ESA

2600 Capitol Avenue
Suite 200
Sacramento, CA 95816
916.564.4500 phone
916.564.4501 fax

esassoc.com

Date: November 13, 2024, updated February 14, 2025

To: Lars Ewing, Public Services Director, Lake County Public Services
Celia Hoburg, Staff Services Specialist, Lake County Public Services
Michelle Irace, Principal Planner, Lake County Planning

Cc: Jessie Lett, ASLA, Roach & Campbell

Subject: **Arborist Report for the Cobb Community Park Project, Lake County, California**

Environmental Science Associates (ESA) has prepared this letter report to document arborist services provided for the Cobb Community Park Project (Project). The area surveyed for this tree inventory encompasses the primary Project development area including the active recreation area in the southwest corner of the site. The active recreation area includes a main parking lot (accessible from Golf Road), signage, a group picnic area, a restroom, a drinking fountain, a grass play field, a playground, an outdoor gathering area, plus an eight (8)-foot buffer. The purpose of the tree inventory was to provide tree data required to satisfy the Lake County Grading Ordinance requirements for clearing of vegetation.

Regulatory Setting

The Lake County Grading Ordinance (Ord. No. 2830, § 1, 7-17-2007) regulates grading on public and private lands within the unincorporated areas of Lake County. It sets forth rules and regulations to control activities involving excavation, grading, and earthwork construction and establishes procedures for the issuance of permits. Grading Ordinance Section 30-14, *Clearing of Vegetation*, specifies that native vegetation shall be retained and protected where its removal is not necessary to implement the grading project or to meet fire safety regulations. Where vegetation must be removed, the method shall be one that minimizes the erosive effects of the removal. Further, when vegetation is to be removed, the location of mature trees, defined as trees greater than five (5) inches diameter at breast height (DBH), that are to be removed and retained, shall be clearly indicated. Vegetation to be preserved shall be clearly flagged or fenced off before any clearing or land disturbance begins.

Methods

ESA's Certified Arborist and Tree Risk Assessment Qualified Jessica Orsolini (ISA No. WE-7845A), with assistance from biologist Liza Ryan, collected field data on October 8, 2024. Trees were inventoried in the primary Project development area and including the active recreation area in the southwest corner of the site. The active recreation area includes a main parking lot (accessible from Golf Road), signage, a group picnic area, a restroom, a drinking fountain, a grass play field, a playground, an outdoor gathering area, plus an eight (8)-foot buffer.

This survey also included the proposed paved bike path paralleling Golf Road from the primary development area to just past the crossing of Kelsey Creek.[1] The remainder of the proposed paved bike path alignment (to the north) was not surveyed due to time constraints. Proposed natural trails were not included in the survey because it

[1] The survey included the path proposed in conceptual plans from November 2024.

is assumed that tree impacts in these areas will be avoided. The proposed crossing of Kelsey Creek was not included in the inventory due to time constraints and limited access resulting from large blackberry thickets. In addition, it is assumed that riparian trees regulated by the California Department of Fish and Wildlife (CDFW) can be avoided through Project design.

All single-stemmed trees five (5) inches or greater DBH or multi-trunk trees with at least one stem greater than five (5) inches DBH were inventoried. The location of each tree was recorded using Geographic Positioning System (GPS) technology. The first 100 trees surveyed were tagged with a unique number using metal arborist tags; trees above 100 were not tagged. Dead trees were not tagged or recorded. The Project site and inventoried trees are shown on the figure in **Attachment A**. The tree table is provided in **Attachment B**. In addition to the trees surveyed by ESA, Attachment A and Attachment B also include tree data provided by LACO Associates, when they conducted the Project site topographic survey. This tree data was not verified by the ESA arborist.

The DBH of each tree was measured using a diameter tape. The height and dripline of each tree up to tree 102 was estimated. Above tree 102, height and dripline were not recorded due to time constraints. Tree condition was judged with respect to structure, vigor, defects, conformance to generally accepted arboricultural standards of care, disease, danger of falling, and suitability for retention in a developed area. Each tree was assigned to one of six categories for tree condition. The six categories were good (G; no defects or minor defects), fair to good (F-G; defects), fair (F; more serious defects), fair to poor (F-P; severe or compounding defects), and poor (P; severe or compounding defects, and short-term death or structural failure of the tree is expected). Condition was judged based on an external inspection of each tree from the ground.

