## LAYTON TREE CONSULTING, LLC

## ARBORIST REPORT/TREE PLAN

7216 93 $^{\text {rd }}$ AVE SE<br>Mercer Island, WA



Report Prepared by:

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October 29, 2019
Updated March 6, 2021

It's all about trees......

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## Assignment

Layton Tree Consulting, LLC was contacted by Barcelo Homes Inc., and was asked to compile an Arborist Report for a property on Mercer Island. The subject property is located at $721693^{\text {rd }}$ AVE SE. My assignment is to prepare a written report on present tree conditions, and to provide appropriate recommendations for the protection of retained trees during development.

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.

Dates of Field Examination: October 28, 2019 and March 3, 2021

## Description

43 'regulated' trees were identified and assessed on the subject property. These are comprised almost entirely of native species; primarily bigleaf maple which account for 39 of the 43 identified trees.

Seven off-site or neighboring trees were also assessed. These exist within a close proximity of property lines on the properties to the east and north. There are no neighboring tree issues on the south property line. An additional eight trees were assessed within the $93^{\text {rd }}$ Avenue SE right-of-way near the proposed storm utility improvements.

A numbered aluminum tag was attached to the lower trunks of all assessed trees. These tag numbers correspond with the numbers on the Tree Summary Table and attached maps. The Tree Summary Table provides detailed information for all of the subject trees.

## 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

## Observations

43 large (regulated) trees were identified within the parcel boundaries. 39 of these are bigleaf maple which form a continuous grove over much of the property. Maple trees range from semi-mature to mature, estimated at 50 to 100 years of age. These have not developed ideal form due to past growing conditions. Trees have developed poor stem taper under heavy competition with each other for sunlight and space. Overall vigor is fair. Some are in moderate decline, evident by upper crown dieback. Three of the subject maples are in poor condition. These have developed extensive trunk decay. Another seven are rated as 'fair to poor' condition due to structural defects, low vigor and general decline.

There are a couple of young to semi-mature Western red cedar trees on the property. These are in fair to good condition. Only one Douglas fir on the property is greater than 10 -inches in diameter. This is a young specimen, estimated at around 30 years of age. Condition is fairly good. There are several smaller Douglas fir trees scattered around the property. Most are in poor condition due to suppression (heavy shading) and are over-topped by the larger maple.

The property has a major infestation of English laurel, which is found throughout. It is quite dense in places. There is also a moderate component of invasive English holly and a minor component of Himalayan blackberry. Most of the native vegetation is found in the southeast portion of the property. Here there are minor to moderate components of sword fern, Oregon grape, beaked hazelnut and oceanspray.

## Neighboring Trees

Trees \#101, \#102 and \#103 are located on the neighboring property to the north. \#101 and \#102 are approximately 10 -feet off of the property line and not likely to be impacted by re-development of the
property. Tree \#103 which is located closest to the property line is in poor condition. This is a semimature bigleaf maple cluster in ultimate decline. The tops have broken out in the past.

Neighboring trees \#104, \#105, \#106 and \#107 are located on the neighboring property to the north. \#104 is a mature bigleaf maple. This exceptional tree has developed good form and is of good vigor. \#105 is a mature European white birch. It is of fairly good vigor. Only minor top decline was observed. \#106 is an exceptional Japanese maple in good condition. \#107 is a cluster of English holly near the northwest property corner. It has developed typical form and is in fair condition.

Trees \#108 > \#115 are in the right-of-way of $93^{\text {rd }}$ Avenue SE. These are within a proximity of the proposed storm utility improvement work. There has been work on the existing storm utility in the recent past. The asphalt pr pavement has been cut in the recent past. These are primarily native species of Douglas fir, bigleaf maple and one red alder. The two Douglas fir are of 'exceptional' size. Both appear sound and in good condition. The maple has developed typical form. All appear to be of fairly good vigor. The alder is also of decent vigor with no concerning defects.

## Discussion/Recommendations

The grove of trees within the southeast portion of the site will be retained. Some of these are in poor condition with a high potential for failure in the future. However, there are few targets in the area. Tree parts are likely to fall into the wooded tree retention area. The retention of the poor condition trees within the preserved grove is feasible at this time as they are considered low risk and provide valuable wildlife habitat.

The extent of driplines (farthest reaching branches) for the subject trees can be found on the tree summary table at the back of this report. The driplines are shown for trees at the edges of the grove to be retained and for neighboring trees.

