



LAYTON TREE CONSULTING, LLC

ARBORIST REPORT

8904 SE 58th Street
Mercer Island, WA



Report Prepared by:

Bob Layton
Registered Consulting Arborist #670
Certified Arborist #PN-2714A

March 8, 2024
Updated June 14, 2024

It's all about trees.....

Table of Contents

Assignment.....	3
Description.....	3
Methodology.....	3
Judging Condition.....	3
Judging Retention Suitability	4
Observations.....	4
Discussion/Recommendations-Updated	5
Tree Protection Guidelines	6
Tree Protection Measures	6
Tree Retention/Tree Replacement	7
Arborist Disclosure Statement.....	8

Attachments

Photos, pages 9 - 17

Tree Summary Table

Tree Plan Map

Tree Inventory and Replacement Worksheet

Assignment

Layton Tree Consulting, LLC was asked to compile an Arborist Report for a property on Mercer Island. The subject property is located at 8904 SE 58th Street. My assignment is to prepare a written report on present tree conditions, and to provide appropriate recommendations for the protection of retained trees during re-development (remodel/addition project) of the property.

This report encompasses all of the criteria set forth under the City of Mercer Island's tree regulations, particularly Chapter 19.10 Trees, of the Unified Development Code Title 19. A 'Regulated' tree is any tree with a diameter of more than 10-inches or any tree that meets the definition of an 'Exceptional' tree.

Date of Field Examination: March 1st and June 13th, 2024

Description

Nine trees were identified and assessed on the property. Of these, five are 'regulated' trees. Trees are found scattered around the property.

Subject trees have been identified with a numbered aluminum tag attached to the lower trunk. Tree tag numbers correspond with the numbers on the attached Tree Summary Table and map.

An additional five off-site trees were also assessed. One is located next to the southeast property corner and four are located within the street right-of-way.

Methodology

Each tree in this report was visited. Tree diameters were measured by tape. The tree heights were measured using a Spiegel Relaskop. Each tree was visually examined for defects and vigor. The tree assessment procedure involves the examination of many factors:

- The crown or canopy of the tree is examined for current vigor/health by examining the foliage for appropriate color and density, the vegetative buds for color and size, and the branches for structural form and annual shoot growth; and the overall presence of limb dieback and/or any disease issues.
- The trunk or main stem of the tree is inspected for decay, which includes cavities, wounds, fruiting bodies of decay (conks or mushrooms), seams, insect pests, bleeding or exudation of sap, callus development, broken or dead tops, structural defects and unnatural leans. Structural defects can include but are not limited to excessive or unnatural leans, crooks, forks with V-shaped crotches, multiple attachments.
- The root collar and exposed surface roots are inspected for the presence of decay, insect damage, as well as if they have been injured or wounded, undermined or exposed, or the original grade has been altered.

Based on these factors a determination of condition is made.

Judging Condition

The three condition categories are described as follows:

Good – free of significant structural defects, no disease concerns, minor pest issues, no significant root issues, good structure/form with uniform crown or canopy, foliage of normal color and density, average or normal vigor, will be wind firm if isolated or left as part of a grouping or grove of trees, suitable for its location

Fair – minor to moderate structural defects not expected to contribute to a failure in near future, no disease concerns, moderate pest issues, no significant root issues, asymmetric or unbalanced crown or canopy, average or normal vigor, foliage of normal color, moderate foliage density, will be wind firm if left as part of a grouping or grove of trees, cannot be isolated, suitable for its location

Poor – major structural defects expected to cause fail in near future, disease or significant pest concerns, decline due to old age, significant root issues, asymmetric or unbalanced crown or canopy, sparse or abnormally small foliage, poor vigor, not suitable for its location

Judging Retention Suitability

Not all trees necessarily warrant retention. The three retention suitability categories as described in ANSI A300 Part 5 (Standard Practices for the Management of Trees During Site Planning, Site Development and Construction) are as follows:

Good – trees are in good health condition and structural stability and have the potential for longevity at the site

Fair – trees are in fair health condition and/or have structural defects that can be mitigated with treatment. These trees may require more intense management and monitoring, and may have shorter life-spans than those in the “good” category.

