



ARBOR INFO LLC

2406 N Castle Way Brier, WA, 98036

**Tree Assessment
For
Seascape Homes
At
Lot 4, 5202 Forest Ave SE
Mercer Island, Washington**



**Date
9/5/2020**

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1. Introduction

I was contacted by Jon Tellefson of Seascope Homes to describe and assess the condition, viability and protection of trees on Lot 4, 5250 Forest Avenue, Mercer Island, WA. This report summarizes my observations and conclusions.

2. Competence

- Certified Arborist (International Society of Arboriculture, ISA #23136, PN 0426 A)
- Registered Consulting Arborist (American Society of Consulting Arborists #499).
- Tree Risk Assessment Qualified (ISA).
- Certified forester (Society of American Foresters #951)
- Bachelor of Science degree in Forest Management from the University of Washington
- Licensed Washington State Real Estate Managing Broker #11534

3. Client

The client to whom this report is addressed is:

Jon Tellefson
Seascope Homes
PO Box 40568
Bellevue, WA 98105
Jmt1231@gmail.com

4. Assignment, Purpose and Use of Report

The assignment is to describe and assess the condition and viability of on-site trees and to provide protection recommendations in conformance with the City of Mercer Island “Tree Submittal Check List”, attached.

5. Limits of Assignment

The assignment is limited to the information gathered during the site visit May 20, 2020 (date of assessment) and references noted in this report. No excavation or sampling was undertaken to determine unseen defects. No inspection of trees not reported herein was made.

A site plan indicating a proposed development plan was provided and is included in the Addenda with tree locations noted.

6. Site Description

Lot 4, 5202 Forest Ave SE, Mercer Island, WA, King County Parcel No. 1410300063. The subject property consists of a single-family residence on 16,396 square feet.

A single-family residence is planned for the site.

7. Methodology

Each tree was measured for diameter at 4.5-feet above ground, (or equivalent) total height, percentage of live green crown, and dripline (extent of live limbs).

Each tree was assessed as to its condition, or vigor and viability:

Vigor or condition:

Health: Biotic

- Good: No evidence of fungal infection or decay; expected to survive without disturbance to its normal life expectancy. (40-100 years in this case)
- Fair: Tree has initial fungal decay or evidence of insect habitat and is less likely to survive to normal life expectancy. Some with minor defects, are rated viable,
- Poor: Tree has significant fungal decay and defects that render it not likely to survive three years.

Structural: Abiotic

- Good: no significant abiotic or mechanical defects
- Fair: less than preferred form, defects such as breaks in the bole, poor limb attachments, included bark, poor root contact, etc.
- Poor: Broken or cracked bole or limbs; root plate compromised

Viability:

- A measure of whether the tree is likely to live to its “normal” life span or has defects limiting that potential or poses a risk to the residence or proposed development is a simple ‘yes/no’ rating.

8. Tree Description

Refer to the attached Tree Assessment Summary Form. A total of fourteen on-site trees as indicated on the Site Plan provided were found. They are classified by the City Municipal Code (MICC) 19.10 –“Trees” as indicated following in Table 1.

Table 1- Tree Classifications

Species	Exceptional	Large	Small
W. red cedar	1	1	1
Bigleaf maple	3	2	1
W. Hemlock		3	
Douglas-fir		1	
Cascara			1

Three trees, No. 1 and 2, both bigleaf maples and 6, a western hemlock are non-viable., No. 6 is located away from potential targets and can be retained. Trees 1 and 2 will become high risk hazards once the house is constructed and should be removed.

Trees No. 1 and 2 are within the proposed building foot print. No replacement is required per (MCC 19.10.070) Basic Tree Risk Assessment forms are attached for both trees.

9. Root Zone Impacts

The limits of disturbance are determined on a case by case basis for each tree in consideration of the tree size, estimate of the extent of the root zone and consideration of the planned root zone disturbance. Distances from the face of each tree to the excavation limit were provided by the client. There appears to be little or no impact to the retained trees.