The recommended Limit of Disturbance (LOD) measurements can also be found on the tree summary table for trees that may be potentially impacted by proposed improvements and have been delineated on the attached tree plan map. The LOD measurements are based on species, age, condition, drip-line, prior improvements, proposed impacts and the anticipated cumulative impacts to the entire root zone. This is the maximum allowable encroachment. Encroachment (soil excavations) beyond the LOD is likely to cause decline or compromise long-term structural stability. These measurements shall be referenced when determining tree retention feasibility.

Tree protection barriers are shown on the final tree plan sheet. Protection fencing shall be located beyond the driplines of retained trees where possible. In no case shall the fencing be located closer than the LOD. The attached tree plan provides adequate protection for all affected trees.

In order to adequately protect neighboring Trees \#105 and \#106, provide a 10-foot protection zone from the property line. \#106 is 'exceptional' and warrants protection. Tree \#104 is not likely to be impacted because of existing steep slopes. If the slope is landscaped in the future, all work shall be done by hand within the driplines of retained and off-site protected trees. Soils shall not be disturbed. No grading is allowed within the LOD.

Trees \#108 > \#115 in the right-of-way of $93^{\text {rd }}$ AVE SE are not likely to be impacted. This utility was recently excavated and improved. The pavement adjacent to it has been cut and patched in the recent past. So long as work is kept to those same limits, there shouldn't be any further impacts to nearby trees.

Tree \#35 has an asymmetric crown to the north which will slightly impact the new residence. The condition of this tree has not changed to a noteworthy degree since the initial inspection. Crown reduction pruning is recommended to make the tree safer or more structurally sound. The total height of the tree needs to be reduced to roughly 40 to 50 -feet in height. The canopy on the north side will be pruned back to provide adequate building clearance and to more uniformly shape the canopy. Pruning the tree back on the north side will help to reduce the risk of a large stem failure. After the tree is properly pruned, it can be feasibly retained.

The project arborist shall be on-site to monitor any excavation within the driplines of retained and/or protected trees so necessary precautions can be taken to maintain these in a viable condition. Care shall be taken when working near trees to protect soils and surface roots that likely extend beyond the drip-line. Cover areas with a protective 6 to 8 -inch layer of wood chips or hog fuel to protect soils from compaction and damage to surface roots.

## 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. Standards have been set forth under MICC 19.10.080. Please review these standards prior to any development activity.

- Tree protection fencing shall be erected per the final 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 drip-lines 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 is required and allowed within the drip-line 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 drip-line. Any roots damaged during these excavations should be exposed to sound tissue and cut cleanly with a saw. Cutting tools should be sterilized with alcohol.
- Areas excavated within the drip-line of retained trees shall be thoroughly irrigated weekly during dry periods.
- Preparations for final landscaping shall be accomplished by hand within the drip-lines of retained trees. Large equipment shall be kept outside of the tree protection zones at all times.


## Tree Retention Calculation

A minimum of 30-percent retention of large, regulated trees is required over a rolling five-year period. Of the 43 regulated trees identified on the property; 18 will be removed. 25 trees or $58 \%$ will be retained.

## Tree Replacement

Replacement trees will be required per 19.10.070 Tree Replacement. The replacement ratios per tree removed are as follows:

Trees less than 10-inches in diameter $=1: 1(8)=8$ replacement trees
Trees 10 -inches to 23 -inches $=2: 1(11)=22$ replacement trees
Trees 24 -inches to 36 -inches $=3: 1(4)=12$ replacement trees
Any 'Exceptional' tree $=6: 1(2)=12$ replacement trees
A total of 46 replacement trees are required based on the proposal which includes the removal of Trees \#1 > \#17 and \#40. There are also 8 small (non-regulated) trees that will also be removed. A total of 54 replacement trees is required. Consult with your City planner for final tree replacement requirements. All replacement trees are to be planted on site. Replacement trees shall be at a minimum - $11 / 2$ inch caliper for deciduous species and 6 feet in height for coniferous species.

The most appropriate locations for tree replacement are on the undisturbed perimeters of the site and within openings in the preserved grove. These areas can be enhanced with native tree plantings of coniferous species to provide screening between residential properties and to maintain the wooded character of the area. Recommended species on the perimeters where more sunlight is available is Douglas fir and shore pine. Shade tolerant species shall be used within the preserved grove to include Western red cedar, Western hemlock and grand fir.

