



September 13, 2021(Revision)

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State of Oregon, O&M Landscape
1240 Ferry St. SE
Salem, OR 97301

RE: Tree Protection Plan for the North Valley Complex Renovation Project

Summary

The State of Oregon is renovating the North Valley Complex at 26755 SW 95th Avenue, Wilsonville, OR 97070. The exterior renovation includes the addition of a fenced-in parking, improved lighting, and improvements to the southwest entrance. A tree inventory resulted in 144 trees on the property, many of which are away from the impacts of development. A total of 27 trees are proposed for removal and 126 trees are proposed to be retained and protected.

Assignment

Assist the State of the Oregon in meeting the tree protection and preservation requirements of the City of Wilsonville tree code: Section 4.610.40, Type C Permit and Section 4.620.00, Tree Relocation, Mitigation or Replacement. This report does not discuss the number or species of new trees proposed for planting, rather it only presents what is required.

Background

A Significant Resource Overlay Zone (SROZ) is located west of the building. The proposed renovations to the building will not impact the SROZ.

Observations

The tree survey was conducted on March 3, 2021. The following information was collected for each tree over 6-inches in diameter at 4.5 above ground level: tree number, common name, botanical, name, DBH, height, canopy spread, health, condition, and pertinent comments. Tree locations were recorded on a survey provided by the State of Oregon. All trees were tagged with aluminum tags that correspond with the tree survey included in this report.

Discussion

Section 4.610.40- Type C Permit

Section 4.610.10.H.1 – Necessary for Construction (3 trees)

Trees 80 – 82 are three ornamental cherry trees that are proposed for removal to facilitate exterior improvements to the southwest entrance.

Section 4.610.10.H.2 Damaged, Dead, and Failed Trees (10 trees)

Trees 57, 67 and 94 failed in the February 2021 ice storm. Tree 96 is dead. Trees 6, 49, 68, 87, 93, and 99 were heavily damaged in the February 2021 ice storm.

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City of Wilsonville
Exhibit B4 DB21-0025 et al

An additional five (5) trees are recommended for removal due to declining health. Trees 1, 2, 7, 66, and 84 are either outgrowing the soil volume needed for tree growth or are otherwise showing poor incremental growth.

Section 4.610.10.H.3 - Interference of Trees in the ROW (9 trees)

Trees 50-52, 60, 65, 70, 74, 78, 84 are all trees in or adjacent to the right-of-way that was overplanted. The removal of these nine (9) trees is proposed to facilitate the growth of nearby trees in and adjacent to the right-of-way.

Table 1 Summary of Trees proposed for removal.

Code	Trees	Count
<i>Section 4.610.10.H.1 – Necessary for Construction</i>	80-82	3
<i>Section 4.610.10.H.2 Damaged, Dead, and Failed Trees</i>	6, 49, 57, 67, 68, 87, 93, 94, 96, 99	10
<i>Section 4.610.10.H.3 - Interference of Trees in the ROW</i>	50-52, 54, 60, 65, 70, 74, 78	9
Remove for declining health	1, 2, 7, 66, 84	5
	Total:	27

Section 4.620.00 Tree Relocation, Mitigation or Replacement

Twenty-seven (27) trees are proposed for removal. Of these, 25 are deciduous trees and two (2) are evergreen trees. Trees shall be selected and established per the replacement requirements outlined in Section 4.620.00.

Section 4.620.10 Tree Protection During Construction (requirement of a Tree Maintenance and Protection Plan)

No development of new structures or renovations of existing structures is occurring on the north or east sides of the property, hence no tree protection fencing is necessary.

New trees are proposed to be planted west of the sidewalk along SW 95th Ave. These trees are a minimum of 15 feet from the existing trees located between the building and sidewalk. No tree protection fencing should be necessary. No heavy equipment is to sit or track across the east landscape bed and turf area when installing the new trees.

The proposed renovation includes restricting access to several parking spaces in the southeast corner of the existing parking lot. The fence is to be installed inside the curb and over the existing asphalt and will not impact tree roots. Existing trees in the southeast landscape strip shall be protected with tree protection fencing.

The storage of equipment and vehicles will be in the south parking lot. Tree protection fencing is proposed on the south side of the parking lot. Tree protection fencing extends from the southwest corner north along the west perimeter of the parking lot.

Recommendations

Based on the proposed exterior improvements and trees inventoried, I recommend the following:

- 1. Removal of 27 trees due to health, construction, or**
- 2. Protection of 126 trees.** Trees in the southeast landscape bed, south landscape beds, southwest landscape bed, and west of the parking lot are to be protected with tree protection fencing. See Appendices 3-6 for specifications.

Conclusion

The proposed renovation project is compatible with tree protection measures.

Sincerely,



Christine Johnson, MS
ISA Certified Arborist, PN-8730A

Enclosures:

- Appendix 1: Certification of Performance
- Appendix 2: Assumptions and Limiting Conditions
- Appendix 3: Tree Protection Specifications
- Appendix 4: Tree Inventory
- Appendix 5: Tree Protection Plan
- Appendix 6: Tree Protection Signage

Appendix 1: Certification of Performance

I, Christine Johnson, certify:

- That a representative of Teragan & Associates, Inc., has inspected the tree(s) and/or the property referred to in this report. The extent of the evaluation is stated in the attached report.
- That Teragan & Associates, Inc. has no current or prospective interest in the vegetation of the property that is the subject of this report, and Teragan & Associates, Inc. has no personal interest or bias with respect to the parties involved.
- That Teragan & Associates, Inc.'s compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, or upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.
- That the analysis, opinions, and conclusions that were developed as part of this report have been prepared according to commonly accepted arboricultural practices.
- That a Board-Certified Master Arborist has overseen the gathering of data.

