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Sagert Farm Subdivision – Tualatin, Oregon
Tree Assessment Report
May 10, 2015

MHA15017

Purpose

This Tree Assessment Report for the Sagert Farm Subdivision project site located at 20130 SW 65th Avenue in Tualatin, Oregon, is provided pursuant to City of Tualatin Development Code Chapters 34 and 73. This report describes the existing trees located on and directly adjacent to the project site, as well as recommendations for tree removal, retention, and protection during construction. This report is based on observations made by International Society of Arboriculture (ISA) Certified Arborist (PN-6145A) and Qualified Tree Risk Assessor Morgan Holen during a site visit conducted on April 16, 2014.

Scope of Work and Limitations

Morgan Holen & Associates, LLC, was contracted by Lennar Northwest, Inc. to collect tree inventory data and develop an arborist report and tree plan for the project. The site is planned for residential development. A site plan was provided by 3J Consulting, Inc. illustrating the location of existing trees and proposed construction impacts.

The existing trees were surveyed and tagged in the field with numbered aluminum tags corresponding with survey point numbers. Visual Tree Assessment (VTA) was performed on individual trees located across the site and on neighboring properties located directly adjacent to the project site. VTA is the standard process whereby the inspector visually assesses the tree from a distance and up close, looking for defect symptoms and evaluating overall condition and vitality of individual trees. Trees were evaluated in terms of general condition and potential construction impacts.

The client may choose to accept or disregard the recommendations contained herein, or seek additional advice. Neither this author nor Morgan Holen & Associates, LLC, have assumed any responsibility for liability associated with the trees on or adjacent to this site.

General Description

The site is primarily a large open undeveloped field, with one existing residence and four other structures, which are all planned for demolition for a 79 lot residential subdivision. The proposed development also includes new streets, a storm water facilities, and open space tracts.

The existing trees are scattered across the site, primarily around the existing home and along property boundaries. In all, 164 trees were inventoried, including 10 trees measuring smaller than eight inches in diameter and 154 trees measuring eight inches and larger in diameter, the City's threshold diameter for regulated trees. Of the 164 existing trees, 43 (26%) are located off-site on neighboring properties, including seven trees measuring smaller than eight inches in diameter. The remaining 121 (74%) trees are located on the project site, including three trees measuring smaller than eight inches in diameter. Twenty-three different tree species were identified. Table 1 provides a summary of the number of inventoried trees by species and location on- or off-site.

Table 1. Number of Inventoried Trees by Species – Sagert Farm Subdivision, Tualatin.

Common Name	Species Name	On-Site	Off-Site	Total	Percent
American holly	*Ilex opaca*	2		**2**	1%
black walnut	*Juglans nigra*	1		**1**	<1%
chestnut	*Castanea dentata*	3		**3**	2%
deciduous	Unknown	1	8	**9**	5%
deodar cedar	*Cedrus deodara*	1		**1**	<1%
dogwood	*Cornus nuttallii*	1		**1**	<1%
Douglas-fir	*Pseudotsuga menziesii*	61	7	**68**	41%
English hawthorn	*Crataegus monogyna*	2		**2**	1%
English walnut	*Juglans regia*	8		**8**	5%
filbert	*Corylus cornuta*	1		**1**	<1%
fir	*Abies* spp.	10		**10**	6%
flowering pear	*Pyrus calleryana*	0	6	**6**	4%
fruit	Unknown	8		**8**	5%
giant sequoia	*Sequoiadendron giganteum*	1	20	**21**	13%
Japanese maple	*Acer japonicum*	1		**1**	<1%
juniper	*Juniperus occidentalis*	2		**2**	1%
larch	*Larix occidentalis*	3		**3**	2%
Oregon ash	*Fraxinus latifolia*	1		**1**	<1%
ponderosa pine	*Pinus ponderosa*	2		**2**	1%
Port-Orford-cedar	*Chamaecyparis lawsoniana*	8	1	**9**	5%
redwood	*Sequoia sempervirens*	1	1	**2**	1%
saucer magnolia	*Magnolia × soulangeana*	1		**1**	<1%
western redcedar	*Thuja plicata*	2		**2**	1%
Total		**121**	**43**	**164**	100%
Percent of Total		74%	26%		

Douglas-fir (*Pseudotsuga menziesii*) is most common, accounting for 41% of the total inventory. These trees vary in size and condition, but most are mature trees located in dense groups. The group in the southeast portion of the project site connects with a larger stand of Douglas-firs located east of the project site. Several of the Douglas-firs in this group are in decline, but overall the group appears in good condition and there is low target potential meaning there is little risk in retaining the dying trees as part of the intact group. Another group of Douglas-firs is located in the middle of the proposed Sagert Road extension. Again, the overall group appears in good condition, but the individual trees are variable in condition, including one high risk tree with severe red-ring rot infection which is trunk decay caused by the fungus *Phellinus pini*. Other mature Douglas-firs and a number of small, young Douglas-firs are scattered across the site and generally appear in good condition, although removal of some of these trees will be necessary to accommodate grading for building lots and streets.

