Attachment 4

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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. 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.



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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.



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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.



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- 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

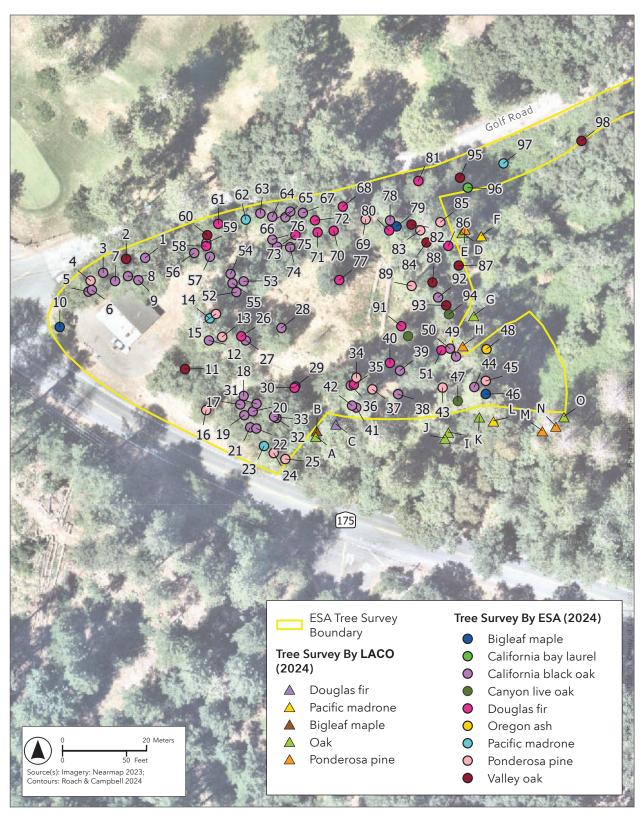


Figure 1A
Tree Inventory
Cobb Community Park
County of Lake



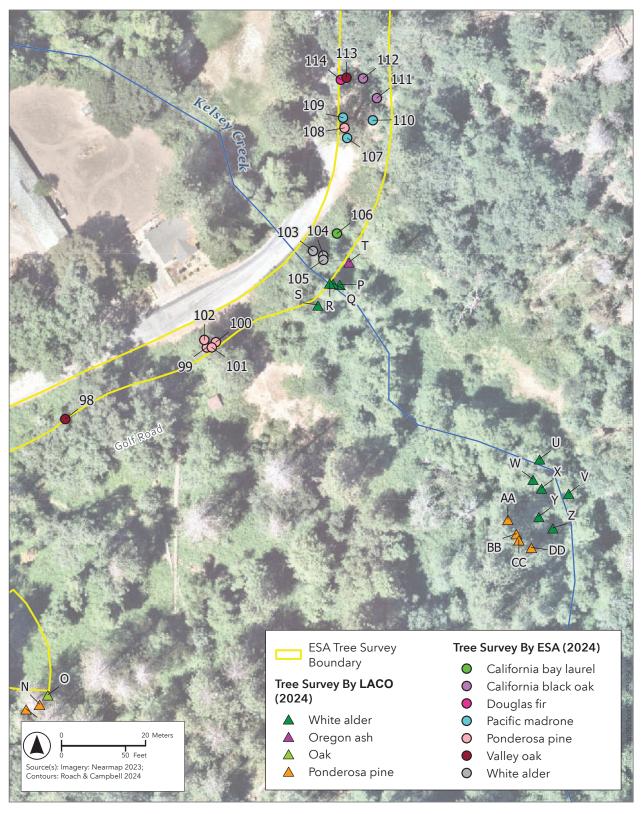


Figure 1B
Tree Inventory
Cobb Community Park
County of Lake



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)
А	Oak	Quercus sp.	42
В	Bigleaf maple	Acer macrophyllum	1
С	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
Н	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
0	Oak	Quercus sp.	10
Р	White alder	Alnus rhombifolia	14
Q	White alder	Alnus rhombifolia	14
R	White alder	Alnus rhombifolia	12
S	White alder	Alnus rhombifolia	18
Т	Oregon ash	Fraxinus latifolia	1
U	White alder	Alnus rhombifolia	12
V	White alder	Alnus rhombifolia	16
W	White alder	Alnus rhombifolia	14
Х	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