



Exhibit F

Portland Tree Consultancy

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ARBORIST REPORT

Tree Inventory & Tree Protection

DATE: 09.01.2021

PROPERTY ADDRESS: 17650 Meining Ave, Sandy, OR 97055

CLIENT REFERENCE: Axis Design Group

PROJECT DESCRIPTION: Tree Inventory and Condition Assessment
for The Pad, a proposed residential development

Introduction

An inventory of all trees 11-inches DBH and larger over was completed on the project site detailed in Figures 1a and 1b and on adjacent trees that could be influenced by development on the project site. Trees affected by excavation for utility lines are also inventoried and their location detailed in Figure 1c. The trees within the project site were tagged with numbered aluminum discs whose numbers correspond to the ID column in the inventory table. The inventory was completed on December 24th, 2020.

Regulated Trees. Chapter 17.102 City Code

Only trees 11-inches DBH and over are regulated by the ordinance. There are 19 trees meeting that threshold on the property: Trees (2801, 2813, 2814, 2823, 2825, 2827, 2828, 2846, 2851, 2866, 2876, 2880, 2882, 2895, 2898, 3601, 3602, 3603, 3604). Of these, one tree is dying, and two are Invasive non-native species.

Tree Retention & Protection Requirements. Chapter 17.102.50

Three trees 11-inches DBH and larger are required to be retained on site. If possible, two of the three must be conifers. Only two regulated trees are able to be retained on-site (Trees 2823 & 2898).

Notes on On-site Tree Protection

There are two high value conifers along the edges of the property that can be expected to survive construction impacts if protected appropriately:

Tree 2823 is a very large multi-stem Western red cedar. The tree has a crown radius of around 20-ft and, if preserved, it is recommended that a tree protection area of at least 15-ft is established around the tree. The project has been re-designed specifically to protect this tree with a separation of 20-ft between the tree and surface disturbance to the north and west and 15-ft to the south. A qualified arborist should monitor the area around the tree to ensure that any surface disturbance is kept outside the above parameters.

Tree 2898 is a good quality Shore pine with no low branches and this tree would ideally be preserved with a recommended tree protection area of 10-ft radius. Site design shows a 5-ft separation between the tree and surface disturbance and as the tree is semi-mature it should remain in adequate condition with this 5-ft separation as long as the adjacent disturbance within 15-ft is overseen by a qualified arborist.

Notes on Tree Protection for trees on adjacent land.

One very large True fir exists adjacent to the east property line (T 29). This tree is set back from the property line slightly and site design gives the tree 17-ft between disturbance and the base of the tree. This should be sufficient to protect the tree and maintain its present condition.

The other trees adjacent to the east property line to be preserved are sufficiently protected by a 5-ft separation between the trees and surface disturbance due to size and species type. Again, a qualified arborist should monitor these separation distances on a regular basis and provide guidance and oversight when surface excavation takes place within 15-ft of these trees.

There is a line of semi-mature Douglas fir trees adjacent to the south property line (Trees 13 to 18) in Meinig Park. Most of these trees are in good condition and all are semi-mature. The tree protection area for these trees should ideally be 15-ft minimum distance between the tree and surface disturbance. Heavy duty and well-maintained erosion control will be required. If excavation is limited (non-linear) it will be possible to excavate within the following parameters if the work is overseen by a qualified arborist.

<u>TREE ID</u>	<u>DBH</u>	<u>Separation distances from excavation or fill to the center of the tree</u>
Tree 13	20"	6-ft OC from Keystone retaining structure excavation
Tree 14	21"	11-ft OC from building foundation excavation
Tree 16	26"	16-ft OC from building foundation excavation
Tree 17	17"	8-ft OC from building foundation excavation

It is noted that the canopy spread to the north of many of these trees is 20 to 30-ft and so significant pruning of these trees will be required to allow site development. Pruning work on conifers requires skilled arborists and should only be completed by qualified arborists.