Results

A total of 114 trees were inventoried. An additional 30 trees provided by LACO Associates are also shown on the figure in Attachment A and included in the tables in Attachment B. This tree data was not verified by the ESA arborist.

Trees surveyed by ESA consist of forty-seven (47) California black oaks (*Quercus kelloggi*), nineteen (19) ponderosa pines (*Pinus ponderosa*), eighteen (18) Douglas firs (*Pseudotsuga menziesii*), eleven (11) valley oaks (*Quercus lobata*), seven (7) Pacific madrones (*Arbutus menziesii*), three (3) white alders (*Alnus rhombifolia*), three (3) bigleaf maples (*Acer macrophyllum*), three (3) Canyon live oaks (*Quercus chrysolepis*), two (2) California bay laurels (*Umbellularia californica*), and one (1) Oregon ash (*Fraxinus latifolia*). Of the trees surveyed, six (6) were in good condition, thirty-eight (38) were in fair to good condition, forty-six (46) were in fair condition, twenty (20) were in fair to poor condition, and four (4) were in poor condition.

Outside the survey boundary, an additional ten (10) white alders, eight (8) ponderosa pines, seven (7) oaks, two (2) Pacific madrones, one (1) Oregon ash, one (1) Douglas fir, and one (1) bigleaf maple were surveyed by LACO Associates.

Discussion and Recommendations

In accordance with the Lake Country Grading Ordinance, trees over five (5) inches in DBH were surveyed in the primary development area for the Project. Vegetation should be retained and protected where its removal is not necessary to construct the Project. Retained trees may be affected by Project activities such as grading, utility installation, and pruning for clearance. The following are recommendations that will help protect retained trees located near the edges of impact during the construction process.

Tree-Protection Zone

- A tree protection zone (TPZ) should be established around retained trees. The TPZ should extend one (1) foot beyond the dripline where possible given grading limits. If a smaller TPZ is required in ungraded areas, six (6) inches of mulch or wood/bark chips should be placed over areas of vehicle traffic to minimize soil compaction.

- The TPZ should be marked with orange construction fence, rope, or caution tape hung on posts (such as T-posts) before clearing occurs. The fence, rope, and/or caution tape should not be supported by trees or other vegetation. The fence, rope, and/or caution tape should remain in place until construction is complete.

- There should be no driving, parking, or storage of supplies or equipment within the TPZ. Entry of construction personnel into the TPZ is not allowed except for maintenance of the fence or other activities undertaken for the protection of trees.

Pruning

- Pruning of retained trees should be conducted by an ISA certified tree worker or arborist in accordance with American National Standard Institute (ANSI) A300 Pruning Standard or adhere to the most recent edition of ANSI Z133.1.

- The canopy of retained trees that overhangs the area to be graded should be pruned to the minimum height required for construction.

Roots

- Where grading or excavation must occur within a TPZ, roots should be uncovered using hand tools, air spades, or water spades. After the roots are uncovered, root pruning should be conducted along the limit of work. Roots should be pruned to the same depth, and no more, as adjacent excavation. Roots should be pruned by a method that cuts them cleanly such as a rock saw, vibrating knife, narrow trencher with sharp blades, or hand excavation and sawing. Roots should not be severed with backhoes, excavators, bulldozers, graders, or other rough grading equipment that may pull or shatter tree roots. Where possible, roots may be shaved flat rather than cut. This can be done using a chainsaw or debarking tool. Root pruning is not necessary for placement of fill.

- Exposed roots should be kept moist to minimize water loss, and the soil should be replaced as quickly as possible. The purpose of root pruning is to remove only those roots that need to be removed to complete construction, without further damaging the root system.

- Roots greater than four (4) inches in diameter are typically structural roots which help anchor the tree. Structural roots generally begin to taper at a distance approximately equal to the circumference at breast height measured horizontally from the trunk. Removal of structural roots may greatly reduce the anchorage of the tree and increase the probability of the tree falling over and thus should be avoided where possible. If during Project implementation, a root greater than four (4) inches diameter is encountered that needs to be cut, the tree should be further evaluated by a certified arborist to determine if the tree should be removed altogether to eliminate a falling hazard.

Landscaping

- The Project landscape plan should avoid planting of landscaping requiring irrigation water within 15 feet of the trunk of retained native oak trees. Extensive landscaping will disturb the root system and compete for available water and minerals. If plantings are necessary within 15 feet of the trunk, drought tolerant landscaping compatible with native oaks should be considered.

