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**Arborist Report
for
Garbarino Property
Parcels 1246700321 and 1246700329
Redmond, WA**



**November 12, 2015
Updated 2-8-16
Updated 7-31-18**

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1. Introduction

American Forest Management was contacted by Greg Arms of Milestone NW and was asked to compile an 'Arborist Report' for a subdivision project involving two parcels in the City of Redmond. The parcel numbers are 1246700321 and 1246700329.

Our assignment is to prepare a written report on present tree conditions, and to provide appropriate recommendations for the protection of retained trees during construction.

This report encompasses all the criteria set forth under the City of Redmond's tree regulations.

Dates of Field Examination: August 28th, and September 2nd and 4th, 2015

2. Description

The topography of the subject property is flat. There are no critical areas on or adjacent to the subject parcels. The vast majority of the subject areas are undeveloped and heavily treed. It is basically a piece of fragmented second-growth forest, comprised primarily of Douglas-fir and big leaf maple.

Trees on neighboring properties with drip-lines extending on to the subject parcels were also assessed. The majority of trees on the adjacent parcel to the south have been recently removed, in conjunction with another subdivision project. Neighboring tree issues are primarily along the north perimeter.

All of the significant trees on the subject property have been identified in the field with a numbered aluminum tag attached to the lower trunk by the surveying crew. Tree tag numbers correspond with tree numbers on the attached Tree Summary Tables.

3. Methodology

Each tree in this report was visited. Tree diameters were measured by tape at DBH (diameter at 4 ½' above ground). The tree heights were measured using a Spiegel Relaskop. Each tree was visually examined for defects and vigor. The tree assessment procedure involves the examination of many factors:

- The crown of the tree is examined for current vigor. This is comprised of inspecting the crown (foliage, buds and branches) for color, density, form, and annual shoot growth, limb dieback and disease. The percentage of live crown is estimated for coniferous species only and scored appropriately.
- The bole or main stem of the tree is inspected for decay, which includes cavities, wounds, fruiting bodies of decay (conks or mushrooms), seams, insects, bleeding, callus development, broken or dead tops, structural defects and unnatural leans. Structural defects include crooks, forks with V-shaped crotches, multiple attachments, and excessive sweep.
- The root collar and roots are inspected for the presence of decay, insects and/or damage, as well as if they have been injured, undermined or exposed, or original grade has been altered.

Based on these factors a determination of 'health' is made.

The four condition categories are described below:

Excellent – free of structural defects, no disease or pest problems, no root issues, excellent structure/form with uniform crown or canopy, foliage of normal color and density, above average vigor, it will be wind firm if isolated, suitable for its location

Good – free of significant structural defects, no disease concerns, minor pest issues, no significant root issues, good structure/form with uniform crown or canopy, foliage of normal color and density, average or

normal vigor, will be wind firm if isolated or left as part of a grouping or grove of trees, suitable for its location

Fair – minor to moderate structural defects not expected to contribute to a failure in near future, no disease concerns, moderate pest issues, no significant root issues, asymmetric or unbalanced crown or canopy, average or normal vigor, foliage of normal color, moderate foliage density, will be wind firm if left as part of a grouping or grove of trees, cannot be isolated, suitable for its location

Poor – major structural defects expected to cause fail in near future, disease or significant pest concerns, decline due to old age, significant root issues, asymmetric or unbalanced crown or canopy, sparse or abnormally small foliage, poor vigor, not suitable for its location

4. Observations

203 trees were inventoried and assessed. Of the 203 significant trees assessed, 161 are healthy and considered viable. 42 are in poor condition (unhealthy) and considered non-viable.

Subject trees are comprised primarily of native species. Douglas-fir and big leaf maple are most dominant. There are minor components of bitter cherry, western red cedar, cottonwood, red alder and willow.

The big leaf maples on the property vary in condition and viability. Several recently suffered major branch and stem failures during the August 29th windstorm. A few have significant infections of *Kretzschmaria deusta*, a soft rot fungus. Many are in decline evidenced by significant dieback of upper crown components and thinning foliage (sparse crowns).

In general, the Douglas-fir trees on the subject property are in fair to good condition with no notable defects. Several of the smaller suppressed trees are in poor condition, with very little live foliage and significant decay columns. Two of the Douglas-fir are likely infected with *Armillaria* root rot, evidenced by heavy resin flows or bleeding on the root crown. These are trees #17 and #121. Both are considered non-viable.

Several of the native bitter cherry trees are in decline. Several have died in recent years. This is a short-lived pioneer species.

The western red cedar are in good condition. No concerning defects or symptoms of decline were observed.

5. Discussion

The extent of drip-lines (farthest reaching branches) for the subject trees can be found on the tree summary tables at the back of this report. Tables also include the recommended Limits of Disturbance (LOD). The LOD is the maximum encroachment allowable, expressed as feet from the trunk face. Excavations to these limits are not likely to cause long-term decline or compromise structural stability, so long as work is carried out diligently. The Tree Summary Tables indicate the proposed action for subject trees.

The most appropriate location for possible tree retention is on the north and south perimeters. Efforts shall be focused on retaining healthy viable trees within 10' of the property lines and leaving native soils intact and undisturbed. This will afford protections for neighboring trees to the north.

All work within the 5' drip-line setback of retained trees shall be supervised by the project arborist to ensure impacts are kept to acceptable levels.