Appendix 2: Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Teragan and Associates, Inc. checked the species identification and tree diameters in the field.
2. It is assumed that this property is not in violation of any codes, statutes, ordinances, or other governmental regulations.
3. The consultant is not responsible for information gathered from others involved in various activities pertaining to this project. Care has been taken to obtain information from reliable sources.
4. Loss or alteration of any part of this delivered report invalidates the entire report.
5. Drawings and information contained in this report may not be to scale and are intended to be used as display points of reference only.
6. The consultants' role is only to make recommendations. Inaction on the part of those receiving the report is not the responsibility of the consultant.
7. This report is to certify the trees that are on site, their size and condition and create a tree plan. Tree plan to include the measures necessary to protect trees that are to be retained during the construction.

Appendix 3: Tree Protection Specifications

It is critical that the following steps be taken to ensure that trees slated for retention are protected.

Before Construction Begins

- 1. Notify all contractors of the tree protection procedures.** For successful tree protection on a construction site, all contractors must know and understand the goals of tree protection. It can only take one mistake with a misplaced trench or other action to destroy the future of a tree.
 - a. Hold a Tree Protection meeting with all contractors to fully explain goals of tree protection.
 - b. Have all sub-contractors sign memoranda of understanding regarding the goals of tree protection. Memoranda to include penalty for violating tree protection plan. Penalty to equal appraised value of tree(s) within the violated tree protection zone per the current Trunk Formula Method as outline by the Council of Tree & Landscape Appraisers current edition of the *Guide for Plant Appraisal*.

- 2. Fencing (City of Wilsonville Public Works Standard Drawing R-1155).**
 - a. Tree protection fencing is to be put in place before construction begins in order to protect the trees and the soil around the trees from any disturbance. Exception is if trees are to be removed that are located within the tree protection areas (TPA), they should be removed prior to installing the tree protection fencing without the use of mechanized wheeled or tracked equipment.
 - b. Fencing is to be placed at the edge of the TPA as shown on the Tree Protection Plan (Appendix 4). TPAs are initially established by the project arborist based on the needs of the site and the tree(s) to be protected and approved by the City's Urban Forester.
 - c. Tree protection fencing shall be 6' in height and set at the edge of the dripline, hardscape, or as shown on the Tree Protection Plan.
 - d. Fence materials shall consist of a 2" mesh chain links secured to a minimum of 1 ½ diameter steel or aluminum line posts.
 - e. Posts shall be set to a depth of no less than 2' in native soil.
 - f. Tree protection fencing is to remain in place until the completion of adjacent construction activities. Tree protection fencing is not to be moved without written permission from the project arborist until the end of the project unless otherwise approved by the City's authorized representative.
 - g. No equipment shall operate inside the tree protective fencing including during fence installation and removal unless otherwise approved by the project arborist.

- 3. Signage.**
 - a. All tree protection fencing should have tree protection so that all contractors understand the purpose of the tree protection fencing. See Appendix 6 for signage.
 - b. The sign shall be a minimum size of 8.5" x 11".
 - c. Signage shall be secured to tree protection fencing with wire ties or plastic zip ties.
 - d. Signage shall be placed 42 inches (3.5 ft) above ground and spaced 50 feet apart. Signage must be clearly visible to contractors and the public.
 - e. Signage shall be weather resistant, either laminated in plastic or placed on aluminum sheeting.

During Construction

1. Protection guidelines within the TPA.

- a. No traffic shall be allowed within the TPA. No vehicle, heavy equipment, or even repeated foot traffic.
- b. No storage of materials including but not limiting to soil, construction material, or waste from the site.
 - i. Waste includes but is not limited to concrete wash out, gasoline, diesel, paint, cleaner, thinners, etc.
- c. Construction trailers are not to be parked / placed within the TPA without written clearance from project arborist.
- d. No vehicles shall be allowed to park within the TPA.
- e. No activity shall be allowed that will cause soil compaction within the TPA.

2. Tree protection. Retained trees shall be protected from any cutting, skinning or breaking of branches, trunks or roots.

3. Root pruning. Any roots that are to be cut from existing trees that are to be retained, the project consulting arborist shall be notified to evaluate, document, and oversee the proper cutting of roots with sharp cutting tools. Cut roots are to be immediately covered with soil or mulch to prevent them from drying out.

4. Grade changes. No grade change should be allowed within the TPA.

5. Tree protection area changes. Any necessary deviation of the TPA shall be cleared by the project arborist and approved by the City's Urban Forester.

6. Watering. Provide water to trees during the summer months as needed. Tree(s) that will have had root system(s) cut back will need supplemental water to overcome the loss of ability to absorb necessary moisture during the summer months.