- Drip irrigation should be used in the vicinity of retained oak trees. No sprinklers or spray irrigation should be used where water may reach within 15 feet of the trunk.

- The area within the dripline of retained oaks should be kept as natural and undisturbed as possible. Two to four (2-4) inches of organic compost or mulch (e.g. natural leaf litter) may be used as a ground cover within the dripline of retained oaks. Mulch moderates soil temperature, maintains soil moisture, reduces soil compaction, enhances root growth, and reduces competition with weeds. Mulch should not be placed within three (3) feet of the trunk as it may promote fungal growth.

We appreciate the opportunity of providing arborist services for the Cobb Community Park Project. Please reach out with any questions.

Best regards,

Jessica Orsolini
Certified Arborist WE-7845A and Tree Risk Assessment Qualified

Attachment A. Tree Inventory
Attachment B. Tree Table

Attachment A
Tree Inventory

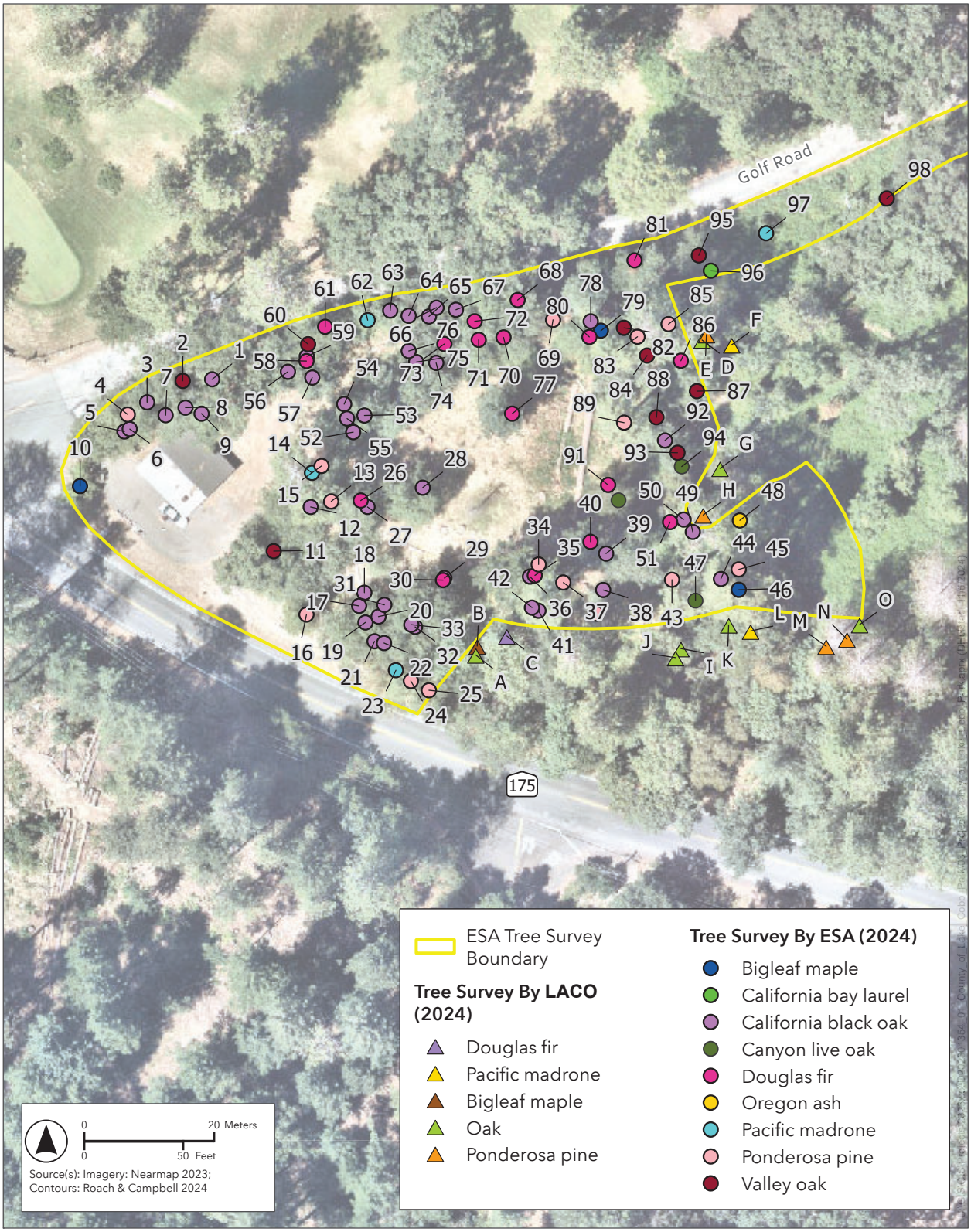


Figure 1A
Tree Inventory
Cobb Community Park
County of Lake

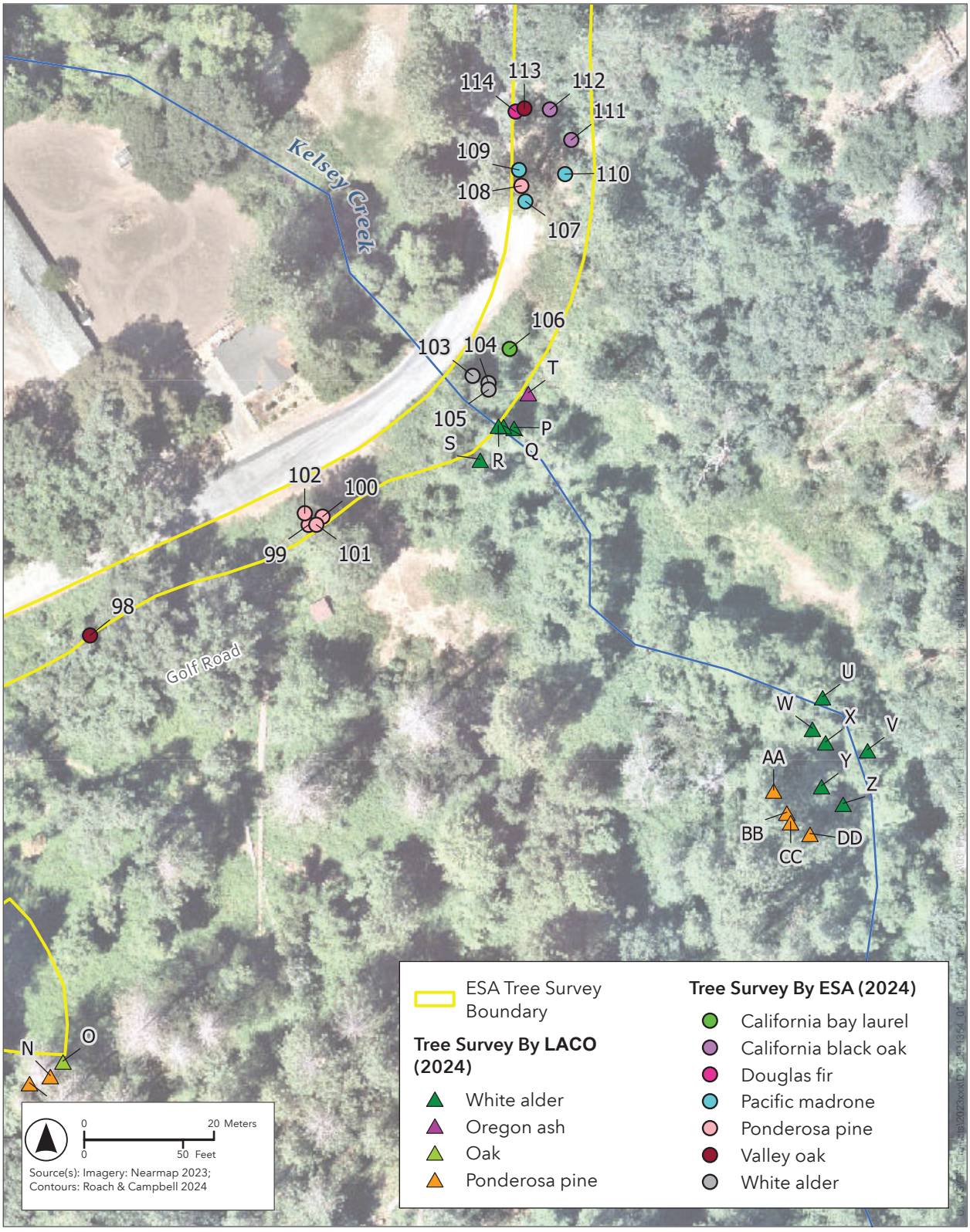


Figure 1B
Tree Inventory
Cobb Community Park
County of Lake

Attachment B
Tree Table

ATTACHMENT B-1
TREES SURVEYED BY ESA

Tree Number	Common Name	Scientific Name	Diameter at Breast Height (DBH) (inches)	Height (feet)	Dripline (feet)	Condition	Comments
1	California black oak	*Quercus kelloggi*	28	50	20	Fair-Good	
2	Valley oak	*Quercus lobata*	28	50	20	Fair-Good	
3	California black oak	*Quercus kelloggi*	20.5	60	20	Fair	Cable line attached to tree.