Poor – trees are in poor health condition and have significant defects in structure that cannot be mitigated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess characteristics that are incompatible or undesirable in landscape settings or be unsuited for the intended use of the site.

Observations

Tree #1 is a young to semi-mature ‘Zebrina’ red cedar. It is of fairly good vigor. Foliage is of normal color and density for this time of year. It has a noticeable lean to the north. It is in fair-to-good condition. It was part of a row with two other cedar trees that have recently failed, see pictures below.

Tree #2 is a young to semi-mature cherry plum, located close to #101. It has a natural lean west away from Tree #1. Vigor appears to be good. Overall condition is rated as fair. It is in need of pruning to remove sucker growth and more uniformly shape the canopy.

Tree #3 is a semi-mature Western hemlock located close to the north property line. Vigor is good, foliage is of normal color and density. The lower trunk is sound with no outward indicators of any internal decay issues. It is in good condition. The lower trunk is covered with English ivy vines. It has developed large lower lateral limbs.

Trees #4 and #5 are semi-mature Portuguese laurel. These are part of a large hedgerow of laurel adjacent to the east property line in the backyard. These are not 'regulated' trees. Condition is fair.

Trees #6 and #7 are semi-mature Douglas fir located close to the southeast corner of the existing structure. Both are of good vigor. #6 has been significantly crown-raised in the past. #7 has a natural lean to the northwest. Both have developed good structural form.

Tree #8 is a semi-mature Scots pine located close to the southwest corner of the existing structure or house. It has been topped in the past and maintained at a small height. Condition is fair.

Tree #9 is a semi-mature black or Austrian pine. It is part of the large tree grouping within the street right-of-way. The main trunk forks into three tops or stems. The forked attachments appear sound. Vigor is fairly good. It is in fair-to-good condition.

Neighboring Trees

Tree #101 is a semi-mature Douglas fir located next to the southeast property corner, within the street right-of-way. It has been significantly pruned (wind-sailed) in the past. Vigor is fairly good. Condition is 'fair-to-good'.

Trees #102 and #103 are semi-mature to mature Austrian pines. They have developed typical form for the species and appears to be of good vigor. Both have natural leans to the south. #103 is somewhat suppressed by the larger fir tree.

Trees #104 and #105 are semi-mature Douglas fir. Both are of good vigor. No concerning issues were observed. #105 has a forked top. These are in good condition.

Discussion/Recommendations-Updated

The attached map shows the extent of driplines for regulated trees at the site. Expanding the house footprint would not be expected to have any adverse impacts on the subject trees southwest of the proposed addition. The limits of disturbance for these trees would not be encroached upon.

The proposal is to move the driveway to the east side of the lot to facilitate the addition and remodel. This would require impacts within the typical limits of disturbance for Trees #7 and #101. An exploratory trench was hand-excavated at 5-feet from the trunk face of #7 and 12-feet from #101 on the west side at the proposed driveway edge to a depth of 10-inches. That would be the maximum depth required to construct the driveway subbase. No large structural roots were encountered in the trench. Only two small roots, 1-inch and a ½-inch in diameter were encountered, see pictures below. A new pervious driveway could be constructed at this location without having noteworthy impacts on these trees, so long as work is carried out diligently, only excavating what is necessary to prepare the new gravel subbase. This work would remove some feeder roots, but not be expected to have consequential impacts on or threaten long-term tree health per MICC 19.10.080 - Tree protection standards. The project arborist shall be on-site to oversee the driveway excavation work so the necessary precautions can be taken to minimize impacts as much as possible. Phase the tree protection fencing for these trees

as shown on the attached map. Only move the protection fencing to Phase II when work is ready to commence on the driveway.

