



# Greenforest Incorporated



## Consulting Arborist

TO: Nghia "Ki" Pham  
Jabooda Homes Inc.  
3040 78th Ave SE #359  
Mercer Island, WA 98040

REFERENCE: Regulated Tree Inventory Report

SITE ADDRESS: 6711, 6717, 6719 42<sup>nd</sup> Avenue South, Seattle WA

DATE: January 25, 2022

PREPARED BY: Favero Greenforest, ISA Certified Arborist # PN -0143A  
ISA Tree Risk Assessment Qualified  
ASCA Registered Consulting Arborist® #379

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Alyson Holahan of JW Architects contacted me on your behalf and you subsequently contracted my services as a consulting arborist. My assignment is to identify, inventory and assess the regulated trees at the above referenced site. The purpose of this report is to establish the condition of the regulated onsite trees to satisfy City of Seattle permit submittal requirements.

You provided me a topographic survey prepared by Lanktree Land Surveying, Inc., dated 11/17/21 showing locations of regulated trees. I visited the site 1/21/2022 and visually inspected all the regulated trees on the parcel, which are the subject of this report.

### *Summary of Onsite Trees:*

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<i>Significant</i>	9
<i>Exceptional</i>	7
<i>Grove</i>	0
<i>Right-of-Way</i>	5

#### LIMITATIONS AND USE OF THIS REPORT

This tree report establishes, via the most practical means available, the existing conditions of the tree on the subject property. This report is based solely on what is readily visible and observable, without any invasive means.

There are several conditions that can affect a tree's condition that may be pre-existing and unable to be ascertained with a visual-only analysis. No attempt was made to determine the presence of hidden or concealed conditions which may contribute to the risk or failure potential of trees on the site. These conditions include root and stem (trunk) rot, internal cracks, structural defects or construction damage to roots, which may be hidden beneath the soil. Additionally, construction and post-construction circumstances can cause a relatively rapid deterioration of a tree's condition.

#### TREE INSPECTION METHOD – TREE HEALTH, CONDITION AND VIABILITY

I visually inspected this tree from the ground. I performed a Level 1 risk assessment.<sup>1</sup> This is the standard assessment for populations of trees near specified targets, conducted in order to identify obvious defects or specified conditions such as a pre-development inventory. This is a limited visual assessment focuses on identifying trees with imminent and/or probable likelihood of failure, and/or other visible conditions that will affect tree retention.

High-risk trees can appear healthy in that they can have a dense, green canopy. This may occur when there is sufficient sapwood or adventitious roots present to maintain tree health, but inadequate strength for structural support.

Conversely, trees in poor health may or may not be structurally stable. For example, tree decline due to root disease is likely to cause the tree to be structurally unstable, while decline due to drought or insect attack may not.

One way that tree health and structure are linked is that healthy trees are more capable of compensating for structural defects. A healthy tree can develop adaptive growth that adds strength to parts weakened by decay, cracks, and wounds. This report identifies unhealthy trees based on existing health conditions and tree structure, and specifies which trees are most suitable for preservation.<sup>2</sup>

No invasive procedures were performed on any trees. The results of this inspection are based on what was visible at the time of the inspection.

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<sup>1</sup> Companion publication to the *ANSI A300 Part 9: Tree Shrub and Other woody Plant Management – Standard Practices, Tree Risk Assessment*. 2011. ISA.

<sup>2</sup> Companion publication to the *ANSI A300 Part 5: Tree Shrub and Other woody Plant Maintenance – Standard Practices, Managing Trees During Construction*. 2008. ISA.

The attached inventory summarizes my inspection results and provides the following information for each tree:

**Significant, Exceptional** (based on size), **or Exceptional** (based on grove) – as defined by municipal code.<sup>3</sup>

**Tree number** as shown on tag in the field, and on attached exhibit.

**DBH** stem diameter in inches measured 4.5 feet from the ground.

**(QMD)** – quadratic mean diameter for multiple stemmed trees.<sup>4</sup>

**Tree Species** common name and Latin binomial.

**Threshold** trunk DBH for exceptional category.

**Dripline** average branch extension from the trunk as radius in feet.

**Health and Structure ratings** ‘1’ indicates good to excellent condition; no visible health-related problems or structural defects, ‘2’ indicates fair condition; minor visible problems or defects that may require attention if the tree is retained, and ‘3’ indicates poor condition; significant visible problems or defects, the tree is not viable for retention and removal is recommended.