Some of the retained subject big leaf maple trees on the north and south perimeters may require corrective pruning and clearance pruning to maintain risks at acceptable levels. This should be evaluated once interior trees that are proposed for removal are cleared from the site.

6. Tree Retention

A total of 161 viable (healthy) significant trees were identified on the subject property.

Tree Calculation based on 161 healthy, significant trees

Healthy Trees proposed for removal – 104 (65%)

Healthy Trees proposed for retention – 57 (35%)

The following table summarizes the tree retention calculation.

Tree Type	Removal	Impacted	Retained	Total
Landmark #	6	0	4	10
Landmark %	60%	0%	40%	100%
Significant #	98	0	53	151
Significant %	65%	0%	35%	100%
Total #	104	0	57	161
Total %	65%	0%	35%	100%

7. Tree Replacement

Replacement trees may be required. Consult with your City planner for tree replacement requirements. All replacement trees are to be planted on site. Replacement trees shall be at a minimum – 2 ½ inch caliper for deciduous species and 6 feet in height for coniferous species.

The most appropriate locations for tree replacement are on the undisturbed perimeters of the site. Perimeters can be enhanced with native tree plantings of coniferous species to provide screening between residential properties and maintaining the character of the area. Recommended species include western red cedar, Sitka spruce, shore pine and Douglas-fir.

8. Tree Protection Measures

The following guidelines are recommended to ensure that the designated space set aside for the preserved trees are protected and construction impacts are kept to a minimum. See the Redmond Zoning Code RZC 21.72.070 Tree Protection Measures.

- Tree protection barriers shall be initially erected at 5’ outside of the drip-line prior to moving any heavy equipment on site.
- Tree protection fencing shall only be moved where necessary to install improvements, but only as close as the fencing locations as indicated on the attached plan.
- Excavation limits should be laid out in paint on the ground to avoid over excavating.
- Excavations within the drip-lines shall be monitored and supervised by a qualified tree professional so necessary precautions can be taken to decrease impacts to tree parts. A qualified tree professional shall monitor excavations when work is required and allowed within the drip-line.
- To establish sub grade for foundations, curbs and pavement sections near the trees, soil should be removed parallel to the roots and not at 90 degree angles to avoid breaking and tearing roots that lead back to the trunk within the drip-line. Any roots damaged during these excavations should be exposed to sound tissue and cut cleanly with a saw. Cutting tools should be sterilized with alcohol.
- Areas excavated within the drip-line of retained trees should be thoroughly irrigated weekly during dry periods.

- Preparations for final landscaping shall be accomplished by hand within the drip-lines of retained trees. Plantings within the drip lines shall be limited. Large equipment shall be kept outside of the tree protection zones.

There is no warranty suggested for any of the trees subject to this report. Weather, latent tree conditions, and future man-caused activities could cause physiologic changes and deteriorating tree condition. Over time, deteriorating tree conditions may appear and there may be conditions, which are not now visible which, could cause tree failure. This report or the verbal comments made at the site in no way warrant the structural stability or long term condition of any tree, but represent my opinion based on the observations made.

Nearly all trees in any condition standing within reach of improvements or human use areas represent hazards that could lead to damage or injury.

Please call if you have any questions or we can be of further assistance.

Sincerely,



Bob Layton
ISA Certified Arborist #PN-2714A
ISA Tree Risk Assessment Qualified

Subject Property-North Side



Subject Property-North Side



Subject Property – South Side



Subject Property – South Side



Recent co-dominant stem failure on big leaf maple



Declining maples – broken/dead tops



Major ivy problem on south side



East end



Previously cleared area on east side of property – non-significant alder



Tree Summary Table

For: Garbarino

American Forest Management, Inc.

