

Arborist Survey Report

Silver Eagle 6

City of Sacramento, Sacramento County, California

May 2024



Prepared for:

John Griffin
Del Paso Homes, Inc.
4120 Douglas Blvd. #306-375
Granite Bay, CA 95746

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Silver Eagle 6**

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1.0 INTRODUCTION

This report presents the results of an arborist survey conducted for the Silver Eagle 6 Property (Study Area) by Madrone Ecological Consulting, LLC (Madrone). The approximately 6.7-acre Study Area is located in the City of Sacramento (City), south of Silver Eagle Road, north of Ford Road, and east of Western Avenue (Figure 1). The Study Area is located in Del Paso Land Grant, in Township 9 North, Range 5 East (MDB&M) of the "Rio Linda, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2013) (Figure 1).

2.0 EXISTING SITE CONDITIONS

The Study Area is a vacant lot that is disked annually. Surrounding land use includes existing medium density residential to the south, residential and undeveloped fallow fields to the north and east, and a regional bike trail, railroad, and Steelhead Creek riparian corridor to the west. The Study Area is relatively flat with elevation ranges of 25-35 feet above mean sea level, sloping gently towards a now defunct drainage bisecting the site from the northeast corner to southwest. Surrounding properties to the north and east are rural residential with low-density single-family homes to the south.

Existing vegetation within the Study Area includes non-native annual grasses and forbs including immature brome (*Bromus* sp.) and oat (*Avena* sp.), johnsongrass (*Sorghum halepense*), prickly lettuce (*Lactuca serriola*), turkey mullein (*Croton setiger*), Bermuda grass (*Cynodon dactylon*) and alkali mallow (*Malvella leprosa*) with a grove of blue oak (*Quercus douglasii*) and Valley oak (*Quercus lobata*) located in the southeast corner.

3.0 METHODOLOGY

Madrone ISA Certified Arborist Daria Snider (#WE-8666A) conducted the arborist survey on 6 July 2023. The survey was conducted in accordance with the Sacramento City Code Chapter 12.56 - Tree Planting, Maintenance and Conservation (Tree Ordinance). The Tree Ordinance protects "Private Protected Trees." Categories of Private Protected Trees that are relevant to the Silver Eagle 6 property include:

- All native oak trees with a Diameter at Standard Height (DSH) of 12 inches or more ;
- Any tree with a DSH of 24 inches or more on an undeveloped lot; and
- Any tree with a DSH of 32 inches or more on a lot with a single unit or duplex dwelling.

DSH is defined as the sum of the diameter of the largest trunk and one-half the cumulative diameter of the remaining trunks at 4.5 feet above natural grade., measured four and one-half feet above the ground.

Ms. Snider inventoried all trees with at least one trunk equal to or greater than 6 inches in diameter. For each tree inventoried, Ms. Snider nailed aluminum tags with a unique identification number into the trunk, recorded the tree identification number, tree species, diameter of each trunk, approximate dripline radius, and general health and structure. The location of each tree was surveyed by the topographic survey crew

prior to the arborist survey; these locations were retained. Note that the health and structure ratings recorded during the course of this survey may be used for general planning purposes, but shall not be considered to be a hazard assessment for public safety purposes.

4.0 RESULTS

Ms. Snider surveyed 30 trees, 23 of which were alive and located within the Study Area. Of these, only 13 met the Tree Ordinance size threshold and are considered Protected Trees under the Tree Ordinance. These include two Valley oak (*Quercus lobata*) trees and 11 blue oak (*Quercus douglasii*) trees. The data is summarized in **Attachment A** and a map of the inventoried trees is included as **Figure 2**. The cumulative DSH of the 13 Protected Trees documented within the Study Area is 281.6 inches and is shown in **Table 1** below along with tree health.

Table 1. Protected Trees within the Study Area

Species	Number of Trees (DSH)	Trees in Poor Condition (DSH)	Trees in Fair Condition (DSH)	Trees in Good Condition (DSH)
Valley oak (<i>Quercus lobata</i>)	2 (52.3)	0 (0)	2 (52.3)	0 (0)
Blue oak (<i>Quercus douglasii</i>)	11 (229.3)	3 (46.1)	6 (137.9)	2 (45.3)
Total	13 (281.6)	3 (46.1)	8 (190.2)	2 (45.3)

5.0 MITIGATION REQUIREMENTS

The Project may require the removal of 13 Protected Trees with a cumulative DSH of 281.6 inches. Of those 13 Protected Trees, 3 trees (46.1 DSH inches) are rated as having poor structure or health, and may not require mitigation for removal. The remaining 10 trees (235.5 DSH inches) are rated fair or better and would require mitigation for removal.