Giant sequoia (*Sequoiadendron giganteum*) accounts for 13% of the inventoried trees and all but one are located off-site to the east, along the south side of Borland Road. These trees were planted in a row and are prominent amenities along the street. The planter strip is relatively large and provides sufficient growing space. Past pruning for overhead utility line clearance has not impacted the health or stability of these trees. They are most suitable for preservation as an undisturbed intact group because they

have grown up competing with and adapting to one another. Construction impacts should be avoided within the dripline area of these trees in order to provide for their long-term preservation.

Two English hawthorns (*Crataegus monogyna*) are the only non-native and invasive trees identified. One filbert (*Corylus cornuta*) was inventoried, but is more of a large shrub than a tree. A variety of trees appear to have been planted for landscaping purposes, including larch (*Larix occidentalis*), ponderosa pine (*Pinus ponderosa*), saucer magnolia (*Magnolia* x *soulangeana*), Japanese maple (*Acer japonicum*), several fruit trees, black walnut (*Juglans nigra*), English walnut (*Juglans regia*), and others. The black walnuts are large trees primarily bordering the existing driveway. These trees are over-mature and although some are in relatively better condition than others, trunk and branch decay, broken branches, crown dieback, and decline are common defects observed and noted.

A complete description of individual trees is provided in the enclosed tree data.

Tree Plan Recommendations

Prior to preparation of this report we coordinated with 3J Consulting, Inc. in regard to the best existing trees and potential construction impacts, and reviewed and considered the approval criteria identified in the Tualatin Development Code Section 34.230 which requires a detailed justification for proposed tree removal. The enclosed tree data and this written report address the relevant criteria.

As provided in the enclosed tree inventory data, individual trees were rated in terms of general condition as either: poor, fair, good, or excellent. Individual trees recommended for removal were also assigned a reason for removal (shown for each tree to be removed under "criteria" in the tree inventory data table) based on the removal criteria as follows:

Criteria for Tree Removal per TDC 34.230:

- **D1** – Diseased and the disease threatens the structural integrity of the tree;
- **D2** – Diseased and the disease permanently and severely diminishes the aesthetic value of the tree; or
- **D3** – Diseased and the continued retention of the tree could result in other trees being infected with a disease that threatens either their structural integrity or aesthetic value.
- **H** – Hazardous.
- **C** – Construction necessitates tree removal.

Trees identified for removal because of construction were further classified as: **C1**- Building lot construction necessitates tree removal; **C2**- Street and sidewalk construction and grading necessitates tree removal; **C3**- Water quality facility construction necessitates tree removal; or **C4**: Other grading and site improvements necessitate tree removal.

Of the 43 off-site trees, 42 (98%) are recommended for retention with tree protection fencing established at the dripline or as otherwise directed by the project arborist. The remaining off-site tree, #10980, is an 18-inch diameter Douglas-fir located in the City's open space tract east of the project site in the northeast area. This tree is intermediate in crown class and the proposed removal of two on-site Douglas-firs (#10977 and #10978) for construction on lot 78 is likely to expose this tree resulting in an increased risk of windthrow. Therefore, tree #10980 should be re-evaluated by a qualified arborist at the time of clearing in terms of hazard risk potential and removal may be recommended. The applicant

should coordinate with the City to obtain authorization to remove this tree if it is determined that the tree presents a foreseeable threat of danger after being exposed by adjacent tree removal.

Other trees recommended for retention were also evaluated in terms of impacts from adjacent tree removal that is necessary for site development and no additional impacts are anticipated. However, we did observe a tree in the City's open space tract with a dead top and red-ring rot conks along the trunk that the City should be aware of because of hazard risk potential. This tree is not included on the project survey because it is not located directly adjacent to the project site, but it is closest to surveyed tree 10973. This tree will not be impacted by site development, but nevertheless is diseased and at increased risk for failure with the development site being the primary target.

