

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.²

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.

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

Available Tree Density Credit (TDC) assigned TDC based on stem diameter.

Retained (TDC) for onsite healthy native conifers, retained TDC is the available TDC multiplied by 1.5.

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. Multiple-stemmed trees are reported as a single integer, using quadratic mean (QMD).

Tree Species common name.

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 and tree removal is recommended.

Comments on Condition obvious structural defects or diseases visible at time of inspection, which includes:

Asymmetric canopy - the tree has an asymmetric canopy from space and light competition from adjacent trees.

Branch dieback - mature branches in canopy are dying/dead.

Deadwood - large and/or multiple dead branches throughout canopy.

Decay - process of wood degradation by microorganisms resulting in weak and defective structure.

Diseased - foliage and trunk/stems are diseased.

Dogleg in trunk - trunk with a bow or defective bend (90°) in trunk often half way of further up the trunk.

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

Double leader - the tree has multiple stem attachments, which may require maintenance or monitoring over time.

Foliar disease - foliage is diseased with manageable fungus.

Insect Injury - active insect injury affecting tree health.

LCR - live crown ratio: the ratio of crown length to total tree height. Stand-alone trees with a LCR of 30 and lower are at increased risk of failure.

Lean - angle of the trunk from vertical.

Multiple leaders - the tree has multiple stem attachments, which may lead to tree failure and require maintenance or monitoring over time.

Previous failure - tree trunk previously broken and defective.

Slender - tree lacks adequate trunk taper to stand lone.

Stumpsprout- tree previously cut at grade with multiple stems and potentially weak attachments.

Suppressed - tree crowded by larger adjacent trees, with defective structure and/or low vigor. Retain tree only as a grove tree, not stand-alone.

Sweep - tree leans away from adjacent trees. Characterized by a leaning lower trunk and a top that is more upright.

Topped – the tree is previously topped and has poor structure and/or stem decay.

Tree leans - trunk has significant lean from vertical.

Trunk decay - wood decay is visible in the trunk.

Wound/decay base of trunk - open wound with visible decay in trunk.

Viability - a determination by the arborist whether the tree is viable for retention.

REQUIRED TREE DENSITY & AVAILABLE TREE DENSITY CREDIT

Required tree density is calculated by multiplying the acreage of the lot by 30, which equals 5. $(6,017 \div 43,560 = .14) \times 30 = 4.14$, or 5 rounded.

Required tree density credits for this parcel equals 5. Attachment 4 provides the available tree density credits for all inventoried trees.

NOTE: Tree density calculations do not apply to public trees, and in this case some trees are likely within the street right of way. Additionally, no tree credits can be claimed for unhealthy or offsite trees.

If the calculated tree density is below the minimum, indicate the type, size and location of the supplemental trees needed to meet the density requirement. Supplemental trees must

be at least 6 feet tall if they are conifers or 2-inch caliper if they are deciduous or broadleaf evergreen.

LIMITS OF DISTURBANCE

Limits of Disturbance (LOD) are calculated for all the trees (and for trees on adjoining parcels with overhanging driplines). They are listed below as radii in feet from the trunk for the side of the tree to be impacted by construction. They are determined using rootplate³ and trunk diameter,^{4,5,6} and ISA Best Management Practices.⁷ These are the minimum distances from the trees for any soil disturbance, and represent the area to be protected during construction. These LOD are malleable and may be adjusted during the design and construction process (which means that they could also get larger depending on the proposed encroachment).

This project is currently in the design phase. The following information will be provided later under separate cover of an *arborist report*:

- A. Proposed action for each tree.
- B. Special instructions for work within critical root zones.
- C. The impact of necessary tree removal to the remaining trees.
- D. Timing and installation of tree protection measures.
- E. Location and type of protection measures for trees.

ATTACHMENTS:

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

³ Coder, Kim D. 2005. *Tree Biomechanics Series*. University of Georgia School of Forest Resources.

⁴ Smiley, E. Thomas, Ph. D. *Assessing the Failure Potential of Tree Roots, Shade Tree Technical Report*. Bartlett Tree Research Laboratories.

⁵ Fite, Kelby and E. Thomas Smiley. 2009. *Managing Trees During construction; Part Two*. Arborist News. ISA.

⁶ Andrew R. Benson, Andrew Koeser, Justin Morgenroth. *Responses Of Mature Roadside Trees To Root Severance Treatments*. 2019. Journal of Urban Forestry & Urban Greening.

⁷ Companion publication to the ANSI A300 Series, Part 5: Managing Trees During Construction. 2008. ISA.

