1	12	12	0	0	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag. Encampment nearby	To Remain
263	*Quercus agrifolia*	Coast live oak	Protected	1	4	4	0	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag. Encampment nearby	To Remain
264	*Quercus john-tuckeri*	Tucker oak	Protected	3	16	13	7	5	0	0	0	0	0	15	20	-	-	-	-	-	-	-	-	D	D	D		To Remain
265	*Quercus john-tuckeri*	Tucker oak	Protected	3	18	15	7	6	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	D	D	D		To Remain
266	*Quercus john-tuckeri*	Tucker oak	Protected	4	4	2	2	2	2	0	0	0	0	10	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
267	*Quercus john-tuckeri*	Tucker oak	Protected	5	11	7	5	4	4	4	0	0	0	15	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
268	*Quercus john-tuckeri*	Tucker oak	Protected	10	22	10	10	10	9	5	5	5	4,3,3	15	25	-	-	-	-	-	-	-	-	D	C	C		To Remain
269	*Quercus john-tuckeri*	Tucker oak	Protected	5	5	4	3	1	1	1	0	0	0	15	10	-	-	-	-	-	-	-	-	D	C	C		To Remain
270	*Quercus john-tuckeri*	Tucker oak	Protected	3	21	16	11	7	0	0	0	0	0	20	25	-	-	-	-	-	-	-	-	B	C	B		To Remain
271	*Quercus john-tuckeri*	Tucker oak	Protected	5	16	10	9	7	3	5	0	0	0	20	25	-	-	-	-	-	-	-	-	B	C	B		To Remain
272	*Quercus john-tuckeri*	Tucker oak	Protected	9	25	15	12	10	6	6	5	4	4,3	20	25	-	-	-	-	-	-	-	-	B	C	B		To Remain
273	*Quercus john-tuckeri*	Tucker oak	Protected	9	15	7	7	6	5	4	4	3	3,3	10	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
274	*Quercus john-tuckeri*	Tucker oak	Not protected	1	27	27	0	0	0	0	0	0	0	8	8	-	-	-	-	-	-	-	-	F	F	F	Stump	To remain (Dead)
275	*Quercus john-tuckeri*	Tucker oak	Protected	5	2	1	1	1	1	1	0	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C	Stump resprout	To Remain

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
276	*Quercus john-tuckeri*	Tucker oak	Not protected	1	1	1	0	0	0	0	0	0	0	5	5	-	-	-	-	-	-	-	-	C	C	C	Stump resprout	To Remain
277	*Quercus john-tuckeri*	Tucker oak	Not protected	1	7	7	0	0	0	0	0	0	0	2	2	-	-	-	-	-	-	-	-	F	F	F	Stump	To remain (Dead)
278	*Quercus john-tuckeri*	Tucker oak	Not protected	1	1	1	0	0	0	0	0	0	0	3	3	-	-	-	-	-	-	-	-	C	C	C	Stump resprout	To Remain
279	*Quercus john-tuckeri*	Tucker oak	Not protected	1	5	5	0	0	0	0	0	0	0	2	1	-	-	-	-	-	-	-	-	F	F	F	Stump	To remain (Dead)
280	*Quercus john-tuckeri*	Tucker oak	Not protected	1	10	10	0	0	0	0	0	0	0	3	1	-	-	-	-	-	-	-	-	F	F	F	Stump	To remain (Dead)
281	*Quercus john-tuckeri*	Tucker oak	Protected	5	2	1	1	1	1	1	0	0	0	6	7	-	-	-	-	-	-	-	-	C	C	C		To Remain
282	*Quercus john-tuckeri*	Tucker oak	Protected	4	2	1	1	1	1	0	0	0	0	6	7	-	-	-	-	-	-	-	-	C	C	C		To Remain
283	*Quercus john-tuckeri*	Tucker oak	Protected	5	5	4	3	1	1	1	0	0	0	10	12	-	-	-	-	-	-	-	-	C	C	C		To Remain
284	*Quercus john-tuckeri*	Tucker oak	Protected	5	4	2	2	2	2	2	0	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C		To Remain
285	*Quercus john-tuckeri*	Tucker oak	Protected	3	15	11	9	4	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	D	D	D		To Remain
286	*Quercus john-tuckeri*	Tucker oak	Protected	6	12	9	5	3	4	3	4	0	0	15	20	-	-	-	-	-	-	-	-	D	C	C		To Remain
287	*Quercus john-tuckeri*	Tucker oak	Protected	1	9	9	0	0	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	D	C	C		To Remain
288	*Quercus john-tuckeri*	Tucker oak	Protected	3	21	14	14	8	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	D	C	C	Estimated data no tag encampment	To Remain
289	*Quercus john-tuckeri*	Tucker oak	Protected	1	8	8	0	0	0	0	0	0	0	25	25	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag encampment	To Remain
290	*Quercus john-tuckeri*	Tucker oak	Protected	3	19	11	12	9	0	0	0	0	0	25	25	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag encampment	To Remain
291	*Quercus john-tuckeri*	Tucker oak	Protected	1	5	5	0	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	D	D	D	Estimated data no tag encampment	To Remain
292	*Quercus john-tuckeri*	Tucker oak	Protected	3	8	7	3	3	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	D	D	D	Estimated data no tag encampment	To Remain
293	*Quercus john-tuckeri*	Tucker oak	Protected	4	15	12	6	5	5	0	0	0	0	15	15	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag encampment	To Remain
294	*Quercus john-tuckeri*	Tucker oak	Protected	3	9	6	6	4	0	0	0	0	0	15	10	-	-	-	-	-	-	-	-	D	D	D	Estimated data no tag encampment	To Remain
295	*Quercus john-tuckeri*	Tucker oak	Protected	3	9	5	5	5	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag encampment	To Remain
296	*Quercus john-tuckeri*	Tucker oak	Protected	3	12	10	5	5	0	0	0	0	0	20	20	-	-	-	-	-	-	-	-	D	C	C	Estimated data no tag encampment	To Remain
297	*Quercus john-tuckeri*	Tucker oak	Protected	4	14	7	7	7	7	0	0	0	0	20	20	-	-	-	-	-	-	-	-	D	C	C	Estimated data no tag encampment	To Remain
298	*Quercus john-tuckeri*	Tucker oak	Protected	2	7	5	5	0	0	0	0	0	0	10	20	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag encampment	To Remain
299	*Quercus john-tuckeri*	Tucker oak	Protected	3	10	7	6	3	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag encampment	To Remain
300	*Quercus john-tuckeri*	Tucker oak	Protected	5	12	8	6	4	5	3	0	0	0	20	20	-	-	-	-	-	-	-	-	D	C	C	Estimated data no tag encampment	To Remain
301	*Quercus john-tuckeri*	Tucker oak	Protected	4	10	8	5	3	3	0	0	0	0	20	20	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag encampment	To Remain
302	*Quercus john-tuckeri*	Tucker oak	Protected	2	12	10	6	0	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag encampment	To Remain
303	*Quercus john-tuckeri*	Tucker oak	Protected	1	5	5	0	0	0	0	0	0	0	20	15	-	-	-	-	-	-	-	-	D	C	C	Estimated data no tag encampment	To Remain

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
304	*Quercus john-tuckeri*	Tucker oak	Protected	2	5	5	2	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	D	D	D	Estimated data no tag encampment	To Remain
305	*Quercus john-tuckeri*	Tucker oak	Protected	11	16	5	5	5	5	7	6	5	3,3,3,3	20	25	-	-	-	-	-	-	-	-	C	D	C	Estimated data no tag encampment	To Remain
306	*Quercus john-tuckeri*	Tucker oak	Protected	4	18	11	9	9	7	0	0	0	0	15	25	-	-	-	-	-	-	-	-	B	C	B		To Remain
307	*Quercus john-tuckeri*	Tucker oak	Protected	20	15	13	6	3	1	1	1	1	1,1,1,1,1,1,1 ,1,1,1,1,1,1	20	20	-	-	-	-	-	-	-	-	D	C	C		To Remain
308	*Quercus john-tuckeri*	Tucker oak	Protected	3	10	6	6	6	0	0	0	0	0	15	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
309	*Quercus john-tuckeri*	Tucker oak	Protected	17	18	8	7	5	5	5	5	4	4,4,4,3,3,3,3 ,3,3,3	15	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
310	*Quercus john-tuckeri*	Tucker oak	Protected	4	16	12	9	4	4	0	0	0	0	20	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
311	*Quercus john-tuckeri*	Tucker oak	Protected	9	24	11	10	10	9	7	6	6	5,3	20	25	-	-	-	-	-	-	-	-	D	C	C		To Remain
312	*Quercus john-tuckeri*	Tucker oak	Protected	13	20	9	7	7	6	6	6	6	4,4,4,3,3,2	15	25	-	-	-	-	-	-	-	-	D	C	C		To Remain
313	*Quercus john-tuckeri*	Tucker oak	Protected	5	15	7	6	7	7	7	0	0	0	20	20	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag encampment	To Remain
314	*Quercus john-tuckeri*	Tucker oak	Protected	5	5	3	3	2	2	2	0	0	0	15	15	-	-	-	-	-	-	-	-	B	C	B		To Remain
315	*Quercus john-tuckeri*	Tucker oak	Protected	8	7	3	3	3	3	2	2	2	2	15	15	-	-	-	-	-	-	-	-	B	C	B		To Remain
316H	*Quercus agrifolia*	Coast live oak	Heritage Tree	3	44	35	20	17	0	0	0	0	0	30	30	-	-	-	-	-	-	-	-	B	D	C		To Remain
317	*Quercus agrifolia*	Coast live oak	Protected	1	20	20	0	0	0	0	0	0	0	25	25	-	-	-	-	-	-	-	-	B	C	B		To Remain
318	*Quercus john-tuckeri*	Tucker oak	Protected	3	20	14	6	13	0	0	0	0	0	20	25	-	-	-	-	-	-	-	-	C	C	C		To Remain
319H	*Quercus agrifolia*	Coast live oak	Heritage Tree	4	54	30	31	26	20	0	0	0	0	35	45	-	-	-	-	-	-	-	-	B	C	B		To Remain
320	*Quercus john-tuckeri*	Tucker oak	Protected	1	12	12	0	0	0	0	0	0	0	10	20	-	-	-	-	-	-	-	-	B	D	C		To Remain
321	*Quercus john-tuckeri*	Tucker oak	Protected	7	21	12	6	6	7	12	5	3	0	10	30	-	-	-	-	-	-	-	-	D	C	C		To Remain
322	*Quercus john-tuckeri*	Tucker oak	Protected	5	19	12	12	3	4	6	0	0	0	15	25	-	-	-	-	-	-	-	-	D	C	C		To Remain
323	*Quercus john-tuckeri*	Tucker oak	Protected	7	17	9	8	8	3	7	3	3	0	20	25	-	-	-	-	-	-	-	-	D	C	C		To Remain
324	*Quercus john-tuckeri*	Tucker oak	Protected	4	11	8	7	1	1	0	0	0	0	20	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
325	*Quercus john-tuckeri*	Tucker oak	Protected	10	21	10	7	9	7	6	6	5	5,5,5	20	25	-	-	-	-	-	-	-	-	C	C	C		To Remain
326	*Quercus john-tuckeri*	Tucker oak	Protected	2	8	6	6	0	0	0	0	0	0	15	15	-	-	-	-	-	-	-	-	D	C	C		To Remain
327	*Quercus john-tuckeri*	Tucker oak	Protected	6	6	3	3	3	2	2	2	0	0	15	15	-	-	-	-	-	-	-	-	D	C	C		To Remain
328	*Quercus john-tuckeri*	Tucker oak	Protected	9	17	8	8	8	7	4	4	3	3,3	20	20	-	-	-	-	-	-	-	-	D	C	C		To Remain
329	*Quercus john-tuckeri*	Tucker oak	Protected	5	15	9	6	7	5	5	0	0	0	15	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
330	*Quercus john-tuckeri*	Tucker oak	Not protected	1	3	3	0	0	0	0	0	0	0	4	8	-	-	-	-	-	-	-	-	D	D	D		To Remain
331	*Quercus john-tuckeri*	Tucker oak	Protected	1	5	5	0	0	0	0	0	0	0	15	10	-	-	-	-	-	-	-	-	D	D	D		To Remain

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
332	*Quercus john-tuckeri*	Tucker oak	Protected	5	10	6	4	5	4	2	0	0	0	15	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
333	*Quercus john-tuckeri*	Tucker oak	Protected	8	12	5	5	5	4	4	4	3	3	10	15	-	-	-	-	-	-	-	-	D	C	C		To Remain
334	*Quercus john-tuckeri*	Tucker oak	Protected	7	19	8	6	9	8	5	3	8	0	15	20	-	-	-	-	-	-	-	-	D	C	C		To Remain
335	*Quercus john-tuckeri*	Tucker oak	Protected	1	2	2	0	0	0	0	0	0	0	8	8	-	-	-	-	-	-	-	-	D	C	C		To Remain
336	*Quercus john-tuckeri*	Tucker oak	Protected	10	9	5	4	3	3	2	2	2	2,2,2	15	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
337	*Quercus john-tuckeri*	Tucker oak	Not protected	5	11	7	7	2	2	4	0	0	0	10	15	-	-	-	-	-	-	-	-	F	F	F		To remain (Dead)
338	*Quercus john-tuckeri*	Tucker oak	Protected	2	2	2	1	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C		To Remain
339	*Quercus john-tuckeri*	Tucker oak	Protected	6	10	5	5	5	5	2	1	0	0	10	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
340	*Quercus john-tuckeri*	Tucker oak	Protected	2	4	4	2	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	D	D	D		To Remain
341	*Quercus john-tuckeri*	Tucker oak	Protected	8	19	13	9	4	4	4	4	4	4	15	15	-	-	-	-	-	-	-	-	E	E	E		To Remain
342	*Quercus john-tuckeri*	Tucker oak	Protected	4	24	14	10	12	12	0	0	0	0	20	28	-	-	-	-	-	-	-	-	D	D	D		To Remain
343	*Quercus john-tuckeri*	Tucker oak	Not protected	1	2	2	0	0	0	0	0	0	0	5	8	-	-	-	-	-	-	-	-	F	F	F		To remain (Dead)
344	*Quercus john-tuckeri*	Tucker oak	Protected	5	8	4	4	3	3	3	0	0	0	10	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
345	*Quercus john-tuckeri*	Tucker oak	Protected	3	7	5	5	2	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	D	C	C		To Remain
346	*Quercus john-tuckeri*	Tucker oak	Not protected	1	12	12	0	0	0	0	0	0	0	1	3	-	-	-	-	-	-	-	-	F	F	F	Cut down	To remain (Dead)
347	*Quercus john-tuckeri*	Tucker oak	Protected	4	6	3	3	2	3	0	0	0	0	10	10	-	-	-	-	-	-	-	-	D	D	D		To Remain
348	*Quercus john-tuckeri*	Tucker oak	Protected	4	14	12	4	4	4	0	0	0	0	20	25	-	-	-	-	-	-	-	-	D	D	D		To Remain
349	*Quercus john-tuckeri*	Tucker oak	Protected	3	23	13	13	13	0	0	0	0	0	15	20	-	-	-	-	-	-	-	-	D	C	C		To Remain
350	*Quercus john-tuckeri*	Tucker oak	Protected	10	12	8	7	2	2	2	2	1	1,1,1	15	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
351	*Quercus john-tuckeri*	Tucker oak	Protected	6	9	4	4	4	3	3	3	0	0	10	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
352	*Quercus john-tuckeri*	Tucker oak	Not protected	5	5	3	3	2	2	1	0	0	0	10	10	-	-	-	-	-	-	-	-	F	F	F		To remain (Dead)
353	*Quercus john-tuckeri*	Tucker oak	Protected	5	11	6	5	5	5	4	0	0	0	15	15	-	-	-	-	-	-	-	-	D	C	C		To Remain
354	*Quercus john-tuckeri*	Tucker oak	Protected	7	16	7	7	7	6	5	5	5	0	15	25	-	-	-	-	-	-	-	-	C	C	C		To Remain
355	*Quercus john-tuckeri*	Tucker oak	Protected	4	15	11	7	5	4	0	0	0	0	15	20	-	-	-	-	-	-	-	-	B	C	B		To Remain
356	*Quercus john-tuckeri*	Tucker oak	Protected	5	15	10	6	7	4	6	0	0	0	15	20	-	-	-	-	-	-	-	-	D	C	C		To Remain
357	*Quercus john-tuckeri*	Tucker oak	Protected	2	6	5	4	0	0	0	0	0	0	10	15	-	-	-	-	-	-	-	-	D	D	D		To Remain
358	*Quercus john-tuckeri*	Tucker oak	Protected	6	17	8	7	5	4	9	7	0	0	15	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
359	*Quercus john-tuckeri*	Tucker oak	Protected	7	18	8	8	9	8	5	4	5	0	15	20	-	-	-	-	-	-	-	-	C	C	C		To Remain

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
360	*Quercus john-tuckeri*	Tucker oak	Protected	4	12	8	6	5	5	0	0	0	0	10	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
361	*Quercus john-tuckeri*	Tucker oak	Protected	1	2	2	0	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C	Estimated data no tag access issues	To Remain
362	*Quercus john-tuckeri*	Tucker oak	Not protected	1	2	2	0	0	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	F	F	F	Estimated data no tag access issues	To remain (Dead)
363	*Quercus john-tuckeri*	Tucker oak	Protected	5	10	5	5	5	4	3	0	0	0	15	15	-	-	-	-	-	-	-	-	D	C	C		To Remain
364	*Quercus john-tuckeri*	Tucker oak	Protected	5	8	4	4	4	3	3	0	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C		To Remain
365	*Quercus john-tuckeri*	Tucker oak	Protected	6	30	14	15	14	12	7	9	0	0	20	25	-	-	-	-	-	-	-	-	B	C	B		To Remain
366	*Quercus john-tuckeri*	Tucker oak	Protected	4	20	14	8	8	8	0	0	0	0	20	25	-	-	-	-	-	-	-	-	B	C	B		To Remain
367	*Quercus john-tuckeri*	Tucker oak	Protected	4	15	11	4	6	8	0	0	0	0	20	25	-	-	-	-	-	-	-	-	C	C	C		To Remain
368	*Quercus john-tuckeri*	Tucker oak	Protected	2	7	6	4	0	0	0	0	0	0	10	15	-	-	-	-	-	-	-	-	C	C	C		To Remain
369	*Quercus john-tuckeri*	Tucker oak	Not protected	4	5	3	3	2	2	0	0	0	0	10	10	-	-	-	-	-	-	-	-	F	F	F		To remain (Dead)
370	*Quercus john-tuckeri*	Tucker oak	Protected	10	15	8	8	6	3	3	3	3	3,3,3	20	25	-	-	-	-	-	-	-	-	C	C	C		To Remain
371	*Quercus john-tuckeri*	Tucker oak	Protected	3	25	15	16	12	0	0	0	0	0	20	25	-	-	-	-	-	-	-	-	C	C	C		To Remain
372	*Quercus john-tuckeri*	Tucker oak	Protected	6	14	8	6	5	7	3	3	0	0	15	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
373H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	36	36	0	0	0	0	0	0	0	35	45	15	17	15	17	20	23	17	15	B	C	B		Major Encroachment (Development)
374H	*Quercus agrifolia*	Coast live oak	Heritage Tree	2	57	40	40	0	0	0	0	0	0	35	45	23	22	17	23	12	30	30	27	D	D	D		Minor Encroachment (Development)
375H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	35	35	0	0	0	0	0	0	0	40	45	8	10	20	22	22	25	32	15	D	D	D		Minor Encroachment (Development)
376	*Quercus john-tuckeri*	Tucker oak	Protected	6	11	5	5	4	4	4	4	0	0	15	20	-	-	-	-	-	-	-	-	B	C	B		To Remain
377	*Quercus john-tuckeri*	Tucker oak	Protected	1	12	12	0	0	0	0	0	0	0	15	20	-	-	-	-	-	-	-	-	C	C	C		To Remain
378	*Quercus john-tuckeri*	Tucker oak	Protected	6	20	17	7	7	3	3	3	0	0	15	25	-	-	-	-	-	-	-	-	B	C	B		To Remain
379	*Quercus john-tuckeri*	Tucker oak	Protected	9	21	9	7	7	7	7	7	6	6,3	20	25	-	-	-	-	-	-	-	-	B	C	B		To Remain
380	*Quercus john-tuckeri*	Tucker oak	Protected	5	4	4	1	1	1	1	0	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C		To Remain
381H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	51	51	0	0	0	0	0	0	0	45	65	25	25	25	25	28	25	22	15	B	C	B		Minor Encroachment (Development)
382	*Quercus john-tuckeri*	Tucker oak	Protected	4	21	15	9	9	8	0	0	0	0	17	30	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag steep	To be Removed
383	*Quercus john-tuckeri*	Tucker oak	Protected	4	11	6	5	5	5	0	0	0	0	20	20	-	-	-	-	-	-	-	-	B	C	B	Estimated data no tag steep	To be Removed
500	*Quercus agrifolia*	Coast live oak	Not protected	2	23	18	15	0	0	0	0	0	0	0	3	-	-	-	-	-	-	-	-	F	F	F	Stump, no tag	To be Removed (Dead)
501	*Quercus agrifolia*	Coast live oak	Not protected	1	23	23	0	0	0	0	0	0	0	3	15	-	-	-	-	-	-	-	-	F	F	F	No tag	To remain (Dead)
502	*Quercus agrifolia*	Coast live oak	Not protected	1	17	17	0	0	0	0	0	0	0	2	10	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To be Removed (Dead)
503	*Quercus agrifolia*	Coast live oak	Not protected	1	28	28	0	0	0	0	0	0	0	4	25	-	-	-	-	-	-	-	-	F	F	F	Fallen over	To be Removed (Dead)

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
504	*Quercus agrifolia*	Coast live oak	Not protected	1	27	27	0	0	0	0	0	0	0	3	20	-	-	-	-	-	-	-	-	F	F	F	Fragments on ground	To remain (Dead)
505	*Quercus agrifolia*	Coast live oak	Not protected	1	21	21	0	0	0	0	0	0	0	1	3	-	-	-	-	-	-	-	-	F	F	F	Stump	To remain (Dead)
506	*Quercus john-tuckeri*	Tucker oak	Protected	3	6	4	4	2	0	0	0	0	0	15	10	-	-	-	-	-	-	-	-	C	C	C	No new tag	To Remain
507	*Quercus john-tuckeri*	Tucker oak	Protected	6	8	5	3	3	3	3	2	0	0	15	10	-	-	-	-	-	-	-	-	D	D	D	No tag	To Remain
508	*Quercus john-tuckeri*	Tucker oak	Protected	6	13	10	6	4	4	2	3	0	0	17	15	-	-	-	-	-	-	-	-	C	C	C	No tag	To Remain
509	*Quercus john-tuckeri*	Tucker oak	Not protected	2	1	1	1	0	0	0	0	0	0	8	8	-	-	-	-	-	-	-	-	C	C	C	No tag	To Remain
510	*Quercus john-tuckeri*	Tucker oak	Protected	3	6	5	3	1	0	0	0	0	0	10	10	-	-	-	-	-	-	-	-	C	C	C	No tag.	To Remain
511	*Quercus john-tuckeri*	Tucker oak	Protected	3	7	6	4	2	0	0	0	0	0	13	10	-	-	-	-	-	-	-	-	B	C	B	No tag	To Remain
512	*Quercus john-tuckeri*	Tucker oak	Protected	5	20	10	10	10	8	7	0	0	0	15	20	-	-	-	-	-	-	-	-	C	C	C	No tag	To Remain
513	*Quercus john-tuckeri*	Tucker oak	Protected	1	7	7	0	0	0	0	0	0	0	11	15	-	-	-	-	-	-	-	-	C	C	C	no new tag	To Remain
514	*Quercus john-tuckeri*	Tucker oak	Protected	3	5	4	3	1	0	0	0	0	0	8	10	-	-	-	-	-	-	-	-	D	D	D	No tag	To Remain
515H	*Quercus agrifolia*	Coast live oak	Heritage Tree	4	47	44	12	7	6	0	0	0	0	45	30	-	-	-	-	-	-	-	-	D	D	D		To be Removed
516H	*Quercus agrifolia*	Coast live oak	Heritage Tree	4	40	24	22	21	11	0	0	0	0	35	50	-	-	-	-	-	-	-	-	B	C	B		To Remain
517	*Quercus agrifolia*	Coast live oak	Protected	1	17	17	0	0	0	0	0	0	0	15	20	-	-	-	-	-	-	-	-	B	D	C	Healed over cavity	To Remain
518	*Quercus agrifolia*	Coast live oak	Protected	2	13	11	6	0	0	0	0	0	0	15	20	12	13	10	10	10	11	10	10	B	C	B	No tag private tree	Major Encroachment (Development)
519	*Quercus agrifolia*	Coast live oak	Protected	2	6	4	4	0	0	0	0	0	0	9	11	-	-	-	-	-	-	-	-	B	C	B	No tag private tree	Minor Encroachment (Roadside FMZ installation)
520	*Quercus agrifolia*	Coast live oak	Protected	4	9	7	5	3	2	0	0	0	0	18	17	-	-	-	-	-	-	-	-	B	C	B	No tag private tree	Minor Encroachment (Roadside FMZ installation)
521	*Quercus agrifolia*	Coast live oak	Protected	2	14	10	10	0	0	0	0	0	0	18	20	-	-	-	-	-	-	-	-	B	C	B	No tag private tree.	Minor Encroachment (Roadside FMZ installation)
522	*Quercus agrifolia*	Coast live oak	Protected	4	10	8	4	3	3	0	0	0	0	15	16	5	7	7	6	9	10	9	6	C	C	C	No tag private tree.	Major Encroachment (Development)
523	*Quercus agrifolia*	Coast live oak	Protected	4	2	1	1	1	1	0	0	0	0	6	8	-	-	-	-	-	-	-	-	B	C	B		To Remain
524	*Quercus chrysolepis*	Canyon live oak	Protected	1	4	4	0	0	0	0	0	0	0	16	10	-	-	-	-	-	-	-	-	B	B	B	No tag private tree.	To Remain
525	*Quercus john-tuckeri*	Tucker oak	Not protected	4	8	6	4	3	3	0	0	0	0	15	15	-	-	-	-	-	-	-	-	F	F	F	No tag private tree.	To remain (Dead)
526	*Quercus john-tuckeri*	Tucker oak	Not protected	2	9	8	5	0	0	0	0	0	0	7	23	-	-	-	-	-	-	-	-	F	F	F	No tag private tree. Fallen over	To remain (Dead)
527	*Quercus agrifolia*	Coast live oak	Protected	1	17	17	0	0	0	0	0	0	0	25	20	-	-	-	-	-	-	-	-	E	E	E	No tag private tree.	To Remain
528	*Quercus agrifolia*	Coast live oak	Not protected	1	30	30	0	0	0	0	0	0	0	7	22	-	-	-	-	-	-	-	-	F	F	F	No tag private tree. Fell over, possible shared root system with adjacent tree	To remain (Dead)
529	*Quercus agrifolia*	Coast live oak	Not protected	2	16	14	7	0	0	0	0	0	0	5	2	-	-	-	-	-	-	-	-	F	F	F	No tag private tree. Stump	To remain (Dead)

Tree No.	Botanical Name	Common Name	Protection Status	No. of Stems	Combined Diameter*	Individual Stem Diameters							Additional Stem Diameters (in.)	Height (ft.)	Crown Diameter (ft.)	Crown Dimensions - Encroached								Tree Rating			General Notes	Disposition
						S1	S2	S3	S4	S5	S6	S7				N	NE	E	SE	S	SW	W	NW	Health	Structure	Overall Oak Tree Rating		
530	*Quercus agrifolia*	Coast live oak	Protected	2	10	9	5	0	0	0	0	0	0	16	16	-	-	-	-	-	-	-	-	B	C	B	No tag private tree	To Remain
531H	*Quercus agrifolia*	Coast live oak	Heritage Tree	1	59	59	0	0	0	0	0	0	0	40	50	25	20	20	25	25	20	20	15	C	C	C		Minor Encroachment (Development)
532	*Quercus agrifolia*	Coast live oak	Protected	5	4	3	1	1	1	1	0	0	0	15	16	7	5	6	6	9	5	10	6	C	C	C		To be Removed
533	*Quercus agrifolia*	Coast live oak	Protected	5	15	11	7	6	5	3	0	0	0	25	23	10	8	13	12	10	10	10	10	C	C	C		To be Removed
534	*Quercus agrifolia*	Coast live oak	Protected	5	2	1	1	1	1	0	0	0	0	7	8	3	1	0	3	4	4	3	4	B	C	B		To be Removed
535	*Quercus agrifolia*	Coast live oak	Protected	1	9	9	0	0	0	0	0	0	0	25	22	9	10	13	10	12	9	9	12	C	C	C		To be Removed
536	*Quercus agrifolia*	Coast live oak	Protected	2	11	8	7	0	0	0	0	0	0	25	19	5	1	4	9	13	10	15	12	C	C	C		To be Removed

Appendix D

Tree Appraisal (Removed and Major Encroachments)

Trunk Formula Method																								
	Field Observations											*Regional Plant Appraisal Committee Information***						*Calculations by Appraiser using Field and Regional Information*					
	1	*2*	*3*							*4*					*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14*	**15**
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**							**Sum***	**Location**				**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**	**7**		**Site**	**Contribution**	**Placement**	**Average**		**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
10H	Quercus agrifolia	75%	40	22	22	18	0	0	0	53.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1645	1621.25	$174,791.25	$74,723.26	$74,700
69	Quercus agrifolia	75%	8	0	0	0	0	0	0	8.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	50.24		26.49	$7,341.45	$3,138.47	$3,140
112	Quercus agrifolia	60%	32	8	5	4	0	0	0	33.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		835	811.25	$89,741.25	$30,691.51	$30,700
114	Quercus agrifolia	75%	6	4	3	2	4	0	0	9.0	85%	85%	60%	77%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	63.585		39.835	$8,742.68	$4,524.33	$4,520
144	Quercus agrifolia	75%	20	15	14	12	9	0	0	32.3	85%	85%	60%	77%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		804	780	$86,486.25	$44,756.63	$44,800
151	Quercus agrifolia	60%	18	0	0	0	0	0	0	18.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	254.34		230.59	$28,771.95	$9,840.01	$9,800
157	Quercus agrifolia	75%	26	0	0	0	0	0	0	26.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	530.66		506.91	$57,785.55	$24,703.32	$24,700
166	Quercus agrifolia	70%	6	6	4	4	4	3	3	11.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	108.33		84.58	$13,440.90	$5,362.92	$5,400
167	Quercus agrifolia	60%	7	4	0	0	0	0	0	8.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	51.025		27.275	$7,423.88	$2,538.97	$2,540
171H	Quercus agrifolia	80%	44	0	0	0	0	0	0	44.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1314	1290	$139,998.45	$63,839.29	$63,800
221	Quercus john-tuckeri	60%	4	4	3	2	1	1	0	6.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	36.895		13.145	$5,940.23	$2,031.56	$2,030
258	Quercus john-tuckeri	60%	9	9	8	9	5	0	0	18.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	260.62		236.87	$29,431.35	$10,065.52	$10,100
373H	Quercus agrifolia	70%	36	0	0	0	0	0	0	36.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		974	949.89	$104,298.45	$41,615.08	$41,600
382	Quercus john-tuckeri	70%	15	9	9	8	0	0	0	21.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	354.035		330.285	$39,239.93	$15,656.73	$15,700
383	Quercus john-tuckeri	70%	6	5	5	5	0	0	0	10.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	87.135		63.385	$11,215.43	$4,474.95	$4,470
515H	Quercus agrifolia	40%	44	12	7	6	0	0	0	46.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1392	1368	$148,226.25	$33,795.59	$33,800
518	Quercus agrifolia	75%	11	6	0	0	0	0	0	12.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	123.245		99.495	$15,006.98	$6,415.48	$6,400
522	Quercus agrifolia	60%	8	4	3	3	0	0	0	9.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	76.93		53.18	$10,143.90	$3,469.21	$3,470
532	Quercus agrifolia	60%	3	1	1	1	1	0	0	3.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	10.205		-13.545	$3,137.78	$1,073.12	$1,070
533	Quercus agrifolia	75%	11	7	6	5	3	0	0	15.5	65%	65%	75%	68%	90%	5.5	23.75	$2,520	$2,041	$4,561	$106	188.4		164.65	$22,013.90	$220.52	$220
534	Quercus chrysolepis	60%	1	1	1	1	0	0	0	2.0	75%	65%	60%	67%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	3.14		-20.61	$2,395.95	$862.54	$860
535	Quercus agrifolia	60%	9	0	0	0	0	0	0	9.0	65%	65%	75%	68%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	63.585		39.835	$8,742.68	$3,226.05	$3,230

Trunk Formula Method

	Field Observations										*Regional Plant Appraisal Committee Information***						*Calculations by Appraiser using Field and Regional Information*				
	1	*2*	*3*							*4*	*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14*	**15**
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**						**Sum***	**Location**	**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**		**Site** / **Contribution** / **Placement** / **Average**		**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
536	Quercus agrifolia	60%	8	7	0	0	0	0	0	10.6	65% / 65% / 75% / 68%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	88.705		64.955	$11,380.28	$4,199.32	$4,200

Appendix E
Photograph Log



Tree No. 1H
Coast live oak
DSH: 58 inches
Height: 30 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 2
Coast live oak
DSH: 13, 12, 9 inches
Height: 20 feet
Oak tree rating: C
Protected Tree



Tree No. 3
Coast live oak
DSH: 14 inches

Height: 20 feet
Oak tree rating: D
Protected tree



Tree No. 4
Coast live oak
DSH: 15, 9 inches
Height: 25 feet
Oak tree rating: D
Protected tree



Tree No. 5
Coast live oak
DSH: 9 inches

Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 6
Coast live oak
DSH: 10, 4 inches

Height: 5 feet
Oak tree rating: F
Not protected



Tree No. 7
Coast live oak
DSH: 1 inch
Height: 10 feet
Oak tree rating: D
Not protected



Tree No. 8H
Coast live oak
DSH: 40 inches
Height: 30 feet
Oak tree rating: B
Protected, Heritage tree
Estimated data from afar



Tree No. 9
Coast live oak
DSH: 40 inches
Height: 10 feet
Oak tree rating: F
Not protected



Tree No. 10H
Coast live oak
DSH: 40, 22, 22, 18 inches
Height: 35 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 11H
Coast live oak
DSH: 70 inches

Height: 35 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 12H
Coast live oak
DSH: 90, 13, 4 inches

Height: 55 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 13H
Coast live oak
DSH: 40, 28, 17 inches
Height: 35 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 14
Coast live oak
DSH: 28, 16, 13, 11, 8, 5 inches (one additional stem)
Height: 30 feet
Oak tree rating: C
Protected tree



Tree No. 15
Coast live oak
DSH: 15 inches

Height: 30 feet
Oak tree rating: B
Protected tree



Tree No. 16
Coast live oak
DSH: 12, 7, 6, 5, 4, 2 inches

Height: 30 feet
Oak tree rating: B
Protected tree



Tree No. 17
Coast live oak
DSH: 24,14,12, 10, 9, 6 inches (one additional stem)
Height: 25 feet
Oak tree rating: B
Protected tree



Tree No. 18
Coast live oak
DSH: 20, 18, 18, 15, 11, 11 inches (4 additional stems)
Height: 35 feet
Oak tree rating: A
Protected tree



Tree No. 19
Coast live oak
DSH: 17, 16, 16, 14, 9 inches

Height: 35 feet
Oak tree rating: B
Protected tree



Tree No. 20
Coast live oak
DSH: 20, 20, 20, 12 inches
Height: 25 feet
Oak tree rating: B
Protected tree



Tree No. 21
Coast live oak
DSH: 18, 16, 15 inches
Height: 30 feet
Oak tree rating: A
Protected tree



Tree No. 22
Coast live oak
DSH: 33, 19 inches
Height: 35 feet
Oak tree rating: B
Protected tree



Tree No. 23
Coast live oak
DSH: 50 inches
Height: 8 feet
Oak tree rating: F
Not protected



Tree No. 24H
Coast live oak
DSH: 50 inches
Height: 25 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 25H
Coast live oak
DSH: 39 inches

Height: 50 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 26H
Coast live oak
DSH: 46 inches

Height: 55 feet
Oak tree rating: B
Protected, heritage tree



Tree No. 27
Coast live oak
DSH: 40 inches

Height: 3 feet
Oak tree rating: F
Not protected



Tree No. 28H
Coast live oak
DSH: 34 inches

Height: 45 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 29
Coast live oak
DSH: 20, 12 inches

Height: 20 feet
Oak tree rating: D
Protected tree



Tree No. 30H
Coast live oak
DSH: 40 inches

Height: 50 feet
Oak tree rating: D
Protected, Heritage tree



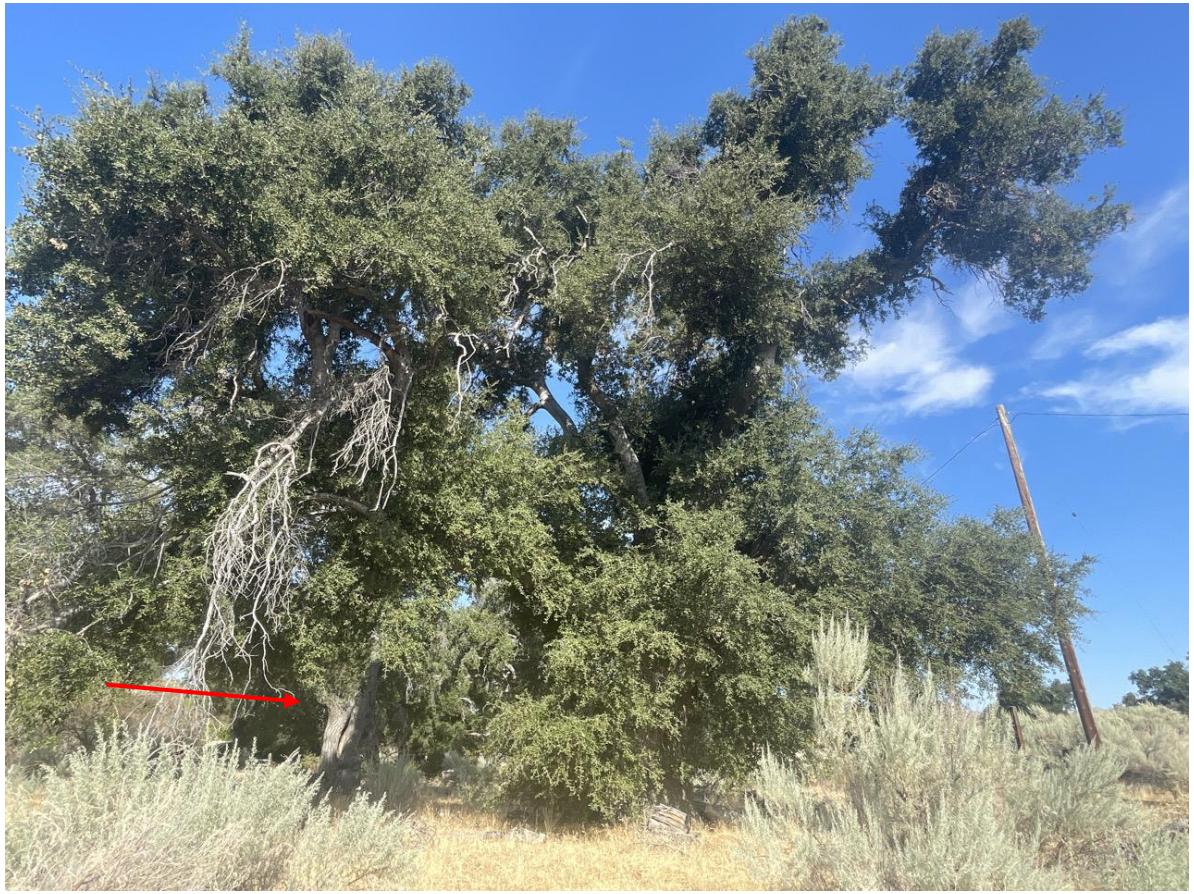
Tree No. 31H
Coast live oak
DSH: 35 inches
Height: 20 feet
Oak tree rating: D
Protected, Heritage tree



Tree No. 32
Coast live oak
DSH: 50 inches
Height: 25 feet
Oak tree rating: F
Not protected



Tree No. 33H
Coast live oak
DSH: 59 inches
Height: 50 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 34H
Coast live oak
DSH: 65 inches
Height: 35 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 35H
Coast live oak
DSH: 50 inches
Height: 40 feet
Oak tree rating: B
Protected, Heritage tree
Estimated data from afar



Tree No. 36
Coast live oak
DSH: 30 inches
Height: 40 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 37H
Coast live oak
DSH: 30, 30, 27, 24, 17, 15 inches
Height: 40 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 38
Coast live oak
DSH: 28 inches
Height: 40 feet
Oak tree rating: C
Protected tree
Estimated data from afar



Tree No. 39H
Coast live oak
DSH: 38 inches

Height: 50 feet
Oak tree rating: B
Protected, Heritage tree
Estimated data from afar



Tree No. 40H
Coast live oak
DSH: 45 inches

Height: 50 feet
Oak tree rating: C
Protected, Heritage tree
Estimated data from afar



Tree No. 41
Coast live oak
DSH: 27 inches

Height: 45 feet
Oak tree rating: C
Protected tree
Estimated data from afar



Tree No. 42
Coast live oak
DSH: 24 inches

Height: 5 feet
Oak tree rating: F
Not protected
Estimated data from afar



Tree No. 43H
Coast live oak
DSH: 55 inches

Height: 45 feet
Oak tree rating: C
Protected, Heritage tree
Estimated data from afar



Tree No. 44
Coast live oak
DSH: 35 inches

Height: 10 feet
Oak tree rating: F
Not protected
Estimated data from afar



Tree No. 45
Coast live oak
DSH: 40 inches

Height: 25 feet
Oak tree rating: F
Not protected
Estimated data from afar



Tree No. 46
Coast live oak
DSH: 27 inches

Height: 15 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 47
Coast live oak
DSH: 27 inches

Height: 45 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 48
Coast live oak
DSH: 30 inches

Height: 55 feet
Oak tree rating: C
Protected tree
Estimated data from afar



Tree No. 49
Coast live oak
DSH: 30 inches

Height: 10 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 50
Coast live oak
DSH: 30 inches

Height: 60 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 51
Coast live oak
DSH: 25 inches

Height: 60 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 52H
Coast live oak
DSH: 45 inches

Height: 60 feet
Oak tree rating: A
Protected, Heritage tree
Estimated data from afar



Tree No. 53
Coast live oak
DSH: 30 inches

Height: 50 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 54
Coast live oak
DSH: 33 inches

Height: 30 feet
Oak tree rating: A
Protected tree
Estimated data from afar



Tree No. 55
Coast live oak
DSH: 7, 7, 7, 7, 7 inches

Height: 20 feet
Oak tree rating: A
Protected tree
Estimated data from afar

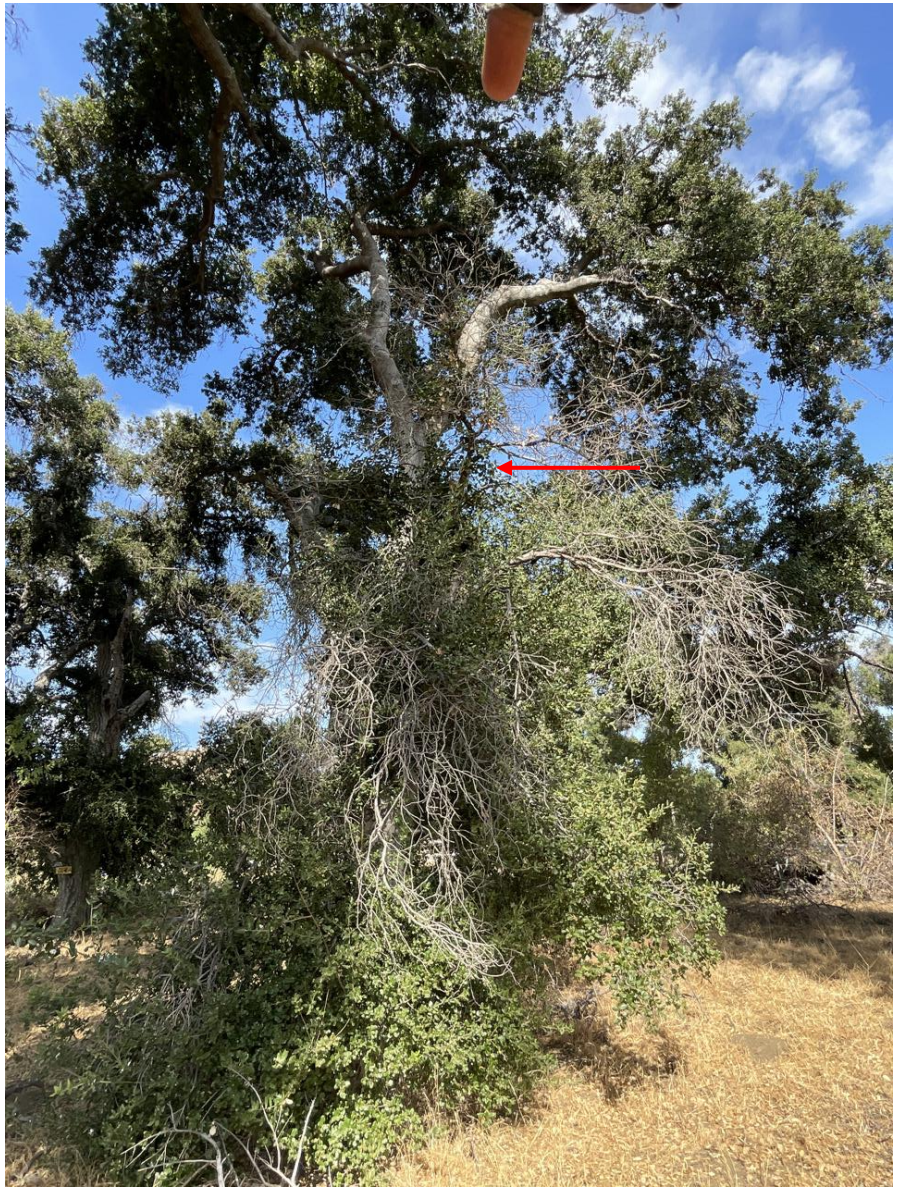


Tree No. 56
Coast live oak
DSH: 19 inches
Height: 25 feet
Oak tree rating: B
Protected tree



Tree No. 57H
Coast live oak
DSH: 35 inches

Height: 45 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 58
Coast live oak
DSH: 15 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 59H
Coast live oak
DSH: 38 inches

Height: 40 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 60H
Coast live oak
DSH: 43 inches
Height: 40 feet
Oak tree rating: C
Protected, Heritage tree
Estimated data from afar



Tree No. 61H
Coast live oak
DSH: 30, 30, 30, 30, 20, 15 inches (one additional stem)
Height: 35 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 62
Coast live oak
DSH: 12 inches

Height: 20 feet
Oak tree rating: A
Protected tree
Estimated data from afar



Tree No. 63
Coast live oak
DSH: 14 inches

Height: 25 feet
Oak tree rating: B
Protected tree



Tree No. 64H
Coast live oak
DSH: 51, 16, 3, 2 inches
Height: 35 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 65H
Coast live oak
DSH: 37, 30, 27, 22, 19, 18 inches (one additional stem)
Height: 35 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 66H
Coast live oak
DSH: 60 inches

Height: 55 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 67H
Coast live oak
DSH: 60 inches

Height: 55 feet
Oak tree rating: D
Protected, Heritage Tree



Tree No. 68H
Coast live oak
DSH: 60 inches

Height: 35 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 69
Coast live oak
DSH: 8 inches

Height: 15 feet
Oak tree rating: A
Protected tree



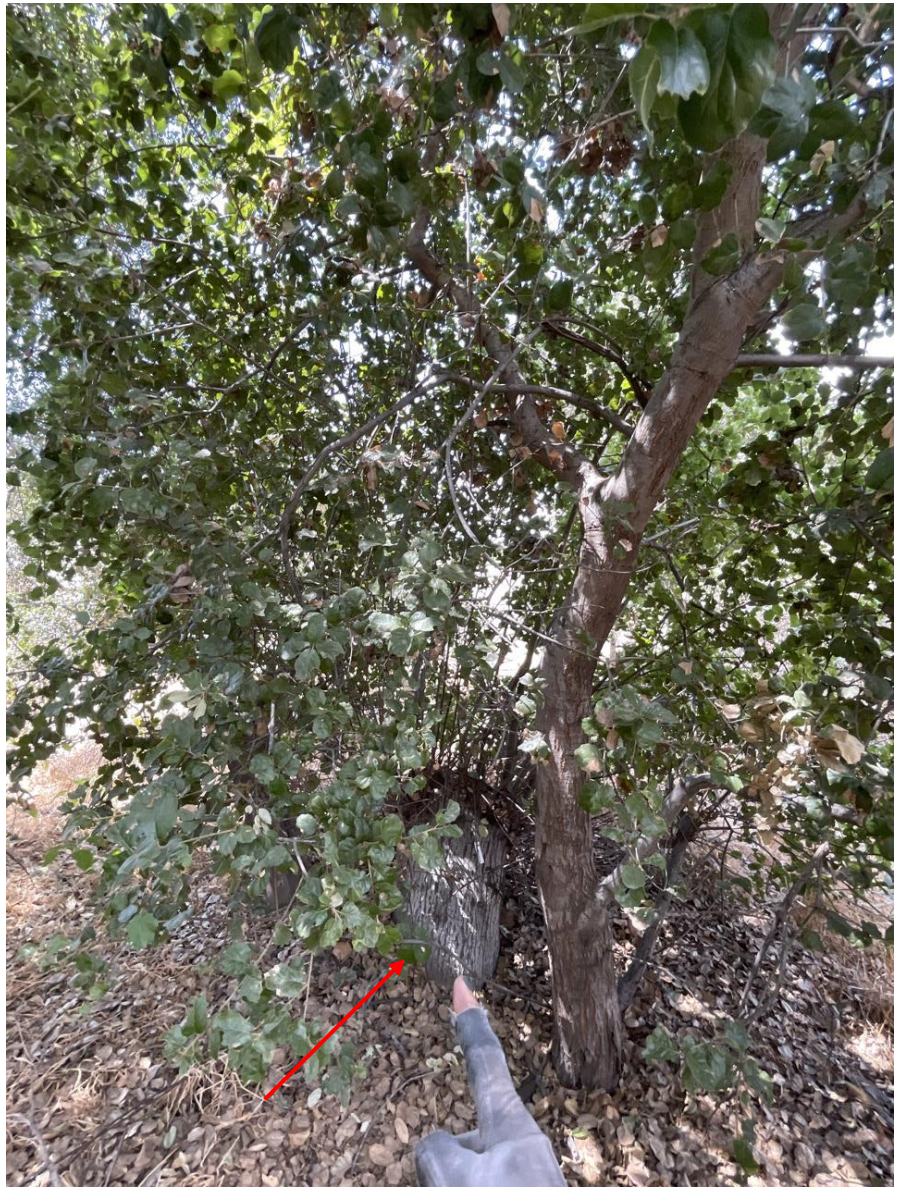
Tree No. 70
Coast live oak
DSH: 6, 4, 3, 2 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 71
Coast live oak
DSH: 6 inches

Height: 15 feet
Oak tree rating: A
Protected tree



Tree No. 72
Coast live oak
DSH: 1, 1, 1, 1, 1, 1 (four additional stems)

Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 73
Coast live oak
DSH: 20, 19, 17, 9 inches

Height: 35 feet
Oak tree rating: C
Protected tree



Tree No. 74
Coast live oak
DSH: 6, 6, 5, 5 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 75
Coast live oak
DSH: 25 inches

Height: 30 feet
Oak tree rating: D
Protected tree



Tree No. 76
Coast live oak
DSH: 14, 13 inches

Height: 35 feet
Oak tree rating: C
Protected tree



Tree No. 77
Coast live oak
DSH: 30, 15 inches

Height: 35 feet
Oak tree rating: F
Not protected



Tree No. 78
Coast live oak
DSH: 12, 4 inches

Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 79
Coast live oak
DSH: 30 inches
Height: 4 feet
Oak tree rating: F
Not protected



Tree No. 80
Coast live oak
DSH: 30 inches
Height: 4 feet
Oak tree rating: F
Not protected



Tree No. 81
Coast live oak
DSH: 36 inches

Height: 30 feet
Oak tree rating: F
Not protected



Tree No. 82
Coast live oak
DSH: 14, 14 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 83H
Coast live oak
DSH: 37 inches
Height: 45 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 84
Coast live oak
DSH: 33 inches
Height: 5 feet
Oak tree rating: F
Not protected



Tree No. 85
Coast live oak
DSH: 30 inches

Height: 3 feet
Oak tree rating: F
Not protected



Tree No. 86H
Coast live oak
DSH: 55 inches

Height: 35 feet
Oak tree rating: D
Protected, Heritage tree



Tree No. 87
Coast live oak
DSH: 27 inches

Height: 6 feet
Oak tree rating: F
Not protected



Tree No. 88
Coast live oak
DSH: 60 inches
Height: 6 feet
Oak tree rating: F
Not protected