Of the 121 on-site trees, 41 (34%) are recommended for retention and 80 (66%) are recommended for removal, including one tree measuring smaller than eight inches in diameter (#2873, a six inch diameter fruit tree in poor condition located on proposed lot 35).

Table 2 provides a summary of the number of inventoried trees based on general condition and treatment recommendation per the City's tree removal criteria.

Table 2. Number of Inventoried Trees by Condition Rating and Treatment Recommendation.

Treatment Recommendation	Condition Rating				Total	Percent
	Poor	Fair	Good	Excellent		
On-Site Trees	**20**	**34**	**60**	**7**	**121**	**74%**
Retain	10	11	18	2	41	25%
Remove for Disease, Hazard, & Construction	0	1	0	0	1	1%
Remove for Building Lot Construction	2	10	20	3	35	21%
Remove for Street/Sidewalk Construction	7	10	12	2	31	19%
Remove for Water Quality Facility Construction	1	1	5	0	7	4%
Remove for Other Grading/Site Improvements	0	2	4	0	6	4%
Off-Site Trees	**0**	**13**	**28**	**2**	**43**	**26%**
Protect	0	12	28	2	42	25%
Re-Evaluate Risk Potential at the Time of Clearing	0	1	0	0	1	1%
Total	**20**	**47**	**88**	**9**	**164**	**100%**
Percent of Total	5%	29%	54%	12%		

Sufficient protection is not possible for on-site trees that are recommended for removal for the purposes of site development, including grading for building lots, streets and sidewalks, storm water facility construction, and other grading and site improvements. Note that tree #11191, the Douglas-fir infected with red-ring rot, is the only tree recommended for removal because it is diseased and hazardous.

On-site trees recommended for preservation are located along the eastern boundary of the project site and predominately in the southern portion of the site in open space tracts. Trees located in the open space tracts will not be impacted by construction and are suitable for preservation in their relatively natural condition. Trees planned for preservation along the eastern boundary will be located in the rear of building lots. Off-site trees recommended for protection are primarily located adjacent to these lots.

Minor pruning for clearance and safety may be needed for both on- and off-site trees. Tree protection fencing should be established at the dripline of trees planned for preservation. Where work is necessary within the protection area, a qualified arborist should provide on-the-ground recommendations for adjustments to protection fencing and monitor work beneath protected tree driplines. Recommendations for tree protection are provided in the next section.

Tree Protection Recommendations

The trees recommended for preservation will need special consideration to assure their protection during construction. We highly recommend a preconstruction meeting with the owner, contractors, and project arborist to review tree protection measures and address questions or concerns on site. Tree protection measures include:

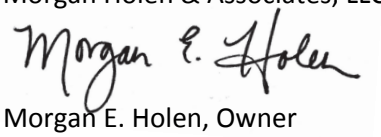
- **Tree Removal and Pruning.** Stumps of removed trees located within 30-feet of protected trees should be removed under the direction of the project arborist to help minimize underground impacts to potentially interconnected roots. Neighboring trees and on-site trees planned for retention may require minor pruning for overhead clearance to avoid crown damage during construction, and to remove dead and defective branches for safety. The project arborist should help identify whether pruning is necessary once trees recommended for removal have been removed and the site is staked and prepared for construction. Tree removal and pruning should be performed by a Qualified Tree Service.
- **Hazard Tree Evaluation.** At the time of clearing and following removal of trees #10977 and #10978, a qualified arborist should conduct a tree risk assessment for off-site tree #10980 and document recommendations for tree retention or removal as needed. If removal is recommended because of hazardous condition, the applicant should coordinate with the City to obtain authorization to remove this tree in conjunction with site development.
- **Protection Fencing.** Trees to be preserved should be protected by installation of tree protection fencing to prevent injury to tree trunks or roots, or soil compaction within the root protection area, which generally coincides with tree driplines. Fences should be 6-foot high steel on concrete blocks or orange plastic construction fencing on metal stakes. The project arborist should determine the exact location and type of tree protection fencing. Trees located more than 30-feet from construction activity should not require fencing.
- **Tree Protection Zone.** Without authorization from the Project Arborist, none of the following should occur beneath the dripline of any protected tree:
    1. Grade change or cut and fill;
    2. New impervious surfaces;
    3. Utility or drainage field placement;
    4. Staging or storage of materials and equipment; or
    5. Vehicle maneuvering.

