Arborist Survey Report

Placer Retirement Residence Project

Placer County, California

Prepared For:

Kimley-Horn

May 10, 2018

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

ECORP Consulting, Inc. has assisted public and private land owners with environmental regulation compliance since 1987. We offer full service capability, from initial baseline environmental studies through environmental planning review, permitting negotiation, liaison to obtain legal agreements, mitigation design, and construction monitoring and reporting.

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LIST OF ACRONYMS AND ABBREVIATIONS

dbh	diameter at breast height
Project	Placer Retirement Residence Project
Tree Preservation Code	Placer County Code (Article 12.16.020) for Tree Preservation
USGS	U.S. Geological Survey

1.0 INTRODUCTION

On behalf of Kimley-Horn, ECORP Consulting, Inc. conducted an arborist survey for the Placer Retirement Residence Project (Project) site, located in Roseville, Placer County, California. The purpose of this survey was to identify, map, and assess the general condition of trees within the Project site according to the Placer County Code (Article 12.16.020) for Tree Preservation (Tree Preservation Code).

The following are definitions from the Tree Preservation Code that were used to guide the methodology and data collection for this survey effort.

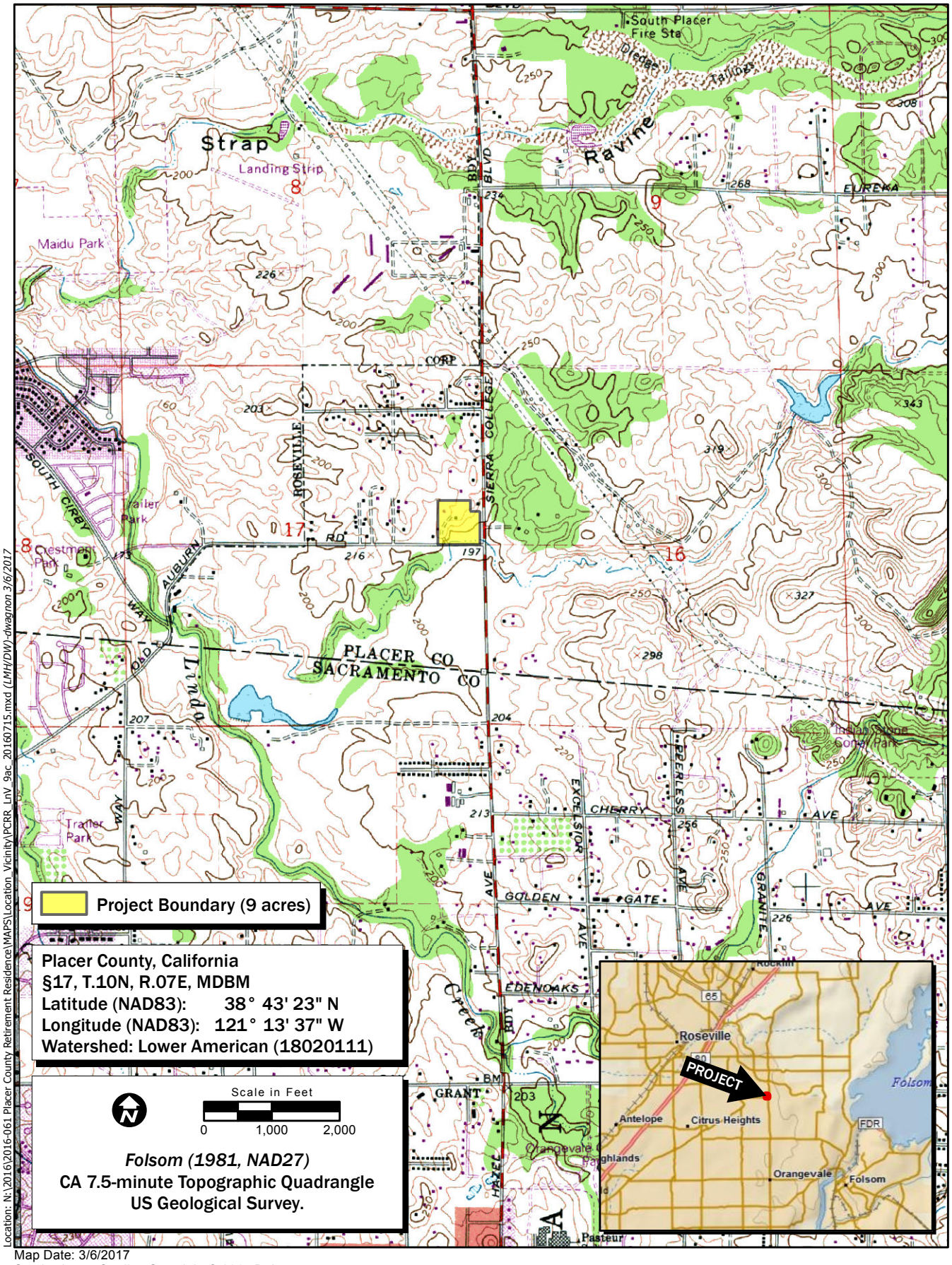
Tree: A tall woody plant native to California, with a single main stem or trunk at least six inches diameter at breast height (dbh), or a multiple trunk with an aggregate of at least ten (10) inches dbh. (Note: Grey pines (*Pinus sabiniana*) are exempt from this article).

Riparian Zone: Any area within fifty (50) feet from the centerline of a seasonal creek or stream, any area one hundred (100) feet from the centerline of a year-round creek, stream, or river, and any area within one hundred (100) feet from the shoreline of a pond, lake or reservoir. At a minimum all streams, creeks, ponds, lakes, and reservoirs as shown on 7.5-minute U.S. Geological Survey (USGS) maps are included in this definition.

Landmark Tree: A tree or grove of trees designated by resolution of the Board of Supervisors to be of historical or cultural value, an outstanding specimen, an unusual species and/or of significant community benefit. Notwithstanding any other provision of this section, a tree that is not native to California may be designated as a landmark tree.

2.0 SITE DESCRIPTION

The site is located in an unincorporated portion of Placer County at the northwestern corner of the intersection of Sierra College Boulevard and Old Auburn Road (Figure 1. *Project Location and Vicinity*). The ±9-acre Project site corresponds to a portion of Section 17, Township 10 North, and Range 7 East (Mount Diablo Base and Meridian) of the "Folsom, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geologic Survey [USGS] 1981). The approximate center of the site is located at 38˚ 43′ 23″ North and 121° 13′ 37″ West within the Lower American Watershed (#18020111, USGS 2016). The Project is located within the Granite Bay community (Assessor's Parcel Number 468-060-038). The Project site is undeveloped and characterized by nonnative annual grassland, with some riparian habitat along the on-site tributary to Linda Creek. The surrounding lands include residential development to the south, rural residences to the west and north, and a mixture of high- and low-density residential development to the east.