7. Utilities. Any necessary passage of utilities through the TPA shall be by means of tunneling under roots by hand digging or boring under the supervision of the project arborist.

8. Reinspection of fencing. Tree protection fencing is subject to inspection by the City. The project arborist highly recommends monthly inspections of tree protection fencing to ensure compliance with the permit and protection of the trees.

After Construction

1. Fences are to remain standing until the completion of the project.
2. Carefully landscape in the area of the tree. Do not allow trenching or soil rototilling within the TPA. Carefully plant new plants within the TPA. Avoid cutting roots.
3. Do not plan for irrigation within the TPA of existing trees unless it is drip irrigation for a specific planting or cleared by the project arborist.
4. Provide for or ensure that adequate drainage will occur around the retained trees.
5. Pruning of the trees should be completed as one of the last steps of the landscaping process before the final placement of trees, shrubs, ground covers, mulch or turf.
6. Provide for inspection and treatment of insect and disease populations that are capable of damaging the retained trees and plants.
7. Trees that are retained may need to be fertilized as called for by project arborist after final inspection.

Appendix 4: Tree Inventory for North Valley Complex
26755 SW 95th Avenue, Wilsonville, OR 97070

Tree No.	Common Name	Botanical Name	DBH* (in)	Height (ft)	Spread (ft)	Condition**	Structure**	Remove or Retain	Comments
1	Cherry	<i>Prunus serrulata</i>	12	20	15	Fair	Fair	Remove - Declining health	Diameter measured at 3.75' AGL; dead and crossing branches; decay on SW side of trunk; water sprouts.
2	Cherry	<i>Prunus sertulata</i>	15	25	20	Fair	Fair	Remove - Declining health	Diameter at 3' AGL; water sprouts; crossing branches; touching building.
3	Hawthorn	<i>Crataegus sp.</i>	7	10	10	Good	Fair	Retain	Diameter at 3.5' AGL; topped; weak branch attachments; unbalanced canopy to the W.
4	Hawthorn	<i>Crataegus sp.</i>	12	10	15	Good	Fair	Retain	Topped; crossing branches.
5	Hawthorn	<i>Crataegus sp.</i>	11	10	15	Good	Fair	Retain	Topped; crossing branches.
6	Japanese maple	<i>Acer palmatum</i>	16	20	30	Poor	Poor	Remove - Damaged	Multistem: 7,6,6,3,4,5,6; storm damage; four leaders have decay present; unbalanced canopy with storm damage.
7	Japanese maple	<i>Acer palmatum</i>	12	15	15	Fair	Poor	Remove - Declining health	Multistem: 6,6,5,5,5; inclusion; decay or wound on every leader; some storm damage in upper canopy.
8	Western redcedar	<i>Thuja plicata</i>	20	50	30	Good	Good	Retain	Codominant leaders: 16,13.
9	Western redcedar	<i>Thuja plicata</i>	18	50	30	Good	Good	Retain	
10	Japanese maple	<i>Acer palmatum</i>	12	30	25	Good	Good	Retain	Multistem: 6,8,6,3; some storm damage in upper canopy.
11	Western redcedar	<i>Thuja plicata</i>	21	50	25	Good	Good	Retain	Codominant leaders:17,13.
12	Western redcedar	<i>Thuja plicata</i>	18	50	25	Good	Good	Retain	
13	Western redcedar	<i>Thuja plicata</i>	16	50	25	Good	Good	Retain	
14	Japanese maple	<i>Acer palmatum</i>	11	25	15	Good	Fair	Retain	Multistem: 7,7,4,4; inclusions; unbalanced to the E.
15	Western redcedar	<i>Thuja plicata</i>	22	50	20	Good	Good	Retain	Codominant leaders: 16,15.
16	Western redcedar	<i>Thuja plicata</i>	15	50	20	Good	Good	Retain	
17	Western redcedar	<i>Thuja plicata</i>	17	50	20	Good	Good	Retain	Multistem: 13,8,8.
18	Western redcedar	<i>Thuja plicata</i>	17	50	25	Good	Good	Retain	
19	Western redcedar	<i>Thuja plicata</i>	16	50	15	Good	Good	Retain	
20	Western redcedar	<i>Thuja plicata</i>	15	45	15	Good	Good	Retain	Fused leaders; diameter measured at 1.25' AGL.
21	Western redcedar	<i>Thuja plicata</i>	14	50	20	Good	Good	Retain	Two leaders: 13,6.
22	Western redcedar	<i>Thuja plicata</i>	16	50	15	Good	Good	Retain	Codominant leaders:12,11.
23	Japanese maple	<i>Acer palmatum</i>	14	30	20	Good	Good	Retain	Multistem: 8,7,6,5,4,3; unbalanced to the SE.