Tree Protection Plan Standards

The following **Tree Protection Plan Notes** will condition all project activity and construction at the site. The Tree Protection Plan Notes will be placed on the site construction plans:

1. Before site development is initiated a qualified arborist (being a currently qualified ISA Certified Arborist) will prune all site & off-site trees to allow clearance from site development and the placement of Tree Protection Fencing.
2. Tree Protection Fencing meeting the standards of the City of Sandy (Ordinance 17.102.50) will be installed to meet separation distances between preserved trees and surface disturbance as detailed in the Arborist Report of 9.1.2021.
3. A currently qualified ISA Certified Arborist will approve the location of the Tree Protection Fencing and suitable erosion control before any development activity is initiated on-site.
4. A currently qualified ISA Certified Arborist will be on-site at all times to oversee all surface disturbance within 15-ft of any preserved tree on site and within 15-ft of any off-site tree.
5. A currently qualified ISA Certified Arborist will be required to approve removal of any root over 2-inches diameter from any preserved tree.
6. All roots required to be removed during the excavation will be cleanly severed using a hand-held tool designed for that purpose.
7. Any activity within the Tree Protection Fencing locations as shown will be completed using hand tools (e.g. air spade, pneumatic drill, pick, shovel, or other hand operated tool as approved by the qualified arborist on-site).
8. No spoil, building materials, fuel or equipment of any kind will be placed or stored within the area protected by the Tree Protection Fence.
9. The contracted qualified arborist will provide detailed notes on all inspections and activities monitored if requested by the City of Sandy. The following items may be requested: Time & Date of Inspections; Detail of excavation & fill within 15-ft of any preserved trees; Size & number of roots over 2-inches removed from preserved trees; any work performed on trees to maintain their condition.

TREE INVENTORY TABLE (for Locations see Fig 1a, b and c)

ID	Tree Species	DBH	Condition	V	Condition / Constraints Notes	Location Notes
2801	Big leaf maple <i>Acer macrophyllum</i>	19	Good	H	Early maturity. Narrow CR form, but good vitality and vigor	At E edge of small raised bank
2807	Japanese maple <i>Acer palmatum</i>	9	Good	M	Asymmetric CR heavily shaded. Codominant stem with wide angle at 4.5-ft	At edge of small raised bank
2813	European wild cherry <i>Prunus avium</i>	15	Fair	L	Heavily leaning stem, growing away from big leaf maple. INVASIVE NON NATIVE	Within E tree line
2814	European wild cherry <i>Prunus avium</i>	14	Fair	L	Straight stem lean, away from big leaf maples INVASIVE NON NATIVE	Within group of smaller trees. E property line
2822	English holly <i>Ilex aquifolium</i>	10	Good/Fair	L	Strong upright crown form, but heavily shaded by western red cedar INVASIVE NON NATIVE	Under red cedar canopy
2823	Western red cedar <i>Thuja plicata</i>	64	Good	H	Large specimen tree with no significant defects. CR low over property	On small raised bank on E property line
2824	European wild cherry <i>Prunus avium</i>	8	Poor	L	Stem has 45-degree lean. Damaged surface roots evident INVASIVE NON NATIVE	Under red cedar canopy. E side property line
2825	Big leaf maple <i>Acer macrophyllum</i>	12	Good	M	CR has vigorous upright growth and good form	Growing N and clear of red cedar canopy
2827	Lodgepole pine <i>Pinus contorta</i>	36	Good	H	Full strong CR. Twin leaders from 8-ft	Grassed center of site
2828	Ponderosa pine <i>Pinus Ponderosa</i>	26	Good/Fair	H	Healthy tree with good CR form. Very poor pruning practice	Grassed center of site
2846	Douglas fir <i>Pseudotsuga menziesii</i>	19	Good	H	Good crown form and good vitality. CR is low to ground and extends 15-ft radius	5-ft from existing fence on west side
2851	Crabapple species <i>Malus spp</i>	12	Fair	L	Thin narrow and damaged CR	Grassed center of site
2866	Spruce species <i>Picea spp</i>	18	Fair/Good	M	Fair vigor. Complete CR but thin growth form	Grassed center of site
2876	Big leaf maple <i>Acer macrophyllum</i>	26	Good/Fair	M	Twin stems from ground level. Some minor basal damage	E side within tree line
2880	Orchard apple <i>Malus domestica</i>	24	Fair	M	Large domestic apple, formerly managed tree. Has heavy sapsucker damage	Grassed center of site
2882	Spruce species <i>Picea spp</i>	18	Dying	-	Recent strong decline. May have no live foliage	Adjacent to N property line
2889	Spruce species <i>Picea spp</i>	11	Fair/Poor	L	Small reduced crown under O/E lines. Large stem lesion Low vigor	OFF SITE: ROW tree at NW property corner