    Root protection zones may be entered for tasks like surveying, measuring, and sampling. Fences must be closed upon completion of these tasks. Protection fencing should not be removed or adjusted unless otherwise directed by the project arborist. Construction that is necessary beneath protected tree driplines should be monitored by the project arborist. It is the developer's responsibility to coordinate with the project arborist as needed prior to working beneath the dripline of any protected tree.

- **Excavation beneath Protected Tree Driplines.** Excavation beneath tree driplines should be avoided if alternatives are available. If excavation is unavoidable, the developer should coordinate with the project arborist to evaluate the proposed excavation to determine methods to minimize impacts to trees. This can include tunneling, hand digging, or other approaches.
- **Quality Assurance.** The project arborist should supervise proper execution of this plan during construction and will be available on-call. It is the developer's responsibility to coordinate with the project arborist as needed.
- **Final Report.** After the project has been completed, the project arborist should provide a final report that describes the measures needed to maintain and protect the remaining trees.

Please contact us if you have questions or need any additional information. Thank you for choosing Morgan Holen & Associates, LLC, to provide consulting arborist services for the Sagert Farm Subdivision project in Tualatin.

Thank you,
Morgan Holen & Associates, LLC



Morgan E. Holen, Owner
ISA Certified Arborist, PN-6145A
ISA Tree Risk Assessment Qualified
Forest Biologist

Enclosures: MHA15017 Sagert Farm Subdivision – Tree Data 4-16-15

No.	Common Name	Species Name	DBH[1]	C-Rad[2]	Cond[3]	Comments	Treatment	Criteria[4]
2857	English walnut	*Juglans regia*	24	24	F	trunk and branch decay, late to push leaves	remove	C2
2858	English walnut	*Juglans regia*	34	22	G	trunk and branch decay	remove	C2
2859	larch	*Larix occidentalis*	16	9	G	moderate branch distribution	remove	C1
2860	larch	*Larix occidentalis*	21	11	G	moderate branch distribution, few dead and broken branches	remove	C1
2861	English walnut	*Juglans regia*	28	14	P	old codominant stem failure, large hollow 0-8' with advanced decay	remove	C1
2862	English walnut	*Juglans regia*	40	24	F	dead branches, branch decay, decline	remove	C1
2863	English walnut	*Juglans regia*	40	18	F	top dieback, decline, trunk decay, codominant stems with included bark	remove	C1
2864	deciduous	unknown	2x10	12	F	dead branches	remove	C2
2865	English walnut	*Juglans regia*	34	30	F	good wound-wood, dieback, decline	remove	C1
2866	English walnut	*Juglans regia*	42	32	F	dieback, decline	remove	C1
2867	ponderosa pine	*Pinus ponderosa*	22	16	G	trunk sweep	remove	C1
2868	dogwood	*Cornus nuttallii*	8	12	G	moderate structure	remove	C1
2869	black walnut	*Juglans nigra*	34	20	F	moderate structure, dead and broken branches, dieback	remove	C1
2870	fruit	unknown	24	10	F	advanced trunk decay	remove	C1
2871	saucer magnolia	*Magnolia × soulangeana*	10,12	18	G	moderate structure, somewhat one-sided to the west	remove	C1
2872	deodar cedar	*Cedrus deodara*	24	22	E	no major defects	remove	C1
2873	fruit	unknown	6	6	P	dead branches, decay	remove	C1
2875	filbert	*Corylus cornuta*	2x10	16	P	poor structure, dead and broken branches, trunk decay	remove	C2
2876	fruit	unknown	3x18	26	F	moderate structure, trunk decay	remove	C1
2969	fruit	unknown	12	8	G	well-maintained	remove	C1