24	Colorado blue spruce	<i>Picea pungens</i>	13	40	15	Good	Good	Retain	
25	Colorado blue spruce	<i>Picea pungens</i>	14	40	15	Good	Good	Retain	
26	Colorado blue spruce	<i>Picea pungens</i>	12	40	15	Good	Good	Retain	
27	Western redcedar	<i>Thuja plicata</i>	8	35	15	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
28	Western redcedar	<i>Thuja plicata</i>	11	40	20	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
29	Western redcedar	<i>Thuja plicata</i>	12	40	20	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
30	Western redcedar	<i>Thuja plicata</i>	11	40	20	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
31	Western redcedar	<i>Thuja plicata</i>	10	35	15	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
32	Western redcedar	<i>Thuja plicata</i>	15	45	25	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
33	Western redcedar	<i>Thuja plicata</i>	12	40	20	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
34	Western redcedar	<i>Thuja plicata</i>	15	45	20	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
35	Colorado blue spruce	<i>Picea pungens</i>	10	30	10	Good	Good	Retain	
36	Colorado blue spruce	<i>Picea pungens</i>	12	35	20	Good	Good	Retain	
37	Western redcedar	<i>Thuja plicata</i>	12	35	15	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
38	Western redcedar	<i>Thuja plicata</i>	12	35	15	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
39	Western redcedar	<i>Thuja plicata</i>	10	35	15	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
40	Western redcedar	<i>Thuja plicata</i>	13	35	15	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
41	Western redcedar	<i>Thuja plicata</i>	13	35	20	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
42	Colorado blue spruce	<i>Picea pungens</i>	11	35	20	Good	Good	Retain	
43	Western redcedar	<i>Thuja plicata</i>	8	25	15	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
44	Western redcedar	<i>Thuja plicata</i>	14	35	20	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
45	Western redcedar	<i>Thuja plicata</i>	10	30	15	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
46	Western redcedar	<i>Thuja plicata</i>	12	35	20	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
47	Western redcedar	<i>Thuja plicata</i>	11	35	20	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
48	Western redcedar	<i>Thuja plicata</i>	14	35	25	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
49	Red maple	<i>Acer rubrum</i>	8	15	10	Poor	Poor	Remove - Damaged	Diameter measured at 3.5' AGL; storm damage; heavily unbalanced to NW; lean to NW.
50	Maple	<i>Acer saccharum</i>	10	25	20	Good	Good	Client Request for Removal - Interference	
51	Maple	<i>Acer saccharum</i>	12	25	20	Good	Good	Client Request for Removal - Interference	Surface root damage; pruned away from lamp to W.
52	Maple	<i>Acer saccharum</i>	12	25	25	Good	Good	Client Request for Removal - Interference	6' N of sidewalk; 3.5' W of electric; diameter measured at 4' AGL.
53	Maple	<i>Acer saccharum</i>	14	25	15	Good	Fair	Retain	Three leaders at 7'; active decay; wood borer holes.
54	Western redcedar	<i>Thuja plicata</i>	12	25	20	Good	Good	Client Request for Removal - Interference	Some discoloration/yellowing foliage in upper canopy.
55	Western redcedar	<i>Thuja plicata</i>	10	25	20	Good	Good	Retain	Some discoloration/yellowing foliage in upper canopy.
56	Western redcedar	<i>Thuja plicata</i>	13	35	20	Fair	Good	Retain	Some discoloration/yellowing foliage in upper canopy, more so than others in the planted stand.
57	Unknown	Unknown	0	n/a	n/a	Dead	Dead	Remove - Dead	Failed; uprooted.
58	Maple	<i>Acer saccharum</i>	6	20	15	Good	Fair	Retain	Codominant leaders at 6.
59	Western redcedar	<i>Thuja plicata</i>	11	35	20	Fair	Good	Retain	Some discoloration/yellowing foliage in upper canopy, more so than others in the planted stand.
60	Western redcedar	<i>Thuja plicata</i>	13	35	20	Poor	Good	Client Request for Removal - Interference	Declining health; brown and yellowing foliage.