4	Ponderosa pine	*Pinus ponderosa*	20	55	20	Fair	
5	California black oak	*Quercus kelloggi*	15	45	20	Fair-Good	
6	California black oak	*Quercus kelloggi*	16	45	20	Fair	
7	California black oak	*Quercus kelloggi*	16.5	65	20	Fair	
8	California black oak	*Quercus kelloggi*	14	40	12	Fair	
9	California black oak	*Quercus kelloggi*	24	75	25	Fair	
10	Bigleaf maple	*Acer macrophyllum*	9, 7, 7.5	25	17	Fair-Good	
11	Valley oak	*Quercus lobata*	24	60	25	Fair-Good	
12	California black oak	*Quercus kelloggi*	23.5	60	20	Fair	
13	Ponderosa pine	*Pinus ponderosa*	22	90	15	Fair-Good	
14	Pacific madrone	*Arbutus menziesii*	5.5	25	10	Fair-Good	
15	Ponderosa pine	*Pinus ponderosa*	41	105	20	Fair-Poor	
16	Ponderosa pine	*Pinus ponderosa*	14	40	20	Fair-Good	
17	California black oak	*Quercus kelloggi*	6	35	15	Fair	
18	California black oak	*Quercus kelloggi*	5, 4.5	20	10	Fair	
19	California black oak	*Quercus kelloggi*	10	50	20	Fair-Good	
20	California black oak	*Quercus kelloggi*	6	45	15	Fair	
21	California black oak	*Quercus kelloggi*	5, 6, 2	50	30	Good	
22	California black oak	*Quercus kelloggi*	7	45	15	Fair	
23	Pacific madrone	*Arbutus menziesii*	13, 16	45	20	Fair	
24	Ponderosa pine	*Pinus ponderosa*	17.5	80	15	Fair-Good	
25	Ponderosa pine	*Pinus ponderosa*	12	65	15	Fair	

Tree Number	Common Name	Scientific Name	Diameter at Breast Height (DBH) (inches)	Height (feet)	Dripline (feet)	Condition	Comments
26	Douglas fir	*Pseudotsuga menziesii*	17	60	20	Good	
27	California black oak	*Quercus kelloggi*	17.5	60	25	Fair-Good	