Map Date: 3/6/2017
Service Layer Credits: Copyright:© 2015 DeLorme

Figure 1. Project Location and Vicinity

2016-138 Placer Retirement Residence

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2.1 Roadway Frontage Improvements

For this Project, two roadway frontage improvements are proposed and their impacts are evaluated separately. The first alternative, the Full Frontage Improvements Alternative, proposes to construct the roadway frontage improvements along Old Auburn Road based on the design requirements required by the Granite Bay Community Plan. The second alternative, the Modified Frontage Improvements Alternative, proposed to shift the existing center line of a portion of Old Auburn Road with the intent of avoiding impacts to the existing Linda Creek tributary and riparian habitat located adjacent to the street right-of-way.

The purpose of including the two alternatives in this Arborist Survey Report is to provide information regarding potential impacts to trees associated with each alternative.

3.0 METHODS

ECORP arborist Krissy Walker-Berry (ISA Certification #WE-11308A) conducted the field survey on August 19, 2016. During the field survey, Ms. Walker-Berry walked the Project site and recorded data using a sub-meter accuracy Trimble GeoXT Global Positioning System unit.

Data collected included species, tree tag number, dbh, dripline radius, structure, and condition. In accordance with the Tree Preservation Code, all native trees (regardless of size) within 100 feet of the centerline of the tributary to Linda Creek (considered the Riparian Zone) were surveyed. For trees outside of the Riparian Zone, all native trees with a dbh of six inches for single-stemmed trees, or with an aggregate dbh of 10 inches for multiple-stemmed trees were surveyed. In addition, any large nonnative tree that could potentially be considered a “landmark tree” was also documented. The survey results are intended for general project planning purposes only; therefore, these results should not be considered a detailed tree analysis (i.e., results do not include hazard assessment, tree health diagnosis, preservation/removal recommendations, or pruning advisement). See the Placer County Retirement Residence Tree Risk Assessment Report (Up A Tree Arborist Services 2018) for the tree risk assessment. The following terms define the collected data:

Diameter at Breast Height (dbh): Trunk diameter at 4.5 feet above grade. Occasional deviations from this height were required for trees with branching at this level or with unusual structural configurations (e.g., horizontal trunks). On multi-trunked trees (trees with multiple vertical trunks in contact at or near ground level), the report lists total aggregate diameter along with the total number of trunks that were measured.

Dripline Radius: The maximum distance from trunk to the edge of the canopy.

Condition: An estimate of the tree's overall health. This includes evaluation of foliage, evidence of wound healing, evidence of fungal attack, density of insect galls, and the amount and condition of attached deadwood. Condition was rated on a three-point scale (poor, fair, good).

Structure: An estimate of the tree's structural soundness, based on obvious external evidence. This evaluates the obvious potential for structural failure of one or more major branches or trunks, the environment and condition of the root crown, symmetry of the canopy, and any noticeable effects of crowding caused by adjacent trees. Structure was rated on a three-point scale (poor, fair, good).

In addition, where appropriate, notes were taken regarding any unusual features (e.g., large trunk cavities, obvious damage or disease, girdling by barbed wire).

4.0 RESULTS

A total of 167 trees were inventoried within the Project site, including 138 trees located within the Riparian Zone (as defined by Placer County's Tree Preservation Code). Four of these trees do not occur within the Project site; however, portions of their tree canopy occur within the boundaries of the property. Data was collected for these trees, but they were not given a tree number. A map depicting the locations of the inventoried trees is included in Attachment A. Detailed tree survey data for each tree are included in Attachment B. Representative site photographs are included in Attachment C.

Of the 167 trees within the Project site, 160 are native trees comprised of six different species. The most common species is interior live oak (*Quercus wislizeni*) with 75 individuals. In addition, there are 45 valley oak (*Quercus lobata*), 27 blue oak (*Quercus douglasii*), six Fremont's cottonwood (*Populus fremontii*), five Goodding's black willow (*Salix gooddingii*), and two red willow (*Salix laevigata*).

Seven nonnative trees were also inventoried as part of this survey predominantly due to their large size. This included one blue gum eucalyptus (*Eucalyptus globulus*), two London planes (*Platanus x acerifolia*), one white mulberry (*Morus alba*), one sweetgum (*Liquidambar styraciflua*), one Chinese pistache (*Pistacia chinensis*), and one Chinese tallow (*Triadica sebifera*).

5.0 IMPACTS AND CONCLUSIONS

5.1 Full Frontage Improvements Alternative

Based on the impact map provided by Kimley-Horn, only 84 of the 167 trees found during the inventory are expected to be impacted either by direct removal or by indirect/partial encroachment by construction of the Full Frontage Improvement Alternative. Partial encroachment means that there will be impacts at the soil level within the Protected Zone of the tree through grade change or potential root flooding near natural ponding basins. An impact figure showing both direct and indirectly impacted trees is provided in Attachment D.

Six of the removed trees are nonnative, so they do not fall under Placer County's Tree Preservation Code. These include trees 3, 5, 7, 8, 1885, and 2896; these are white mulberry, sweetgum, London plane, Chinese pistache, and eucalyptus trees, respectively.

Sixteen of the impacted trees (See Table 1 and Attachment D) are expected to have partial encroachments within the Dripline/Protected Zone. As such, these trees may be indirectly impacted by the Project. Work within the dripline of these trees should be monitored by an arborist to help minimize disturbances. If any of these trees are determined that they will be impacted such that they require removal, they will be mitigated accordingly.

Table 1. Potential Indirect Impacts for Full Frontage Improvements Alternative

Tree Tag #	Common Name	Scientific Name	DBH (inches)
13	Goodding's Black Willow	*Salix gooddingii*	32
36	Interior Live Oak	*Quercus wislizeni*	12
107	Valley Oak	*Quercus lobata*	19.5
108	Valley Oak	*Quercus lobata*	13
110	Interior Live Oak	*Quercus wislizeni*	12
133	Valley Oak	*Quercus lobata*	54
135	Valley Oak	*Quercus lobata*	12
202	Valley Oak	*Quercus lobata*	12.5
238	Interior Live Oak	*Quercus wislizeni*	8.5
239	Interior Live Oak	*Quercus wislizeni*	2
247	Interior Live Oak	*Quercus wislizeni*	5.5
263	Interior Live Oak	*Quercus wislizeni*	12
1883	Interior Live Oak	*Quercus wislizeni*	2
1887	Valley Oak	*Quercus lobata*	1
1888	Interior Live Oak	*Quercus wislizeni*	3.5
2893	Interior Live Oak	*Quercus wislizeni*	26

The remaining 62 trees will be removed as a result of Project implementation (See Table 2 and Attachment D). Placer County requires inch-per-inch mitigation for tree removal. Therefore, as a result of this Full Frontage Improvements Alternative, a total of 898 inches will need either to be replaced on the property or have an equivalent monetary amount paid into the Placer County's tree preservation fund.

