



# Greenforest Incorporated



## Consulting Arborist

TO: Mike O'Brien  
OB Mercer Island Properties  
P.O. Box 726  
Bellevue, WA 98009

REFERENCE: Arborist Report

SITE ADDRESS: 2825 West Mercer Way, Mercer Island WA

DATE: February 21, 2019

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

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### Introduction

The Blueline Group contacted me on your behalf, and you contracted with Greenforest Inc., as a consulting arborist. My assignment is to prepare a report of the regulated trees on the above referenced site. The attached inventory establishes the condition of the regulated trees, and provides a *significant tree arborist report* as per MI code §19.10.090.c.2.b.

Blueline provided me a topographic survey prepared by M. W. Marshall, dated 9/01. I visited the site 12/04/2018 and visually inspected the trees, which are the subject of this report, and represent all regulated trees on the site.

### Summary

	Retained	Removed	Total
<i>Significant</i> Trees	0	14	14
<i>Exceptional</i> Trees	1	2	3

The site is the defunct center for Mercer Island Boys and Girls Club. The building is boarded up and the landscape is over-mature and neglected. The regulated trees are primarily ornamental species and include a mix of coniferous, deciduous and broad-leaf evergreen trees.

Very few of the trees onsite are viable for retention: they are either so old and have negligible to no remaining useful life, or are so close to the existing building, that removal of the existing building's foundation will put the trees at risk of falling over. This includes the two *exceptional* trees proposed for removal.

Two species included in the previous submitted inventory, Portugal laurel and Leyland cypress, though shown on an earlier survey, are not trees regulated by City and are excluded from tree retention calculations. This includes several large Leyland cypress growing adjacent to the existing building, even though they are of exceptional trunk size. One cypress tree (#25) is a stand-alone tree of good form and structure. Although City has requested it be retained if possible, this tree is within the SE 30<sup>th</sup> Street ROW, and the necessary site improvements will necessitate this tree be removed.

Three previously inventoried *small* trees are removed from the inventory in this report (#15, 34 & 35).

One tree is proposed for retention: an *Exceptional* Pacific madrone (#2).

#### LIMITATIONS AND USE OF THIS REPORT

This tree report 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 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

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.<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.

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 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 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.

Required tree attributes are summarized in attachment 3, including the following information for each tree:

**Regulated Threshold**– reports the trunk size threshold for *exceptional* tree status.

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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.

**Regulated Tree Category** – indicates if tree is small, large or exceptional as defined by Municipal code. There are no grove trees on this parcel.

**> 24"** – indicates trees with DBH equal to or greater than 24".

**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 Species** Latin and 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.

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

Conk – fungal fruiting body growing on trunk.

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

Diseased - foliage and trunk/stems are diseased.

Disease center - soil borne fungal infection site.

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

Hedge – trees planted in close proximity with asymmetric canopies.

Insect Injury – Sequoia pitch moth activity affecting tree health.

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

LCR – low live crown ratio.

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

Previous failure - tree lifted from failed rootplate; or roots growing on soil surface.

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

Trunk decay - wood decay is visible in the trunk.

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

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

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

At the west parcel boundary, and parallel 62<sup>nd</sup> Ave NE, is an approximately 15'-wide swath of unmanaged vegetation, including mostly brambles and naturalized weedy tree species. Very few of the trees in this area are large enough to be regulated, and none are of a quality worth preserving.

All of the Purpleleaf plums and pines on the site are ailing and in poor condition.

The perimeter of the south side of the existing building has mature Leyland cypress trees growing in a hedgerow. Although these trees are healthy, if the foundation of the building is demolished, these trees will be at risk of falling over as the foundation currently anchors their rootplates. This is also applicable for the Empress tree against the west side of the building.

#### TREE PROTECTION AND LIMITS OF DISTURBANCE

Tree #2, an *exceptional* Pacific madrone is proposed for retention. This tree has a 27" DBH trunk, and a 16-foot radius dripline.

Limits of Disturbance (LOD) are determined using rootplate<sup>3</sup> and trunk diameter,<sup>4,5</sup> and ISA Best Management Practices.<sup>6</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.

The LOD for this madrone tree is a 16-foot radius from the base of the trunk, or the tree's dripline.