Tree No. 3 is measured at 11.5 feet east of the excavation zone. This encroachment into the root zone will affect about 30-percent of the entire zone and about 9-percent of the critical root zone. Post construction, this over-mature tree will overhang the house.

Table 2 – Root Zone Impacts

No.	Species	Facing Dripline	Measured Distance to Excavation Limit	Excavation Type	Root Zone Impact (963/3217)	Critical Root Zone Impact (75/804)
3	Bigleaf maple	32'	11.5'	Site leveling	±30%	±9%

In my opinion, Tree No. 3 should be removed prior to construction as the root structure will be significantly impacted by excavation and will overhang the house once that is built.

11. Discussion

The tree removal plan will retain 90-percent (9 of 11 of the total large regulated trees) and 73-percent of the total trees on the site.

12. Replacement Trees

The trees to be removed are big leaf maple that are very large and over-mature, are susceptible to dead limb drop and scaffold limb and whole tree failure. No trees are required to replace trees No. 1 and 2 as they are non-viable and will constitute high risk hazards, post construction. Tree No. 3 should be removed as root zone impacts will compromise long term health. Proposed locations are shown on the attached tree location map. Recommended native replacements are:

Table 3 – Replacement Trees

Pacific Dogwood	<i>Cornus nuttalli</i>
Douglas-fir	<i>Psuedotsuga menziesii</i>
Cascara	<i>Rhamnus purshiana</i>
Western red cedar	<i>Thuja plicata</i>

Per MCC 19.10.070 replacement trees must be at least 6-feet tall for the Douglas-fir and Western red cedar and 1.5-inches in diameter at the base for the Dogwood and Cascara. These are to be maintained for a period of 5 years after establishment.

13. Summary

Nine of the thirteen on-site trees are healthy and structurally sound indicating full-term viability. Two high risk hazard trees and one viable but potentially compromised tree will be removed. The remaining trees should be protected.

Retained Tree protections should include:

- Certified Arborist on site during excavation activities within the defined root zone of all trees.
- All trees to be retained are to be fenced at the edge of the recommended tree protection zone with 6-foot high cyclone type fencing.
- Utility lines should be bored. Bore access pits to be developed with 18” buckets or hand dug.
- Retaining wall footings to be minimally deep, no more than 12-inches.
- Tree roots over 1-1/2 inches in diameter encountered in all excavations are to be cut cleanly to the trench wall with clean sharp tools. Roots to be covered with soil or wetted burlap if they must remain exposed.
- Supplemental irrigation is to be provided during summer months (generally June-September) for all trees in the construction zones.

- Recommended protected tree root zones are to be covered with 4-inches of hog fuel at all times. Where machinery access is needed, the root zones should be covered with 12-inches of hog fuel, plywood or steel sheets.
- Stumps for trees to be removed are to be ground out (not excavated).

13. Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Ownership of the subject trees as provided by the client is assumed to be correct. No responsibility is assumed for legal matters. No opinion as to the property line location is made.
2. Care has been taken to obtain all information from reliable sources. The consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
3. The consultant shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including additional fees.
4. This report and any values expressed herein represent the opinion of the consultant, and the consultant'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.
5. The exhibits in this report are included to assist the reader and are not necessarily to scale.
6. Unless expressed otherwise, information in this report covers only items that were examined, and reflects the condition of those items at the time of inspection. The subject site was cleared of all vegetation at the time of inspection therefore the extent of removals is inferred from adjacent undisturbed areas. The inspection is limited to visual examination of accessible portions of the trees and plants.
7. Loss or alteration of any part of the report invalidates the entire report. Ownership of any documents related to this report passes to the client only.
8. The liability of ArborInfo LLC its contractors and employees is limited to the client only and only up to the amount of the fee actually received for the assignment.
9. *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.*