**Comments on Condition** obvious structural defects or diseases visible at time of inspection.

**Viable Tree?** viability is determined by the arborist, regardless of municipal code or requirements. The *condition* and *viability* ratings in this report are not a substitute for municipal-required assessments and reporting, which are outside the scope of this report. This report alone does not guarantee SDCI authorizing removal of any tree. SDCI requires a higher level of assessment and scrutiny for the removal of exceptional trees based on their risk.

This *viability* rating is provided only as a guide for selecting trees to retain and does not guarantee tree removal. Level 2 & 3 risk assessments are outside the scope of this assignment.

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<sup>3</sup> Director’s Rule 16-2008. Seattle DCI.

<sup>4</sup> Ibid.

## SUBJECT TREES

There are 7 exceptional-size trees, 9 significant trees, zero grove trees, and 5 right-of-way trees (street trees and also in the alley). There are 3 trees of non-significance.

Of the 7 exceptional-size trees, I've indicated 3 as not viable. This includes the willow, deodar cedar and an ash (1, 13 and 23).

The other 4 exceptional trees stand near the circular driveway (5, 6 & 8), or at the SW site corner (15). Although the junipers have been pruned terribly in past, they are in good health and have no likelihood of falling over and causing damage. Beauty alone, or lack of it, has never been a reason SDCI will authorize removal of a protected tree, and the appearance of these two trees can be improved by maintenance pruning.

The Alpine fir is being affected by adelgid insects, but likely has 15 years of remaining useful life.

The honey locust is of specimen quality, and the small wounds on its trunk are negligible.

The exceptional ash tree, 23, stands very close to two other ashes at the NW site corner, one significant (21) and one in the alley ROW (24), and all three are in very poor condition. I recommend none be retained.

Significant trees include more ash, a hinoki cypress, two walnuts and an apple. All of the ashes on this site are in poor to very poor condition. The hinoki is a stunning specimen, and the best tree of all.

Right-of-way trees include three crabapples along 42<sup>nd</sup> Ave S, and then a plum and another ash in the alley to the west.

The non-viability of 3 exceptional-size trees is based on my visual-only assessment, and SDCI has a higher standard for determining if an exceptional tree should be designated a *hazard* tree, then authorizing its removal because of poor condition. Based on my experience with other projects, it is more than likely that upon presenting SDCI with a level 3 risk assessment report, the 3 non-viable trees would be authorized for removal, and not bound to protection under Director's Rule 16-2008. NOTE: but this is not a guarantee.

There are 3 trees shown in the attached exhibit that are not significant: either are too small or a shrub species. All trees listed in the attached inventory represent all regulated trees associated with this parcel. There are no offsite trees with branches or rootplates overhanging the property line.

## INNER AND OUTER ROOT ZONES

Soil disturbance and encroachment inside the dripline of an exceptional tree is restricted by city code. An exceptional tree's outer root zone (ORZ, defined by the dripline), inner root zone (IRZ, or one-half the dripline radius), and feeder root zone (2 times the dripline) are defined by municipal code. SMC §21.11.050

*The basic tree protection area shall be the area within the drip line of the tree. The tree protection area may be reduced if approved by the Director according to a plan prepared by a tree care professional. Such reduction shall be limited to one-third of the area within the outer half of the area within the drip line. In no case shall the reduction occur within the inner root zone. In addition, the Director may establish conditions for protecting the tree during construction within the feeder root zone. (See Exhibit SMC §21.11.050.B.)*

These defined root zones will have implications for future site redevelopment. SDCI typically requires factual evidence AND compliance with industry best practices for any proposed disturbance within the ORZ of an exceptional tree, either on or off site. Industry best practices sometimes may not allow any disturbance within a tree's ORZ. Branch pruning must also be factored into any proposed encroachment. Every tree scenario is different.

The following table provides the outer root zone (ORZ) and inner root zone (IRZ) radii for the exceptional trees.

Tree No.	DBH (in)	Species	DL (R')	IRZ (R')	ORZ (R')	LOD (R')
1	34.5"	Deodar cedar, Cedrus deodara	S – 0' W,N,E – 34'	S – 0' W,N,E – 17'	S – 0' W,N,E – 34'	18'
5	12.5"	Hollywood juniper, Juniperus chinensis torulosa	10'	5'	10'	8'
6	8,9.7"	Hollywood juniper, Juniperus chinensis torulosa	11'	5.5'	11'	8'
8	8,10.1"	Alpine fir, Abies lasiocarpa	7'	3.5'	7'	8'
13	31"	Willow (non-native), Salix sp.	23'	11.5'	23'	17'
15	24.5"	Honey locust, Gleditsia triacanthos	26'	13'	26'	14'
23	26"	Oregon Ash, Fraxinus latifolia	0*	0'	0'	13'

Note that trees 1 and 23 have a zero radius driplines (at least on one side of the tree). SDCI defines protected areas based on the dripline, and in cases like this, they rely on industry BMPs that establish protection areas based more on trunk diameter, and not dripline. Hence, the LOD column.