## 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

North property line


Front or west side of property


Subject maple, typical of maples on property


Middle portion of property, dense English laurel


Maples in southeast portion of property


Neighboring trees \#101, \#102 and \#103


Neighboring tree \#104


Neighboring trees \#105 and \#106


Neighboring tree \#107

$93^{\text {rd }}$ AVE SE ROW, Tree \#109 on left, \#110 on right

$93^{\text {rd }}$ AVE SE ROW, Tree \#112 on left, \#113, \#114 and \#115 in background


Layton Tree Consulting LLC
For: Barcelo Homes Inc
Site: $\quad 7216$ 93rd AVE SE
Tree Summary Table
Date: 10/24/2019

| Tree/ Tag \# | Species Common Name | Species Scientific Name | $\begin{gathered} \text { DBH } \\ \text { (inches) } \end{gathered}$ | Height (feet) | Drip-Line / Limits of Disturbance (feet) |  |  |  | Condition | Exceptional CommentsYes/No |  | ProposalReplacement <br> Trees |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | N | S | E | W |  |  |  |  |  |
| 1 | bigleaf maple | Acer macrophyllum | 32 | 96 | 30 | 10 | 22 | 18 | Fair | Yes | asymmetric crown to north, deadwood | Remove | 6 |
| 2 | bigleaf maple | Acer macrophyllum | 26 | 98 | 12 | 14 | 10 | 18 | Fair | No | forked top, moderate included bark | Remove | 3 |
| 3 | bigleaf maple | Acer macrophyllum | 11 | 75 | 18 | 0 | 16 | 0 | Fair | No | asymmetric crown to NE, suppressed | Remove | 2 |
| 4 | bigleaf maple | Acer macrophyllum | 24 | 105 | 0 | 22 | 20 | 6 | Fair | No | asymmetric crown to southeast | Remove | 3 |
| 5 | bigleaf maple | Acer macrophyllum | 22 | 32 | X | X | X | X | Poor | No | broken, 90\% dead | Remove | 0 |
| 6 | bigleaf maple | Acer macrophyllum | 37 | 108 | 24 | 8 | 8 | 34 | Fair | Yes | trunk forks at 8 feet, codominant stems | Remove | 6 |
| 7 | bigleaf maple | Acer macrophyllum | 18 | 105 | 8 | 12 | 5 | 16 | Fair | No | leans west, decent vigor | Remove | 2 |
| 8 | bigleaf maple | Acer macrophyllum | 14 | 98 | 11 | 6 | 6 | 9 | Fair | No | poor trunk taper | Remove | 2 |
| 9 | bigleaf maple | Acer macrophyllum | 18 | 102 | 11 | 6 | 14 | 5 | Fair | No | poor trunk taper, forked top | Remove | 2 |
| 10 | bigleaf maple | Acer macrophyllum | 23 | 116 | 6 | 28 | 16 | 12 | Fair | No | natural lean south, forked top, deadwood | Remove | 2 |
| 11 | bigleaf maple | Acer macrophyllum | 22 | 102 | 10 | 6 | 14 | 17 | Fair | No | natural lean west | Remove | 2 |
| 12 | Western red cedar | Thuja plicata | 26 | 64 | 14 | 13 | 13 | 16 | Fair | No | sparse top foliage, suppressed by \#11 | Remove | 3 |
| 13 | bigleaf maple | Acer macrophyllum | 19,15,9 (26) | 95 | 9 | 20 | 18 | 12 | Fair-poor | No | moderate trunk decay, crown dieback | Remove | 3 |
| 14 | bigleaf maple | Acer macrophyllum | 20 | 86 | 9 | 12 | 0 | 28 | Fair | No | natural lean west, forked top | Remove | 2 |
| 15 | bigleaf maple | Acer macrophyllum | 18 | 85 | 8 | 14 | 16 | 15 | Fair | No | forked top, compact crown | Remove | 2 |