10. *NEARLY ALL TREES IN ANY CONDITION STANDING WITHIN REACH OF IMPROVEMENTS OR HUMAN USE AREAS REPRESENT HAZARDS THAT COULD LEAD TO DAMAGE OR INJURY. THE ASSESSMENT IS VALID FOR TWO YEARS FROM THE DATE OF INSPECTION, ONLY.*

11. PERTINENT JURISDICTION RULES AND REGULATIONS SHOULD BE CONSULTED PRIOR TO THE REMOVAL OF ANY TREE.

Respectfully Submitted,

A handwritten signature in cursive script that reads "Tom Hanson".

Thomas M. Hanson, CF, RCA

- I. Tree Location Map
- II. Tree Assessment Summary Table
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CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT

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TREE INVENTORY & REPLACEMENT SUBMITTAL INFORMATION

EXCEPTIONAL TREES

Exceptional Trees- means a tree or group of trees that because of its unique historical, ecological or aesthetic value constitutes an important community resource. A tree that is rare or exceptional by virtue of its size, species, condition, cultural/historical importance, age, and/or contribution as part of a tree grove. Trees with a diameter of more than 36 inches, or with a diameter that is equal to or greater than the diameter listed in the Exceptional Tree Table shown in MICC 19.16 under Tree, Exceptional.

List the total number of trees for each category and the tree identification numbers from the arborist report.

Number of trees 36" or greater _____

List tree numbers: _____

Number of trees 24" or greater (including 36" or greater) _____

List tree numbers: _____

Number of trees from Exceptional Tree Table (MICC 19.16) _____

List tree numbers: _____

LARGE REGULATED TREES

Large Regulated Trees- means any tree with a diameter of 10 inches or more, and any tree that meets the definition of an Exceptional Tree.

Number of Large Regulated Trees on site _____ (A)

List tree numbers: _____

Number of Large Regulated Trees on site proposed for removal _____ (B)

List tree numbers: _____

Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30% _____ %

RIGHT OF WAY TREES

Right of Way Trees- means a tree that is located in the street right of way adjacent to the project property.

Number of Large Regulated Trees in right of way _____

List tree numbers: _____

Number of Large Regulated Trees in right of way proposed for removal _____

List tree numbers: _____

Reason for removal: _____

TREE REPLACEMENT

Tree replacement- removed trees must be replaced based on the ratio in the table below. Replacement trees shall be conifers at least six feet tall and or deciduous at least one and one-half inches in diameter at base.

Diameter of Removed Tree (measured 4.5' above ground)	Tree replacement Ratio	Number of Trees Proposed for Removal	Number of Tree Required for Replacement Based on Size/Type
Less than 10"	1		
10" up to 24"	2		
Greater than 24" up to 36"	3		
Greater than 36" and any Exceptional Tree	6		
TOTAL TREE REPLACEMENTS			