No.	Common Name	Species Name	DBH[1]	C-Rad[2]	Cond[3]	Comments	Treatment	Criteria[4]
2970	juniper	*Juniperus occidentalis*	8	6	F	thin crown	remove	C2
2971	juniper	*Juniperus occidentalis*	12	9	F	thin crown	remove	C1
2972	larch	*Larix occidentalis*	20	14	G	few broken branches, no major defects	remove	C1
2973	ponderosa pine	*Pinus ponderosa*	32	22	E	multiple leaders, no major defects	remove	C1
2974	Japanese maple	*Acer japonicum*	14	13	E	multi-stemmed, well-maintained	remove	C2
2975	American holly	*Ilex opaca*	3x8	10	G	moderate structure	remove	C2
2976	Douglas-fir	*Pseudotsuga menziesii*	52	24	G	large codominant leaders with included bark	remove	C1
3040	English walnut	*Juglans regia*	42	32	G	broken branches, branch decay	remove	C1
3064	Douglas-fir	*Pseudotsuga menziesii*	48	18	G	forked top	remove	C1
3065	Douglas-fir	*Pseudotsuga menziesii*	42	18	F	twig dieback, poor top structure	remove	C1
3066	fruit	unknown	18	15	F	poor structure, covered with blackberry	remove	C1
3067	Douglas-fir	*Pseudotsuga menziesii*	14	16	G	relatively young tree	remove	C1
3068	Douglas-fir	*Pseudotsuga menziesii*	16	16	G	relatively young tree	remove	C2
3074	chestnut	*Castanea dentata*	22	22	G	moderate structure	remove	C2
3075	chestnut	*Castanea dentata*	25	22	G	moderate structure	remove	C2
3076	English hawthorn	*Crataegus monogyna*	8	10	F	invasive species, poor structure	remove	C2
3085	Douglas-fir	*Pseudotsuga menziesii*	50	18	G	few dead branches, some history of branch failure	remove	C2
3305	Douglas-fir	*Pseudotsuga menziesii*	44	20	G	codominant crown class	retain	
3306	Douglas-fir	*Pseudotsuga menziesii*	46	20	G	codominant crown class	retain	
3307	Douglas-fir	*Pseudotsuga menziesii*	10	8	P	suppressed	retain	
3308	Douglas-fir	*Pseudotsuga menziesii*	16	8	P	suppressed	retain	
3309	Douglas-fir	*Pseudotsuga menziesii*	48	26	G	codominant crown class	retain	
3310	Douglas-fir	*Pseudotsuga menziesii*	36	24	G	codominant crown class	retain	
3311	Douglas-fir	*Pseudotsuga menziesii*	42	26	G	codominant crown class	retain	
3312	Douglas-fir	*Pseudotsuga menziesii*	24	16	F	intermediate crown class	retain	

No.	Common Name	Species Name	DBH[1]	C-Rad[2]	Cond[3]	Comments	Treatment	Criteria[4]
3313	Douglas-fir	*Pseudotsuga menziesii*	24	8	F	intermediate crown class	retain	
3314	Douglas-fir	*Pseudotsuga menziesii*	36	22	G	codominant crown class	retain	
3315	Douglas-fir	*Pseudotsuga menziesii*	38	12	F	codominant crown class, history of branch failure, epicormic sprouts	retain	
3316	Douglas-fir	*Pseudotsuga menziesii*	10	6	P	suppressed	retain	
3317	Douglas-fir	*Pseudotsuga menziesii*	26	6	P	severe *P. pini* infection, could create snag, low target potential	retain	
3318	Douglas-fir	*Pseudotsuga menziesii*	24	16	F	codominant crown class	retain	
3319	Douglas-fir	*Pseudotsuga menziesii*	10	8	P	suppressed	retain	
3320	Douglas-fir	*Pseudotsuga menziesii*	26	14	F	codominant crown class	retain	
3321	Douglas-fir	*Pseudotsuga menziesii*	28	10	P	severe *P. pini* infection, could create snag, low target potential	retain	
3322	Douglas-fir	*Pseudotsuga menziesii*	38	24	F	dead and broken branches	retain	
3323	Douglas-fir	*Pseudotsuga menziesii*	32	6	P	mostly dead, could create snag, low target potential	retain	
3368	Douglas-fir	*Pseudotsuga menziesii*	44	26	G	codominant crown class, self-corrected lean	retain	
3369	Douglas-fir	*Pseudotsuga menziesii*	54	30	E	no major defects	retain	
3370	Douglas-fir	*Pseudotsuga menziesii*	10	12	G	relatively young tree	retain	
3371	fruit	unknown	18	16	P	poor structure, dead branches, decay, low target potential	retain	
3411	fir	*Abies* spp.	20	12	G	dense group, no major defects	remove	C1
3412	fir	*Abies* spp.	20	12	G	dense group, no major defects	remove	C1
3413	fir	*Abies* spp.	18	10	G	dense group, no major defects	remove	C1
3414	giant sequoia	*Sequoiadendron giganteum*	44	18	E	no major defects	remove	C2
3415	Douglas-fir	*Pseudotsuga menziesii*	28	18	G	no major defects, minor crown asymmetry	remove	C2
3416	fir	*Abies* spp.	16	10	G	few dead branches	remove	C4
3417	fir	*Abies* spp.	8	6	F	thin crown, suppressed	remove	C4