| 16 | bigleaf maple | Acer macrophyllum | 22 | 80 | 5 | 18 | 20 | 10 | Fair-poor | No | significant crown dieback | Remove | 2 |
| 17 | bigleaf maple | Acer macrophyllum | 14 | 86 | 6 | 8 | 14 | 6 | Fair | No | compact crown | Remove | 2 |
| 18 | bigleaf maple | Acer macrophyllum | 26 | 95 | 16/16 | 24 | 5 | 22/16 | Fair | No | forked top, moderate included bark | Save |  |
| 19 | bigleaf maple | Acer macrophyllum | 25 | 97 | 16 | 22 | 18 | 5 | Fair | No | forked top, moderate included bark | Save |  |
| 20 | bigleaf maple | Acer macrophyllum | 28 | 94 | 8 | 18 | 12 | 14 | Fair | No | typical | Save |  |
| 21 | bigleaf maple | Acer macrophyllum | 27 | 98 | 14 | 5 | 14 | 10 | Fair | No | trunk seam, moderate deadwood | Save |  |
| 22 | bigleaf maple | Acer macrophyllum | 25 | 94 | 18 | 4 | 0 | 22 | Fair | No | natural lean west, asymmetric crown | Save |  |
| 23 | bigleaf maple | Acer macrophyllum | 22 | 96 | 26 | 0 | 0 | 16 | Fair | No | natural lean northwest | Save |  |
| 24 | bigleaf maple | Acer macrophyllum | 24 | 84 | 35 | 0 | 0 | 0 | Fair-poor | No | trunk decay, heavy lean north | Save |  |
| 25 | bigleaf maple | Acer macrophyllum | 25 | 83 | X | X | X | X | Poor | No | extensive trunk decay, leans north | Save |  |
| 26 | bigleaf maple | Acer macrophyllum | 16,12 (20) | 82 | 34 | 18 | 14 | 12 | Fair | No | moderate trunk decay, moderate deadwood | Save |  |
| 27 | bigleaf maple | Acer macrophyllum | 37 | 88 | 22 | 16 | 18 | 16 | Fair-poor | *No | large trunk cavity, trunk split, decent vigor | Save |  |
| 28 | bigleaf maple | Acer macrophyllum | 18 | 86 | 0 | 20 | 6 | 16 | Fair | No | significant natural lean south | Save |  |
| 29 | bigleaf maple | Acer macrophyllum | 34 | 94 | 26 | 8 | 20 | 10 | Fair | Yes | natural lean north | Save |  |
| 30 | bigleaf maple | Acer macrophyllum | 26,20 (33) | 92 | 6 | 26 | 16 | 13 | Fair-poor | No | significant trunk decay, natural lean south | Save |  |
| 31 | bigleaf maple | Acer macrophyllum | 13 | 38 | 10 | 14 | 15 | 0 | Fair | No | topped in past, low risk | Save |  |
| 32 | bigleaf maple | Acer macrophyllum | 8,7 (11) | 34 | 14 | 4 | 16 | 4 | Fair | No | suppressed, natural lean north | Save |  |
| 33 | bigleaf maple | Acer macrophyllum | 15 | 32 | X | X | X | X | Poor | No | broken, extensive decay | Save |  |
| 34 | bigleaf maple | Acer macrophyllum | 13 | 34 | 12 | 8 | 10 | 10 | Fair | No | broken, failed top, decent vigor, low risk | Save |  |
| 35 | bigleaf maple | Acer macrophyllum | 40,34 (52) | 78 | 28/20 | 12 | 22 | 18/20 | Fair-poor | *No | extensive basal rot, broken top | Save |  |
| 36 | bigleaf maple | Acer macrophyllum | 14 | 71 | 18/12 | 0 | 8 | 6 | Fair | No | natural lean north | Save |  |
| 37 | bigleaf maple | Acer macrophyllum | 8,8 (11) | 58 | 16/10 | 10 | 16 | 8 | Fair | No | natural lean north | Save |  |
| 38 | Western red cedar | Thuja plicata | 15 | 49 | 12 | 12 | 11 | 12/12 | Good | No | full crown, good vigor | Save |  |
| 39 | Douglas fir | Pseudotsuga menziesii | 10 | 61 | 8 | 7 | 8 | 8/8 | Fair-good | No | somewhat suppressed by maple | Save |  |