ID	Tree Species	DBH	Condition	V	Condition / Constraints Notes	Location Notes
2895	Maple species <i>Acer spp</i>	12	Fair/Good	M	Strong vertical growth within closely spaced tree grouping	Small raised bank on E property line
2898	Lodgepole pine <i>Pinus contorta</i>	14	Good	H	Strong vertical CR development. Lower stem among cherry laurel stems	Small raised bank on E property line
3601	Big leaf maple <i>Acer macrophyllum</i>	26	Good/Fair	M	Canopy dominant tree. Full large CR. CR low over property and 35-ft radial spread	Raised bank area at N end of property
3602	Big leaf maple <i>Acer macrophyllum</i>	17	Fair/Good	M	Twisting strong stem intertwined with dominant tree T 3601	Raised bank area at N end of property
3603	Big leaf maple <i>Acer macrophyllum</i>	24	Good/Fair	M	Strong dominant CR. Spreading CR form. CR low over property and 35-ft radial spread	Raised bank area at N end of property
3604	Big leaf maple <i>Acer macrophyllum</i>	15	Poor	L	Heavy lean over PL, likely partial uproot. Basal decay and damage on off-lean basal area	Raised bank area at N end of property. NE co
1	European wild cherry <i>Prunus avium</i>	26	Fair	M	Fully mature, low vigor. Branch failures. Pruned under O/E INVASIVE NON NATIVE	OFF SITE: On slope of hwy bank. 8-ft from AP
2	Willow species <i>Salix spp</i>	20	Fair/poor	L	Multi-stem – no dominant stem Tree but in shrub form.	OFF SITE: 11-ft from AP. W side drain channel
3	Douglas fir <i>Pseudotsuga menziesii</i>	41	Good	H	Strong complete crown. On raised root mound. No defects noted	OFF SITE: 2-ft from AP
4	Western red cedar <i>Thuja plicata</i>	45	Good	H	Complete CR and branch structure. Crown slightly thin	OFF SITE: 10-ft from AP. At drain channel
5	Big leaf maple <i>Acer macrophyllum</i>	28	Fair	M	Heavily shaded by T4. Multiple branch breakouts. Shared CR space with T4	OFF SITE: 4-ft from AP. At drain channel
6	European wild cherry <i>Prunus avium</i>	9	Poor	L	Significant stem damage. Multiple stem lesions INVASIVE NON NATIVE	OFF SITE: Park landscape area
7	Big leaf maple <i>Acer macrophyllum</i>	12	Good/Fair	M	Semi-mature. Upright CR	OFF SITE: Park landscape area
8	Big leaf maple <i>Acer macrophyllum</i>	12	Fair/Poor	L	Tree shaded under adjacent tree. No upper CR	OFF SITE: On steep hwy bank
9	Grand fir <i>Abies grandis</i>	11	Good	H	Semi-mature. Strong upright growth and good upper CR growth	OFF SITE: 20-ft from AP
10	Big leaf maple <i>Acer macrophyllum</i>	26	Fair/Good	M	Group of stems from ground level	OFF SITE: 12-ft from AP
11	Big leaf maple <i>Acer macrophyllum</i>	10	Poor/Fair	M	Severely damaged CR. Scarring of stem	OFF SITE: 6-ft from AP
12	Big leaf maple <i>Acer macrophyllum</i>	14	Good/Fair	M	Early maturity. Stem scar	OFF SITE: On steep hwy bank