Date: Updated 7-31-18

Inspector: Layton

Tree/Tag #	Species	DBH	Height	Drip-Line (feet)				Condition	Healthy	Comments	Proposal
				N	S	E	W				
1	red maple	13	24	8/8	13/10	12/8	13/10	fair	yes	fork at 4', codom stems	Remove
0	big leaf maple	18	55	x	x	x	x	poor	no	consumed in ivy, high risk	Remove
2	flowering cherry	10,9	24	18/10	na	na	na	fair	healthy	mod trunk decay	save
3	flowering cherry	12,10	27	13/10	na	na	na	fair-good	healthy	no concerns	save
4	apple	6	7	8/6	na	na	na	good	healthy	well maintained	save
5	scouler willow 2	8,9	28	x	x	x	x	poor	no	in vast decline	Remove
6	big leaf maple	13	48	6/8	14/12	8/8	8/8	fair	yes	some decline, mid bole decay	Remove
7	big leaf maple 2	22,14	70	22/16	24/18	14/14	22/16	fair	yes	mod decay, hypoxylon	Remove
8	bitter cherry	11	26	x	x	x	x	poor	no	broken top, dying	Remove
9	big leaf maple	9	27	0/6	20/8	12/6	2/6	fair	yes	poor form, suppressed	Save
10	big leaf maple 3	14-18	70	x	x	x	x	poor	no	extensive trunk decay, diseased	Remove
11	Douglas-fir	14	64	6/10	6/8	10/10	6/8	fair	yes	small crown	Save
12	big leaf maple 2	12,14	75	x	x	x	x	poor	no	extensive trunk decay, forked at base	Remove
16	big leaf maple 7	12-22	75	20/16	24/18	34/18	20/18	fair-poor	no	consumed in ivy, poor basal attachments	Remove
17	Douglas-fir	35	115	x	x	x	x	poor	no	heavy bleeding at base, suspect armillaria	Remove
18	Douglas-fir	29	112	18/16	10/18	10/14	14/16	fair-good	yes	slight natural lean north	Remove
19	Douglas-fir	14	82	6/10	6/12	6/10	6/12	fair	yes	poor taper, well protected	Remove
20	Japanese maple	3,3,3,3	14							non significant	
21	Douglas-fir	31	110	12/16	14/18	12/14	14/16	good	yes	no concerns	Remove
22	Douglas-fir	15	66	8/12	8/14	6/10	10/12	fair	yes	broken top	Remove
23	Douglas-fir	24	105	16/16	18/18	10/12	14/16	good	yes	minor crooks	Remove
24	Douglas-fir	16	102	6/12	6/14	8/12	6/14	fair	yes	small crown, poor taper	Remove
25	Douglas-fir	11	58	6/10	6/12	4/10	6/12	fair	yes	broken top, poor taper, don't isolate	Remove
26	Douglas-fir	29	120	12/16	20/18	18/14	14/18	good	yes	no concerns	Remove
27	big leaf maple	16	32	12/12	0/16	14/12	10/14	poor	no	recent broken top, < 10% live crown	Remove
28	big leaf maple	28	55	0/16	30/18	10/14	10/16	fair	yes	recent major failure, needs corrective & clearance pruning	Remove
29	big leaf maple 3	13,15,12	64	x	x	x	x	poor	no	major failure, soft rot fungus	Remove
30	big leaf maple	25	90	8/12	30/18	24/16	6/16	fair	yes	assymetric crown to south	Save
31	Douglas-fir	24	118	12/na	10/14	8/12	12/14	fair-good	yes	typical	Save
32	big leaf maple	12	32	x	x	x	x	poor	no	dead/broken top	
33	big leaf maple	25	78	0/14	26/14	14/14	18/18	fair	yes	assymetric crown to south	Save
34	big leaf maple	8	23	18/na	0/8	6/8	4/8	fair	yes	suppressed	Save
35	Douglas-fir	31	130	14/na	16/14	12/14	16/16	good	yes	try to save	Save
36	big leaf maple	9	40	14/10	14/10	16/10	8/10	fair	yes	crook, suppressed	Save
37	holly	5	20							non significant	
38	big leaf maple	4,4	36							non significant	
39	holly	5	16							non significant	

Tree Summary Table

For: Garbarino

American Forest Management, Inc.

Date: Updated 7-31-18

Inspector: Layton

Tree/Tag #	Species	DBH	Height	Drip-Line (feet)				Condition	Healthy	Comments	Proposal
				N	S	E	W				
40	big leaf maple	7	45	4/8	10/8	0/8	14/8	fair-poor	no	poor form, lean, high risk	Remove
41	big leaf maple	6	43	12/8	6/8	6/8	6/8	fair	yes	poor taper, lean,	Remove
42	holly	8	24							non significant	
43	big leaf maple	5								non significant dead	
44	Douglas-fir	27	120	12/14	18/16	16/14	14/16	fair-good	yes	no concerns	Remove
45	Douglas-fir	12	49	8/na	6/10	8/8	6/10	fair	yes	suppressed	Save
46	Douglas-fir	33	130	18/na	18/14	18/16	12/16	fair-good	yes	appears sound	Save
47	Douglas-fir	32	120	16/na	12/14	14/14	16/16	good	yes	no concerns	Save
48	Douglas-fir	21	92	10/14	12/14	12/14	16/16	fair	yes	cambial rupture	Save
49	big leaf maple	17	73	10/12	16/16	8/12	14/16	fair	yes	suppressed, bent top	Save
50	Douglas-fir	19	77	6/12	14/14	8/12	12/14	fair	yes	ivy on trunk	Remove
51	big leaf maple	13	70	16/10	12/12	8/8	8/10	fair	yes	sparse top	Remove
52	big leaf maple	20	72	18/14	18/16	10/12	16/16	fair	yes	typical	Remove
53	big leaf maple	6	24	0/6	16/8	4/6	8/6	fair	no	lean, suppressed	Remove
54	big leaf maple	8	24	0/6	14/8	0/6	16/8	fair-poor	no	assymetric crown, poor form	Remove
55	big leaf maple	13	62	x	x	x	x	poor	no	extensive trunk rot, high risk	Remove
56	big leaf maple	19	74	18/16	14/16	12/14	20/16	fair	yes	typical	Remove
57	bird cherry	5	25							non significant	
58	big leaf maple	5	34							non significant	
59	big leaf maple	6	38	x	x	x	x	poor	no	very poor taper, high risk, ivy	Remove
60	big leaf maple	8	54	6/8	12/10	8/8	6/8	fair	yes	typical	Remove
61	big leaf maple	20	80	18/16	16/16	20/16	18/18	fair	yes	sparse top, trunk seams	Remove
62	big leaf maple	8	40	x	x	x	x	poor	no	extensive trunk rot, high risk	Remove
63	Douglas-fir	22	115	10/12	8/14	6/12	10/14	fair-good	yes	no concerns	Save
64	big leaf maple	7	25	6/6	8/8	4/6	10/8	fair	yes	suppressed	Remove
65	Douglas-fir	31	120	8/10	16/16	16/14	14/16	good	yes	no concerns	Remove
66	bitter cherry	5	16							non significant	
67	big leaf maple	25	82	16/16	20/16	14/14	18/18	fair	yes	typical	Remove
68	Douglas-fir	17	66	4/12	14/14	12/12	10/14	fair-good	yes	somewhat suppressed	Remove
69	Douglas-fir	15	64	2/10	16/12	14/12	4/12	fair	yes	natural lean south	Remove
70	black cottonwood	25	120	20/16	16/18	18/16	12/18	fair	yes	appears sound	Remove
71	big leaf maple	12	75	x	x	x	x	poor	no	extensive trunk rot	Remove
72	Douglas-fir	14	46	0/10	16/14	10/10	0/12	fair	yes	broken top, suppressed	Remove
73	big leaf maple	18	54	10/14	16/16	18/14	0/14	fair	yes	forked top	Remove
74	big leaf maple	12	56	6/10	16/12	6/10	14/12	fair	yes	sparse crown	Remove
75	big leaf maple	8	54	6/8	6/8	6/8	8/8	fair	yes	sparse crown	Remove
76	Douglas-fir	27	116	10/14	16/16	8/12	12/16	fair-good	yes	old broken top	Remove