Tree No. 89
Coast live oak
DSH: 30 inches

Height: 1 foot
Oak tree rating: F
Not protected



Tree No. 90H
Coast live oak
DSH: 60 inches

Height: 45 feet
Oak tree rating: D
Protected, Heritage tree



Tree No. 91
Coast live oak
DSH: 11, 2 inches

Height: 15 feet
Oak tree rating: A
Protected tree



Tree No. 92
Coast live oak
DSH: 5, 3, 2 inches

Height: 15 feet
Oak tree rating: A
Protected tree



Tree No. 93
Coast live oak
DSH: 1, 1 inches

Height: 7 feet
Oak tree rating: B
Not protected



Tree No. 94H
Coast live oak
DSH: 65, 13, 11, 9 inches
Height: 20 feet
Oak tree rating: B
Protected, Heritage tree



Tree No. 95
Coast live oak
DSH: 2, 2, 1, 1 inches

Height: 10 feet
Oak tree rating: A
Protected tree



Tree No. 96
Coast live oak
DSH: 15 inches

Height: 1 foot
Oak tree rating: F
Not protected



Tree No. 97H
Coast live oak
DSH: 48 inches

Height: 40 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 98
Coast live oak
DSH: 25 inches
Height: 4 feet
Oak tree rating: F
Not protected



Tree No. 99H
Coast live oak
DSH: 75, 45 inches
Height: 35 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 100
Coast live oak
DSH: 60 inches
Height: 15 feet
Oak tree rating: F
Not protected



Tree No. 101
Coast live oak
DSH: 16, 15, 14, 9 inches

Height: 25 feet
Oak tree rating: D
Protected tree



Tree No. 102
Coast live oak
DSH: 16, 16, 15, 15, 14, 9 inches (two additional stems)

Height: 30 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 103
Coast live oak
DSH: 24, 17, 6, 4, 4 inches

Height: 45 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 104
Coast live oak
DSH: 20 inches

Height: 5 feet
Oak tree rating: F
Not protected
Estimated data from afar



Tree No. 105H
Coast live oak
DSH: 60 inches
Height: 50 feet
Oak tree rating: B
Protected, Heritage tree
Estimated data from afar



Tree No. 106
Coast live oak
DSH: 30 inches

Height: 5 feet
Oak tree rating: F
Not protected



Tree No. 107H
Coast live oak
DSH: 40 inches

Height: 45 feet
Oak tree rating: D
Protected, Heritage tree



Tree No. 108
Coast live oak
DSH: 25 inches

Height: 3 feet
Oak tree rating: F
Not protected



Tree No. 109H
Coast live oak
DSH: 55 inches
Height: 45 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 110
Coast live oak
DSH: 30 inches
Height: 15 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 111H
Coast live oak
DSH: 73 inches
Height: 30 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 112
Coast live oak
DSH: 32, 8, 5, 4 inches
Height: 25 feet
Oak tree rating: A
Protected tree



Tree No. 113
Coast live oak
DSH: 32, 5, 2 inches

Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 114
Coast live oak
DSH: 6, 4, 4, 3, 2 inches

Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 115
Coast live oak
DSH: 25 inches
Height: 3 feet
Oak tree rating: F
Not protected



Tree No. 116H
Coast live oak
DSH: 54 inches

Height: 35 feet
Oak tree rating: D
Protected, Heritage tree



Tree No. 117H
Coast live oak
DSH: 55 inches

Height: 50 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 118
Coast live oak
DSH: 17 inches

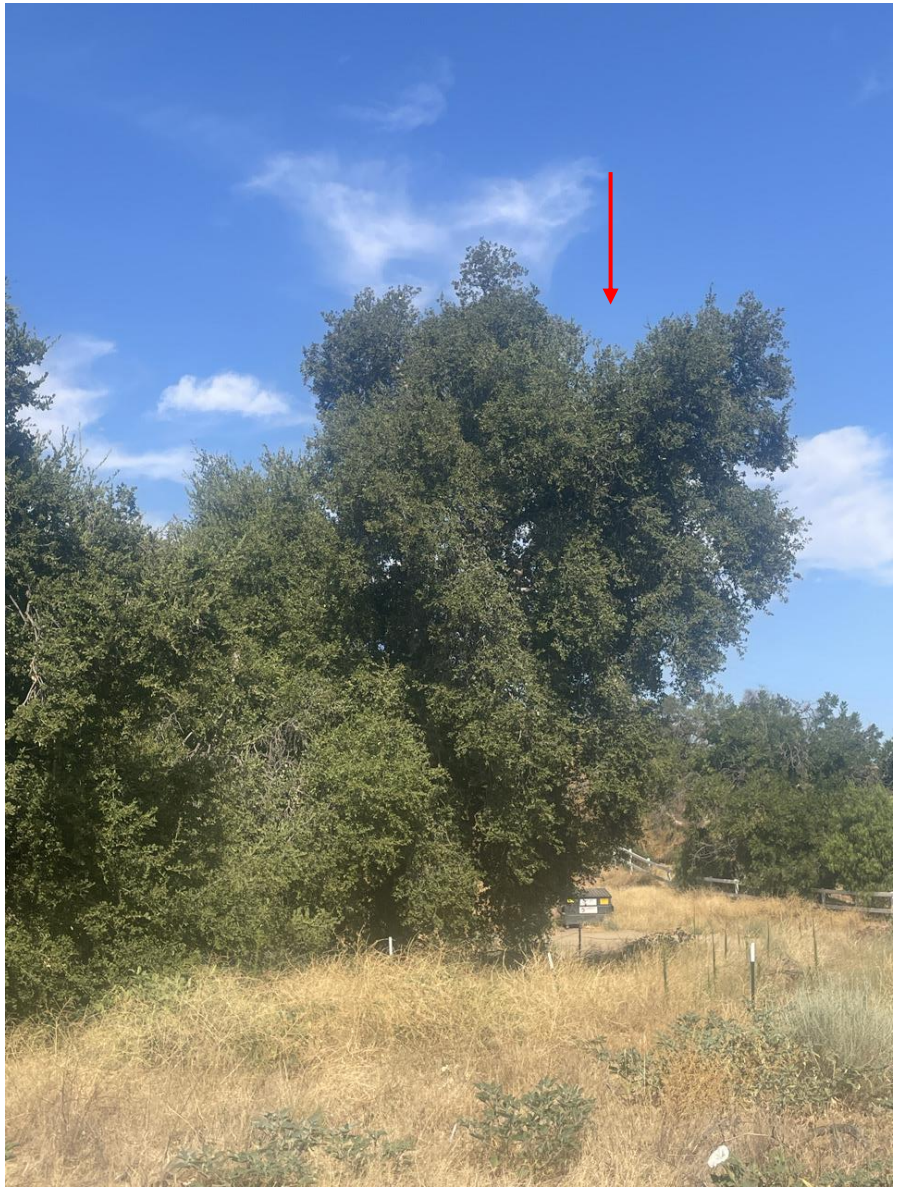
Height: 4 feet
Oak tree rating: F
Not protected
Estimated data from afar



Tree No. 119
Coast live oak
DSH: 30 inches
Height: 35 feet
Oak tree rating: C
Protected tree
Estimated data from afar



Tree No. 120
Coast live oak
DSH: 30 inches
Height: 25 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 121H
Coast live oak
DSH: 35, 22 inches

Height: 45 feet
Oak tree rating: A
Protected, Heritage tree
Estimated data from afar



Tree No. 122H
Coast live oak
DSH: 50, 35 inches

Height: 35 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 123H
Coast live oak
DSH: 27, 24 inches
Height: 40 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 124
Coast live oak
DSH: 25, 25, 24, 18 inches
Height: 5 feet
Oak tree rating: F
Not protected



Tree No. 125
Coast live oak
DSH: 35 inches
Height: 10 feet
Oak tree rating: F
Not protected



Tree No. 126H
Coast live oak
DSH: 42 inches

Height: 40 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 127H
Coast live oak
DSH: 53 inches

Height: 40 feet
Oak tree rating: B
Protected, Heritage tree



Tree No. 128
Coast live oak
DSH: 65 inches
Height: 25 feet
Oak tree rating: F
Not protected



Tree No. 129
Coast live oak
DSH: 48 inches
Height: 10 feet
Oak tree rating: F
Not protected



Tree No. 130H
Coast live oak
DSH: 35, 32, 20 inches
Height: 25 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 131
Coast live oak
DSH: 30 inches
Height: 25 feet
Oak tree rating: B
Protected tree



Tree No. 132H
Coast live oak
DSH: 34, 30 inches
Height: 35 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 133H
Coast live oak
DSH: 45 inches

Height: 25 feet
Oak tree rating: D
Protected, Heritage tree



Tree No. 134
Coast live oak
DSH: 45 inches
Height: 10 feet
Oak tree rating: F
Not protected



Tree No. 135H
Coast live oak
DSH: 46 inches

Height: 45 feet
Oak tree rating: B
Protected, Heritage tree



Tree No. 136
Coast live oak
DSH: 19, 12 inches

Height: 25 feet
Oak tree rating: B
Protected tree



Tree No. 137
Coast live oak
DSH: 40, 35 inches
Height: 4 feet
Oak tree rating: F
Not protected



Tree No. 138
Coast live oak
DSH: 20, 16, 16, 14, 12 inches
Height: 25 feet
Oak tree rating: A
Protected tree
Estimated data from afar



Tree No. 139H
Coast live oak
DSH: 30, 25, 25, 25, 14 inches
Height: 35 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 140
Coast live oak
DSH: 5, 5, 5, 5 inches
Height: 10 feet
Oak tree rating: A
Protected tree



Tree No. 141
Tucker oak
DSH: 3, 3, 3, 3, 3, 2 inches
(four additional stems)

Height: 10 feet
Oak tree rating: A
Protected tree



Tree No. 142
Tucker oak
DSH: 5, 5, 4, 4, 3 inches

Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 143
Tucker oak
DSH: 7, 5 inches

Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 144
Coast live oak
DSH: 20, 15, 14, 12, 9 inches

Height: 40 feet
Oak tree rating: A
Protected tree



Tree No. 145H
Coast live oak
DSH: 45, 27, 5 inches
Height: 35 feet
Oak tree rating: B
Protected, Heritage Tree



Tree No. 146H
Coast live oak
DSH: 34, 27, 16 inches
Height: 30 feet
Oak tree rating: B
Protected, Heritage tree



Tree No. 147
Coast live oak
DSH: 32 inches

Height: 30 feet
Oak tree rating: A
Protected tree



Tree No. 148H
Coast live oak
DSH: 37 inches
Height: 40 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 149H
Coast live oak
DSH: 55, 37 inches
Height: 35 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 150
Coast live oak
DSH: 72 inches
Height: 50 feet
Oak tree rating: F
Not protected



Tree No. 151
Coast live oak
DSH: 18 inches

Height: 25 feet
Oak tree rating: C
Protected tree



Tree No. 152
Coast live oak
DSH: 17, 16 inches

Height: 30 feet
Oak tree rating: B
Protected tree



Tree No. 153
Coast live oak
DSH: 18 inches
Height: 25 feet
Oak tree rating: C
Protected tree



Tree No. 154
Tucker oak
DSH: 4, 4, 4, 4, 4, 3 inches (four additional stems)
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 155
Tucker oak
DSH: 6, 4, 4, 3, 3, 2 inches
Height: 10 feet
Oak tree rating: A
Protected tree



Tree No. 156
Tucker oak
DSH: 3, 3, 3, 3, 3, 3 inches (three additional stems)
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 157
Coast live oak
DSH: 26 inches

Height: 35 feet
Oak tree rating: B
Protected tree



Tree No. 158
Coast live oak
DSH: 27, 17 inches

Height: 35 feet
Oak tree rating: B
Protected tree



Tree No. 159H
Coast live oak
DSH: 54 inches
Height: 40 feet
Oak tree rating: D
Protected, Heritage tree



Tree No. 160H
Coast live oak
DSH: 55 inches
Height: 45 feet
Oak tree rating: A
Protected, Heritage tree
Estimated data from afar



Tree No. 161
Coast live oak
DSH: 14, 14 inches

Height: 35 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 162
Coast live oak
DSH: 2, 2, 2 inches

Height: 10 feet
Oak tree rating: A
Protected tree
Estimated data from afar



Tree No. 163
Coast live oak
DSH: 9, 9 inches
Height: 25 feet
Oak tree rating: A
Protected tree
Estimated data from afar



Tree No. 164H
Coast live oak
DSH: 55, 35 inches
Height: 50 feet
Oak tree rating: D
Protected, Heritage tree
Estimated data from afar



Tree No. 165
Coast live oak
DSH: 2, 2, 2 inches

Height: 20 feet
Oak tree rating: B
Protected tree
Estimated data from afar

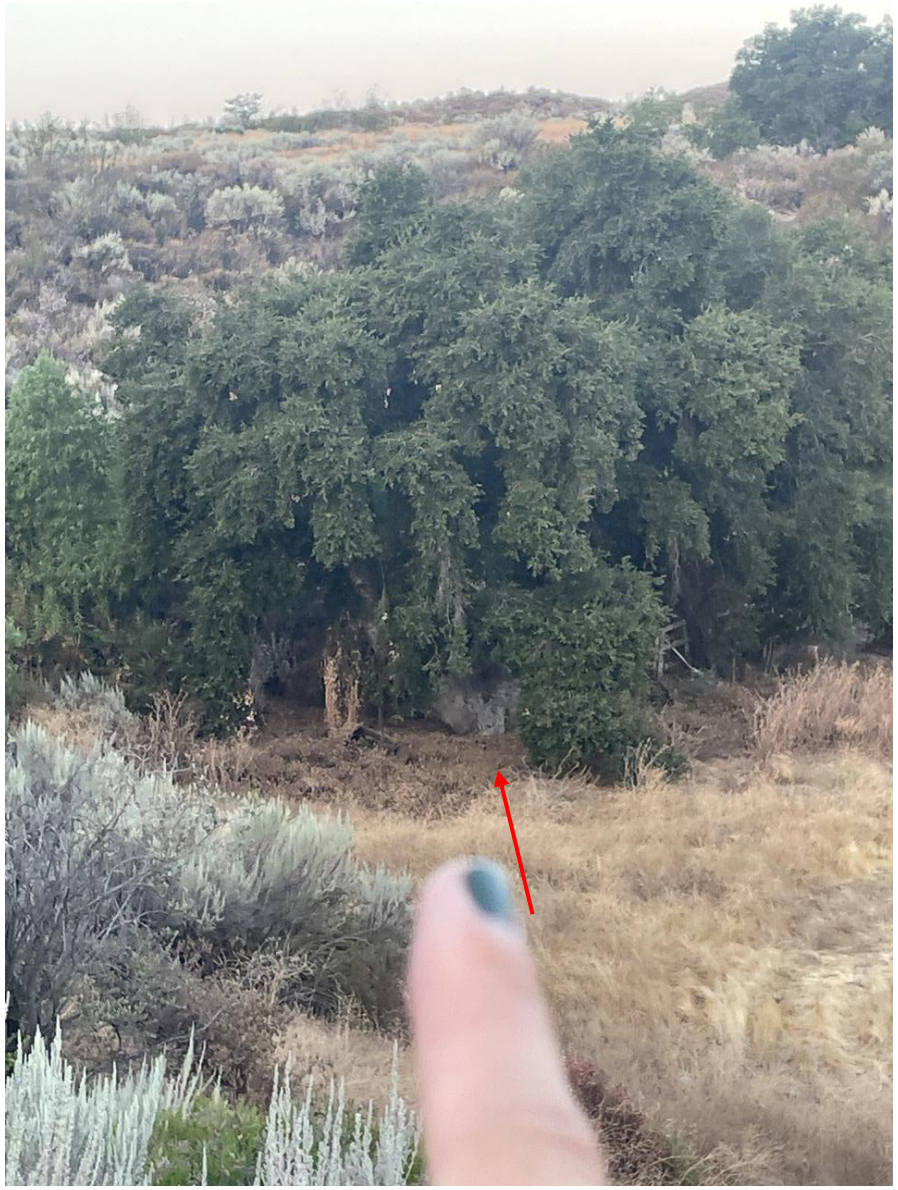


Tree No. 166
Coast live oak
DSH: 6, 6, 4, 4, 4, 3 inches
(one additional stem)

Height: 10 feet
Oak tree rating: A
Protected tree



Tree No. 167
Coast live oak
DSH: 7, 4 inches
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 168H
Coast live oak
DSH: 70 inches
Height: 50 feet
Oak tree rating: A
Protected, Heritage tree
Estimated data from afar



Tree No. 169H
Coast live oak
DSH: 70 inches

Height: 50 feet
Oak tree rating: A
Protected, Heritage tree
Estimated data from afar



Tree No. 170H
Coast live oak
DSH: 70 inches
Height: 35 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 171H
Coast live oak
DSH: 44 inches
Height: 35 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 172H
Coast live oak
DSH: 45, 15 inches

Height: 35 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 173H
Coast live oak
DSH: 55, 2, 2 inches
Height: 45 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 174
Tucker oak
DSH: 4, 2 inches

Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 175
Tucker oak
DSH: 4, 4, 3, 3, 3 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 176
Tucker oak
DSH: 4, 3, 3 inches

Height: 15 feet
Oak tree rating: A
Protected tree



Tree No. 177
Tucker oak
DSH: 4, 2, 2, 1, 1, 1 inches
(one additional stem)

Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 178
Tucker oak
DSH: 12, 1, 1, 1, 1, 1 (four additional stems)
Height: 20 feet
Oak tree rating: D
Protected tree



Tree No. 179
Tucker oak
DSH: 12, 12, 10, 9, 9, 6 (three additional stems)
Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 180
Coast live oak
DSH: 45 inches

Height: 4 feet
Oak tree rating: F
Not protected



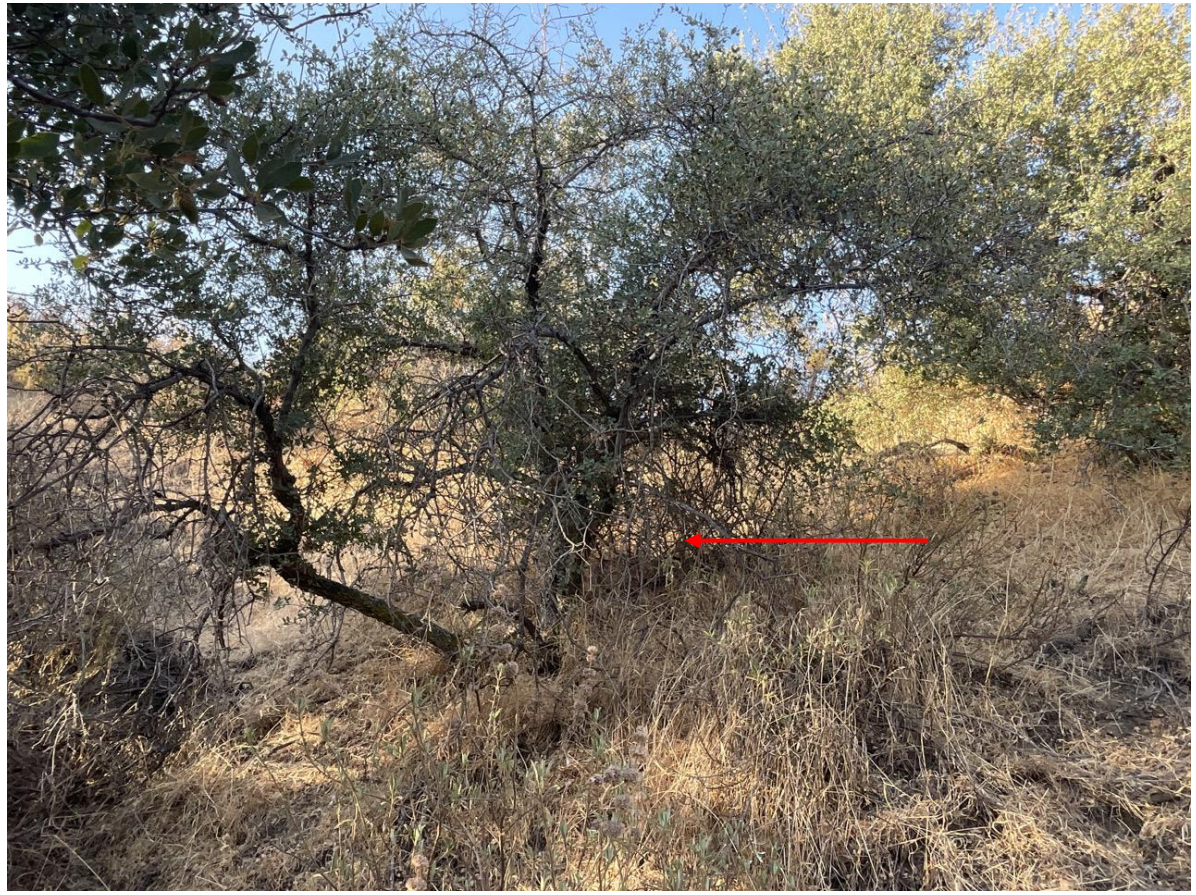
Tree No. 181
Tucker oak
DSH: 15, 13, 7 inches
Height: 20 feet
Oak tree rating: A
Protected tree



Tree No. 182
Tucker oak
DSH: 5, 4, 3, 3, 3 inches
Height: 15 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 183
Tucker oak
DSH: 13, 11, 8, 6, 5, 2 inches (two additional stems)
Height: 25 feet
Oak tree rating: A
Protected tree



Tree No. 184
Tucker oak
DSH: 6, 3 inches
Height: 15 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 185
Tucker oak
DSH: 14, 4, 4 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 186
Tucker oak
DSH: 11, 9, 7, 5, 4 inches
Height: 20 feet
Oak tree rating: B
Protected tree



Tree No. 187
Tucker oak
DSH: 12, 5, 4, 4, 1, 1 inches
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 188
Tucker oak
DSH: 15, 7, 4, 3 inches
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 189
Tucker oak
DSH: 11, 6, 4, 3, 1, 1 (14 additional stems)
Height: 20 feet
Oak tree rating: B
Protected tree



Tree No. 190
Tucker oak
DSH: 6, 6, 4, 3, 3 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 191
Tucker oak
DSH: 4 inches

Height: 10 feet
Oak tree rating: F
Not protected



Tree No. 192
Tucker oak
DSH: 12, 7, 7 inches
Height: 20 feet
Oak tree rating: D
Protected tree



Tree No. 193
Tucker oak
DSH: 2, 2, 2, 2 inches

Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 194
Tucker oak
DSH: 12, 9 inches

Height: 20 feet
Oak tree rating: B
Protected tree



Tree No. 195
Tucker oak
DSH: 3 inches

Height: 10 feet
Oak tree rating: D
Protected tree



Tree No. 196
Tucker oak
DSH: 3 inches
Height: 6 feet
Oak tree rating: C
Protected tree



Tree No. 197
Tucker oak
DSH: 3, 3, 3, 3, 2 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 198
Tucker oak
DSH: 3, 3, 3, 3, 3, 3 inches (one additional stem)
Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 199
Tucker oak
DSH: 8, 6, 5, 5, 4, 4 inches (two additional stems)
Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 200
Tucker oak
DSH: 8, 7, 4, 3, 2 inches
Height: 15 feet
Oak tree rating: A
Protected tree



Tree No. 201
Tucker oak
DSH: 6, 3, 3, 3 inches
Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 202
Tucker oak
DSH: 11, 8, 7, 5, 2, 2 inches
Height: 5 feet
Oak tree rating: F
Not protected
Estimated data from afar



Tree No. 203
Tucker oak
DSH: 7, 4 inches

Height: 12 feet
Oak tree rating: C
Protected tree



Tree No. 204
Tucker oak
DSH: 3 inches
Height: 5 feet
Oak tree rating: C
Protected tree



Tree No. 205
Tucker oak
DSH: 15, 12, 10, 5, 2, 2 inches
Height: 20 feet
Oak tree rating: B
Protected tree



Tree No. 206
Tucker oak
DSH: 15, 15, 14, 6, 5 inches
Height: 25 feet
Oak tree rating: B
Protected tree



Tree No. 207
Tucker oak
DSH: 5, 4, 4, 4, 3, 3 inches (two additional stems)
Height: 10 feet
Oak tree rating: D
Protected tree



Tree No. 208
Tucker oak
DSH: 15 inches
Height: 4 feet
Oak tree rating: F
Not protected



Tree No. 209
Tucker oak
DSH: 5, 3, 2, 2, 1 inches
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 210
Tucker oak
DSH: 1, 1, 1, 1, 1, 1 (four additional stems)
Height: 8 feet
Oak tree rating: B
Protected tree



Tree No. 211
Tucker oak
DSH: 15, 9, 3, 2, 1 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 212A
Tucker oak
DSH: 9, 9, 5 inches
Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 212B
Tucker oak
DSH: 9, 8, 7, 2 inches
Height: 20 feet
Oak tree rating: C
Protected tree



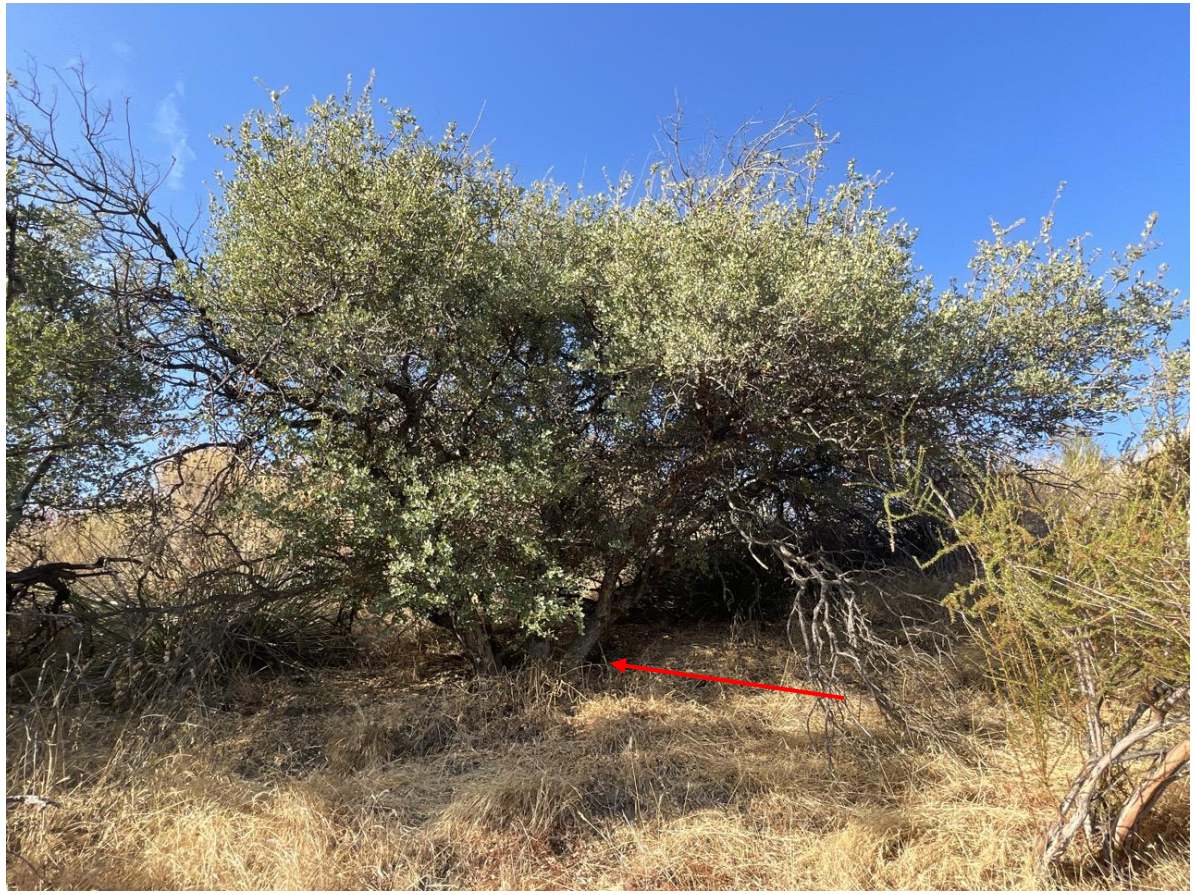
Tree No. 213
Tucker oak
DSH: 14, 9, 6, 6, 5, 4 inches (two additional stems)
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 214
Tucker oak
DSH: 9, 5, 5, 5, 4, 4 inches (three additional stems)
Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 215
Tucker oak
DSH: 4, 3, 3, 3, 3 inches
Height: 10 feet
Oak tree rating: D
Protected tree



Tree No. 216
Tucker oak
DSH: 8, 6, 6, 5, 2 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 217
Tucker oak
DSH: 3, 3, 3, 3, 3, 2 inches (four additional stems)
Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 218
Tucker oak
DSH: 2, 2, 2, 2, 2, 2 inches
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 219
Tucker oak
DSH: 2, 2, 2, 2, 2, 2 inches
Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 220
Tucker oak
DSH: 8, 8, 6, 3, 2, 1 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 221
Tucker oak
DSH: 4, 4, 3, 2, 1, 1 inches
Height: 10 feet
Oak tree rating: B
Protected tree
Estimated data from afar

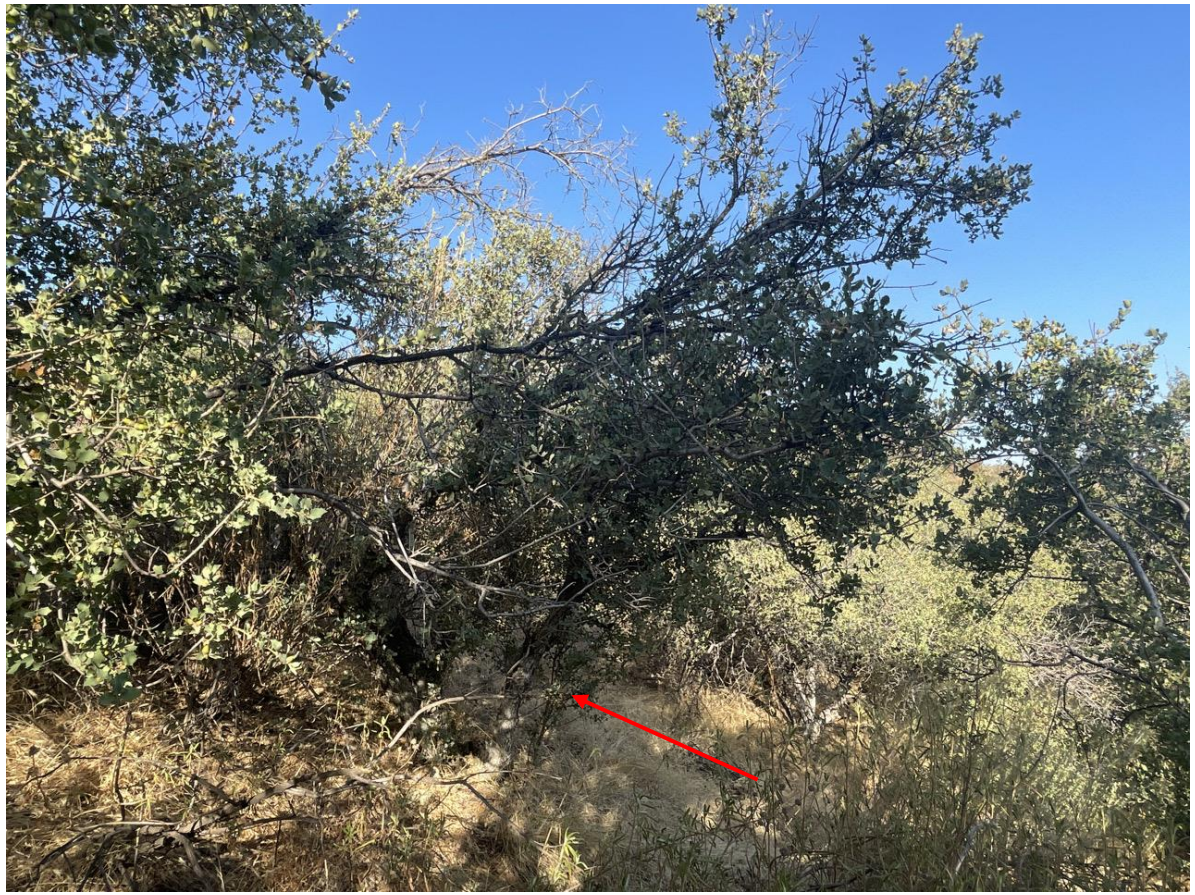


Tree No. 222
Tucker oak
DSH: 5, 5, 5, 5 inches
Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 223
Tucker oak
DSH: 6, 4, 4, 3, 2 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 224
Tucker oak
DSH: 4, 4, 2, 1, 1, 1 inches
Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 225
Tucker oak
DSH: 4, 4, 2, 2, 2, 2 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 226
Tucker oak
DSH: 6, 6, 5, 2, 1, 1 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 227
Tucker oak
DSH: 5, 5, 2, 1, 1 inches

Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 228
Tucker oak
DSH: 5, 1 inches
Height: 10 feet
Oak tree rating: D
Protected tree



Tree No. 229
Tucker oak
DSH: 12, 9, 5 inches
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 230
Tucker oak
DSH: 7, 4, 2 inches
Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 231
Tucker oak
DSH: 5, 4, 4, 3, 1 inches

Height: 15 feet
Oak tree rating: F
Not protected



Tree No. 232
Tucker oak
DSH: 9, 9, 6, 5, 3 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 233
Tucker oak
DSH: 7 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 234
Tucker oak
DSH: 2, 2, 2 inches
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 235
Tucker oak
DSH: 6, 6, 5, 4, 4, 3 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 236
Tucker oak
DSH: 6, 6, 3 inches
Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 237
Tucker oak
DSH: 6, 5, 5, 4, 4, 3 inches
Height: 10 feet
Oak tree rating: D
Protected tree



Tree No. 238
Tucker oak
DSH: 5, 3, 3, 3, 3, 3 inches
Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 239
Tucker oak
DSH: 4 inches
Height: 7 feet
Oak tree rating: D
Protected tree



Tree No. 240
Tucker oak
DSH: 8, 1, 1, 1, 1, 1 inches (nine additional stems)
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 241
Tucker oak
DSH: 7, 7, 3 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 242
Tucker oak
DSH: 2, 1, 1 inches

Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 243
Tucker oak
DSH: 15, 8 inches
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 244
Tucker oak
DSH: 12 inches

Height: 3 feet
Oak tree rating: F
Not protected



Tree No. 245
Tucker oak
DSH: 9 inches
Height: 15 feet
Oak tree rating: F
Not protected



Tree No. 246
Tucker oak
DSH: 5, 5, 3, 3, 3, 1 inches
(two additional stems)

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 247
Tucker oak
DSH: 4, 4, 3, 3, 2, 2 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 248
Tucker oak
DSH: 7, 6, 6, 6, 4, 4 inches (seven additional stems)
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 249
Tucker oak
DSH: 11, 7, 6, 3 inches
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 250
Tucker oak
DSH: 10, 3 inches
Height: 20 feet
Oak tree rating: B
Protected tree



Tree No. 251
Tucker oak
DSH: 3, 3, 1, 1, 1 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 252
Tucker oak
DSH: 9, 9, 9 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 253
Tucker oak
DSH: 11, 11 inches

Height: 25 feet
Oak tree rating: D
Protected tree



Tree No. 254
Tucker oak
DSH: 4 inches

Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 255
Tucker oak
DSH: 4 inches

Height: 5 feet
Oak tree rating: D
Protected tree



Tree No. 256
Tucker oak
DSH: 5, 1, 1, 1, 1, 1 inches
Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 257
Tucker oak
DSH: 11, 10, 9, 8, 5 inches
Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 258
Tucker oak
DSH: 9, 9, 9, 8, 5 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 259
Tucker oak
DSH: 7, 5 inches
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 260
Tucker oak
DSH: 6, 2 inches

Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 261
Tucker oak
DSH: 2, 2, 2, 2, 2, 2, inches (one additional stem)
Height: 10 feet
Oak tree rating: F
Not protected



Tree No. 262
Coast live oak
DSH: 12 inches

Height: 20 feet
Oak tree rating: A
Protected tree
Estimated data from afar



Tree No. 264
Tucker oak
DSH: 13, 7, 5 inches
Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 265
Tucker oak
DSH: 15, 7, 6 inches
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 266
Tucker oak
DSH: 2, 2, 2, 2 inches
Height: 10 feet
Oak tree rating: D
Protected tree



Tree No. 267
Tucker oak
DSH: 7, 5, 4, 4, 4 inches

Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 268
Tucker oak
DSH: 10, 10, 10, 9, 5, 5 inches (four additional stems)
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 269
Tucker oak
DSH: 4, 3, 1, 1, 1 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 270
Tucker oak
DSH: 16, 11, 7 inches
Height: 20 feet
Oak tree rating: B
Protected tree



Tree No. 271
Tucker oak
DSH: 10, 9, 7, 5, 3 inches
Height: 20 feet
Oak tree rating: A
Protected tree



Tree No. 272
Tucker oak
DSH: 15, 12, 10, 6, 6, 5 inches (three additional stems)
Height: 20 feet
Oak tree rating: A
Protected tree



Tree No. 273
Tucker oak
DSH: 7, 7, 6, 5, 4, 4 inches (three additional stems)
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 274
Tucker oak
DSH: 27 inches

Height: 8 feet
Oak tree rating: F
Not protected



Tree No. 275
Tucker oak
DSH: 1, 1, 1, 1, 1 inches
Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 276
Tucker oak
DSH: 1 inch

Height: 5 feet
Oak tree rating: C
Not protected



Tree No. 277
Tucker oak
DSH: 7 inches

Height: 2 feet
Oak tree rating: F
Not protected



Tree No. 278
Tucker oak
DSH: 1 inch

Height: 3 feet
Oak tree rating: C
Not protected



Tree No. 279
Tucker oak
DSH: 5 inches

Height: 2 feet
Oak tree rating: F
Not protected



Tree No. 280
Tucker oak
DSH: 10 inches

Height: 3 feet
Oak tree rating: F
Not protected



Tree No. 281
Tucker oak
DSH: 1, 1, 1, 1, 1 inches
Height: 6 feet
Oak tree rating: B
Protected tree



Tree No. 282
Tucker oak
DSH: 1, 1, 1, 1 inches
Height: 6 feet
Oak tree rating: B
Protected tree



Tree No. 283
Tucker oak
DSH: 4, 3, 1, 1, 1 inches
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 284
Tucker oak
DSH: 2, 2, 2, 2, 2 inches

Height: 10 feet
Oak tree rating: B
Protected tree

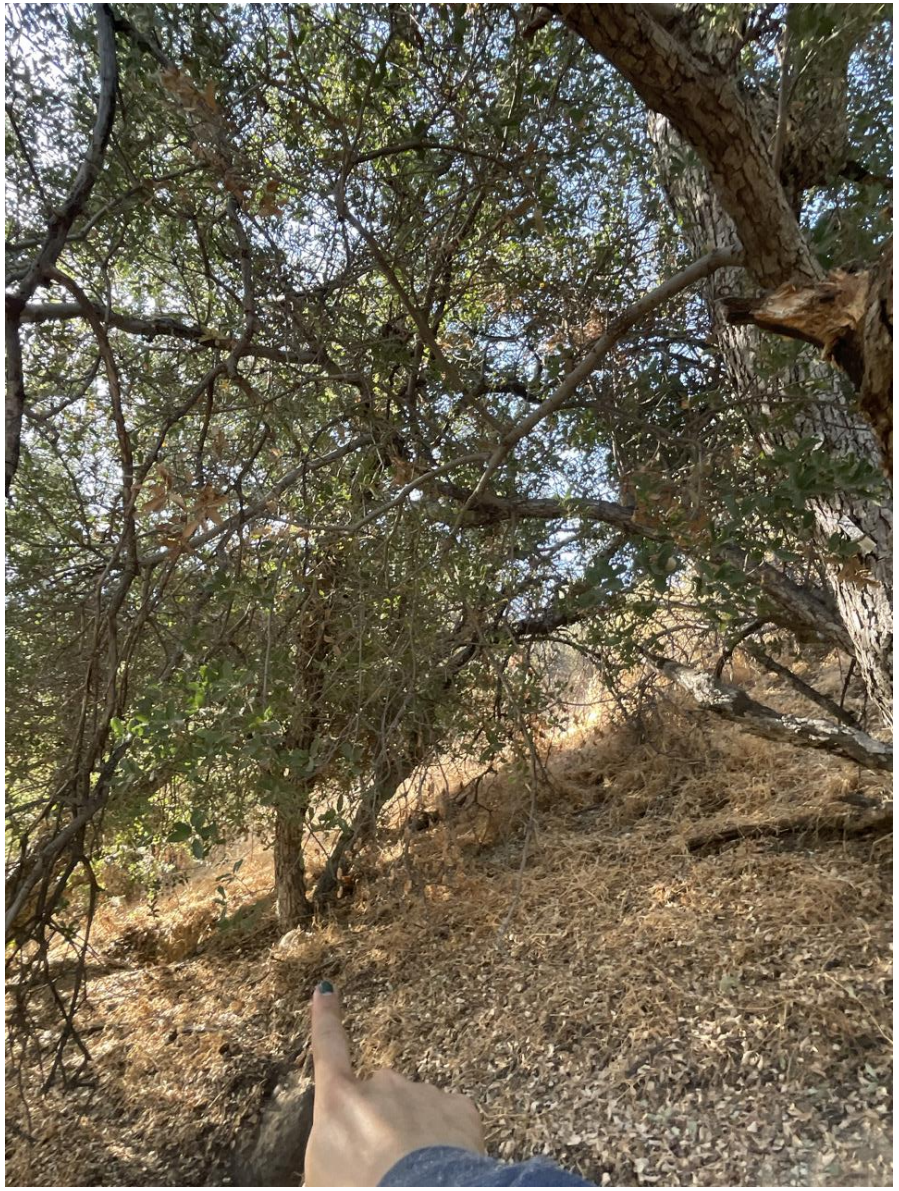


Tree No. 285
Tucker oak
DSH: 11, 9, 4 inches

Height: 20 feet
Oak tree rating: B
Protected tree



Tree No. 286
Tucker oak
DSH: 9, 5, 4, 4, 3, 3 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 287
Tucker oak
DSH: 9 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 288
Tucker oak
DSH: 14, 14, 8 inches

Height: 20 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 289
Tucker oak
DSH: 8 inches

Height: 25 feet
Oak tree rating: B
Protected oak
Estimated data from afar



Tree No. 290
Tucker oak
DSH: 12, 11, 9 inches
Height: 25 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 291
Tucker oak
DSH: 5 inches

Height: 10 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 292
Tucker oak
DSH: 7, 3, 3 inches

Height: 20 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 293
Tucker oak
DSH: 12, 6, 5, 5 inches

Height: 15 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 294
Tucker oak
DSH: 6, 6, 4 inches

Height: 15 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 295
Tucker oak
DSH: 5, 5, 5 inches
Height: 15 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 296
Tucker oak
DSH: 10, 5, 5 inches
Height: 20 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 297
Tucker oak
DSH: 7, 7, 7, 7 inches
Height: 20 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 298
Tucker oak
DSH: 5, 5 inches
Height: 10 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 299
Tucker oak
DSH: 7, 6, 3 inches

Height: 15 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 300
Tucker oak
DSH: 8, 6, 5, 4, 3 inches

Height: 20 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 301
Tucker oak
DSH: 8, 5, 3, 3 inches

Height: 20 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 302
Tucker oak
DSH: 10, 6 inches

Height: 15 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 303
Tucker oak
DSH: 5 inches

Height: 20 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 304
Tucker oak
DSH: 5, 2 inches

Height: 10 feet
Oak tree rating: D
Protected tree
Estimated data from afar



Tree No. 305
Tucker oak
DSH: 7, 6, 5, 5, 5, 5 inches
(five additional stems)

Height: 20 feet
Oak tree rating: C
Protected tree
Estimated data from afar



Tree No. 306
Tucker oak
DSH: 11, 9, 9, 7 inches
Height: 15 feet
Oak tree rating: A
Protected tree



Tree No. 307
Tucker oak
DSH: 13, 6, 3, 1, 1, 1, inches (14 additional stems)
Height: 20 feet
Oak tree rating: D
Protected tree



Tree No. 308
Tucker oak
DSH: 6, 6, 6 inches

Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 309
Tucker oak
DSH: 8, 7, 5, 5, 5, 5 inches (11 additional stems)
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 310
Tucker oak
DSH: 12, 9, 4, 4 inches
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 311
Tucker oak
DSH: 11, 10, 10, 9, 7, 6 inches (three additional stems)
Height: 20 feet
Oak tree rating: C
Protected oak



Tree No. 312
Tucker oak
DSH: 9, 7, 7, 6, 6, 6 inches (seven additional stems)
Height: 15 feet
Oak tree rating: C
Protected oak



Tree No. 313
Tucker oak
DSH: 7, 7, 7, 7, 6 inches
Height: 20 feet
Oak tree rating: C
Protected oak
Estimated data from afar



Tree No. 314
Tucker oak
DSH: 3, 3, 2, 2, 2 inches
Height: 15 feet
Oak tree rating: A
Protected tree



Tree No. 315
Tucker oak
DSH: 3, 3, 3, 3, 2, 2 inches (two additional stems)
Height: 15 feet
Oak tree rating: A
Protected tree



Tree No. 316H
Coast live oak
DSH: 35, 20, 17 inches
Height: 30 feet
Oak tree rating: B
Protected, Heritage tree



Tree No. 317
Coast live oak
DSH: 20 inches
Height: 25 feet
Oak tree rating: C
Protected tree



Tree No. 318
Tucker oak
DSH: 14, 13, 6 inches
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 319H
Coast live oak
DSH: 31, 30, 26, 20 inches
Height: 35 feet
Oak tree rating: B
Protected, Heritage tree

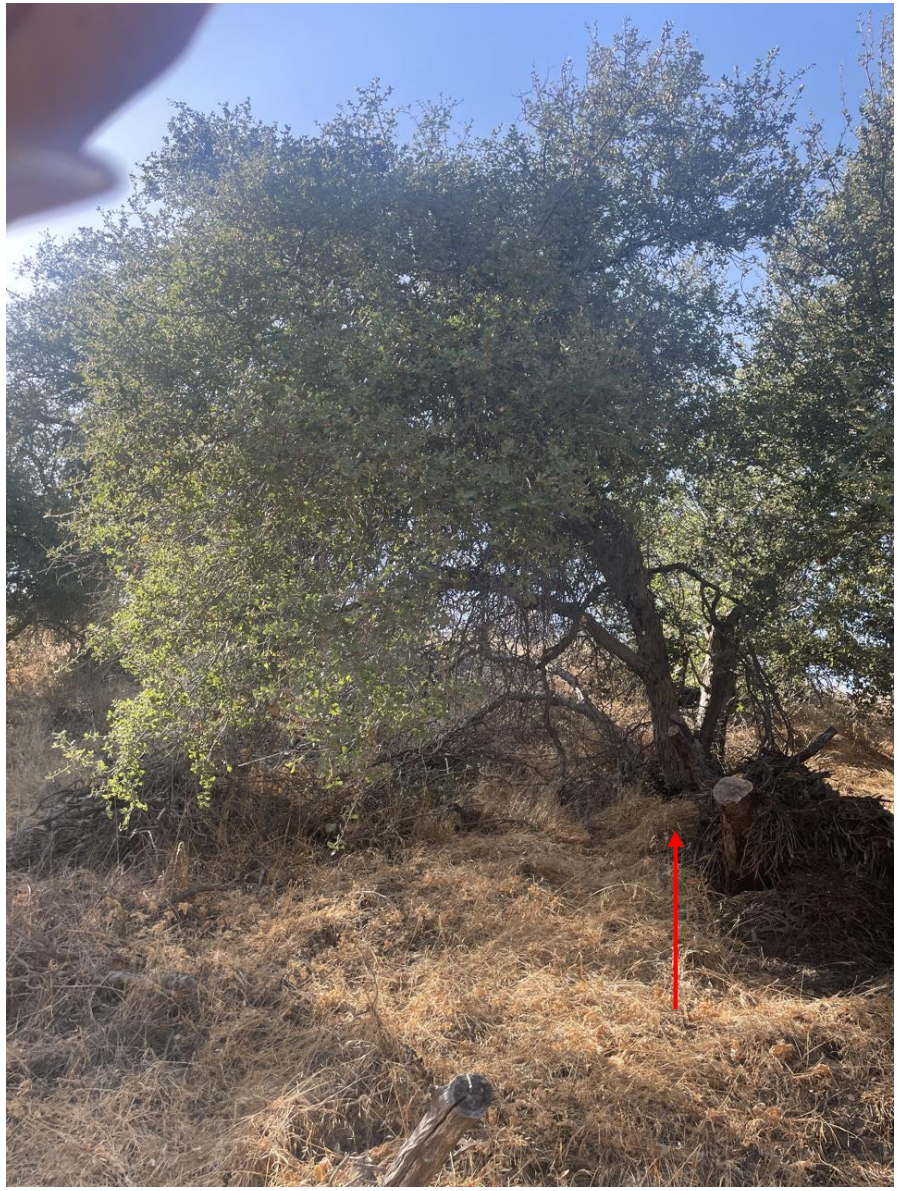


Tree No. 320
Tucker oak
DSH: 12 inches
Height: 10 feet
Oak tree rating: A
Protected tree



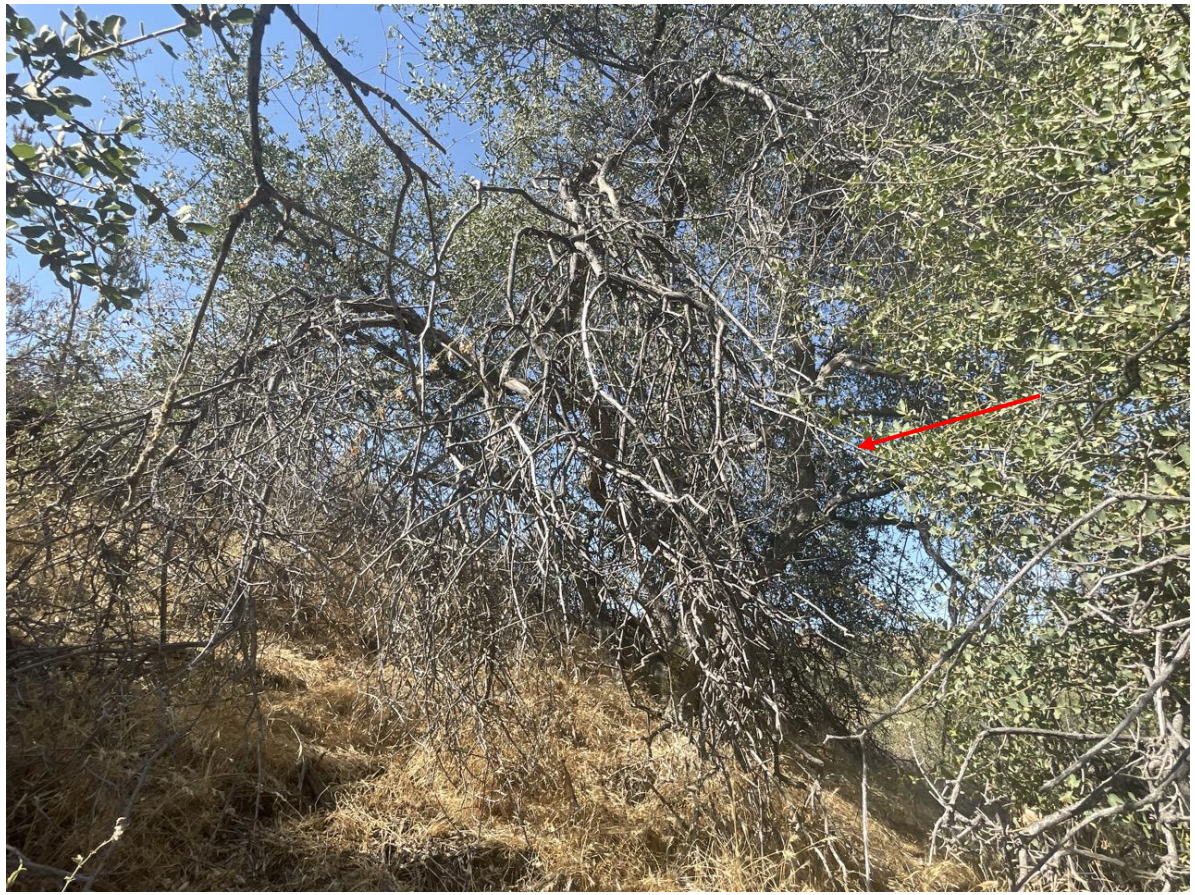
Tree No. 321
Tucker oak
DSH: 12, 12, 7, 6, 6, 5 inches
(one additional stem)