No.	Common Name	Species Name	DBH[1]	C-Rad[2]	Cond[3]	Comments	Treatment	Criteria[4]
3418	fir	*Abies* spp.	14	12	G	dense group	remove	C4
3419	fir	*Abies* spp.	12	10	G	dense group	remove	C4
3420	fir	*Abies* spp.	10	10	F	topped, multiple leaders	remove	C4
3421	Douglas-fir	*Pseudotsuga menziesii*	10	12	G	relatively young tree	remove	C4
3422	fir	*Abies* spp.	8	6	F	small live crown, forked top, dead branches	remove	C3
3423	Port-Orford-cedar	*Chamaecyparis lawsoniana*	14	0	P	dead	remove	C3
3424	chestnut	*Castanea dentata*	3x20	20	G	moderate structure	remove	C3
3425	Port-Orford-cedar	*Chamaecyparis lawsoniana*	12	8	G	dense row	remove	C3
3426	Port-Orford-cedar	*Chamaecyparis lawsoniana*	12	8	G	dense row	remove	C3
3427	Port-Orford-cedar	*Chamaecyparis lawsoniana*	12	8	G	dense row	remove	C3
3428	Port-Orford-cedar	*Chamaecyparis lawsoniana*	12	8	G	dense row	remove	C3
3429	Port-Orford-cedar	*Chamaecyparis lawsoniana*	12	8	G	dense row	retain	
3430	Port-Orford-cedar	*Chamaecyparis lawsoniana*	12	8	G	dense row	retain	
3431	fir	*Abies* spp.	6	8	F	dead branches, suppressed	retain	
3432	Port-Orford-cedar	*Chamaecyparis lawsoniana*	12	8	G	dense row	retain	
3435	Douglas-fir	*Pseudotsuga menziesii*	15	14	G	no major defects	retain	
3436	fruit	unknown	22	14	P	poor structure, dead and broken branches, decline, low target potential	retain	
3438	Douglas-fir	*Pseudotsuga menziesii*	5	6	F	heavy cone production, low target potential	retain	
3439	fruit	unknown	18	16	P	poor structure, decay, low target potential	retain	
3440	Douglas-fir	*Pseudotsuga menziesii*	14	15	F	relatively young tree	retain	
3606	flowering pear	*Pyrus calleryana*	4	6	G	street tree	protect off-site tree	
3607	flowering pear	*Pyrus calleryana*	4	6	G	street tree	protect off-site tree	
3608	flowering pear	*Pyrus calleryana*	4	6	G	street tree	protect off-site tree	
3609	flowering pear	*Pyrus calleryana*	4	6	G	street tree	protect off-site tree	

No.	Common Name	Species Name	DBH[1]	C-Rad[2]	Cond[3]	Comments	Treatment	Criteria[4]
3610	flowering pear	*Pyrus calleryana*	4	6	G	street tree	protect off-site tree	
3611	flowering pear	*Pyrus calleryana*	4	6	G	street tree	protect off-site tree	
10430	giant sequoia	*Sequoiadendron giganteum*	32	12	G	dense row, protect intact group	protect off-site tree	
10431	giant sequoia	*Sequoiadendron giganteum*	34	12	G	dense row, protect intact group	protect off-site tree	
10432	giant sequoia	*Sequoiadendron giganteum*	32	12	G	dense row, protect intact group	protect off-site tree	
10433	giant sequoia	*Sequoiadendron giganteum*	32	12	G	dense row, protect intact group	protect off-site tree	
10434	giant sequoia	*Sequoiadendron giganteum*	36	12	G	dense row, protect intact group	protect off-site tree	
10435	giant sequoia	*Sequoiadendron giganteum*	30	12	G	dense row, protect intact group	protect off-site tree	
10436	giant sequoia	*Sequoiadendron giganteum*	38	15	F	dense row, protect intact group	protect off-site tree	
10437	giant sequoia	*Sequoiadendron giganteum*	20	12	F	dense row, protect intact group	protect off-site tree	
10438	giant sequoia	*Sequoiadendron giganteum*	46	20	G	dense row, protect intact group	protect off-site tree	
10439	giant sequoia	*Sequoiadendron giganteum*	54	24	G	dense row, protect intact group, open wound on north face 20-30'	protect off-site tree	
10440	giant sequoia	*Sequoiadendron giganteum*	54	24	G	dense row, protect intact group	protect off-site tree	
10441	giant sequoia	*Sequoiadendron giganteum*	48	26	G	dense row, protect intact group	protect off-site tree	
10442	giant sequoia	*Sequoiadendron giganteum*	48	26	G	dense row, protect intact group	protect off-site tree	
10443	giant sequoia	*Sequoiadendron giganteum*	46	26	G	dense row, protect intact group, codominant leaders	protect off-site tree	
10444	giant sequoia	*Sequoiadendron giganteum*	46	28	G	dense row, protect intact group	protect off-site tree	
10445	giant sequoia	*Sequoiadendron giganteum*	44	26	F	dense row, protect intact group	protect off-site tree	
10446	giant sequoia	*Sequoiadendron giganteum*	42	28	G	dense row, protect intact group	protect off-site tree	
10447	giant sequoia	*Sequoiadendron giganteum*	50	28	G	dense row, protect intact group	protect off-site tree	
10448	giant sequoia	*Sequoiadendron giganteum*	50	28	F	dense row, protect intact group, codominant leaders	protect off-site tree	
10969	English hawthorn	*Crataegus monogyna*	14	16	F	invasive species	remove	C2
10971	Douglas-fir	*Pseudotsuga menziesii*	42	22	G	one-sided crown to west	protect off-site tree	
10972	Douglas-fir	*Pseudotsuga menziesii*	30	24	G	one-sided crown to west	protect off-site tree	