28	California black oak	*Quercus kelloggi*	15.5	50	25	Fair-Good	
29	California black oak	*Quercus kelloggi*	18	65	30	Fair-Good	
30	Douglas fir	*Pseudotsuga menziesii*	6	15	12	Fair	
31	California black oak	*Quercus kelloggi*	7	50	15	Fair	
32	California black oak	*Quercus kelloggi*	8.5, 6	50	12	Fair	
33	California black oak	*Quercus kelloggi*	6	60	10	Fair	
34	Ponderosa pine	*Pinus ponderosa*	20	80	0	Poor	No branches visible potentially dead with broken top difficult to see with adjacent trees.
35	Douglas fir	*Pseudotsuga menziesii*	31	80	30	Fair-Good	
36	California black oak	*Quercus kelloggi*	15	50	15	Poor	Top 2/3 rotten.
37	Ponderosa pine	*Pinus ponderosa*	38	115	20	Fair-Good	Yellow flagging.
38	California black oak	*Quercus kelloggi*	15.5	50	15	Fair-Good	
39	California black oak	*Quercus kelloggi*	28	65	30	Fair	
40	Douglas fir	*Pseudotsuga menziesii*	13.5	50	15	Fair-Good	
41	California black oak	*Quercus kelloggi*	22	65	15	Fair-Poor	Leaning south broken top.
42	California black oak	*Quercus kelloggi*	6	45	20	Fair	
43	Ponderosa pine	*Pinus ponderosa*	32	120	20	Fair	
44	California black oak	*Quercus kelloggi*	13.5	40	15	Fair-Poor	
45	Ponderosa pine	*Pinus ponderosa*	48.5	140	25	Fair-Good	
46	Bigleaf maple	*Acer macrophyllum*	9	45	20	Fair-Good	
47	Canyon live oak	*Quercus chrysolepis*	15.5	45	15	Fair-Poor	
48	Oregon ash	*Fraxinus latifolia*	13.5	60	25	Good	
49	California black oak	*Quercus kelloggi*	16	30	12	Poor	Crown missing.
50	California black oak	*Quercus kelloggi*	16	50	12	Fair-Poor	