Tree Summary Table

For: Garbarino

American Forest Management, Inc.

Date: Updated 7-31-18

Inspector: Layton

Tree/Tag #	Species	DBH	Height	Drip-Line (feet)				Condition	Healthy	Comments	Proposal
				N	S	E	W				
77	Douglas-fir	10	29	0/8	10/10	3/8	12/12	fair-poor	no	lean, suppressed	Remove
78	Douglas-fir	19	76	4/12	16/16	2/12	12/16	fair	yes	old broken top, moderate butt swell	Remove
79	Douglas-fir	23	120	4/14	18/16	10/12	14/16	fair-good	yes	typical	Remove
80	black cottonwood	24	130	16/16	16/16	16/14	12/16	fair	yes	typical	Remove
81	Douglas-fir	14	61	6/10	12/12	6/10	12/12	fair	yes	suppressed	Remove
82	big leaf maple	16	40	x	x	x	x	dead	no	dead	Remove
83	Douglas-fir	32	130	14/16	16/18	14/16	20/18	fair-good	yes	ivy covering trunk	Remove
84	Douglas-fir	16	106	4/10	8/12	6/10	8/12	fair	yes	poor taper	Save
85	big leaf maple	11	66	12/10	14/12	14/10	6/12	fair	yes	suppressed	Save
86	Douglas-fir	22	120	16/na	10/16	6/12	16/16	fair	yes	typical	Save
87	Douglas-fir	18	110	14/na	4/12	6/10	4/12	fair	yes	poor taper, ivy covering trunk	Save
88	big leaf maple	25	71	24/na	0/12	16/12	14/16	fair	yes	assymetric crown to north	Save
89	Douglas-fir	24	120	12/na	8/14	10/12	10/14	fair-good	yes	no concerns	Save
90	big leaf maple	14	77	12/na	10/12	16/12	8/12	fair	yes	suppressed, poor form	Save
91	Douglas-fir	13	84	16/na	0/12	8/12	0/12	fair	yes	natural lean north	Save
92	Douglas-fir	28	120	18/na	12/14	10/14	16/16	fair-good	yes	no concerns	Save
93	Douglas-fir	24	125	16/na	12/14	10/12	14/14	fair-good	yes	no concerns	Save
94	Douglas-fir	7	22	10/na	2/6	4/6	8/8	fair	yes	suppressed, mod decay column, low risk	Save
95	big leaf maple	36	75	28/na	16/18	22/na	12/16	fair	yes	trunk covered in ivy	Save
96	Douglas-fir	19	83	10/12	8/12	8/12	6/12	fair	yes	old broken top	Save
97	Douglas-fir	29	130	12/16	18/18	16/16	12/18	fair-good	yes	ivy	Remove
98	Douglas-fir	11	54	x	x	x	x	poor	no	less than 10% live crown	Remove
101	big leaf maple	16	71	12/14	16/16	18/14	12/16	fair	yes	forked top	Remove
102	Douglas-fir	13	82	6/10	6/12	8/10	8/12	fair	yes	poor taper	Save
103	Douglas-fir	11	77	6/10	8/12	6/na	8/12	fair	yes	poor taper	Save
104	Douglas-fir	25	130	12/16	16/18	18/14	12/18	fair-good	yes	no concerns	Remove
105	Douglas-fir	14	75	10/12	10/12	8/12	6/12	fair	yes	old broken top	Remove
106	big leaf maple	17	77	2/14	18/16	10/14	18/16	fair	yes	assymetric crown, ivy	Remove
107	Douglas-fir	16	105	10/12	6/14	8/12	8/14	fair	yes	poor trunk taper	Remove
108	Douglas-fir	20	115	12/14	10/14	10/12	12/14	fair	yes	covered in ivy	Remove
109	big leaf maple	19	92	16/16	18/18	12/14	10/16	fair	yes	typical	Remove
110	big leaf maple	15	61	x	x	x	x	poor	no	mid bole decay, lean, high risk	Remove
111	Douglas-fir	27	130	10/14	18/16	16/14	10/16	fair-good	yes	no concerns	Remove
112	Douglas-fir	14	48	6/10	16/14	16/12	4/12	fair	yes	suppressed	Remove
113	Douglas-fir	8	40	8/8	6/10	6/8	6/10	fair	yes	suppressed	Remove
114	Douglas-fir	19	110	10/12	12/14	16/14	6/14	fair-good	yes	typical	Remove
115	Douglas-fir	25	130	16/16	10/18	14/16	14/18	fair-good	yes	no concerns	Remove

Tree Summary Table

For: Garbarino

American Forest Management, Inc.