Height: 10 feet
Oak tree rating: C
Protected tree

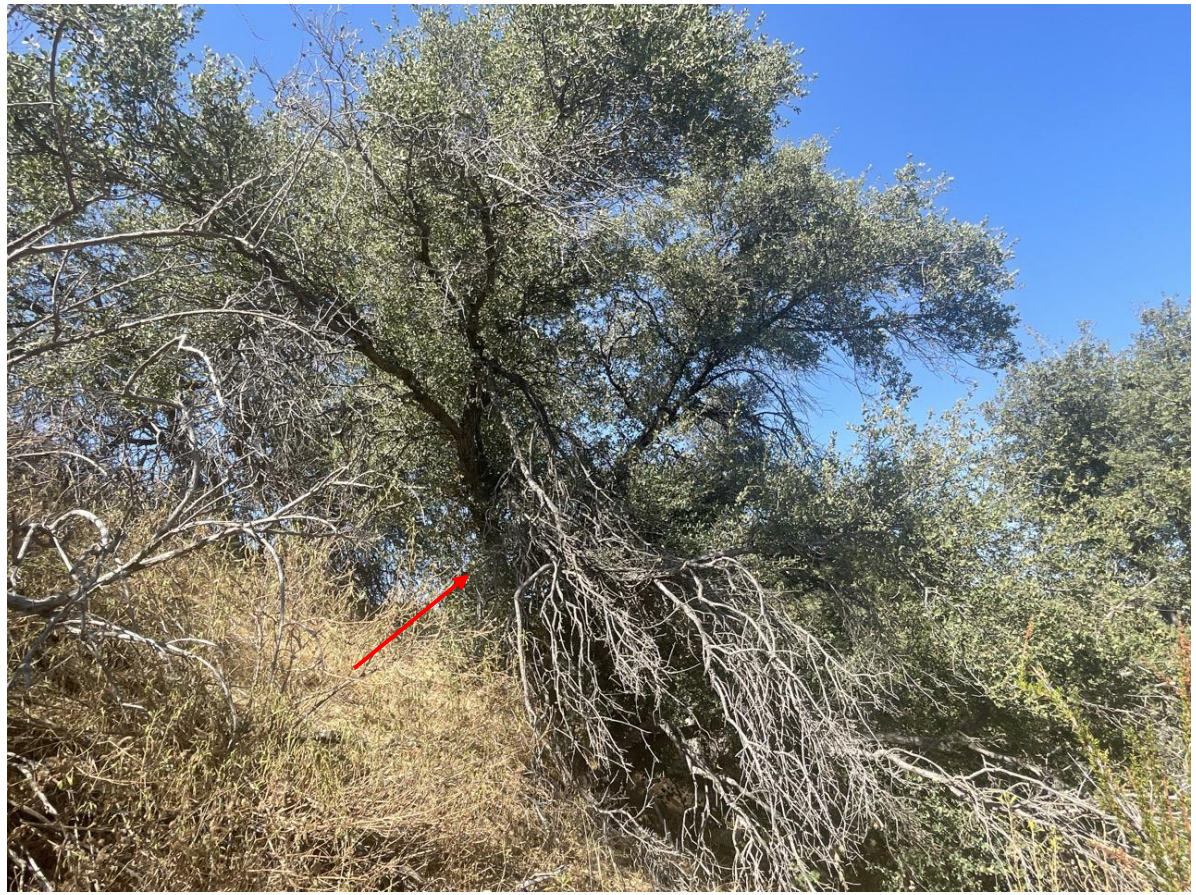


Tree No. 322
Tucker oak
DSH: 12, 12, 6, 4, 3 inches

Height: 15 feet
Oak tree rating: B
Protected oak



Tree No. 323
Tucker oak
DSH: 9, 8, 8, 7, 3, 3 inches (one additional stem)
Height: 20 feet
Oak tree rating: D
Protected tree



Tree No. 324
Tucker oak
DSH: 8, 7, 1, 1 inches
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 325
Tucker oak
DSH: 10, 9, 7, 7, 6, 6, inches (four additional stems)
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 326
Tucker oak
DSH: 6, 6 inches
Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 327
Tucker oak
DSH: 3, 3, 3, 2, 2, 2 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 328
Tucker oak
DSH: 8, 8, 8, 7, 4, 4 inches (three additional stems)
Height: 20 feet
Oak tree rating: B
Protected tree

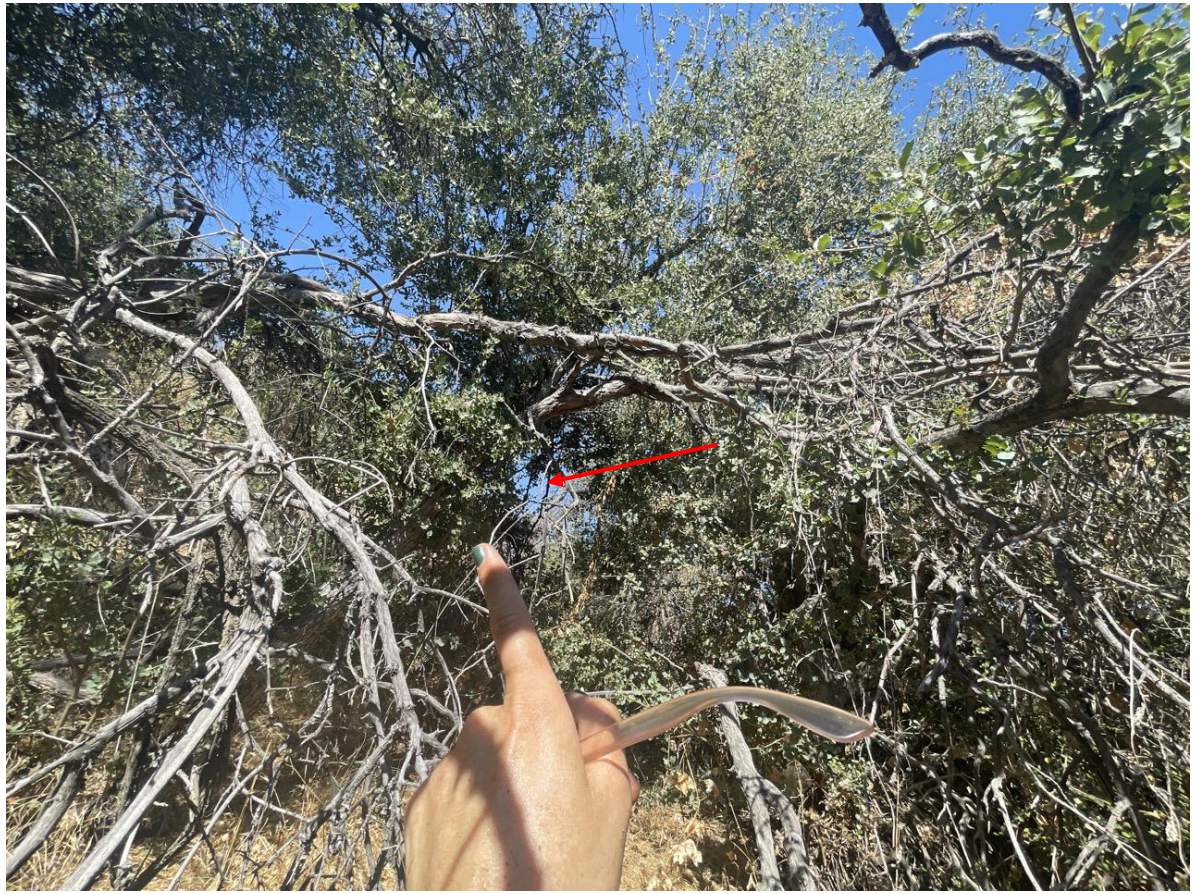


Tree No. 329
Tucker oak
DSH: 9, 7, 6, 5, 5 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 330
Tucker oak
DSH: 3 inches

Height: 4 feet
Oak tree rating: D
Not protected



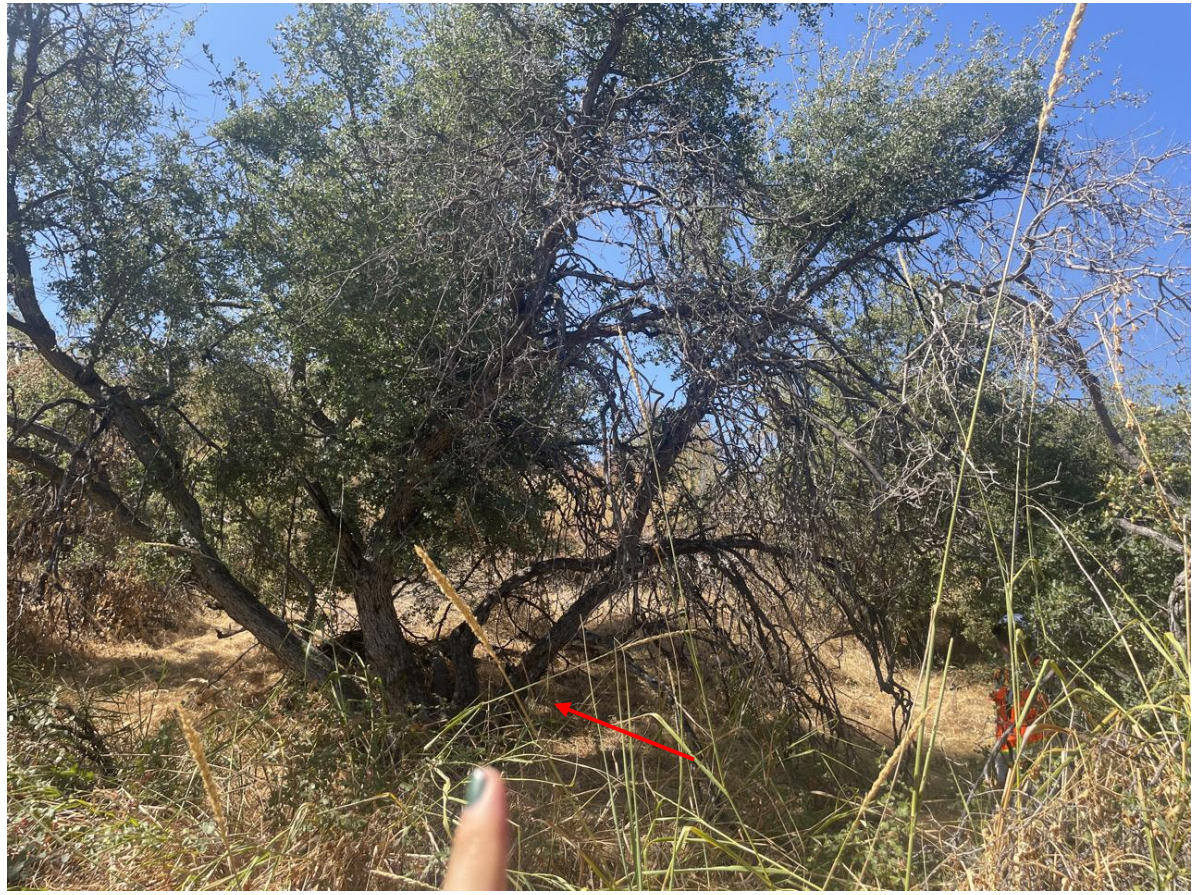
Tree No. 331
Tucker oak
DSH: 5 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 332
Tucker oak
DSH: 6, 5, 4, 4, 2 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 333
Tucker oak
DSH: 5, 5, 5, 4, 4, 4 inches (two additional stems)
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 334
Tucker oak
DSH: 9, 8, 8, 8, 6, 5 inches (one additional stem)
Height: 15 feet
Oak tree rating: C
Protected tree

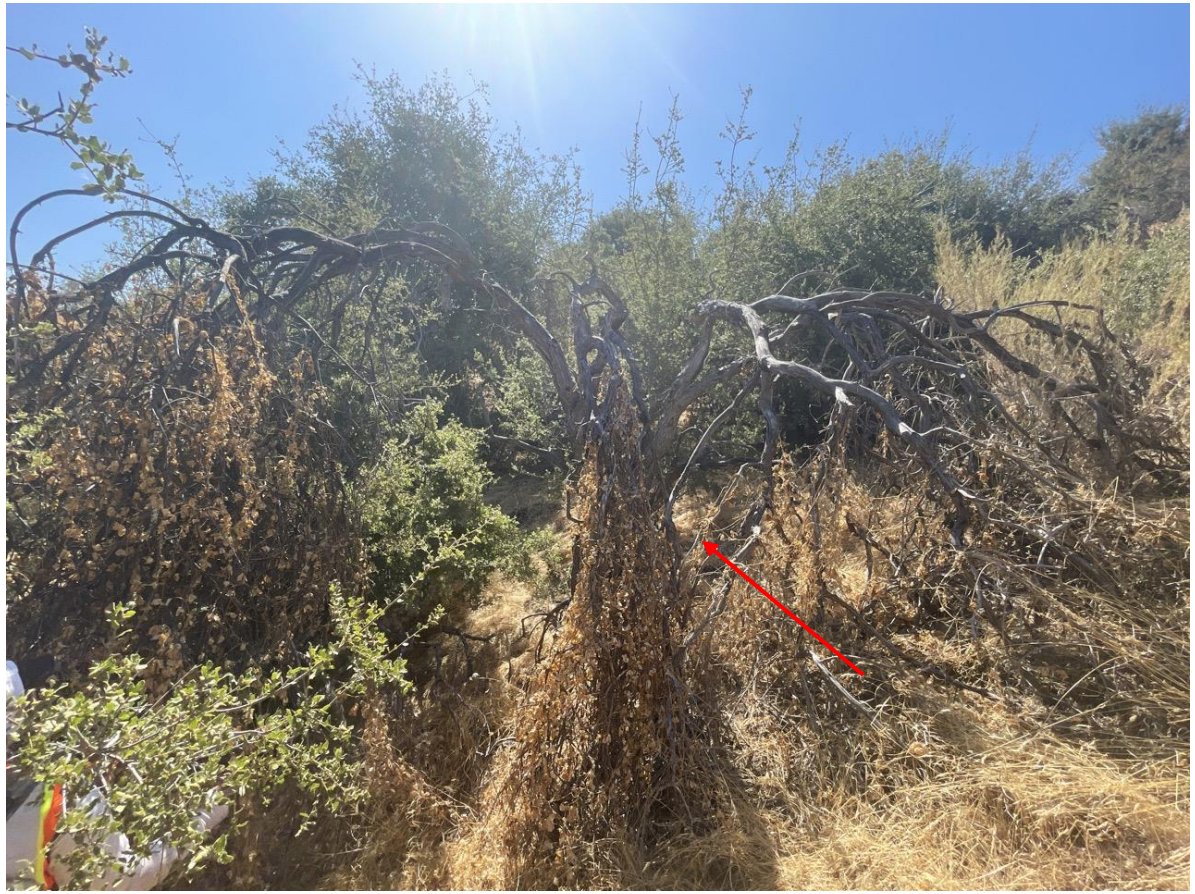


Tree No. 335
Tucker oak
DSH: 2 inches

Height: 8 feet
Oak tree rating: C
Protected tree



Tree No. 336
Tucker oak
DSH: 5, 4, 3, 3, 2, 2, inches (four additional stems)
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 337
Tucker oak
DSH: 7, 7, 4, 2, 2 inches
Height: 10 feet
Oak tree rating: F
Not protected



Tree No. 338
Tucker oak
DSH: 2, 1 inches

Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 339
Tucker oak
DSH: 5, 5, 5, 5, 2, 1 inches
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 340
Tucker oak
DSH: 4, 2 inches

Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 341
Tucker oak
DSH: 13, 9, 4, 4, 4, 4 inches (two additional stems)
Height: 15 feet
Oak tree rating: D
Protected tree



Tree No. 342
Tucker oak
DSH: 14, 12, 12, 10 inches
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 343
Tucker oak
DSH: 2 inches

Height: 5 feet
Oak tree rating: F
Not protected



Tree No. 344
Tucker oak
DSH:4, 4, 3, 3, 3 inches
Height: 10 feet
Oak tree rating: D
Protected tree



Tree No. 345
Tucker oak
DSH: 5, 5, 2 inches
Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 346
Tucker oak
DSH: 12 inches

Height: 1 foot
Oak tree rating: F
Not protected



Tree No. 347
Tucker oak
DSH: 3, 3, 3, 2 inches

Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 348
Tucker oak
DSH: 12, 4, 4, 4 inches
Height: 20 feet
Oak tree rating: D
Protected tree



Tree No. 349
Tucker oak
DSH: 13, 13, 13 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 350
Tucker oak
DSH: 8, 7, 2, 2, 2, 2 inches (four additional stems)
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 351
Tucker oak
DSH: 4, 4, 4, 3, 3, 3 inches
Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 352
Tucker oak
DSH: 3, 3, 2, 2, 1 inches
Height: 10 feet
Oak tree rating: F
Not protected



Tree No. 353
Tucker oak
DSH: 6, 5, 5, 5, 4 inches
Height: 15 feet
Oak tree rating: D
Protected tree



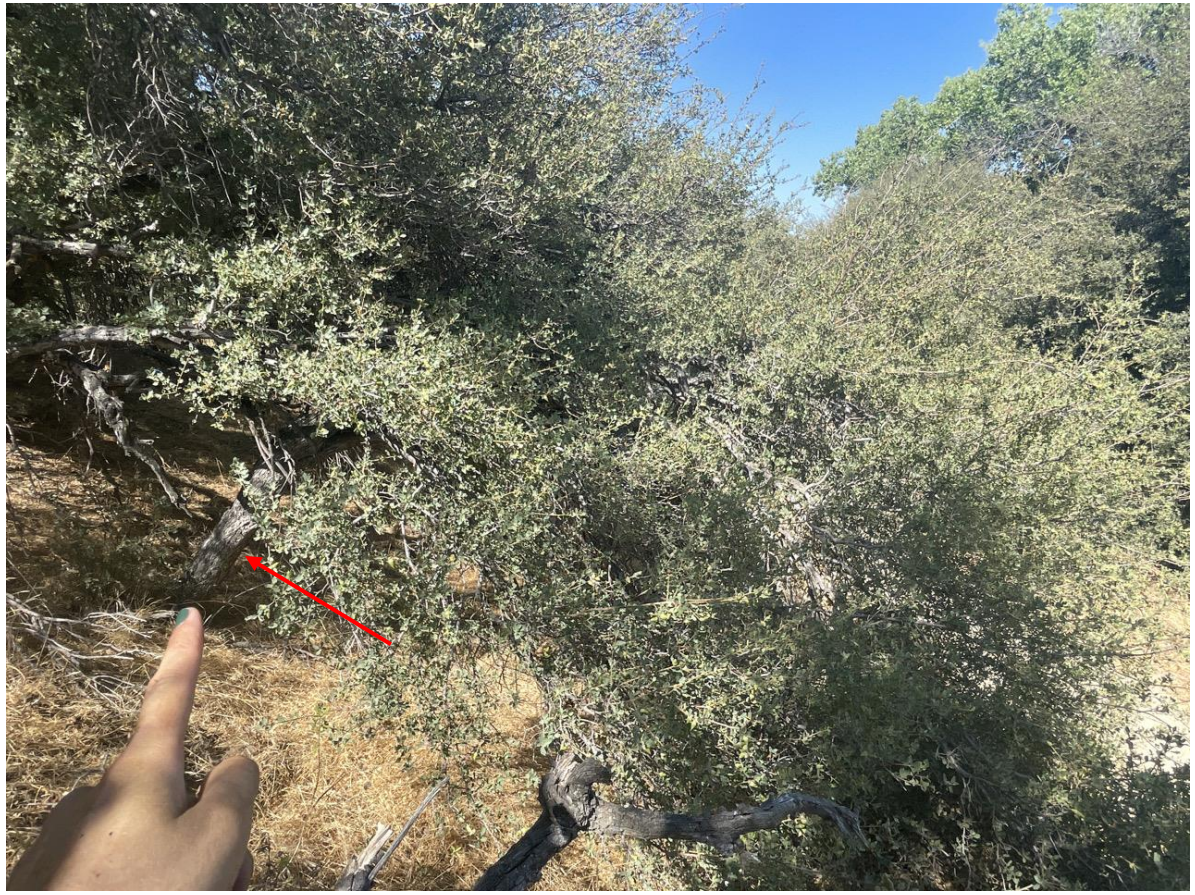
Tree No. 354
Tucker oak
DSH: 7, 7, 7, 6, 5, 5 inches (one additional stem)
Height: 15 feet
Oak tree rating: C
Protected tree



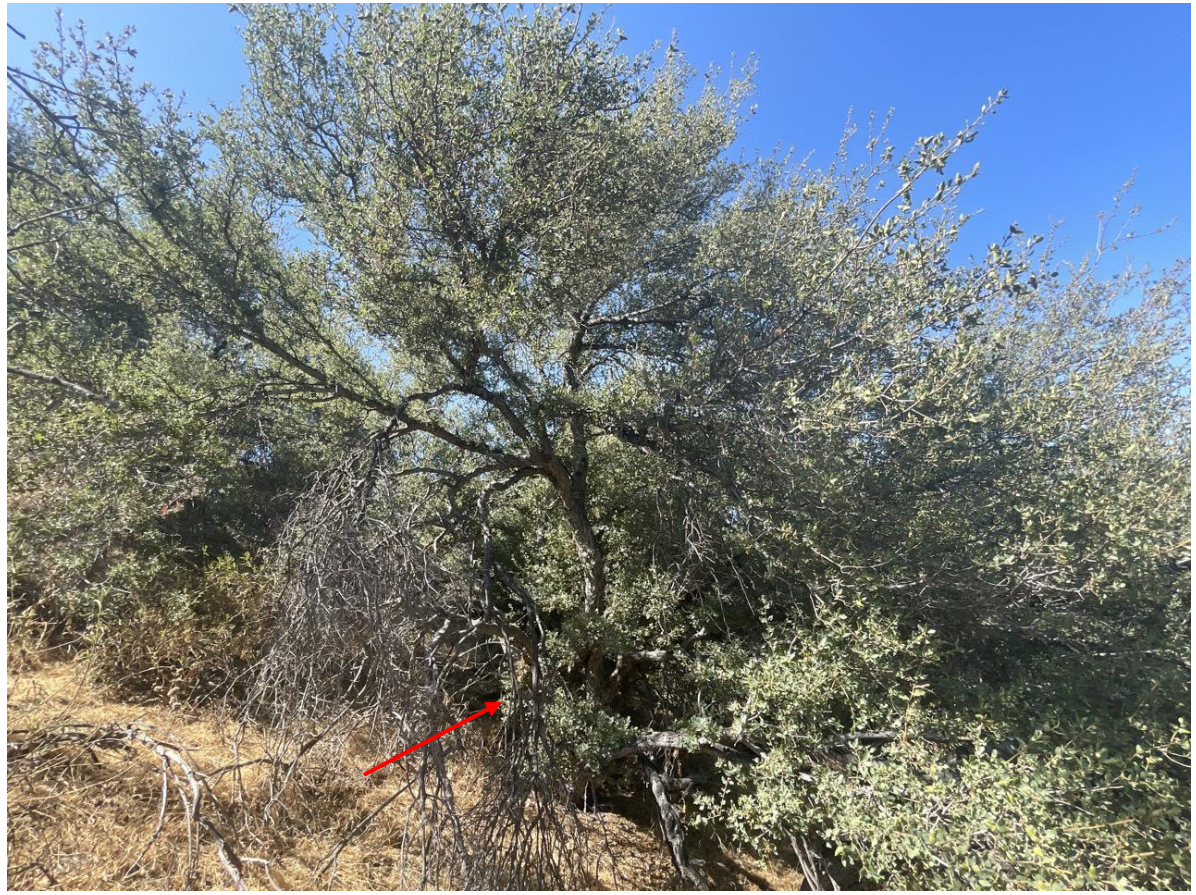
Tree No. 355
Tucker oak
DSH: 11, 7, 5, 4 inches
Height: 15 feet
Oak tree rating: A
Protected tree



Tree No. 356
Tucker oak
DSH: 10, 7, 6, 6, 4 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 357
Tucker oak
DSH: 5, 4 inches
Height: 10 feet
Oak tree rating: D
Protected tree



Tree No. 358
Tucker oak
DSH: 9, 8, 7, 7, 5, 4 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 359
Tucker oak
DSH: 9, 8, 8, 8, 5, 5 inches (one additional stem)
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 360
Tucker oak
DSH: 8, 6, 5, 5 inches
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 361
Tucker oak
DSH: 2 inches
Height: 10 feet
Oak tree rating: B
Protected tree
Estimated data from afar



Tree No. 362
Tucker oak
DSH: 2 inches
Height: 10 feet
Oak tree rating: F
Not protected
Estimated data from afar



Tree No. 363
Tucker oak
DSH: 5, 5, 5, 4, 3 inches
Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 364
Tucker oak
DSH: 4, 4, 4, 3, 3 inches
Height: 10 feet
Oak tree rating: C
Protected tree



Tree No. 365
Tucker oak
DSH: 15, 14, 14,12, 9, 7 inches
Height: 20 feet
Oak tree rating: A
Protected tree



Tree No. 366
Tucker oak
DSH: 14, 8, 8, 8 inches
Height: 20 feet
Oak tree rating: A
Protected tree



Tree No. 367
Tucker oak
DSH: 11, 8, 6, 4 inches
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 368
Tucker oak
DSH: 6, 4 inches
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 369
Tucker oak
DSH: 3, 3, 2, 2 inches
Height: 10 feet
Oak tree rating: F
Not protected



Tree No. 370
Tucker oak
DSH: 8, 8, 6, 3, 3, 3 inches (four additional stems)
Height: 20 feet
Oak tree rating: C
Protected tree



Tree No. 371
Tucker oak
DSH: 16, 15, 12 inches
Height: 20 feet
Oak tree rating: B
Protected tree



Tree No. 372
Tucker oak
DSH: 8, 7, 6, 5, 3, 3 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 373H
Coast live oak
DSH: 36 inches
Height: 35 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 374H
Coast live oak
DSH: 40, 40 inches
Height: 35 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 375H
Coast live oak
DSH: 35 inches

Height: 40 feet
Oak tree rating: D
Protected, Heritage tree



Tree No. 376
Tucker oak
DSH: 5, 5, 4, 4, 4, 4 inches
Height: 15 feet
Oak Tree Rating: C
Protected tree



Tree No. 377
Tucker oak
DSH: 12 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 378
Tucker oak
DSH: 17, 7, 7, 3, 3, 3 inches
Height: 15 feet
Oak tree rating: A
Protected tree



Tree No. 379
Tucker oak
DSH: 9, 7, 7, 7, 7, 7 inches (three additional stems)
Height: 20 feet
Oak tree rating: A
Protected tree



Tree No. 380
Tucker oak
DSH: 4, 1, 1, 1, 1 inches

Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 381H
Coast live oak
DSH: 51 inches
Height: 45 feet
Oak tree rating: A
Protected, Heritage tree



Tree No. 382
Tucker oak
DSH: 15, 9, 9, 8 inches
Height: 17 feet
Oak tree rating: A
Protected tree
Estimated data from afar



Tree No. 383
Tucker oak
DSH: 6, 5, 5, 5 inches

Height: 20 feet
Oak tree rating: A
Protected tree
Estimated data from afar



Tree No. 500
Coast live oak
DSH: 18, 15 inches

Height: 0 feet
Oak tree rating: F
Not protected



Tree No. 501
Coast live oak
DSH: 23 inches
Height: 3 feet
Oak tree rating: F
Not protected



Tree No. 502
Coast live oak
DSH: 17 inches
Height: 2 feet
Oak tree rating: F
Not protected



Tree No. 503
Coast live oak
DSH: 28 inches

Height: 4 feet
Oak tree rating: F
Not protected



Tree No. 504
Coast live oak
DSH: 27 inches
Height: 3 feet
Oak tree rating: F
Not protected



Tree No. 505
Coast live oak
DSH: 21 inches

Height: 1 foot
Oak tree rating: F
Not protected



Tree No. 506
Tucker oak
DSH: 4, 4, 2 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 507
Tucker oak
DSH: 5, 3, 3, 3, 3, 2 inches

Height: 15 feet
Oak tree rating: C
Protected tree



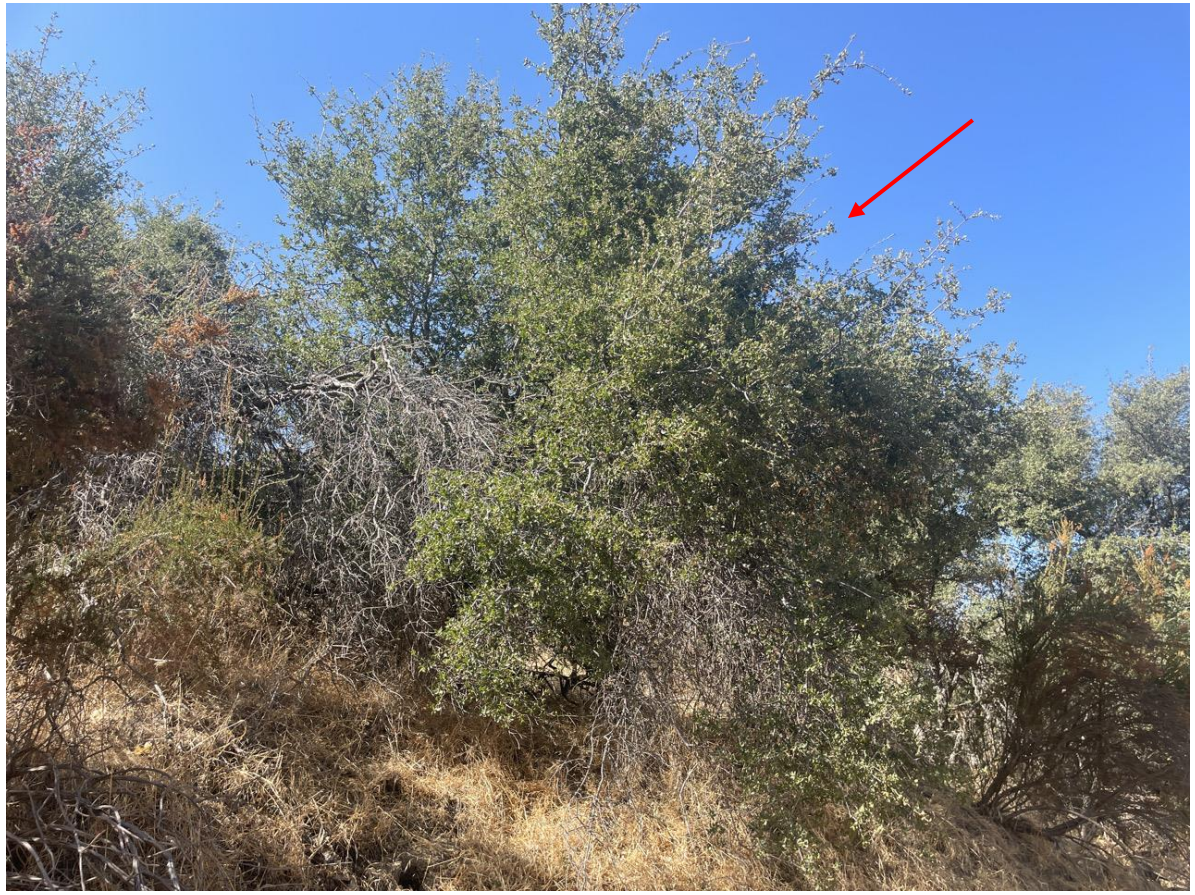
Tree No. 508
Tucker oak
DSH: 10, 6, 4, 4, 3, 2 inches
Height: 17 feet
Oak tree rating: C
Protected tree



Tree No. 509
Tucker oak
DSH: 1, 1 inches
Height: 8 feet
Oak tree rating: C
Not protected



Tree No. 510
Tucker oak
DSH: 5, 3, 1 inches
Height: 10 feet
Oak tree rating: B
Protected tree



Tree No. 511
Tucker oak
DSH: 6, 4, 2 inches
Height: 13 feet
Oak tree rating: C
Protected tree



Tree No. 512
Tucker oak
DSH: 10, 10, 10, 8, 7 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 513
Tucker oak
DSH: 7 inches
Height: 11 feet
Oak tree rating: C
Protected tree



Tree No. 514
Tucker oak
DSH: 4, 3, 1 inches
Height: 8 feet
Oak tree rating: D
Protected tree



Tree No. 515H
Coast live oak
DSH: 44, 12, 7, 6 inches
Height: 45 feet
Oak tree rating: C
Protected, Heritage tree



Tree No. 516H
Coast live oak
DSH: 24, 22, 21,11 inches
Height: 35 feet
Oak tree rating: B
Protected, Heritage tree



Tree No. 517
Coast live oak
DSH: 17 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 518
Coast live oak
DSH: 11, 6 inches
Height: 15 feet
Oak tree rating: A
Protected tree



Tree No. 519
Coast live oak
DSH: 4, 4 inches
Height: 9 feet
Oak tree rating: A
Protected tree



Tree No. 521
Coast live oak
DSH: 10, 10 inches
Height: 18 feet
Oak tree rating: A
Protected tree



Tree No. 522
Coast live oak
DSH: 8, 4, 3, 3 inches
Height: 15 feet
Oak tree rating: B
Protected tree



Tree No. 523
Coast live oak
DSH: 1, 1, 1, 1 inches
Height: 6 feet
Oak tree rating: B
Protected tree



Tree No. 524
Canyon live oak
DSH: 5 inches

Height: 16 feet
Oak tree rating: A
Protected tree



Tree No. 525
Tucker oak
DSH: 6, 4, 3, 3 inches
Height: 15 feet
Oak tree rating: F
Not protected



Tree No. 526
Tucker oak
DSH: 8, 5 inches

Height: 7 feet
Oak tree rating: F
Not protected



Tree No. 527
Coast live oak
DSH: 17 inches

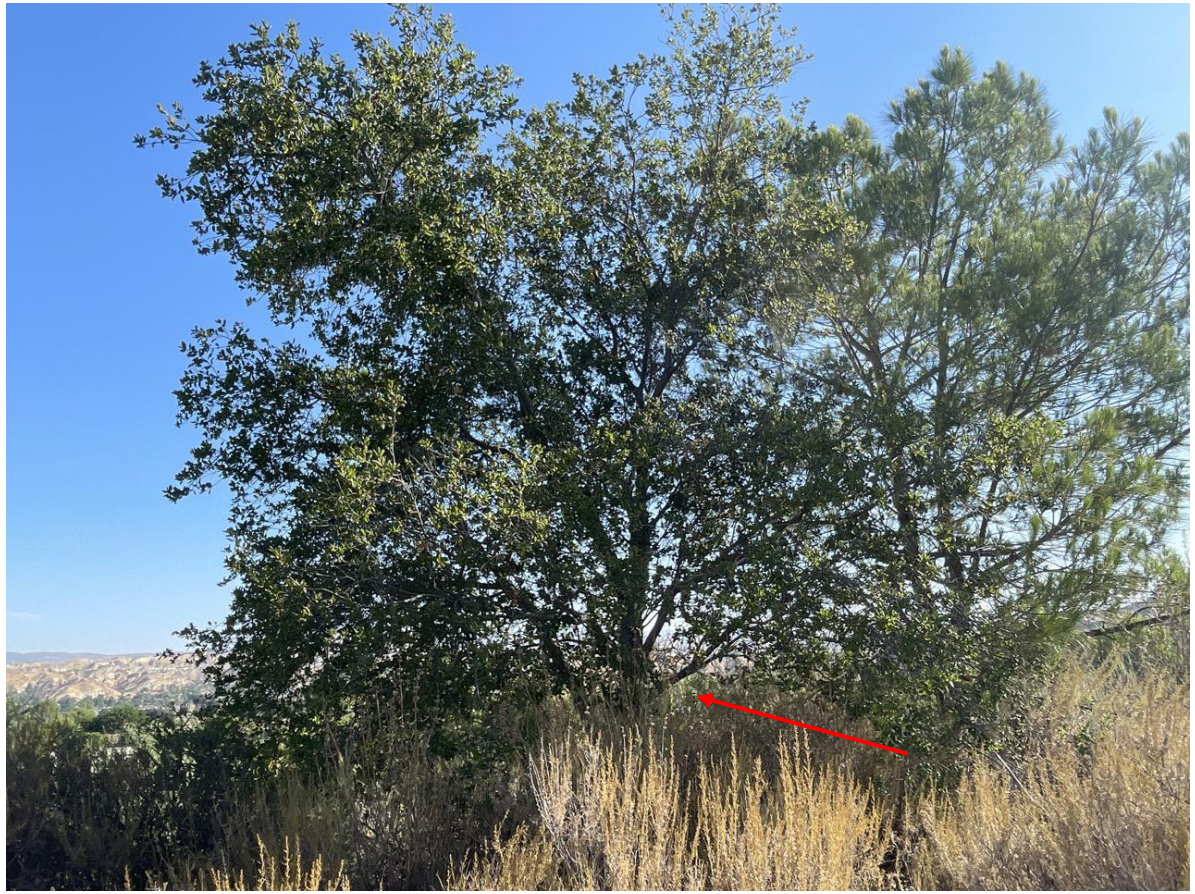
Height: 25 feet
Oak tree rating: D
Protected tree



Tree No. 528
Coast live oak
DSH: 30 inches
Height: 7 feet
Oak tree rating: F
Not protected



Tree No. 529
Coast live oak
DSH: 14, 7 inches
Height: 5 feet
Oak tree rating: F
Not protected



Tree No. 530
Coast live oak
DSH: 9, 5 inches
Height: 16 feet
Oak tree rating: A
Protected tree



Tree No. 531H
Coast live oak
DSH: 59 inches

Height: 40 feet
Oak tree rating: C
Protected tree, Heritage tree



Tree No. 532
Coast live oak
DSH: 3, 1, 1, 1, 1 inches

Height: 15 feet
Oak tree rating: C
Protected tree



Tree No. 533
Coast live oak
DSH: 11, 7, 6, 5, 3 inches

Height: 25 feet
Oak tree rating: C
Protected tree



Tree No. 534
Coast live oak
DSH: 1, 1, 1, 1, 1 inches

Height: 7 feet
Oak tree rating: B
Protected tree



Tree No. 535
Coast live oak
DSH: 9 inches

Height: 25 feet
Oak tree rating: C
Protected tree



Tree No. 536

Tree No. 536
Coast live oak
DSH: 8, 7 inches

Height: 25 feet
Oak tree rating: C
Protected tree

Appendix F
Regulated Tree Appraisal

	Trunk Formula Method																								
	Field Observations											*Regional Plant Appraisal Committee Information***							*Calculations by Appraiser using Field and Regional Information*						
	1	*2*	*3*							*4*				*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**						**Sum***	**Location**				**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**		**Site**	**Contribution**	**Placement**	**Average**		**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
1H	Quercus agrifolia	70%	58	0	0	0	0	0	58.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1805	1781.25	$191,591.25	$76,444.91	$76,400
2	Quercus agrifolia	60%	12	9	13	0	0	0	19.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	309.29		285.54	$34,541.70	$11,813.26	$11,800
3	Quercus agrifolia	40%	14	0	0	0	0	0	14.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	153.86		130.11	$18,221.55	$4,154.51	$4,150
4	Quercus agrifolia	50%	15	9	0	0	0	0	17.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	240.21		216.46	$27,288.30	$7,777.17	$7,780
5	Quercus agrifolia	50%	9	0	0	0	0	0	9.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	63.585		39.835	$8,742.68	$2,491.66	$2,490
8H	Quercus agrifolia	60%	40	0	0	0	0	0	40.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1149	1125.25	$122,711.25	$41,967.25	$42,000
10H	Quercus agrifolia	75%	40	22	22	18	0	0	53.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1645	1621.25	$174,791.25	$74,723.26	$74,700
11H	Quercus agrifolia	70%	70	0	0	0	0	0	70.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2123	2099.25	$224,981.25	$89,767.52	$89,800
12H	Quercus agrifolia	70%	90	13	4	0	0	0	91.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2447	2423.25	$259,001.25	$103,341.50	$103,300
13H	Quercus agrifolia	70%	40	28	17	0	0	0	51.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1576	1552.25	$167,546.25	$66,850.95	$66,800
14	Quercus agrifolia	60%	28	16	13	11	8	5	38.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1063	1039.25	$113,681.25	$38,878.99	$38,880
15	Quercus agrifolia	60%	15	0	0	0	0	0	15.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	176.625		152.875	$20,611.88	$7,049.26	$7,000
16	Quercus agrifolia	60%	12	7	6	5	4	2	16.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	215.09		191.34	$24,650.70	$8,430.54	$8,400
17	Quercus agrifolia	70%	24	14	10	9	12	6	34.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		882	858.25	$94,676.25	$37,775.82	$37,800
18	Quercus agrifolia	70%	20	18	18	15	11	11	42.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1233	1209.25	$131,531.25	$52,480.97	$52,500
19	Quercus agrifolia	70%	17	16	16	14	9	0	32.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		788	764.25	$84,806.25	$33,837.69	$33,800
20	Quercus agrifolia	70%	20	20	20	12	0	0	36.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		974	950.25	$104,336.25	$41,630.16	$41,600
21	Quercus agrifolia	70%	18	16	15	0	0	0	28.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	631.925		608.175	$68,418.38	$27,298.93	$27,300
22	Quercus agrifolia	70%	33	19	0	0	0	0	38.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1063	1039.25	$113,681.25	$45,358.82	$45,400
24H	Quercus agrifolia	60%	50	0	0	0	0	0	50.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1541	1517.25	$163,871.25	$56,043.97	$56,000
25H	Quercus agrifolia	70%	39	0	0	0	0	0	39.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1106	1082.25	$118,196.25	$47,160.30	$47,200
26H	Quercus agrifolia	70%	46	0	0	0	0	0	46.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1392	1368.25	$148,226.25	$59,142.27	$59,100
28H	Quercus agrifolia	60%	34	0	0	0	0	0	34.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		882	858.25	$94,676.25	$32,379.28	$32,400
29	Quercus agrifolia	20%	20	12	0	0	0	0	23.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	427.04		403.29	$46,905.45	$5,347.22	$5,300

	Trunk Formula Method																								
	Field Observations											*Regional Plant Appraisal Committee Information***							*Calculations by Appraiser using Field and Regional Information*						
	1	*2*	*3*							*4*					*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**						**Sum***	**Location**					**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**		**Site**	**Contribution**	**Placement**	**Average**			**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
30H	Quercus agrifolia	50%	40	0	0	0	0	0	40.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1149	1125.25	$122,711.25	$34,972.71	$35,000
31H	Quercus agrifolia	20%	35	0	0	0	0	0	35.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		928	904.25	$99,506.25	$11,343.71	$11,300
33H	Quercus agrifolia	50%	59	0	0	0	0	0	59.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1836	1811.815	$194,800.58	$55,518.16	$55,500
34H	Quercus agrifolia	70%	65	0	0	0	0	0	65.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2002	1978.375	$212,289.38	$84,703.46	$84,700
35H	Quercus agrifolia	60%	50	0	0	0	0	0	50.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1541	1516.75	$163,818.75	$56,026.01	$56,000
36	Quercus agrifolia	60%	30	0	0	0	0	0	30.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	706.5		682.75	$76,248.75	$26,077.07	$26,100
37H	Quercus agrifolia	50%	30	30	24	27	17	15	60.2	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1870	1845.84306	$198,373.52	$56,536.45	$56,500
38	Quercus agrifolia	60%	28	0	0	0	0	0	28.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	615.44		591.69	$66,687.45	$22,807.11	$22,800
39H	Quercus agrifolia	60%	38	0	0	0	0	0	38.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1063	1038.91	$113,645.55	$38,866.78	$38,900
40H	Quercus agrifolia	60%	45	0	0	0	0	0	45.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1353	1329.375	$144,144.38	$49,297.38	$49,300
41	Quercus agrifolia	60%	27	0	0	0	0	0	27.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	572.265		548.515	$62,154.08	$21,256.69	$21,300
43H	Quercus agrifolia	40%	55	0	0	0	0	0	55.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1711	1687.375	$181,734.38	$41,435.44	$41,400
46	Quercus agrifolia	20%	27	0	0	0	0	0	27.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	572.265		548.515	$62,154.08	$7,085.56	$7,100
47	Quercus agrifolia	60%	27	0	0	0	0	0	27.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	572.265		548.515	$62,154.08	$21,256.69	$21,300
48	Quercus agrifolia	60%	30	0	0	0	0	0	30.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	706.5		682.75	$76,248.75	$26,077.07	$26,100
49	Quercus agrifolia	50%	30	0	0	0	0	0	30.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	706.5		682.75	$76,248.75	$21,730.89	$21,700
50	Quercus agrifolia	60%	30	0	0	0	0	0	30.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	706.5		682.75	$76,248.75	$26,077.07	$26,100
51	Quercus agrifolia	60%	25	0	0	0	0	0	25.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	490.625		466.875	$53,581.88	$18,325.00	$18,300
52H	Quercus agrifolia	70%	45	0	0	0	0	0	45.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1353	1329.375	$144,144.38	$57,513.61	$57,500
53	Quercus agrifolia	60%	30	0	0	0	0	0	30.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	706.5		682.75	$76,248.75	$26,077.07	$26,100
54	Quercus agrifolia	70%	33	0	0	0	0	0	33.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		835	811.335	$89,750.18	$35,810.32	$35,800
55	Quercus agrifolia	70%	7	7	7	7	7	0	15.7	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	192.325		168.575	$22,260.38	$8,881.89	$8,900
56	Quercus agrifolia	50%	19	0	0	0	0	0	19.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	283.385		259.635	$31,821.68	$9,069.18	$9,100
57H	Quercus agrifolia	70%	35	0	0	0	0	0	35.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		928	904.375	$99,519.38	$39,708.23	$39,700

	Trunk Formula Method																									
	Field Observations											*Regional Plant Appraisal Committee Information***						*Calculations by Appraiser using Field and Regional Information*							
	1	*2*	*3*								*4*				*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	Species	Condition	Individual Trunk Diameters (inches)							Sum*	Location				Species Rating	Replacement Tree Size		Replacement Tree Cost	Installation Cost	Installed Tree Cost	Unit Tree Cost / in^2	Appraised Trunk Area		Appraised Tree Trunk Increase (in^2 TA_{INCR})	Basic Tree Cost	Appraised Value	Appraised Value (Rounded per guidelines)
			1	2	3	4	5	6	7		Site	Contribution	Placement	Average		Diameter	in^2 TA_R					in^2 TA_A	in^2 ATA_A				
58	Quercus agrifolia	20%	15	0	0	0	0	0	0	15.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	176.625		152.875	$20,611.88	$2,349.75	$2,350
59H	Quercus agrifolia	50%	38	0	0	0	0	0	0	38.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1063	1038.91	$113,645.55	$32,388.98	$32,400
60H	Quercus agrifolia	70%	43	0	0	0	0	0	0	43.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1273	1249.735	$135,782.18	$54,177.09	$54,200
61H	Quercus agrifolia	70%	30	30	30	30	20	15	14	66.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2040	2016.01364	$216,241.43	$86,280.33	$86,300
62	Quercus agrifolia	70%	12	0	0	0	0	0	0	12.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	113.04		89.29	$13,935.45	$5,560.24	$5,600
63	Quercus agrifolia	70%	14	0	0	0	0	0	0	14.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	153.86		130.11	$18,221.55	$7,270.40	$7,300
64H	Quercus agrifolia	60%	51	16	3	2	0	0	0	53.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1664	1640.366	$176,798.43	$60,465.06	$60,500
65H	Quercus agrifolia	70%	37	30	27	22	19	18	18	67.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2053	2028.89921	$217,594.42	$86,820.17	$86,800
66H	Quercus agrifolia	70%	60	0	0	0	0	0	0	60.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1865	1841.25	$197,891.25	$78,958.61	$79,000
67H	Quercus agrifolia	30%	60	0	0	0	0	0	0	60.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1865	1841.25	$197,891.25	$33,839.40	$33,800
68H	Quercus agrifolia	30%	60	0	0	0	0	0	0	60.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1865	1841.25	$197,891.25	$33,839.40	$33,800
69	Quercus agrifolia	75%	8	0	0	0	0	0	0	8.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	50.24		26.49	$7,341.45	$3,138.47	$3,140
70	Quercus agrifolia	60%	6	4	3	2	0	0	0	8.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	51.025		27.275	$7,423.88	$2,538.97	$2,540
71	Quercus agrifolia	70%	6	0	0	0	0	0	0	6.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	28.26		4.51	$5,033.55	$2,008.39	$2,010
72	Quercus agrifolia	60%	1	1	1	1	1	1	1	3.2	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$839.97	$840
73	Quercus agrifolia	60%	20	19	17	9	0	0	0	33.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		865	840.947801	$92,859.52	$31,757.96	$31,800
74	Quercus agrifolia	60%	6	6	5	5	0	0	0	11.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	95.77		72.02	$12,122.10	$4,145.76	$4,150
75	Quercus agrifolia	70%	25	0	0	0	0	0	0	25.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	490.625		466.875	$53,581.88	$21,379.17	$21,400
76	Quercus agrifolia	40%	14	13	0	0	0	0	0	19.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	286.525		262.775	$32,151.38	$7,330.51	$7,300
78	Quercus agrifolia	60%	12	4	0	0	0	0	0	12.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	125.6		101.85	$15,254.25	$5,216.95	$5,200
82	Quercus agrifolia	50%	14	14	0	0	0	0	0	19.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	307.72		283.97	$34,376.85	$9,797.40	$9,800
83H	Quercus agrifolia	60%	37	0	0	0	0	0	0	37.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1018	994.735	$109,007.18	$37,280.45	$37,300
86H	Quercus agrifolia	40%	55	0	0	0	0	0	0	55.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1711	1687.375	$181,734.38	$41,435.44	$41,400
90H	Quercus agrifolia	30%	60	0	0	0	0	0	0	60.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1865	1841.25	$197,891.25	$33,839.40	$33,800

	Trunk Formula Method																									
	Field Observations											*Regional Plant Appraisal Committee Information***							*Calculations by Appraiser using Field and Regional Information*							
	1	*2*	*3*								*4*					*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**							**Sum***	**Location**					**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**	**7**		**Site**	**Contribution**	**Placement**	**Average**			**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
91	Quercus agrifolia	70%	11	2	0	0	0	0	0	11.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	98.125		74.375	$12,369.38	$4,935.38	$4,940
92	Quercus agrifolia	70%	5	3	2	0	0	0	0	6.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	29.83		6.08	$5,198.40	$2,074.16	$2,070
94H	Quercus agrifolia	60%	65	13	11	9	0	0	0	67.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2071	2047.70069	$219,568.57	$75,092.45	$75,100
95	Quercus agrifolia	70%	2	2	1	1	0	0	0	3.2	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$749.38	$750
97H	Quercus agrifolia	60%	48	0	0	0	0	0	0	48.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1468	1443.81	$156,160.05	$53,406.74	$53,400
99H	Quercus agrifolia	70%	75	45	0	0	0	0	0	87.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2412	2387.77449	$255,276.32	$101,855.25	$101,900
101	Quercus agrifolia	30%	16	15	14	9	0	0	0	27.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	595.03		571.28	$64,544.40	$11,037.09	$11,000
102	Quercus agrifolia	70%	16	16	15	15	14	9	4	35.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		958	934.085325	$102,638.96	$40,952.94	$41,000
103	Quercus agrifolia	70%	24	17	4	6	4	0	0	30.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	732.405		708.655	$78,968.78	$31,508.54	$31,500
105H	Quercus agrifolia	70%	60	0	0	0	0	0	0	60.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1865	1841.25	$197,891.25	$78,958.61	$79,000
107H	Quercus agrifolia	40%	40	0	0	0	0	0	0	40.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1149	1125.25	$122,711.25	$27,978.17	$28,000
109H	Quercus agrifolia	40%	55	0	0	0	0	0	0	55.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1711	1687.375	$181,734.38	$41,435.44	$41,400
110	Quercus agrifolia	50%	30	0	0	0	0	0	0	30.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	706.5		682.75	$76,248.75	$21,730.89	$21,700
111H	Quercus agrifolia	50%	73	0	0	0	0	0	0	73.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2187	2162.935	$231,668.18	$66,025.43	$66,000
112	Quercus agrifolia	60%	32	8	5	4	0	0	0	33.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		835	811.25	$89,741.25	$30,691.51	$30,700
113	Quercus agrifolia	40%	32	5	2	0	0	0	0	32.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		809	785.277331	$87,014.12	$19,839.22	$19,800
114	Quercus agrifolia	75%	6	4	3	2	4	0	0	9.0	85%	85%	60%	77%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	63.585		39.835	$8,742.68	$4,524.33	$4,520
116H	Quercus agrifolia	60%	54	0	0	0	0	0	0	54.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1678	1654.59	$178,291.95	$60,975.85	$61,000
117H	Quercus agrifolia	70%	55	0	0	0	0	0	0	55.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1711	1687.375	$181,734.38	$72,512.02	$72,500
119	Quercus agrifolia	20%	30	0	0	0	0	0	0	30.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	706.5		682.75	$76,248.75	$8,692.36	$8,700
120	Quercus agrifolia	50%	30	0	0	0	0	0	0	30.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	706.5		682.75	$76,248.75	$21,730.89	$21,700
121H	Quercus agrifolia	70%	35	22	0	0	0	0	0	41.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1205	1181.60069	$128,628.07	$51,322.60	$51,300
122H	Quercus agrifolia	70%	50	35	0	0	0	0	0	61.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1895	1870.94652	$201,009.38	$80,202.74	$80,200
123H	Quercus agrifolia	70%	24	27	0	0	0	0	0	36.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		979	955.522513	$104,889.86	$41,851.06	$41,900