The Tree Ordinance requires the Project Applicant to obtain a Tree Permit from the City prior to Improvement Plan approval if any Protected Trees will be impacted by the Project. The Tree Permit Application must be accompanied by a Tree Replacement Plan, which “must provide for the replacement of trees at a ratio of one inch DSH of tree replaced for each inch DSH of tree removed (1:1 ratio).” Replacement options include on-site or off-site replacement, payment of an in-lieu fee, or credit for existing trees that will be preserved. Tree replacement equivalents outlined in the Tree Ordinance are summarized in **Table 2** below, and the current (August 2023) in-lieu fee is \$325 per DSH inch. The City shall review the permit application as well as the final site improvement plans and determine the precise mitigation requirement at that time.

Table 2. Tree Replacement Equivalency

Replacement Tree Size	DSH Equivalency
15-gallon container or smaller tree	1-inch DSH
24-inch box tree	2-inch DSH
36-inch box tree	3-inch DSH

For example, if all of the Protected Trees within the Study Area were impacted, the 235.5 DSH inches could be mitigated by planting 79 36-inch box trees, or by payment of \$76,537.50.

6.0 REFERENCES

U.S. Geological Survey (USGS). 2022. *"Rio Linda, California"* 7.5-Minute Series Topographic Quadrangle.
U.S. Geological Survey. Denver, Colorado.