No.	Common Name	Species Name	DBH[1]	C-Rad[2]	Cond[3]	Comments	Treatment	Criteria[4]
10973	Douglas-fir	*Pseudotsuga menziesii*	14	22	F	suppressed, but okay in group (note that closest adjacent non-surveyed tree has dead top and *P. pini* conks along trunk)	protect off-site tree	
10974	Douglas-fir	*Pseudotsuga menziesii*	30	25	G	one-sided crown to west	protect off-site tree	
10975	giant sequoia	*Sequoiadendron giganteum*	54	18	E	no major defects	protect off-site tree	
10976	Douglas-fir	*Pseudotsuga menziesii*	38	24	G	poor leader structure with increased risk potential	remove	C1
10977	Douglas-fir	*Pseudotsuga menziesii*	28	22	G	codominant crown class, one-sided crown, only suitable for retention with 10978	remove	C1
10978	Douglas-fir	*Pseudotsuga menziesii*	34	16	G	codominant crown class, one-sided crown, only suitable for retention with 10977	remove	C1
10979	redwood	*Sequoia sempervirens*	10	12	E	relatively young tree, no major defects	protect off-site tree	
10980	Douglas-fir	*Pseudotsuga menziesii*	18	6	F	intermediate crown class, okay as intact group but increased risk of windthrow with exposure if 10977 and 10978 removed	re-evaluate at the time of adjacent tree removal	
10981	Douglas-fir	*Pseudotsuga menziesii*	30	24	G	self-corrected lean	retain	
10982	redwood	*Sequoia sempervirens*	66	28	E	codominant leaders	retain	
10989	Douglas-fir	*Pseudotsuga menziesii*	38	18	G	few dead and broken branches	remove	C1
11073	Douglas-fir	*Pseudotsuga menziesii*	32	22	G	codominant crown class	retain	
11074	Douglas-fir	*Pseudotsuga menziesii*	40	22	G	codominant crown class	retain	
11075	Douglas-fir	*Pseudotsuga menziesii*	46	22	G	open grown	retain	
11076	Oregon ash	*Fraxinus latifolia*	16	20	F	moderate structure, visual assessment inhibited by blackberry	retain	
11181	Douglas-fir	*Pseudotsuga menziesii*	60	24	E	forked top, no major defects	remove	C1