	Trunk Formula Method																								
	Field Observations											*Regional Plant Appraisal Committee Information***							*Calculations by Appraiser using Field and Regional Information*						
	1	*2*	*3*							*4*					*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**						**Sum***	**Location**					**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**		**Site**	**Contribution**	**Placement**	**Average**			**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
126H	Quercus agrifolia	70%	42	0	0	0	0	0	42.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1233	1208.91	$131,495.55	$52,466.72	$52,500
127H	Quercus agrifolia	70%	53	0	0	0	0	0	53.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1645	1621.135	$174,779.18	$69,736.89	$69,700
130H	Quercus agrifolia	60%	35	32	20	0	0	0	51.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1592	1568.59768	$169,262.76	$57,887.86	$57,900
131	Quercus agrifolia	50%	30	0	0	0	0	0	30.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	706.5		682.75	$76,248.75	$21,730.89	$21,700
132H	Quercus agrifolia	60%	34	30	0	0	0	0	45.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1367	1342.76934	$145,550.78	$49,778.37	$49,800
133H	Quercus agrifolia	50%	45	0	0	0	0	0	45.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1353	1329.375	$144,144.38	$41,081.15	$41,100
135H	Quercus agrifolia	70%	46	0	0	0	0	0	46.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1392	1368.19	$148,219.95	$59,139.76	$59,100
136	Quercus agrifolia	70%	19	12	0	0	0	0	22.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	396.425		372.675	$43,690.88	$17,432.66	$17,400
138	Quercus agrifolia	70%	20	16	16	12	14	0	35.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		946	921.914313	$101,361.00	$40,443.04	$40,400
139H	Quercus agrifolia	70%	25	25	25	30	14	0	54.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1695	1671.2918	$180,045.64	$71,838.21	$71,800
140	Quercus agrifolia	70%	5	5	5	5	0	0	10.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	78.5		54.75	$10,308.75	$4,113.19	$4,110
141	Quercus john-tuckeri	70%	3	3	3	3	3	2	8.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	51.025		27.275	$7,423.88	$2,962.13	$2,960
142	Quercus john-tuckeri	60%	5	5	4	3	4	0	9.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	71.435		47.685	$9,566.93	$3,271.89	$3,270
143	Quercus john-tuckeri	60%	7	5	0	0	0	0	8.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	58.09		34.34	$8,165.70	$2,792.67	$2,790
144	Quercus agrifolia	75%	20	15	14	12	9	0	32.3	85%	85%	60%	77%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		804	780.135282	$86,474.20	$44,750.40	$44,800
145H	Quercus agrifolia	70%	45	27	5	0	0	0	52.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1635	1611.51914	$173,769.51	$69,334.03	$69,300
146H	Quercus agrifolia	70%	27	34	16	0	0	0	46.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1402	1378.59123	$149,312.08	$59,575.52	$59,600
147	Quercus agrifolia	70%	32	0	0	0	0	0	32.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		788	763.81	$84,760.05	$33,819.26	$33,800
148H	Quercus agrifolia	70%	37	0	0	0	0	0	37.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1018	994.735	$109,007.18	$43,493.86	$43,500
149H	Quercus agrifolia	60%	55	37	0	0	0	0	66.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2035	2010.96668	$215,711.50	$73,773.33	$73,800
151	Quercus agrifolia	60%	18	0	0	0	0	0	18.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	254.34		230.59	$28,771.95	$9,840.01	$9,800
152	Quercus agrifolia	60%	17	16	0	0	0	0	23.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	427.825		404.075	$46,987.88	$16,069.85	$16,100
153	Quercus agrifolia	50%	18	0	0	0	0	0	18.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	254.34		230.59	$28,771.95	$8,200.01	$8,200
154	Quercus john-tuckeri	60%	4	4	4	4	4	3	11.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	98.125		74.375	$12,369.38	$4,230.33	$4,230

	Trunk Formula Method																									
	Field Observations													*Regional Plant Appraisal Committee Information***							*Calculations by Appraiser using Field and Regional Information*				
	1	*2*	*3*								*4*				*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	Species	Condition	Individual Trunk Diameters (inches)							Sum*	Location				Species Rating	Replacement Tree Size		Replacement Tree Cost	Installation Cost	Installed Tree Cost	Unit Tree Cost / in^2	Appraised Trunk Area		Appraised Tree Trunk Increase (in^2 TA_{INCR})	Basic Tree Cost	Appraised Value	Appraised Value (Rounded per guidelines)
			1	2	3	4	5	6	7		Site	Contribution	Placement	Average		Diameter	in^2 TA_R					in^2 TA_A	in^2 ATA_A				
155	Quercus john-tuckeri	70%	6	4	4	3	3	2	0	9.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	70.65		46.9	$9,484.50	$3,784.32	$3,780
156	Quercus john-tuckeri	60%	3	3	3	3	3	3	3	9.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	63.585		39.835	$8,742.68	$2,989.99	$2,990
157	Quercus agrifolia	75%	26	0	0	0	0	0	0	26.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	530.66		506.91	$57,785.55	$24,703.32	$24,700
158	Quercus agrifolia	60%	27	17	0	0	0	0	0	31.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		783	759.31358	$84,287.93	$28,826.47	$28,800
159H	Quercus agrifolia	20%	54	0	0	0	0	0	0	54.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1678	1654.59	$178,291.95	$20,325.28	$20,300
160H	Quercus agrifolia	70%	55	0	0	0	0	0	0	55.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1711	1687.375	$181,734.38	$72,512.02	$72,500
161	Quercus agrifolia	70%	14	14	0	0	0	0	0	19.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	307.72		283.97	$34,376.85	$13,716.36	$13,700
162	Quercus agrifolia	70%	2	2	2	0	0	0	0	3.5	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$749.38	$750
163	Quercus agrifolia	70%	9	9	0	0	0	0	0	12.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	127.17		103.42	$15,419.10	$6,152.22	$6,200
164H	Quercus agrifolia	20%	55	35	0	0	0	0	0	65.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2007	1983.30727	$212,807.26	$24,260.03	$24,300
165	Quercus agrifolia	70%	2	2	2	0	0	0	0	3.5	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$749.38	$750
166	Quercus agrifolia	70%	6	6	4	4	4	3	3	11.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	108.33		84.58	$13,440.90	$5,362.92	$5,400
167	Quercus agrifolia	60%	7	4	0	0	0	0	0	8.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	51.025		27.275	$7,423.88	$2,538.97	$2,540
168H	Quercus agrifolia	70%	70	0	0	0	0	0	0	70.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2123	2098.75	$224,928.75	$89,746.57	$89,700
169H	Quercus agrifolia	70%	70	0	0	0	0	0	0	70.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2123	2098.75	$224,928.75	$89,746.57	$89,700
170H	Quercus agrifolia	70%	70	0	0	0	0	0	0	70.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		2123	2098.75	$224,928.75	$89,746.57	$89,700
171H	Quercus agrifolia	80%	44	0	0	0	0	0	0	44.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1314	1289.89	$139,998.45	$63,839.29	$63,800
172H	Quercus agrifolia	60%	45	15	0	0	0	0	0	47.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1446	1422.68763	$153,942.20	$52,648.23	$52,600
173H	Quercus agrifolia	70%	55	2	2	0	0	0	0	55.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1713	1689.73167	$181,981.83	$72,610.75	$72,600
174	Quercus john-tuckeri	60%	4	2	0	0	0	0	0	4.5	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$2,753.29	$2,750
175	Quercus john-tuckeri	60%	4	4	3	3	3	0	0	7.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	46.315		22.565	$6,929.33	$2,369.83	$2,370
176	Quercus john-tuckeri	70%	4	3	3	0	0	0	0	5.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	26.69		2.94	$4,868.70	$1,942.61	$1,940

	Trunk Formula Method																								
	Field Observations											*Regional Plant Appraisal Committee Information***							*Calculations by Appraiser using Field and Regional Information*						
	1	*2*	*3*							*4*				*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**						**Sum***	**Location**				**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**		**Site**	**Contribution**	**Placement**	**Average**		**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
177	Quercus john-tuckeri	60%	4	2	2	1	1	1	5.3	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$3,710.23	$3,710
178	Quercus john-tuckeri	60%	12	1	1	1	1	1	12.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	120.105		96.355	$14,677.28	$5,019.63	$5,000
179	Quercus john-tuckeri	50%	12	12	10	9	6	3	24.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	481.205		457.455	$52,592.78	$14,988.94	$15,000
181	Quercus john-tuckeri	70%	15	13	7	0	0	0	21.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	347.755		324.005	$38,580.53	$15,393.63	$15,400
182	Quercus john-tuckeri	50%	5	3	3	3	4	0	8.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	53.38		29.63	$7,671.15	$2,186.28	$2,190
183	Quercus john-tuckeri	70%	13	6	11	8	5	2	20.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	332.84		309.09	$37,014.45	$14,768.77	$14,800
184	Quercus john-tuckeri	50%	6	3	0	0	0	0	6.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	35.325		11.575	$5,775.38	$1,645.98	$1,650
185	Quercus john-tuckeri	50%	14	4	4	0	0	0	15.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	178.98		155.23	$20,859.15	$5,944.86	$5,900
186	Quercus john-tuckeri	50%	11	9	7	4	5	0	17.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	229.22		205.47	$26,134.35	$7,448.29	$7,400
187	Quercus john-tuckeri	60%	12	4	4	5	1	1	14.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	159.355		135.605	$18,798.53	$6,429.10	$6,400
188	Quercus john-tuckeri	50%	15	7	4	3	0	0	17.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	234.715		210.965	$26,711.33	$7,612.73	$7,600
189	Quercus john-tuckeri	50%	11	6	4	3	1	1	14.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	155.43		131.68	$18,386.40	$5,240.12	$5,200
190	Quercus john-tuckeri	60%	6	6	3	3	4	0	10.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	83.21		59.46	$10,803.30	$3,694.73	$3,690
192	Quercus john-tuckeri	60%	12	7	7	0	0	0	15.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	189.97		166.22	$22,013.10	$7,528.48	$7,500
193	Quercus john-tuckeri	60%	2	2	2	2	0	0	4.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$2,354.67	$2,350
194	Quercus john-tuckeri	60%	12	9	0	0	0	0	15.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	176.625		152.875	$20,611.88	$7,049.26	$7,000
195	Quercus john-tuckeri	50%	3	0	0	0	0	0	3.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$1,525.37	$1,530
196	Quercus john-tuckeri	40%	3	0	0	0	0	0	3.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$1,514.50	$1,510
197	Quercus john-tuckeri	40%	3	3	2	3	3	0	6.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	31.4		7.65	$5,363.25	$1,222.82	$1,220
198	Quercus john-tuckeri	40%	3	3	3	3	3	3	7.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	49.455		25.705	$7,259.03	$1,655.06	$1,660
199	Quercus john-tuckeri	40%	8	6	4	4	5	5	14.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	157		133.25	$18,551.25	$4,229.69	$4,230
200	Quercus john-tuckeri	70%	7	8	4	2	3	0	11.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	111.47		87.72	$13,770.60	$5,494.47	$5,500

	Trunk Formula Method																								
	Field Observations											*Regional Plant Appraisal Committee Information***							*Calculations by Appraiser using Field and Regional Information*						
	1	*2*	*3*							*4*					*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**							**Sum***	**Location**				**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**	**7**		**Site**	**Contribution**	**Placement**	**Average**		**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
201	Quercus john-tuckeri	50%	6	3	3	3	0	0	0	7.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	49.455		25.705	$7,259.03	$2,068.82	$2,070
203	Quercus john-tuckeri	50%	7	4	0	0	0	0	0	8.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	51.025		27.275	$7,423.88	$2,115.80	$2,120
204	Quercus john-tuckeri	40%	3	0	0	0	0	0	0	3.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$1,514.50	$1,510
205	Quercus john-tuckeri	60%	15	12	10	5	2	2	0	22.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	394.07		370.32	$43,443.60	$14,857.71	$14,900
206	Quercus john-tuckeri	60%	15	15	14	6	5	0	0	26.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	554.995		531.245	$60,340.73	$20,636.53	$20,600
207	Quercus john-tuckeri	20%	5	4	4	4	3	3	3	10.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	85.565		61.815	$11,050.58	$1,259.77	$1,260
209	Quercus john-tuckeri	70%	5	2	2	3	1	0	0	6.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	33.755		10.005	$5,610.53	$2,238.60	$2,240
210	Quercus john-tuckeri	70%	1	1	1	1	1	1	1	3.2	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$1,697.08	$1,700
211	Quercus john-tuckeri	40%	15	9	2	3	1	0	0	17.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	251.2		227.45	$28,442.25	$6,484.83	$6,500
212A	Quercus john-tuckeri	40%	9	9	5	0	0	0	0	13.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	146.795		123.045	$17,479.73	$3,985.38	$3,990
212B	Quercus john-tuckeri	50%	9	7	2	8	0	0	0	14.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	155.43		131.68	$18,386.40	$5,240.12	$5,200
213	Quercus john-tuckeri	40%	14	9	6	6	5	4	3	20.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	320.28		296.53	$35,695.65	$8,138.61	$8,100
214	Quercus john-tuckeri	50%	9	5	5	5	4	4	4	15.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	185.26		161.51	$21,518.55	$6,132.79	$6,100
215	Quercus john-tuckeri	20%	4	3	3	3	3	0	0	7.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	40.82		17.07	$6,352.35	$724.17	$720
216	Quercus john-tuckeri	60%	8	6	6	5	2	0	0	12.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	129.525		105.775	$15,666.38	$5,357.90	$5,400
217	Quercus john-tuckeri	50%	3	3	3	3	3	2	2	8.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	51.025		27.275	$7,423.88	$2,115.80	$2,120
218	Quercus john-tuckeri	60%	2	2	2	2	2	2	0	4.9	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$3,203.00	$3,200
219	Quercus john-tuckeri	40%	2	2	2	2	2	2	0	4.9	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$3,166.24	$3,170
220	Quercus john-tuckeri	40%	8	8	6	2	3	1	0	13.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	139.73		115.98	$16,737.90	$3,816.24	$3,820
221	Quercus john-tuckeri	60%	4	4	3	2	1	1	0	6.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	36.895		13.145	$5,940.23	$2,031.56	$2,030
222	Quercus john-tuckeri	40%	5	5	5	5	0	0	0	10.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	78.5		54.75	$10,308.75	$2,350.40	$2,350
223	Quercus john-tuckeri	40%	6	3	4	4	2	0	0	9.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	63.585		39.835	$8,742.68	$1,993.33	$1,990

	Trunk Formula Method																								
	Field Observations											*Regional Plant Appraisal Committee Information***							*Calculations by Appraiser using Field and Regional Information*					
	1	*2*	*3*							*4*				*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**						**Sum***	**Location**				**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**		**Site**	**Contribution**	**Placement**	**Average**		**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
224	Quercus john-tuckeri	40%	4	2	4	1	1	1	6.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	30.615		6.865	$5,280.83	$1,204.03	$1,200
225	Quercus john-tuckeri	60%	4	4	2	2	2	2	6.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	37.68		13.93	$6,022.65	$2,059.75	$2,060
226	Quercus john-tuckeri	40%	6	6	5	2	1	1	10.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	80.855		57.105	$10,556.03	$2,406.77	$2,410
227	Quercus john-tuckeri	60%	5	5	2	1	1	0	7.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	43.96		20.21	$6,682.05	$2,285.26	$2,290
228	Quercus john-tuckeri	60%	5	1	0	0	0	0	5.1	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$3,449.82	$3,450
229	Quercus john-tuckeri	50%	12	9	5	0	0	0	15.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	196.25		172.5	$22,672.50	$6,461.66	$6,500
230	Quercus john-tuckeri	50%	7	4	2	0	0	0	8.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	54.165		30.415	$7,753.58	$2,209.77	$2,210
232	Quercus john-tuckeri	60%	9	9	5	6	3	0	15.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	182.12		158.37	$21,188.85	$7,246.59	$7,200
233	Quercus john-tuckeri	40%	7	0	0	0	0	0	7.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	38.465		14.715	$6,105.08	$1,391.96	$1,390
234	Quercus john-tuckeri	60%	2	2	2	0	0	0	3.5	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$1,985.89	$1,990
235	Quercus john-tuckeri	50%	6	6	5	4	4	3	11.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	108.33		84.58	$13,440.90	$3,830.66	$3,830
236	Quercus john-tuckeri	40%	6	6	3	0	0	0	9.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	63.585		39.835	$8,742.68	$1,993.33	$1,990
237	Quercus john-tuckeri	20%	6	5	4	4	5	3	11.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	99.695		75.945	$12,534.23	$1,428.90	$1,430
238	Quercus john-tuckeri	40%	5	3	3	3	3	3	8.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	54.95		31.2	$7,836.00	$1,786.61	$1,790
239	Quercus john-tuckeri	20%	4	0	0	0	0	0	4.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$2,296.43	$2,300
240	Quercus john-tuckeri	60%	8	1	1	1	1	1	8.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	61.23		37.48	$8,495.40	$2,905.43	$2,910
241	Quercus john-tuckeri	50%	7	7	3	0	0	0	10.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	83.995		60.245	$10,885.73	$3,102.43	$3,100
242	Quercus john-tuckeri	40%	2	1	1	0	0	0	2.4	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$1,130.58	$1,130
243	Quercus john-tuckeri	40%	15	8	0	0	0	0	17.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	226.865		203.115	$25,887.08	$5,902.25	$5,900
246	Quercus john-tuckeri	40%	5	5	3	3	3	1	8.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	62.8		39.05	$8,660.25	$1,974.54	$1,970
247	Quercus john-tuckeri	40%	4	4	3	3	2	2	7.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	45.53		21.78	$6,846.90	$1,561.09	$1,560
248	Quercus john-tuckeri	60%	7	6	6	6	4	4	16.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	203.315		179.565	$23,414.33	$8,007.70	$8,000

	Trunk Formula Method																								
	Field Observations											*Regional Plant Appraisal Committee Information***						*Calculations by Appraiser using Field and Regional Information*						
	1	*2*	*3*								*4*				*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**							**Sum***	**Location**				**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**	**7**		**Site**	**Contribution**	**Placement**	**Average**		**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
249	Quercus john-tuckeri	40%	11	6	7	3	0	0	0	14.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	168.775		145.025	$19,787.63	$4,511.58	$4,510
250	Quercus john-tuckeri	40%	10	3	0	0	0	0	0	10.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	85.565		61.815	$11,050.58	$2,519.53	$2,520
251	Quercus john-tuckeri	40%	3	3	1	1	1	0	0	4.6	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$2,937.48	$2,940
252	Quercus john-tuckeri	60%	9	9	9	0	0	0	0	15.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	190.755		167.005	$22,095.53	$7,556.67	$7,600
253	Quercus john-tuckeri	60%	11	11	0	0	0	0	0	15.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	189.97		166.22	$22,013.10	$7,528.48	$7,500
254	Quercus john-tuckeri	60%	4	0	0	0	0	0	0	4.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$2,354.67	$2,350
255	Quercus john-tuckeri	20%	4	0	0	0	0	0	0	4.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$2,296.43	$2,300
256	Quercus john-tuckeri	60%	5	1	1	1	1	1	0	5.5	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$3,983.45	$3,980
257	Quercus john-tuckeri	40%	8	11	9	10	5	0	0	19.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	306.935		283.185	$34,294.43	$7,819.13	$7,800
258	Quercus john-tuckeri	60%	9	9	8	9	5	0	0	18.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	260.62		236.87	$29,431.35	$10,065.52	$10,100
259	Quercus john-tuckeri	50%	7	5	0	0	0	0	0	8.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	58.09		34.34	$8,165.70	$2,327.22	$2,330
260	Quercus john-tuckeri	50%	6	2	0	0	0	0	0	6.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	31.4		7.65	$5,363.25	$1,528.53	$1,530
262	Quercus agrifolia	70%	12	0	0	0	0	0	0	12.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	113.04		89.29	$13,935.45	$5,560.24	$5,600
263	Quercus agrifolia	70%	4							4.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$642.33	$640
264	Quercus john-tuckeri	40%	13	7	5	0	0	0	0	15.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	190.755		167.005	$22,095.53	$5,037.78	$5,000
265	Quercus john-tuckeri	40%	15	7	6	0	0	0	0	17.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	243.35		219.6	$27,618.00	$6,296.90	$6,300
266	Quercus john-tuckeri	40%	2	2	2	2	0	0	0	4.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$2,325.55	$2,330
267	Quercus john-tuckeri	40%	7	5	4	4	4	0	0	11.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	95.77		72.02	$12,122.10	$2,763.84	$2,760
268	Quercus john-tuckeri	50%	10	10	10	9	5	5	5	22.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	384.65		360.9	$42,454.50	$12,099.53	$12,100
269	Quercus john-tuckeri	50%	4	3	1	1	1	0	0	5.3	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$3,689.52	$3,690
270	Quercus john-tuckeri	70%	16	11	7	0	0	0	0	20.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	334.41		310.66	$37,179.30	$14,834.54	$14,800

	Trunk Formula Method																								
	Field Observations											*Regional Plant Appraisal Committee Information***						*Calculations by Appraiser using Field and Regional Information*						
	1	*2*	*3*							*4*				*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**						**Sum***	**Location**				**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**		**Site**	**Contribution**	**Placement**	**Average**		**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
271	Quercus john-tuckeri	70%	10	9	7	3	5	0	16.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	207.24		183.49	$23,826.45	$9,506.75	$9,500
272	Quercus john-tuckeri	70%	15	12	10	6	6	5	24.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	476.495		452.745	$52,098.23	$20,787.19	$20,800
273	Quercus john-tuckeri	60%	7	7	6	5	4	4	14.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	171.13		147.38	$20,034.90	$6,851.94	$6,900
275	Quercus john-tuckeri	60%	1	1	1	1	1	0	2.2	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$1,033.10	$1,030
281	Quercus john-tuckeri	60%	1	1	1	1	1	0	2.2	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$1,033.10	$1,030
282	Quercus john-tuckeri	60%	1	1	1	1	0	0	2.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$925.87	$930
283	Quercus john-tuckeri	60%	4	3	1	1	1	0	5.3	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$3,710.23	$3,710
284	Quercus john-tuckeri	60%	2	2	2	2	2	0	4.5	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$2,753.29	$2,750
285	Quercus john-tuckeri	40%	11	9	4	0	0	0	14.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	171.13		147.38	$20,034.90	$4,567.96	$4,570
286	Quercus john-tuckeri	50%	9	5	3	4	3	4	12.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	122.46		98.71	$14,924.55	$4,253.50	$4,250
287	Quercus john-tuckeri	50%	9	0	0	0	0	0	9.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	63.585		39.835	$8,742.68	$2,491.66	$2,490
288	Quercus john-tuckeri	50%	14	14	8	0	0	0	21.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	357.96		334.21	$39,652.05	$11,300.83	$11,300
289	Quercus john-tuckeri	60%	8	0	0	0	0	0	8.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	50.24		26.49	$7,341.45	$2,510.78	$2,510
290	Quercus john-tuckeri	60%	11	12	9	0	0	0	18.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	271.61		247.86	$30,585.30	$10,460.17	$10,500
291	Quercus john-tuckeri	40%	5	0	0	0	0	0	5.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$3,410.78	$3,410
292	Quercus john-tuckeri	40%	7	3	3	0	0	0	8.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	52.595		28.845	$7,588.73	$1,730.23	$1,730
293	Quercus john-tuckeri	60%	12	6	5	5	0	0	15.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	180.55		156.8	$21,024.00	$7,190.21	$7,200
294	Quercus john-tuckeri	40%	6	6	4	0	0	0	9.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	69.08		45.33	$9,319.65	$2,124.88	$2,120
295	Quercus john-tuckeri	60%	5	5	5	0	0	0	8.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	58.875		35.125	$8,248.13	$2,820.86	$2,820
296	Quercus john-tuckeri	50%	10	5	5	0	0	0	12.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	117.75		94	$14,430.00	$4,112.55	$4,110
297	Quercus john-tuckeri	50%	7	7	7	7	0	0	14.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	153.86		130.11	$18,221.55	$5,193.14	$5,200

	Trunk Formula Method																									
	Field Observations											*Regional Plant Appraisal Committee Information***							*Calculations by Appraiser using Field and Regional Information*							
	1	*2*	*3*								*4*					*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**							**Sum***	**Location**					**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**	**7**		**Site**	**Contribution**	**Placement**	**Average**			**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
298	Quercus john-tuckeri	60%	5	5	0	0	0	0	0	7.1	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	39.25		15.5	$6,187.50	$2,116.13	$2,120
299	Quercus john-tuckeri	60%	7	6	3	0	0	0	0	9.7	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	73.79		50.04	$9,814.20	$3,356.46	$3,360
300	Quercus john-tuckeri	50%	8	6	4	5	3	0	0	12.2	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	117.75		94	$14,430.00	$4,112.55	$4,110
301	Quercus john-tuckeri	60%	8	5	3	3	0	0	0	10.3	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	83.995		60.245	$10,885.73	$3,722.92	$3,720
302	Quercus john-tuckeri	60%	10	6	0	0	0	0	0	11.7	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	106.76		83.01	$13,276.05	$4,540.41	$4,540
303	Quercus john-tuckeri	50%	5	0	0	0	0	0	0	5.0	65%	65%	60%	63%		90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$3,430.30	$3,430
304	Quercus john-tuckeri	40%	5	2	0	0	0	0	0	5.4	65%	65%	60%	63%		90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$3,939.68	$3,940
305	Quercus john-tuckeri	50%	5	5	5	5	7	6	5	15.7	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	193.11		169.36	$22,342.80	$6,367.70	$6,400
306	Quercus john-tuckeri	70%	11	9	9	7	0	0	0	18.2	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	260.62		236.87	$29,431.35	$11,743.11	$11,700
307	Quercus john-tuckeri	50%	13	6	3	1	1	1	1	15.2	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	181.335		157.585	$21,106.43	$6,015.33	$6,000
308	Quercus john-tuckeri	60%	6	6	6	0	0	0	0	10.4	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	84.78		61.03	$10,968.15	$3,751.11	$3,750
309	Quercus john-tuckeri	60%	8	7	5	5	5	5	4	18.4	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	266.9		243.15	$30,090.75	$10,291.04	$10,300
310	Quercus john-tuckeri	60%	12	9	4	4	0	0	0	16.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	201.745		177.995	$23,249.48	$7,951.32	$8,000
311	Quercus john-tuckeri	50%	11	10	10	9	7	6	6	23.6	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	437.245		413.495	$47,976.98	$13,673.44	$13,700
312	Quercus john-tuckeri	50%	9	7	7	6	6	6	6	19.8	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	308.505		284.755	$34,459.28	$9,820.89	$9,800
313	Quercus john-tuckeri	70%	7	6	7	7	7	0	0	15.2	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	182.12		158.37	$21,188.85	$8,454.35	$8,500
314	Quercus john-tuckeri	70%	3	3	2	2	2	0	0	5.5	65%	65%	60%	63%		90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$4,005.33	$4,010
315	Quercus john-tuckeri	70%	3	3	3	3	2	2	2	7.2	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	40.82		17.07	$6,352.35	$2,534.59	$2,530
316H	Quercus agrifolia	60%	35	20	17	0	0	0	0	43.7	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1304	1279.8855	$138,947.98	$47,520.21	$47,500
317	Quercus agrifolia	70%	20	0	0	0	0	0	0	20.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	314		290.25	$35,036.25	$13,979.46	$14,000
318	Quercus john-tuckeri	60%	14	6	13	0	0	0	0	20.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	314.785		291.035	$35,118.68	$12,010.59	$12,000
319H	Quercus agrifolia	70%	30	31	26	20	0	0	0	54.2	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1685	1661.00583	$178,965.61	$71,407.28	$71,400
320	Quercus john-tuckeri	60%	12	0	0	0	0	0	0	12.0	65%	65%	60%	63%		90%	5.5	23.75	$2,520	$2,040	$4,560	$105	113.04		89.29	$13,935.45	$4,765.92	$4,770

	Trunk Formula Method																								
	Field Observations											*Regional Plant Appraisal Committee Information***							*Calculations by Appraiser using Field and Regional Information*					
	1	*2*	*3*							*4*				*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**						**Sum***	**Location**				**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**		**Site**	**Contribution**	**Placement**	**Average**		**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
321	Quercus john-tuckeri	50%	12	6	6	7	12	5	3	21.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	347.755		324.005	$38,580.53	$10,995.45	$11,000
322	Quercus john-tuckeri	50%	12	12	3	4	6	0	0	18.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	273.965		250.215	$30,832.58	$8,787.28	$8,800
323	Quercus john-tuckeri	50%	9	8	8	3	7	3	3	16.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	223.725		199.975	$25,557.38	$7,283.85	$7,300
324	Quercus john-tuckeri	60%	8	7	1	1	0	0	0	10.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	90.275		66.525	$11,545.13	$3,948.43	$3,950
325	Quercus john-tuckeri	60%	10	7	9	7	6	6	5	21.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	354.035		330.285	$39,239.93	$13,420.05	$13,400
326	Quercus john-tuckeri	50%	6	6	0	0	0	0	0	8.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	56.52		32.77	$8,000.85	$2,280.24	$2,280
327	Quercus john-tuckeri	50%	3	3	3	2	2	2	0	6.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	30.615		6.865	$5,280.83	$1,505.04	$1,510
328	Quercus john-tuckeri	50%	8	8	8	7	4	4	3	17.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	235.5		211.75	$26,793.75	$7,636.22	$7,600
329	Quercus john-tuckeri	60%	9	6	7	5	5	0	0	14.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	169.56		145.81	$19,870.05	$6,795.56	$6,800
331	Quercus john-tuckeri	40%	5	0	0	0	0	0	0	5.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$3,410.78	$3,410
332	Quercus john-tuckeri	40%	6	4	5	4	2	0	0	9.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	76.145		52.395	$10,061.48	$2,294.02	$2,290
333	Quercus john-tuckeri	50%	5	5	5	4	4	4	3	11.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	110.685		86.935	$13,688.18	$3,901.13	$3,900
334	Quercus john-tuckeri	50%	8	6	9	8	5	3	8	18.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	269.255		245.505	$30,338.03	$8,646.34	$8,600
335	Quercus john-tuckeri	50%	2	0	0	0	0	0	0	2.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$917.72	$920
336	Quercus john-tuckeri	60%	5	4	3	3	2	2	2	9.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	65.155		41.405	$8,907.53	$3,046.37	$3,050
338	Quercus john-tuckeri	60%	2	1	0	0	0	0	0	2.2	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$1,033.10	$1,030
339	Quercus john-tuckeri	60%	5	5	5	5	2	1	0	10.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	82.425		58.675	$10,720.88	$3,666.54	$3,670
340	Quercus john-tuckeri	40%	4	2	0	0	0	0	0	4.5	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$2,720.60	$2,720
341	Quercus john-tuckeri	20%	13	9	4	4	4	4	4	18.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	271.61		247.86	$30,585.30	$3,486.72	$3,490
342	Quercus john-tuckeri	40%	14	10	12	12	0	0	0	24.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	458.44		434.69	$50,202.45	$11,446.16	$11,400
344	Quercus john-tuckeri	40%	4	4	3	3	3	0	0	7.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	46.315		22.565	$6,929.33	$1,579.89	$1,580
345	Quercus john-tuckeri	50%	5	5	2	0	0	0	0	7.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	42.39		18.64	$6,517.20	$1,857.40	$1,860

	Trunk Formula Method																								
	Field Observations											*Regional Plant Appraisal Committee Information***						*Calculations by Appraiser using Field and Regional Information*						
	1	*2*	*3*								*4*				*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	Species	Condition	Individual Trunk Diameters (inches)							Sum*	Location				Species Rating	Replacement Tree Size		Replacement Tree Cost	Installation Cost	Installed Tree Cost	Unit Tree Cost / in^2	Appraised Trunk Area		Appraised Tree Trunk Increase (in^2 TA_{INCR})	Basic Tree Cost	Appraised Value	Appraised Value (Rounded per guidelines)
			1	2	3	4	5	6	7		Site	Contribution	Placement	Average		Diameter	in^2 TA_R					in^2 TA_A	in^2 ATA_A				
347	Quercus john-tuckeri	40%	3	3	2	3	0	0	0	5.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	24.335		0.585	$4,621.43	$1,053.68	$1,050
348	Quercus john-tuckeri	40%	12	4	4	4	0	0	0	13.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	150.72		126.97	$17,891.85	$4,079.34	$4,080
349	Quercus john-tuckeri	50%	13	13	13	0	0	0	0	22.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	397.995		374.245	$43,855.73	$12,498.88	$12,500
350	Quercus john-tuckeri	60%	8	7	2	2	2	2	1	11.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	104.405		80.655	$13,028.78	$4,455.84	$4,460
351	Quercus john-tuckeri	60%	4	4	4	3	3	3	0	8.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	58.875		35.125	$8,248.13	$2,820.86	$2,820
353	Quercus john-tuckeri	50%	6	5	5	5	4	0	0	11.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	99.695		75.945	$12,534.23	$3,572.25	$3,570
354	Quercus john-tuckeri	60%	7	7	7	6	5	5	5	16.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	202.53		178.78	$23,331.90	$7,979.51	$8,000
355	Quercus john-tuckeri	70%	11	7	5	4	0	0	0	14.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	165.635		141.885	$19,457.93	$7,763.71	$7,800
356	Quercus john-tuckeri	50%	10	6	7	4	6	0	0	15.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	186.045		162.295	$21,600.98	$6,156.28	$6,200
357	Quercus john-tuckeri	40%	5	4	0	0	0	0	0	6.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	32.185		8.435	$5,445.68	$1,241.61	$1,240
358	Quercus john-tuckeri	60%	8	7	5	4	9	7	0	16.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	222.94		199.19	$25,474.95	$8,712.43	$8,700
359	Quercus john-tuckeri	60%	8	8	9	8	5	4	5	18.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	266.115		242.365	$30,008.33	$10,262.85	$10,300
360	Quercus john-tuckeri	60%	8	6	5	5	0	0	0	12.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	117.75		94	$14,430.00	$4,935.06	$4,940
361	Quercus john-tuckeri	60%	2	0	0	0	0	0	0	2.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$925.87	$930
363	Quercus john-tuckeri	50%	5	5	5	4	3	0	0	10.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	78.5		54.75	$10,308.75	$2,937.99	$2,940
364	Quercus john-tuckeri	60%	4	4	4	3	3	0	0	8.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	51.81		28.06	$7,506.30	$2,567.15	$2,570
365	Quercus john-tuckeri	70%	14	15	14	12	7	9	0	29.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	699.435		675.685	$75,506.93	$30,127.26	$30,100
366	Quercus john-tuckeri	70%	14	8	8	8	0	0	0	19.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	304.58		280.83	$34,047.15	$13,584.81	$13,600
367	Quercus john-tuckeri	60%	11	4	6	8	0	0	0	15.4	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	186.045		162.295	$21,600.98	$7,387.53	$7,400
368	Quercus john-tuckeri	60%	6	4	0	0	0	0	0	7.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	40.82		17.07	$6,352.35	$2,172.50	$2,170
370	Quercus john-tuckeri	60%	8	8	6	3	3	3	3	15.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	178.195		154.445	$20,776.73	$7,105.64	$7,100
371	Quercus john-tuckeri	60%	15	16	12	0	0	0	0	25.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	490.625		466.875	$53,581.88	$18,325.00	$18,300
372	Quercus john-tuckeri	60%	8	6	5	7	3	3	0	13.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	150.72		126.97	$17,891.85	$6,119.01	$6,100
373H	Quercus agrifolia	70%	36	0	0	0	0	0	0	36.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		974	949.89	$104,298.45	$41,615.08	$41,600

	Trunk Formula Method																									
	Field Observations													*Regional Plant Appraisal Committee Information***							*Calculations by Appraiser using Field and Regional Information*				
	1	*2*	*3*							*4*				*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**						**Sum***	**Location**				**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**		**Site**	**Contribution**	**Placement**	**Average**		**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
374H	Quercus agrifolia	40%	40	40	0	0	0	0	56.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1761	1737.44999	$186,992.25	$42,634.23	$42,600
375H	Quercus agrifolia	40%	35	0	0	0	0	0	35.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		928	904.375	$99,519.38	$22,690.42	$22,700
376	Quercus john-tuckeri	70%	5	5	4	4	4	4	10.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	89.49		65.74	$11,462.70	$4,573.62	$4,570
377	Quercus john-tuckeri	60%	12	0	0	0	0	0	12.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	113.04		89.29	$13,935.45	$4,765.92	$4,770
378	Quercus john-tuckeri	70%	17	7	7	3	3	3	20.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	324.99		301.24	$36,190.20	$14,439.89	$14,400
379	Quercus john-tuckeri	70%	9	7	7	7	7	7	20.8	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	340.69		316.94	$37,838.70	$15,097.64	$15,100
380	Quercus john-tuckeri	60%	4	1	1	1	1	0	4.5	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$2,746.33	$2,750
381H	Quercus agrifolia	70%	51	0	0	0	0	0	51.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1576	1552.215	$167,542.58	$66,849.49	$66,800
382	Quercus john-tuckeri	70%	15	9	9	8	0	0	21.2	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	354.035		330.285	$39,239.93	$15,656.73	$15,700
383	Quercus john-tuckeri	70%	6	5	5	5	0	0	10.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	87.135		63.385	$11,215.43	$4,474.95	$4,470
506	Quercus john-tuckeri	60%	4	4	2	0	0	0	6.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	28.26		4.51	$5,033.55	$1,721.47	$1,720
507	Quercus john-tuckeri	40%	5	3	3	3	3	2	8.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	51.025		27.275	$7,423.88	$1,692.64	$1,690
508	Quercus john-tuckeri	60%	10	6	4	4	2	3	13.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	142.085		118.335	$16,985.18	$5,808.93	$5,800
510	Quercus john-tuckeri	60%	5	3	1	0	0	0	5.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	27.475		3.725	$4,951.13	$1,693.28	$1,690
511	Quercus john-tuckeri	70%	6	4	2	0	0	0	7.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	43.96		20.21	$6,682.05	$2,666.14	$2,670
512	Quercus john-tuckeri	60%	10	10	10	8	7	0	20.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	324.205		300.455	$36,107.78	$12,348.86	$12,300
513	Quercus john-tuckeri	60%	7	0	0	0	0	0	7.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	38.465		14.715	$6,105.08	$2,087.94	$2,090
514	Quercus john-tuckeri	40%	4	3	1	0	0	0	5.1	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$3,410.78	$3,410
515H	Quercus agrifolia	40%	44	12	7	6	0	0	46.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1392	1368.25	$148,226.25	$33,795.59	$33,800
516H	Quercus agrifolia	70%	24	22	21	11	0	0	40.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1161	1136.87244	$123,931.61	$49,448.71	$49,400
517	Quercus agrifolia	60%	17	0	0	0	0	0	17.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	226.865		203.115	$25,887.08	$8,853.38	$8,900
518	Quercus agrifolia	75%	11	6	0	0	0	0	12.5	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	123.245		99.495	$15,006.98	$6,415.48	$6,400
519	Quercus agrifolia	70%	4	4	0	0	0	0	5.7	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	25.12		1.37	$4,703.85	$1,876.84	$1,880

	Trunk Formula Method																								
	Field Observations											*Regional Plant Appraisal Committee Information***						*Calculations by Appraiser using Field and Regional Information*						
	1	*2*	*3*							*4*				*5*	*6*		*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14.00*	15
Tree Number	**Species**	**Condition**	**Individual Trunk Diameters (inches)**						**Sum***	**Location**				**Species Rating**	**Replacement Tree Size**		**Replacement Tree Cost**	**Installation Cost**	**Installed Tree Cost**	**Unit Tree Cost / in^2**	**Appraised Trunk Area**		**Appraised Tree Trunk Increase (in^2 TA_{INCR})**	**Basic Tree Cost**	**Appraised Value**	**Appraised Value (Rounded per guidelines)**
			1	**2**	**3**	**4**	**5**	**6**		**Site**	**Contribution**	**Placement**	**Average**		**Diameter**	**in^2 TA_R**					**in^2 TA_A**	**in^2 ATA_A**				
520	Quercus agrifolia	70%	7	5	3	2	0	0	9.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	68.295		44.545	$9,237.23	$3,685.65	$3,690
521	Quercus agrifolia	70%	10	10	0	0	0	0	14.1	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	157		133.25	$18,551.25	$7,401.95	$7,400
522	Quercus agrifolia	60%	8	4	3	3	0	0	9.9	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	76.93		53.18	$10,143.90	$3,469.21	$3,470
523	Quercus agrifolia	70%	1	1	1	1	0	0	2.0	65%	65%	60%	63%	90%	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	See RCM Appraisal	RCM + Cost to Parity (See Below)	RCM + Cost to Parity (See Below)	$220.52	$220
524	Quercus chrysolepis	80%	6	0	0	0	0	0	6.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	28.26		4.51	$5,033.55	$2,295.30	$2,300
527	Quercus agrifolia	20%	17	0	0	0	0	0	17.0	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	226.865		203.115	$25,887.08	$2,951.13	$2,950
530	Quercus agrifolia	70%	9	5	0	0	0	0	10.3	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	83.21		59.46	$10,803.30	$4,310.52	$4,310
531H	Quercus agrifolia	60%	59	0	0	0	0	0	59.0	65%	65%	75%	68%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105		1836	1812.25	$194,846.25	$71,898.27	$71,900
532	Quercus agrifolia	60%	3	1	1	1	1	0	3.6	65%	65%	60%	63%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	10.205		-13.545	$3,137.78	$1,073.12	$1,070
533	Quercus agrifolia	75%	11	7	6	5	3	0	15.5	65%	65%	75%	68%	90%	5.5	23.75	$2,520	$2,041	$4,561	$106	188.4		164.65	$22,013.90	$220.52	$220
534	Quercus chrysolepis	60%	1	1	1	1	0	0	2.0	75%	65%	60%	67%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	3.14		-20.61	$2,395.95	$862.54	$860
535	Quercus agrifolia	60%	9	0	0	0	0	0	9.0	65%	65%	75%	68%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	63.585		39.835	$8,742.68	$3,226.05	$3,230
536	Quercus	60%	8	7	0	0	0	0	10.6	65%	65%	75%	68%	90%	5.5	23.75	$2,520	$2,040	$4,560	$105	88.705		64.955	$11,380.28	$4,199.32	$4,200

*

**Costs associated with Replacement Tree Costs, Installation Cost, and Unit Tree Costs are based on the 2004 Species Classification Guide and Group Assignment "A Regional Suppliment to the CTLA Guide for Plant Appraisal, 9th Edition" and accounts for the costs of inflation between 2004 and 2024 using the U.S. Bureau of Labor Statistics Consumer Price Index.

Appendix G
Removal Photograph Log



Tree No. 10H
To be removed
Appraised at $74,700



Tree No. 69
To be removed
Appraised at $3,140



Tree No. 114
To be removed
Appraised at $3,740



Tree No. 144
To be removed
Appraised at $36,300



Tree No. 166
To be removed
Appraised at $5,400



Tree No. 167
To be removed
Appraised at $2,540



Tree No. 171H
To be removed
Appraised at $63,800



Tree No. 221
To be removed
Appraised at $2,030



Tree No. 382
To be removed
Appraised at $15,700



Tree No. 383
To be removed
Appraised at $4,470



Tree No. 515H
To be removed
Appraised at $33,800



Tree No. 536
To be Removed
Appraised at $4,200



Tree No. 532
To be Removed
Appraised at $1,070



Tree No. 533
To be Removed
Appraised at $220



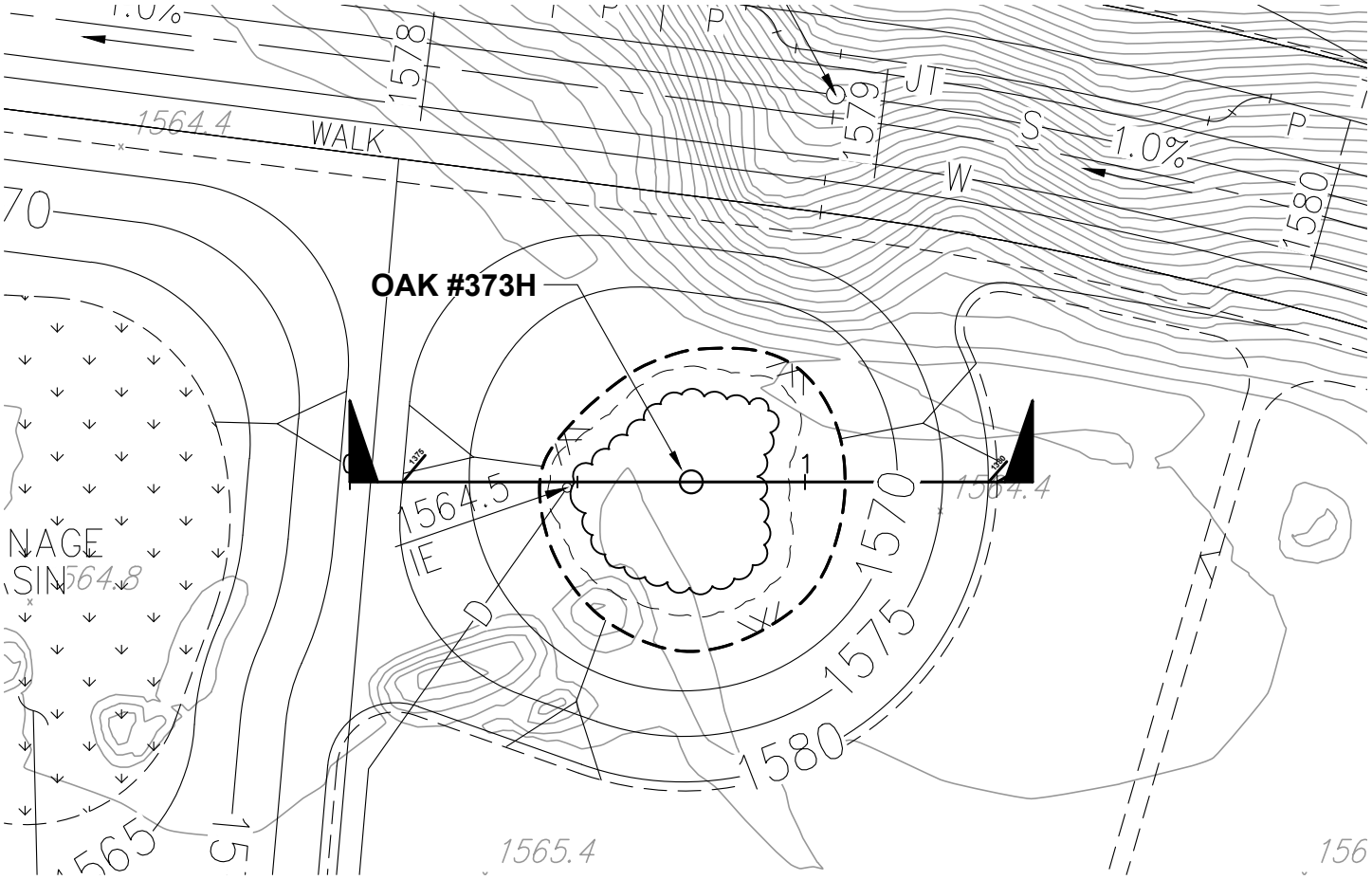
Tree No. 534
To be Removed
Appraised at $860