Date: Updated 7-31-18

Inspector: Layton

Tree/Tag #	Species	DBH	Height	Drip-Line (feet)				Condition	Healthy	Comments	Proposal
				N	S	E	W				
116	rowan (mtn. ash)	11,5	25	15/10	12/na	12/8	15/10	fair	yes	decent form	Save
117	Douglas-fir	18	48	10/12	12/na	12/10	10/12	poor	no	fork at 15', codom, splitting apart, high risk	Remove
118	hawthorn	5	22	7/5	7/na	6/6	1	fair		non-significant	
119	lodgepole pine	14	47	8/10	8/na	6/8	8/10	good	yes	forked top, okay	Save
120	Douglas-fir	17	81	12/10	14/na	6/10	14/14	fair	yes	typ, could isolate	Save
121	Douglas-fir	33	116	10/14	18/na	8/12	10/16	poor	no	heavy pitching at base, suspect armillaria	Remove
122	Douglas-fir	26	122	16/16	18/na	14/14	14/16	fair	yes	old broken top	Save
123	Douglas-fir	15	54	2/12	14/na	2/10	10/14	fair	yes	leaning top, suppressed	Save
124	Douglas-fir	10	37	4/8	6/12	0/8	16/12	fair	yes	lean, suppressed	Save
125	holly	5	18							non significant	
126	Douglas-fir	14	70	12/10	0/12	6/10	4/12	fair	no	lean, poor taper	Remove
127	big leaf maple	23	86	22/16	2/18	22/16	30/18	fair	yes	assymetric crown	Remove
128	Douglas-fir	23	120	10/16	18/18	14/16	14/18	fair-good	yes	no concerns	Remove
129	big leaf maple	6	30	x	x	x	x	poor	no	major fork at 4', structure compromised	Remove
130	big leaf maple	6	28	x	x	x	x	poor	no	forked top, compromised structure	Remove
131	Douglas-fir	23	96	18/16	12/16	12/14	10/16	good	yes	no concerns	Remove
132	Douglas-fir	13	65	6/10	8/12	8/10	6/12	fair	yes	broken top	Remove
133	Douglas-fir	7	30	x	x	x	x	poor	no	heavily suppressed, decay column	Remove
134	Douglas-fir	11	72	10/10	6/12	6/10	4/12	fair	yes	poor taper, don't isolate	Remove
135	Douglas-fir	27	120	12/16	12/18	14/14	8/16	good	yes	no concerns	Remove
136	Douglas-fir	24	118	12/14	16/16	10/14	12/16	fair	yes	trunk covered in ivy	Remove
137	Douglas-fir	12	58	14/10	6/12	6/10	12/14	fair	yes	suppressed, don't isolate	Remove
138	Douglas-fir	25	108	16/16	14/18	14/16	14/18	fair	yes	old broken top	Remove
139	Douglas-fir	11	40	14/14	2/12	8/10	10/12	fair	yes	suppressed, don't isolate	Remove
140	Douglas-fir	18	96	6/14	14/16	12/12	10/14	fair	yes	old broken top	Remove
141	Douglas-fir	22	105	22/14	10/16	6/14	20/16	fair	yes	crooked trunk, covered in ivy	Remove
142	holly	5	15							non significant	
143	big leaf maple	14	75	14/14	0/14	0/12	10/14	fair-poor	no	small crown, roor trunk taper, high risk	Remove
144	big leaf maple	20	73	2/14	16/16	4/14	16/16	fair-poor	no	large old top failure, poor form, high risk	Remove
145	big leaf maple	12	71	8/10	6/12	8/10	4/12	fair-poor	no	small crown, roor trunk taper, high risk	Remove
146	Douglas-fir	15	120	2/12	10/14	10/12	8/14	fair	yes	poor trunk taper	Remove
147	Douglas-fir	17	122	8/14	8/16	10/12	8/14	fair	yes	same, covered in ivy	Remove
148	Douglas-fir	24	130	16/16	18/18	16/16	12/16	fair-good	yes	trunk covered in ivy	Remove
149	Douglas-fir	5	21							non significant	
150	big leaf maple	20	80	4/12	20/16	18/16	10/16	fair-poor	no	in decline, sparse crown, trunk decay	Remove
151	big leaf maple	20	62	0/14	30/16	0/12	10/16	fair	yes	recent major failure, needs corrective & clearance pruning	Save
152	Douglas-fir	14	77	10/10	6/12	10/10	4/12	fair	yes	hit by recent bm failure	Save

Tree Summary Table

For: Garbarino

American Forest Management, Inc.