The limits of disturbance (LOD) above are from industry standards and research.<sup>5,6,7,8</sup> These define the shortest distance from the tree to any soil disturbance, AND for only one side of the tree, AND that protection on the other 3 sides of the tree is expanded at minimum to 1.5 times LOD on two abutting sides, and 2 times LOD on the fourth or opposite side of the tree (this is more or less a rectangular shape, and a portion of it will likely be offsite for trees at the edge of the site).

#### SDOT DEFINITIONS – ZONES A, B & C

SDOT's 2020 Standard Plan 133<sup>9</sup>, defines three concentric areas around a tree, based on trunk size (DBH), and describes restrictions for trenching/excavation within. (X is assumed to equal DBH.)

Zone A is labeled Critical Root Zone (CRZ) and is defined as  $DIA=1/2X$ .

Zone B is labeled dripline and defined as  $DIA=X$

Zone C is defined as  $2X$ .

No disturbance is allowed inside zone A without site-specific inspection and approval of methods to minimize root damage. Severance of roots larger than 2" dia. requires engineer's approval. Tunneling required to install lines 3'0" below grade or deeper.

For zone B, the only restriction is for tunneling, which matches the restriction of zone A above. There are no restrictions listed for zone C.

Trees that I've designated as ROW trees are based solely on me looking at the exhibit you provided me. I'm not a surveyor, so please have this confirmed by others. It is also my understanding that trees in the alley and street ROW are controlled by SDOT, and not SDCI. Obtain confirmation on this from each governing department.

#### ATTACHMENTS:

1. Assumptions and Limiting Conditions
2. Certification of Performance
3. Regulated Tree Inventory
4. Tree Number Exhibit

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<sup>5</sup> Coder, Kim D. 2005. *Tree Biomechanics Series*. University of Georgia School of Forest Resources.

<sup>6</sup> Smiley, E. Thomas, Ph. D. *Assessing the Failure Potential of Tree Roots, Shade Tree Technical Report*. Bartlett Tree Research Laboratories.

<sup>7</sup> Fite, Kelby and E. Thomas Smiley. 2009. *Managing Trees During construction; Part Two*. Arborist News. ISA.

<sup>8</sup> Companion publication to the ANSI A300 Series, Part 5: Managing Trees During Construction. 2008. ISA.

<sup>9</sup> [https://www.seattle.gov/Documents/Departments/SPU/Engineering/2020\\_Standard\\_Plans.pdf](https://www.seattle.gov/Documents/Departments/SPU/Engineering/2020_Standard_Plans.pdf)

#### Attachment No. 1 - Assumptions & Limiting Conditions

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1. A field examination of the site was made 1/21/2022. My observations and conclusions are as of that date.
2. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant/arborist can neither guarantee nor be responsible for the accuracy of information provided by others.
3. I am not a qualified land surveyor. Reasonable care was used to match the trees indicated on the sheets with those growing in the field.
4. Construction activities can significantly affect the condition of retained trees. All retained trees should be inspected after construction is completed, and then inspected regularly as part of routine maintenance.
5. Unless stated other wise: 1) information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of inspection; and 2) the inspection is limited to visual examination of the subject trees without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied that problems or deficiencies of the subject tree may not arise in the future.
6. All trees possess the risk of failure. Trees can fail at any time, with or without obvious defects, and with or without applied stress. A complete evaluation of the potential for this (a) tree to fail requires excavation and examination of the base of the subject tree. Permission of the current property owner must be obtained before this work can be undertaken and the hazard evaluation completed.
7. The consultant/appraiser shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made.

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RE: Regulated Tree Inventory Report, 6711, 6717, 6719 42<sup>nd</sup> Avenue South, Seattle WA

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#### Attachment No. 2 - Certification of Performance

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I, Favero Greenforest, certify that:

- I have personally inspected the trees and the property referred to in this report and have stated my findings accurately.
- I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinion, and conclusions stated herein are my own and are based on current scientific procedures and facts.
- My analysis, opinion, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated within the report.
- My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client of any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of International Society of Arboriculture (ISA), and the ISA PNW Chapter, I am an ISA Certified Arborist (#PN-0143A) and am Tree Risk Assessment Qualified, and am a Registered Consulting Arborist® (#379) with American Society of Consulting Arborists. I have worked as an independent consulting arborist since 1989.