Tree Number	Common Name	Scientific Name	Diameter at Breast Height (DBH) (inches)	Height (feet)	Dripline (feet)	Condition	Comments
51	Douglas fir	*Pseudotsuga menziesii*	5.5	30	10	Good	
52	California black oak	*Quercus kelloggi*	18	60	20	Fair	Dead top.
53	California black oak	*Quercus kelloggi*	22	65	20	Fair-Good	
54	California black oak	*Quercus kelloggi*	20	45	10	Fair-Poor	Broken top.
55	California black oak	*Quercus kelloggi*	24	80	20	Fair	
56	California black oak	*Quercus kelloggi*	20.5	60	15	Fair	
57	California black oak	*Quercus kelloggi*	20	30	15	Fair-Poor	Broken top.
58	Douglas fir	*Pseudotsuga menziesii*	18	50	25	Fair	Broken top.
59	California black oak	*Quercus kelloggi*	15.5	45	10	Fair	
60	Valley oak	*Quercus lobata*	17	65	15	Fair	
61	Douglas fir	*Pseudotsuga menziesii*	14	60	15	Fair-Good	
62	Pacific madrone	*Arbutus menziesii*	7	30	10	Fair-Good	
63	California black oak	*Quercus kelloggi*	15	50	8	Fair	
64	California black oak	*Quercus kelloggi*	9.5	25	8	Fair-Poor	Broken top.
65	California black oak	*Quercus kelloggi*	27	85	20	Fair	
66	California black oak	*Quercus kelloggi*	14	65	8	Fair	
67	California black oak	*Quercus kelloggi*	43	100	30	Fair	
68	Douglas fir	*Pseudotsuga menziesii*	17	65	20	Fair-Good	
69	Ponderosa pine	*Pinus ponderosa*	18	65	10	Fair-Poor	
70	Douglas fir	*Pseudotsuga menziesii*	13	75	20	Fair-Good	
71	Douglas fir	*Pseudotsuga menziesii*	17	65	25	Good	
72	Douglas fir	*Pseudotsuga menziesii*	13	65	15	Fair	
73	Douglas fir	*Pseudotsuga menziesii*	17	65	15	Good	
74	California black oak	*Quercus kelloggi*	14	45	25	Poor	Dead broken top.
75	California black oak	*Quercus kelloggi*	15.5	100	22	Fair-Good	
76	California black oak	*Quercus kelloggi*	21	55	10	Fair	Dead broken top.
77	Douglas fir	*Pseudotsuga menziesii*	23	90	20	Fair-Good	

Tree Number	Common Name	Scientific Name	Diameter at Breast Height (DBH) (inches)	Height (feet)	Dripline (feet)	Condition	Comments
78	California black oak	*Quercus kelloggi*	15	75	15	Fair	
79	Bigleaf maple	*Acer macrophyllum*	7.5	50	10	Fair-Good	
80	Douglas fir	*Pseudotsuga menziesii*	18	75	25	Fair-Good	
81	Douglas fir	*Pseudotsuga menziesii*	23	70	30	Fair	Broken top.
82	Valley oak	*Quercus lobata*	14	100	10	Fair-Poor	
83	Ponderosa pine	*Pinus ponderosa*	35	120	25	Fair	
84	Valley oak	*Quercus lobata*	16	65	8	Fair-Poor	
85	Ponderosa pine	*Pinus ponderosa*	38	130	20	Fair	
86	Douglas fir	*Pseudotsuga menziesii*	21	85	20	Fair-Good	
87	Valley oak	*Quercus lobata*	19	75	12	Fair-Poor	Substantial rot in trunk.
88	Valley oak	*Quercus lobata*	26	75	12	Fair-Poor	Broken top.
89	Ponderosa pine	*Pinus ponderosa*	36	150	15	Fair-Good	
91	Canyon live oak	*Quercus chrysolepis*	6	35	7	Fair-Good	
91	Douglas fir	*Pseudotsuga menziesii*	14	50	15	Fair-Good	
92	California black oak	*Quercus kelloggi*	6.5	35	8	Fair-Good	
93	Valley oak	*Quercus lobata*	20	80	12	Fair	
94	Canyon live oak	*Quercus chrysolepis*	30	65	15	Fair-Poor	
95	Valley oak	*Quercus lobata*	21	50	20	Fair	
96	California bay laurel	*Umbellularia californica*	6	15	10	Fair-Poor	Crown missing.
97	Pacific madrone	*Arbutus menziesii*	5	20	10	Fair-Good	In center of blackberries - not tagged.
98	Valley oak	*Quercus lobata*	22	50	30	Fair	
99	Ponderosa pine	*Pinus ponderosa*	26	80	20	Fair	
100	Ponderosa pine	*Pinus ponderosa*	14	60	15	Fair	
101	Ponderosa pine	*Pinus ponderosa*	6	40	12	Fair	Not tagged.
102	Ponderosa pine	*Pinus ponderosa*	6	35	12	Fair	Not tagged.
103	White alder	*Alnus rhombifolia*	20	N/A	N/A	Fair-Good	Not tagged.
104	White alder	*Alnus rhombifolia*	12	N/A	N/A	Fair	Not tagged.