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

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

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

<sup>6</sup> Companion publication to the ANSI A300 Series, Part 5: *Managing Trees During Construction*. 2008. ISA.

Minimum six (6) foot temporary chain-link fence shall be installed at the driplines of tree 2. Fencing shall completely encircle the tree. Install fence posts using pier block only. A City planner must approve any modifications to the fencing material and location.

No stockpiling of materials, vehicular or pedestrian traffic, material storage or use of equipment or machinery shall be allowed within the protective fencing. Fencing shall not be moved or removed unless approved by a City planner. Any work, activity or soil disturbance within the protection fencing, or critical root zone, shall be reviewed, approved and monitored by the project arborist.

The removal of other trees on this site will have no negative impact on this retained madrone tree. At this time in the design process, there is no proposed required work within the protection area for this tree, and no need for any special instructions.

**ATTACHMENTS:**

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

Attachment No. 1 - Assumptions & Limiting Conditions

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1. A field examination of the site was made 12/14/2018. 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.

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: February 21, 2019



Attachment No. 3 – Regulated Tree Inventory (**Boldface tree to be retained**)

Regulated Threshold	Regulated Category	> 24" DBH	Tree No. *	DBH (in.)	QMD	Common name/Latin name	Drip-line Radius	Health	Structure	Comments on Condition	Tree Type	Viable Tree?
36"	Significant		1	9,16"	18"	Empress tree, Paulownia tomentosa	20'	1	2	Asymmetric canopy	D	No
<b>6"</b>	<b>Exceptional</b>	<b>Yes</b>	<b>2</b>	<b>27"</b>		<b>Madrone, Arbutus menziesii</b>	<b>16'</b>	<b>1</b>	<b>1</b>		<b>BE</b>	<b>Yes</b>
16"	Significant		3	7,7,8,9"	15"	English hawthorn, Crataegus monogyna	12'	2	3	Diseased, stumpsprout	D	No
16"	Exceptional		4	16"		English hawthorn, Crataegus monogyna	15'	2	3	Topped, double leader, over mature	D	No
21"	Exceptional		5	16,16"	23"	Blireiana flowering plum, Prunus blireiana	16'	2	3	Double leader, over mature	D	No
21"	Significant		6	20"		Blireiana flowering plum, Prunus blireiana	16'	2	3	Over mature	D	No
21"	Significant		7	8"		Blireiana flowering plum, Prunus blireiana	15'	2	3	Over mature	D	No
21"	Significant		8	14"		Blireiana flowering plum, Prunus blireiana	14'	3	3	Suckers, over mature, fungal conks on trunk	D	No
16"	Significant		9	8,8,10"	15"	English hawthorn, Crataegus monogyna	18'	2	3	Diseased, topped, stumpsprout	D	No
21"	Significant		10	12"		Blireiana flowering plum, Prunus blireiana	14'	3	3	Diseased, branch decline, decay	D	No
21"	Significant		11	12"		Blireiana flowering plum, Prunus blireiana	7'	3	3		D	No
21"	Significant		12	20"		Blireiana flowering plum, Prunus blireiana	16'	3	3		D	No
21"	Significant		13	11"		Blireiana flowering plum, Prunus blireiana	12'	1	3	Root failure	D	No
21"	Significant		14	11"		Blireiana flowering plum, Prunus blireiana	16'	2	2	Over mature, roots at soil surface	D	No
NR			16	21"		Leyland cypress, Cupressus xLeylandii	16'	1	2	Asymmetric (hedge against existing building)	C	No
NR			17	12,14"	18"	Leyland cypress, Cupressus xLeylandii	13'	1	2		C	No
NR		Yes	18	24"		Leyland cypress, Cupressus xLeylandii	15'	1	2		C	No



