



**Lennar Multifamily Communities
Marymoor Project
Redmond, WA
Arborist Report**



July 20th, 2018

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Site/Tree Photos – pages 6 - 7
Tree Summary Table - attached
Tree Condition Map - attached

1. Introduction

American Forest Management was contacted by Lennar Multifamily Communities LLC and was asked to compile an Arborist Report for three adjacent properties located at 6820 and 6900 - 176th Avenue NE, and 17609 NE 70th Street in the City of Redmond.

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 of the property.

Date of Field Examination: July 18th, 2018

2. Description

Six significant trees (trees with a diameter at breast height, 4 1/2' above ground > 6") were identified on the property. There are ten significant neighboring and right-of-way trees with drip-lines that extend over the property line, and twelve recently planted 2-3" caliper street trees planted near the north west fence line. The subject property currently has several commercial businesses operating on it.

All of the subject trees have been identified with a numbered aluminum tag attached to the lower trunk of the tree or orange flagging tape with numbers marked in permanent ink nearby. Field tree tag numbers correspond with attached Tree Condition Summary Table and the attached copy of the site survey. The tree summary table provides descriptive data for all assessed trees, including drip-line measurements.

3. Methodology

Each tree in this report was visited. Tree diameters were measured by tape. The tree heights were measured using a clinometer. 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.

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Based on these factors a determination of condition is made. The four condition categories are described below based on the species traits assessed:

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 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 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

A 'viable' tree is a significant tree that a qualified professional has determined to be in good health, with a low risk of failure due to structural defects, is wind firm if isolated or remains as part of a grove, and is a species that is suitable for its location. Trees considered 'non-viable' are trees that are in poor condition due to disease, age related decline, have significant decay issues and/or cumulative structural defects, which exacerbate failure potential.

The attached tree map indicates the 'condition' of the subject trees found at the site.

4. Observations

Trees #1>#6 are black cottonwood, which have blown in as seed and taken root in gravel or cracks in asphalt. Some are in difficult to access areas between shipping containers, so DBH is approximate. Their overall condition is rated as fair, but are not considered to be viable in the long term due to present compaction and future site development.

The only other notable trees on this property are Japanese maples, #7 and #8. They are in overall good condition and have an average DBH of 5" which are not considered to be significant trees by RZC 21.72, but could potentially be protected or salvaged.

East Lake Sammamish Trail Right-of-Way Trees

#103-#114 are Ash trees planted close to the west property line. The subject trees are young or non-significant with 2-3" caliper trunks. They are in good or fair condition mostly

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due to compaction and drought. 'Gator bags' were installed on some, but empty. These trees could remain viable with regular watering through the summer months and if construction activity is limited to the existing fence line.

Neighboring Trees

Trees #119-127 are a mix of poor - fair condition Cottonwoods, Scouler's Willow, and an Oregon Ash. These are growing a few feet south of the property line, with canopies extending 8 - 20' over the property line.

Tree #115 is a Scouler's Willow growing through a chain-link fence on the west property line. It has been cut back many times in the past and has many dead stems, but is persisting. It is in poor condition and not considered viable.

Trees #116 and 118 are Douglas fir near the south west property corner. They are in good condition and considered viable.

5. Discussion

The extent of drip-lines (farthest reaching branches) for the subject trees can be found on the tree summary table at the back of this report. These have also been delineated on a copy of the attached site plan for potentially impacted viable trees. The information plotted on the attached survey may need to be transferred to a final tree retention/protection plan to meet City submittal requirements.

There are no high retention value trees or anything of noteworthy significance on the property. Black cottonwood is not a suitable species to be retained on development sites, due to inherent failure patterns. These are fast-growing, short-lived trees. Branch and stem failures are common from weak branch and stem unions or attachments.

It appears from the site plan that a new roadway and fire lane is planned along the south perimeter of the site. This will require the removal of the neighboring trees identified in this report. Most of these are low value retention, native hardwood species of willow, cottonwood and one Oregon ash. The off-site Douglas fir will also be compromised by the new roadway. The community would be best served by appropriately establishing (planting) new trees post development.

6. Tree Replacement

Tree Calculation based on 6 significant trees

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Tree Type	Removal	Impacted	Retained	Total
Landmark #	0	0	0	0
Landmark %	0%	0%	0%	0%
Significant #	6	0	0	6
Significant %	100%	0%	0%	100%
Total #	6	0	0	6
Total %	100%	0%	0%	100%

Replacement trees will be required. The removal of significant trees requires a replacement ratio of 1:1, for a total of 6 replacement trees. It is assumed the landscape plan for the site will far exceed this number. 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.

