



# Greenforest Incorporated



## Consulting Arborist

TO: Farzad Ghazvinian

REFERENCE: Significant Tree Inventory

SITE ADDRESS: 4720 East Mercer Way, Mercer Island WA

DATE: August 6, 2018

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

### Introduction

You contacted me and contracted my services as a consulting arborist. My assignment is to tag, inspect and assess the significant trees at the above referenced site. This inventory establishes the condition of the regulated trees on this site, and provides a *significant tree inventory* as per MI code §19.10.090.c.2.a.

You provided me a topographic survey prepared by Terrane, dated 2/17/18. I visited the site 5/14/2018 and visually inspected the trees, which are the subject of this inventory. This inventory represents all regulated trees on the site, plus some on abutting parcels and within the street right-of-way.

### Summary

*The site currently has a single-family residence. The existing landscaping is over mature and much of the vegetation on the parcel is neglected. The subject trees include both native and ornamental deciduous, evergreen and broadleaf evergreen species.*

	<i>Small</i>	<i>Significant</i>	<i>Exceptional</i>	<i>Hazardous/Dead</i>
<i>Retain</i>	<i>1</i>	<i>16</i>	<i>3</i>	<i>3</i>
<i>Remove</i>		<i>6</i>	<i>1</i>	<i>1</i>
<i>Offsite</i>		<i>4</i>	<i>3</i>	
<i>Right-of-way</i>		<i>1</i>		

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#### Limitations and Use of this Report

This document provides required tree attributes for a *tree inventory*. Required data for an *arborist report* (as per MI code §19.10.090.c.2.b) shall be provided under separate cover. This inventory shall be used in the building permit process for the subject parcel, and as an aid in tree retention with City planners.

This inventory establishes, via the most practical means available, the existing conditions of the trees on the subject property. Ratings for health and structure, as well as any recommendations are valid only through the development and construction process. This inventory 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

I marked each tree with 1" x 3.5" aluminum tag indicating tree number. I visually inspected each tree from the ground. I performed a Level 1 risk assessment. 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.

I recorded tree species and size (DBH). I estimated the average dripline of each tree. I rated the condition of each tree, both health and structure/form. A tree's structure/form is distinct from its health. This inspection identifies what is visible with both.

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



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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/form 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 inventory identifies unhealthy trees based on existing health conditions and tree structure, and specifies which trees are most suitable for preservation.

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:

**Proposed Action** – Indicates if tree is to be removed or retained.

**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** Multiple-stemmed trees are reported as a single integer, using quadratic mean.

**Tree Category** – indicates if tree is small, large or exceptional as defined by Municipal code.

> 24" DBH are indicated.

**Viability** - a determination by the arborist whether the tree is viable for retention. Non-viable trees are indicated.

**Tree Species** common name.

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

**Health and Structure/Form 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.

Chlorosis - yellowing or off-color foliage.

Crack - separation of wood fibers and predisposed to failure.

Dead - tree is 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.

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

Ivy - dense ivy prevents a thorough inspection, and other defects may be present.

Kretzschmaria –a wood-decaying fungi that causes the trunk to become brittle.

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.

Sweep in trunk - characterized by a leaning lower trunk and a more upright top.

Self-corrected lean - self-corrected leans and sweeps are characterized by a leaning lower trunk and a top that is more upright.

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.

**Tree type** – indicates if tree is coniferous, deciduous or broadleaf evergreen.

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#### LIMITS OF DISTURBANCE

Limits of Disturbance (LOD) are calculated for all the significant trees (and for trees on adjoining parcels with overhanging driplines). They are listed in attachment 3 as radii in feet from the trunk for the side of the tree to be impacted by construction. They are determined using rootplate<sup>1</sup> and trunk diameter,<sup>2,3</sup> and ISA Best Management Practices.<sup>4</sup> 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.

#### Attachments:

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

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<sup>1</sup> Coder, Kim D. 2005. *Tree Biomechanics Series*. University of Georgia School of Forest Resources.

<sup>2</sup> Smiley, E. Thomas, Ph. D. *Assessing the Failure Potential of Tree Roots, Shade Tree Technical Report*. Bartlett Tree Research Laboratories.

<sup>3</sup> Fite, Kelby and E. Thomas Smiley. 2009. *Managing Trees During construction; Part Two*. Arborist News. ISA.

<sup>4</sup> Companion publication to the ANSI A300 Series, Part 5: *Managing Trees During Construction*. 2008. ISA.



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Attachment No. 1 - Assumptions & Limiting Conditions

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1. A field examination of the site was made 5/24/2018. 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.
8. This report and any values/opinions expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.



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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.