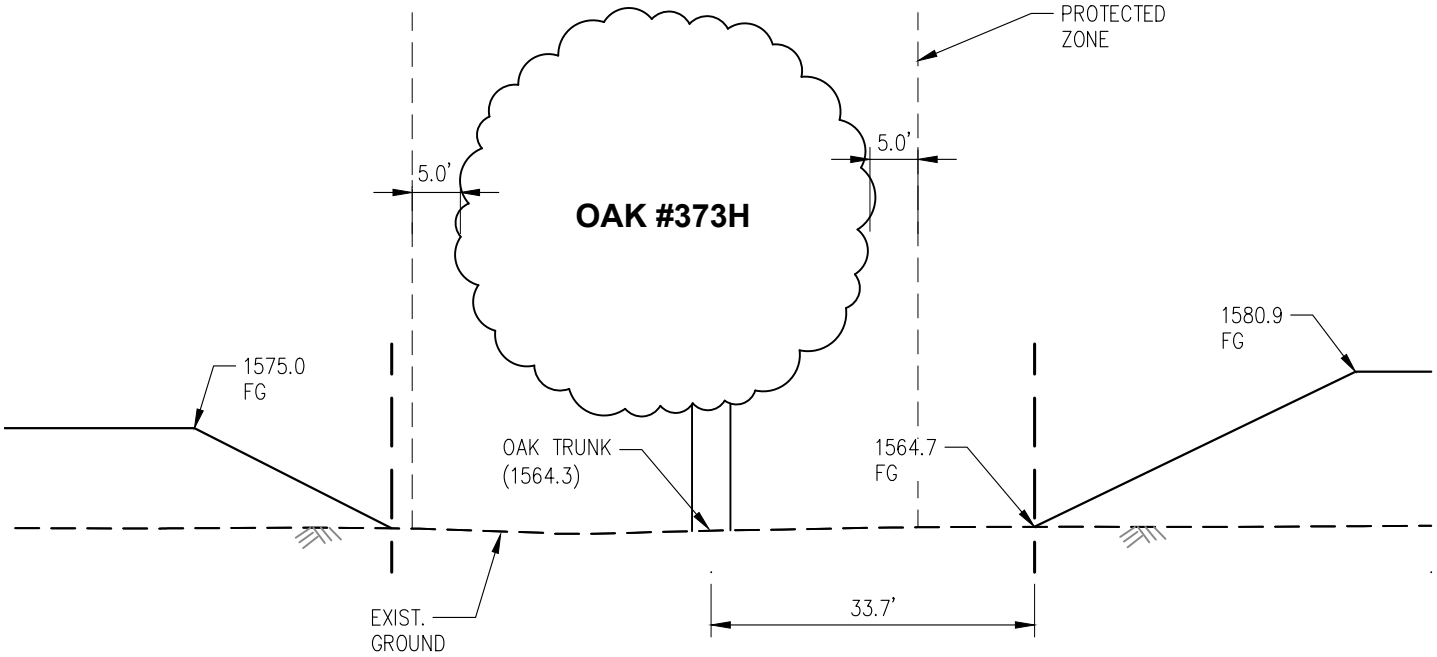


Tree No. 535
To be Removed
Appraised at $3,230

Appendix H

Major Encroachment Cross Sections

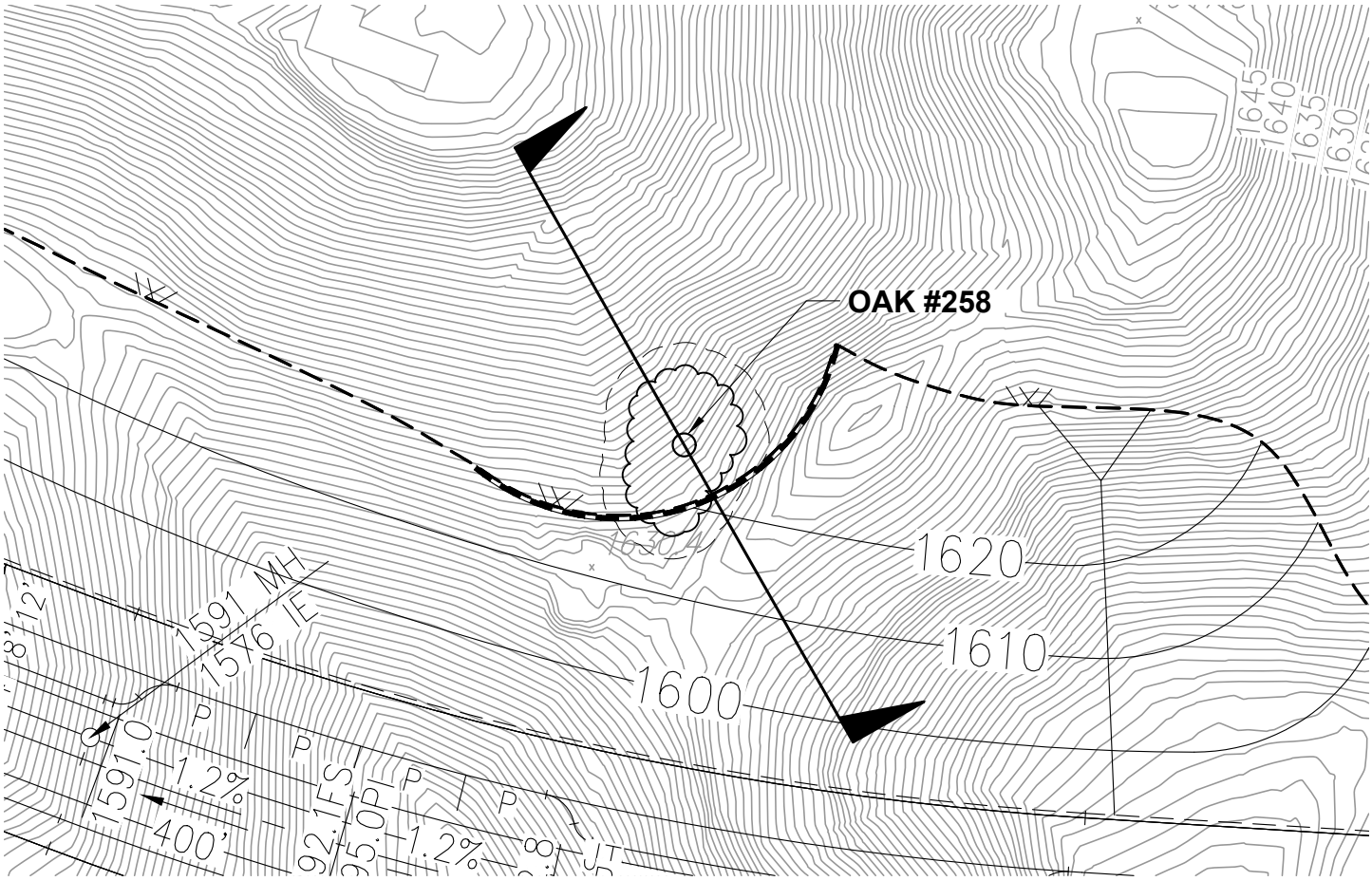


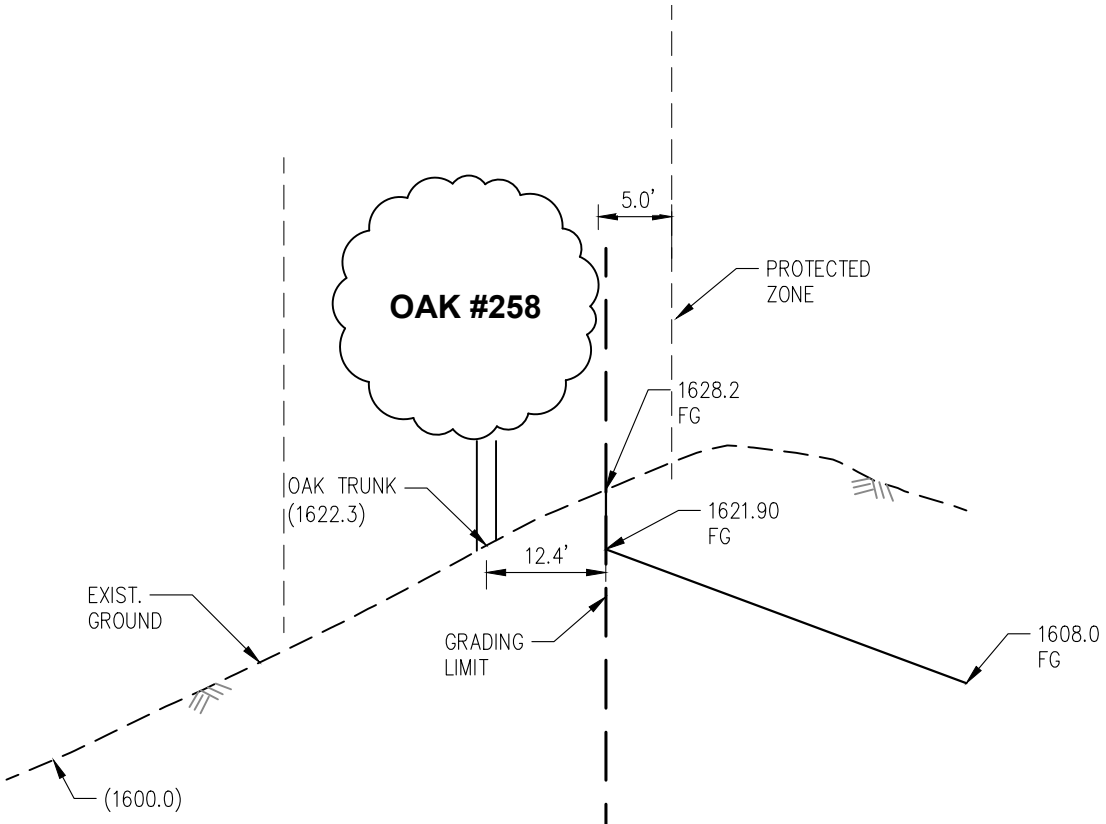


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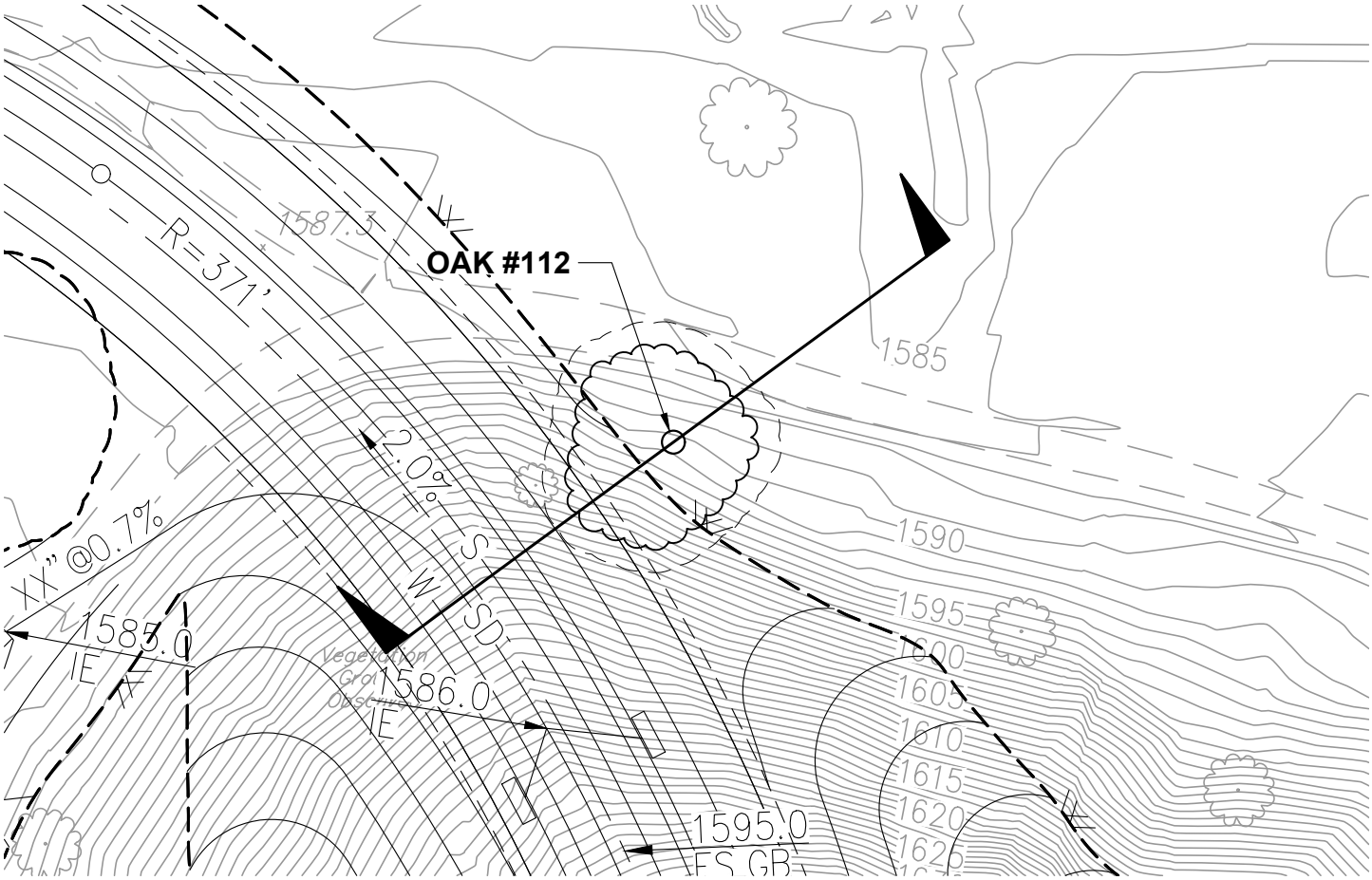


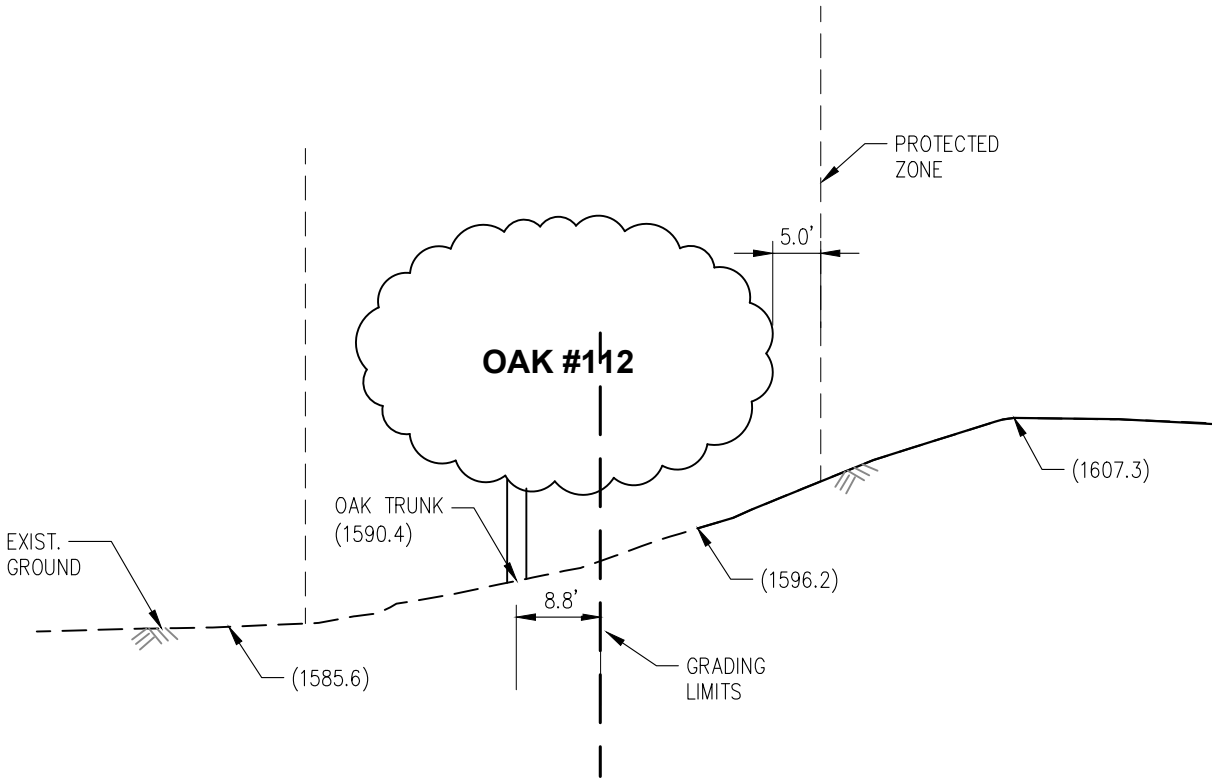


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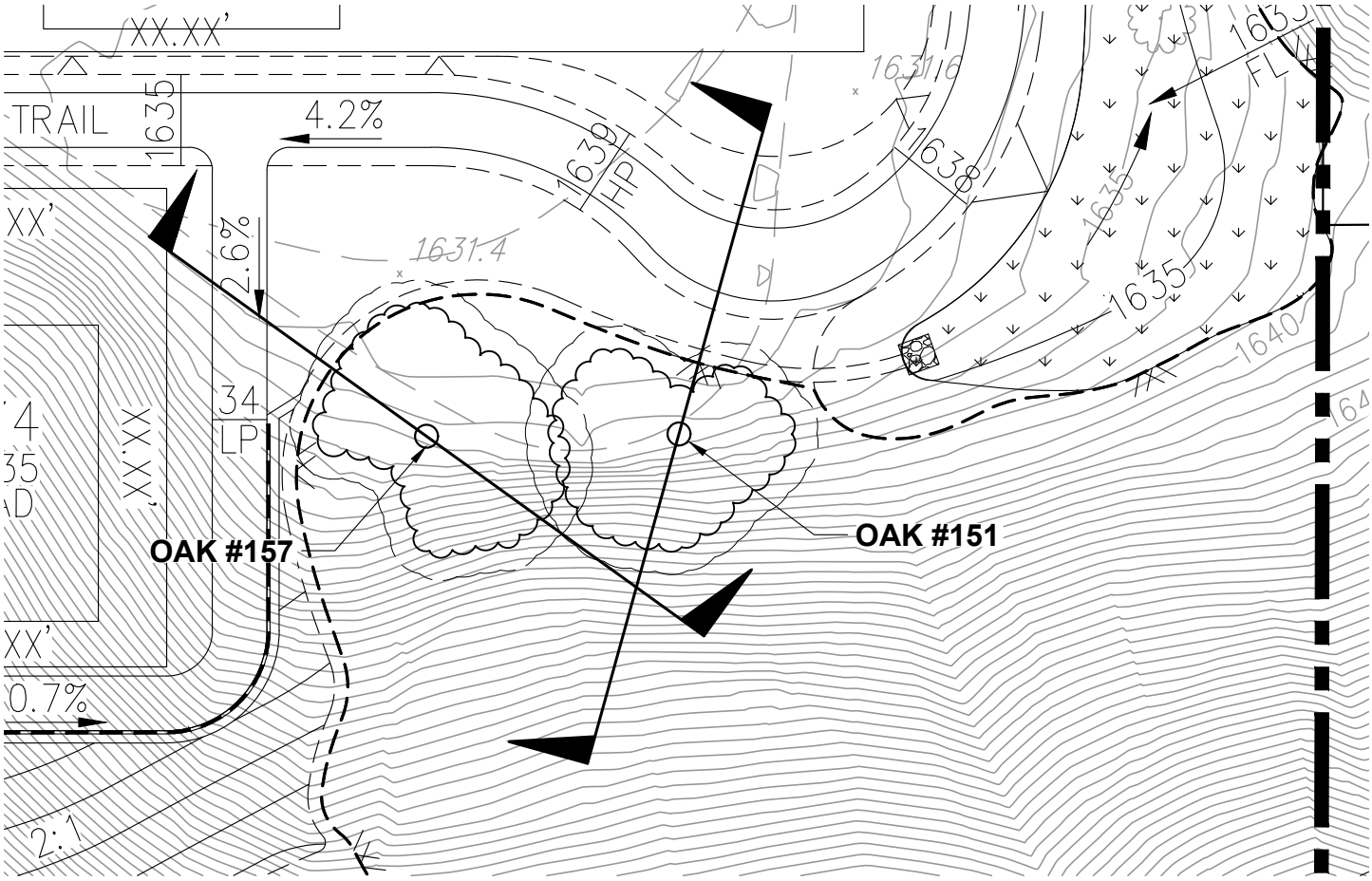


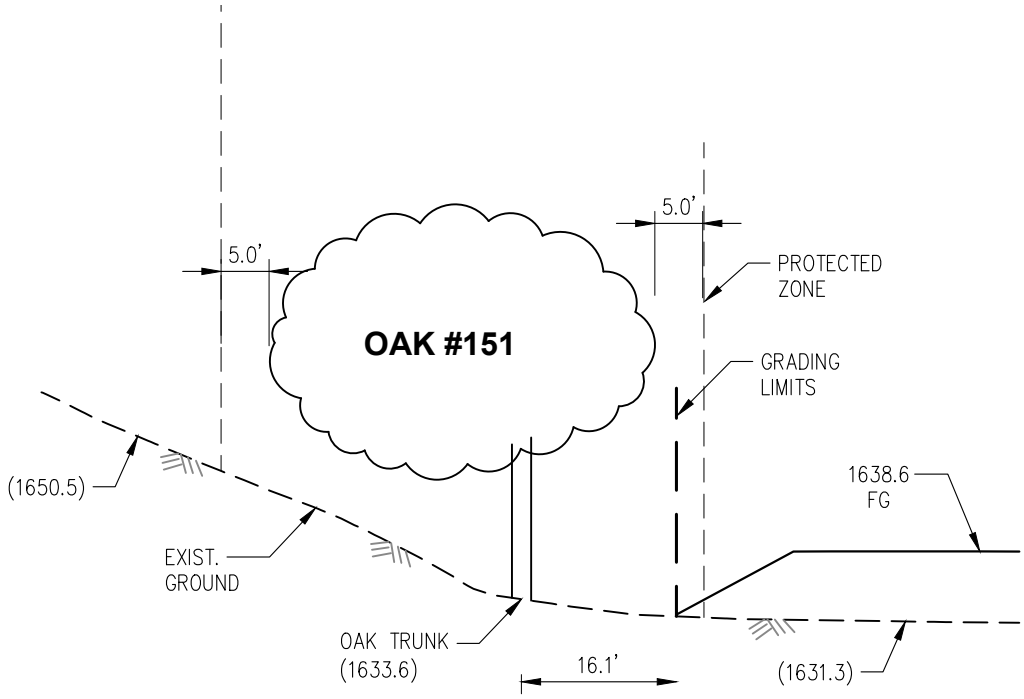


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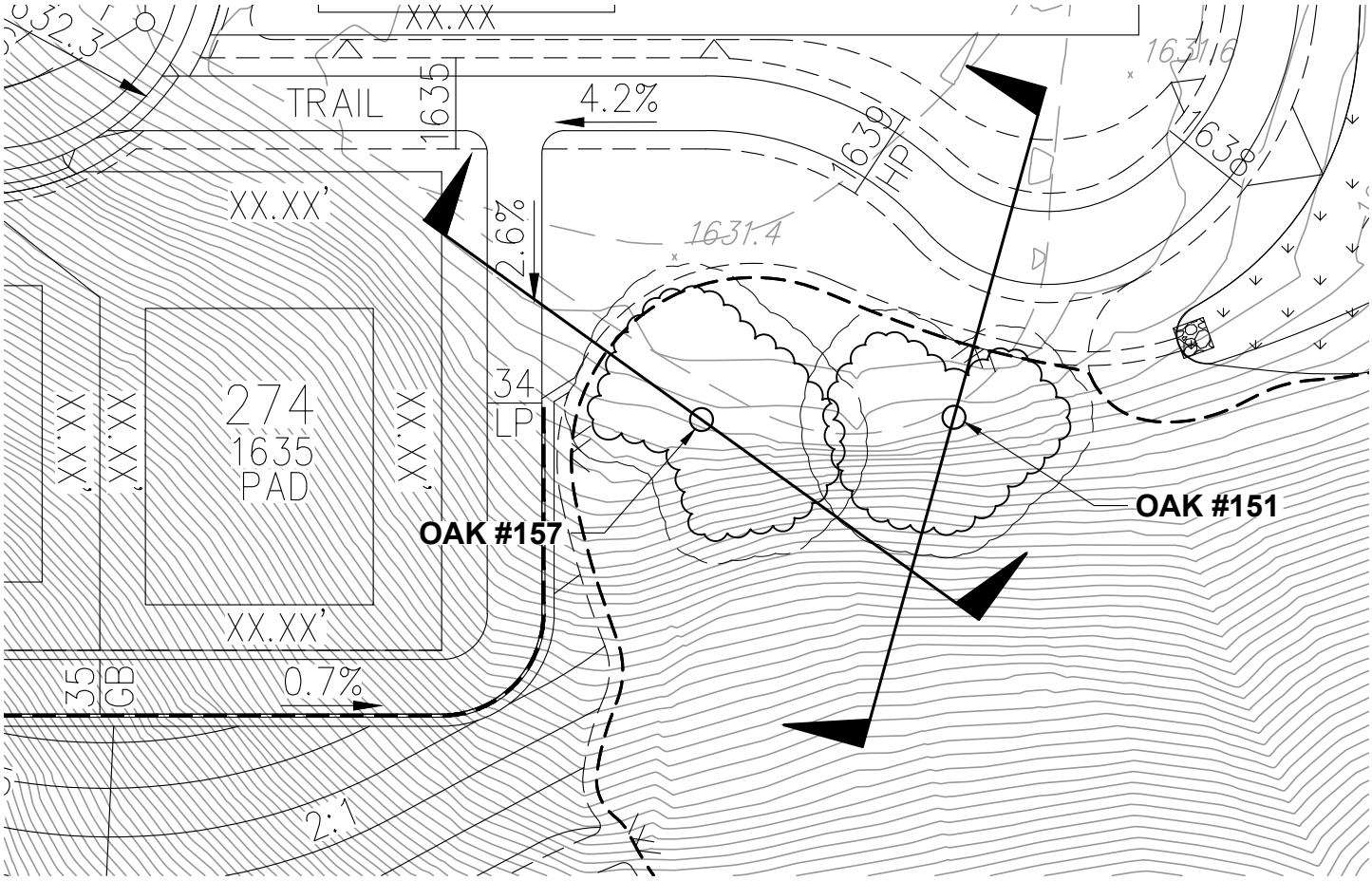


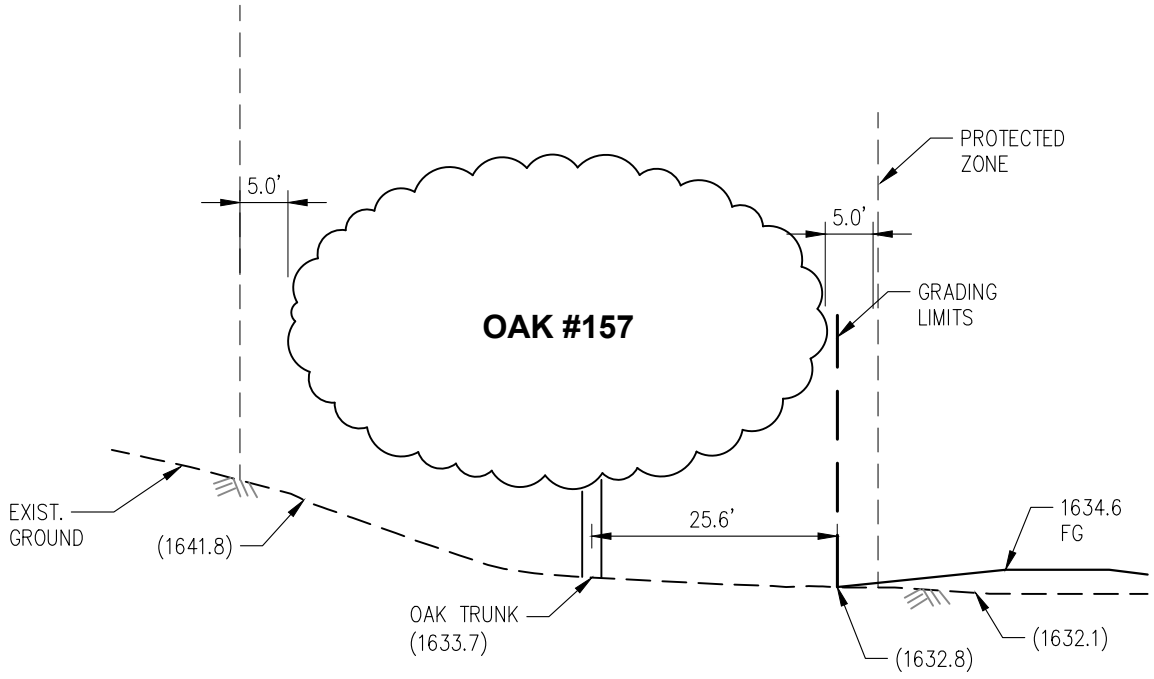


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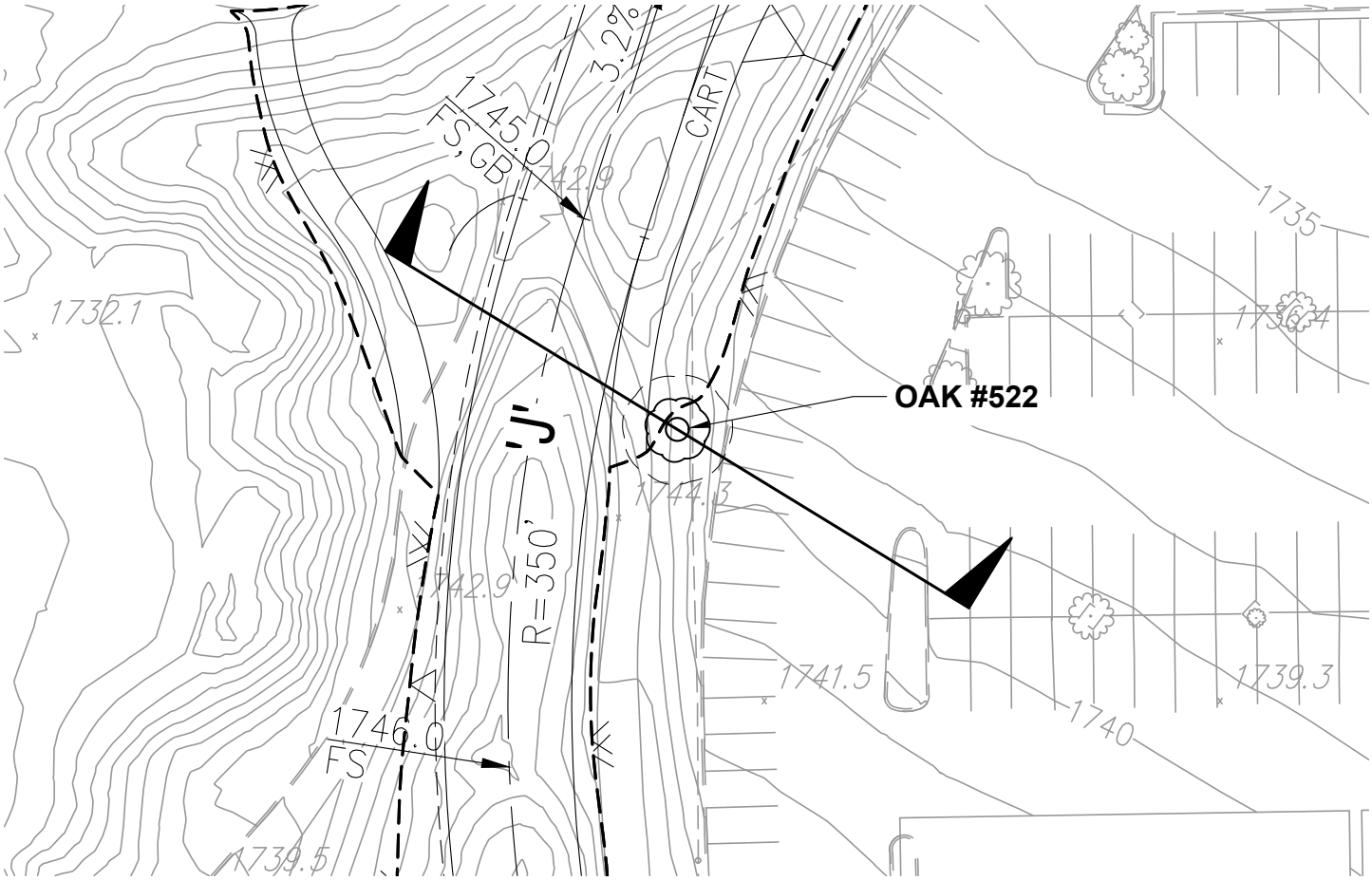


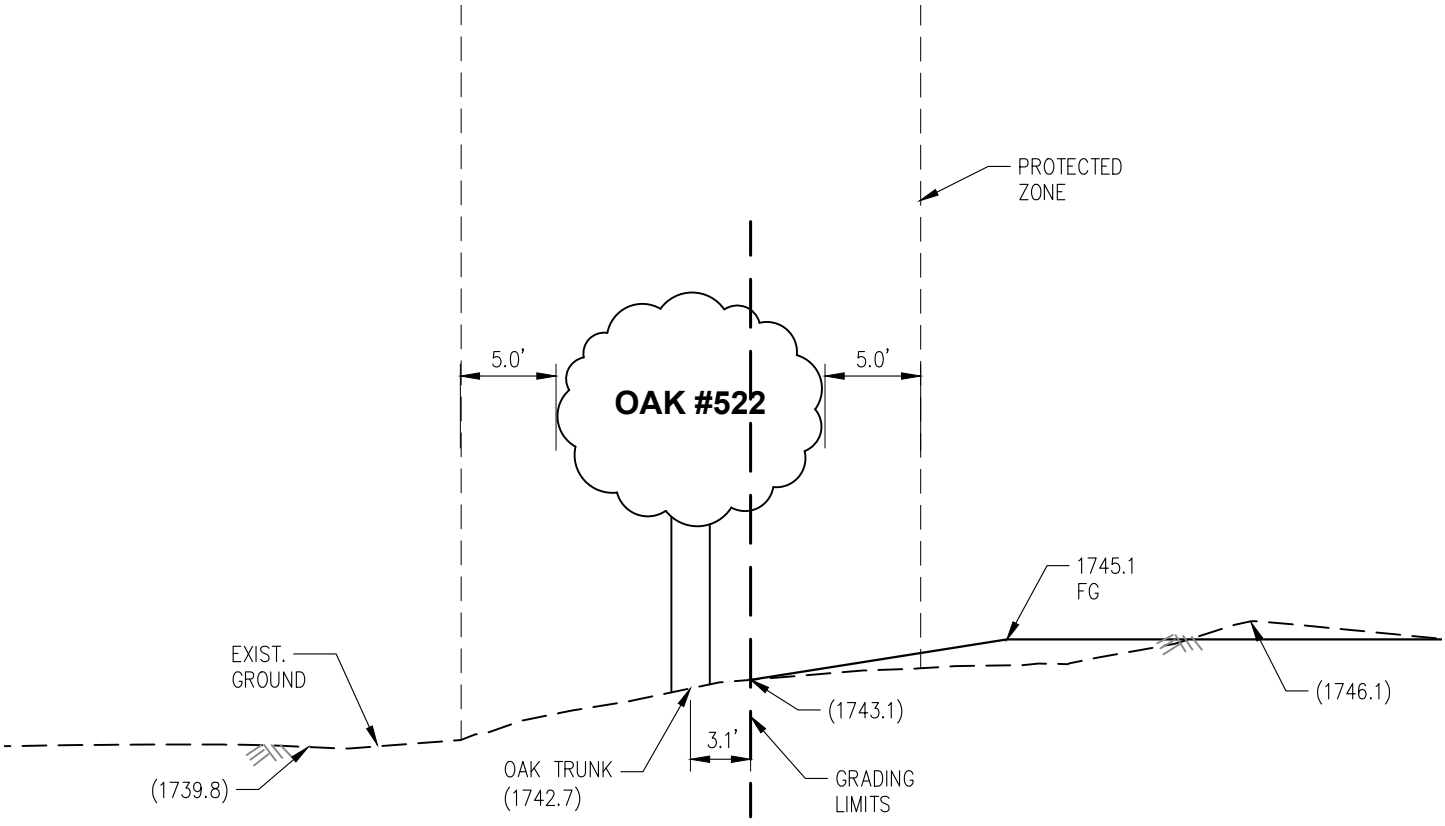


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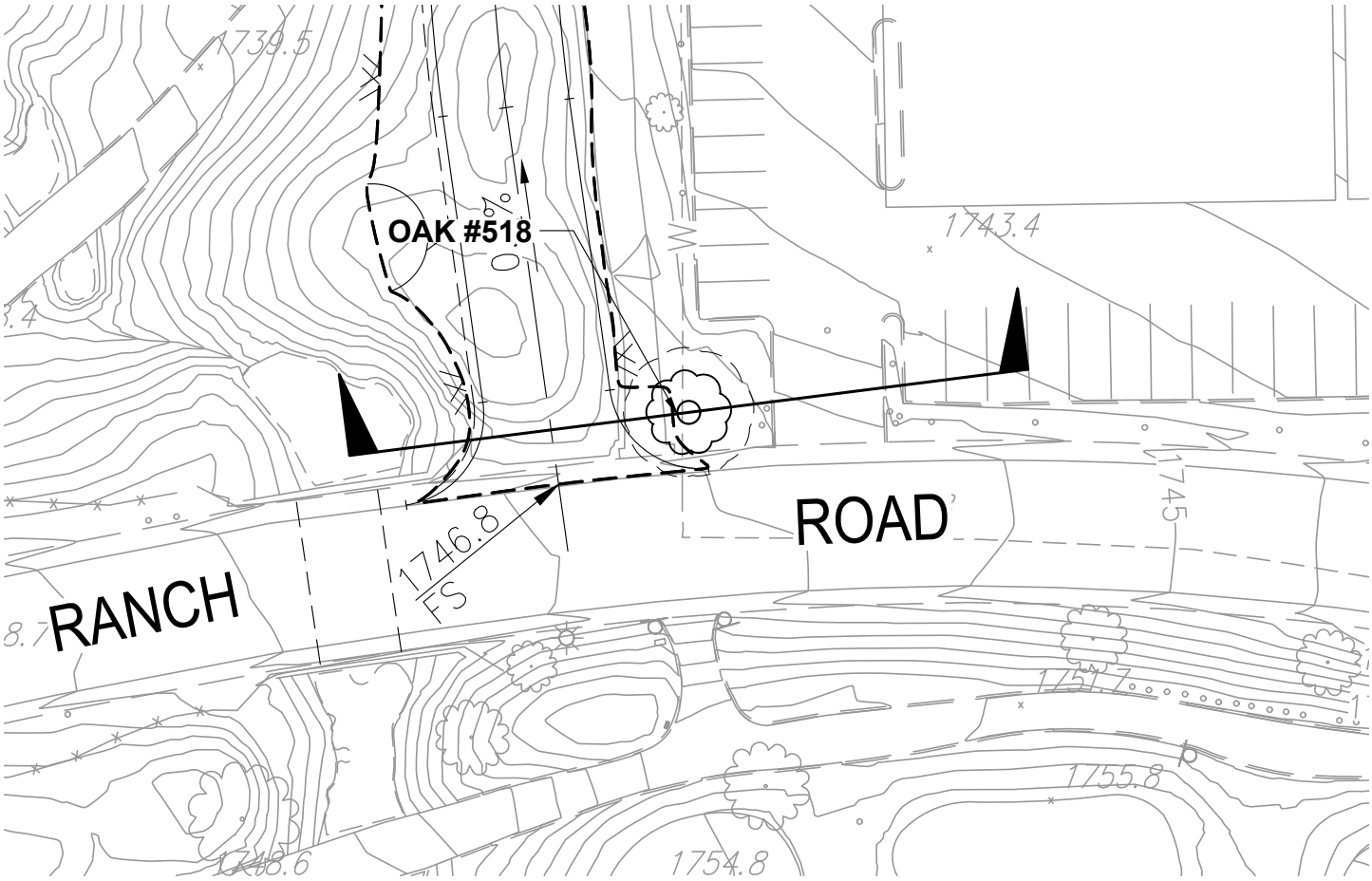


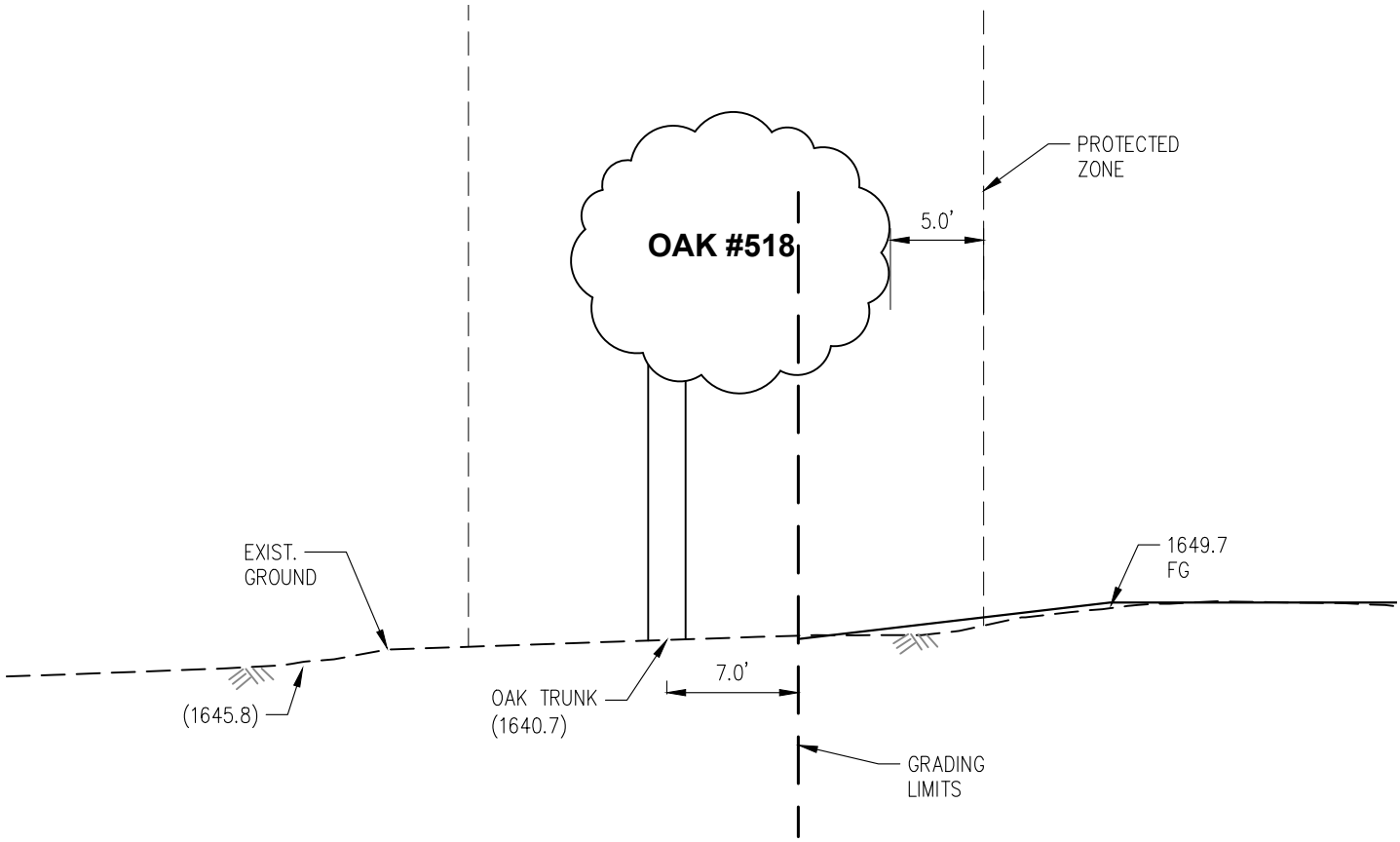


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OAK #522 SECTION

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MAJOR IMPACT
OAK #518 SECTION

DUDEK

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Appendix I

Major Encroachments Photograph Log



Tree No. 112
To be majorly encroached
Appraised at $30,700



Tree No. 151
To be majorly encroached
Appraised at $9,800



Tree No. 157
To be majorly encroached
Appraised at $24,700



Tree No. 258
To be majorly encroached
Appraised at $10,100



Tree No. 373H
To be majorly encroached
Appraised at $41,600



Tree No. 518
To be majorly encroached
Appraised at $6,400



Tree No. 522
To be majorly encroached
Appraised at $3,470

Appendix J

Minor Encroachments Photograph Log



Tree No. 1



Tree No. 2



Tree No. 3



Tree No. 4



Tree No. 5



Tree No. 11



Tree No. 13



Tree No. 14



Tree No. 17



Tree No. 19



Tree No. 20



Tree No. 22



Tree No. 25



Tree No. 26



Tree No. 28



Tree No. 30



Tree No. 31



Tree No. 33



Tree No. 34



Tree No. 35



Tree No. 36



Tree No. 37



Tree No. 38



Tree No. 40



Tree No. 41



Tree No. 43



Tree No. 47



Tree No. 48



Tree No. 53



Tree No. 60



Tree No. 64



Tree No. 65



Tree No. 66



Tree No. 67



Tree No. 68



Tree No. 86



Tree No. 90



Tree No. 97



Tree No. 99



Tree No. 111



Tree No. 117



Tree No. 119



Tree No. 120



Tree No. 121



Tree No. 122



Tree No. 123



Tree No. 126



Tree No. 127



Tree No. 130



Tree No. 131



Tree No. 132



Tree No. 135



Tree No. 136



Tree No. 145



Tree No. 147



Tree No. 148



Tree No. 149



Tree No. 152



Tree No. 153



Tree No. 154



Tree No. 155



Tree No. 156



Tree No. 158



Tree No. 159



Tree No. 162



Tree No. 163



Tree No. 164



Tree No. 178



Tree No. 179



Tree No. 214



Tree No. 248



Tree No. 252



Tree No. 253



Tree No. 259



Tree No. 373



Tree No. 374



Tree No. 375



Tree No. 381



Tree No. 519



Tree No. 521



Tree No. 531H

Appendix K

Tree Protection Measures

Tree Protection Measures

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

Tree Protection Measures Prior to Construction

Prior to any construction activity (drainage, demolition, material removal or delivery), oak and landmark trees with canopies that fall within 30 feet of construction activity shall be protected by fencing and signage. All contractors shall be made aware of the tree protection measures. A project arborist shall be assigned to monitor tree health and construction activity near retained trees on site. The project arborist shall be an International Society of Arboriculture (ISA) Certified Arborist.

Fencing. A 6-foot high, chain link fence with tree protection signs shall be erected around all trees (or tree groups) with canopies that fall within 30 feet of construction activity. The protective fence should be installed at a distance from the trunk that is equal to the dripline radius plus 5 feet (protected tree zone). For any trees that would be encroached upon by construction activities, fencing shall be placed as far away from trunk of the tree as possible while still allowing the required construction activities to proceed. This fencing will delineate the tree protection zone 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. Fences are to be mounted on two-inch diameter galvanized iron posts, driven into the ground to a depth of at least 2-feet at no more than 10-foot spacing. In areas where fencing is located on paving or concrete that will not be demolished, then the posts may be supported by an appropriate grade level concrete base. 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 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:

Avoidance: Signs, ropes, cables, or any other items shall not be attached to any tree.

Equipment Operation and Storage. 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 shall stay out of the fenced tree protection zone, unless where specifically approved in writing by the City Arborist and under the supervision of an ISA Certified Arborist

Storage and Disposal. Do not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the fenced tree protection zone. Remove all foreign debris within the fenced tree 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 outside of the fenced tree protection zone of 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.

Moving Construction Materials. 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 retained trees (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 or ANSI A300 standards.

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.

Root Pruning. Except where specifically approved in writing, all trenching shall be outside of the fenced tree 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 shall be clean and sharp, to minimize ripping, tearing, and fracturing the root system. The trench shall be made no deeper than necessary.

Trenching. Unless a Tree Permit has been issued for trenching activity within the fenced tree protection zone, all trenching shall be outside of the fenced tree protection zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. The trench should be made no deeper than necessary

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

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. 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.

Inspection. An ISA Certified Arborist shall inspect the trees on at least a monthly basis for the duration of construction activity. A summary report documenting observations and management recommendations shall be submitted to the owner following each inspection. Photographs of representative trees are to be included in each report.

Maintenance After Construction

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

Mulch. Provide a 4-inch mulch layer of mulch under the canopy of trees. Mulch shall be clean and organic and provide long-term soil conditioning, soil moisture retention, and soil temperature control.

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 ISA or ANSI A300 standards.

Watering. Retained trees on site shall be watered as they were prior to the commencement of construction activity. Supplemental irrigation may be necessary for twelve months following substantial root pruning.

Watering Adjacent Plant Material. All plants near the trees shall be compatible with water requirements of said trees. Watering regime included in the site's landscape plan shall be developed with consideration for the water needs of retained trees.

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 within 30 feet of construction activity shall be monitored by an ISA Certified Arborist for the first two years after construction completion. An annual monitoring report shall be submitted to the City Arborist. Each report shall summarize the inspection efforts, document observations and management actions taken, include photographs of each tree, and compare postconstruction tree conditions with the original, pre-construction baseline condition. If any retained trees die within this inspection period, they shall be replaced at a ratio approved by the City.

Appendix C
Aquatic Resources Delineation Report

Aquatic Resources Delineation Report

Belcaro at Sand Canyon Project

DECEMBER 2025

Prepared for:

NUWI – SAND CANYON, LLC
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Santa Monica, California 90403
Contact: Corey Harpole

Prepared by:

DUDEK

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Printed on 30% post-consumer recycled material.

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APPENDICES

A Antecedent Precipitation Tool Output
B Data Forms
C Review Area Photos

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
amsl	above mean sea level
APN	Assessor's parcel number
APT	Antecedent Precipitation Tool
CDFW	California Department of Fish and Wildlife
EPA	Environmental Protection Agency
GIS	geographic information systems
HUC	hydrologic unit code
NETR	Nationwide Environmental Title Research
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWW	non-wetland water
OHWM	ordinary high-water mark
PDSI	Palmer Drought Severity Index
project	Mojave Industrial Park Project
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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1 Introduction

This Aquatic Resources Delineation Report was prepared in accordance with the U.S. Army Corps of Engineers (USACE) Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017). This report and supporting appendices provide the 20 items listed in the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports and presents the results of the jurisdictional aquatic resources delineation conducted by Dudek for the proposed Belcaro Sand Canyon Project (project) within the City of Santa Clarita in Los Angeles County, California. The delineation was conducted to identify and map existing aquatic resources potentially subject to the regulatory jurisdiction of the USACE pursuant to Section 404 of the Clean Water Act (33 USC 1344), waters of the state potentially subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act, and stream and riparian habitats potentially subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Section 1602 of the California Fish and Game Code (collectively referred to as jurisdictional aquatic resources).

1.1 Disclaimer Statement

This report presents Dudek's best efforts to quantify the extent of jurisdictional aquatic resources potentially regulated by USACE, RWQCB, and CDFW (i.e., regulatory agencies) within the identified review areas using the current regulations, written policies, and guidance of these regulatory agencies. The potential jurisdictional resources described in this report are subject to verification by the regulatory agencies. Only the regulatory agencies can make a final determination on whether the features present are subject to USACE, RWQCB, and/or CDFW regulation. It is recommended that a USACE Approved Jurisdictional Determination be requested to determine whether features identified in this report are or are not waters of the U.S.[1]

1.2 Contact Information

Contact information for the project applicant and agent are provided in Table 1.[2] Access to the review area is not restricted, but if a site visit is requested, the project applicant or agent will accompany regulatory staff to the review area.[3] NUWI – Sand Canyon, LLC is the project applicant and landowner.

Table 1. Contact Information

Project Applicant	NUWI – Sand Canyon, LLC	**Agent**	Dudek
Contact Name	Jason Han	**Contact Name**	Michael Cady
Address	2001 Wilshire Boulevard, Suite 401 Santa Monica, California 90403	**Address**	38 North Marengo Avenue Pasadena, California 91101
Phone	310.566.6390	**Phone**	626.204.9841
Email	jasonh@newurbanwest.com	**Email**	mcady@dudek.com

1 Minimum Standards Item 1 (Request for Jurisdictional Determination)
2 Minimum Standards Item 2 (Contact Information)
3 Minimum Standards Item 3 (Site Access Statement)

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2 Review Area Description and Landscape Setting[4]

The approximately 179-acre review area is located south of State Route 14 (SR-14) at 34.419558 °N and 118.406304°W within the City of Santa Clarita, California (Figure 1, Project Location).[5] The review area consists of parcels with the following Assessor's Identification Numbers (AINs): 2840-015-031, 2840-015-034, 2840-015-033, 2840-015-032, 2840-015-025, 2840-016-013, 2840-022-003 (partial), 2840-001-118, 2840-007-010, 2840-007-902 (partial), 2840-007-030 (partial), 2840-015-045, 2840-015-047, and 2840-015-035, as well as the right-of-way (ROW) associated with Lost Canyon Road. The review area is within Township 4 North, Range 15 West, Sections 13, 14, 23, and 24 of the San Bernardino meridian, as depicted on the U.S. Geological Survey Mint Canyon, California 7.5-minute topographic quadrangle map (USGS 2022). The review area is generally located south of SR-14, north Robinson Ranch Road, and east of Sand Canyon Road.

Regional access to the review area is provided via SR-14, approximately 0.20-air-mile north of the review area. Directions to the review area are as follows: From SR-14 northbound, take exit 9 for Sand Canyon Road; turn right onto Sand Canyon Road and head south; turn left onto Comet Way and head northeast; turn slightly right onto Oak Springs Canyon Road and head east; continue (south) onto Oak Springs Canyon Road; turn left (north) into southern extent of the Review Area.[6]

2.1 Topography and Land Use

Topography within the review area is generally flat but undulating with slopes scattered along the Santa Clarita River, the eastern boundary of the project, and the project's southwestern corner. Elevation ranges from approximately 1,550 feet above mean sea level (amsl) in the northwestern corner of the review area to 1,730 feet amsl in the southeastern corner of the review area. The project site is currently undeveloped and is zoned for low-density urban residential use and non-urban residential use (City of Santa Clarita 2011). Adjacent land uses include existing low-density residential developments and an equestrian facility along the western and southwestern boundary, a golf course (Sand Canyon Country Club) along the southeastern boundary, undeveloped/open space to the north and east of the project site, and a railroad (the Antelope Valley Line) bisecting the northern parcels of the project (City of Santa Clarita 2011). The Angeles National Forest is located approximately 0.25-mile east of the project boundary.

2.2 Soils[7]

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2023a), the review area is included within the Soil Survey of the Antelope Valley Area, California (USDA 1970). There are eight soil map units mapped in the review area: Hanford sandy loam, 0% to 2% slopes; Hanford sandy loam, 2% to 9% slopes; Metz loam, 2% to 5% slopes; Oak Glen sandy loam, 0% to 2% slopes; Oak Glen gravelly sandy loam, 2% to 9% slopes; Saugus loam, 30% to 50% slopes, eroded; riverwash; and sandy alluvial

4 Minimum Standards Item 10 (Description of Existing Field Conditions)
5 Minimum Standard Item 14 (Site Location Map)
6 Minimum Standard Item 4 (Directions to the Survey Area)
7 Minimum Standards Item 13 (Soil Descriptions)

land. Three of these soil map units are included in the USDA NRCS hydric soils list: Metz loam, 2% to 5% slopes; riverwash; and sandy alluvial land (USDA 2023b). The soil types comprising the major components of these map units are described in more detail below and the distribution of these soil map units are presented on Figure 2, Soils.

Further discussion of each hydric soil is discussed below.

Hanford Series consists of very deep, well drained or somewhat excessively drained soils formed in alluvial material derived from granite. Hanford soils are found on stream bottoms, floodplains, and alluvial fans at elevations between 150 to 3,500 feet above mean sea level (amsl). Vegetation where not cultivated or built is primarily composed of annual grasses and forbs, sometimes with scattered California junipers (*Juniperus californica*) (USDA 1970, 2023c). The review area contains Hanford sandy loam, 0% to 2% slopes, and Hanford sandy loam, 2% to 9% slopes throughout much of the flat, upland areas of the northern portions of the project site (Figure 2). Neither of these soil map units are rated as hydric (USDA 2023b).

Metz Series consists of very deep, somewhat excessively drained soils formed in alluvial material of mixed, but predominantly sedimentary rock sources. Metz soils are found on alluvial fans and floodplains at elevations between 25 to 2,500 feet amsl. Vegetation where not cultivated or built is composed of grasses, forbs, oaks (*Quercus* spp.), and willows (*Salix* spp.) (USDA 1970, 2023c). The review area contains Metz loam, 2% to 5% slopes, located within flat areas along the eastern boundary of the project site (Figure 2). This soil map unit is included in the USDA NRCS hydric soils list but is rated 'predominantly nonhydric', meaning that no major component of the map unit is rated as hydric but one minor component comprising 1% of the map unit is rated hydric (USDA 2023d).

Oak Glen Series consists of deep, well drained soils formed in alluvial material derived mainly from granitic rocks. Oak Glen soils are found on alluvial fans and toe of slopes at elevations between 3,400 to 6,000 feet amsl. Vegetation where not cultivated or built is composed of naturalized grasses and forbs, shrubs, mixed hardwoods, and pines (USDA 1970, 2023c). The review area contains Oak Glen sandy loam, 0% to 2% slopes, and Oak Glen gravelly sandy loam, 2% to 9% slopes, located within undulating areas in the southern portion of the project site (Figure 2). Neither of these soil map units are rated as hydric (USDA 2023b).

Saugus Series consists of deep, well drained soils formed from weakly consolidated sediments. Saugus soils are found on uplands made up of dissected terraces and foothills at elevations between 600 to 2,500 feet amsl. Vegetation where not cultivated or built is composed of naturalized grasses and forbs, as well as chamise or other shrubs (USDA 1970, 2023c). The review area contains Saugus loam, 30% to 50% slopes, eroded, located on hilly areas scattered throughout the project site (Figure 2). This soil map unit is not rated as hydric (USDA 2023b).