If the existing concrete walkway adjacent to the existing foundation near Trees #6 and #7 is to be removed; concrete shall be broken up with a manual jackhammer and removed by hand-labor only. Cover any newly exposed ground with a +/- 4-inch layer of coarse arborist wood-chip mulch or hog fuel to protect soils and surface roots.

Tree #8 will need to be removed to facilitate the building footprint expansion. No impacts are anticipated to occur to Trees #9 and #102 > #105 within the street right-of-way. The minor impact at the outer east dripline of Tree #105 is not concerning.

Tree Protection fencing shall be positioned as shown on the attached map. The existing grades within the tree protection zones shall be maintained and not altered. The existing concrete driveway within 5-feet of the driplines of nearby retained trees shall be broken up with a manual jackhammer and removed by hand-labor only. Cover any newly exposed ground with a +/- 4-inch layer of coarse arborist wood-chip mulch or hog fuel. Move the protection fence to Phase II as shown on the attached map.

Tree Protection Guidelines

Tree protection fencing shall be positioned around any retained trees or off-site protected trees prior to the start of work or bringing any heavy equipment onto the site. This will help to define clearing limits and protect soils and surface roots. Existing grades within the tree protection fenced area shall not be altered.

Any excavation within the driplines of retained trees and/or the neighboring trees shall be monitored by the project arborist so necessary precautions can be taken to minimize overall impacts. Any roots damaged during site work outside of the tree protection area shall be pruned clean at sound tissue prior to backfilling or finishing areas. Sound tissue is where the root is undamaged and the bark is completely intact with the root. This will help roots to seal off potential decay and allow them to sprout new growth. Any disturbed areas near protected trees shall be watered weekly during the dry season of June through September. This will help to create a favorable environment for new root growth and reduce the overall stress associated with root loss and disturbance.

Care shall be taken to continue to protect trees during finish landscape work. Any landscape work within the protection areas shall be accomplished using hand-labor only. Simply finish the landscape within the tree protection areas by cutting/hand-pulling any unwanted vegetation and applying a 2 to 4-inch covering of organic mulch/beauty bark. Avoid large plantings, irrigation trenches and the construction of hardscapes within the driplines of retained trees.

Tree Protection Measures

The following guidelines are recommended to ensure that the designated space set aside for the preserved trees are protected and construction impacts are kept to a minimum.

- Tree protection fencing shall be erected per attached tree plan prior to moving any heavy equipment on site. Doing this will set clearing limits and avoid compaction of soils within root zones of retained trees.
- Excavation limits shall be laid out in paint on the ground to avoid over excavating.
- Excavations within the driplines shall be monitored by a qualified tree professional so necessary precautions can be taken to decrease impacts to tree parts. A qualified tree professional shall monitor excavations when work has been authorized or approved within the dripline or critical root zone.
- To establish sub grade for foundations, curbs and pavement sections near the trees, soil shall be removed parallel to the roots and not at 90-degree angles to avoid breaking and tearing roots that lead back to the trunk within the dripline. Any roots damaged during these excavations shall be hand-excavated and exposed to sound tissue and cut cleanly with a saw prior to backfilling or finishing areas.
- Areas excavated within the dripline of retained trees shall be thoroughly irrigated weekly during dry periods.
- Preparations for final landscaping shall be accomplished by hand within the driplines of retained trees. Large equipment shall be kept outside of the tree protection zones at all times.

Tree Retention/Tree Replacement

MICC 19.10.060 - Tree removal—Associated with a development proposal.2.Retention requirement. Development proposals specified under subsection (a)(1) of this section shall retain trees as follows' minimum of 30 percent of trees with a diameter of ten inches or greater, or that otherwise meet the definition of large tree, shall be retained over a rolling five-year period.

The proposal is to retain four of the five regulated trees on the property, which is equivalent to 80% retention.