Appendix 4: Tree Inventory for North Valley Complex
26755 SW 95th Avenue, Wilsonville, OR 97070

Tree No.	Common Name	Botanical Name	DBH* (in)	Height (ft)	Spread (ft)	Condition**	Structure**	Remove or Retain	Comments
61	Western redcedar	<i>Thuja plicata</i>	17	35	20	Good	Good	Retain	Three leaders: 11,8,11; some discoloration and yellowing foliage in upper canopy.
62	Western redcedar	<i>Thuja plicata</i>	15	35	20	Good	Good	Retain	Two leaders: 13,8; some discoloration and yellowing foliage in upper canopy.
63	Western redcedar	<i>Thuja plicata</i>	13	30	20	Good	Good	Retain	Some discoloration and yellowing foliage in upper canopy.
64	Western redcedar	<i>Thuja plicata</i>	16	35	20	Good	Good	Retain	Some discoloration and yellowing foliage in upper canopy.
65	Maple	<i>Acer saccharum</i>	11	25	15	Good	Good	Client Request for Removal - Interference	
66	Maple	<i>Acer saccharum</i>	10	20	10	Very poor	Poor	Remove - Declining health	Blackened and missing bark on lower trunk; boring holes; little to no new growth.
67	Unknown	Unknown	0	n/a	n/a	Dead	Dead	Remove - Dead	Failed; uprooted.
68	Maple	<i>Acer saccharum</i>	14	20	25	Poor	Poor	Remove - Damaged	Storm damage, unbalanced canopy.
69	Maple	<i>Acer saccharum</i>	17	25	25	Good	Fair	Retain	Diameter at 3.75'; Four leaders at 5'; crossing branches; blackened bark on lower trunk; borer holes.
70	Maple	<i>Acer saccharum</i>	13	25	25	Good	Fair	Client Request for Removal - Interference	Blackened bark on lower trunk; borer holes; surface root damage.
71	Western redcedar	<i>Thuja plicata</i>	17	35	20	Good	Good	Retain	Three leaders: 12,9,8.
72	Western redcedar	<i>Thuja plicata</i>	14	35	20	Good	Good	Retain	Two leaders: 13,6.
73	Western redcedar	<i>Thuja plicata</i>	21	35	20	Good	Good	Retain	Diameter measured at 0.5' AGL; three fused leaders.
74	Maple	<i>Acer saccharum</i>	15	25	20	Fair	Fair	Client Request for Removal - Interference	Diameter at 3.5' AGL; large inclusion on S side; wound wood and cracked bark.
75	Western redcedar	<i>Thuja plicata</i>	16	35	15	Good	Good	Retain	Two leaders: 14,8; sapsuckers.
76	Western redcedar	<i>Thuja plicata</i>	16	35	20	Good	Good	Retain	
77	Western redcedar	<i>Thuja plicata</i>	16	35	20	Good	Good	Retain	
78	Maple	<i>Acer saccharum</i>	16	30	20	Good	Good	Client Request for Removal - Interference	Slight unbalance to NW.
79	Maple	<i>Acer saccharum</i>	13	25	20	Good	Fair	Retain	Inclusions; crossing branches; burls.
80	Cherry	<i>Prunus serrulata</i>	8	10	10	Poor	Very poor	Client Request for Removal - Development - Structure	Two leaders: 6,5; decayed leaders; lean to the E.
81	Cherry	<i>Prunus serrulata</i>	10	15	10	Good	Fair	Client Request for Removal - Development - Structure	Two leaders: 8,6; dead branches; unbalanced to the E; water sprouts.
82	Cherry	<i>Prunus serrulata</i>	12	25	20	Good	Good	Client Request for Removal - Development - Structure	
83	Maple	<i>Acer saccharum</i>	15	20	20	Good	Good	Retain	Diameter at 4' AGL, branch inclusions; cable and telecommunications nearby.
84	Maple	<i>Acer saccharum</i>	16	20	20	Poor	Very poor	Remove - Declining health	Missing bark on S side; will decline; inclusions; cracked bark; dead leaders
85	Maple	<i>Acer saccharum</i>	15	25	25	Fair	Fair	Retain	Diameter at 4' AGL; wound on south side of trunk; inclusions.
86	Western redcedar	<i>Thuja plicata</i>	12	35	20	Good	Good	Retain	Three leaders: 8,8,4.
87	Green ash	<i>Fraxinus pennsylvanica</i>	10	30	25	Poor	Poor	Remove - Damaged	Lost 75% of canopy on storm.
88	Western redcedar	<i>Thuja plicata</i>	15	35	30	Good	Good	Retain	Multistem: 9,8,7,6,3.
89	Western redcedar	<i>Thuja plicata</i>	13	35	25	Good	Good	Retain	Two leaders: 12,6.
90	Red maple	<i>Acer rubrum</i>	9	25	20	Good	Good	Retain	
91	Western redcedar	<i>Thuja plicata</i>	12	25	15	Poor	Good	Retain	Brown foliage; in decline.
92	Green ash	<i>Fraxinus pennsylvanica</i>	14	30	25	Good	Good	Retain	
93	Green ash	<i>Fraxinus pennsylvanica</i>	15	30	20	Poor	Poor	Remove - Damaged	Lost over 50% of canopy in storm.
94	Unknown	Unknown	0	n/a	n/a	Dead	Dead	Remove - Dead	Failed; uprooted.
95	Green ash	<i>Fraxinus pennsylvanica</i>	19	30	30	Good	Good	Retain	
96	Green ash	<i>Fraxinus pennsylvanica</i>	7	n/a	n/a	Dead	Dead	Remove - Dead	
97	Western redcedar	<i>Thuja plicata</i>	17	35	25	Fair	Good	Retain	Codominant leaders: 13,11; browning and thinning foliage.
98	Western redcedar	<i>Thuja plicata</i>	12	35	25	Poor	Good	Retain	Browning and thinning foliage.
99	Green ash	<i>Fraxinus pennsylvanica</i>	12	25	25	Poor	Poor	Remove - Damaged	Lost over 50% of canopy to storm.
100	Douglas fir	<i>Pseudotsuga menziesii</i>	12	30	25	Good	Good	Retain	
101	Green ash	<i>Fraxinus pennsylvanica</i>	20	35	30	Good	Good	Retain	
102	Western redcedar	<i>Thuja plicata</i>	17	35	25	Fair	Good	Retain	Slight browning of foliage in upper canopy.
103	Douglas fir	<i>Pseudotsuga menziesii</i>	7	15	10	Good	Good	Retain	
104	Western redcedar	<i>Thuja plicata</i>	9	20	10	Good	Good	Retain	
105	Western redcedar	<i>Thuja plicata</i>	14	30	25	Fair	Good	Retain	Slight browning of foliage.
106	Western redcedar	<i>Thuja plicata</i>	19	30	25	Fair	Good	Retain	Three leaders: 14,10,8; slight browning of foliage.
107	Western redcedar	<i>Thuja plicata</i>	8	25	30	Good	Good	Retain	Three leaders: 6,5,3.
108	Red maple	<i>Acer rubrum</i>	12	25	25	Good	Good	Retain	
109	Red maple	<i>Acer rubrum</i>	11	20	20	Fair	Fair	Retain	Cracked bark at tree base.
110	Red maple	<i>Acer rubrum</i>	11	20	20	Fair	Fair	Retain	Cracked bark at trunk base and up trunk.
111	Red maple	<i>Acer rubrum</i>	13	25	20	Good	Good	Retain	
112	Red maple	<i>Acer rubrum</i>	14	25	25	Good	Good	Retain	Heavy sapsuckers at 6'.
113	Red maple	<i>Acer rubrum</i>	14	25	25	Good	Good	Retain	
114	Red maple	<i>Acer rubrum</i>	13	25	25	Good	Good	Retain	
115	Western redcedar	<i>Thuja plicata</i>	~15	30	30	Good	Good	Retain	
116	Northern red oak	<i>Quercus rubra</i>	22	40	35	Good	Good	Retain	
117	Northern red oak	<i>Quercus rubra</i>	19	40	35	Good	Good	Retain	
118	Western redcedar	<i>Thuja plicata</i>	13	35	25	Good	Good	Retain	Two leaders: 12,6.