Figures

Figure 1. Site and Vicinity

Figure 2. Tree Inventory Map

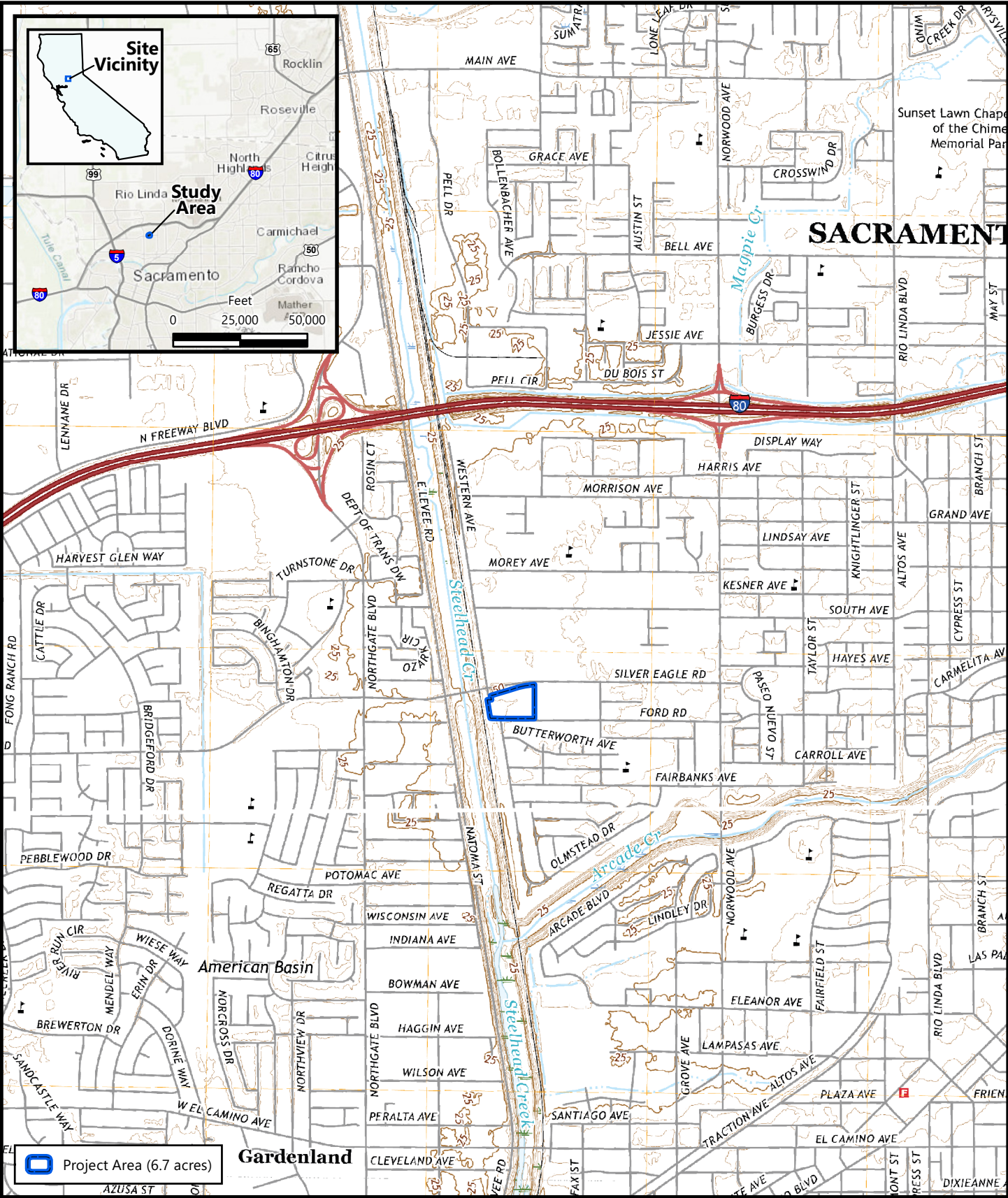
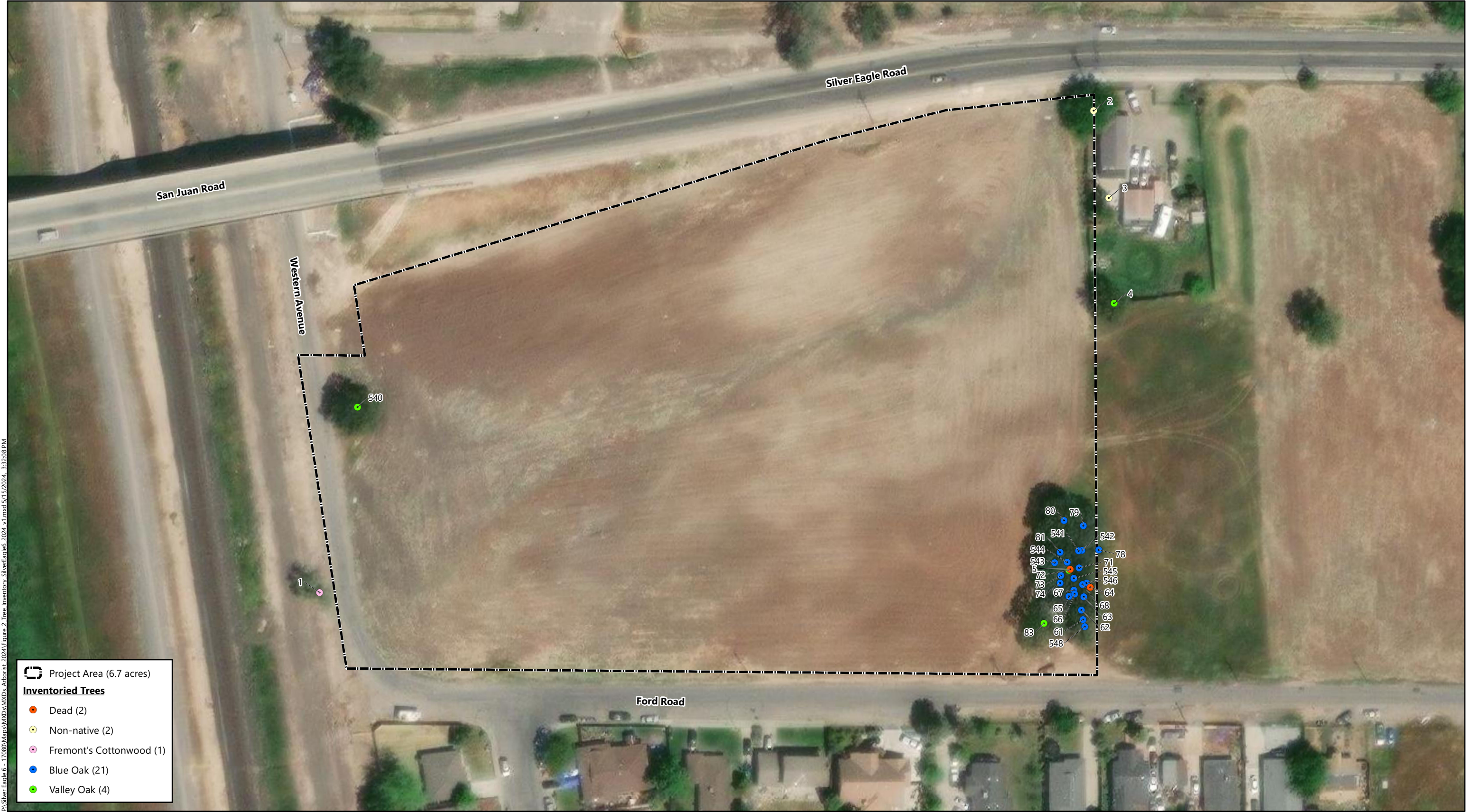


Figure 1
Site and Vicinity



Source: United States Geologic Survey, 2022.
 "Rio Linda, California" 7.5-Minute Topographic Quadrangle
 Del Paso Land Grant
 Township 9 North, Range 5 East
 Longitude -121.467773, Latitude 38.629403

Silver Eagle 6
 Sacramento, Sacramento County, California

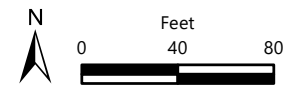


P:\Silver Eagle 6 - 17080\Maps\MXD\stMXDs\Arborist_2024\Figure 2 - Tree Inventory_SilverEagle6_2024_v1.mxd 5/15/2024 - 3:32:08 PM

Project Area (6.7 acres)

Inventoried Trees

- Dead (2)
- Non-native (2)
- Fremont's Cottonwood (1)
- Blue Oak (21)
- Valley Oak (4)



Aerial Source: Maxar, 12 April 2022.