Any trees removed pursuant to the city's tree code will require replacement per 19.10.070 - Tree replacement. Based the city's Tree Inventory & Replacement Worksheet (attached), 3 replacement trees would be required.

B.Replacement trees.1.Location. Replacement trees shall be located in the following order of priority from most important to least important:

- a.On-site replacement adjacent to or within critical tree areas as defined in chapter 19.16 MICC;
- b.On-site replacement outside of critical tree areas adjacent to other retained trees making up a grove or stand of trees;
- c.On-site replacement outside of critical tree areas; and
- d.Off-site in adjacent public right-of-way where explicitly authorized by the city.

2.Species. Replacement trees shall primarily be those species native to the Pacific Northwest. In making a determination regarding the species of replacement trees, the city arborist shall defer to the species selected by the property owner unless the city arborist determines that the species selected is unlikely to survive for a period of at least ten years, represents a danger or nuisance, would threaten overhead or underground utilities or would fail to provide adequate protection to any critical tree area.

3.Size.

a.Coniferous trees shall be at least six feet tall; and

b.Deciduous trees shall be at least one and one-half inches in caliper.

The city arborist may authorize the planting of smaller-sized replacement trees if the applicant can demonstrate that smaller trees are more suited to the species, the site conditions, neighborhood character, and the purposes of this section, and that such replacement trees will be planted in sufficient quantities to meet the intent of this section. The city arborist shall not authorize the planting of shrubs or bushes in lieu of required replacement trees.

The property is large enough to successfully sustain the 3 required replacement trees. There is ample planting space in the front, back and side yard (west side).

Arborist Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training and experience to examine and assess trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risks associated with living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that grow, respond to their environment, mature, decline and sometimes fail in ways we do not fully understand. Conditions are often hidden within trees and below ground.

Arborists cannot guarantee that a tree will be healthy and/or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed. Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