No.	Common Name	Species Name	DBH[1]	C-Rad[2]	Cond[3]	Comments	Treatment	Criteria[4]
11182	Douglas-fir	*Pseudotsuga menziesii*	34	16	F	poor structure, history of branch failure	remove	C2
11183	Douglas-fir	*Pseudotsuga menziesii*	20	10	F	codominant crown class	remove	C2
11184	Douglas-fir	*Pseudotsuga menziesii*	22	8	P	suppressed	remove	C2
11185	Douglas-fir	*Pseudotsuga menziesii*	28	14	F	codominant crown class	remove	C2
11186	Douglas-fir	*Pseudotsuga menziesii*	28	8	P	suppressed	remove	C2
11187	Douglas-fir	*Pseudotsuga menziesii*	36	16	G	codominant crown class	remove	C1
11188	Douglas-fir	*Pseudotsuga menziesii*	22	14	P	suppressed	remove	C2
11189	Douglas-fir	*Pseudotsuga menziesii*	18	10	P	suppressed	remove	C2
11190	Douglas-fir	*Pseudotsuga menziesii*	14	8	P	suppressed	remove	C2
11191	Douglas-fir	*Pseudotsuga menziesii*	44	22	F	>12 *P. pini* conks along north face, high risk	remove	D1,H,C2
11192	Douglas-fir	*Pseudotsuga menziesii*	42	20	G	few dead and broken branches, basal swelling	remove	C2
11193	Douglas-fir	*Pseudotsuga menziesii*	30	14	P	suppressed	remove	C2
11194	Douglas-fir	*Pseudotsuga menziesii*	44	28	G	few dead and broken branches	remove	C2
11195	Douglas-fir	*Pseudotsuga menziesii*	36	28	G	few dead and broken branches	remove	C2
11203	deciduous	unknown	20	22	F	visual assessment inhibited by blackberry	protect off-site tree	
11204	deciduous	unknown	20	22	F	visual assessment inhibited by blackberry	protect off-site tree	
11205	deciduous	unknown	20	22	G	visual assessment inhibited by blackberry	protect off-site tree	
11206	deciduous	unknown	20	20	G	visual assessment inhibited by blackberry	protect off-site tree	
11207	deciduous	unknown	20	22	F	visual assessment inhibited by blackberry	protect off-site tree	
11208	deciduous	unknown	20	20	F	visual assessment inhibited by blackberry	protect off-site tree	

No.	Common Name	Species Name	DBH[1]	C-Rad[2]	Cond[3]	Comments	Treatment	Criteria[4]
11209	deciduous	unknown	40	26	F	moderate structure	protect off-site tree	
11210	deciduous	unknown	18	12	F	poor structure, some decay	protect off-site tree	
11211	Port-Orford-cedar	*Chamaecyparis lawsoniana*	24	14	G	codominant leaders	protect off-site tree	
11224	Douglas-fir	*Pseudotsuga menziesii*	12	10	F	intermediate crown class, dead and broken branches, poor structure	remove	C2
11225	Douglas-fir	*Pseudotsuga menziesii*	22	16	F	suppressed, one-sided crown	remove	C2
11226	Douglas-fir	*Pseudotsuga menziesii*	40	22	G	old resin flow west face 0-12'	remove	C2
11227	Douglas-fir	*Pseudotsuga menziesii*	30	10	G	codominant with 11228	remove	C2
11228	Douglas-fir	*Pseudotsuga menziesii*	38	16	G	codominant with 11227	remove	C1
11229	Douglas-fir	*Pseudotsuga menziesii*	24	20	G	no major defects	protect off-site tree	
11230	Douglas-fir	*Pseudotsuga menziesii*	7	8	F	somewhat suppressed	protect off-site tree	
11231	American holly	*Ilex opaca*	12	8	F	poor structure	retain	
11232	western redcedar	*Thuja plicata*	20	18	G	moderate structure	retain	
11233	western redcedar	*Thuja plicata*	20	22	G	moderate structure	retain	

[1]**DBH** is tree diameter measured at 4.5-feet above the ground level in inches; multiple trunks splitting below DBH are measured separately and individual trunk measurements are separated by a comma, except multiple trunks of the same size are indicated with an asterisk (quantity x size).

[2]**C-Rad** is crown radius measured in feet.

[3]**Cond** is an arborist assigned rating to generally describe the condition of individual trees as follows-
Poor Condition; **F**air Condition; **G**ood Condition; or **E**xcellent Condition.

[4]**Criteria** provides justification for the proposed tree removal (per TDC 34.230):
D1: Diseased and the disease threatens the structural integrity of the tree;
D2: Diseased and the disease permanently and severely diminishes the aesthetic value of the tree; or
D3: Diseased and the continued retention of the tree could result in other trees being infected with a disease that threatens either their structural integrity or aesthetic v
H: Hazardous.
C: Construction necessitates tree removal (**1**-Building Lot; **2**-Street/Sidewalk; **3**-Water Quality Facility; **4**-Other Grading/Site Improvements)