Riverwash is a land type composed of alluvial sandy to gravelly material in intermittent streambeds. Material is regularly deposited and removed during flood events or as a result of streambank erosion. It is not categorized as a soil type in the USDA soil survey due to its lack of value for farming. This soil map unit contains little to no vegetation in general (USDA 1970) and is mapped within the Santa Clara River along the northern boundary of the project site (Figure 2). This soil map unit is included in the USDA NRCS hydric soils list, rated 'predominantly hydric', meaning that all major components of the map unit are rated as hydric and at least one minor component is not rated hydric (USDA 2023d). In this case, riverwash is classified as a hydric soil due to the presence of drainageways (criterion code 4), likely associated with the Santa Clara River (USDA 2023b).

Sandy Alluvial Land is a land type primarily composed of stratified unconsolidated sandy to loamy sandy alluvial material within floodplains. This material has been deposited relatively recently by flowing water. It is not categorized as a soil type in the USDA soil survey due to its lack of value for farming. Vegetation is comprised of willows and cottonwoods (*Populus* spp.) with an understory of annual herbaceous plant species (USDA 1970). Sandy alluvial land is mapped on the edges of the Santa Clara River along the northern boundary of the project site (Figure 2). This soil map unit is included in the USDA NRCS hydric soils list, rated 'predominantly hydric', meaning that all major components of the map unit are rated as hydric and at least one minor component is not rated hydric (USDA 2023d). In this case, sandy alluvial land is classified as a hydric soil due to the presence of floodplains (criterion code 2) and drainageways (criterion code 4), likely associated with the Santa Clara River(USDA 2023b).

2.3 Watershed

The review area occurs within the eastern portion of the Santa Clara sub-basin, Hydrologic Unit Code [HUC] 18070102 (Figure 3, Hydrologic Setting). The Santa Clara subbasin comprises approximately 1,626 square miles and spans across northeastern Los Angeles County and much of northern Ventura County (U.S. Geological Survey [USGS] 2023). The primary geographic and surface hydrologic feature of the watershed is the Santa Clara River, which flows west for approximately 50 miles until it reaches the Pacific Ocean near the City of Ventura. As an interrupted perennial watercourse, the Santa Clara River exhibits both intermittent and perennial flows along various reaches. The Santa Clara River occurs in the northern extent of the review area. Oak Spring Canyon Creek, a drainage located in the southern and western extent of the review area, is a direct tributary to the Santa Clara River.

The review area occurs within the Sand Canyon–Santa Clara River sub-watershed (HUC 180701020107) of the Headwaters of Santa Clara River watershed (HUC 1807010201). The Headwaters of Santa Clara River watershed comprises approximately 239 square miles (152,907 acres) (USGS 2023). This watershed originates in Soledad Canyon, as well as the numerous smaller canyons of the adjacent Sierra Pelona Mountains and San Gabriel Mountains, which ultimately drain into the reaches of the Santa Clara River contained within Soledad Canyon. The Sand Canyon–Santa Clara River sub-watershed is the western-most and furthest downstream unit of this watershed.

2.4 Vegetation

Table 2 summarizes the vegetation associations and three land cover types mapped within the Study Area and their spatial distributions are presented on Figure 3, Vegetation Communities and Land Covers. Descriptions of these vegetation communities and land cover types are provided in detail below. The Study Area does contain riparian vegetation that is adjacent to aquatic features that would fall under CDFW jurisdiction: *Lepidospartum squamatum–Atriplex canescens* association; *Lepidospartum squamatum–Eriogonum fasciculatum* association; and *Populus fremontii* association. A description of these vegetation associations are further discussed in this section below and a discussion of their potential as jurisdictional aquatic resources is provided below in Section 5.3.

Table 2. Vegetation Communities and Land Cover Types within the Study Area

Alliance/ Land Cover Type–Common Name	Alliance–Scientific Name	Association	Sensitive[1]	Study Area (acres)
Native Upland Scrub Communities				
Big sagebrush scrub	*Artemisia tridentata* shrubland	*Artemisia tridentata–Ericameria nauseosa*	No	8.60
		Artemisia tridentata ssp. *parishii*	Yes	28.56
		Artemisia tridentata - Eriogonum fasciculatum	No	0.05
California brittle bush–ashy buckwheat scrub	*Encelia californica - Eriogonum cinereum* shrubland	*Encelia californica*	Yes	0.63
California buckwheat scrub	*Eriogonum fasciculatum* shrubland	*Eriogonum fasciculatum–Artemisia tridentata*	Yes	4.79
California sagebrush–(purple sage) scrub	*Artemisia californica - (Salvia leucophylla)* shrubland	*Artemisia californica*	No	6.79
		Artemisia californica–Salvia leucophylla	No	1.44
Deerweed–silver lupine–yerba santa scrub	*Acmispon glaber - Lupinus albifrons - Eriodictyon* spp. shrubland	*Eriodictyon crassifolium*	No	6.40
Fourwing saltbush scrub	*Atriplex canescens* shrubland	*Atriplex canescens*	No	1.53
			Subtotal Native Upland Scrub Communities[2]	*58.79*
Native Upland Chaparral Communities				
Basket bush–river hawthorn–desert olive patches	*Rhus aromatica–Crataegus rivularis–Forestiera pubescens* shrubland	*Rhus aromatica*	Yes	2.49
Chamise chaparral	*Adenostoma fasciculatum* shrubland	*Adenostoma fasciculatum*	No	2.36
		Adenostoma fasciculatum–(Ceanothus cuneatus)	No	15.56
		Adenostoma fasciculatum–Eriogonum fasciculatum	No	1.79
Holly leaf cherry–toyon–greenbark ceanothus chaparral	*Prunus ilicifolia–Heteromeles arbutifolia–Ceanothus spinosus* shrubland	*Prunus ilicifolia* ssp. *ilicifolia*	Yes	10.95
Tucker oak chaparral	*Quercus john-tuckeri* shrubland	*Quercus john-tuckeri*	No	3.59
			Subtotal[2]	*36.73*

Table 2. Vegetation Communities and Land Cover Types within the Study Area

Alliance/ Land Cover Type–Common Name	Alliance–Scientific Name	Association	Sensitive[1]	Study Area (acres)
Native Upland Woodland Communities				
Coast live oak woodland and forest	*Quercus agrifolia* woodland and forest	*Quercus agrifolia*	No	6.73
Native Riparian Communities				
Cattail marshes	*Typha* (*angustifolia, domingensis, latifolia*) *Herbaceous Alliance*	*Typha angustifolia - Typha latifolia - Typha domingensis*	No	0.06
Mulefat thickets	*Baccharis salicifolia* shrubland	*Baccharis salicifolia*	No	0.59
Scale broom scrub	*Lepidospartum squamatum* shrubland	*Lepidospartum squamatum–Atriplex canescens*	Yes	2.45
		Lepidospartum squamatum–Eriogonum fasciculatum	Yes	16.83
Fremont cottonwood forest and woodland	*Populus fremontii–Fraxinus velutina–Salix gooddingii* forest and woodland	*Populus fremontii*	Yes	1.27
		Populus fremontii–Salix laevigata	Yes	0.42
			Subtotal[2]	*21.63*
Semi-Natural Upland Communities[2]				
Non-native grassland	N/A	N/A	No	59.74
Upland mustards or star-thistle fields	*Brassica nigra–Centaurea* (*solstitialis, melitensis*) herbaceous semi-natural	*Hirschfeldia incana*	No	13.98
			Subtotal[2]	*73.71*
Non-Natural Land Cover Types				
Disturbed habitat	N/A	N/A	No	18.22
Ornamental plantings	N/A	N/A	No	2.10
Unvegetated wash and river bottom	N/A	N/A	Yes	0.78
Urban/Developed land	N/A	N/A	No	19.02
			Subtotal[2]	*40.11*
			Total[2]	**237.70**

Notes: N/A = Not Applicable

[1] The term "semi-natural" is used in the Manual of California Vegetation to distinguish between natural vegetation communities and vegetation types dominated by non-native plants (Sawyer et al. 2009).

[2] Totals may not sum due to rounding.

2.4.1 Native Upland Vegetation Communities

Big Sagebrush Scrub

Big sagebrush scrub alliance communities feature big sagebrush (*Artemisia tridentata*) as the dominant or co-dominant species in the shrub canopy, and can also include yellow rabbitbrush (*Chrysothamnus viscidiflorus*), joint-fir (*Ephedra* spp.), California buckwheat (*Eriogonum fasciculatum*), rubber rabbitbrush (*Ericameria nauseosa*), bitter brush (*Purshia tridentata*), desert gooseberry (*Ribes velutinum*), and spineless horsebrush (*Tetradymia canescens*). Communities within this alliance typically occur in deep, well drained, loamy to sandy soils on plains, alluvial fans, toes of slopes, lower slopes, valley bottoms, hillsides, ridges, stream channels, and dry washes (CNPS 2023).

Two associations within the big sagebrush scrub alliance were mapped in the review area: *Artemisia tridentata* ssp. *parishii* association and *Artemisia tridentata–Ericameria nauseosa* association. Big sagebrush scrub occurs throughout the central portion of the review area. Associated species observed within this alliance in the field included thick leaf yerba santa (*Eriodictyon crassifolium*), rubber rabbitbrush, California buckwheat, shortpod mustard (*Hirschfeldia incana*), tree tobacco (*Nicotiana glauca*).

California Brittle Bush–Ashy Buckwheat Scrub

California brittlebush–ashy buckwheat scrub alliance communities feature California brittle bush (*Encelia californica*) and/or ashy buckwheat (*Eriogonum cinereum*) as dominant or co-dominant species in the shrub canopy, and can also include California sagebrush (*Artemisia californica*), coyote bush (*Baccharis pilularis*), bush monkeyflower (*Diplacus aurantiacus*), California buckwheat, chaparral yucca (*Hesperoyucca whipplei*), Menzies's golden bush (*Isocoma menziesii*), common deer weed (*Acmispon glaber*), laurel sumac (*Malosma laurina*), black sage (*Salvia mellifera*), and other common coastal sage scrub species. Communities within this alliance typically occur in soils formed in sandstone, shale, or volcanic substrates on exposed, steep slopes (CNPS 2023).

The only association within the California brittlebush–ashy buckwheat scrub alliance mapped in the review area was the *Encelia californica* association. California brittle bush–ashy buckwheat scrub occurs on a north-facing slope in the southeastern corner of the review area. Associated species observed within this alliance in the field included purple sage (*Salvia leucophylla*), California sagebrush, and California buckwheat.

California Buckwheat Scrub

California buckwheat scrub alliance communities feature California buckwheat as the dominant or co-dominant species in the shrub canopy, and can also include California sagebrush, bush mallow (*Malacothamnus fasciculatus*), bush monkeyflower, California brittle bush, Menzies's golden bush, coyote bush, common deer weed, black sage, and white sage (*Salvia apiana*). Communities within this alliance typically occur in well drained, coarse soils on upland slopes, arroyos, channels, washes, and rarely flooded low-gradient deposits (CNPS 2023).

The only association within the California buckwheat scrub alliance mapped in the review area was the *Eriogonum fasciculatum–Artemisia tridentata* association. California buckwheat scrub occurs on the gentle slopes in the southernmost tip of the review area. Associated species observed within this alliance in the field included shortpod mustard, white sage, and Parish's big sagebrush (*Artemisia tridentata* ssp. *parishii*).

California Sagebrush–(Purple Sage) Scrub

California sagebrush–(purple sage) scrub alliance communities feature California sagebrush and sometimes purple sage as the dominant or co-dominant species in the shrub canopy. This alliance can also include chamise (*Adenostoma fasciculatum*), coyote bush, bush monkeyflower, California brittle bush, narrowleaf goldenbush (*Ericameria linearifolia*), California buckwheat, golden-yarrow (*Eriophyllum confertiflorum*), chaparral yucca, Menzies' goldenbush, laurel sumac, coast pricklypear (*Opuntia littoralis*), sugarbush (*Rhus ovata*), white sage, black sage, and poison oak (*Toxicodendron diversilobum*). Communities within this alliance typically occur in alluvial or colluvial soils on variable slopes that are usually steep and rarely flooded or low-gradient deposits along streams (CNPS 2023).

Two associations within the California sagebrush–(purple sage) scrub alliance were mapped in the review area: *Artemisia californica* association and *Artemisia californica–Salvia leucophylla* association. These associations are mapped on the slopes north of railroad as well as the southeastern corner of the review area. Associated species observed within this alliance in the field included chamise, chaparral yucca, California brittle bush, and Parish's big sagebrush.

Deerweed–Silver Lupine–Yerba Santa Scrub

Deerweed–silver lupine–yerba santa scrub alliance communities feature common deer weed, bush poppy (*Dendromecon rigida*), California yerba santa (*Eriodictyon californicum*), thick leaf yerba santa, poodle-dog bush (*Eriodictyon parryi*), and/or silver lupine (*Lupinus albifrons*) as dominant or co-dominant species in the shrub canopy. This alliance can also include chamise, California sagebrush, coyote bush, buck brush (*Ceanothus cuneatus*), sand-aster (*Corethrogyne filaginifolia*), bush monkeyflower, narrowleaf goldenbush, California buckwheat, golden-yarrow, sawtooth golden bush (*Hazardia squarrosa*), slender sunflower (*Helianthus gracilentus*), sugarbush, white sage, blue elderberry (*Sambucus mexicana*), and poison oak. Communities within this alliance typically occur on typically exposed and somewhat steep slopes in open settings (CNPS 2023).

The only association within the deerweed–silver lupine–yerba santa scrub alliance mapped in the review area was the *Eriodictyon crassifolium* association. This association is mapped in the central and northern portion of the review area. Associated species observed within this alliance in the field were fairly limited as the stands were quite monotypic, but shortpod mustard and Parish's big sagebrush were observed along the edges.

Fourwing Saltbush Scrub

Fourwing saltbush scrub alliance communities feature fourwing saltbush (*Atriplex canescens*) as dominant or co-dominant species in the shrub canopy and can also include white bursage (*Ambrosia dumosa*), cheesebush (*Ambrosia salsola*), shadscale (*Atriplex confertifolia*), allscale (*Atriplex polycarpa*), yellow rabbitbrush, bladderpod (*Peritoma arborea*), mormon tea (*Ephedra viridis*), spiny hop sage (*Grayia spinosa*), creosote (*Larrea tridentata*), and bush seepweed (*Suaeda nigra*). Communities within this alliance typically occur in carbonate-rich, alkaline, sandy or sandy clay loams on playas, alluvial fans, rolling hills, lake deposits, or streambeds (CNPS 2023).

The only association within the fourwing saltbush scrub alliance mapped in the project site was the *Atriplex canescens* association. This association is mapped in the southeastern portion of the project site. Associated species observed within this vegetation community included chamise and shortpod mustard.

Basket Bush–River Hawthorn–Desert Olive Patches

Basket bush–river hawthorn–desert olive patches alliance communities feature desert olive (*Forestiera pubescens*), skunkbush sumac (*Rhus aromatica*; also known as basket bush), or blue elderberry as the dominant species in the shrub canopy along with fourwing saltbush, Emory's baccharis (*Baccharis salicina*), broom baccharis (*Baccharis sergiloides*), narrowleaf goldenbush, broom snakeweed (*Gutierrezia sarothrae*), common reed (*Phragmites australis*), desert almond (*Prunus fasciculata*), sandbar willow (*Salix exigua*), and desert wild grape (*Vitis girdiana*). Communities within this alliance typically occur in silty soils to coarse sand on floodplains, streambanks, springs, river terraces, washes, swales, shallow valleys, or upland areas (CNPS 2024).

The only association within the basket bush–river hawthorn–desert olive patches alliance mapped in the project site was the *Rhus aromatica* association. This association occurs in the southeastern corner of the project site. Associated species observed within this vegetation community in the field included golden currant (*Ribes aureum* var. *gracilliumum*), blue elderberry, and shortpod mustard.

Chamise Chaparral

Chamise chaparral alliance communities feature chamise as the dominant species in the shrub canopy along with redshank (*Adenostoma sparsifolium*), manzanitas (*Arctostaphylos* spp.), ceanothus (*Ceanothus* spp.), bush monkeyflower, California buckwheat, chaparral yucca, toyon (*Heteromeles arbutifolia*), scrub oak (*Quercus berberidifolia*), interior live oak (*Quercus wislizeni*), white sage, purple sage, black sage, and poison oak. Communities within this alliance typically occur in shallow soils over colluvial material or various types of bedrock on a variety of topographic settings (CNPS 2023).

Three associations within the chamise chaparral alliance were mapped in the review area: *Adenostoma fasciculatum* association, *Adenostoma fasciculatum*–(*Ceanothus cuneatus*) association, and *Adenostoma fasciculatum–Eriogonum fasciculatum* association. These associations are mapped on slopes throughout the edges the review area. Associated species observed within this alliance in the field included soft brome (*Bromus hordeaceus*), slender oat (*Avena barbata*), golden currant, and chaparral yucca.

Holly Leaf Cherry–Toyon–Greenbark Ceanothus Chaparral

Holly leaf cherry–toyon–greenbark ceanothus chaparral alliance communities feature greenbark ceanothus (*Ceanothus spinosus*), toyon, and/or holly leaf cherry (*Prunus ilicifolia*) as dominant or co-dominant species in the shrub canopy. This alliance can also include California sagebrush, bigpod ceanothus (*Ceanothus megacarpus*), birch leaf mountain mahogany (*Cercocarpus betuloides*), pipestem clematis (*Clematis lasiantha*), bush monkeyflower, California buckwheat, California ash (*Fraxinus dipetala*), bush penstemon (*Keckiella antirrhinoides*), heartleaf keckiella (*Keckiella cordifolia*), scrub oak, hollyleaf redberry (*Rhamnus ilicifolia*), sugarbush, and black sage. Communities within this alliance typically occur in soils derived from bedrock or colluvium on steep, north-facing slopes (CNPS 2023).

The only association within the holly leaf cherry–toyon–greenbark ceanothus chaparral alliance mapped in the review area was the *Prunus ilicifolia* ssp. *ilicifolia* association. This association is mapped in the southern portion of the review area, on undulating slopes north of Oak Spring Canyon Creek. Associated species observed within this

alliance in the field include various non-native grasses in the understory, poison oak, and scattered shrubs such as Parish's big sagebrush, fourwing saltbush, and thick leaf yerba santa.

Tucker Oak Chaparral

Tucker oak chaparral alliance communities feature Tucker oak (*Quercus john-tuckeri*) as the dominant species in the shrub canopy, and can also include chamise, bigberry manzanita (*Arctostaphylos glauca*), buck brush, birch leaf mountain mahogany, narrowleaf goldenbush, rubber rabbitbrush, California buckwheat, California ash, ashy silktassel (*Garrya flavescens*), California juniper (*Juniperus californica*), interior live oak, and creeping snowberry (*Symphoricarpos mollis*). Communities within this alliance typically occur in well to extensively drained soils over bedrock or colluvium on upper slopes or tops of ridges (CNPS 2023).

The only association within the Tucker oak chaparral alliance mapped in the review area was the *Quercus john-tuckeri* association. This association is mapped in the southern portion of the review area, on undulating slopes north of Oak Spring Canyon Creek. Associated species observed within this alliance in the field include various non-native grasses in the understory, poison oak, and scattered shrubs such as Parish's big sagebrush, fourwing saltbush, and thick leaf yerba santa.

Coast Live Oak Woodland and Forest

Coast live oak woodland and forest alliance communities feature coast live oak as the dominant or co-dominant species in the tree canopy and can also include bigleaf maple (*Acer macrophyllum*), blue oak (*Quercus douglasii*), California bay laurel (*Umbellularia californica*), Engelmann oak (*Quercus engelmannii*), Southern California black walnut (*Juglans californica*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), and madrone (*Arbutus menziesii*). Communities within this alliance occur in deep, sandy or loamy soils with high organic content on canyon bottoms, slopes, and flats (CNPS 2023).

The only association within the coast live oak woodland and forest alliance mapped in the review area was the *Quercus agrifolia* association. This association is mapped in the northwestern portion of the review area. Associated species observed within this alliance in the field include various non-native grasses in the understory, poison oak, and scattered shrubs such as ripgut brome (*Bromus diandrus*), flatspine bur ragweed (*Ambrosia acanthicarpa*), and scattered Eucalyptus trees (*Eucalyptus* spp.).

2.4.2 Semi-Natural Upland Vegetation Communities

Non-Native Grassland

Oberbauer et al. (2008) states that non-native grassland has a sparse to dense cover of annual grasses, such as wild oats (*Avena* spp.), bromes (*Bromus* spp.), and fescue (*Festuca* spp.), that typically occurs on fine-textured, clay soils. Other herbaceous species may occur alongside these grasses, including California poppy (*Eschscholzia californica*), stork's bills (*Erodium* spp.), goldfields (*Lasthenia* spp.), phacelias (*Phacelia* spp.), gilias (*Gilia* spp.), and baby blue-eyes (*Nemophila menziesii*). Non-native grassland also includes land that is used as pasture for grazing (Oberbauer et al. 2008). This general habitat type is not included in the CDFW California Natural Community List (CDFW 2023), but it was used as a vegetation community for this report because it best fit the habitat that was observed in the field.

Non-native grassland is scattered throughout flat areas and gently slopes areas of the review area. Species observed in the field within this habitat type included soft brome, flatspine bur ragweed, small wirelettuce (*Stephanomeria exigua*), redstem stork's bill (*Erodium cicutarium*), shortpod mustard, and dove weed (*Croton setiger*).

Upland Mustards or Star-Thistle Fields

Upland mustards or star-thistle fields alliance communities feature either black mustard (*Brassica nigra*), field mustard (*Brassica rapa*), Italian plumeless thistle (*Carduus pycnocephalus*), cardoon (*Cynara cardunculus*), Maltese star-thistle (*Centaurea melitensis*), yellow star-thistle (*Centaurea solstitialis*), Geraldton carnation weed (*Euphorbia terracina*), shortpod mustard, Dyer's woad (*Isatis tinctoria*), or cultivated radish (*Raphanus sativus*) among other similar ruderal forbs as the dominant species in the herbaceous layer. Communities within this alliance occur in clayey to sandy-loamy soils on a variety of disturbed landscapes, including fallow fields, rangelands, roadsides, and often have become naturalized in native communities, such as grasslands, coastal scrub, and riparian areas (CNPS 2023).

The only association within the upland mustards or star-thistle fields alliance mapped in the review area was the *Hirschfeldia incana* association. This association is mapped primarily in the northeastern portion of the review area, but also in the southernmost extension and the northwestern corner. Associated species observed within this alliance in the field include dove weed, small wirelettuce, and scattered California buckwheat.

2.4.3 Riparian Vegetation Communities

Cattail Marshes

Cattail marsh (*Typha* (*angustifolia, domingensis, latifolia*) Herbaceous Alliance) communities include narrowleaf cattail (*Typha angustifolia*), southern cattail (*Typha domingensis*), or broadleaf cattail (*Typha latifolia*) as dominant or co-dominant species in the herbaceous layer with creeping bentgrass (*Agrostis stolonifera*), Pacific silverweed (*Potentilla anserina ssp. pacifica*), sedges (*Cyperus* spp.), salt grass (*Distichlis spicata*), barnyardgrass, pale spike rush (*Eleocharis macrostachya*), giant horsetail (*Equisetum telmateia*), rushes (*Juncus* spp.), least duckweed (*Lemna minuta*), perennial pepper weed (*Lepidium latifolium*), water-parsley (*Oenanthe sarmentosa*), smartweed (*Persicaria lapathifolia*), dotted smartweed (*Persicaria punctata*), common reed (*Phragmites australis*), American bulrush (*Schoenoplectus americanus*), California bulrush (*Schoenoplectus californicus*), and cocklebur (*Xanthium strumarium*). This alliance has a continuous to intermittent herbaceous layer less than 5 feet (1.5 meters) in height with emergent trees such as willows (*Salix* spp.) sometimes present at low cover. Cattail marsh communities typically occur in semi-permanently flooded freshwater or brackish marshes with clayey or silty soils (CNPS 2025b).

Cattail marshes were found in the Study Area surrounding the proposed Lost Canyon Road and Sand Canyon Road roundabout. The community was located at an outlet for an underground stormwater culvert.

Mulefat Thickets

The mulefat thickets shrubland alliance consists of woodland vegetation dominated by mulefat (*Baccharis salicifolia*). This vegetation community has a continuous two-tiered canopy that is less than 5 meters (16 feet) in height and occurs often along canyon bottoms, floodplains, irrigation ditches, lake margins, stream channels,

generally in areas with alluvial soils and a high water-table (CNPS 2025b). Mulefat thickets was located at an outlet for an underground stormwater culvert.

Scale Broom Scrub

Scale broom scrub alliance communities feature scale broom (*Lepidospartum squamatum*) as the dominant, co-dominant, or a conspicuous species in the shrub canopy in semi-alluvial environments, and can also include cheesebush, California sagebrush, mulefat (*Baccharis salicifolia*), bladderpod, brittle bush (*Encelia farinosa*), thick leaf yerba santa, California buckwheat, chaparral yucca, common deerweed, laurel sumac, coast prickly pear, skunkbush sumac, poison oak, and other arid scrub and wash species. Communities within this alliance occur in intermittently or rarely flooded alluvial soils along low-gradient streams, washes, or fans (CNPS 2023).

Two associations within the scale broom scrub alliance were mapped in the review area: *Lepidospartum squamatum–Atriplex canescens* association and *Lepidospartum squamatum–Eriogonum fasciculatum* association. These associations are mapped within or adjacent to the stream channels for the Santa Clara River along the northern boundary or Oak Spring Canyon Creek, which cuts through the southwestern and northwestern corners of the review area. Associated species observed within this alliance in the field included flatspine bur ragweed, shortpod mustard, and scattered shrubs such as Parish's big sagebrush, tamarisk (*Tamarix ramosissima*), California buckwheat, rubber rabbitbrush, thick leaf yerba santa.

Fremont Cottonwood Forest and Woodland

Fremont cottonwood forest and woodland alliance communities feature Fremont cottonwood as the dominant or co-dominant species in the tree canopy, and can also include white alder (*Alnus rhombifolia*), California sycamore (*Platanus racemosa*), Oregon ash (*Fraxinus latifolia*), velvet ash (*F. velutina*), coast live oak, sandbar willow, Goodding's willow (*S. gooddingii*), red willow (*S. laevigata*), arroyo willow (*S. lasiolepis*), shining willow (*S. lasiandra* var. *lasiandra*), and yellow willow (*S. lutea*). Communities within this alliance typically occur on floodplains and alluvial fans; along springs, streams, and low-gradient rivers; and in lower canyons in desert mountains or in valleys with consistently high-water table (CNPS 2023).

Two associations within the Fremont cottonwood forest and woodland alliance were mapped in the review area: *Populus fremontii* association and *Populus fremontii–Salix laevigata* association. These associations are mapped within the Santa Clara River stream channels, as well as in the southernmost extension of the review area. Associated species observed within this alliance in the field included tamarisk and mulefat.

2.4.4 Non-Natural Land Cover Types

Disturbed Habitat

Disturbed habitat refers to areas where soils have been recently or repeatedly disturbed by grading, compaction, or clearing of vegetation. Structures are typically not present within disturbed habitats, and these areas provide relatively low value for most plant and wildlife species. When vegetated, disturbed habitat supports predominantly non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (Oberbauer et al. 2008). Disturbed habitat is not a listed vegetation community under the CDFW California Natural Community List (CDFW 2023), but it has been used in this report because it best describes what was observed in the field.

In the review area, disturbed habitat is mapped along unpaved roadways throughout the review area, as well as lots adjacent to residences or roads that appear to be regularly mowed, likely for fire hazard abatement purposes.

Ornamental Plantings

Ornamental plantings refers to areas where non-native ornamental species and landscaping schemes have been installed and maintained, usually as part of commercial or residential property/park. This habitat type typically supports myriad ornamental species, including, but not limited to, Bermudagrass (*Cynodon dactylon*), hottentot fig (*Carpobrotus edulis*), Peruvian peppertree (*Schinus molle*), Brazilian peppertree (*S. terebinthifolius*), and red apple iceplant (*Aptenia cordifolia*). Parks and ornamental plantings is not a listed vegetation community under the CDFW California Natural Community List (CDFW 2023), but it has been used in this report because it best describes what was observed in the field.

In the review area, ornamental plantings are mapped in the southeastern corner of the review area, comprising the Sand Canyon Country Club golf course facilities.

Urban/Developed Land

Urban or developed land refers to areas that have been constructed on or otherwise physically altered to the point where vegetation is no longer present. Urban or developed areas are characterized by permanent or semi-permanent structures, hardscapes, and landscaped areas that require irrigation (Oberbauer et al. 2008). Developed land is not a listed vegetation community under the CDFW California Natural Community List (CDFW 2023) but has been used in this report because it best describes what was observed in the field.

In the review area, the urban/developed land cover consists of a paved road, Lost Canyon Road, in the northwestern corner and maintained areas associated with residences along the southernmost extension of the review area.

2.5 National Wetland Inventory

A desktop review of the U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) database (USFWS 2023) indicates the presence of three types of features: R4SBA, R4SBAx, R4SBC, and R5UBF (USFWS 2023). Figure 3 depicts the NWI data within the review area.

Riverine

R4SBA (Riverine; 4=intermittent, SB=streambed, A=temporarily flooded): This type of water includes natural channels/streambeds that support flowing water for only part of the year. When not flowing, surface water is sometimes present in isolated pools or absent. In general, surface water is briefly present from a few days to a few weeks during the growing season but is usually absent with the water table well below the ground surface for most of the year. This type of feature is mapped within the Santa Clara River floodplain and Oak Spring Canyon Creek.

R4SBAx (Riverine; 4=intermittent, SB=streambed, A=temporarily flooded, x=excavated): This type of water includes excavated channels/streambeds that support flowing water for only part of the year. When not flowing, surface water is sometimes present in isolated pools or absent. In general, surface water is briefly present from a few days to a few weeks during the growing season but is usually absent with the water table well below the ground surface for most of the year. This type of feature is mapped for Sand Canyon Creek.

R4SBC (Riverine; 4=intermittent, SB=streambed, C=seasonally flooded): This type of water includes natural channels/streambeds that support flowing water for only part of the year. When not flowing, surface water is sometimes present in isolated pools or absent. In general, surface water is present for extended periods especially early in the growing season but is absent by the end of the growing season in most years. After flooding ceases the water table varies between above-ground saturation to a water table well below the ground surface. This type of feature is mapped along the southern bank of the Santa Clara River in a low-flow channel.

R5UBF (Riverine; 5=unknown perennial, UB=unconsolidated bottom, F=semipermanently flooded): This type of water includes natural channels/streambeds that support some flowing water all year round outside of years of extreme drought. Surface water is present throughout the growing season in most years, and when absent, the water table is usually at or near the ground surface. This type of feature is mapped along the southern bank of the Santa Clara River in a low-flow channel. Although the NWI database was not able to distinguish whether the feature was a low-gradient, high-gradient, or tidal perennial system, this feature meets the definition of a lower perennial system as it is outside of tidal influence and characterized by a well-developed floodplain and a predominance of sandy substrate.

2.6 Review Area Alterations, Current and Past Land Use

The review area is primarily comprised of undeveloped parcels planned for low-density urban residential use and non-urban residential use in the City of Santa Clarita General Plan (City of Santa Clarita 2023). The Antelope Valley Line (formerly the Southern Pacific railroad) has been present since 1876 (Santa Clarita Valley Historical Society [SCVHS] 2023), and the Sand Canyon Country Club (formerly the Robinson Ranch Golf Club) was built in 1999 (Sand Canyon Country Club 2023). Much of the surrounding residential developments were built starting in the mid-1980s, gradually increasing to the present day. Similarly, dirt roads intersecting the project site have been present since the mid-1950s and have gradually increased through the course of time.

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3 Precipitation Data and Analysis[8]

The USACE-developed Antecedent Precipitation Tool (APT) was used to assess whether the delineation date occurred in a drier, average, or wetter than normal period (USACE 2023a). To determine what constitutes a "typical year," USACE developed the APT. The information generated from the APT can help to determine whether normal hydrologic and/or climatic conditions were present during the site visit and assist with completing the Wetland Determination Data Form.

The APT provides three climatological parameters: Palmer Drought Severity Index (PDSI), season, and antecedent precipitation condition. The PDSI is a standardized index calculated on a monthly basis, with PDSI value outputs ranging from -4 (extreme drought) to +4 (very wet) (National Oceanic and Atmospheric Administration [NOAA] 2023) to assess drought conditions (i.e., PDSI Class). The APT determines wet vs. dry season based on related procedures provided in the applicable regional supplement for the review area (in this case, the Arid West Region supplement [USACE 2008a]). If the Precipitation Normalcy Index score is less than 10, then the antecedent precipitation condition is classified as drier than normal; normal conditions are present with a Precipitation Normalcy Index score of 10 to 14; conditions are wetter than normal when a Precipitation Normalcy Index score is greater than 14 (USACE 2023a).

Table 3 summarizes the key data extrapolated from the APT output: estimated drought conditions (PDSI Class), wet or dry season determination, Precipitation Normalcy Index score, and antecedent precipitation condition. Based on the APT output provided in Appendix A, the precipitation and climatic conditions for the review area were within the wetter than normal and within the normal range during the time of the delineations. According to the USDA Agricultural Applied Climate Information System (USDA 2023e), the area around the review area (Station Name: Canyon Country 2.6 E) receives an average of 9.53 inches of precipitation annually between the years 2010 to 2023.

Table 3. Antecedent Precipitation Tool Data for the Review Area

Main Field Survey Date	PDSI Class	Season	Precipitation Normalcy Index Score	Antecedent Precipitation Condition
10/24/2023	Moderate Wetness	Dry Season	15	Wetter than Normal
11/1/2023	Moderate Wetness	Dry Season	13	Normal Conditions

Notes: PDSI = Palmer Drought Severity Index.

8 Minimum Standards Item 11 (Discussion of Hydrology)

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4 Investigation Methods[9]

A jurisdictional delineation of the review area was conducted by Dudek biologists Lily Sam and Eilleen Salas on October 24, November 1, and November 2, 2023, and by Michael Cady on December 1, 2025 (Table 4, Survey Schedule for the Aquatic Resources Delineation). Prior to conducting the jurisdictional delineation, USFWS National Wetland Inventory data (USFWS 2023) was reviewed to determine if the review area contained any features mapped by the USFWS. Site-specific topographical data was reviewed in conjunction with aerials, both current and historical, to determine the potential presence of non-wetland waters. Current vegetation mapping was reviewed to assess whether the review area supported hydrophytic vegetation and potential wetlands. Jurisdictional boundaries were mapped in the field using ESRI Collector on a mobile device with submeter accuracy. Remote sensing was not used for the delineation.

Table 4. Survey Schedule for the Aquatic Resources Delineation

Date	Hours	Personnel	Conditions
10/24/2023	9:12 a.m.–2:00 p.m.	Lily Sam Eilleen Salas	67–74°F; 0–3 mph wind; 0–10% cloud cover
11/1/2023	10:00 a.m.–2:10 p.m.	Lily Sam Eilleen Salas	70–79°F; 0–1 mph; 0% cloud cover
11/2/2023	7:15 a.m.–3:09 p.m.	Eilleen Salas	52–77°F; 0–1 mph; 0–20% cloud cover
12/1/2025	11:30 a.m.-12:30 p.m.	Michael Cady	Not taken

Notes: °F = degrees Fahrenheit; mph = miles per hour.

4.1 U.S. Army Corps of Engineers

The USACE wetlands delineation was conducted in accordance with the 1987 USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a). A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b) was used to determine the limits of non-wetland waters. Non-wetland waters were delineated on aerial maps in conjunction with ESRI Collector on a mobile device. The widths of each non-wetland water were determined in the field according to the OHWM manual. USACE OHWM Forms were completed at representative cross-sections of non-wetland waters to capture their characteristics and widths. All data forms can be found in Appendix B.

4.2 Regional Water Quality Control Board

Waters of the state regulated by the RWQCB were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2021). As described in these procedures, wetland waters of the state are mapped based on the procedures in USACE's 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters are mapped at the OHWM

[9] Minimum Standards Item 8 (Dates of Field Work), Item 5 (Use of 1987 Manual, Regional Supplement, and OHWM guide), Item 12 (Statement Regarding Use of Remote Sensing), Item 18 (Data Forms) and Item 19 (Methods)

based on the procedures defined in USACE's 2008 A Field Guide to Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b).

4.3 California Department of Fish and Wildlife

CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code Section 1602. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979).

5 Aquatic Resource Narrative[10]

The following descriptions of observed potential hydrological features and/or potentially jurisdictional aquatic resources within the review area document the presence or absence of aquatic resource indicators per methodologies discussed in Section 4 of this report. Photos of the areas reviewed for the presence of potential resources are provided in Appendix C, Review Area Photos.[11] The locations of these photos are shown in Figure 5, Potential Jurisdictional Aquatic Resources – USACE).[12]

Santa Clara River (Feature-01)

The southern edge of the Santa Clara River, mapped as Feature-01, is recorded at Transect 4 (Figure 5). The headwaters of the Santa Clara River occur east of the project site within the San Gabriel Mountains and collect within the canyon bottom of Soledad Canyon. The Santa Clara River then flows westerly across the northern boundary of the project site and ultimately flows into the Pacific Ocean approximately 50 air-miles west of the project site.

The reach of the Santa Clara River within the review area consists of a low-flow channel and an active floodplain that exhibits significant braiding, sediment sorting, gravel and cobble benching, surface scour, and presence of a defined bed and bank, as well as a change in sediment texture, vegetation species, and vegetative cover compared with adjacent upland. The southern bank consists of a steep, cut bank, and due to the vertical nature of the bank, the OHWM and top of bank were mapped as coincident. The floodplain is vegetated with riparian vegetation communities, mapped as scale broom scrub with small, scattered stands of Fremont cottonwood forest and woodland.

Dudek biologists identified this feature as the sole aquatic feature likely to be regulated by USACE. A Streamflow Duration Assessment Method (SDAM) was not conducted for Feature-01; however, the reach of the Santa Clara River located within the review area is categorized as a perennial stream in the U.S. Geological Survey National Hydrography Dataset (USGS 2023). Although the biological reconnaissance survey occurred during the dry season in late May, a significant volume of surface water (approximately 1 foot deep) was observed flowing within the low-flow channel, which generally meanders across the entire width of the active floodplain. Therefore, the Santa Clara River is likely to be classified as at-least-intermittent. Additionally, the Santa Clara River flows directly into the Pacific Ocean, a Traditional Navigable Waterway, and is likely considered a relatively permanent water under the Environmental Protection Agency's (EPA's) final rule conforming to Sackett v. EPA. Accordingly, the Santa Clara River channel mapped as Feature-01 in the review area is likely subject to USACE jurisdiction. The Santa Clara River also likely subject to CDFW and RWQCB jurisdiction.

Oak Spring Canyon Creek (Feature-02)

Oak Spring Canyon Creek, mapped as Feature-02, is recorded at Transects 1 and 2 (Figure 6, Potential Jurisdictional Aquatic Resources – RWQCB/CDFW). The creek traverses the project site from the middle of the southern boundary to the middle of the western boundary. It then re-enters the northwestern corner of the project site and subsequently flows into the Santa Clara River. Prior to entering the project site, the creek originates in small canyons further

10 Minimum Standards Item 6 (Aquatic Resource Narrative)
11 Minimum Standards Item 17 (Ground Photos)
12 Minimum Standards Items 7 and 16 (Delineation Maps)

southeast, and is then conveyed through the adjacent golf course. Within the review area, the creek is characterized by a variable bank, consisting of a steep, cut bank along certain reaches or a flat, shallow floodplain in others. The OHWM and top of bank were also mapped as coincident along this feature due to the erosional cut nature of the bank throughout its extent within the project site. Areas within the OHWM exhibit a change in vegetation cover and type, a change in sediment texture, wracking, sand benches, surface scour, sedimentation, and sediment sorting. In general, the vegetation within the channel is sparse and composed of exclusively of scale broom scrub, whereas areas above the OHWM have more compacted soils and a higher density of vegetation (i.e., rabbitbrush and broom scale scrub).

Dudek biologist identified Oak Spring Canyon Creek (Feature-02) as an aquatic feature that would not likely be regulated by the USACE because it does not meet the relatively permanent standard as waters of the United States. A Streamflow Duration Assessment Method (SDAM) was not conducted for Feature-01; however, no surface water, benthic macroinvertebrates, or algae were detected within the creek. Oak Spring Canyon Creek also likely subject to CDFW and RWQCB jurisdiction; however, CDFW jurisdiction also includes adjacent riparian vegetation (i.e., scale broom scrub) that extends beyond the OHWM.

Feature-03 (Non-Jurisdictional)

A potential feature, mapped as Feature-03, is recorded at Transect 3 along the southernmost tip of the review area, where the project boundary extends southward between an equestrian facility and Sand Canyon Country Club (Figure 6). Dudek biologists investigated this feature due to the presence of a small stand of Fremont cottonwoods (*Populus fremontii* Association), as well as some visible topographic relief. Historical aerial imagery indicates that there was not a naturally occurring riverine feature in the area (Nationwide Environmental Title Research [NETR] 2023). The potential feature likely formed due to the construction of the adjacent golf course in 1999, which substantially altered the natural topography of the area. Aerial imagery from 2000 does show a small riverine feature had developed beginning about 450 feet south of Oak Springs Canyon Road in a bare-ground area to the west of the developed golf course greens and fairways (NETR 2023). This area likely receives waters from the irrigation of the golf course greens and fairways and overflow from the golf course during low-frequency storm events via a 3-foot-wide culvert pipe located at the southernmost extent. However, it does not appear to convey water with much regularity due to the feature's lack of a defined bed and bank or drainage patterns from 2002 to 2023 (Google Earth 2023, NETR 2023).

The bare-ground area became naturally vegetated after 2000 and is primarily big sage scrub (*Eriogonum fasciculatum - Artemisia tridentata* Association) along with a small patch of Fremont cottonwood forest and woodland (*Populus fremontii* Association). The feature does not exhibit clear OHWM indicators, such as a change in sediment texture or vegetative cover compared with adjacent areas that are positioned at a slightly higher topographic setting. No indicators of standing water were observed around the Fremont cottonwood stand during the delineation. While there is a downstream culvert that goes beneath Oak Springs Canyon Road and into Oak Spring Canyon Creek, no indicators of water were observed during the survey upstream or downstream of the culvert. Additionally, historical aerial imagery does not show hydrology north of Oak Springs Canyon Road that would indicate water flowing north from the culvert into Oak Spring Canyon Creek (Google Earth 2023, NETR 2023).

Fremont cottonwood is not on the Arid West National Wetland Plant List (USACE 2020), the soils mapped on site (Oak Glen gravelly sandy loam and Oak Glen sandy loam) are not hydric (USDA 2023b), and no hydrology of flowing or standing water was observed. As such, the feature would not fit the definition of a stream or water impoundment

that would be regulated as a streambed under CDFW jurisdiction, a water of the State under RWQCB jurisdiction, or a water of the U.S. under USACE jurisdiction.

5.1 Waters of the United States (USACE)

Approximately 14.28 acres of non-wetland waters potentially regulated by USACE were mapped within the Santa Clara River (Figure 5). Table 5 below lists all features within the review area that are potentially subject to USACE jurisdiction. A copy of the ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet is not submitted with this report because Table 5 in this section provides all of the information requested.[13]

Table 5. Potential USACE Aquatic Resource Summary for the Review Area[14]

Feature Name	Cowardin[1]	OHWM Indicators	Location (Latitude/Longitude; Decimal Degrees)	Acres/ Linear Feet[2]
Non-Wetland Waters				
Santa Clara River	Riverine, At-Least-Intermittent	CAST, CVS, CVC, BBS, SD, SB, SS, DP	34.424713°, -118.408099°; 34.422088°, -118.423180°	15.75/3,138
			Grand Total	**15.75/3,138**

Notes:
OHWM = ordinary high-water mark; NWW = non-wetland water; CAST = change in average sediment texture; BBS = break in bank slope; CVS = change in vegetation species; CVC = change in vegetation cover; DP = drainage patterns; SB = sediment benches; SD = sediment deposition; SS = surface scour.

1 Pursuant to Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979) and USACE Cowardin Codes for ORM Data Entry (USACE 2023b).

2 Totals may not sum due to rounding.

5.2 Waters of the State (RWQCB)

Approximately 19.53 acres of non-wetland waters potentially regulated by RWQCB were mapped within the Santa Clara River, Oak Spring Canyon Creek, Sand Canyon Creek, and a stormwater channel northeast of the intersection of Sand Canyon Road and Lost Canyon Road (Figure 6). Table 6 below lists all features within the review area that are subject to RWQCB regulation.

Table 6. RWQCB Aquatic Resource Summary for the Review Area

Feature Name	Location (Latitude/Longitude; Decimal Degrees)	Acreage/Linear Feet[1]
Non-Wetland Waters		
Santa Clara River	34.424713°, -118.408099°	14.28/2,838
Oak Spring Canyon Creek	34.417911°, -118.408469°	5.25/2,546
Sand Canyon Creek	34.419540°, 34.419540°	0.81/790
Stormwater Channel	34.419526°, -118.423505°	0.17/310

13 Minimum Standards Item 15 (ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet)

14 Minimum Standards Item 9 (Table Listing All Aquatic Resources)

Table 6. RWQCB Aquatic Resource Summary for the Review Area

Feature Name	Location (Latitude/Longitude; Decimal Degrees)	Acreage/Linear Feet[1]
	Grand Total	21.98/6,784

Notes:
RWQCB = Regional Water Quality Control Board
[1] Totals may not sum due to rounding.

5.3 CDFW Jurisdiction

Approximately 24.98 acres of streambed and adjacent riparian vegetation potentially regulated by CDFW were mapped within the Santa Clara River, Oak Spring Canyon Creek, Sand Canyon Creek, and a stormwater channel northeast of the intersection of Sand Canyon Road and Lost Canyon Road (Figure 6). Table 7 below lists all features within the review area that are subject to CDFW regulation.

Table 7. CDFW Aquatic Resource Summary for the Review Area

Feature Name	Location (Latitude/Longitude; Decimal Degrees)	Acreage/Linear Feet[1]
Streams		
Santa Clara River	34.424713°, -118.408099°	14.28/2,838
Oak Spring Canyon Creek	34.417911°, -118.408469°	5.25/2,546
Sand Canyon Creek	34.419540°, 34.419540°	0.81/790
Stormwater Channel	34.419526°, -118.423505°	0.17/310
	Subtotal	*21.98/6,784*
Adjacent Riparian Vegetation		
Santa Clara River	34.424484°, -118.408658°	3.00/----
	Total	24.98/6,784

Notes:
CDFW = California Department of Fish and Wildlife
[1] Totals may not sum due to rounding.

6 Results and Conclusions

Based on the jurisdictional delineation and review of relevant information provided in this Aquatic Resources Delineation Report, 14.28 acres of non-wetland waters potentially regulated by USACE were delineated within the review area. All USACE-jurisdictional areas were contained within the Santa Clara River channel (Feature-01), which is likely to be regulated by USACE given its downstream connection to a traditional navigable water (the Pacific Ocean). Additionally, the review area includes 21.98 acres of non-wetland waters potentially regulated by RWQCB, as well as 21.98 acres of streambed and 3.00 acres of adjacent riparian vegetation potentially regulated by CDFW, associated with both the Santa Clara River.