Photo Documentation

Looking north down west property line to Trees #1 and #2



Tree #1 on right



Looking east across backyard, Trees #3, #4 and #5 in background



Trees #3 and #4



Tree #3, mid-crown



Laurel hedge at northeast corner of house



Looking east across front yard to Trees #6, #7 and #101



Looking north down east property line, Tree #101 in foreground, #7 on left



Looking north to garage from street



Trees #6, #7 and #101



Upper crowns of trees pictured above



Trees #9 and #102 > #105 in street right-of-way



Trees #9 and #102 > #105 in street right-of-way



Upper crowns of trees pictured above



Hand-excavated trench at edge of proposed new driveway



Hand-excavated trench at edge of proposed new driveway



Two small roots encountered within trench



Hand-excavated trench 5-feet from trunk face of Tree #7





Layton Tree Consulting LLC

For: Jennie Lee
 Site: 8904 SE 58th ST - Mercer Island

Tree Summary Table

Date: 3/1/2024

Tree/ Tag #	Species Common Name	Species Scientific Name	DBH (inches)	Height (feet)	Drip-Line (feet)				Condition	Regulated Yes/No	Exceptional Yes/No	Comments	Proposal
					N	S	E	W					
1	Zebrina cedar	<i>Thuja plicata 'Zebrina'</i>	7	20	6	4	6	4	Fair-Good	No	No	leans north	Retain
2	cherry plum	<i>Prunus cerasifera</i>	6	25	4	6	4	8	Fair	No	No	typical form, needs pruning	Retain
3	Western hemlock	<i>Tsuga heterophylla</i>	29	70	14	18	20	18	Good	Yes	Yes	good form and vigor	Retain
4	Portuguese laurel	<i>Prunus lusitanica</i>	9	40	10	10	12	8	Fair	No	No	typical, part of hedgerow	Retain
5	Portuguese laurel	<i>Prunus lusitanica</i>	8	16	x	x	x	x	Fair	No	No	topped, part of hedge	Remove
6	Douglas fir	<i>Pseudotsuga menziesii</i>	22	110	14	8	6	8	Fair-Good	Yes	No	crown raised in past, good structural form	Retain
7	Douglas fir	<i>Pseudotsuga menziesii</i>	33	130	18	12	6	16	Good	Yes	Yes	natural lean NW, good form and vigor	Retain
8	Scots pine	<i>Pinus sylvestris</i>	11	12	2	6	6	8	Fair	Yes	No	topped, close to house	Remove
9	Austrian pine	<i>Pinus nigra</i>	22	75	8	16	16	6	Fair-Good	Yes	No	forked trunk, asymmetric crown south	Retain
Neighboring/Off-site Trees													
101	Douglas fir	<i>Pseudotsuga menziesii</i>	36	120	10	18	10	14	Fair-Good	Yes	Yes	windsail pruned, good form and vigor	Protect
102	Austrian pine	<i>Pinus nigra</i>	22	75	0	20	10	8	Fair-Good	Yes	No	heavy, self corrected lean south	Protect
103	Austrian pine	<i>Pinus nigra</i>	18	60	0	14	0	16	Fair	Yes	No	suppressed by #104, leans SW	Protect
104	Douglas fir	<i>Pseudotsuga menziesii</i>	28	110	12	16	12	18	Good	Yes	No	good form and vigor	Protect
105	Douglas fir	<i>Pseudotsuga menziesii</i>	40	125	18	14	18	20	Good	Yes	Yes	good form and vigor, forked top	Protect

Drip-Line measurements from face of trunk

8904 SE 58TH ST - TREE PLAN MAP

N 86°53'08" W 27.31'

N 86°53'08" W 79.15'

LOT 35
PARCEL#
2287000350

10,005 ± SQ FT
0.23 ACRE(S)

25' REAR BSBL

$\Delta = 29^{\circ}28'29"$
 $R = 100.00'$
 $L = 51.44'$

FENCE COR
1.2'S OF LINE
& 0.6'E FROM
PROP COR

FENCE COR
1.0'S OF
PROP LINE

FENCE
1.0'S

3
4
SET REBAR/CAP
3.00'S ON LINE

EXISTING RESIDENCE

PROPOSED
ADDITION

NEW
COURT-
YARD

GARAGE

25'
ROW

EXIST'G

SET
REBAR/CAP

47.12'

15' SIDE BSBL

N 00°19'43" E

8'

5' SIDE BSBL

N 00°19'43" E 109.48'

20' FRONT BSBL

NEW
DRIVEWAY

105

104

103

102

6

101

17'

SET/
REBAR/CAP

29'-0"

N 89°40'17" W 75.00'

13'-9"

5'-8"

21'-1"

EXIST'G

6'-2"

APPROX. LOCATION
PER RECORDS (TYP)

-DRIPLINE

- - REGULATED TREE
- - NON-REGULATED TREE

- + PHASE I - TREE PROTECTION FENCE
- + PHASE II - TREE PROTECTION FENCE

SE 58TH ST

30'
ROW

APPROX. SCALE
1" = 14.25'

CB (TYPE 1)
RIM = 320.22'

CONC = 317.8'

15" CONC = 317.8'

15" CONC = 317.8'

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | www.mercergov.org



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 0

List tree numbers: _____

Number of trees 24" or greater (including 36" or greater) 2

List tree numbers: 3,7

Number of trees from Exceptional Tree Table (MICC 19.16) 2

List tree numbers: 3,7

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 5 (A)

List tree numbers: 3,6,7,8,9

Number of Large Regulated Trees on site proposed for removal 1 (B)

List tree numbers: 8

Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30% 80 %

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 5

List tree numbers: 101,102,103,104,105

Number of Large Regulated Trees in right of way proposed for removal 0

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	1	1
10" up to 24"	2	1	2
Greater than 24" up to 36"	3	0	0
Greater than 36" and any Exceptional Tree	6	0	0
TOTAL TREE REPLACEMENTS			3