## Layton Tree Consulting LLC

For: Barcelo Homes Inc
Site: $\quad 7216$ 93rd AVE SE
Tree Summary Table
Date: 10/24/2019

| Tree/ <br> Tag \# | Species Common Name | Species Scientific Name | $\begin{gathered} \mathrm{DBH} \\ \text { (inches) } \end{gathered}$ | Height (feet) | Drip-Line / Limits of Disturbance (feet) |  |  |  | Condition $\begin{gathered}\text { Exceptional } \\ \text { Yes/No }\end{gathered}$ |  |  | ProposalReplacement <br> Trees |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | N | S | E | W |  |  |  |  |  |
| 40 | bigleaf maple | Acer macrophyllum | 11,9 (14) | 47 | 13 | 13 | 15 | 6 | Fair | No | fork at base, decent vigor | Remove | 2 |
| 41 | bigleaf maple | Acer macrophyllum | 9,8,5 (13) | 42 | 14 | 12 | 6 | 12/12 | Fair | No | tight cluster, typical | Save |  |
| 42 | bigleaf maple | Acer macrophyllum | 32 | 74 | 27/16 | 10 | 32/16 | 12/16 | Fair | No | leans northeast, end weight prune | Save |  |
| 43 | plum (fruit) | Prunus americana cv | 9,8 (12) | 21 | 14 | 7 | 9 | 12/10 | Fair-poor | No | topped, not maintained | Save |  |
| Neighb | boring Trees |  |  |  |  |  |  |  |  |  |  |  | 46 |
| 101 | bigleaf maple | Acer macrophyllum | 20 | 56 | NA | NA | NA | 6/6 | Fair | No | multiple tops, approx 10 feet off pl | Protect |  |
| 102 | Douglas fir | Pseudotsuga menziesii | 24 | 86 | NA | NA | NA | 5/5 | Good | No | approx 10 feet off pl, old broken top | Protect |  |
| 103 | bigleaf maple | Acer macrophyllum | 19,18 | 42 | NA | NA | NA | 10/5 | Poor | No | approx 5 feet off pl, broken top | Protect |  |
| 104 | bigleaf maple | Acer macrophyllum | 46 | 103 | NA | 20/20 | NA | 32/20 | Good | Yes | sound, good form | Protect |  |
| 105 | European white birch | Betula pendula | 18 | 78 | NA | 10/10 | 10 | 12 | Fair | No | incipient top decline | Protect |  |
| 106 | Japanese maple | Acer palmatum | 14,10 | 36 | NA | 16/10 | 17 | 16 | Good | Yes | no concerns | Protect |  |
| 107 | English holly | Ilex aquifolium | 8,7,6 | 20 | NA | 6/4 | 8 | 8/6 | Fair | No | typical | Protect |  |
| 108 | Austrian pine | Pinus nigra | 18 | 53 | 10 | 12 | 8 | NA | Good | No | above keystone retaining wall | Protect |  |
| 109 | Douglas fir | Pseudotsuga menziesii | 30 | 104 | 10 | 14 | 14 | NA | Good | Yes | appears sound, good vigor | Protect |  |
| 110 | Douglas fir | Pseudotsuga menziesii | 45 | 120 | 16 | 14 | NA | 10 | Good | Yes | appears sound, good vigor | Protect |  |
| 111 | red alder | Alnus rubra | 12,13 | 70 | 14 | 12 | 12 | NA | Fair | No | decent vigor | Protect |  |
| 112 | bigleaf maple | Acer macrophyllum | 26 | 66 | 18 | 22 | 20 | NA | Good | No | decent form, approx. 12-feet to retaining wall | Protect |  |
| 113 | bigleaf maple | Acer macrophyllum | 14,8 | 60 | 8 | 12 | 8 | NA | Fair | No | a few feet above rockery, decent form | Protect |  |
| 114 | bigleaf maple | Acer macrophyllum | 9,8,7 | 64 | 10 | 8 | 13 | NA | Fair | No | at edge of rockery, typical | Protect |  |
| 115 | bigleaf maple | Acer macrophyllum | 12,10,7 | 76 | 10 | 12 | 18 | NA | Fair | No | a few feet off driveway edge | Protect |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

-meets exceptional size threshold but is in poor condition
Drip-Line and Limits of Disturbance measurements from face of trunk
Drip-Line and Limits of Disturbance measurements for Neighboring trees from fence/property line
Calculated DBH: the DBH is parenthesis is the square root of the sum of the dbh for each individual stem squared (example with 3 stems
dbh = square root [(stem1)2 +(stem2)2 +(stem3)2 ]).




## CITY OF MERCER ISLAND

COMMUNITY PLANNING \& DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
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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 4
List tree numbers: $1,6,27,35$
Number of trees 24 " or greater (including 36 " or greater)

## 17

List tree numbers: $\quad 1,2,4,6,12,13,18-22,24,25,27,29,30,35,42$
Number of trees from Exceptional Tree Table (MICC 19.16)
4
List tree numbers: $\quad 1,6,27,35$

## 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 | 43 | (A) |  |
| :--- | :--- | :--- | :--- |
| List tree numbers: $\quad \# 1>\# 43$ |  |  |  |
|  |  |  |  |
| Number of Large Regulated Trees on site proposed for removal |  |  |  |
| List tree numbers: | $\# 1>\# 17$ and \#40 | 18 | (B) |
| Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30\% | 58 | $\%$ |  |
| 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

0
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 | 8 | 8 |
| 10" up to 24" | 2 | 11 | 22 |
| Greater than 24 " up to 36 " | 3 | 4 | 12 |
| Greater than 36" and any Exceptional Tree | 6 | 2 | 12 |
| TOTAL TREE REPLACEMENTS |  |  | 54 |