ID	Tree Species	DBH	Condition	V	Condition / Constraints Notes	Location Notes
13	Douglas fir <i>Pseudotsuga menziesii</i>	20	Good	H	Group of 3 trees with shared CR and root space. Early maturity. Good vigor. CR low & 20-ft over site	OFF SITE: Adjacent children play area
14	Douglas fir <i>Pseudotsuga menziesii</i>	21	Good	H	Group of 3 trees with shared CR and root space. Early maturity. Good vigor. CR low & 20-ft over site	OFF SITE: Adjacent children play area
15	Douglas fir <i>Pseudotsuga menziesii</i>	21	Good	H	Group of 3 trees with shared CR and root space. Early maturity. Good vigor. CR low & 20-ft over site	OFF SITE: Adjacent children play area
16	Douglas fir <i>Pseudotsuga menziesii</i>	26	Good	H	No shared space. No defects noted. CR low over site to 8-ft ht. Mid-bank location	OFF SITE: Adjacent children play area
17	Douglas fir <i>Pseudotsuga menziesii</i>	17	Good/Fair	M	Semi-mature. Within grouping of shared root and CR space, at bottom of slope	OFF SITE: Adjacent children play area
18	Douglas fir <i>Pseudotsuga menziesii</i>	13	Good	M	Semi-mature. Within grouping of shared root and CR space, at bottom of slope	OFF SITE: Adjacent children play area
19	Douglas fir <i>Pseudotsuga menziesii</i>	10	Good	M	Semi-mature. Within grouping of shared root and CR space, at bottom of slope	OFF SITE: Adjacent children play area
20	Big leaf maple <i>Acer macrophyllum</i>	15	Fair	M	Two stems sound, one damaged. Among large adjacent group of similar species	OFF SITE: Within tree line, E side of property
21	Big leaf maple <i>Acer macrophyllum</i>	13	Fair/Good	M	Group of 3 large stems, average 13" diam	OFF SITE: Within tree line, E side of property
22	Big leaf maple <i>Acer macrophyllum</i>	9	Fair/Poor	L	A group of smaller stems. Some basal damage	OFF SITE: Within tree line, E side of property
23	European wild cherry <i>Prunus avium</i>	8	Fair	L	Leaning stem INVASIVE NON NATIVE	OFF SITE: Within tree line, E side of property
24	Big leaf maple <i>Acer macrophyllum</i>	11	Good/Fair	M	Vertical growing. One large live stem, two dead stems	OFF SITE: Within tree line, E side of property
25	Big leaf maple <i>Acer macrophyllum</i>	10	Good/Fair	M	Canopy sub-dominant. Twisting but strong stem	OFF SITE: Within tree line, E side of property
26	Big leaf maple <i>Acer macrophyllum</i>	15	Good	M	Early maturity. Strong vertical growing stem	OFF SITE: Within tree line, E side of property
27	Big leaf maple <i>Acer macrophyllum</i>	9	Dying	-	Functionally dead. Upper CR is missing	OFF SITE: Within tree line, E side of property
28	Big leaf maple <i>Acer macrophyllum</i>	13	Good/Fair	M	Narrow strong vertical CR	OFF SITE: Within tree line, E side of property
29	True fir <i>Abies spp</i>	29	Good	H	Very straight upright stem. Vitality appears good. Full upper CR	OFF SITE: Within tree line, E side of property
30	European wild cherry <i>Prunus avium</i>	14	Fair/Good	L	Vertical stem. Small high CR INVASIVE NON NATIVE	OFF SITE: Within tree line, E side of property
31	European wild cherry <i>Prunus avium</i>	12	Fair/Good	L	Vertical stem. Small high CR INVASIVE NON NATIVE	OFF SITE: Within tree line, E side of property

Table Notes:

DBH: Stem diameter at 4.5-ft from grade or measured as required by regulation.

V: Amenity value of tree in the opinion of the consultant. Taking into account the species type, size, and safe and healthy life expectancy of the tree (L: Low; M: Medium; H: High).