Table 2. Proposed Tree Removals for Full Frontage Improvements Alternative

Tree Tag #	Common Name	Scientific Name	DBH (inches)
9	Fremont's Cottonwood	Populus fremontii	32.5
10	Blue Oak	Quercus douglasii	34
18	Blue Oak	Quercus douglasii	16.5
19	Interior Live Oak	Quercus wislizeni	41.5
20	Blue Oak	Quercus douglasii	31.5
21	Fremont's Cottonwood	Populus fremontii	52
22	Valley Oak	Quercus lobata	20
23	Interior Live Oak	Quercus wislizeni	39.5
24	Interior Live Oak	Quercus wislizeni	24

Table 2. Proposed Tree Removals for Full Frontage Improvements Alternative

Tree Tag #	Common Name	Scientific Name	DBH (inches)
25	Interior Live Oak	Quercus wislizeni	31.5
26	Interior Live Oak	Quercus wislizeni	9
27	Blue Oak	Quercus douglasii	42.5
29	Blue Oak	Quercus douglasii	14
30	Interior Live Oak	Quercus wislizeni	8
31	Blue Oak	Quercus douglasii	20
35	Valley Oak	Quercus lobata	34
46	Blue Oak	Quercus douglasii	24
48	Blue Oak	Quercus douglasii	10
49	Blue Oak	Quercus douglasii	15
63	Blue Oak	Quercus douglasii	34
136	Blue Oak	Quercus douglasii	4.5
137	Valley Oak	Quercus lobata	14
138	Interior Live Oak	Quercus wislizeni	7
139	Interior Live Oak	Quercus wislizeni	21
140	Interior Live Oak	Quercus wislizeni	11.5
141	Valley Oak	Quercus lobata	10.5
142	Interior Live Oak	Quercus wislizeni	2
213	Valley Oak	Quercus lobata	12.5
214	Valley Oak	Quercus lobata	10
215	Valley Oak	Quercus lobata	1.5
216	Valley Oak	Quercus lobata	9
217	Valley Oak	Quercus lobata	4
218	Valley Oak	Quercus lobata	10
219	Valley Oak	Quercus lobata	2
220	Valley Oak	Quercus lobata	18
221	Interior Live Oak	Quercus wislizeni	6.5
222	Interior Live Oak	Quercus wislizeni	6.5
224	Interior Live Oak	Quercus wislizeni	5
225	Blue Oak	Quercus douglasii	1
226	Interior Live Oak	Quercus wislizeni	6
228	Interior Live Oak	Quercus wislizeni	2.5
229	Interior Live Oak	Quercus wislizeni	3
230	Interior Live Oak	Quercus wislizeni	9
240	Interior Live Oak	Quercus wislizeni	1
241	Interior Live Oak	Quercus wislizeni	7
242	Interior Live Oak	Quercus wislizeni	34
248	Interior Live Oak	Quercus wislizeni	2.5
249	Interior Live Oak	Quercus wislizeni	1

Table 2. Proposed Tree Removals for Full Frontage Improvements Alternative			
Tree Tag #	Common Name	Scientific Name	DBH (inches)
250	Interior Live Oak	Quercus wislizeni	3
251	Interior Live Oak	Quercus wislizeni	1
252	Interior Live Oak	Quercus wislizeni	2.5
253	Interior Live Oak	Quercus wislizeni	7
261	Goodding's Black Willow	Salix gooddingii	21
262	Blue Oak	Quercus douglasii	5.5
1870	Interior Live Oak	Quercus wislizeni	7
1871	Interior Live Oak	Quercus wislizeni	10
1872	Interior Live Oak	Quercus wislizeni	32
1873	Interior Live Oak	Quercus wislizeni	8.5
1876	Goodding's Black Willow	Salix gooddingii	2.5
1884	Interior Live Oak	Quercus wislizeni	3
1886	Interior Live Oak	Quercus wislizeni	3
2894	Interior Live Oak	Quercus wislizeni	36
		Total Inches Proposed for Removal:	898.0

5.2 Modified Frontage Improvements Alternative

Based on the impact map provided by Kimley-Horn, only 59 of the 167 trees found during the inventory are expected to be impacted either by direct removal or by indirect/partial encroachment by construction of the Modified Frontage Improvements Alternative. Partial encroachment means that there will be impacts at the soil level within the Protected Zone of the tree through either a bike trail with minimal impacts to the subgrade or potential root flooding near natural ponding basins. An impact figure showing both direct and indirectly impacted trees is provided in Attachment E.

Five of the removed trees are nonnative, so they do not fall under Placer County's Tree Preservation Code. These include trees 3, 5, 7, 8, and 2896; these are white mulberry, sweetgum, London plane, and eucalyptus trees, respectively.

Twenty-six of the impacted trees (See Table 3 and Attachment E) are expected to have partial encroachments within the Dripline/Protected Zone. As such, these trees may be indirectly impacted by the Project. Work within the dripline of these trees should be monitored by an arborist to help minimize disturbances. If any of these trees are determined that they will be impacted such that they require removal, they will be mitigated accordingly.

Table 3. Potential Indirect Impacts for Modified Frontage Improvements Alternative			
Tree Tag #	Common Name	Scientific Name	DBH (inches)
40	Valley Oak	Quercus lobata	18.5
106	Valley Oak	Quercus lobata	22.5

Table 3. Potential Indirect Impacts for Modified Frontage Improvements Alternative			
Tree Tag #	Common Name	Scientific Name	DBH (inches)
107	Valley Oak	Quercus lobata	19.5
108	Valley Oak	Quercus lobata	13
110	Interior Live Oak	Quercus wislizeni	12
111	Interior Live Oak	Quercus wislizeni	12
117	Valley Oak	Quercus lobata	9.5
119	Valley Oak	Quercus lobata	32
122	Valley Oak	Quercus lobata	19.5
123	Valley Oak	Quercus lobata	21.5
127	Red Willow	Salix laevigata	31
129	Interior Live Oak	Quercus wislizeni	12.5
132	Interior Live Oak	Quercus wislizeni	4
206	Blue Oak	Quercus douglasii	1
208	Blue Oak	Quercus douglasii	4.5
233	Valley Oak	Quercus lobata	25.5
234	Valley Oak	Quercus lobata	8
235	Valley Oak	Quercus lobata	7.5
236	Interior Live Oak	Quercus wislizeni	3.5
1877	Interior Live Oak	Quercus wislizeni	8.5
1878	Interior Live Oak	Quercus wislizeni	5
1879	Interior Live Oak	Quercus wislizeni	5.5
1880	Interior Live Oak	Quercus wislizeni	4.5
1883	Interior Live Oak	Quercus wislizeni	2
2893	Interior Live Oak	Quercus wislizeni	26
2894	Interior Live Oak	Quercus wislizeni	36

The remaining 28 trees will be removed as a result of Project implementation (See Table 4 and Attachment E). Placer County requires inch-per-inch mitigation for tree removal. Therefore, as a result of this Modified Frontage Improvements Alternative, a total of 494.5 inches will need either to be replaced on the property or have an equivalent monetary amount paid into the Placer County's tree preservation fund.