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 if we can be of further assistance.

Sincerely,



Ben Mark
benjamin.mark@afmforest.com
ISA Certified Arborist #PN-6976A
ISA Tree Risk Assessment Qualified

Photos

Trees #7, 8 – Non-significant Japanese Maples



Tree #104 – Non-significant Ash with a dead top as a result of poor planting soils and drought stress

R.O.W. Trees



#121-122 – Scouler's willow over south fence.





#1 – Black Cottonwood

Tree #2 and #3



Cottonwood breaking through asphalt.



Tree Summary Table									American Forest Management, Inc			
For:									Date:	7/18/2018		
Lennar Multifamily - Marymoor Redmond Project									Inspector:	Ben Mark		
Tree/ Tag #	Species	DBH (inches)	Height (feet)	Tree Credit	Drip-Line / Limits of Disturbance (feet)				Condition	Viability yes/no	Comments	Proposal
					N	S	E	W				
1	Black Cottonwood	10	42						Poor	No		Remove
2	Black Cottonwood	10	40						Poor	No		Remove
3	Black Cottonwood	8	30						Poor	No		Remove
4	Black Cottonwood	10	45						Poor	No		Remove
5	Black Cottonwood	8	35						Poor	No		Remove
6	Black Cottonwood	12	50						Poor	No	Broken through pavement	Remove
7	Japanese Maple	5 , 4	15		6	10	10	8/2	Good	Yes	Insignificant DBH, Power lines above	Remove
8	Japanese Maple	5 , 4	15		8	8	8	6 /2	Good	Yes	Insignificant DBH, Power lines above	Remove
NEIGHBORING TREES												
103	Ash	2	12		2	2	2	2	Fair	Yes	Drought	TBD
104	Ash	2	15		3	6	3	6	Fair	Yes		TBD
105	Ash	2	12		2	2	2	2	Fair	Yes	Drought, dead top compaction	TBD
106	Ash	2	15		3	3	2	3	Fair	Yes		TBD
107	Ash	3	18		6	6	6 /4	5	Good	Yes		TBD
108	Ash	4	20		8	8	8	8	Good	Yes		TBD
109	Ash	3	18		6	6	6	6	Good	Yes		TBD
110	Ash	3	20		6	6	6	6	Fair	Yes	Drought	TBD
111	Ash	3	18		5	5	4	4	Fair	Yes		TBD
112	Ash	3	20		5	5	5	5	Good	Yes		TBD
113	Ash	3	18		5	4	5	5	Good	Yes		TBD
114	Ash	3	20		5	6	4	4	Good	Yes		TBD
115	Scouler Willow	5,8,4,4,6,6,4,4,10 (6)	43				8		Poor	No		TBD
116	Douglas Fir	16	45				10		Good	Yes	Full canopy	TBD
117	Douglas Fir	7	25		8				Good	Yes		TBD
118	Douglas Fir	4,4,3,3,4 (4)	25		8				Fair	Yes	Group of insignificant trees	TBD
119	Black Cottonwood	28	50		18				Fair	Yes	Thin canopy	TBD
120	Oregon Ash	5,5,5,5,4,4 (5)	40		8				Fair	Yes	Drought , Group of insignificant trees	TBD
121	Scouler Willow	8,5,6 (6)			6				Poor	No	Cut back many times	TBD
122	Scouler Willow	4,5,6 (5)			8				Poor	No	Group of insignificant trees	TBD
123	Scouler Willow	6, 5,8 (6)			8				Poor	No		TBD
124	Black Cottonwood	12			15				Poor	No	Decay at base	TBD
125	Black Cottonwood	16			8				Fair	Yes		TBD
126	Black Cottonwood	20, 36, 12 (22)	55		20				Poor	No	Multiple dead leaders	TBD
127	Black Cottonwood	19	60		8				Fair	Yes	Broken leader/ regrowth ok	TBD
Property Trees - Drip-Line and Limits of Disturbance measurements from face of trunk												
Neighboring Trees - Drip-line and Limits of Disturbance measurements from property line											TBD = to be determined	
Calculated multistem DBH: the DBH in (perentheses) is the AVERAGE of the dbh for all stems												

POOR
CONDITION

FAIR
CONDITION

GOOD
CONDITION