Attachment No. 1 - Assumptions & Limiting Conditions

1. A field examination of the site was made 6/2/2021. 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.

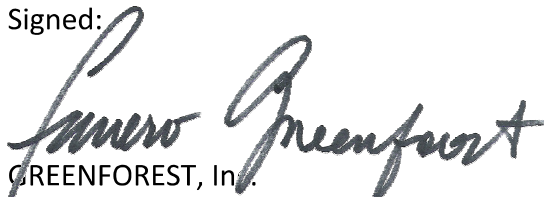
Attachment No. 2 - Certification of Performance

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.

**Favero
Greenforest**

Date: June 7, 2021



Digitally signed by Favero Greenforest
DN: cn=Favero Greenforest, o, ou,
email=greenforestinc@mindspring.com
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Date: 2021.06.07 08:12:57 -07'00'



Mike Smith, Chrysalis Homes, LLC
 RE: Regulated Tree Inventory, 11 - 9th Street, Kirkland WA 98033
 June 7, 2021
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QMD – quadratic mean diameter for multiple stemmed trees
 Dripline radius from center of tree
 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.

Attachment No. 4 – Significant Tree Inventory

Available TDC	Retained TDC	Tree No.	DBH (in.)	QMD	Species	DL (R')	Health	Structure	Comments on Condition	LOD (R')	Viable Tree?
1	1	1	4,6"	7"	Scots pine	7'	2	2	Suppressed, asymmetric canopy, sweep in trunk, double leader	6'	Yes
3	3	2	15"		Scots pine	16'	1	2	Sweep, deadwood	8'	Yes
2	2	3	11"		Norway spruce	11'	1	2	Deadwood	6'	Yes
2	2	4	8,9"	12"	Black locust	18'	1	2	Double leader, asymmetric, stump sprout	6'	Yes
1	1	5	7,8"	11"	Black locust	16'	1	2	Double leader, asymmetric, stump sprout	6'	Yes
2	2	6	13"		Norway spruce	16'	1	2	Deadwood, asymmetric	7'	Yes
2	2	7	12"		Norway spruce	17'	1	2	Deadwood, asymmetric	6'	Yes
1	1	8	7"		Black locust	15'	1	2	Slender trunk, LCR	6'	Yes
1	1	9	6,7"	9"	Black locust	18'	1	2	Double leader, asymmetric, stump sprout	6'	Yes
1	1	10	6"		Black locust	18'	1	2	Asymmetric, sweep	6'	Yes
1	1	11	6"		Black locust	18'	1	2	Asymmetric, sweep	6'	Yes
1	1	12	6"		Black locust	15'	1	2	Asymmetric, sweep	6'	Yes
0	0	13	26"		Black locust	25'	3	3	Lean, previous rootplate failure, branch dieback, sweep, asymmetric	13'	No
0	0	14	(7) 6-8"	17"	English laurel	20'	1	3	Lean, previously topped	7'	No
15	22.5	15	38"		Western red-cedar	26'	1	1		20'	Yes
2	3	16	12"		Western red-cedar	10'	1	2	Asymmetric	6'	Yes

Greenforest



Registered Consulting Arborist

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Available TDC	Retained TDC	Tree No.	DBH (In.)	QMD	Species	DL (R')	Health	Structure	Comments on Condition	LOD (R')	Viable Tree?
19	28.5	17	46"		Western red-cedar	23'	1	2	Topped, multiple leaders at attachment	21'	Yes
0	0	18	12"		English holly	12'	3	3	Topped, suppressed, asymmetric, dieback, hedgerow	6'	No
0	0	19	6,10"	12"	English holly	12'	3	3	Topped, suppressed, asymmetric, dieback, hedgerow	6'	No
0	0	20	6"		English holly	12'	3	3	Topped, suppressed, asymmetric, dieback, hedgerow	6'	No
0	0	21	7,10"	12"	English holly	12'	3	3	Topped, suppressed, asymmetric, dieback, hedgerow	6'	No



January 3, 22

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City of Kirkland
Community Development Services
123 5th Street
Kirkland, WA 98033

VIA Electronic Upload

Re: 11 – 9th St, Kirkland, WA 98033

Dear Community Development:

This firm represents Michael T. Smith, the owner of the above-referenced property. I have been asked to explain to you why a variance and a modification to the driveway standards are appropriate for this property. Specifically, I have been asked to address; 1) a variance to allow for a ten-foot setback from Kirkland Way; and 2) a driveway modification to allow driveway parking in the front setback. Thank you for considering this request.

The Kirkland Way Setback Variance: As you know, variances in Kirkland must meet the criteria of KMC 120.20. That section of the Code reads as follows:

120.20 Criteria for Granting a Variance

The City may grant a variance only if it finds that:

1. The variance will not be materially detrimental to the property or improvements in the area of the subject property or to the City in part or as a whole; and
2. The variance is necessary because of special circumstances regarding the size, shape, topography, or location of the subject property, or the location of a preexisting improvement on the subject property that conformed to the Zoning Code in effect when the improvement was constructed; and