Table 4. Proposed Tree Removals for Modified Frontage Improvements Alternative			
Tree Tag #	Common Name	Scientific Name	DBH (inches)
9	Fremont's Cottonwood	Populus fremontii	32.5
10	Blue Oak	Quercus douglasii	34
13	Goodding's Black Willow	Salix gooddingii	32
18	Blue Oak	Quercus douglasii	16.5
19	Interior Live Oak	Quercus wislizeni	41.5
20	Blue Oak	Quercus douglasii	31.5

Table 4. Proposed Tree Removals for Modified Frontage Improvements Alternative			
Tree Tag #	Common Name	Scientific Name	DBH (inches)
21	Fremont's Cottonwood	Populus fremontii	52
46	Blue Oak	Quercus douglasii	24
48	Blue Oak	Quercus douglasii	10
49	Blue Oak	Quercus douglasii	15
63	Blue Oak	Quercus douglasii	34
114	Valley Oak	Quercus lobata	11
115	Interior Live Oak	Quercus wislizeni	14
116	Valley Oak	Quercus lobata	6
120	Valley Oak	Quercus lobata	17.5
121	Blue Oak	Quercus douglasii	2.5
138	Interior Live Oak	Quercus wislizeni	7
139	Interior Live Oak	Quercus wislizeni	21
140	Interior Live Oak	Quercus wislizeni	11.5
141	Valley Oak	Quercus lobata	10.5
142	Interior Live Oak	Quercus wislizeni	2
262	Blue Oak	Quercus douglasii	5.5
1870	Interior Live Oak	Quercus wislizeni	7
1871	Interior Live Oak	Quercus wislizeni	10
1872	Interior Live Oak	Quercus wislizeni	32
1873	Interior Live Oak	Quercus wislizeni	8.5
1876	Goodding's Black Willow	Salix gooddingii	2.5
1884	Interior Live Oak	Quercus wislizeni	3
		Total Inches Proposed for Removal:	494.5

5.3 Summary

Based on the impacts shown above, the Modified Frontage Improvements Alternative will result in less impacts to trees (494.5 total inches removed) as compared to the Full Frontage Improvements Alternative (898 total inches removed), which would nearly double the inches of trees impacted.

6.0 REFERENCES

Up A Tree Arborist Services. 2018. Placer County Retirement Residence Tree Risk Assessment Report, Placer County, CA. Prepared for Kimley-Horn. Loomis, California.

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LIST OF ATTACHMENTS

Attachment A – Tree Inventory at the Placer Community Retirement Residence Project

Attachment B – Tree Survey Data (19 August 2016)

Attachment C – Representative Site Photographs

Attachment D – Proposed Tree Impacts Full Frontage Improvements Alternative

Attachment E – Proposed Tree Impacts Modified Frontage Improvements Alternative

ATTACHMENT A

Tree Inventory at the Placer Community Retirement Residence Project

Tree Inventory at the Placer Retirment Residence

Map Features

Property Boundary - 8.9 acres

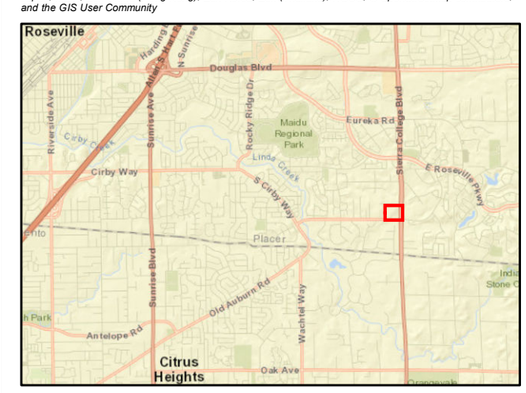
Native Species

- Blue Oak
- Fremont's Cottonwood
- Goodding's Black Willow
- Interior Live Oak
- Red Willow
- Valley Oak

Non-Native Species

- Blue Gum Eucalyptus
- Sweetgum
- White Mulberry
- Chinese Tallow
- London Plane
- Chinese Pistache

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



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Location: N:\2016\2016-061 Placer County Retirement Residence\MAPS\SSS_Survey_and_Mapping\Arborist_Tree_Locations\PCRR_TreeLocations_20180409.mxd (JDS) JSwager 5/8/2018

2016-138 Placer County Retirment Residence #1

Scale in Feet
0 80

Photo Source: 2013, USGS
Boundary: Kimley-Horn

Map Date: 5/8/2018

ATTACHMENT B

Tree Survey Data (August 19, 2016)

Tree Survey Data (19 August 2016)

						Condition				
Tree Tag #	Common Name	Scientific Name	DBH (inches)	Multi-trunked (#)	Dripline Radius (feet)	Structure	Health	Within Riparian Area (Y/N)	Full Alternative Impacts	Modified Alternative Impacts
3	White Mulberry	*Morus alba*	35	1	19	Good	Fair	No	Direct	Direct
5	Sweetgum	*Liquidambar styraciflua*	17	1	14	Good	Fair	No	Direct	Direct
7	London Plane	*Platanus x acerifolia*	23	1	18	Good	Fair	No	Direct	Direct
8	London Plane	*Platanus x acerifolia*	20.5	1	18	Good	Fair	No	Direct	Direct
9	Fremont's Cottonwood	*Populus fremontii*	32.5	1	15	Fair	Fair	No	Direct	Direct
10	Blue Oak	*Quercus douglasii*	34	1	23	Good	Good	No	Direct	Direct
13	Goodding's Black Willow	*Salix gooddingii*	32	1	17	Poor	Fair	Yes	Indirect	Direct
18	Blue Oak	*Quercus douglasii*	16.5	1	24	Fair	Fair	Yes	Direct	Direct
19	Interior Live Oak	*Quercus wislizeni*	41.5	6	21	Poor	Fair	Yes	Direct	Direct
20	Blue Oak	*Quercus douglasii*	31.5	1	20	Fair	Fair	Yes	Direct	Direct
21	Fremont's Cottonwood	*Populus fremontii*	52	1	30	Fair	Fair	Yes	Direct	Direct
22	Valley Oak	*Quercus lobata*	20	1	23	Fair	Poor	Yes	Direct	-
23	Interior Live Oak	*Quercus wislizeni*	39.5	4	10	Poor	Poor	Yes	Direct	-
24	Interior Live Oak	*Quercus wislizeni*	24	1	18	Good	Fair	Yes	Direct	-
25	Interior Live Oak	*Quercus wislizeni*	31.5	1	18	Poor	Fair	Yes	Direct	-
26	Interior Live Oak	*Quercus wislizeni*	9	1	15	Fair	Fair	Yes	Direct	-
27	Blue Oak	*Quercus douglasii*	42.5	2	18	Fair	Fair	Yes	Direct	-
29	Blue Oak	*Quercus douglasii*	14	2	12	Fair	Fair	Yes	Direct	-
30	Interior Live Oak	*Quercus wislizeni*	8	2	12	Fair	Fair	Yes	Direct	-
31	Blue Oak	*Quercus douglasii*	20	1	21	Poor	Fair	Yes	Direct	-
33	Valley Oak	*Quercus lobata*	15.5	1	18	Good	Fair	Yes	-	-
35	Valley Oak	*Quercus lobata*	34	1	25	Fair	Fair	Yes	Direct	-
36	Interior Live Oak	*Quercus wislizeni*	12	1	12	Good	Fair	Yes	Indirect	-
40	Valley Oak	*Quercus lobata*	18.5	2	15	Good	Good	Yes	-	Indirect
42	Blue Oak	*Quercus douglasii*	10.5	1	12	Fair	Fair	Yes	-	-
43	Valley Oak	*Quercus lobata*	18	2	14	Fair	Fair	Yes	-	-
46	Blue Oak	*Quercus douglasii*	24	2	18	Fair	Fair	No	Direct	Direct
48	Blue Oak	*Quercus douglasii*	10	1	12	Fair	Fair	No	Direct	Direct
49	Blue Oak	*Quercus douglasii*	15	1	10	Good	Fair	No	Direct	Direct
63	Blue Oak	*Quercus douglasii*	34	1	19	Good	Fair	No	Direct	Direct
100	Fremont's Cottonwood	*Populus fremontii*	9.5	3	8	Fair	Fair	Yes	-	-
101	Goodding's Black Willow	*Salix gooddingii*	9.5	5	12	Fair	Fair	Yes	-	-
102	Fremont's Cottonwood	*Populus fremontii*	25	5	15	Good	Good	Yes	-	-
103	Fremont's Cottonwood	*Populus fremontii*	5.5	1	13	Good	Good	Yes	-	-
104	Fremont's Cottonwood	*Populus fremontii*	18	3	12	Good	Good	Yes	-	-
105	Blue Oak	*Quercus douglasii*	7.5	1	6	Good	Good	Yes	-	-
106	Valley Oak	*Quercus lobata*	22.5	2	9	Good	Good	Yes	-	Indirect
107	Valley Oak	*Quercus lobata*	19.5	2	11	Good	Good	Yes	Indirect	Indirect
108	Valley Oak	*Quercus lobata*	13	1	13	Good	Good	Yes	Indirect	Indirect
109	Valley Oak	*Quercus lobata*	31	4	0	Fair	Fair	Yes	-	-
110	Interior Live Oak	*Quercus wislizeni*	12	1	12	Good	Good	Yes	Indirect	Indirect