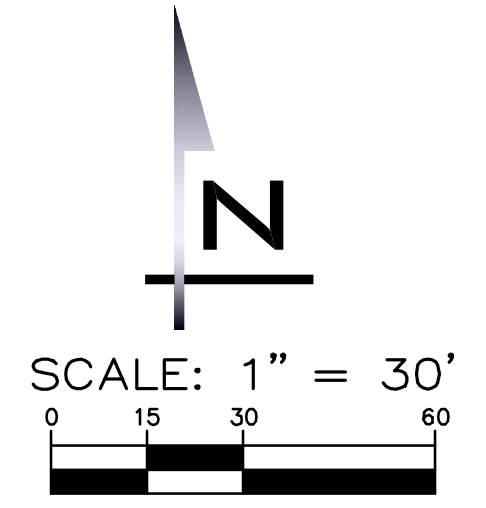
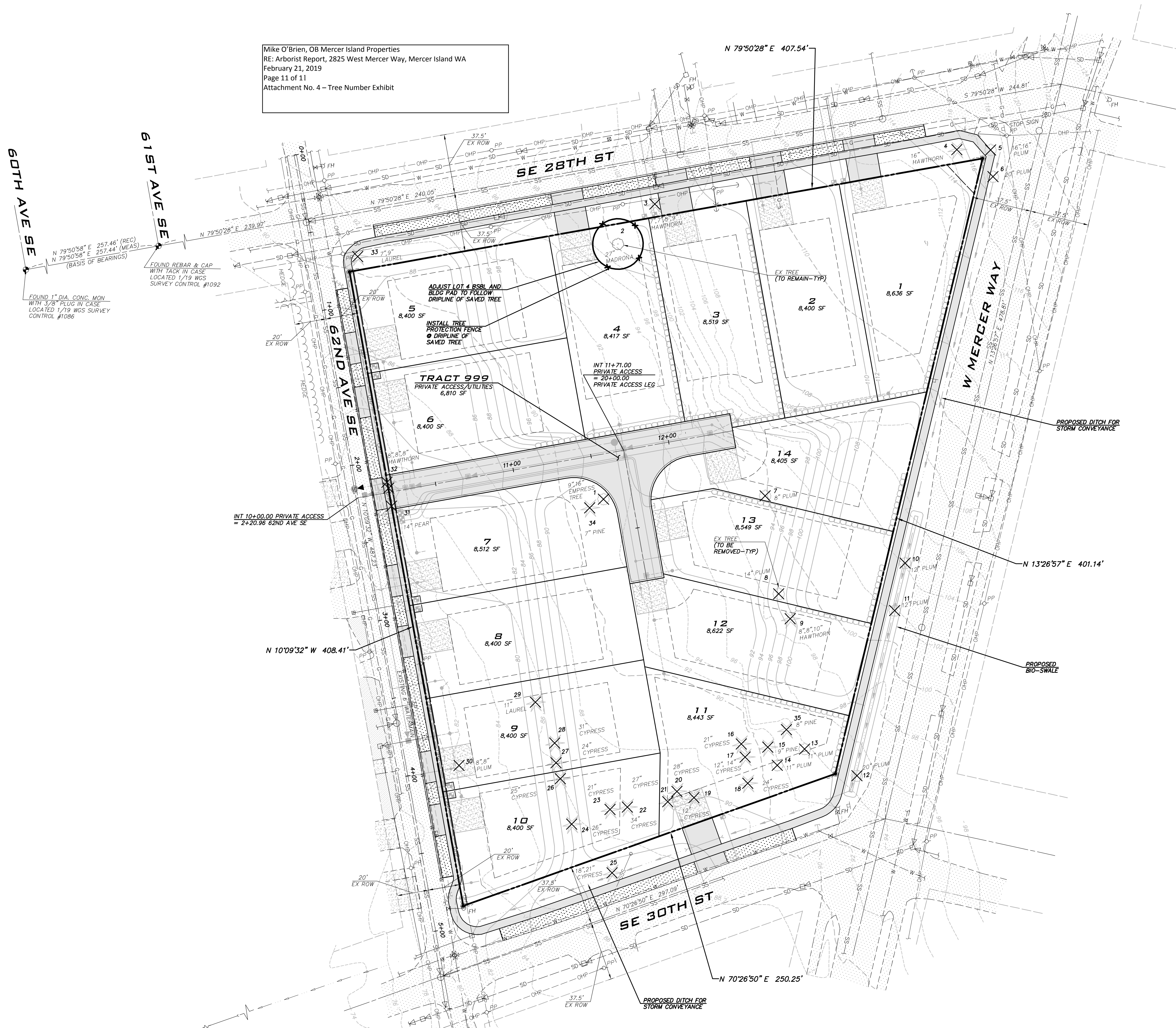
Regulated Threshold	Regulated Category	> 24" DBH	Tree No.*	DBH (In.)	QMD	Common name/Latin name	Dripline Radius	Health	Structure	Comments on Condition	Tree Type	Viable Tree?
NR			19	12"		Leyland cypress, Cupressus xLeylandii	16'	1	2		C	No
NR		Yes	20	28"		Leyland cypress, Cupressus xLeylandii	16'	1	2		C	No
NR		Yes	21	27"		Leyland cypress, Cupressus xLeylandii	16'	1	2		C	No
NR		Yes	22	34"		Leyland cypress, Cupressus xLeylandii	16'	1	2		C	No
NR			23	21"		Leyland cypress, Cupressus xLeylandii	16'	1	2		C	No
NR		Yes	24	26"		Leyland cypress, Cupressus xLeylandii	16'	1	2		C	No
NR		Yes	25	18,21"	27"	Leyland cypress, Cupressus xLeylandii	16'	1	1		C	Yes
NR		Yes	26	25"		Leyland cypress, Cupressus xLeylandii	16'	1	2	Asymmetric (hedge against existing building)	C	No
NR		Yes	27	24"		Leyland cypress, Cupressus xLeylandii	16'	1	2		C	No
NR		Yes	28	31"		Leyland cypress, Cupressus xLeylandii	16'	1	2		C	No
NR			29	11"		Portugal laurel, Prunus lusitanica	10'	1	1		BE	Yes
36"	Significant		30	8,8"	11"	Plum (seedling), Prunus domestica	15'	3	3	Diseased, topped, decay, lean	D	No
36"	Significant		31	14"		Pear, common, Pyrus communis	16'	2	3	Topped, covered in ivy	D	No
16"	Significant		32	8,8,8"	13"	English hawthorn, Crataegus monogyna	15'	2	3	Multiple ldrs, lean, ivy	D	No
NR			33	7,9"	11"	Portugal laurel, Prunus lusitanica	12'	1	2	Double leader	BE	Yes