Appendix 4: Tree Inventory for North Valley Complex
26755 SW 95th Avenue, Wilsonville, OR 97070

Tree No.	Common Name	Botanical Name	DBH* (in)	Height (ft)	Spread (ft)	Condition**	Structure**	Remove or Retain	Comments
119	Western redcedar	<i>Thuja plicata</i>	20	35	25	Good	Good	Retain	Two leaders: 8,~18
120	Northern red oak	<i>Quercus rubra</i>	19	40	30	Good	Good	Retain	
121	Western redcedar	<i>Thuja plicata</i>	~13	40	25	Good	Good	Retain	
122	Douglas fir	<i>Pseudotsuga menziesii</i>	~28	70	40	Poor	Poor	Retain	Dead branches; thinning foliage.
123	Douglas fir	<i>Pseudotsuga menziesii</i>	~30	65	40	Good	Good	Retain	
124	Douglas fir	<i>Pseudotsuga menziesii</i>	~36	80	50	Good	Good	Retain	
125	Giant Sequoia	<i>Sequoiadendron giganteum</i>	~28	45	25	Good	Good	Retain	
126	Douglas fir	<i>Pseudotsuga menziesii</i>	16	45	30	Good	Good	Retain	
127	Douglas fir	<i>Pseudotsuga menziesii</i>	20	40	30	Good	Good	Retain	
128	Giant Sequoia	<i>Sequoiadendron giganteum</i>	9	20	15	Good	Good	Retain	
129	Douglas fir	<i>Pseudotsuga menziesii</i>	17	45	30	Good	Good	Retain	
130	Giant Sequoia	<i>Sequoiadendron giganteum</i>	30	50	30	Good	Good	Retain	
131	Douglas fir	<i>Pseudotsuga menziesii</i>	45	80	40	Good	Good	Retain	
132	Douglas fir	<i>Pseudotsuga menziesii</i>	44	80	40	Good	Good	Retain	
133	Willow	<i>Salix sp.</i>	18	30	25	Good	Good	Retain	
134	Willow	<i>Salix sp.</i>	13	25	20	Fair	Poor	Retain	Two leaders: 7,11; unbalanced to the E.
135	Douglas fir	<i>Pseudotsuga menziesii</i>	44	80	40	Good	Good	Retain	
136	Bigleaf maple	<i>Acer macrophyllum</i>	23	30	30	Fair	Fair	Retain	Lean to NE; deadwood.
137	Incense cedar	<i>Calocedrus decurrens</i>	26	60	40	Good	Fair	Retain	Multiple leaders at 20'.
138	Bigleaf maple	<i>Acer macrophyllum</i>	34	50	40	Good	Fair	Retain	
139	Incense cedar	<i>Calocedrus decurrens</i>	27	60	30	Good	Good	Retain	Craggy and burl'd growth.
140	Incense cedar	<i>Calocedrus decurrens</i>	9	20	15	Good	Poor	Retain	Failed tree leaning on upper canopy.
141	Incense cedar	<i>Calocedrus decurrens</i>	25	50	30	Good	Good	Retain	
142	Bigleaf maple	<i>Acer macrophyllum</i>	27	45	25	Good	Fair	Retain	Unbalanced to the N.
143	Incense cedar	<i>Calocedrus decurrens</i>	10	25	10	Poor	Fair	Retain	Suppressed.
144	Incense cedar	<i>Calocedrus decurrens</i>	23	60	25	Good	Good	Retain	
145	Incense cedar	<i>Calocedrus decurrens</i>	19	65	30	Good	Good	Retain	
146	Incense cedar	<i>Calocedrus decurrens</i>	30	70	40	Good	Good	Retain	NW corner tree.
147	Incense cedar	<i>Calocedrus decurrens</i>	40	70	50	Good	Good	Retain	S of 146; codominant leaders: 28,28.
148	Incense cedar	<i>Calocedrus decurrens</i>	27	75	45	Good	Good	Retain	
149	Bigleaf maple	<i>Acer macrophyllum</i>	39	60	50	Good	Fair	Retain	Codominant leaders; diameter measured at 1' AGL; burls at trunk base; deadwood.
150	Bigleaf maple	<i>Acer macrophyllum</i>	25	55	35	Good	Good	Retain	
151	Bigleaf maple	<i>Acer macrophyllum</i>	~30	55	45	Fair	Fair	Retain	Odd growth at trunk base; deadwood.
152	Douglas fir	<i>Pseudotsuga menziesii</i>	43	60	50	Fair	Poor	Retain	Conks at ~20; hard lean S; failed and regrown.
153	Western redcedar	<i>Thuja plicata</i>	8	n/a	n/a	Dead	Dead	Retain	This tree is in a natural area and does not need to be removed.