This report can be used by those agencies to determine if they would regulate the features described herein. The geographic information systems (GIS) data for the delineation is provided digitally. [15]

[15] Minimum Standards Item 20 (Digital Data)

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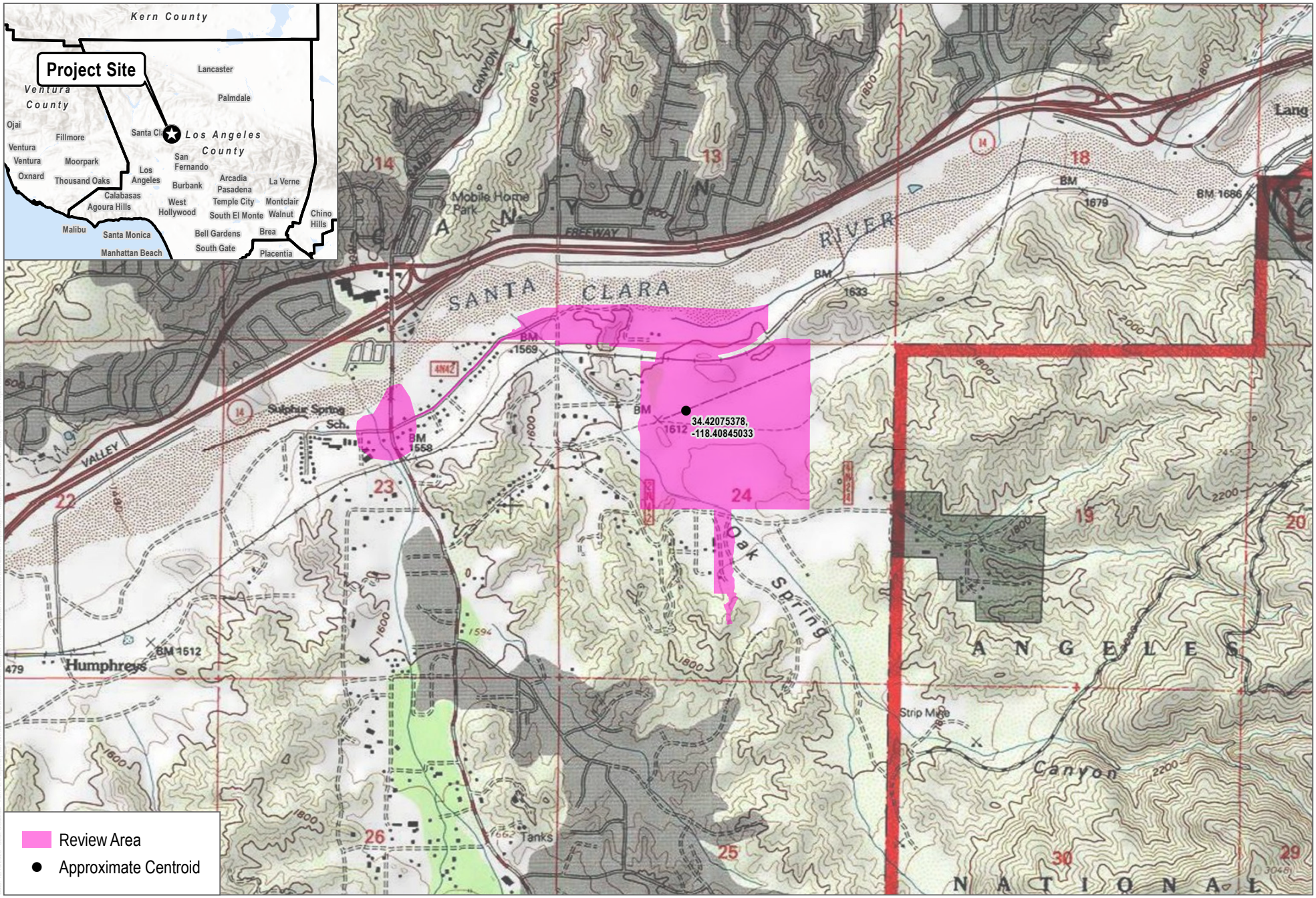
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SOURCE: USGS Topo 7.5-Minute Series

Mint Canyon Quadrangle - Township 4N Range 15W Section 24

DUDEK

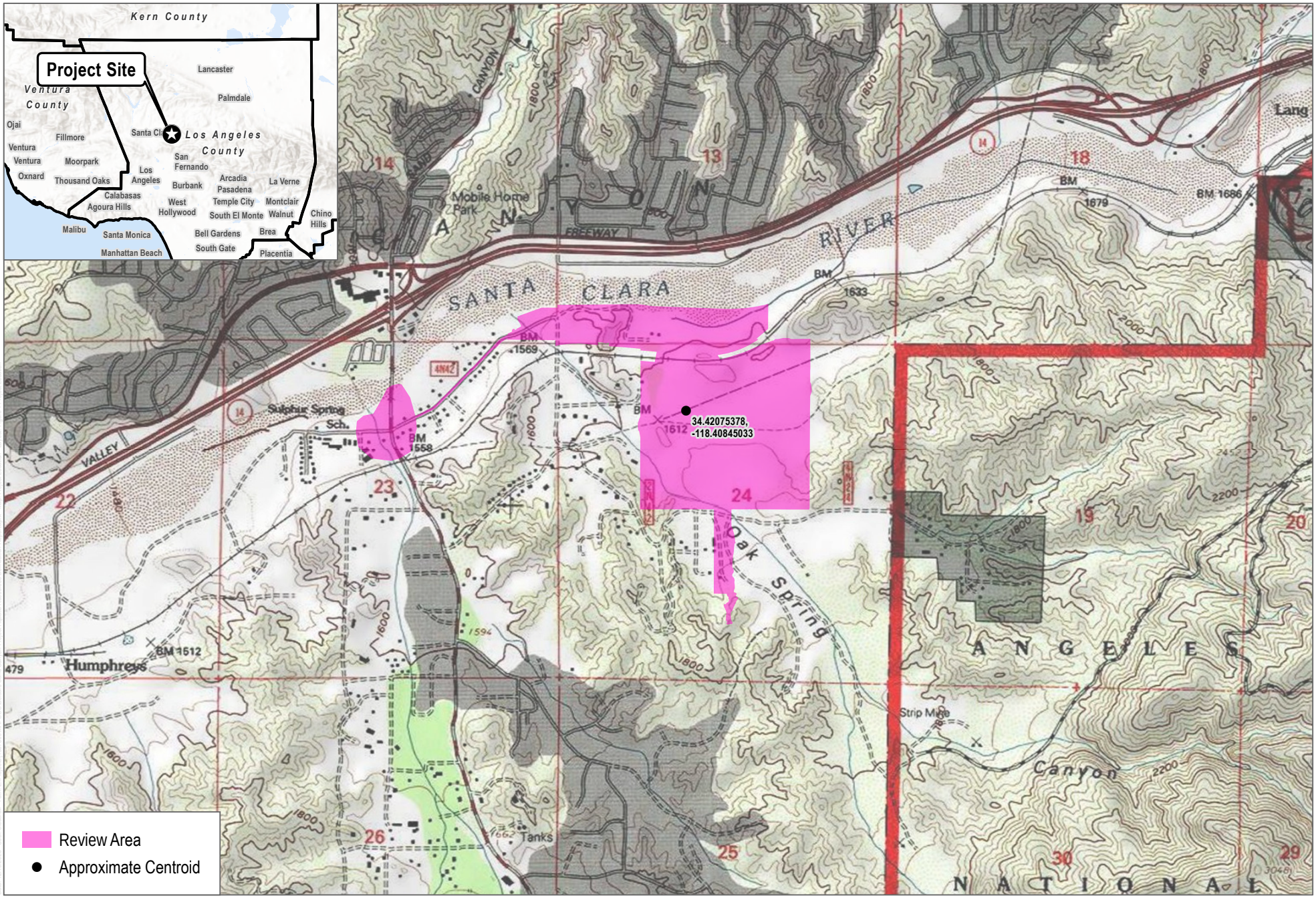
0 1,150 2,300 Feet

FIGURE 1

Project Location

Belcaro Sand Canyon Project Aquatic Resources Delineation Report

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SOURCE: USGS Topo 7.5-Minute Series

Mint Canyon Quadrangle - Township 4N Range 15W Section 24

DUDEK

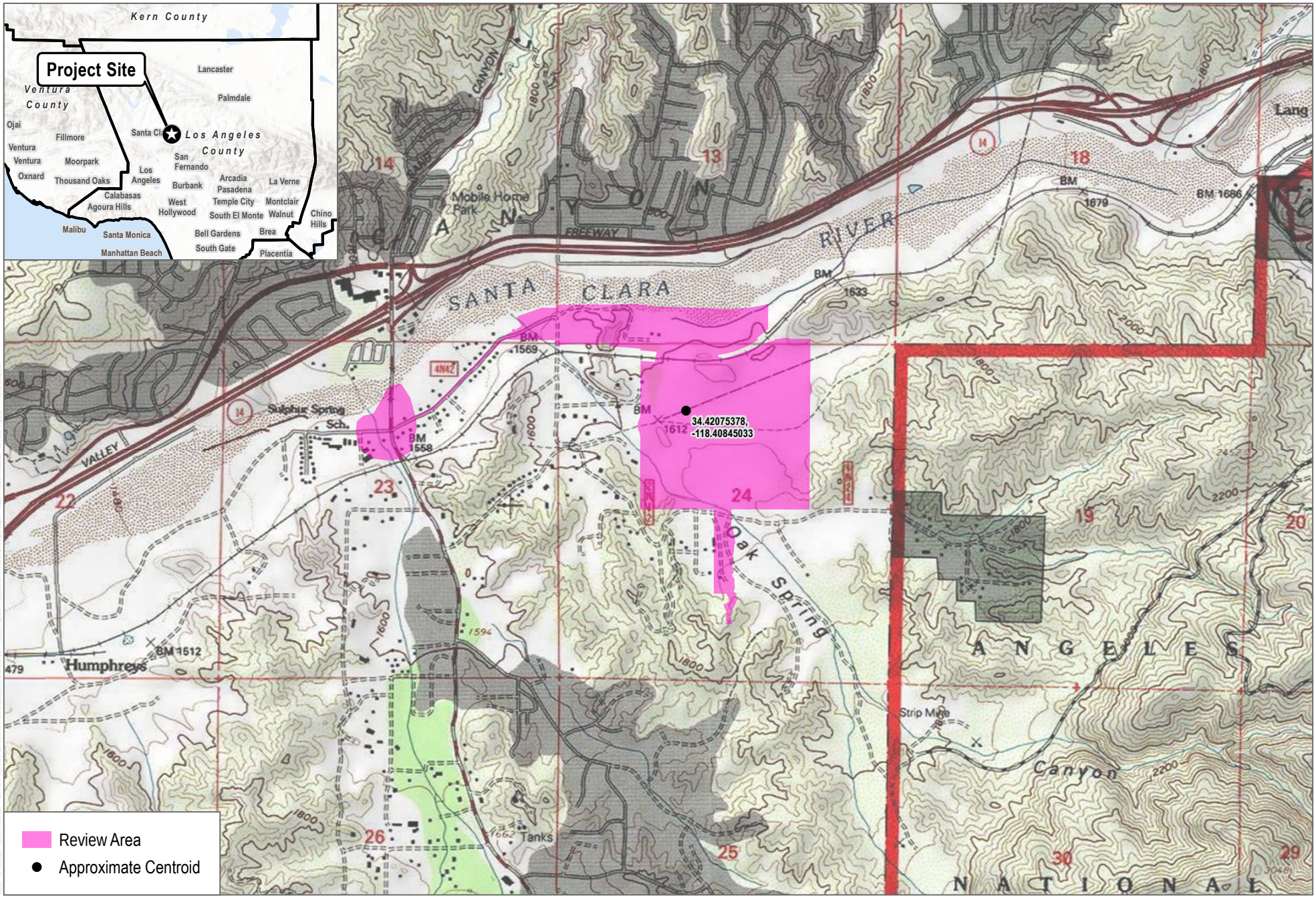
0 1,150 2,300 Feet

FIGURE 1

Project Location

Belcaro Sand Canyon Project Aquatic Resources Delineation Report

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SOURCE: USGS Topo 7.5-Minute Series

Mint Canyon Quadrangle - Township 4N Range 15W Section 24

DUDEK

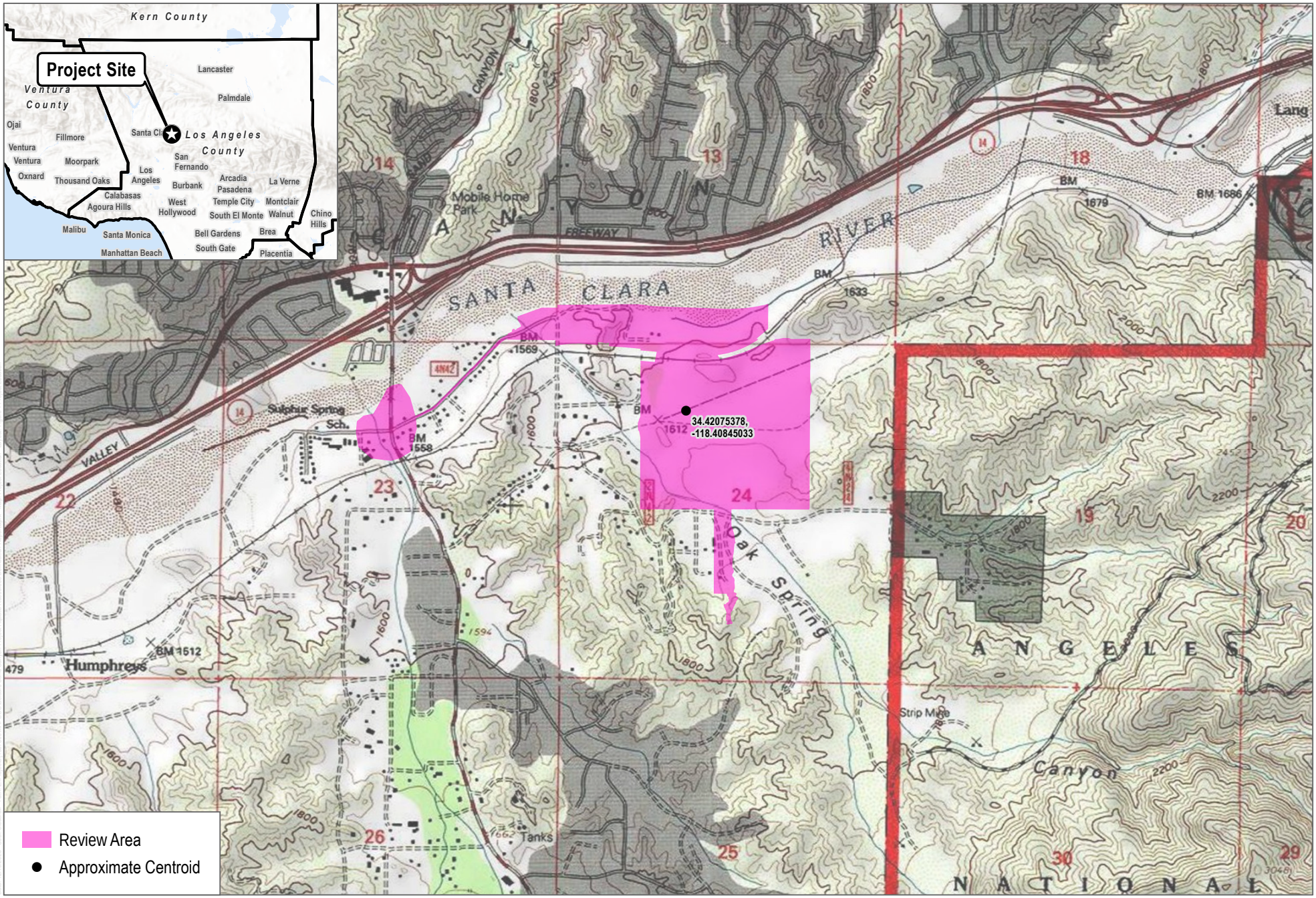
0 1,150 2,300 Feet

FIGURE 1

Project Location

Belcaro Sand Canyon Project Aquatic Resources Delineation Report

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SOURCE: USGS Topo 7.5-Minute Series

Mint Canyon Quadrangle - Township 4N Range 15W Section 24

DUDEK

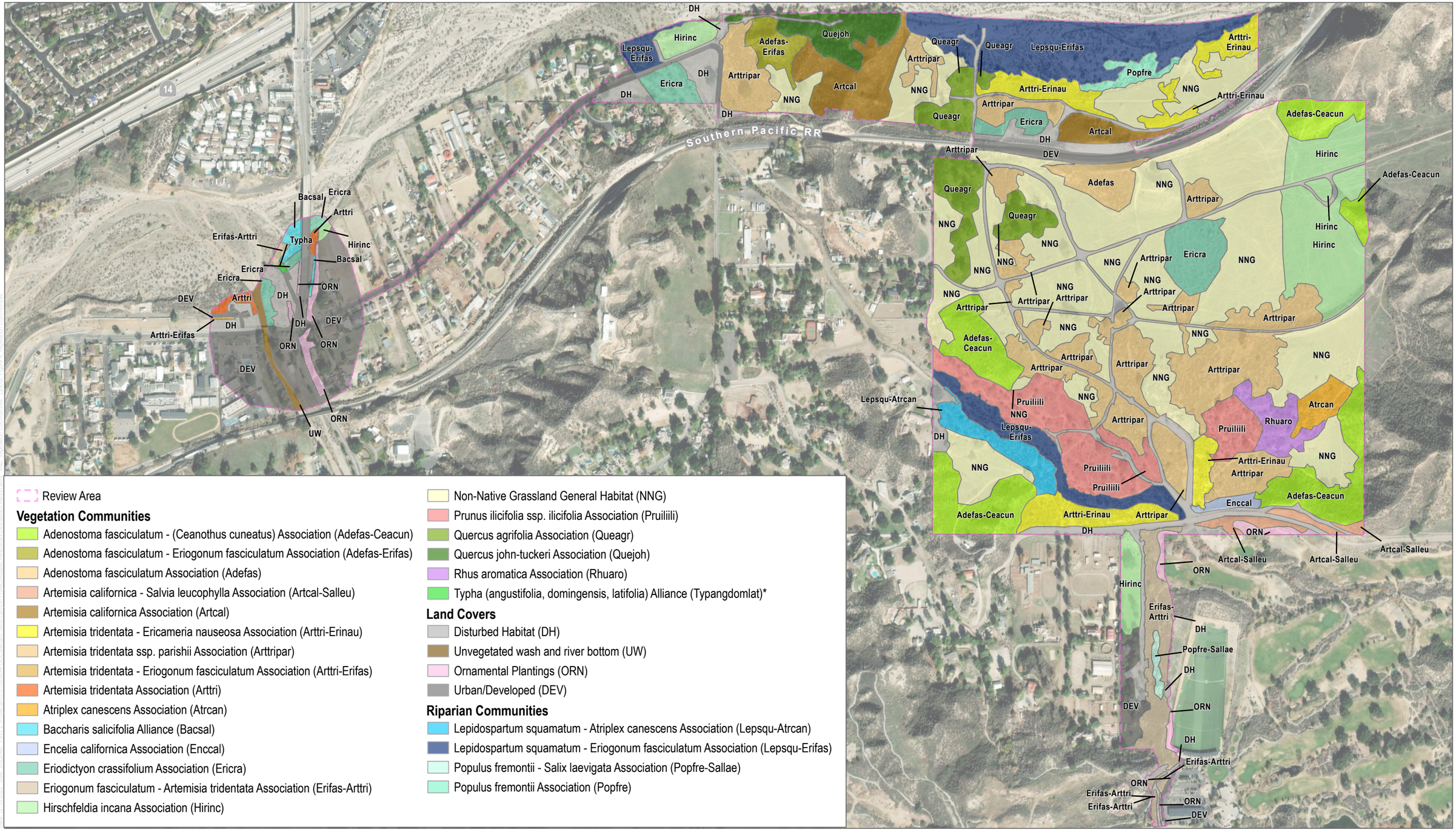
0 1,150 2,300 Feet

FIGURE 1

Project Location

Belcaro Sand Canyon Project Aquatic Resources Delineation Report

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Review Area

Vegetation Communities

- Adenostoma fasciculatum - (Ceanothus cuneatus) Association (Adefas-Ceacun)
- Adenostoma fasciculatum - Eriogonum fasciculatum Association (Adefas-Erifas)
- Adenostoma fasciculatum Association (Adefas)
- Artemisia californica - Salvia leucophylla Association (Artcal-Salleu)
- Artemisia californica Association (Artcal)
- Artemisia tridentata - Ericameria nauseosa Association (Arttri-Erinau)
- Artemisia tridentata ssp. parishii Association (Arttripar)
- Artemisia tridentata - Eriogonum fasciculatum Association (Arttri-Erifas)
- Artemisia tridentata Association (Arttri)
- Atriplex canescens Association (Atrcan)
- Baccharis salicifolia Alliance (Bacsal)
- Encelia californica Association (Enccal)
- Eriodictyon crassifolium Association (Ericra)
- Eriogonum fasciculatum - Artemisia tridentata Association (Erifas-Arttri)
- Hirschfeldia incana Association (Hirinc)
- Non-Native Grassland General Habitat (NNG)
- Prunus ilicifolia ssp. ilicifolia Association (Pruiliili)
- Quercus agrifolia Association (Queagr)
- Quercus john-tuckeri Association (Quejoh)
- Rhus aromatica Association (Rhuaro)
- Typha (angustifolia, domingensis, latifolia) Alliance (Typangdomlat)*

Land Covers

- Disturbed Habitat (DH)
- Unvegetated wash and river bottom (UW)
- Ornamental Plantings (ORN)
- Urban/Developed (DEV)

Riparian Communities

- Lepidospartum squamatum - Atriplex canescens Association (Lepsqu-Atrcan)
- Lepidospartum squamatum - Eriogonum fasciculatum Association (Lepsqu-Erifas)
- Populus fremontii - Salix laevigata Association (Popfre-Sallae)
- Populus fremontii Association (Popfre)

SOURCE: Maxar 12/8/2022

DUDEK

0 265 530 Feet

FIGURE 4

Vegetation Communities

Belcaro Sand Canyon Project Aquatic Resources Delineation Report

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Review Area
Topography 10-foot Contours
OHWM Transect
Photo Points

Jurisdictional Resources

USACE/RWQCB/CDFW (15.19 Acres)

N

0 275 550 Feet

Coordinate System: NAD 83 State Plane Zone 5 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: NAD 83
Vertical Datum: NAVD88
1 inch = 262.5 feet

Created on August 20, 2025

Made in accordance with the Final Map and Drawing Standards for the South Pacific Division Regulatory Program as established on August 6, 2012.

Imagery Source: Maxar 12/8/2022

SOURCE: Maxar 12/8/2022

FIGURE 5

Potential Jurisdictional Aquatic Resources - USACE

Belcaro Sand Canyon Project Aquatic Resources Delineation Report

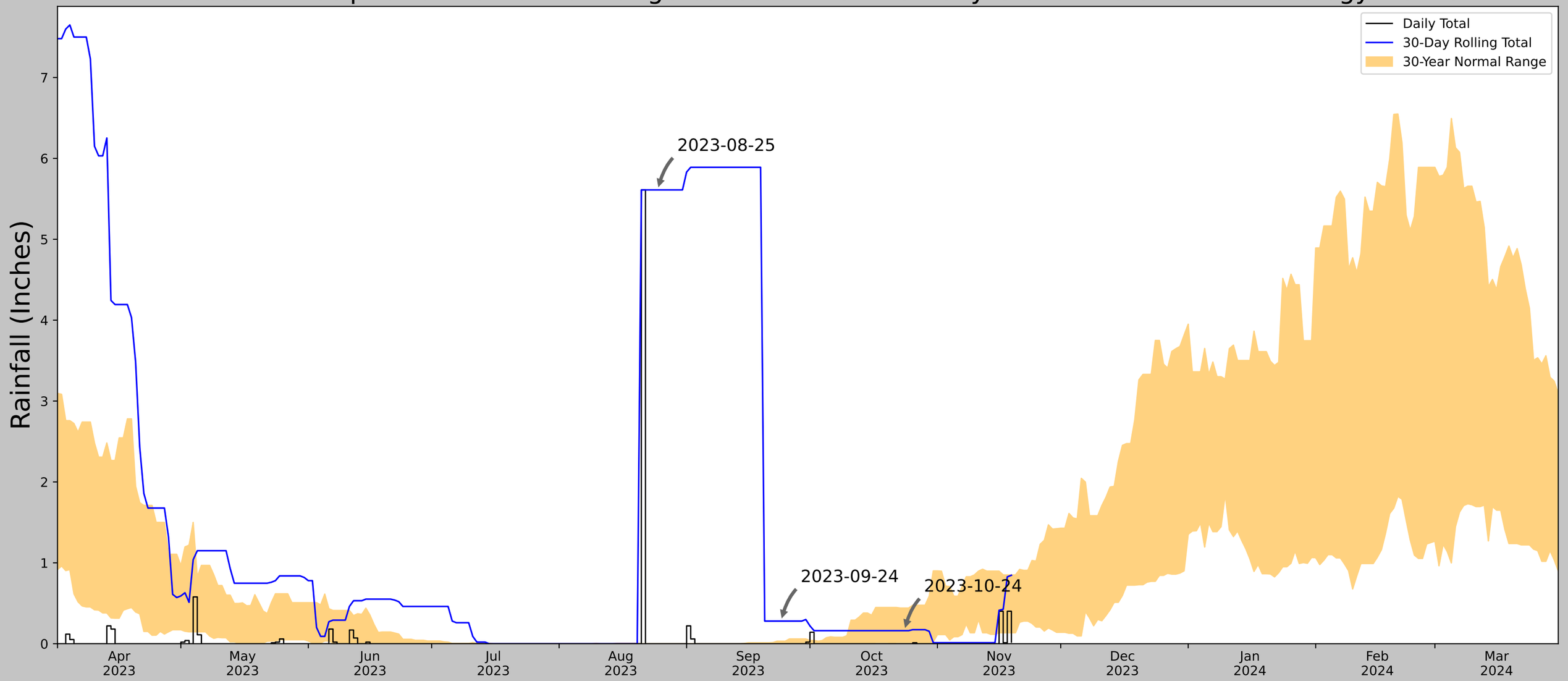
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Appendix A

Antecedent Precipitation Tool Output

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	34.419578189701, -118.406303732383
Observation Date	2023-10-24
Elevation (ft)	1633.43
Drought Index (PDSI)	Moderate wetness
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-10-24	0.016535	0.440945	0.161417	Normal	2	3	6
2023-09-24	0.0	0.031496	0.279528	Wet	3	2	6
2023-08-25	0.0	0.0	5.610236	Wet	3	1	3
Result							Wetter than Normal - 15

US Army Corps of Engineers

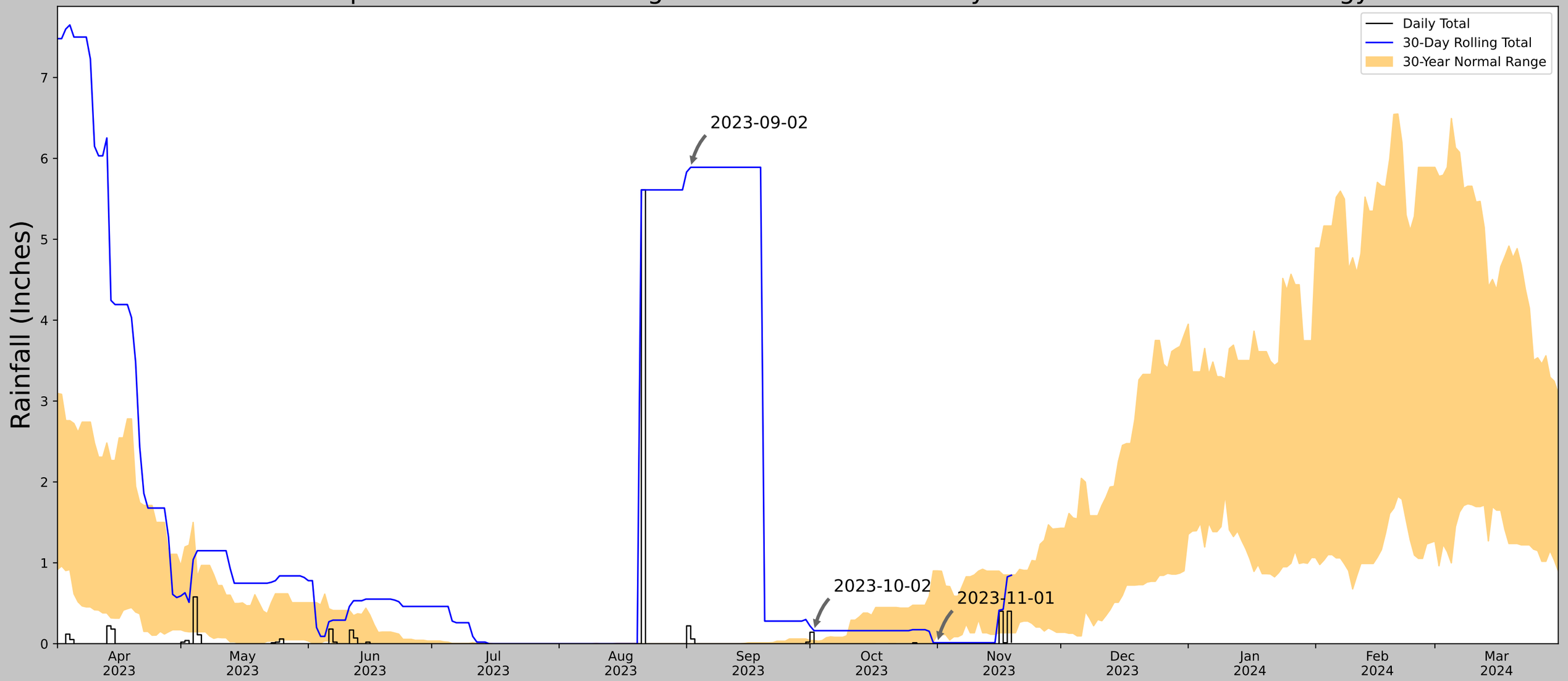
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PACOIMA DAM FC33A-E	34.3294, -118.4006	1549.869	6.238	83.561	3.328	9636	90
SAN FERNANDO 4.2 E	34.2793, -118.363	1238.845	4.073	311.024	3.1	53	0
CANYON COUNTRY 2.6 E	34.4268, -118.4275	1617.126	6.902	67.257	3.57	438	0
LA CRESCENTA FC251 C	34.2222, -118.2378	1544.948	11.885	4.921	5.407	33	0
NEWHALL	34.3667, -118.5667	1399.934	9.819	149.935	5.891	4	0
NEWHALL S FC32CE	34.3869, -118.5342	1232.94	8.594	316.929	6.591	122	0
NEWHALL 5NW	34.3933, -118.5939	1765.092	11.876	215.223	7.9	1066	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	34.419578189701, -118.406303732383
Observation Date	2023-11-01
Elevation (ft)	1633.43
Drought Index (PDSI)	Moderate wetness (2023-10)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-11-01	0.112205	0.900394	0.011811	Dry	1	3	3
2023-10-02	0.0	0.039764	0.161417	Wet	3	2	6
2023-09-02	0.0	0.0	5.889764	Wet	3	1	3
Result							Normal Conditions - 12

US Army Corps of Engineers

ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PACOIMA DAM FC33A-E	34.3294, -118.4006	1549.869	6.238	83.561	3.328	9636	89
SAN FERNANDO 4.2 E	34.2793, -118.363	1238.845	4.073	311.024	3.1	53	0
CANYON COUNTRY 2.6 E	34.4268, -118.4275	1617.126	6.902	67.257	3.57	438	1
LA CRESCENTA FC251 C	34.2222, -118.2378	1544.948	11.885	4.921	5.407	33	0
NEWHALL	34.3667, -118.5667	1399.934	9.819	149.935	5.891	4	0
NEWHALL S FC32CE	34.3869, -118.5342	1232.94	8.594	316.929	6.591	122	0
NEWHALL 5NW	34.3933, -118.5939	1765.092	11.876	215.223	7.9	1066	0

Appendix B
Data Forms

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-CO-R.

OMB Control No. 0710-XXXX

Approval Expires:

Project ID #: 15375	Site Name: Belcaro	Date and Time: November 1, 2023
Location (lat/long): 34.425193°, -118.410164°	Investigator(s): Lily Sam, Eilleen Salas	

Step 1 Site overview from remote and online resources

Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [x] satellite imagery
- [ ] land use maps
- [x] aerial photos
- [x] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources. Were there any recent extreme events (floods or drought)?

Residential developments and State Route 14 confine the channel to the north. Tropical Storm Hilary dropped approximately 5.5 inches of rain over the region within a span of a few days in late August 2023.

Step 2 Site conditions during field assessment

First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

Feature-01 is the Santa Clara River, which is composed of a larger active floodplain and a low-flow channel. The larger floodplain unit is generally vegetated with riparian scrub (i.e., scale broom scrub) and scattered stands of Fremont cottonwood forest and woodland along the banks. The bank is steeply cut, almost vertically, along the southern bank. The active floodplain exhibits significant braiding, sediment sorting, surface scour, benches, and presence of defined bed and bank. Surface flow was observed within the low-flow channel during the May 2023 reconnaissance survey (dry season). The low-flow is unvegetated and meanders across the width of the active floodplain.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.

OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM.

OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators

- [x] **Break in slope:** a
  - [x] *on the bank:* a
  - [ ] *undercut bank:*
  - [ ] *valley bottom:*
  - [ ] Other: _____
- [x] **Shelving:** a
  - [x] *shelf at top of bank:* a
  - [ ] *natural levee:*
  - [ ] *man-made berms or levees:*
  - [ ] *other berms:* _____
- [x] **Channel bar:** b
  - [x] *shelving (berms) on bar:* b
  - [x] *unvegetated:* b
  - [x] *vegetation transition (go to veg. indicators)* x
  - [x] *sediment transition (go to sed. indicators)* x
  - [ ] *upper limit of deposition on bar:*
- [x] **Instream bedforms and other bedload transport evidence:** b
  - [x] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)* b
  - [x] *bedforms (e.g., poofs, riffles, steps, etc.):* b
  - [x] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)* b
- [x] **Secondary channels:** b

Sediment indicators

- [x] **Soil development:** a
- [x] **Changes in character of soil:** x
- [ ] **Mudcracks:**
- [x] **Changes in particle-sized distribution:** b
  - [x] *transition from* loam to gravel
  - [x] *upper limit of sand-sized particles*
  - [ ] *silt deposits:*

Vegetation Indicators

- [x] **Change in vegetation type and/or density:** b

Check the appropriate boxes and select the general vegetation change *(e.g., graminoids to woody shrubs).* ***Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.***

- [x] *vegetation absent to:* woody shrubs
- [ ] *moss to:*
- [ ] *forbs to:*
- [ ] *graminoids to:*
- [x] *woody shrubs to:* deciduous trees
- [ ] *deciduous trees to:*
- [ ] *coniferous trees to:*
- [ ] **Vegetation matted down and/or bent:**
- [ ] **Exposed roots below intact soil layer:**

Ancillary indicators

- [x] **Wracking/presence of organic litter:** x
- [ ] **Presence of large wood:**
- [x] **Leaf litter disturbed or washed away:** b
- [ ] **Water staining:**
- [ ] **Weathered clasts or bedrock:**

Other observed indicators?

Describe:

Step 4 Is additional information needed to support this determination?

- [ ] Yes
- [x] No

If yes, describe and attach information to datasheet:

Project ID #: 15375

Step 5 Describe rationale for location of OHWM

OHWM was determined by a number of field indicators, including sediment sorting, sediment scour, steeply cut banks, gravel and cobble benching, changes in sediment textures and vegetative cover, changes in vegetation species, channel braiding, and presence of a bed and bank. All of these indicators can be seen in the photo described below.

Additional observations or notes

Data for this form were collected at Transect 4 of the Aquatic Resources Delineation Report.

Attach a photo log of the site. Use the table below, or attach separately.

Photo log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs and include descriptions in the table below.

Number photographs in the order that they are taken. Attach photographs and include annotations of features.

Photo Number	Photograph description
Photo 6	View of low-flow channel with surface flow present during May 2023 visit. Active floodplain and banks are visible in adjacent areas
	and the background of the photo.

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-CO-R.

OMB Control No. 0710-XXXX

Approval Expires:

Project ID #: 15375	Site Name: Belcaro	Date and Time: October 24, 2023
Location (lat/long): 34.418149°, -118.408743°	Investigator(s): Lily Sam and Eilleen Salas	

Step 1 Site overview from remote and online resources

Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [x] satellite imagery
- [ ] land use maps
- [x] aerial photos
- [x] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.

Were there any recent extreme events (floods or drought)?

A golf course is located downstream to the south and directly adjacent to the feature. Otherwise, there is some residential developments surrounding the property. Tropical storm Hilary dropped approximately 5.5 inches of rain over the area within a span of a few days in late August 2023.

Step 2 Site conditions during field assessment

First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

Channel meanders from the middle of the southern limits of the site up to the northwest corner and outlets into the Santa Clara River. Some portions of the bank are highly eroded and steep while it appears that some flatter portions are a floodplain. Vegetation within the channel is sparse. Low flow channels contain loose, sandy soils where areas above OHWM are more compacted and have a higher desnity of vegetation (rabbitbrush and broomscale scrub).

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.

OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM.

OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators

- [x] **Break in slope:** b
  - [x] *on the bank:* x
  - [ ] *undercut bank:*
  - [ ] *valley bottom:*
  - [ ] Other: _____
- [x] **Shelving:** a
  - [x] *shelf at top of bank:* x
  - [ ] *natural levee:*
  - [ ] *man-made berms or levees:*
  - [ ] *other berms:* _____
- [x] **Channel bar:** a
  - [ ] *shelving (berms) on bar:*
  - [x] *unvegetated:* b
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar:*
- [ ] **Instream bedforms and other bedload transport evidence:**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., poofs, riffles, steps, etc.):*
  - [ ] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*
- [x] **Secondary channels:** x

Sediment indicators

- [x] **Soil development:** x
- [ ] **Changes in character of soil:**
- [ ] **Mudcracks:**
- [x] **Changes in particle-sized distribution:** x
  - [x] *transition from* Compat to Sandy
  - [ ] *upper limit of sand-sized particles*
  - [x] *silt deposits:*

Vegetation Indicators

- [x] **Change in vegetation type and/or density:** x

  Check the appropriate boxes and select the general vegetation change *(e.g., graminoids to woody shrubs).* ***Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.***

  - [x] *vegetation absent to:* woody shrubs
  - [ ] *moss to:*
  - [ ] *forbs to:*
  - [ ] *graminoids to:*
  - [ ] *woody shrubs to:*
  - [ ] *deciduous trees to:*
  - [ ] *coniferous trees to:*
- [ ] **Vegetation matted down and/or bent:**
- [ ] **Exposed roots below intact soil layer:**

Ancillary indicators

- [x] **Wracking/presence of organic litter:** x
- [ ] **Presence of large wood:**
- [ ] **Leaf litter disturbed or washed away:**
- [ ] **Water staining:**
- [ ] **Weathered clasts or bedrock:**

Other observed indicators?

Describe:

Step 4 Is additional information needed to support this determination?

- [ ] Yes
- [x] No

If yes, describe and attach information to datasheet:

Project ID #: 15375

Step 5 Describe rationale for location of OHWM

OHWM was determined by a number of field indicators, including sedimentation, exposure of rocks and small boulders, steeply eroded banks, sandbarring and shelving occuring within the feature, change in density of vegetation and wrack lines. All of these indicators can be seen in the photo exhibit as described below. No water or hydric vegetation was present within the feature at the time of the survey.

Additional observations or notes

Data for this form were collected at Transect 1 and Transect 2 of the Aquatic Resources Delineation Report.

Attach a photo log of the site. Use the table below, or attach separately.

Photo log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs and include descriptions in the table below.

Number photographs in the order that they are taken. Attach photographs and include annotations of features.

Photo Number	Photograph description
Photo 1	View within channel looking north. Sedimentation and erosion present.
Photo 2	View of eastern bank, clear cut erosion and transition between sandy sediment and compacted upland areas. Lack of veg within cha
Photo 3	More channelized northern portion of feature. Steep cut banks on either side. Some wrack present in foreground.
Photo 4	Facing west. Steep cut banks showing limits of feature.

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-CO-R.

OMB Control No. 0710-XXXX

Approval Expires:

Project ID #: 15375	Site Name: Belcaro	Date and Time: November 1, 2023
Location (lat/long): 34.414476°, -118.406279°	Investigator(s): Lily Sam, Eilleen Salas	

Step 1 Site overview from remote and online resources

Check boxes for online resources used to evaluate site:

- ☐ gage data
- ☐ LiDAR
- ☐ geologic maps
- ☐ climatic data
- ☒ satellite imagery
- ☐ land use maps
- ☒ aerial photos
- ☒ topographic maps
- ☐ Other: _____

Describe land use and flow conditions from online resources.

Were there any recent extreme events (floods or drought)?

A golf course is located directly to the east of the feature and a few residences and equestrian facility are located to the west. Tropical Storm Hilary dropped approximately 5.5 inches of rain over the region within a span of a few days in late August 2023.

Step 2 Site conditions during field assessment

First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

This feature is a slight depression or swale connected to the adjacent golf course via a 3-foot wide culvert pipe located at the southernmost end. The feature likely receives overflow from the golf course during low-frequency storm events. The culvert does not apear to convey water with much regularity due to the feature's lack of a bed and bank, flow lines, sediment sorting, or sedimentation. The feature also does not connect flows further downstream and does not exhibit a change in sediment texture or vegetative cover as compared with adjacent areas with a slightly higher topographic setting.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.

OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM.

OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators

- ☐ **Break in slope:**
  - ☐ *on the bank:*
  - ☐ *undercut bank:*
  - ☐ *valley bottom:*
  - ☐ Other: _____
- ☐ **Shelving:**
  - ☐ *shelf at top of bank:*
  - ☐ *natural levee:*
  - ☐ *man-made berms or levees:*
  - ☐ *other berms:* _____
- ☐ **Channel bar:**
  - ☐ *shelving (berms) on bar:*
  - ☐ *unvegetated:*
  - ☐ *vegetation transition (go to veg. indicators)*
  - ☐ *sediment transition (go to sed. indicators)*
  - ☐ *upper limit of deposition on bar:*
- ☐ **Instream bedforms and other bedload transport evidence:**
  - ☐ *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - ☐ *bedforms (e.g., poofs, riffles, steps, etc.):*
  - ☐ *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*
- ☐ **Secondary channels:**

Sediment indicators

- ☐ **Soil development:**
- ☐ **Changes in character of soil:**
- ☐ **Mudcracks:**
- ☐ **Changes in particle-sized distribution:**
  - ☐ *transition from* _____ to _____
  - ☐ *upper limit of sand-sized particles*
  - ☐ *silt deposits:*

Vegetation Indicators

- ☐ **Change in vegetation type and/or density:**

  Check the appropriate boxes and select the general vegetation change *(e.g., graminoids to woody shrubs).* ***Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.***

  - ☐ *vegetation absent to:*
  - ☐ *moss to:*
  - ☐ *forbs to:*
  - ☐ *graminoids to:*
  - ☐ *woody shrubs to:*
  - ☐ *deciduous trees to:*
  - ☐ *coniferous trees to:*
- ☐ **Vegetation matted down and/or bent:**
- ☐ **Exposed roots below intact soil layer:**

Ancillary indicators

- ☐ **Wracking/presence of organic litter:**
- ☐ **Presence of large wood:**
- ☐ **Leaf litter disturbed or washed away:**
- ☐ **Water staining:**
- ☐ **Weathered clasts or bedrock:**

Other observed indicators?

Describe:

Step 4 Is additional information needed to support this determination?

☐ Yes ☐ No

If yes, describe and attach information to datasheet:

Project ID #: 15375

Step 5 Describe rationale for location of OHWM

No OHWM was detected within this swale feature.

Additional observations or notes

Data for this form were collected at Transect 3 of the Aquatic Resources Delineation Report.

Attach a photo log of the site. Use the table below, or attach separately.

Photo log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs and include descriptions in the table below.

Number photographs in the order that they are taken. Attach photographs and include annotations of features.

Photo Number	Photograph description
Photo 5	View of swale feature where clear OHWM indicators were not detected.

Appendix C
Review Area Photos



Photo 1. Facing north. View Oak Spring Canyon Creek at Transect 1, where sedimentation and erosion were observed within the channel.



Photo 2. Facing northwest. View of eastern bank of Oak Spring Canyon Creek, where clear cut bank and transition between sandy sediment and compacted upland soils are detected along the ordinary high water mark (OHWM). The photo also depicts a lack of vegetation that is prevalent within the channel.



Photo 3. Facing northwest. View of Oak Spring Canyon Creek at Transect 2, where the creek becomes more channelized further downstream. Banks are steeply cut on either side, with wracking present in the foreground.



Photo 4. Facing southwest. View of western bank of Oak Spring Canyon Creek, showing steeply cut banks along the OHWM.



Photo 5. Facing north. View of potential swale at Transect 3, where no clear OHWM indicators were observed in the field.



Photo 6. Facing east-northeast. View of Santa Clara River at Transect 4, where the low-flow channel was observed carrying surface flow in the May 2023 reconnaissance survey. The adjacent active floodplain contains riparian vegetation (i.e., scale broom scrub, Fremont cottonwood forest and woodland), surface scour, sediment sorting, benching, wracking, and steeply cut banks.



Photo 7. Facing north. View of Sand Canyon Creek north of the Lost Canyon Road.



Photo 8. Facing north. View of stormwater channel adjacent to Sand Canyon Road. Peruvian pepper trees on the adjacent residential parcel are along the eastern bank.



Photo 1. Facing north. View Oak Spring Canyon Creek at Transect 1, where sedimentation and erosion were observed within the channel.



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Photo 7. Facing north. View of Sand Canyon Creek north of the Lost Canyon Road.



Photo 8. Facing north. View of stormwater channel adjacent to Sand Canyon Road. Peruvian pepper trees on the adjacent residential parcel are along the eastern bank.

Appendix D
Protocol Coastal California Gnatcatcher Survey Report

August 7, 2024 15375

U.S. Fish and Wildlife Service
Attn: Recovery Permit Coordinator
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

Subject: Focused California Gnatcatcher Survey Results for the Belcaro Sand Canyon Project, City of Santa Clarita, California

Dear Recovery Permit Coordinator:

This report documents the results of protocol-level presence/absence surveys for the coastal California gnatcatcher (*Polioptila californica californica*; hereafter, gnatcatcher). Focused surveys were conducted throughout all areas of suitable habitat for the Belcaro Sand Canyon Project (Project) located in the City of Santa Clarita, California (Figure 1, Project Location). There are approximately 76.54 acres of suitable habitat for gnatcatcher on the Project site (Figure 2, California Gnatcatcher Survey Area).

The gnatcatcher is a federally listed threatened species and a California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC). It is closely associated with coastal sage scrub habitat and typically occurs below 950 feet elevation and on slopes less than 40% (Atwood 1990). The species is threatened primarily by loss, degradation, and fragmentation of coastal sage scrub habitat, and is also impacted by brown-headed cowbird (*Molothrus ater*) nest parasitism (Braden et al. 1997).

1 Location and Existing Conditions

The approximately 209-acre Project site is located south of State Route 14 (SR-14) at 34.419558°N and 118.406304°W within the City of Santa Clarita, California (Figure 1, Project Location). The Project site is generally located south of SR-14, north of Robinson Ranch Road, east of Sand Canyon Road, and west of the San Gabriel Mountains National Monument within Township 4 North, Range 15 West, Sections 13, 14, 23, and 24 of the San Bernardino meridian, as depicted on the U.S. Geological Survey (USGS) Mint Canyon, California 7.5-minute topographic quadrangle map (USGS 2024).

The undeveloped Project site is situated in a low lying area between regional mountain ranges and along the southern boundary of the Santa Clara River. As such, the Project site is relatively flat with a few pronounced hills in the northwest and southwest portions of the site. The Project site is intersected by the Southern Pacific Railroad and dirt roads and trails create a web of access connections throughout the site (Figure 2, California Gnatcatcher Survey Area). Elevations on the Project site range from approximately 1,560 feet above mean sea level (amsl) along the Santa Clara River to 1,720 feet amsl along the southern hillside.

2 Vegetation Communities

Vegetation communities and land uses within the Project site were previously mapped in accordance with the California Department of Fish and Wildlife (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018) and the California Native Plant Society (CNPS) Guideline for Mapping Rare Vegetation (CNPS 2011). Natural vegetation communities were classified using the California Natural Community List (CDFW 2023), which is based on A Manual of California Vegetation, Second Edition (Sawyer et al. 2009) and A Manual of California Vegetation, Online Edition (CNPS 2024), where feasible, with modifications to accommodate the lack of conformity of the observed communities using Oberbauer et al. (2008) and Jones and Stokes (1993).

The Project site includes a variety of native and non-native upland vegetation communities and developed areas. Twenty-four vegetation community associations and land covers were identified within the Project site, which are shown in Figure 3 (Survey Results). Eleven of these mapped associations totaling 76.54 acres were identified as potentially suitable gnatcatcher habitat, and are summarized in Table 1.

Table 1. Suitable Vegetation Communities within the Project Site

Vegetation Community	Association	Acres
Coastal Scrub		
Big Sagebrush Scrub	*Artemisia tridentata - Ericameria nauseosa* Association (Arttri-Erinau)	8.60
	Artemisia tridentata ssp. parishii Association (Arttripar)	28.02
California Brittle Bush–Ashy Buckwheat Scrub	*Encelia californica* Association (Enccal)	0.63
California Buckwheat Scrub	*Eriogonum fasciculatum - Artemisia tridentata* Association (Erifas-Arttri)	3.24
California Sagebrush–(Purple Sage) Scrub	*Artemisia californica* Association (Artcal)	6.76
	Artemisia californica - Salvia leucophylla Association (Artcal-Salleu)	1.43
Deerweed–Silver Lupine–Yerba Santa Scrub	*Eriodictyon crassifolium* Association (Ericra)	5.67
Fourwing Saltbush Scrub	*Atriplex canescens* Association (Atrcan)	1.53
	Coastal Scrub Subtotal[1]	*55.87*
Chaparral		
Chamise Chaparral	*Adenostoma fasciculatum – Eriogonum fasciculatum* Association (Adefas-Erifas)	1.79
	Chaparral Subtotal[1]	*1.79*
Riparian Scrub		
Scale Broom Scrub	*Lepidospartum squamatum - Atriplex canescens* Association (Lepsqu-Atrcan)	2.45
	Lepidospartum squamatum - Eriogonum fasciculatum Association (Lepsqu-Erifas)	16.42
	Riparian Scrub Subtotal[1]	*18.88*
	Total[1]	**76.54**

Note: [1] Totals may not sum due to rounding.

Coastal Scrub

Big Sagebrush Scrub

Big sagebrush scrub alliance communities feature big sagebrush (*Artemisia tridentata*) as the dominant or co-dominant species in the shrub canopy and can also include yellow rabbitbrush (*Chrysothamnus viscidiflorus*), joint-fir (*Ephedra* spp.), California buckwheat (*Eriogonum fasciculatum*), rubber rabbitbrush (*Ericameria nauseosa*), bitter brush (*Purshia tridentata*), desert gooseberry (*Ribes velutinum*), and spineless horsebrush (*Tetradymia canescens*). Communities within this alliance typically occur in deep, well drained, loamy to sandy soils on plains, alluvial fans, toes of slopes, lower slopes, valley bottoms, hillsides, ridges, stream channels, and dry washes (CNPS 2024). Big sagebrush scrub occurs throughout the central portion of the project site. Associated species observed within this alliance in the field included thick leaf yerba santa (*Eriodictyon crassifolium*), rubber rabbitbrush (*Ericameria nauseosa* var. *hololueca*), California buckwheat, shortpod mustard (*Hirschfeldia incana*), and tree tobacco (*Nicotiana glauca*). Two associations within the big sagebrush scrub alliance were included in the Survey Area: *Artemisia tridentata* ssp. *parishii* association and *Artemisia tridentata–Ericameria nauseosa* association.

California Brittle Bush–Ashy Buckwheat Scrub

California brittlebush–ashy buckwheat scrub alliance communities feature California brittle bush (*Encelia californica*) and/or ashy buckwheat (*Eriogonum cinereum*) as dominant or co-dominant species in the shrub canopy, and can also include California sagebrush (*Artemisia californica*), coyote bush (*Baccharis pilularis*), bush monkeyflower (*Diplacus aurantiacus*), California buckwheat, chaparral yucca (*Hesperoyucca whipplei*), Menzies's golden bush (*Isocoma menziesii*), common deer weed (*Acmispon glaber*), laurel sumac (*Malosma laurina*), black sage (*Salvia mellifera*), and other common coastal sage scrub species. Communities within this alliance typically occur in soils formed in sandstone, shale, or volcanic substrates on exposed, steep slopes (CNPS 2024). California brittle bush–ashy buckwheat scrub is mapped on a north-facing slope in the southeastern corner of the project site. Associated species observed within this alliance in the field included purple sage (*Salvia leucophylla*), California sagebrush, and California buckwheat. The only association within the California brittlebush–ashy buckwheat scrub alliance included in the Survey Area was the *Encelia californica* association.

California Buckwheat Scrub

California buckwheat scrub alliance communities feature California buckwheat as the dominant or co-dominant species in the shrub canopy, and can also include California sagebrush, bush mallow (*Malacothamnus fasciculatus*), bush monkeyflower, California brittle bush, Menzies's golden bush, coyote bush, common deer weed, black sage, and white sage (*Salvia apiana*). Communities within this alliance typically occur in well drained, coarse soils on upland slopes, arroyos, channels, washes, and rarely flooded low-gradient deposits (CNPS 2024a). California buckwheat scrub is mapped on slopes in the southernmost tip of the project site. Associated species observed within this alliance in the field included shortpod mustard, white sage, and Parish's big sagebrush (*Artemisia tridentata* ssp. *parishii*). The only association within the California buckwheat scrub alliance included in the Survey Area was the *Eriogonum fasciculatum–Artemisia tridentata* association.

California Sagebrush–(Purple Sage) Scrub

California sagebrush–(purple sage) scrub alliance communities feature California sagebrush and sometimes purple sage as the dominant or co-dominant species in the shrub canopy. This alliance can also include chamise

(*Adenostoma fasciculatum*), coyote bush, bush monkeyflower, California brittle bush, narrowleaf goldenbush (*Ericameria linearifolia*), California buckwheat, golden-yarrow (*Eriophyllum confertiflorum*), chaparral yucca, Menzies' goldenbush, laurel sumac, coast pricklypear (*Opuntia littoralis*), sugarbush (*Rhus ovata*), white sage, black sage, and poison oak (*Toxicodendron diversilobum*). Communities within this alliance typically occur in alluvial or colluvial soils on variable slopes that are usually steep and rarely flooded or low-gradient deposits along streams (CNPS 2024). California sagebrush–(purple sage) scrub is mapped on the slopes north of the railroad as well as the southeastern corner of the project site. Associated species observed within this alliance in the field included chamise, chaparral yucca, California brittle bush, and Parish's big sagebrush. Two associations within the California sagebrush–(purple sage) scrub alliance were included in the Survey Area: *Artemisia californica* association and *Artemisia californica–Salvia leucophylla* association.

Deerweed–Silver Lupine–Yerba Santa Scrub

Deerweed–silver lupine–yerba santa scrub alliance communities feature common deer weed, bush poppy (*Dendromecon rigida*), California yerba santa (*Eriodictyon californicum*), thick leaf yerba santa, poodle-dog bush (*Eriodictyon parryi*), and/or silver lupine (*Lupinus albifrons*) as dominant or co-dominant species in the shrub canopy. This alliance can also include chamise, California sagebrush, coyote bush, buck brush (*Ceanothus cuneatus*), sand-aster (*Corethrogyne filaginifolia*), bush monkeyflower, narrowleaf goldenbush, California buckwheat, golden-yarrow, sawtooth golden bush (*Hazardia squarrosa*), slender sunflower (*Helianthus gracilentus*), sugarbush, white sage, blue elderberry (*Sambucus mexicana*), and poison oak. Communities within this alliance typically occur on exposed and somewhat steep slopes in open settings (CNPS 2024). Deerweed–silver lupine–yerba santa scrub is mapped in the central and northern portion of the project site. Associated species observed within this alliance in the field were fairly limited as the stands were quite monotypic, but shortpod mustard and Parish's big sagebrush were observed along the edges. The only association within the deerweed–silver lupine–yerba santa scrub alliance included in the Survey Area was the *Eriodictyon crassifolium* association.

Fourwing Saltbush Scrub

Fourwing saltbush scrub alliance communities feature fourwing saltbush (*Atriplex canescens*) as dominant or co-dominant species in the shrub canopy and can also include white bursage (*Ambrosia dumosa*), cheesebush (*Ambrosia salsola*), shadscale (*Atriplex confertifolia*), allscale (*Atriplex polycarpa*), yellow rabbitbrush, bladderpod (*Peritoma arborea*), mormon tea (*Ephedra viridis*), spiny hop sage (*Grayia spinosa*), creosote (*Larrea tridentata*), and bush seepweed (*Suaeda nigra*). Communities within this alliance typically occur in carbonate-rich, alkaline, sandy or sandy clay loams on playas, alluvial fans, rolling hills, lake deposits, or streambeds (CNPS 2024). Fourwing saltbush scrub is mapped in the southeastern portion of the project site. Associated species observed within this alliance included chamise and shortpod mustard. The only association within the fourwing saltbush scrub alliance included in the Survey Area was the *Atriplex canescens* association.

Chaparral

Chamise Chaparral

Chamise chaparral alliance communities feature chamise as the dominant species in the shrub canopy along with redshank (*Adenostoma sparsifolium*), manzanitas (*Arctostaphylos* spp.), ceanothus (*Ceanothus* spp.), bush monkeyflower, California buckwheat, chaparral yucca, toyon (*Heteromeles arbutifolia*), scrub oak (*Quercus berberidifolia*), interior live oak (*Quercus wislizeni*), white sage, purple sage, black sage, and poison oak.

Communities within this alliance typically occur in shallow soils over colluvial material or various types of bedrock on a variety of topographic settings (CNPS 2024). Chamise chaparral occurs on slopes throughout the edges the project site. Associated species observed within this alliance in the field included soft brome (*Bromus hordeaceus*), slender oat (*Avena barbata*), golden currant (*Ribes aureum* var. *gracilliumu*m), and chaparral yucca. The only association within the chamise chaparral alliance included in the Survey Area was *Adenostoma fasciculatum–Eriogonum fasciculatum* association.