Tree Survey Data (19 August 2016)

						Condition				
Tree Tag #	Common Name	Scientific Name	DBH (inches)	Multi-trunked (#)	Dripline Radius (feet)	Structure	Health	Within Riparian Area (Y/N)	Full Alternative Impacts	Modified Alternative Impacts
111	Interior Live Oak	*Quercus wislizeni*	12	1	12	Good	Good	Yes	-	Indirect
112	Valley Oak	*Quercus lobata*	4.5	2	12	Fair	Fair	Yes	-	-
113	Valley Oak	*Quercus lobata*	10	1	12	Good	Good	Yes	-	-
114	Valley Oak	*Quercus lobata*	11	1	14	Fair	Fair	Yes	-	Direct
115	Interior Live Oak	*Quercus wislizeni*	14	1	13	Good	Good	Yes	-	Direct
116	Valley Oak	*Quercus lobata*	6	1	9	Fair	Fair	Yes	-	Direct
117	Valley Oak	*Quercus lobata*	9.5	1	16	Good	Good	Yes	-	Indirect
118	Red Willow	*Salix laevigata*	11.5	5	10	Fair	Fair	Yes	-	-
119	Valley Oak	*Quercus lobata*	32	3	15	Fair	Good	Yes	-	Indirect
120	Valley Oak	*Quercus lobata*	17.5	6	7	Fair	Fair	Yes	-	Direct
121	Blue Oak	*Quercus douglasii*	2.5	1	4	Fair	Fair	Yes	-	Direct
122	Valley Oak	*Quercus lobata*	19.5	6	10	Fair	Fair	Yes	-	Indirect
123	Valley Oak	*Quercus lobata*	21.5	4	12	Fair	Fair	Yes	-	Indirect
124	Blue Oak	*Quercus douglasii*	5.5	3	6	Fair	Poor	Yes	-	-
125	Blue Oak	*Quercus douglasii*	11	6	7	Fair	Fair	Yes	-	-
127	Red Willow	*Salix laevigata*	31	11	0	DOWN	Fair	Yes	-	Indirect
128	Valley Oak	*Quercus lobata*	2	1	5	Good	Good	Yes	-	-
129	Interior Live Oak	*Quercus wislizeni*	12.5	1	18	Good	Fair	Yes	-	Indirect
130	Valley Oak	*Quercus lobata*	13.5	1	15	Good	Good	Yes	-	-
131	Interior Live Oak	*Quercus wislizeni*	1	1	0	Fair	Fair	Yes	-	-
132	Interior Live Oak	*Quercus wislizeni*	4	2	5	Good	Good	Yes	-	Indirect
133	Valley Oak	*Quercus lobata*	54	6	20	Good	Good	Yes	Indirect	-
134	Interior Live Oak	*Quercus wislizeni*	5.5	4	0	Good	Good	Yes	-	-
135	Valley Oak	*Quercus lobata*	12	1	13	Good	Good	Yes	Indirect	-
136	Blue Oak	*Quercus douglasii*	4.5	3	5	Fair	Fair	Yes	Direct	-
137	Valley Oak	*Quercus lobata*	14	1	18	Good	Good	Yes	Direct	-
138	Interior Live Oak	*Quercus wislizeni*	7	3	7	Poor	Fair	Yes	Direct	Direct
139	Interior Live Oak	*Quercus wislizeni*	21	6	12	Fair	Good	Yes	Direct	Direct
140	Interior Live Oak	*Quercus wislizeni*	11.5	3	10	Fair	Fair	Yes	Direct	Direct
141	Valley Oak	*Quercus lobata*	10.5	1	12	Fair	Fair	Yes	Direct	Direct
142	Interior Live Oak	*Quercus wislizeni*	2	2	4	Good	Good	Yes	Direct	Direct
201	Interior Live Oak	*Quercus wislizeni*	5	2	7	Fair	Fair	Yes	-	-
202	Valley Oak	*Quercus lobata*	12.5	4	10	Fair	Fair	Yes	Indirect	-
203	Valley Oak	*Quercus lobata*	7.5	2	12	Fair	Fair	Yes	-	-
204 (2044)	Valley Oak	*Quercus lobata*	5.5	2	7	Fair	Fair	Yes	-	-
205	Interior Live Oak	*Quercus wislizeni*	3.5	1	5	Fair	Fair	Yes	-	-
206	Blue Oak	*Quercus douglasii*	1	1	4	Fair	Fair	Yes	-	Indirect
207	Interior Live Oak	*Quercus wislizeni*	1	1	4	Fair	Fair	Yes	-	-
208	Blue Oak	*Quercus douglasii*	4.5	3	8	Fair	Fair	Yes	-	Indirect
209	Blue Oak	*Quercus douglasii*	1.5	1	5	Fair	Fair	Yes	-	-
210	Interior Live Oak	*Quercus wislizeni*	36.5	5	14	Fair	Fair	Yes	-	-

Tree Survey Data (19 August 2016)