* DBH is diameter measured at the industry standard of 4.5-feet above ground level.

** Tree health condition and structure ratings are **Good, Fair, Poor, Very poor, and Dead**.

AGL, Above Ground Level

NORTH VALLEY COMPLEX RESTORATION WILSONVILLE, OREGON

CIVIL DESIGN REVIEW

MARCH 2021

Appendix 5: Tree Protection Plan

Tree Protection Plan Prepared by: Teragan & Associates, Inc.;
Christine Johnson, ISA Certified Arborist, PN-8730A
Date Prepared: 09/13/2021
Plan Provided By: Christopher Aston, DAS Enterprise Asset Management
NOTE: TERAGAN & ASSOCIATES, INC. ADDED TREES THAT WERE NOT SHOWN.

TREE LEGEND

- # TREE NO.
- X TREE PROPOSED FOR REMOVAL
- TREE PROTECTION FENCING
- PROPOSED LAMP POSTS

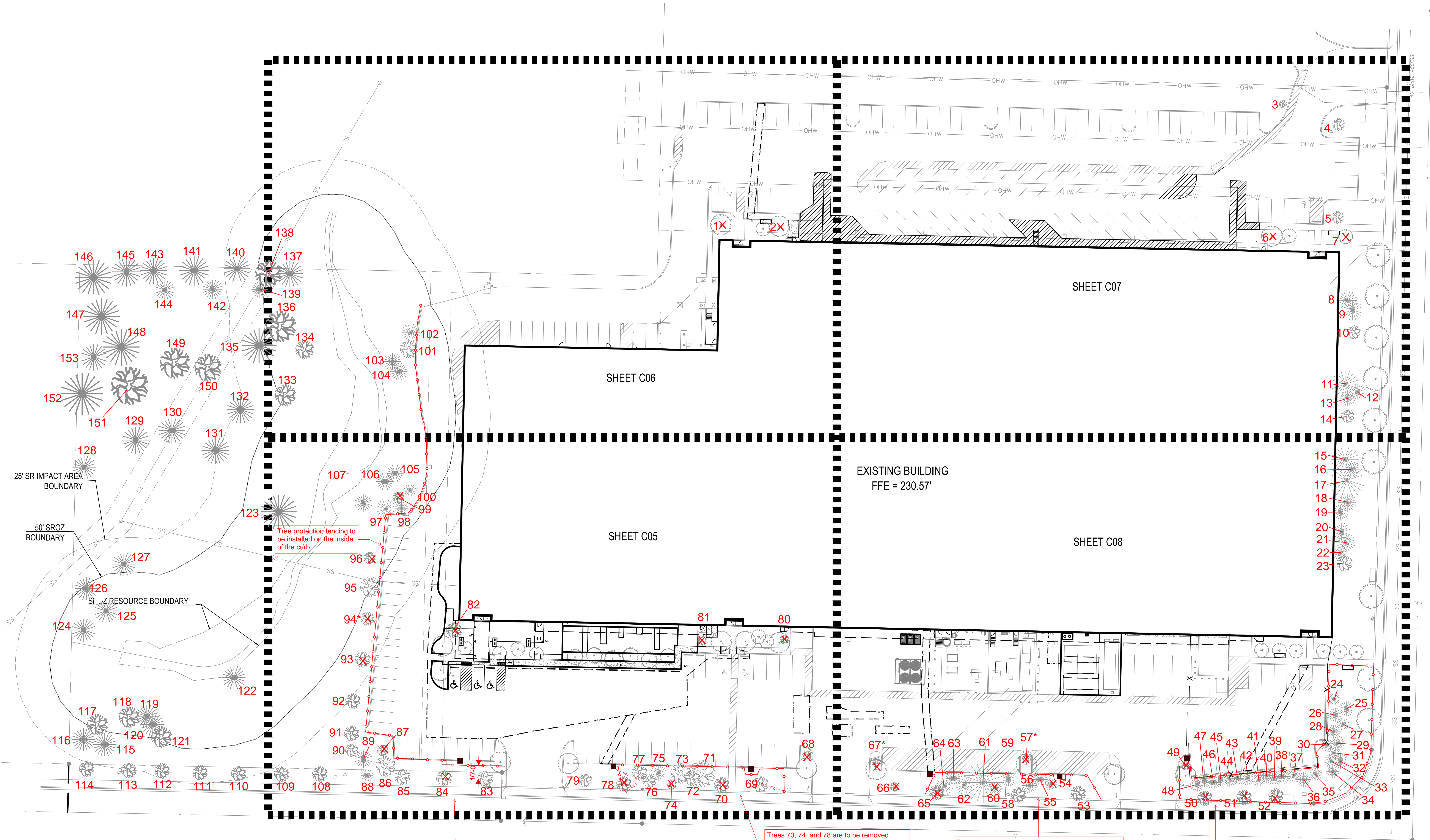
SHEET INDEX

- C04 CIVIL COVER SHEET /KEY PLAN
- C05 SOUTHWEST CIVIL SITE PLAN
- C06 NORTHWEST CIVIL SITE PLAN
- C07 NORTHEAST CIVIL SITE PLAN
- C08 SOUTHEAST CIVIL SITE PLAN
- C09 CIVIL DETAILS/SECTIONS

PROPOSED / NEW LEGEND AND ABBREVIATIONS

AC	ASPHALT CONCRETE
ADA	AMERICANS WITH DISABILITIES ACT
APPROX	APPROXIMATELY
BC	BOTTOM OF CURB
BPA	BONNEVILLE POWER ADMINISTRATION
BWALL	BOTTOM OF WALL
CONST	CONSTRUCT
CP	CONTROL POINT
DS	DOWNSPOUT
EA	EACH
EG	EXISTING GRADE
EL	ELEVATION
ESMT	EASEMENT
EX	EXISTING
FFE	FINISH FLOOR ELEVATION
FG	FINISH GRADE
FL	FLOWLINE
FT	FOOT/FEET
FS	FINISHED SURFACE
GB	GRADE BREAK
GPS	GLOBAL POSITIONING SYSTEM
L	LENGTH
LF	LINEAR FEET
ME	MATCH EXISTING
MH	MANHOLE
MEP	MECHANICAL ELECTRICAL PLUMBING
MIN	MINIMUM
PERF	PERFORATED
PCC	PORTLAND CEMENT CONCRETE
PL	PROPERTY LINE
PUE	PUBLIC UTILITY EASEMENT
PVMT	PAVEMENT