Date: Updated 7-31-18

Inspector: Layton

Tree/Tag #	Species	DBH	Height	Drip-Line (feet)				Condition	Healthy	Comments	Proposal
				N	S	E	W				
153	Douglas-fir	10	26	6/7	7/8	4/7	5/8	fair	yes	small crown	Save
154	Douglas-fir	15	30	4/7	5/8	6/7	4/8	fair	yes	small rown, remove ivy	Save
155	big leaf maple 3	13,13,14	44	x	x	x	x	poor	no	broken tops, covered in ivy, vast decline	Remove
156	Douglas-fir	27	125	12/14	18/18	10/12	14/16	fair-good	yes	trunk covered in ivy	Remove
157	big leaf maple	15	43	x	x	x	x	dead	no	recent dead	Remove
158	big leaf maple	13	51	x	x	x	x	poor	no	advanced decay in lower trunk, sparse	Remove
159	Douglas-fir	25	120	0/12	18/na	4/12	16/16	fair-good	yes	no concerns	Save
160	Douglas-fir	15	64	14/12	18/18	14/16	12/18	fair	yes	old broken top	Save
161	Douglas-fir	9	30	2/12	12/na	10/12	6/14	fair	yes	suppressed	Save
162	big leaf maple	15	65	1/8	6/na	1/8	2/8	fair	yes	assmetric crown, suppressed	Save
163	Douglas-fir	25	120	x	x	x	x	fair	yes	covered in ivy	Remove
163	Douglas-fir	25	130	12/16	16/18	14/14	10/16	fair	yes	ivy	Remove
164	big leaf maple	14	77	10/12	8/14	12/12	8/14	fair	yes	typical	Remove
165	big leaf maple	18	90	22/16	12/16	18/14	16/16	fair	yes	multiple forks	Remove
166	Douglas-fir	16	118	14/16	14/18	10/14	16/18	fair	yes	covered in ivy	Remove
167	big leaf maple	18	82	6/12	8/14	6/12	10/14	fair	yes	typical	Remove
168	Douglas-fir	15	120	0/12	14/14	8/12	6/14	fair	yes	poor trunk taper	Remove
169	Douglas-fir	15	120	14/14	12/16	12/14	10/16	fair	yes	poor trunk taper	Remove
170	Douglas-fir	12	84	10/12	6/12	8/12	4/12	fair-poor	no	compromised by ivy	Remove
171	big leaf maple	20	92	12/12	14/16	24/14	6/14	fair-poor	no	same	Remove
172	big leaf maple	14	70	x	x	x	x	poor	no	60% dead crown, in vast decline	Remove
173	Douglas-fir	8	36	12/12	16/18	16/16	14/18	poor	no	<10% live crown, consumed in ivy	Remove
174	Douglas-fir	16	110	x	x	x	x	fair	yes	poor trunk taper	Remove
175	Douglas-fir	8	37	10/12	10/14	12/12	6/14	poor	no	< 10% live crown, in decline, sparse	Remove
176	Douglas-fir	26	120	0/8	16/14	0/12	10/14	good	yes	ivy	Save
177	Douglas-fir	12	32	6/6	10/na	8/6	7/6	fair	yes	deformed top, suppressed	Save
178	vine maple	6	18	12/12	30/na	20/16	8/16	fair	yes	typical	Save
179	big leaf maple	20	74	2/10	6/12	10/10	4/12	fair	yes	typical	Save
180	Douglas-fir	12	45	12/16	16/18	16/16	10/18	fair-poor	no	< 20% live crown, suppressed	Remove
181	Douglas-fir	28	130	12/10	8/na	12/12	10/14	fair-good	yes	no concerns	Remove
182	Douglas-fir	21	110	12/14	8/14	14/14	6/14	fair	yes	ivy	Remove
183	Douglas-fir	26	125	14/14	14/16	16/16	10/16	fair-good	yes	ivy	Remove
184	big leaf maple	5,6	40	x	x	x	x	poor	no	codominant stems, compromised structure	Remove
185	Douglas-fir	11	53	6/10	6/10	4/10	8/12	fair	yes	suppressed, ivy	Remove
186	Douglas-fir	15	105	12/12	4/14	8/12	8/14	fair	yes	natural lean, ivy	Remove
187	red alder	4								non-significant	
188	red alder	5								non-significant	

Tree Summary Table

For: Garbarino

American Forest Management, Inc.

Date: Updated 7-31-18

Inspector: Layton

Tree/Tag #	Species	DBH	Height	Drip-Line (feet)				Condition	Healthy	Comments	Proposal
				N	S	E	W				
189	red alder	8	42					fair-poor	no	sapling	Remove
190	red alder	5								non-significant	
191	red alder	7	44					fair-poor	no	sapling	Remove
192	willow	5								non significant	
193	red alder	5								non significant	
194	willow	5								non significant	
195	red alder	5								non significant	
196	red alder	6	45					fair-poor	no	sapling	Remove
197	red alder	7	45	x	x	x	x	poor	no	pre-mature decline	Remove
198	red alder	8	44					fair-poor	no	sapling	Remove
199	Douglas-fir	31	135	10/12	14/na	10/12	8/14	good	yes	no concerns	Remove
200	western red cedar	23	70	10/14	16/na	16/14	14/16	good	yes	no concerns	Save
201	Douglas-fir	18	105	8/10	6/8	6/8	8/10	fair-good	yes	no concerns	Remove
202	western red cedar	8	30	6/10	6/na	6/10	12/12	good	yes	young	Remove
203	Douglas-fir	11	46	12/10	6/10	6/8	10/10	good	yes	young	Remove
204	Douglas-fir	10	45	30/14	25/na	20/14	22/16	fair	yes	suppressed, sparse	Remove
205	big leaf maple	32	90					fair	yes	mature	Remove
206	western red cedar	12	51	x	x	x	x	fair	yes	suppressed	Remove
207	western red cedar	47	86	0/10	12/na	10/12	10/12	good	yes	no concerns	Remove
208	big leaf maple	4	30	15/15	16/na	18/16	14/16			non significant	
209	bitter cherry	13	56	0/12	18/na	20/na	0/12	fair	yes	mature, short-lived	Remove
210	bitter cherry	9	40	0/12	18/na	20/na	0/12	poor	no	very heavy lean, high risk	Remove
211	bitter cherry	7,5	40	x	x	x	x	poor	no	very heavy lean, high risk	Remove
212	Douglas-fir	23	115	10/12	18/16	16/na	8/10	fair	yes	old broken top	Remove
213	big leaf maple	21	80	24/14	30/18	20/na	36/18	fair	yes	typical, appears sound	Remove
214	Douglas-fir	5	16					poor		non significant, less than 5"	
215	big leaf maple	10	60	20/12	0/12	10/na	24/12	fair-poor	no	poor form, structure high risk	Remove
216	Douglas-fir	15	79	2/10	10/8	10/na	6/8	fair	yes	old broken top	Save
217	big leaf maple	16	84	16/10	4/12	20/na	20/8	fair	yes	typical	Save
218	Douglas-fir	21	120	12/14	8/16	4/14	12/14	fair	yes	natural lean west	Remove
219	Douglas-fir	25	125	14/16	14/16	16/na	10/16	fair	yes	sch conk on ground	Save
220	western red cedar	6	18	5/6	5/6	5/6	5/6	good	yes	young	Remove
221	big leaf maple	5	30							non significant	
222	western red cedar	6	25	5/6	6/6	4/5	6/6	good	yes	young	Remove
223	big leaf maple	5	30							non significant	
224	big leaf maple	9,11	44	0/10	16/12	20/na	0/12	fair	yes	assymetric crowns, suppressed	Save
225	big leaf maple	7	30	x	x	x	x	poor	no	internal crack, heavy lean	Remove