Tree Number	Common Name	Scientific Name	Diameter at Breast Height (DBH) (inches)	Height (feet)	Dripline (feet)	Condition	Comments
105	White alder	*Alnus rhombifolia*	15	N/A	N/A	Fair	Not tagged.
106	California bay laurel	*Umbellularia californica*	5	N/A	N/A	Fair-Good	Not tagged.
107	Pacific madrone	*Arbutus menziesii*	11.5	N/A	N/A	Fair-Good	Not tagged.
108	Ponderosa pine	*Pinus ponderosa*	42	N/A	N/A	Fair	Not tagged.
109	Pacific madrone	*Arbutus menziesii*	8	N/A	N/A	Fair-Poor	Not tagged.
110	Pacific madrone	*Arbutus menziesii*	10	N/A	N/A	Fair-Poor	Not tagged.
111	California black oak	*Quercus kelloggi*	6	N/A	N/A	Fair-Good	Not tagged.
112	California black oak	*Quercus kelloggi*	10, 7	N/A	N/A	Fair-Poor	Not tagged. Broken top.
113	Valley oak	*Quercus lobata*	22	65	N/A	Fair-Poor	Not tagged.
114	Douglas fir	*Pseudotsuga menziesii*	12	N/A	N/A	Fair-Poor	Not tagged.

ATTACHMENT B-2
TREES SURVEYED BY LACO

Label	Common Name	Scientific Name	Diameter at Breast Height (DBH) (inches)
A	Oak	*Quercus* sp.	42
B	Bigleaf maple	*Acer macrophyllum*	1
C	Douglas fir	*Pseudotsuga menziesii*	14
D	Oak	*Quercus* sp.	12
E	Ponderosa pine	*Pinus ponderosa*	30
F	Pacific madrone	*Arbutus menziesii*	12
G	Oak	*Quercus* sp.	24
H	Ponderosa pine	*Pinus ponderosa*	48
I	Oak	*Quercus* sp.	18
J	Oak	*Quercus* sp.	18
K	Oak	*Quercus* sp.	24
L	Pacific madrone	*Arbutus menziesii*	24
M	Ponderosa pine	*Pinus ponderosa*	24
N	Ponderosa pine	*Pinus ponderosa*	36
O	Oak	*Quercus* sp.	10
P	White alder	*Alnus rhombifolia*	14
Q	White alder	*Alnus rhombifolia*	14
R	White alder	*Alnus rhombifolia*	12
S	White alder	*Alnus rhombifolia*	18
T	Oregon ash	*Fraxinus latifolia*	1
U	White alder	*Alnus rhombifolia*	12
V	White alder	*Alnus rhombifolia*	16
W	White alder	*Alnus rhombifolia*	14
X	White alder	*Alnus rhombifolia*	14
Y	White alder	*Alnus rhombifolia*	18
Z	White alder	*Alnus rhombifolia*	16
AA	Ponderosa pine	*Pinus ponderosa*	18
BB	Ponderosa pine	*Pinus ponderosa*	34
CC	Ponderosa pine	*Pinus ponderosa*	16
DD	Ponderosa pine	*Pinus ponderosa*	30