Signed:

  
GREENFOREST, Inc.  
By Favero Greenforest, M. S.



Date: January 25, 2022



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### Attachment No. 3 – Regulated Tree Inventory

Dripline radius from center of tree (also outer root zone radius, or ORZ)

QMD – quadratic mean diameter for multiple stemmed trees

Inner root zone (IRZ) = DL x .5

Condition ratings '1' good to excellent, '2' fair, '3' poor

\* For offsite trees, driplines are reported as branch length overhanging the subject property as measured from an existing fence; DBH is estimated.

Significant	Exceptional Size	Grove Size	Exceptional Grove	Tree No.	DBH (QMD)	Species	Threshold	Dripline (R')	Health	Structure	Comments on Condition	Viable Tree?
	✓	✓	No	1	34.5"	Deodar cedar, Cedrus deodara	30"	0'/ 34'	1	3	Double leader, 1/2 topped and limbed (dead), live leader topped	NO
ROW/42ND				2	2"	Crabapple, Malus baccata	N/A	11'	1	2	Copious suckers at base	YES
✓				3	7.1,8.4" (11")	Mountain ash, Sorbus aucuparia	29"	15'	2	3	Double leader, decay in trunk, asymmetric canopy, topped	NO
Not Significant				4	5.7"	Star magnolia, Magnolia stellata						
	✓	✓	No	5	12.5"	Hollywood juniper, Juniperus chinensis torulosa	10.3"	10'	1	2	Multiple leaders, horribly pruned in past	YES
	✓	✓	No	6	8,9.7" (12.6")	Hollywood juniper, Juniperus chinensis torulosa	10.3"	11'	1	2	Multiple leaders, horribly pruned in past	YES
ROW/42ND				7	2.5"	Crabapple, Malus baccata	N/A	8'	1	3	Copious suckers at base, large tear in trunk	NO
	✓	✓	No	8	8,10.1" (12.9")	Alpine fir, Abies lasiocarpa	12.6"	7'	2	2	Adelgid insect injury, double leader	YES
✓		✓	No	9	13.9"	Hinoki cypress, Chamaecyparis obtusa	16.4"	14'	1	1		YES
✓				10	2,4,6" (7.5")	Walnut, Juglans regia	28.8"	15'	1	2	Multiple leaders	YES



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Significant	Exceptional Size	Grove Size	Exceptional Grove	Tree No.	DBH (QMD)	Species	Threshold	Dripline (R')	Health	Structure	Comments on Condition	Viable Tree?
✓				11	7.9,8.3" (11.5")	Walnut, <i>Juglans regia</i>	29.8"	18'	1	2	Double leader	YES
ROW/42ND				12	3"	Crabapple, <i>Malus baccata</i>	N/A	9'	1	2	Copious suckers at base	YES
	✓	✓	No	13	31"	Willow (non-native), <i>Salix</i> sp.	24"	23'	3	3	Ganoderma decay fungus, previous failure, internal decay	NO
✓		✓	No	14	8.2,10.1" (13")	Apple, <i>Malus domestica</i>	20"	15'	2	2	Diseased, poorly pruned	YES
	✓	✓	No	15	24.5"	Honey locust, <i>Gleditsia triacanthos</i>	20"	26'	1	2	Multiple small trunk wounds	YES
Not Significant				16/17		Arboretum (shrub species)						
ROW/ALLEY				18	(5) 2-4" (6.5")	Plum, <i>Prunus domestica</i>	N/A	7'*	2	2	Multiple leaders, brown rot fungus, suckers	YES
✓		✓	No	19	7.9,9" (12")	Oregon Ash, <i>Fraxinus latifolia</i>	24"	11'*	1	2	Double leader	YES
✓		✓	No	20	16.2"	Oregon Ash, <i>Fraxinus latifolia</i>	24"	19'	1	3	Topped, multiple leaders	NO
✓		✓	No	21	13.4"	Oregon Ash, <i>Fraxinus latifolia</i>	24"	17'	1	3	Topped, girdling at rootcrown	NO
✓		✓	No	22	17"*	Oregon Ash, <i>Fraxinus latifolia</i>	24"	9'*	2	3	Topped, trunk decay, ivy obscuring trunk	NO
	✓	✓	No	23	26"*	Oregon Ash, <i>Fraxinus latifolia</i>	24"	0'*	2	3	Topped, trunk decay, ivy	NO
ROW/ALLEY				24	18"*	Oregon Ash, <i>Fraxinus latifolia</i>	N/A	0'*	2	3	Topped, trunk decay, ivy	NO