Tree Summary Table

For: Garbarino
Redmond

American Forest Management, Inc.

Date: 9/4/2015 and 2/27/17
Inspector: Layton

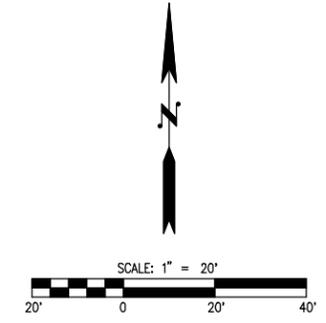
Tree/Tag #	Species	DBH	Height	Drip-Line (feet)				Condition	Viability	Comments	
				N	S	E	W				
NEIGHBORING TREES											
100	Douglas-fir	24	120		10/14	14/16	na	10/14	fair-good	viable	no concerns
14	Douglas-fir	32	115		na	14/16	10/14	16/16	fair	viable	mature
13	Douglas-fir	28	120		na	16/16	16/16	12/16	fair-good	viable	no concerns
201	big leaf maple cluster	10-18	90			30/16			fair	viable	some deadwood
202	big leaf maple cluster	16,18	72			26/14			fair	viable	would need clearance pruning
203	flowering cherry	*15	22		19/12				good	viable	
204	fig tree	*6	14		6/6		6/6		good	viable	non-significant tree
205	Evergreen shrubs		6						good	viable	large cluster of evergreen shrubs

* caliper measurement (one foot above grade)

ROW Trees - Drip-Line and Limits of Disturbance measurements from face of trunk

Trees on neighboring properties - Drip-line and Limits of Disturbance measurements from property lines

SW 1/4, SW 1/4 OF SEC 34, T26N, R5E, W1M., CITY OF REDMOND, KING COUNTY, WASHINGTON



TREE LEGEND

- LANDMARK TREE TO BE RETAINED
- TREE TO BE RETAINED
- LANDMARK TREE (TO BE REMOVED)
- TREE (TO BE REMOVED)
- TREE CONIFEROUS
- TREE DECIDUOUS W/ DRIPLINE AND 5' DRIPLINE SETBACK
- TREE TAG NUMBER

UTILITY LEGEND

- TYPE 1 CATCH BASIN, GRATED LID
- TYPE 1 CATCH BASIN, SOLID LID
- TYPE 2 CATCH BASIN, GRATED LID
- TYPE 2 CATCH BASIN, SOLID LID
- STORM PIPE
- SEWER MANHOLE
- WATER METER
- HYDRANT
- SEWER PIPE
- WATER PIPE
- PROPOSED DRAINAGE SWALE

TREE REPLACEMENT

SIGNIFICANT TREES TO BE REMOVED AND REPLACED AT A 1:1 RATIO
 98=98 REPLACEMENT TREES
 LANDMARK TREES TO BE REMOVED AND REPLACED AT A 3:1 RATIO
 6=18 REPLACEMENT TREES
 TOTAL REPLACEMENT TREES REQUIRED = 116 TREES
 TOTAL REPLACEMENT TREES REPLACED = 63 TREES
 TOTAL NUMBER OF "FREE-IN-LIEU" OF TREE REPLACEMENT TREES = 53 TREES

TREE INVENTORY--PROPOSED ACTION AND BRIEF DEFINITION			
TYPE OF TREE (DSH)	REMOVAL	RETAINED	TOTAL
LANDMARK (>30')	6 = 4.0%	4 = 2.7%	10 = 6.2%
SIGNIFICANT (6"-30')	98 = 64.9%	53 = 35.1%	151 = 93.8%
TOTALS	104 = 64.6%	57 = 35.4%	161 = 100%

TOPOGRAPHIC DISCLAIMER

THE TOPOGRAPHIC SURVEY WAS PERFORMED BY LDC, INC. IN AUGUST 2015. ANY CHANGES TO THE SITE AFTER THIS DATE WILL NOT BE REFLECTED IN THE PLANS. ANY DISCREPANCIES FOUND BETWEEN WHAT IS SHOWN ON THE PLANS AND WHAT IS NOTED IN THE FIELD SHOULD BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER.