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TREE SUBMITTAL CHECKLIST

If a box is checked, please provide the information in your next submittal

SUBMITTAL ITEMS

1. The Mercer Island Tree Inventory Form

- Provide the City's Mercer Island Tree Inventory Form

2. Arborist report/tree inventory

- Provide an Arborist report, prepared by a qualified Arborist. Include the following information in the arborist report.
 - 1. Description of how the arborist meets the threshold requirements for Qualified Arborist.
 - 2. A complete description of each tree's diameter, species, critical root zone, limits of allowable disturbance, health, condition, and viability.
 - 3. A description of the method(s) used to determine the limits of allowable disturbance (i.e., critical root zone, root plate diameter, or a case-by-case basis description for individual trees).
 - 4. Any special instructions specifically outlining any work proposed within the limits of disturbance protection areas (i.e. hand-digging, air space, tunneling, root pruning, any grade changes, clearing, monitoring, and aftercare).
 - 5. For trees not viable for retention, a description of the reason(s) for removal based on poor health, high risk of failure due to structure, defects, unavoidable isolation, windfirmness, unsuitability species, etc. If there is no reasonable alternative action (pruning, cabling, etc.) possible, replacement recommendations must be given.
 - 6. Describe the impact of necessary tree removal on the remaining trees, including those in a grove or on adjacent properties.
 - 7. Describe timing and installation of tree protection measures. Such measures must include fencing and be in accordance with the tree protection standards as outlined in MICC 19.10.
 - 8. The suggested location and species of replacement trees to be used when required. The report shall include planting and maintenance specifications to ensure long term survival.
 - 9. **A Tree Inventory** containing the following:
 - a. A numbering system of all existing large trees on the property (with corresponding tags on trees). The inventory shall also include large trees on adjacent property with driplines or critical root zones extending into the property.
 - b. Tree size (diameter). Where a tree splits into several trunks close to ground level, the dbh (Diameter at Breast Height) for the tree is the square root of the sum of the dbh for each individual stem squared (example with 3 stems: $dbh = \sqrt{(stem1)^2 + (stem2)^2 + (stem3)^2}$).
 - c. Proposed tree status (retained or proposed for removal).
 - d. Tree type or species.
 - e. Identify all Exceptional trees and differentiate between those less than 24 inches and those greater than or equal to 24 inches in diameter.
 - f. Brief general health or condition rating of each tree (i.e. poor, fair, good, etc.).

3. Site/tree retention plan

Indicate the following on all civil/utility and grading sheets. If there are no civil sheets indicate on the architectural site plan

- 1. Location of all proposed improvements (building footprint, access, utilities, buffers, required landscape areas).
- 2. Surveyed location of all large trees and Exceptional trees on the property
- 3. Show the critical root zone of Large trees on adjacent properties if driplines extend over the subject property line.
- 4. Trees labeled corresponding to the tree inventory numbering system on the Mercer Island Tree Inventory Form.
- 5. Identify Exceptional trees using different symbols for trees less than 24 inches and trees greater than or equal to 24 inches.
- 6. Location of tree protection measures.
- 7. Limits of excavation near potential saved trees (e.g. excavation limits for building foundation).
- 8. Indicate clearing limits/limits of disturbance (LOD) around all trees potentially impacted by site disturbances - grading, demolition, construction activities (including approximate LOD of off-site trees with overhanging driplines), etc.
- 9. Proposed tree status (trees to be removed or retained) noted by an 'X' for removal.

4. Replanting plan

- Provide the Replanting plan showing proposed locations of any required replacement trees.

PEER REVIEW AND CONFLICT OF INTEREST

A peer review of the tree permit application by a qualified arborist may be required to verify the adequacy of the information and analysis. **The applicant shall bear the cost of the peer review.**

The City Arborist may require the applicant retain a replacement qualified arborist or may require a peer review where the City Arborist believes a conflict of interest may exist.

For example, if an otherwise qualified arborist is employed by a tree removal company and prepares the arborist report for a development proposal, a replacement qualified arborist or peer review may be required.

ARBORIST QUALIFICATION

For tree reviews associated with a development proposal, a qualified arborist must have

- A minimum of three (3) years' experience working directly with the protection of trees during construction
- Have experience with the likelihood of tree survival after construction
- Be able to prescribe appropriate measures for the preservation of trees during land development
- ISA Tree Risk Assessment Qualification
- Your qualified arborists must have at least one (1) of the following credentials:
 - ISA Certified Arborist;
 - ISA Certified Arborist Municipal Specialist;
 - ISA Board Certified Master Arborist;
 - American Society of Consulting Arborists (ASCA) registered Consulting Arborist;
 - Society of American Foresters (SAF) Certified Forester for Forest Management Plans;

ADDITIONAL INFORMATION

Additional Information. The City Arborist or Code Official may require additional documentation, plans, or information as needed to ensure compliance with applicable City regulations.