Riparian Scrub

Scale Broom Scrub

Scale broom scrub alliance communities feature scale broom (*Lepidospartum squamatum*) as the dominant, co-dominant, or a conspicuous species in the shrub canopy in semi-alluvial environments, and can also include cheesebush, California sagebrush, mulefat (*Baccharis salicifolia*), bladderpod, brittle bush (*Encelia farinosa*), thick leaf yerba santa, California buckwheat, chaparral yucca, common deerweed, laurel sumac, coast prickly pear, skunkbush sumac, poison oak, and other arid scrub and wash species. Communities within this alliance occur in intermittently or rarely flooded alluvial soils along low-gradient streams, washes, or fans (CNPS 2024). Scale broom scrub is mapped within or adjacent to the stream channels for the Santa Clara River along the northern boundary or Oak Spring Canyon Creek, which cuts through the southwestern and northwestern corners of the project site. Associated species observed within this alliance in the field included flatspine bur ragweed, shortpod mustard, and scattered shrubs such as Parish's big sagebrush, tamarisk (*Tamarix ramosissima*), California buckwheat, rubber rabbitbrush, and thick leaf yerba santa. Two associations within the scale broom scrub alliance were included in the Survey Area: *Lepidospartum squamatum–Atriplex canescens* association and *Lepidospartum squamatum–Eriogonum fasciculatum* association.

3 Methods

The focused surveys for gnatcatcher were conducted between May 15 and June 29, 2024, by two permitted biologists: Melissa Blundell (TE-97717A) and Tsutomu (Tommy) Molioo (TE-02412D) (Table 2). The surveys were conducted following the currently accepted protocol of the U.S. Fish and Wildlife Service (USFWS) *Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Protocol* (USFWS 1997). The surveys included six survey passes at a minimum of 7-day intervals during the breeding season.

In accordance with the protocol, no more than 80 acres of suitable habitat were surveyed by a single permitted biologist during each site visit conducted. Survey routes are shown on Figure 3 (Survey Results) and were performed within legally accessible parcels and public access ways. The survey aimed for complete audible and visual coverage of all suitable gnatcatcher habitat on site, to the extent feasible. Access was limited to areas within the Project site boundaries. Where potentially suitable habitat was present adjacent to the site, surveyors spent time along the boundary to detect any gnatcatchers that may be present within 500-feet of the site. Birding binoculars (e.g., 8x42 magnification) were used to aid in detecting and identifying bird species. Recorded vocalizations were used frequently in order to elicit a response from the species. The tape was played approximately every 50 to 100 feet. If gnatcatchers would have been detected, the playing of the tape would have ceased to avoid harassment.

A digital aerial map overlain with vegetation polygons and the site area was used for the survey. The digital mobile map was also utilized during the surveys to assist in navigating and mapping any gnatcatchers present. Weather conditions, time of day, and season were appropriate for the detection of gnatcatchers and are provided in Table 2.

Table 2 Survey Dates and Conditions

Pass No.	Date	Biologist's Initials[1]	Time	Survey Conditions[2]
1	5/15/2024	MB, PV	0610–1140	58–73°F; 110% cc; 0–3 mph wind
2	5/22/2024	MB, PV	0612–1146	55–73°F; 0% cc; 0–3 mph wind
3	5/29/2024	MB, PV	0610–1058	55–73°F; 0% cloud cover; 0–3 mph wind
4	6/12/2024	TM, JE	0645–1144	60–78°F; 0–100% cloud cover; 0–1 mph wind
5	6/19/2024	MB, PV	0613–1135	58–78°F; 0% cloud cover; 0–3 mph wind
6	6/28/2024	MB, JR	0601–1113	60–82°F; 0% cloud cover; 1–4 mph wind

[1]Biologist Initials: MB = Melissa Blundell; TM = Tommy Molioo; PV = Pedro Vitar (safety escort); JE = Josh Elson (safety escort); JR = James Robles (safety escort)
[2]Survey Conditions: °F = degrees Fahrenheit; % cc = percent cloud cover; mph = mile per hour

4 Results

No coastal California gnatcatchers were observed during the focused surveys. Overall, 42 avian species were observed during the surveys. Eight special-status species were observed during the surveys including southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; CDFW Watch List [WL]), Cooper's hawk (*Accipiter cooperii*; WL), Costa's hummingbird (*Calypte costae*; USFWS Bird of Conservation Concern [BCC]), wrentit (*Chamaea fasciata*; BCC), Bullock's oriole (*Icterus bullockii*; BCC), California thrasher (*Toxostoma redivivum*, BCC), oak titmouse (*Baeolophus* inornatus; BCC), and Nuttall's woodpecker (*Dryobates nuttallii*; BCC). Those locations that were mapped are shown on Figure 3. A full list of avian species observed during the survey is provided in Appendix A. Photo documentation of the Survey Area is provided in Appendix B.

Please feel free to contact me with questions or if you require additional information regarding this survey. I certify that the information in this survey report and attached exhibits fully and accurately represent my work.

Sincerely,

Melissa Blundell
Biologist (TE-97717A)
760.214.1878
mblundell@dudek.com

Tommy Molioo
Biologist (TE-02412D)
949.212.9404
tmolioo@dudek.com

Atts.: *Figures 1–3*
A – List of Bird Species Observed
B – Photo Log

cc: *Mike Cady (mcady@dudek.com)*

5 References

Atwood, J. L. 1990. Status review of the California gnatcatcher (Polioptila californica). Unpublished technical report Manomet Bird Observatory, Manomet, Massachusetts. 79pp.

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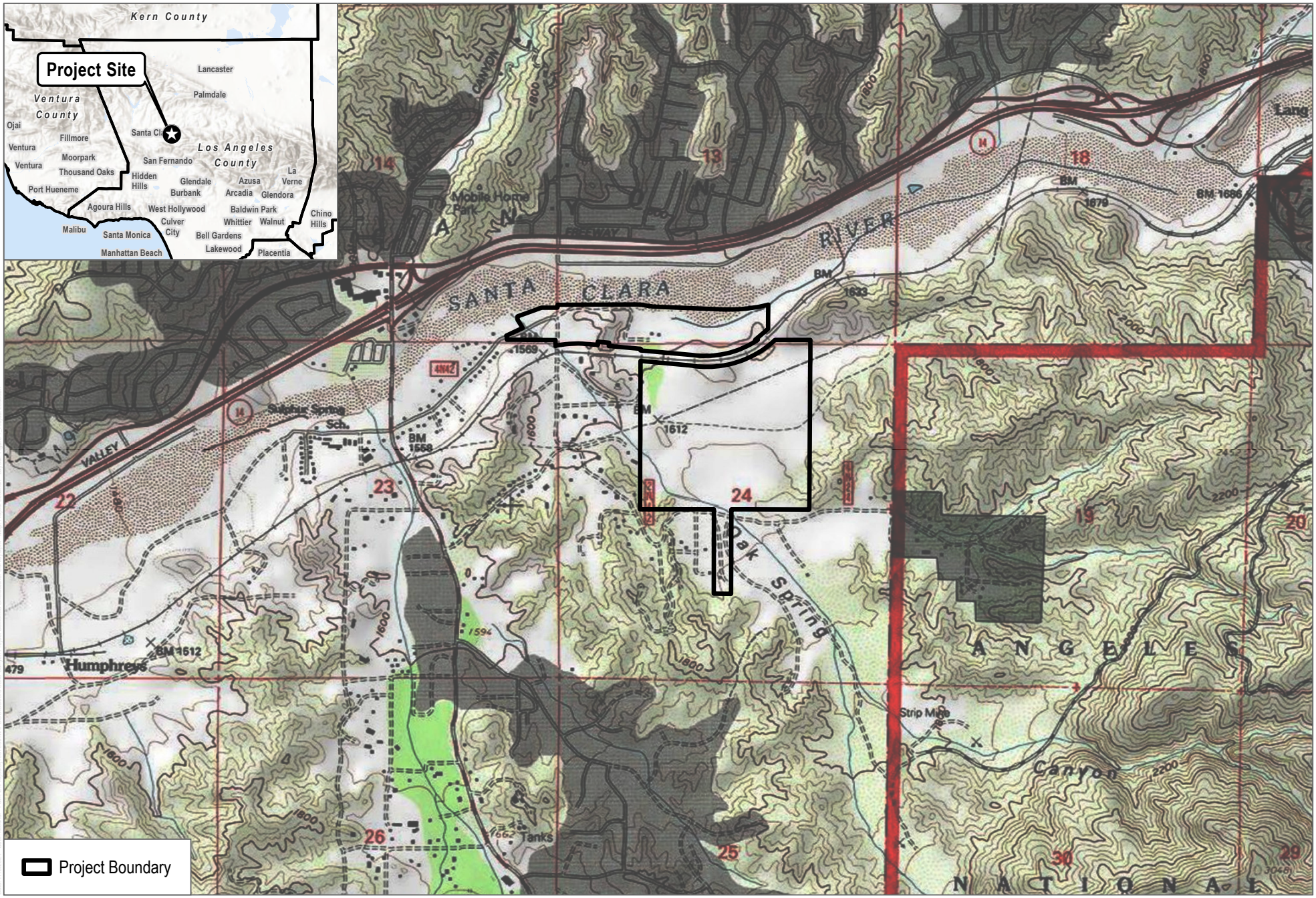
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SOURCE: USGS Topo 7.5-Minute Series

Mint Canyon Quadrangle - Township 4N Range 15W Section 24

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Belcaro Sand Canyon Project California Gnatcatcher Survey



SOURCE: Vivid 12/8/2022

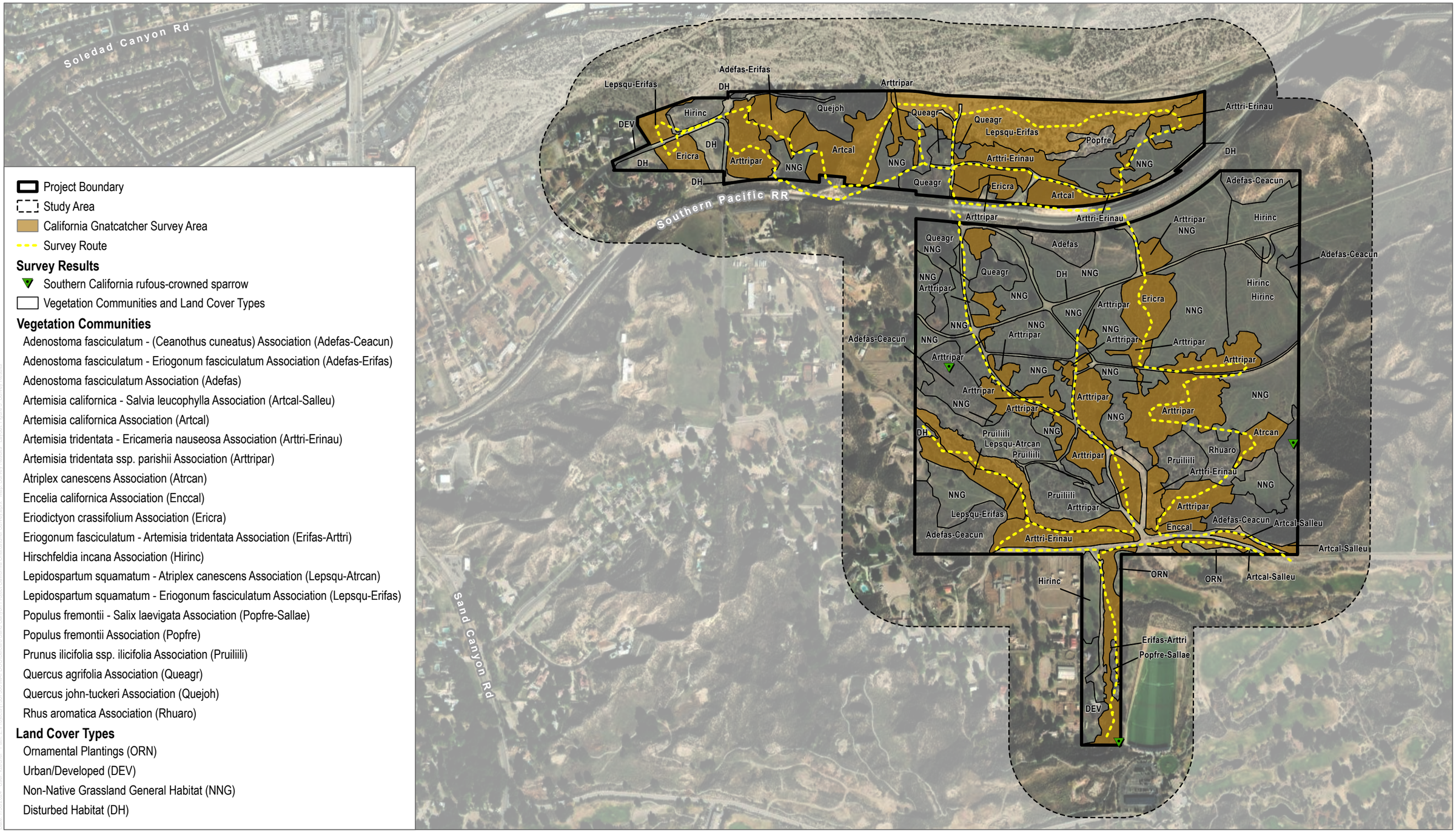
DUDEK

0 445 890 Feet

FIGURE 2

California Gnatcatcher Survey Area

Belcaro Sand Canyon Project California Gnatcatcher Survey



SOURCE: Maxar 12/8/2022

DUDEK

0 300 600 Feet

FIGURE 3

Survey Results

Belcaro Sand Canyon Project California Gnatcatcher Survey

Appendix A
List of Bird Species Observed

Birds

ACCIPITRIDAE – HAWKS, KITES, EAGLES, AND ALLIES

Accipiter cooperii – Cooper's hawk
Buteo jamaicensis – red-tailed hawk
Buteo lineatus – red-shouldered hawk

AEGITHALIDAE – LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus – bushtit

ARDEIDAE – HERONS, BITTERNS, AND ALLIES

Ardea alba – great egret

CARDINALIDAE – CARDINALS AND ALLIES

Pheucticus melanocephalus – black-headed grosbeak

CHARADRIIDAE – LAPWINGS AND PLOVERS

Charadrius vociferus – killdeer

COLUMBIDAE – PIGEONS AND DOVES

Zenaida macroura – mourning dove
* *Streptopelia decaocto* – Eurasian collared-dove

CORVIDAE – CROWS AND JAYS

Aphelocoma californica – California scrub-jay
Corvus brachyrhynchos – American crow
Corvus corax – common raven

CUCULIDAE – CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus – greater roadrunner

FALCONIDAE – CARACARAS AND FALCONS

Falco sparverius – American kestrel

FRINGILLIDAE – FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus – house finch
Spinus psaltria – lesser goldfinch

HIRUNDINIDAE – SWALLOWS

Petrochelidon pyrrhonota – cliff swallow

ICTERIDAE – BLACKBIRDS

Euphagus cyanocephalus – Brewer's blackbird
Icterus bullockii – Bullock's oriole
Icterus cucullatus – hooded oriole

MIMIDAE – MOCKINGBIRDS AND THRASHERS

Mimus polyglottos – northern mockingbird
Toxostoma redivivum – California thrasher

ODONTOPHORIDAE – NEW WORLD QUAIL

Callipepla californica – California quail

PARIDAE – CHICKADEES AND TITMICE

Baeolophus inornatus – oak titmouse

PASSERELLIDAE – NEW WORLD SPARROWS

* *Aimophila ruficeps* – rufous-crowned sparrow
* *Melozone crissalis* – California towhee
* *Pipilo maculatus* – spotted towhee

PASSERIDAE – OLD WORLD SPARROWS

* *Passer domesticus* – house sparrow

PICIDAE – WOODPECKERS AND ALLIES

* Melanerpes formicivorus – acorn woodpecker
* *Dryobates nuttallii* – Nuttall's woodpecker

POLIOPTILIDAE – GNATCATCHERS

Polioptila caerulea – blue-gray gnatcatcher

PTILOGONATIDAE – SILKY-FLYCATCHERS

Phainopepla nitens – phainopepla

STURNIDAE – STARLINGS

* *Sturnus vulgaris* – European starling

SYLVIIDAE – SYLVIID WARBLERS

* Chamaea fasciata – wrentit

TROCHILIDAE – HUMMINGBIRDS

Calypte anna – Anna's hummingbird
Calypte costae – Costa's hummingbird
Selasphorus sasin – Allen's hummingbird

TROGLODYTIDAE – WRENS

Troglodytes aedon – house wren
Thryomanes bewickii – Bewick's wren

TYRANNIDAE – TYRANT FLYCATCHERS

Sayornis nigricans – black phoebe
Tyrannus verticalis – western kingbird
Tyrannus vociferans – Cassin's kingbird

* signifies introduced (non-native) species

Appendix B
Photo Log



Photo 1. View of *Adenostoma fasciculatum – Eriogonum fasciculatum* in the western portion of the northern Survey Area. Photo facing southeast. November 2, 2023.



Photo 2. View of *Artemisia tridentata ssp. parishii* in the center of the northern Survey Area. Photo facing northwest. May 25, 2023.



Photo 3. View of *Lepidospartum squamatum - Eriogonum fasciculatum* in the northeastern portion of the northern Survey Area. Photo facing north. November 2, 2023.



Photo 4. View of *Artemisia tridentata ssp. parishii* along the survey route in the southern Survey Area. Photo facing east. November 1, 2023.



Photo 5. View of *Artemisia tridentata ssp. parishii* in the eastern portion of the southern Survey Area. Photo facing north-northeast. November 2, 2023.



Photo 6. View of *Atriplex canescens* near the southeast portion of the southern Survey Area. Photo facing southwest. May 25, 2023.



Photo 7. View of *Artemisia tridentata - Ericameria nauseosa* along the survey route in the southern portion of the southern Survey Area. Photo facing northwest. November 1, 2023.



Photo 8. View of *Lepidospartum squamatum - Atriplex canescens* in the southwest portion of the southern Survey Area. Photo facing northwest. November 1, 2023.

Appendix E
Photo Exhibit



Photo 1. Representative photo of *Prunus ilicifolia* ssp. *ilicifolia* association.



Photo 2. Representative photo of *Artemisia tridentata* ssp. *parishii* association.



Photo 3. Representative photo of *Lepidospartum squamatum - Eriogonum fasciculat*um association in the Santa Clara River wash.



Photo 4. Representative photo of *Hirschfeldia incana* association.



Photo 5. Representative photo of non-native grassland.



Photo 6. Representative photo of *Encelia californica* association.



Photo 7. Representative photo of *Quercus john-tuckeri* association.



Photo 8. Representative photo of *Quercus agrifolia* association in the background.



Photo 9. Representative photo of *Adenostoma fasciculatum* - (*Ceanothus cuneatus*) association.



Photo 10. Oak Spring Canyon Creek taken from Lost Canyon Road and facing downstream.



Photo 11. Santa Clarita River low flow channel in the study area.



Photo 12. Oak Spring Canyon Creek taken from Oak Springs Canyon Road and facing downstream.

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Appendix F
Plant and Wildlife Compendia

Plants

Dicots

AMARANTHACEAE—AMARANTH FAMILY

Amaranthus albus—prostrate pigweed*
Chenopodium album—lambsquarters*
Chenopodium californicum—California goosefoot
Schinus molle—Peruvian peppertree*

ANACARDIACEAE—SUMAC FAMILY

Rhus aromatica—skunkbush sumac
Toxicodendron diversilobum—poison oak

APOCYNACEAE—DOGBANE FAMILY

Nerium oleander—oleander*

ASTERACEAE—SUNFLOWER FAMILY

Acourtia microcephala—sacapellote
Ambrosia acanthicarpa—flatspine bur ragweed
Ambrosia psilostachya—western ragweed
Artemisia californica—California sagebrush
Artemisia dracunculus—wild tarragon
Artemisia tridentata ssp. *parishii*—Parish's big sagebrush
Baccharis salicifolia ssp. *salicifolia*—mulefat
Carduus pycnocephalus—Italian plumeless thistle*
Centaurea melitensis—Maltese star-thistle*
Chaenactis glabriuscula—yellow pincushion
Cirsium occidental—cobwebby thistle
Corethrogyne filaginifolia—sand-aster
Deinandra fasciculata—clustered tarweed
Encelia californica—California brittle bush
Ericameria nauseosa var. *hololeuca*—rubber rabbitbrush
Erigeron canadensis—Canadian horseweed
Eriophyllum confertiflorum—golden-yarrow
Helianthus annuus—common sunflower
Lactuca serriola—prickly lettuce*
Lasthenia gracilis—needle goldfields
Lepidospartum squamatum—scale broom
Lessingia glandulifera var. *glandulifera*—valley lessingia
Rafinesquia californica—California plumeseed

Pseudognaphalium californicum—ladies' tobacco
Senecio flaccidus—threadleaf ragwort
Sonchus oleraceus—common sowthistle
Stephanomeria exigua—small wirelettuce
Stephanomeria virgata—rod wirelettuce
Tetradymia comosa—hairy horsebrush
Uropappus lindleyi—Lindley's silverpuffs
Xanthium strumarium—cocklebur

BORAGINACEAE—FORGET-ME-NOT FAMILY

Amsinckia intermedia—common fiddleneck
Pectocarya platycarpa—broadfruit combseed
Phacelia distans—distant phacelia
Xanthium strumarium—cocklebur

BRASSICACEAE—MUSTARD FAMILY

Hirschfeldia incana—short-pod mustard*
Sisymbrium altissimum—tall tumblemustard*

CACTACEAE—CACTUS FAMILY

Cylindropuntia ramosissima—branched pencil cholla
Opuntia basilaris var. *basilaris*—beavertail pricklypear

CAPRIFOLIACEAE— HONEYSUCKLE FAMILY

Lonicera subspicata var. *denudata*— Santa Barbara honeysuckle

CHENOPODIACEAE—GOOSEFOOT FAMILY

Atriplex canescens—fourwing saltbush
Atriplex semibaccata—Australian saltbush*
Salsola tragus—prickly Russian thistle*

CONVOLVULACEAE—MORNING-GLORY FAMILY

Calystegia peirsonii—Peirson's morning-glory
Cuscuta californica—chaparral dodder

CUCURBITACEAE—GOURD FAMILY

Cucurbita foetidissima—Missouri gourd
Marah macrocarpa—Cucamonga manroot

EUPHORBIACEAE—SPURGE FAMILY

Croton setiger—dove weed
Euphorbia albomarginata—whitemargin sandmat
Ricinus communis—castorbean*

FABACEAE—LEGUME FAMILY

Acmispon glaber—*deer weed*
Acmispon maritimus var. *maritimus*—coastal bird's-foot trefoil
Acmispon micranthus—San Diego bird's-foot trefoil
Lupinus bicolor—miniature lupine
Lupinus succulentus—hollowleaf annual lupine
Melilotus indicus—annual yellow sweetclover
Robinia pseudoacacia—black locust*
Trifolium willdenovii—tomcat clover

FAGACEAE—OAK FAMILY

Quercus agrifolia var. *agrifolia*—coast live oak
Quercus john-tuckeri—Tucker oak

GERANIACEAE—GERANIUM FAMILY

Erodium cicutarium—redstem stork's bill*

GROSSULARIACEAE—GOOSEBERRY FAMILY

Ribes aureum var. *gracillimum*—golden currant

HYDROPHYLLACEAE—WATERLEAF FAMILY

Phacelia cicutaria—caterpillar phacelia
Phacelia distans—distant phacelia

LAMIACEAE—MINT FAMILY

Marrubium vulgare—horehound*
Salvia apiana—white sage
Salvia columbariae—chia
Salvia leucophylla—purple sage
Salvia mellifera—black sage

MALVACEAE—MALLOW FAMILY

Malacothamnus fasciculatus var. *fasciculatus*—Mendocino bushmallow
Malva parviflora—cheeseweed mallow*

MYRTACEAE—MYRTLE FAMILY

Eucalyptus cinerea—silver dollar tree *
Eucalyptus globulus—Tasmanian bluegum*

NAMACEAE—NAMA FAMILY

Eriodictyon crassifolium—thick leaf yerba santa

NYCTAGINACEAE—FOUR O'CLOCK FAMILY

Mirabilis laevis—desert wishbone-bush

ONAGRACEAE—EVENING PRIMROSE FAMILY

Camissonia campestris—Mojave suncup
Camissoniopsis bistorta—southern suncup
Camissoniopsis micrantha—miniature suncup
Clarkia purpurea—winecup clarkia

OROBANCHACEAE—BROOMRAPES

Castilleja exserta ssp. *exserta*—exserted Indian paintbrush

PAEONIACEAE—PEONY FAMILY

Paeonia californica—California peony

PAPAVERACEAE—POPPY FAMILY

Eschscholzia californica—California poppy

POLEMONIACEAE—PHLOX FAMILY

Navarretia atractyloides—hollyleaf pincushion plant

POLYGONACEAE—BUCKWHEAT FAMILY

Chorizanthe staticoides—Turkish rugging
Eriogonum fasciculatum—California buckwheat
Eriogonum gracile—slender woolly buckwheat
Eriogonum gracillimum—rose and white buckwheat

RHAMNACEAE—BUCKTHORN FAMILY

Ceanothus crassifolius—hoary leaf ceanothus
Ceanothus cuneatus var. *cuneatus*—buckbrush
Rhamnus crocea—redberry buckthorn
Rumex hymenosepalus—canaigre dock

ROSACEAE—ROSE FAMILY

Adenostoma fasciculatum—chamise
Heteromeles arbutifolia—toyon
Prunus ilicifolia ssp. *ilicifolia*—mainland cherry

SALICACEAE—WILLOW FAMILY

Populus fremontii—Fremont cottonwood
Salix exigua—sandbar willow
Salix laevigata—red willow
Salix lasiolepis—arroyo willow

SOLANACEAE—NIGHTSHADE FAMILY

Datura wrightii—sacred thorn-apple
Nicotiana glauca—tree tobacco*
Nicotiana quadrivalvis—Indian tobacco
Solanum xanti—purple nightshade

TAMARICACEAE—TAMARISK FAMILY

Tamarix ramosissima—tamarisk*

VIBURNACEAE—MUSKROOT FAMILY

Sambucus mexicana—blue elderberry

Monocots

AGAVACEAE—AGAVE FAMILY

Chlorogalum pomeridianum var. *pomeridianum*—wavyleaf soap plant
Hesperoyucca whipplei—chaparral yucca

ASPARAGACEAE—ASPARAGUS FAMILY

Dipterostemon capitatus—bluedicks

ASPHODELACEAE—ASPHODEL FAMILY

Dipterostemon capitatus—onionweed

LILIACEAE—LILY FAMILY

Calochortus splendens—splendid mariposa lily

POACEAE—GRASS FAMILY

Avena barbata—slender oat*
Arundo donax—giant reed*
Bromus diandrus—ripgut brome*
Bromus hordeaceus—soft brome*
Bromus rubens—red brome*
Elymus condensatus—giant wild rye
Elymus triticoides—creeping ryegrass
Festuca myuros—rat-tail fescue*
Melica imperfecta—smallflower melicgrass
Schismus barbatus—common Mediterranean grass*
Stipa pulchra—purple needlegrass
Stipa miliacea var. *miliacea*—smilograss*

THEMIDACEAE— BRODIAEA FAMILY

Bloomeria crocea—common goldenstar

Gymnosperms And Gnetophytes

PINACEAE—PINE FAMILY

Pinus halepensis—Aleppo pine*

Wildlife

Invertebrates

APIDAE—BEES

Bombus fervidus—yellow bumble bee
Bombus melanopygus—black tail bumble bee
Bombus vosnesenskii—Vosnesensky bumble bee
Bombus crotchii—Crotch's bumble bee

Vertebrates

Reptiles

IGUANIDAE – IGUANID LIZARDS

Sceloporus occidentalis—western fence lizard
Uta stansburiana—side-blotched lizard

VIPERIDAE—VIPERS

Crotalus oreganus—western rattlesnake

Birds

ICTERIDAE—BLACKBIRDS

Euphagus cyanocephalus—Brewer's blackbird
Icterus bullockii—Bullock's oriole
Icterus cucullatus—hooded oriole

AEGITHALIDAE—LONG-TAILED TITS & BUSHTITS

Psaltriparus minimus—bushtit

CARDINALIDAE—CARDINALS & ALLIES

Pheucticus melanocephalus—black-headed grosbeak

FALCONIDAE—CARACARAS & FALCONS

Falco sparverius—American kestrel

FRINGILLIDAE—FRINGILLINE & CARDUELINE FINCHES & ALLIES

Haemorhous mexicanus—house finch
Spinus lawrencei—Lawrence's goldfinch
Spinus psaltria—lesser goldfinch

TYRANNIDAE—TYRANT FLYCATCHERS

Myiarchus cinerascens—ash-throated flycatcher
Sayornis nigricans—black phoebe
Tyrannus verticalis—western kingbird
Tyrannus vociferans—Cassin's kingbird

ACCIPITRIDAE—HAWKS, KITES, EAGLES, & ALLIES

Accipiter cooperii—Cooper's hawk
Buteo jamaicensis—red-tailed hawk
Buteo lineatus—red-shouldered hawk

ARDEIDAE—HERONS, BITTERNS, & ALLIES

Ardea alba—great egret

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird
Calypte costae—Costa's hummingbird
Selasphorus sasin—Allen's hummingbird

CORVIDAE—CROWS & JAYS

Aphelocoma californica—California scrub-jay
Corvus brachyrhynchos—American crow
Corvus corax—common raven

MIMIDAE—MOCKINGBIRDS & THRASHERS

Mimus polyglottos—northern mockingbird
Toxostoma redivivum—California thrasher

ODONTOPHORIDAE—NEW WORLD QUAIL

Callipepla californica—California quail

CATHARTIDAE—NEW WORLD VULTURES

Cathartes aura—turkey vulture

PASSERIDAE—OLD WORLD SPARROWS

Passer domesticus—house sparrow*

POLIOPTILIDAE—GNATCATCHERS

Polioptila caerulea—blue-gray gnatcatcher

COLUMBIDAE—PIGEONS & DOVES

Zenaida macroura—mourning dove

Streptopelia decaocto—Eurasian collared-dove*

CUCULIDAE—CUCKOOS, ROADRUNNERS, & ANIS

Geococcyx californianus—greater roadrunner

CHARADRIIDAE—LAPWINGS & PLOVERS

Charadrius vociferus—killdeer

PTILIOGONATIDAE—SILKY-FLYCATCHERS

Phainopepla nitens—phainopepla

STURNIDAE—STARLINGS

Sturnus vulgaris—European starling*

HIRUNDINIDAE—SWALLOWS

Hirundo rustica—barn swallow

Petrochelidon pyrrhonota—cliff swallow

PARIDAE—CHICKADEES & TITMICE

Baeolophus inornatus—oak titmouse

PICIDAE—WOODPECKERS & ALLIES

Melanerpes formicivorus—acorn woodpecker

Dryobates nuttallii—Nuttall's woodpecker

TROGLODYTIDAE—WRENS

Thryomanes bewickii—Bewick's wren

Troglodytes aedon—northern house wren

PASSERELLIDAE—NEW WORLD SPARROWS

Aimophila ruficeps canescens—Southern California rufous-crowned sparrow

Aimophila ruficeps—rufous-crowned sparrow

Chondestes grammacus—lark sparrow

Melozone crissalis—California towhee

Passerculus sandwichensis—savannah sparrow

Pipilo maculatus—spotted towhee

SYLVIIDAE—SYLVIID WARBLERS

Chamaea fasciata—wrentit

Mammals

CANIDAE—WOLVES & FOXES

Canis latrans—coyote

LEPORIDAE—HARES & RABBITS

Sylvilagus audubonii—desert cottontail

SCIURIDAE—SQUIRRELS

Otospermophilus beecheyi—California ground squirrel

* signifies introduced (non-native) species

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Appendix G

Assessment of Special-Status Plant Species Potentially Occurring in the Study Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Arenaria paludicola	marsh sandwort	FE/SE/1B.1	Marshes and swamps (brackish, freshwater); Openings, Sandy/perennial stoloniferous herb/May–Aug/10–560	Not expected to occur. The Study Area is outside of the species' known elevation range and there is no suitable vegetation present.
Berberis nevinii	Nevin's barberry	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub; Gravelly (sometimes), Sandy (sometimes)/perennial evergreen shrub/(Feb)Mar–June/230–2,705	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Calochortus catalinae	Catalina mariposa lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/perennial bulbiferous herb/(Feb)Mar–June/50–2,295	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Calochortus clavatus var. *avius*	Pleasant Valley mariposa-lily	None/None/1B.2	Lower montane coniferous forest (Josephine silt loam, volcanic)/perennial bulbiferous herb/May–July/1000–5,905	Not expected to occur. No suitable vegetation present.
Calochortus clavatus var. *clavatus*	club-haired mariposa lily	None/None/4.3	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; Clay, Rocky, Serpentinite (usually)/perennial bulbiferous herb/(Mar)May–June/100–4,265	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Calochortus clavatus var. *gracilis*	slender mariposa-lily	None/None/1B.2	Chaparral, Coastal scrub, Valley and foothill grassland/perennial bulbiferous herb/Mar–June(Nov)/1050–3,280	Occurs. Seven individuals were documented in the southeast corner of the Study Area, where the species has previously been documented (Glenn Lukos Associates 2021).
Calochortus palmeri var. *palmeri*	Palmer's mariposa-lily	None/None/1B.2	Chaparral, Lower montane coniferous forest, Meadows and seeps; Mesic/perennial bulbiferous herb/Apr–July/2,330–7,840	Not expected to occur. The Study Area is outside of the species' known elevation range.
Calochortus plummerae	Plummer's mariposa-lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland; Granitic, Rocky/perennial bulbiferous herb/May–July/330–5,580	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Calystegia peirsonii	Peirson's morning-glory	None/None/4.2	Chaparral, Chenopod scrub, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland/perennial rhizomatous herb/Apr–June/100–4,920	Occurs. Eighty-one individuals were observed at four locations along the northeastern and southeastern boundaries of the Study Area.
Canbya candida	white pygmy-poppy	None/None/4.2	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland; Granitic, Gravelly, Sandy/annual herb/Mar–June/1,970–4,790	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Centromadia parryi ssp. *australis*	southern tarplant	None/None/1B.1	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/annual herb/May–Nov/0–1,575	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Cercocarpus betuloides var. *blancheae*	island mountain-mahogany	None/None/4.3	Chaparral, Closed-cone coniferous forest/perennial evergreen shrub/Feb–May/100–1,970	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	None/SE/1B.1	Coastal scrub (sandy), Valley and foothill grassland/annual herb/Apr–July/490–4,005	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Chorizanthe parryi var. *parryi*	Parry's spineflower	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; Openings, Rocky (sometimes), Sandy (sometimes)/annual herb/Apr–June/900–4,005	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Deinandra minthornii	Santa Susana tarplant	None/SR/1B.2	Chaparral, Coastal scrub; Rocky/perennial deciduous shrub/July–Nov/920–2,495	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Deinandra paniculata	paniculate tarplant	None/None/4.2	Coastal scrub, Valley and foothill grassland, Vernal pools; Sandy (sometimes), Vernally Mesic (usually)/annual herb/(Mar)Apr–Nov/80–3,085	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Delphinium parryi ssp. *purpureum*	Mt. Pinos larkspur	None/None/4.3	Chaparral, Mojavean desert scrub, Pinyon and juniper woodland/perennial herb/May–June/3280–8,530	Not expected to occur. The Study Area is outside of the species' known elevation range.
Diplacus johnstonii	Johnston's monkeyflower	None/None/4.3	Lower montane coniferous forest (disturbed areas, gravelly, roadsides, rocky, scree)/annual herb/May–Aug/3200–9,580	Not expected to occur. The Study Area is outside of the species' known elevation range and there is no suitable vegetation present.
Dodecahema leptoceras	slender-horned spineflower	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub (alluvial fans); Sandy/annual herb/Apr–June/655–2,495	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Dudleya densiflora	San Gabriel Mountains dudleya	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland; Granitic/perennial herb/Mar–July/800–2,000	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Harpagonella palmeri	Palmer's grapplinghook	None/None/4.2	Chaparral, Coastal scrub, Valley and foothill grassland; Clay, Openings/annual herb/Mar–May/65–3,135	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Helianthus inexpectatus	Newhall sunflower	None/None/1B.1	Marshes and swamps, Riparian woodland; Seeps/perennial rhizomatous herb/Aug–Oct/1,000–1,000	Not expected to occur. The Study Area is outside of the species' known elevation range.
Heuchera caespitosa	urn-flowered alumroot	None/None/4.3	Cismontane woodland, Lower montane coniferous forest, Riparian forest (montane), Upper montane coniferous forest; Rocky/perennial rhizomatous herb/May–Aug/3,790–8,695	Not expected to occur. The Study Area is outside of the species' known elevation range.
Hordeum intercedens	vernal barley	None/None/3.2	Coastal dunes, Coastal scrub, Valley and foothill grassland (depressions, saline flats), Vernal pools/annual herb/Mar–June/15–3,280	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Horkelia cuneata var. *puberula*	mesa horkelia	None/None/1B.1	Chaparral (maritime), Cismontane woodland, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/perennial herb/Feb–July(Sep)/230–2,660	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Hulsea vestita ssp. *gabrielensis*	San Gabriel Mountains sunflower	None/None/4.3	Lower montane coniferous forest, Upper montane coniferous forest; Rocky/perennial herb/May–July/4,920–8,205	Not expected to occur. The Study Area is outside of the species' known elevation range and there is no suitable vegetation present.
Imperata brevifolia	California satintail	None/None/2B.1	Chaparral, Coastal scrub, Meadows and seeps (often alkali), Mojavean desert scrub, Riparian scrub; Mesic/perennial rhizomatous herb/Sep–May/0–3,985	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Juglans californica	Southern California black walnut	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/perennial deciduous tree/Mar–Aug/165–2,955	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	None/None/4.2	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt), Meadows and seeps (alkaline seeps)/perennial rhizomatous herb/(Mar)May–June/10–2,955	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/1B.1	Marshes and swamps (coastal salt), Playas, Vernal pools/annual herb/Feb–June/5–4,005	Not expected to occur. No suitable vegetation present.
Lepechinia fragrans	fragrant pitcher sage	None/None/4.2	Chaparral/perennial shrub/Mar–Oct/65–4,300	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Lepechinia rossii	Ross' pitcher sage	None/None/1B.2	Chaparral/perennial shrub/May–Sep/1,000–2,590	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None/None/4.3	Chaparral, Coastal scrub/annual herb/Jan–July/5–2,905	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Lilium humboldtii ssp. *ocellatum*	ocellated Humboldt lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland; Openings/perennial bulbiferous herb/Mar–July(Aug)/100–5,905	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Lupinus paynei	Payne's bush lupine	None/None/1B.1	Coastal scrub, Riparian scrub, Valley and foothill grassland; Sandy/perennial shrub/Mar–Apr(May–July)/720–1,380	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Malacothamnus davidsonii	Davidson's bush-mallow	None/None/1B.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/perennial deciduous shrub/June–Jan/605–3,740	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Monardella exilis	Mojave monardella	None/None/4.2	Chenopod scrub, Desert dunes, Great Basin scrub, Joshua tree "woodland", Lower montane coniferous forest, Mojavean desert scrub, Pinyon and juniper woodland; Sandy/annual herb/Apr–Sep/1,970–6,725	Not expected to occur. No suitable vegetation present.
Mucronea californica	California spineflower	None/None/4.2	Chaparral, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland; Sandy/annual herb/Mar–July(Aug)/0–4,595	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Nasturtium gambelii	Gambel's water cress	FE/ST/1B.1	Marshes and swamps (brackish, freshwater)/perennial rhizomatous herb/Apr–Oct/15–1,085	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Navarretia fossalis	spreading navarretia	FT/None/1B.1	Chenopod scrub, Marshes and swamps (shallow freshwater), Playas, Vernal pools/annual herb/Apr–June/100–2,150	Not expected to occur. No suitable vegetation present.
Navarretia setiloba	Piute Mountains navarretia	None/None/1B.1	Cismontane woodland, Pinyon and juniper woodland, Valley and foothill grassland; Clay (sometimes), Gravelly (sometimes), Loam (sometimes)/annual herb/Apr–July/935–6,890	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Opuntia basilaris var. *brachyclada*	short-joint beavertail	None/None/1B.2	Chaparral, Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland/perennial stem/Apr–June(Aug)/1395–5,905	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Orcuttia californica	California Orcutt grass	FE/SE/1B.1	Vernal pools/annual herb/Apr–Aug/50–2,165	Not expected to occur. No suitable vegetation present.
Phacelia mohavensis	Mojave phacelia	None/None/4.3	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland; Gravelly (sometimes), Sandy (sometimes)/annual herb/Apr–Aug/4,595–8,205	Not expected to occur. The Study Area is outside of the species' known elevation range and there is no suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Pseudognaphalium leucocephalum	white rabbit-tobacco	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; Gravelly, Sandy/perennial herb/(July)Aug–Nov(Dec)/0–6,890	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Quercus durata var. *gabrielensis*	San Gabriel oak	None/None/4.2	Chaparral, Cismontane woodland/perennial evergreen shrub/Apr–May/1475–3,280	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Senecio aphanactis	chaparral ragwort	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub; Alkaline (sometimes)/annual herb/Jan–Apr(May)/50–2,625	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).
Streptanthus campestris	southern jewelflower	None/None/1B.3	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland; Rocky/perennial herb/(Apr)May–July/2,955–7,545	Not expected to occur. The Study Area is outside of the species' known elevation range.
Symphyotrichum greatae	Greata's aster	None/None/1B.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Riparian woodland; Mesic/perennial rhizomatous herb/June–Oct/985–6,595	Not expected to occur. Suitable habitat is present, but the species was not observed during the focused rare plant survey and was not observed during previous rare plant surveys in 2014, 2016, 2018, and 2019 (GLA 2021).

Table Notes:

[1] Status Abbreviations

Federal and State Statuses

FE: Federally listed as endangered
FT: Federally listed as threatened
SE: State listed as endangered
SR: State designated as rare
ST: State listed as threatened

CRPR: California Rare Plant Rank

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3: Review List: Plants about which more information is needed
CRPR 4: Watch List: Plants of limited distribution

Threat Rank Modifier

.1 - Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 - Moderately threatened in California (20% - 80% of occurrences threatened/moderate degree and immediacy of threat)
.3 - Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat)

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Appendix H

Assessment of Special-Status Wildlife Species Potentially Occurring in the Study Area

Scientific Name	Common Name	Status[1](Federal/State)	Primary Habitat Associations	Potential to Occur
Invertebrates				
Bombus crotchii	Crotch's bumble bee	None/SCE	Open grassland and scrub communities supporting suitable floral resources.	Occurs. The species was identified in the Study Area during focused surveys for bumble bees.
Branchinecta lynchi	vernal pool fairy shrimp	FT/None	Vernal pools, seasonally ponded areas within vernal swales, and ephemeral freshwater habitats	Not expected to occur. Suitable habitat for the species is not present in the Study Area.
Euphydryas editha quino	quino checkerspot butterfly	FE/None	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include *Plantago erecta*, *P. patagonica*, and *Antirrhinum coulterianum*, among others	Not expected to occur. The Study Area does not contain host plant species. In addition, this species is considered extirpated from Los Angeles County by the USFWS (CDFW 2025a; USFWS 2019).
Streptocephalus woottoni	Riverside fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. Suitable habitat for the species is not present in the Study Area.
Danaus plexippus plexippus pop. 1	monarch - California overwintering population	PFL/None	Wind-protected tree groves with nectar sources and nearby water sources	Low potential to occur on site. No suitable wind-protected tree groves are present in the Study Area; however, the species may be transient through the Study Area during migration and foraging.
Fishes				
Catostomus santaanae	Santa Ana sucker	FT/None	Small, shallow, cool, clear streams less than 7 meters (23 feet) in width and a few centimeters to more than a meter (1.5 inches to more than 3 feet) in depth; substrates are generally coarse gravel, rubble, and boulder	Moderate potential to occur in the Study Area. Not expected to occur on the Project site. The species could occur in the northern portion of the Study Area; however, there is no suitable habitat within the Project site.

Scientific Name	Common Name	Status[1](Federal/State)	Primary Habitat Associations	Potential to Occur
Gasterosteus aculeatus williamsoni	unarmored threespine stickleback	FE/FP, SE	Slow-moving and backwater areas	Moderate potential to occur in the Study Area. Not expected to occur on the Project site. The species could occur in the northern portion of the Study Area in the Santa Clara River; however, there is no suitable habitat within the Project site.
Gila orcuttii	arroyo chub	None/SSC	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud	Moderate potential to occur in the Study Area. Not expected to occur on the Project site. The species could occur in the northern portion of the Study Area in the Santa Clara River; however, there is no suitable habitat within the Project site.
Rhinichthys osculus ssp. 8	Santa Ana speckled dace	None/SSC	Headwaters of the Santa Ana and San Gabriel Rivers; may be extirpated from the Los Angeles River system	Moderate potential to occur in the Study Area. Not expected to occur on the Project site. The species could occur in the northern portion of the Study Area in the Santa Clara River; however, there is no suitable habitat within the Project site.
Amphibians				
Anaxyrus californicus	arroyo toad	FE/SSC	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected to occur. There are only two records from the Santa Clara River, with the last being from 2001 (CDFW 2025a). The Santa Clara River is not included as part of a recovery unit (USFWS 2009).
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	Not expected to occur. Suitable habitat is not present in the Study Area.

Scientific Name	Common Name	Status[1](Federal/State)	Primary Habitat Associations	Potential to Occur
Rana muscosa	mountain yellow-legged frog	FE/SE, WL	Lakes, ponds, meadow streams, isolated pools, and open riverbanks; rocky canyons in narrow canyons and in chaparral	Not expected to occur. Suitable habitat is not present in the Study Area.
Spea hammondii	western spadefoot	PFL/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	Low potential to occur. Marginal habitat for breeding could occur in the Santa Clara River wash depending on flows through the floodplain and the amount of precipitation received during the wet season. Two 2006 records of the species in the Study Area in the northern portion of the Study Area were associated with a single individual moving overland for both records (CDFW 2025a). No ponding features were observed during Dudek's 2024 surveys of the Study Area and no ponding features are visible on aerial imagery from the past 30 years (Google 2025).
Taricha torosa (Monterey Co. south only)	California newt	None/SSC	Estivates in wet forests, oak forests, chaparral, and rolling grassland; breeds in ponds, reservoirs and slow-moving streams.	Not expected to occur. Suitable habitat for the species is not present in the Study Area.
Reptiles				
Anniella spp.	California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Moderate potential to occur. Suitable habitat is present in the Study Area.
Anniella stebbinsi	southern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Moderate potential to occur. Suitable habitat is present in the Study Area.

Scientific Name	Common Name	Status[1](Federal/State)	Primary Habitat Associations	Potential to Occur
Arizona elegans occidentalis	California glossy snake	None/SSC	Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils	Moderate potential to occur. Suitable habitat is present in the Study Area.
Aspidoscelis tigris stejnegeri	coastal whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Occurs. Multiple individuals were observed by Dudek biologists during surveys.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Occurs. The species was observed during surveys in 2016 but not during subsequent surveys of the site (Glenn Lukos Associates 2021).
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	High potential to occur. There is a 1995 record approximately 800 feet from the Study Area boundary (CDFW 2025a). The species could occur within the Santa Clara River wash when water flow is present because it provides suitable foraging opportunities.
Actinemys pallida	southwestern pond turtle	PFL/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Low potential to occur. The species could occur within the Santa Clara River wash when high flows are present. However, aerial imagery over the past 30 years shows the river is often dry (Google 2024), so the area is not expected to support a population of the species.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Occurs. Observed foraging in the Study Area during surveys. Suitable nesting habitat is present in the *Quercus agrifolia* association located in the northwest portion of the Study Area.

Scientific Name	Common Name	Status[1](Federal/State)	Primary Habitat Associations	Potential to Occur
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Not expected to occur. Suitable habitat is not present in the Study Area.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Occurs. Observed during surveys in 2024 in *Adenostoma fasciculatum* - (*Ceanothus cuneatus*) association in the western portion of the Study Area.
Ammodramus savannarum (nesting)	grasshopper sparrow	None/SSC	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Not expected to occur. Suitable habitat is not present in the Study Area.
Artemisiospiza belli belli	Bell's sage sparrow	None/WL	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	High potential to occur. Suitable habitat is present and there is a 2007 record approximately 2,000 feet from the Study Area (CDFW 2025a).
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/CSE	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Not expected to occur. Suitable habitat is not present in the Study Area.
Buteo swainsoni (nesting)	Swainson's hawk	None/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Not expected to occur (nesting). The Study Area lies just outside the expected breeding range. Only historic records of observations exist (CDFW 2025a). The species may be transient during migration.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. Suitable habitat is not present in the Study Area.

Scientific Name	Common Name	Status[1](Federal/State)	Primary Habitat Associations	Potential to Occur
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Low potential to occur. Marginal habitat is present but the conspicuous species was not observed during any of the surveys of the Study Area.
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. Suitable nesting habitat is not present in the Study Area. May be transient during migration.
Eremophila alpestris actia	California horned lark	None/WL	This subspecies of horned lark occurs on the state's southern and central coastal slope and in the San Joaquin Valley. Nests and forages in grasslands, disturbed lands, agriculture, and beaches.	Not expected to occur. Suitable nesting habitat is not present in the Study Area. May be transient during migration.
Falco mexicanus (nesting)	prairie falcon	None/WL	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Not expected to occur. Suitable nesting habitat is not present in the Study Area. May be transient during migration and foraging.
Gymnogyps californianus	California condor	FE/FP, SE	Nests in rock formations, deep caves, and occasionally in cavities in giant sequoia trees (Sequoiadendron giganteus); forages in relatively open habitats where large animal carcasses can be detected	Not expected to occur. Suitable nesting habitat is not present in the Study Area. May be transient during foraging.
Lanius ludovicianus (nesting)	loggerhead shrike	None/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	Not expected to occur. Study Area lacks dense foliage ideal for nesting (CDFW 2025a). Observations include only one recent (2005) sighting 4.3 miles from site boundary (CDFW 2025a).

Scientific Name	Common Name	Status[1](Federal/State)	Primary Habitat Associations	Potential to Occur
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Not expected to occur. Protocol surveys conducted by Dudek in 2024 were negative for the species. Additionally, protocol surveys conducted for this species in 2014 and 2016 were also negative (Glenn Lukos Associates 2021).
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. Marginal habitat for the species is present in the Santa Clara River wash and protocol surveys conducted for the species in 2014 were negative (Glenn Lukos Associates 2021).
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Not expected to occur. No rocky outcroppings on site for roosting. No recent observations exist (CDFW 2025a).
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	Not expected to occur. No structures for roosting on site. No recent observations exist (CDFW 2025a).
Euderma maculatum	spotted bat	None/SSC	Foothills, mountains, desert regions of southern California, including arid deserts, grasslands, and mixed-conifer forests; roosts in rock crevices and cliffs; feeds over water and along washes	Not expected to occur. No structures for roosting on site. No recent observations exist (CDFW 2025a).

Scientific Name	Common Name	Status[1](Federal/State)	Primary Habitat Associations	Potential to Occur
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Not expected to occur. Some trees for roosting on site, however, most recent sighting more than 25 years old (CDFW 2025a).
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/SSC	Coastal sage scrub habitats in Southern California; intermediate canopy stages of shrub habitats and open shrub / herbaceous and tree / herbaceous edges	Occurs. One individual seen during 2018 surveys and suitable habitat is present.
Macrotus californicus	Californian leaf-nosed bat	None/SSC	Riparian woodlands, desert wash, desert scrub; roosts in mines and caves, occasionally buildings	Not expected to occur. Suitable habitat for the species is not present in the Study Area.
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Not expected to occur. The Study Area is outside of the range of the species.
Onychomys torridus ramona	southern grasshopper mouse	None/SSC	Grassland and sparse coastal scrub	Low potential to occur. Coastal scrub habitat in the Study Area is denser than is ideal for the species and there are no recent sightings exist for this species (CDFW 2025a).
Puma concolor	mountain lion - Southern California/Central Coast ESU	None/SC	Scrubs, chaparral, riparian, woodland, and forest; rests in rocky areas and on cliffs and ledges that provide cover; most abundant in riparian areas and brushy stages of most habitats throughout California, except deserts	High potential to occur. This wide-ranging species is expected to use the Study Area for range movement, foraging, and dispersal, but not for natal dens due to the human activity present (i.e., railroad use, golf course, State Route 14, and residential housing).
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Low potential to occur. Marginal habitat present. One recent sighting (2015) occurred approximately 11 miles from the Study Area boundary (CDFW 2025a).

Table Notes:
[1] **Status Abbreviations**
Federal Statuses
FE: Federally listed Endangered
FT: Federally listed as Threatened
PFL: Proposed for federal listing
FC: Candidate for federal listing as threatened or endangered
FD: Federally Delisted
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
State Statuses
SE: State listed as Endangered
ST: State listed as Threatened
SCE: State candidate for listing as Endangered
SD: State Delisted
FP: Fully protected species
SSC: Species of Special Concern
WL: California Watch List Species

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