NR = Not Regulated

Tree numbers are non-sequential because 3 *small* trees included in the previous inventory are removed from this report.



Mike O'Brien, OB Mercer Island Properties  
 RE: Arborist Report, 2825 West Mercer Way, Mercer Island WA  
 February 21, 2019  
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 Attachment No. 4 - Tree Number Exhibit



**BLUELINE**

25 CENTRAL WAY, SUITE 400,  
 KIRKLAND, WA 98033  
 P: 425.216.4551 F: 425.216.4002  
 WWW.THEBLUELINEGROUP.COM

SCALE:  
 AS NOTED

PROJECT MANAGER:  
 BRETT K. PUDISTS, PE

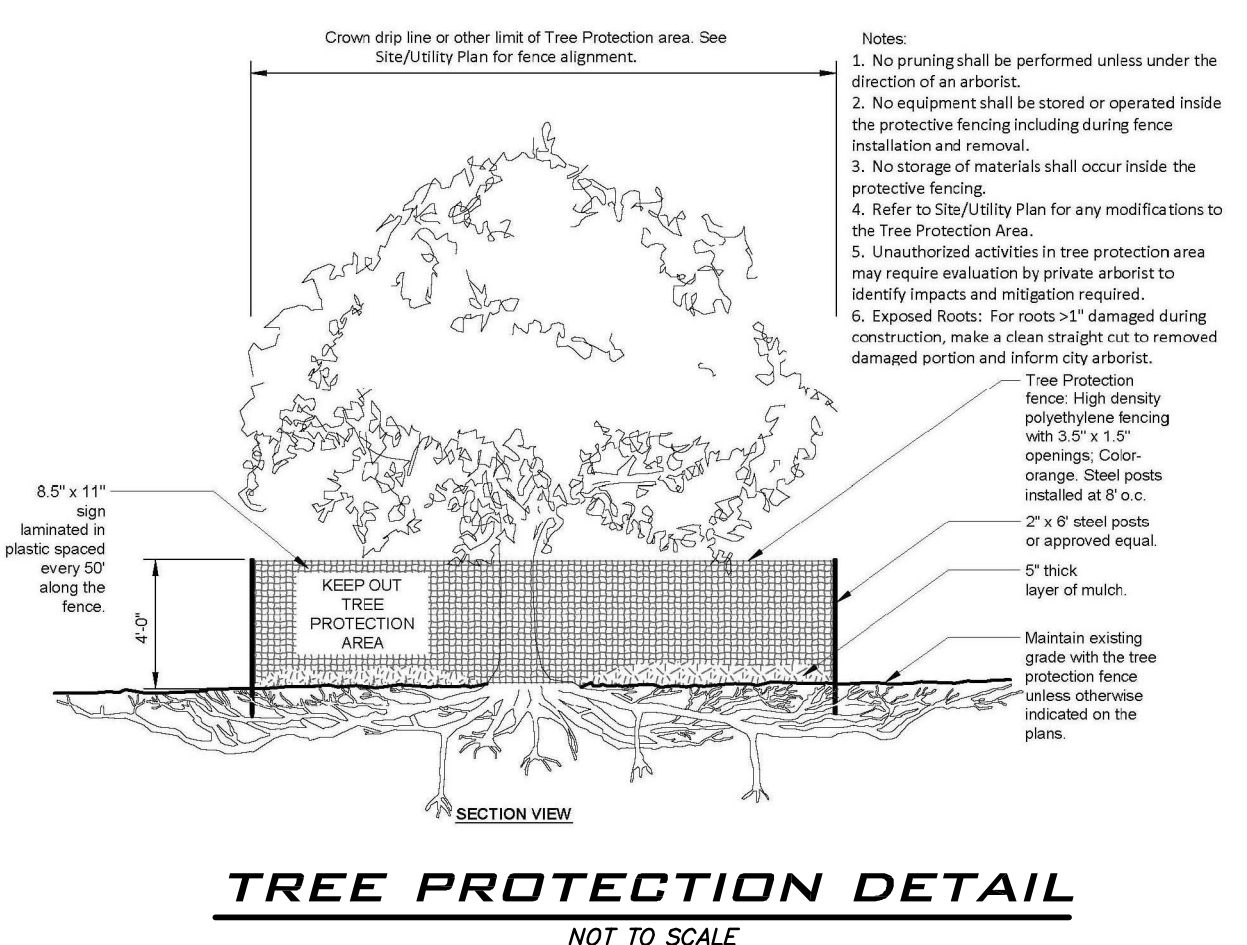
PROJECT ENGINEER:  
 LYNSEY MUNKEL, PE

DESIGNER:  
 NADIA KROUMOVA

ISSUE DATE:  
 2/21/2019

NO	DATE	BY	REVISIONS

**PRELIMINARY TREE RETENTION PLAN**  
**2825 W MERCER WAY**  
**PRELIMINARY PLAN**  
 PARCEL #2174502425  
 CITY OF MERCER ISLAND WASHINGTON



**UNDERGROUND UTILITY NOTE**

UNDERGROUND UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION. THERE IS NO GUARANTEE THAT ALL UTILITY LINES ARE SHOWN, OR THAT THE LOCATION, SIZE AND MATERIAL IS ACCURATE. THE CONTRACTOR SHALL UNCOVER ALL INDICATED PIPING WHERE CROSSING, INTERFERENCES, OR CONNECTIONS OCCUR PRIOR TO TRENCHING OR EXCAVATION FOR ANY PIPE OR STRUCTURES. TO DETERMINE ACTUAL LOCATIONS, SIZE AND MATERIAL. THE CONTRACTOR SHALL MAKE THE APPROPRIATE PROVISION FOR PROTECTION OF SAID FACILITIES. THE CONTRACTOR SHALL NOTIFY ONE CALL AT 8-1-1 (WASHINGTON811.COM) AND ARRANGE FOR FIELD LOCATION OF EXISTING FACILITIES BEFORE CONSTRUCTION.

JOB NUMBER:  
**13-118**

SHEET NAME:  
**TR-01**

SHT **8** OF **9**