Abbreviations: AP - asphalt path; CR – Tree crown; O/E - Hi voltage overhead electricity; PL – Parking lot; SS – Self-sown;

Figure 1a Tree survey 12.24.20 (North half of site)

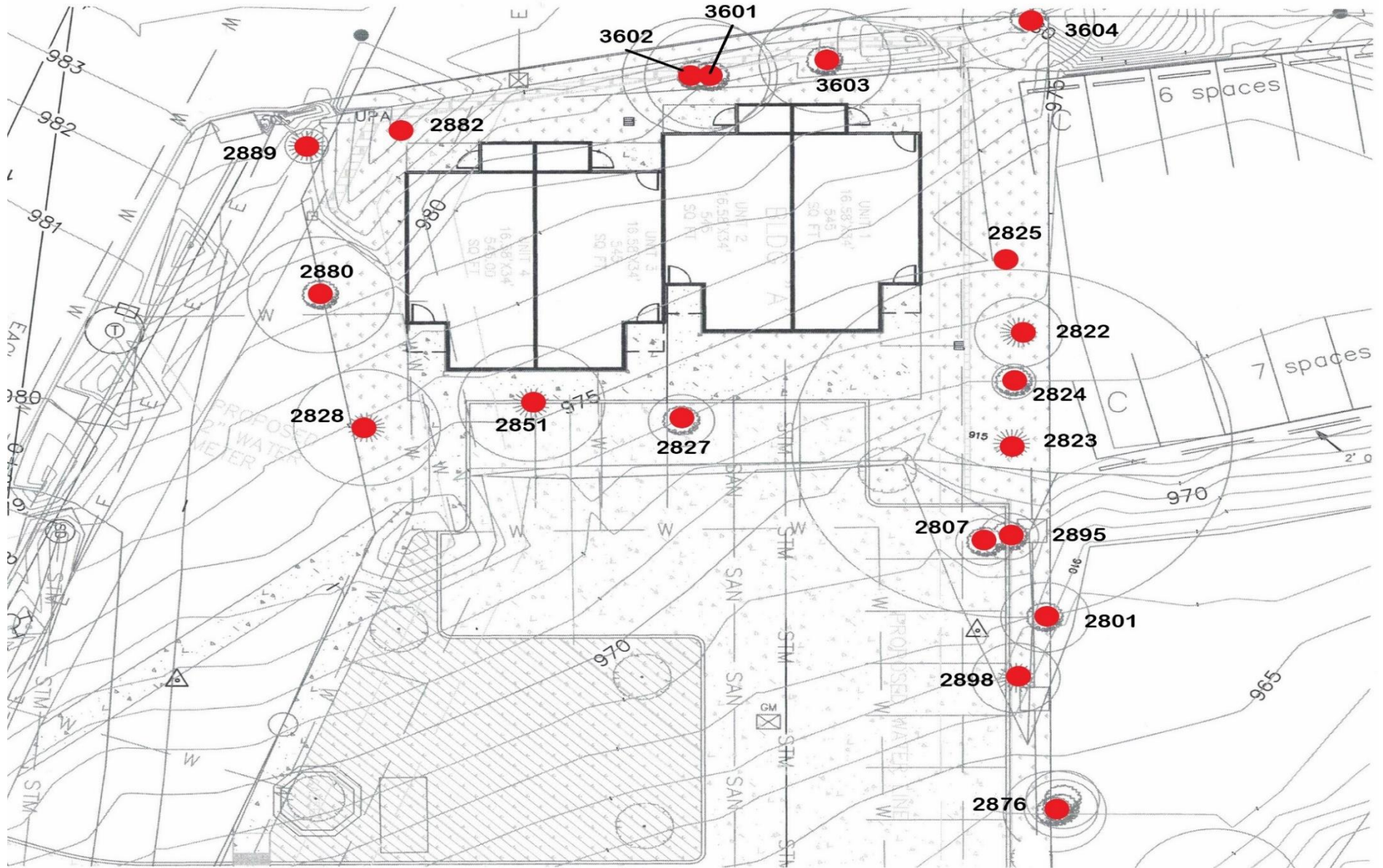


Figure 1b Tree survey 12.24.20 (South half of site)



Figure 1c Tree survey 12.24.20 (Utility alignment area)