Figure 2
Tree Inventory Map

Silver Eagle 6
Sacramento, Sacramento County, California



Attachments

Attachment A. Arborist Survey Data for Silver Eagle 6

Attachment A

Arborist Survey Data for Silver Eagle 6

Arborist Survey Data for Silver Eagle 6

Tree Number	Species	Individual DBH for Multi- Trunk Trees	Cumulative DSH (inches)	Dripline Radius (ft.)	Health	Structure	Comments
1	Fremont's cottonwood		27.5	20	Fair	Poor	Numerous branches have broken off, and some of the remaining branches are dead.
2	Mulberry		30	30	Good	Good	Located in adjacent backyard.
3	Crape Myrtle		18	15	Good	Good	Located in adjacent backyard.
4	Valley oak		17.5	26	Good	Good	Located on adjacent property.
5	Unknown	8, 10, 8	17		Dead		
61	Blue oak	9.0, 5.9, 7.1	15.5	15	Poor	Poor	2 main branches dead, bulk of remainder removed. Foliage is trunk sprouts except one branch that is resting on ground
63	Blue oak	12.8, 4.2, 3.7, 4.2, 6.9	22.3	22	Fair	Fair	
64	Unknown	8, 8, 8	16		Dead		
65	Blue oak	10.6, 5.7, 7.4	17.2	18	Poor	Fair	Extensive branch die back, healing large cavity on central trunk
66	Blue oak	6.2, 5.7, 5.6	11.9	15	Poor	Poor	One central branch almost dead, cavity at base of 2 trunks
67	Blue oak	6.0, 3.0	7.5	8	Poor	Poor	Half of branches dead, smaller trunk dead, cavity at base of larger trunk
68	Blue oak		6.1	10	Fair	Fair	
71	Blue oak	11.8, 3.1, 4.4	15.6	22	Fair	Fair	
72	Valley oak		6.2	15	Poor	Fair	Many dead branches, only vigorous foliage is trunk sprouts. sloughing bark
73	Blue oak	9.5, 4.1, 10.3	17.1	25	Fair	Fair	One branch has substantial die back but remaining branches are vigorous
74	Blue oak		7.2	12	Fair	Poor	Tall single trunk lacking proper taper, without adjacent trees would likely fail
78	Blue oak	6.5, 6.5, 4.6, 1.9, 2.9	14.5	10	Fair	Fair	
79	Blue oak	16.2, 13.4	22.9	25	Good	Good	
80	Blue oak	13.3, 13.9, 12.3, 10.5, 13.3	38.6	30	Fair	Fair	Some dying branches and included bark at trunk unions but otherwise vigorous
81	Blue oak	10.1, 8.7	14.5	17	Fair/Poor	Fair	Substantial die back on one trunk but other is in good health
83	Valley oak	19.3, 17.2	27.9	25	Fair	Good	Some branch die back at tips
540	Valley oak		24.4	28	Fair	Good	One section of tree is dead. Unknown if disease or chemical. Remainder is in great shape.
541	Blue oak		11	10	Poor	Fair	Branches are at least half dead. Healing trunk cavity at base
542	Blue oak		10.6	15	Poor	Poor	Half of branches dead, substantial sloughing bark at base
543	Blue oak	14.3, 15.2	22.4	26	Good	Good	

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Tree Number	Species	Individual DBH for Multi- Trunk Trees	Cumulative DSH (inches)	Dripline Radius (ft.)	Health	Structure	Comments
544	Blue oak	10.0, 6.7	13.4	12	Poor	Fair	Many dying branches, included bark at main trunk union
545	Blue oak		5.7	8	Poor	Poor	Lots of dead branches, and only trunk is a branch of a central leader
546	Blue oak		6.9	18	Poor	Poor	Substantial lean and substantial amount of dead branches
62 / 547	Blue oak	3.8, 9.0	12.8	15	Fair	Fair	Tree has two tags.
548	Blue oak	7.4, 9.7, 12.5, 7.9, 9.5	29.8	20	Fair	Fair	Some branch die back, numerous trunks with sloughing bark at base