						Condition				
Tree Tag #	Common Name	Scientific Name	DBH (inches)	Multi-trunked (#)	Dripline Radius (feet)	Structure	Health	Within Riparian Area (Y/N)	Full Alternative Impacts	Modified Alternative Impacts
211	Chinese Tallow	*Triadica sebifera*	5	2	10	Fair	Fair	Yes	-	-
212	Interior Live Oak	*Quercus wislizeni*	9	4	8	Fair	Good	Yes	-	-
213	Valley Oak	*Quercus lobata*	12.5	1	18	Fair	Fair	Yes	Direct	-
214	Valley Oak	*Quercus lobata*	10	2	12	Poor	Fair	Yes	Direct	-
215	Valley Oak	*Quercus lobata*	1.5	1	3	Poor	Fair	Yes	Direct	-
216	Valley Oak	*Quercus lobata*	9	1	13	Good	Fair	Yes	Direct	-
217	Valley Oak	*Quercus lobata*	4	1	10	Poor	Fair	Yes	Direct	-
218	Valley Oak	*Quercus lobata*	10	2	10	Poor	Poor	Yes	Direct	-
219	Valley Oak	*Quercus lobata*	2	1	5	Good	Poor	Yes	Direct	-
220	Valley Oak	*Quercus lobata*	18	3	12	Fair	Poor	Yes	Direct	-
221	Interior Live Oak	*Quercus wislizeni*	6.5	2	10	Fair	Fair	Yes	Direct	-
222	Interior Live Oak	*Quercus wislizeni*	6.5	4	4	Fair	Fair	Yes	Direct	-
223	Interior Live Oak	*Quercus wislizeni*	4.5	1	8	Good	Fair	Yes	-	-
224	Interior Live Oak	*Quercus wislizeni*	5	3	8	Fair	Fair	Yes	Direct	-
225	Blue Oak	*Quercus douglasii*	1	1	3	Fair	Fair	Yes	Direct	-
226	Interior Live Oak	*Quercus wislizeni*	6	1	10	Fair	Fair	Yes	Direct	-
227	Valley Oak	*Quercus lobata*	6	1	10	Good	Fair	Yes	-	-
228	Interior Live Oak	*Quercus wislizeni*	2.5	2	5	Fair	Good	Yes	Direct	-
229	Interior Live Oak	*Quercus wislizeni*	3	1	8	Fair	Fair	Yes	Direct	-
230	Interior Live Oak	*Quercus wislizeni*	9	2	15	Fair	Fair	Yes	Direct	-
231	Valley Oak	*Quercus lobata*	3.5	1	7	Fair	Fair	Yes	-	-
232	Blue Oak	*Quercus douglasii*	1	1	5	Fair	Fair	Yes	-	-
233	Valley Oak	*Quercus lobata*	25.5	2	16	Fair	Fair	Yes	-	Indirect
234	Valley Oak	*Quercus lobata*	8	1	6	Good	Fair	Yes	-	Indirect
235	Valley Oak	*Quercus lobata*	7.5	1	8	Fair	Fair	Yes	-	Indirect
236	Interior Live Oak	*Quercus wislizeni*	3.5	3	5	Fair	Fair	Yes	-	Indirect
237	Blue Oak	*Quercus douglasii*	2	1	3	Good	Fair	Yes	-	-
238	Interior Live Oak	*Quercus wislizeni*	8.5	1	12	Good	Fair	Yes	Indirect	-
239	Interior Live Oak	*Quercus wislizeni*	2	1	5	Fair	Fair	Yes	Indirect	-
240	Interior Live Oak	*Quercus wislizeni*	1	1	3	Fair	Fair	Yes	Direct	-
241	Interior Live Oak	*Quercus wislizeni*	7	4	5	Fair	Fair	Yes	Direct	-
242	Interior Live Oak	*Quercus wislizeni*	34	3	24	Poor	Poor	Yes	Direct	-
243	Interior Live Oak	*Quercus wislizeni*	3	2	10	Fair	Fair	Yes	-	-
244	Interior Live Oak	*Quercus wislizeni*	4	3	7	Fair	Fair	Yes	-	-
245	Valley Oak	*Quercus lobata*	2	1	5	Good	Fair	Yes	-	-
246	Interior Live Oak	*Quercus wislizeni*	3.5	2	6	Fair	Fair	Yes	-	-
247	Interior Live Oak	*Quercus wislizeni*	5.5	3	7	Good	Fair	Yes	Indirect	-
248	Interior Live Oak	*Quercus wislizeni*	2.5	2	5	Fair	Good	Yes	Direct	-
249	Interior Live Oak	*Quercus wislizeni*	1	1	4	Fair	Fair	Yes	Direct	-
250	Interior Live Oak	*Quercus wislizeni*	3	2	6	Fair	Fair	Yes	Direct	-
251	Interior Live Oak	*Quercus wislizeni*	1	1	5	Fair	Fair	Yes	Direct	-

Tree Survey Data (19 August 2016)

						Condition				
Tree Tag #	Common Name	Scientific Name	DBH (inches)	Multi-trunked (#)	Dripline Radius (feet)	Structure	Health	Within Riparian Area (Y/N)	Full Alternative Impacts	Modified Alternative Impacts
252	Interior Live Oak	*Quercus wislizeni*	2.5	2	5	Fair	Fair	Yes	Direct	-
253	Interior Live Oak	*Quercus wislizeni*	7	2	10	Fair	Fair	Yes	Direct	-
254	Valley Oak	*Quercus lobata*	6	1	8	Good	Fair	Yes	-	-
255	Interior Live Oak	*Quercus wislizeni*	1.5	1	4	Fair	Fair	Yes	-	-
256	Interior Live Oak	*Quercus wislizeni*	1.5	1	5	Fair	Fair	Yes	-	-
257	Valley Oak	*Quercus lobata*	2	2	4	Fair	Fair	Yes	-	-
258	Interior Live Oak	*Quercus wislizeni*	2	1	5	Good	Fair	Yes	-	-
259	Interior Live Oak	*Quercus wislizeni*	1	1	4	Good	Fair	Yes	-	-
260	Interior Live Oak	*Quercus wislizeni*	1	1	3	Good	Fair	Yes	-	-
261	Goodding's Black Willow	*Salix gooddingii*	21	3	15	Fair	Fair	Yes	Direct	-
262	Blue Oak	*Quercus douglasii*	5.5	1	6	Good	Fair	No	Direct	Direct
263	Interior Live Oak	*Quercus wislizeni*	12	3	7	Fair	Good	No	Indirect	-
1869	Interior Live Oak	*Quercus wislizeni*	18.5	2	16	Good	Fair	No	-	-
1870	Interior Live Oak	*Quercus wislizeni*	7	1	9	Fair	Fair	No	Direct	Direct
1871	Interior Live Oak	*Quercus wislizeni*	10	1	16	Fair	Fair	No	Direct	Direct
1872	Interior Live Oak	*Quercus wislizeni*	32	3	20	Fair	Fair	No	Direct	Direct
1873	Interior Live Oak	*Quercus wislizeni*	8.5	1	17	Fair	Fair	No	Direct	Direct
1874	Interior Live Oak	*Quercus wislizeni*	19.5	1	17	Good	Fair	No	-	-
1875	Goodding's Black Willow	*Salix gooddingii*	29	2	18	Fair	Fair	Yes	-	-
1876	Goodding's Black Willow	*Salix gooddingii*	2.5	2	6	Fair	Fair	Yes	Direct	Direct
1877	Interior Live Oak	*Quercus wislizeni*	8.5	2	11	Fair	Fair	Yes	-	Indirect
1878	Interior Live Oak	*Quercus wislizeni*	5	3	10	Poor	Fair	Yes	-	Indirect
1879	Interior Live Oak	*Quercus wislizeni*	5.5	3	7	Poor	Fair	Yes	-	Indirect
1880	Interior Live Oak	*Quercus wislizeni*	4.5	3	6	Fair	Good	Yes	-	Indirect
1881	Interior Live Oak	*Quercus wislizeni*	1.5	1	7	Fair	Fair	Yes	-	-
1882	Interior Live Oak	*Quercus wislizeni*	4	2	8	Good	Good	Yes	-	-
1883	Interior Live Oak	*Quercus wislizeni*	2	1	7	Good	Good	Yes	Indirect	Indirect
1884	Interior Live Oak	*Quercus wislizeni*	3	3	8	Fair	Fair	Yes	Direct	Direct
1885	Chinese pistache	*Pistacia chinensis*	2.5	2	5	Fair	Good	Yes	Direct	-
1886	Interior Live Oak	*Quercus wislizeni*	3	3	5	Fair	Fair	Yes	Direct	-
1887	Valley Oak	*Quercus lobata*	1	1	3	Good	Fair	Yes	Indirect	-
1888	Interior Live Oak	*Quercus wislizeni*	3.5	2	10	Fair	Fair	Yes	Indirect	-
2893	Interior Live Oak	*Quercus wislizeni*	26	3	17	Fair	Fair	Yes	Indirect	Indirect
2894	Interior Live Oak	*Quercus wislizeni*	36	2	24	Fair	Fair	No	Direct	Indirect
2895	Interior Live Oak	*Quercus wislizeni*	14	1	12	Good	Fair	No	-	-
2896	Blue Gum Eucalyptus	*Eucalyptus globulus*	25	1	17	Good	Good	No	Direct	Direct
2897	Blue Oak	*Quercus douglasii*	12.5	1	12	Good	Good	No	-	-
2898	Blue Oak	*Quercus douglasii*	8	1	9	Good	Fair	No	-	-
2899	Blue Oak	*Quercus douglasii*	12	2	9	Good	Fair	No	-	-
2900	Valley Oak	*Quercus lobata*	9	1	8	Good	Fair	No	-	-
--	Blue Oak	*Quercus douglasii*	9	2	8	Good	Good	No	-	-