R	RADIUS
ROW	RIGHT OF WAY
S	SLOPE
SF	SQUARE FEET
SROZ	SIGNIFICANT RESOURCE OVERLAY ZONE
STD	STANDARD
SWP	STORMWATER PLANTER
TC	TOP OF CURB
TP	TOP OF PAVEMENT
TYP	TYPICAL
TW	TOP OF WALK
TWALL	TOP OF WALL

---	SAWCUT LINE
==	NEW CURB
—SD—	STORM DRAIN (SD)
CO	CLEAN OUT (CO)
AD	AREA DRAIN (AD)
VCO	VERTICAL TRANSITION CLEAN OUT (VCO)
GB	GRADE BREAK
TP 32.56'	SPOT ELEVATION
~>	OVERLAND DRAINAGE DIRECTION

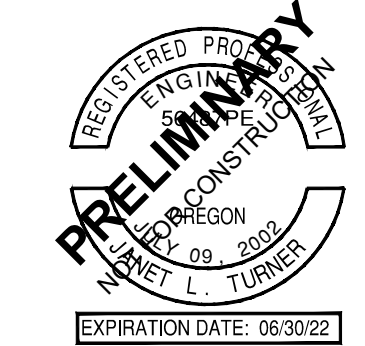
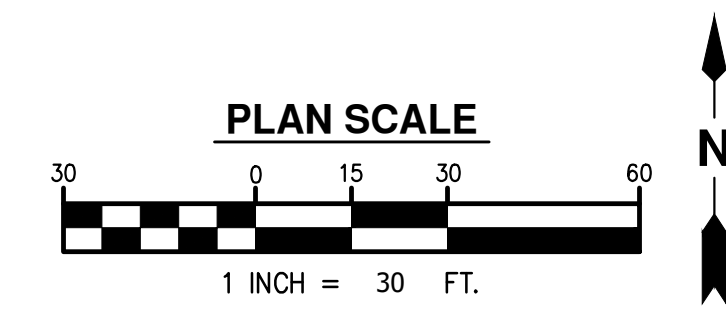


Trees 84, 87, 93, 94, 96, 99 are to be removed BEFORE installing tree protection fencing. Fencing is being installed to protect trees from accidental damage from construction equipment and vehicles.

Trees 70, 74, and 78 are to be removed BEFORE installing tree protection fencing. Fencing is being installed to protect trees from accidental damage from construction equipment and vehicles.

Trees 54, 57, 60, 65 and 67 are to be removed BEFORE installing tree protection fencing. Fencing is being installed to protect trees from accidental damage from construction equipment and vehicles.

Trees 49-52 are to be removed BEFORE installing tree protection fencing. Tree protection fencing locations TBD.



VEGETATION/TREE PROTECTION ZONE

**DO NOT REMOVE OR ADJUST THIS FENCING.
THE FENCE LOCATIONS ARE APPROVED TO PROTECT
VEGETATION AND TREES.**

Please contact the Code Enforcement Specialist and project arborist, if alterations to the approved location of the protection fencing are needed.



Project Arborist: TERAGAN & ASSOCIATES, INC 503-697-1975
Date of Tree Protection Plan: 09/13/2021