**Favero Greenforest**

Digitally signed by Favero Greenforest  
DN: cn=Favero Greenforest, o, ou,  
email=greenforestinc@mindspring.com, c=US  
Date: 2018.08.06 08:37:21 -07'00'

Date: August 6, 2018



Attachment No. 3 – Significant Tree Inventory

Proposed Action	Tree No.	DBH	QMD	Category	>24" DBH	Viable Tree	Species	Dripline	Health	Structure	Comments on Condition	Tree Type	LOD Radius
Remove	1	12, 24"	26"	Large	Yes		Lawson cypress	16'	1	2	Asymmetric	E	13'
Remove	2	25"	25"	Large	Yes		Lawson cypress	15'	1	2	Asymmetric	E	13'
RETAIN	3	5, 6"	7"	Small			Vine maple	8'	1	2	Growth obstruction, asymmetric	D	6'
RETAIN	4	4.5, 4.5, 5"	8"	Exceptional			Vine maple	8'	1	2	Growth obstruction, asymmetric	D	6'
Remove	5	6, 7, 7, 7"	13"	Significant			Japanese maple	14'	1	2	Growth obstruction	D	7'
Remove	6	12"	12"	Significant			Colorado blue spruce	11'	1	1		E	6'
Remove	7	17"	17"	Significant			Colorado blue spruce	12'	1	2	Asymmetric	E	8'
RETAIN	8	10"	10"	Significant			Scots pine	12'	1	1		C	6'
RETAIN	9	9, 10"	13"	Significant			Portugal laurel	11'	1	2	Double leader	BE	6'
RETAIN	10	8, 8, 8"	13"	Significant			Thread cypress	12'	1	2	Multiple leader	C	6'
RETAIN	11	20"	20"	Dead		NO	Douglas-fir	0'	3	3	Dead, topped at 40 feet	E	10'
RETAIN	12	21"	21"	Significant			Western red-cedar	16'	1	2	Asymmetric, perched on shoulder	C	10'
RETAIN	13	26"	26"	Large	Yes	NO	Bigleaf maple	20'	3	3	Ivy, Kretzschmaria, decay	D	13'
RETAIN	14	42"	42"	Exceptional	Yes		Douglas-fir	20'	1	1		E	20'
RETAIN	15	15"	15"	Exceptional			Pacific madrone	12'	2	2	Lean, diseased, asymmetric	BE	8'
Remove	16	9"	9"	Hazardous		NO	Pacific madrone	8'	3	3	Lean, diseased, minuscule canopy, ivy	BE	6'
RETAIN	17	6, 8, 8, 9, 10"	18"	Significant			Bigleaf maple	20'	1	2	Stumpsprout	D	9'
Remove	18	34"	34"	Exceptional	Yes		Douglas-fir	20'	1	2	Previously topped, hazard	E	17'



Proposed Action	Tree No.	DBH	QMD	Category	>24" DBH	Viable Tree	Species	Dripline	Health	Structure	Comments on Condition	Tree Type	LOD Radius
Remove	19	13, 14"	19"	Significant			Bigleaf maple	18'	2	2	Suppressed, asymmetric, double leader	D	9'
RETAIN	20	29"	29"	Large	Yes		Douglas-fir	20'	1	2	Sweep in trunk	E	14'
RETAIN	21	9, 11, 16"	21"	Significant			Bigleaf maple	20'	1	2	Multiple leader	D	10'
RETAIN	22	12"	12"	Significant			European birch	16'	1	2	Lean west toward street, slender	D	6'
RETAIN	23	12"	12"	Significant			Bigleaf maple	16'	1	2	Asymmetric	D	6'
RETAIN	24	13"	13"	Significant			Bigleaf maple	16'	1	2	Slender	D	6'
Remove	25	10, 10, 13"	19"	Significant		NO	Bigleaf maple	16'	2	3	Suppressed, stumpsprout	D	9'
Remove	26	16, 17"	23"	Significant		NO	Bigleaf maple	20'	3	3	Decline, chlorotic, slender, stumpsprout	D	11'
Remove	27	10, 10 "	14"	Significant		NO	Bigleaf maple	20'	2	3	Suppressed, asymmetric, stumpsprout	D	6'
Remove	28	9, 14, 15"	22"	Significant		NO	Bigleaf maple	6'	3	3	Decline, suppressed, stumpsprout, decay	D	11'
Remove	29	19"	19"	Significant		NO	Bigleaf maple	20'	1	3	Suppressed, asymmetric, over-extended branches	D	9'
Remove	30	13, 19, 35"	41"	Hazardous		NO	Bigleaf maple	25'	1	3	Crack, decay	D	20'
RETAIN	31	60"	60"	Hazardous		NO	Bigleaf maple	20'	3	3	Topped at 8 feet, multiple water sprout, Kretzschmaria	D	16'
OFFSITE	101	38"	38"	Exceptional	Yes		Giant redwood	18'			Topped at 40 feet	E	16'
OFFSITE	102	38"	38"	Exceptional	Yes		Giant redwood	18'			Topped at 40 feet	E	16'
OFFSITE	103	9, 13"	15"	Significant			Lawson cypress					E	8'
OFFSITE	104	12, 18, 20"	29"	Large	Yes		Western red-cedar	16'			Multiple leader	C	14'



Proposed Action	Tree No.	DBH	QMD	Category	>24" DBH	Viable Tree	Species	Dripline	Health	Structure	Comments on Condition	Tree Type	LOD Radius
OFFSITE	105	15"	15"	Significant			Western red-cedar	16'				C	8'
OFFSITE	106	54"	54"	Exceptional	Yes		Bigleaf maple	40'			Double leader, chlorotic, declining foliage, ivy	D	22'
OFFSITE	107	26"	26"	Large	Yes		Western red-cedar	18'				C	13'
ROW	201	11, 11"	15"	Significant			Bigleaf maple	20'	1	2	Double leader	D	8'





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Attachment No. 4 - Tree Number Exhibit

4270 E MERCER WAY