Tree Survey Data (19 August 2016)

						Condition				
Tree Tag #	**Common Name**	**Scientific Name**	**DBH (inches)**	**Multi-trunked (#)**	**Dripline Radius (feet)**	**Structure**	**Health**	**Within Riparian Area (Y/N)**	**Full Alternative Impacts**	**Modified Alternative Impacts**
--	Interior Live Oak	*Quercus wislizeni*	20	2	18	Fair	Fair	No	-	-
--	Interior Live Oak	*Quercus wislizeni*	49	5	15	Fair	Good	No	-	-
--	Interior Live Oak	*Quercus wislizeni*	12	1	10	Good	Good	No	-	-

ATTACHMENT C

Representative Site Photographs

Photo 1. View along the western border of the site from the southwestern corner of the site, looking north. 19 August 2016.

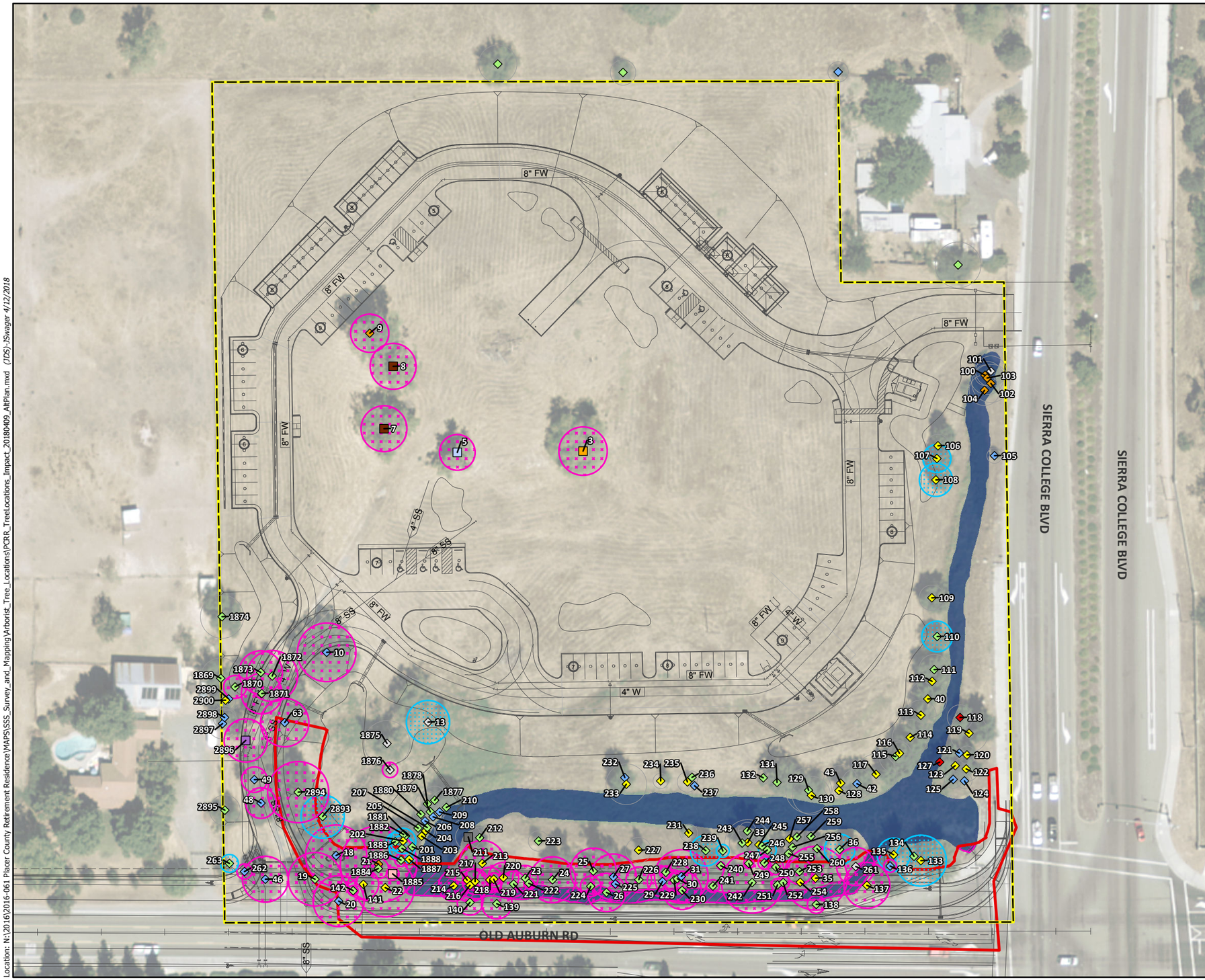
Photo 2. View across the site from the southern bank of the tributary to Linda Creek, looking north. 19 August 2016.

Photo 3. View across the tributary to Linda Creek of the southeastern corner of the site, looking northeast. Sierra College Boulevard is visible in the background. 19 August 2016.

Photo 4. View of the southwestern corner of the site where the tributary to Linda Creek crosses underneath Old Auburn Road, looking east. 19 August 2016.