Call 2 Business Days Before You Dig
811 or 1-800-424-5555
 Utilities Underground Location Center

90% PREP SUBMITTAL

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	6-5-19	90% PREP	JCS
2	10-29-19	90% PREP-REVISED PER CITY COMMENTS	JMT

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 Surveying
 Engineering
 Planning
 Kent
 1851 Central Pk.S., #101
 Woodinville, WA 98072
 20210 142nd Avenue NE
 Woodinville, WA 98072
 T 425.886.1869 www.LDCcorp.com

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OWNER:
 GARBARINO FAMILY
 10030 136TH AVE NE
 REDMOND, WA 98003
 CONTACT: GREG ARMS
 PHONE: (206) 817-4192
APPLICANT:
 MILESTONE NW
 227 BELLEVUE WAY NE
 BELLEVUE, WA 98004
 CONTACT: GREG ARMS
 PHONE: (206) 817-4192

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 AMERICAN FOREST MANAGEMENT
 11415 NE 128TH ST #110
 KIRKLAND, WA 98034
 CONTACT: BOB LAYTON
 PHONE: (425) 820-3420
GEOTECH:
 THE RILEY GROUP, INC.
 17522 BOTHELL WAY NE
 BOTHELL, WA 98011
 CONTACT: RICKY WANG
 PHONE: (425) 415-0551

LANDSCAPE ARCHITECT:
 CRAMER DESIGN CONSULTANTS, INC.
 1909 242ND ST SE
 BOTHELL, WA 98021
 CONTACT: GAYLE CRAMER
 PHONE: (425) 241-6258

SITE ADDRESS
 10042 & 1030 136TH AVE NE
 REDMOND, WA 98003

PRELIMINARY
PROGRESS SET

PROJECT TITLE
GARBARINO

SHEET TITLE
TREE PRESERVATION PLAN

JOB NUMBER: 15-104
DESIGNED BY: JMT
DRAFTED BY: BPC
DATE: 6-5-19
JURISDICTION: REDMOND

TP-01
SHEET 24 OF 31

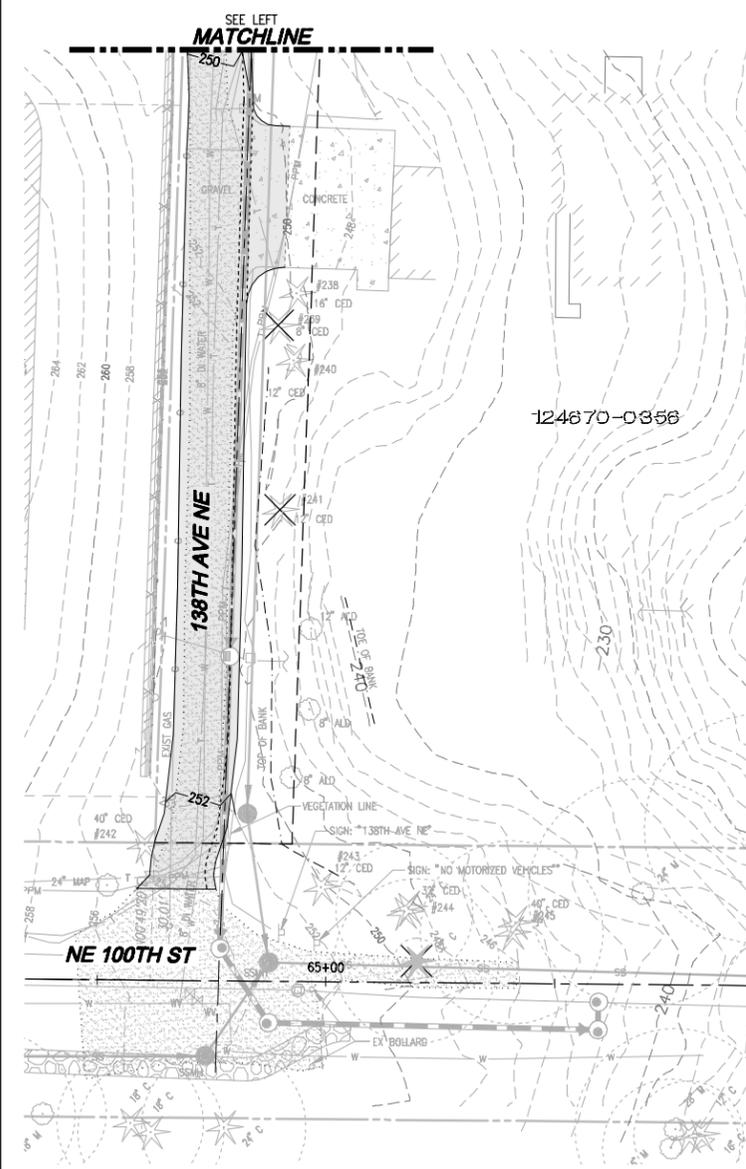
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TREE LEGEND

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GARBARINO

SHEET TITLE
TREE PRESERVATION PLAN

JOB NUMBER:	15-104
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DATE:	6-5-19
JURISDICTION:	REDMOND

TP-02
SHEET 25 OF 31