ATTACHMENT D

Proposed Tree Impacts



Tree Impacts
Full Frontage Improvements Alternative

Map Features

- Property Boundary - 8.9 acres
- Frontage Grading Area Alternative

Native Species

- Blue Oak
- Fremont's Cottonwood
- Goodding's Black Willow
- Interior Live Oak
- Red Willow
- Valley Oak

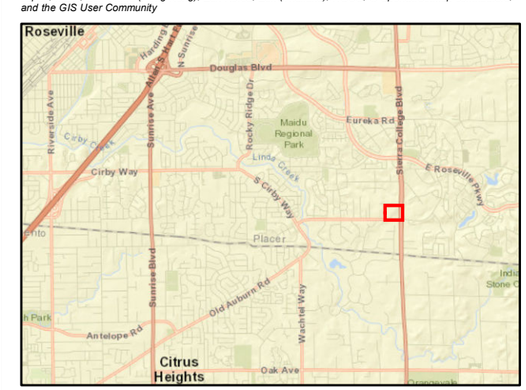
Non-Native Species

- Blue Gum Eucalyptus
- Sweetgum
- White Mulberry
- Chinese Tallow
- London Plane
- Chinese Pistache

Alterantive Project IMpact

- Direct Impact (Removal)
- Indirect Impact (Dripline Impact)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Location: N:\2016\2016-061 Placer County Retirement Residence\MAPS\SSS_Survey_and_Mapping\Arborist_Tree_Locations\PCRR_TreeLocations_Impact_20180409_AltPlan.mxd (JDS) JSwager 4/12/2018

2016-138 Placer County Retirment Residence #1

Scale in Feet
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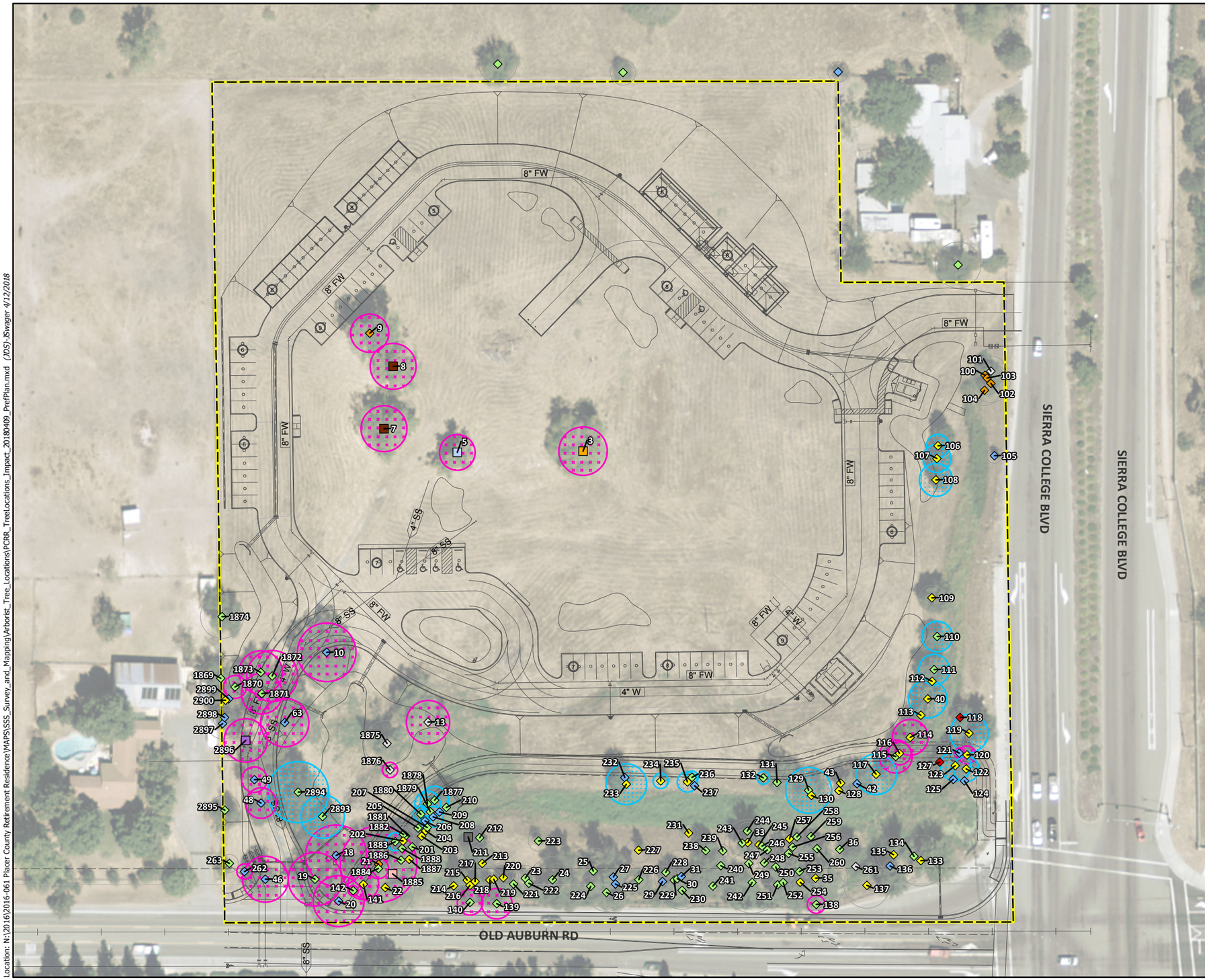
Photo Source: 2013, USGS
Site Plan Data: Kimley-Horn

Map Date: 4/12/2018

ATTACHMENT E

Proposed Tree Impacts Modified Frontage Improvements Alternative



Tree Impacts
Modified Frontage Improvements Alternative

Map Features

Property Boundary - 8.9 acres

Native Species

- Blue Oak
- Fremont's Cottonwood
- Goodding's Black Willow
- Interior Live Oak
- Red Willow
- Valley Oak

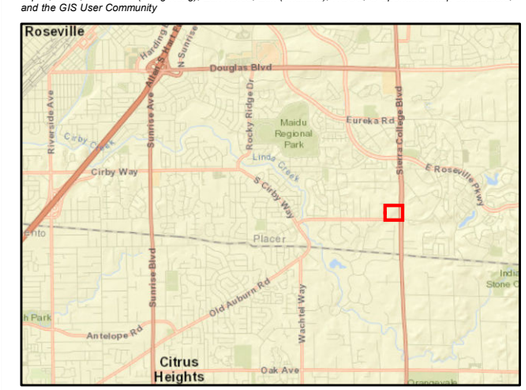
Non-Native Species

- Blue Gum Eucalyptus
- Sweetgum
- White Mulberry
- Chinese Tallow
- London Plane
- Chinese Pistache

Impact Type

- Direct Impact (Removal)
- Indirect Impact (Dripline Impact)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Location: N:\2016\2016-061 Placer County Retirement Residence\MAPS\SSS_Survey_and_Mapping\Arborist_Tree_Locations\PCRR_TreeLocations_Impact_20180409_PrefPlan.mxd (JDS)-BSwager 4/12/2018

2016-138 Placer County Retirment Residence #1

Scale in Feet
0 80

Photo Source: 2013, USGS
Site Plan Data: Kimley-Horn

Map Date: 4/12/2018