

## Arborist Report

To: SRS Architecture c/o Bryan Samuel  
Site: 8621 SE 63rd St, Mercer Island, WA 98040  
Re: Tree Inventory and Assessment  
Date: May 12, 2025  
Project Arborist: Julian Garcia  
ISA Certified Arborist PN-9969A  
Reviewed By: Connor McDermott-Grossman  
ISA Certified Arborist PN-8704A  
ISA Qualified Tree Risk Assessor  
Referenced Documents: Site Survey (Terrane dated 12.17.2024)  
Conceptual Design Plans ("Mercer Modern", SRS dated 01.31.2025)  
Attached: Table of Trees  
Tree Site Map

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### Summary

I inventoried and assessed seven large (regulated) trees on this site. Of the on-site trees assessed, six met the exceptional tree criteria outlined in the Mercer Island City Code (MICC).

I found one tree grove on-site. Trees that are part of a grove shall also be considered exceptional trees, unless they meet the definition of a hazardous tree.

There were six trees on adjacent properties to the west and south that required documentation for this property. Trees on neighboring properties were documented if they appeared to be large (regulated) or exceptional trees and their driplines extended over the property line.

I reviewed conceptual design plans (SRS dated 01.31.2025) for tree retention feasibility. If these plans are implemented, then two regulated, exceptional trees (trees 402 and 403) and one regulated tree (tree 404) will need to be removed. If these three trees are removed as a part of the proposed development project, then 14 replacement trees and/or fees-in-lieu will be required.

*This report is preliminary as I have not reviewed finalized plans. As plans develop, please contact us so we can help identify and minimize tree and design conflicts.*

## Assignment and Scope of Work

This report outlines the site inspection by Julian Garcia of Tree Solutions Inc. (TSI), on February 6, 2025. I was asked to visit the site and provide an arborist report including findings and management recommendations. Bryan Samuel, of SRS Architecture, requested these services in preparation for a proposed residential development.

## Observations

### Site

This 12,341 square foot site faces SE 63rd St to the north and backs up to native forests of Pioneer Park to the south on Mercer Island. A one-story single-family residence currently exists in the center of the property. According to the City of Mercer Island GIS Portal, it is zoned as single-family residential (R-9.6) and no environmentally critical areas exist on-site.

The front yard consists of mostly mature, native species trees with native understory plants. Understory vegetation on-site was a mix of native species (*Polystichum munitum*, *Mahonia* spp., *Gaultheria shallon*) and lawn. Few invasive species, except for common holly (*Ilex aquifolium*) were observed on-site.

### Proposed Plans

The most recent conceptual design plans ("Mercer Modern", SRS dated 01.31.2025) propose to convert the existing garage into an attached dwelling unit (ADU) and to build a new garage extension on the western section of the house. The plans also show converting the existing driveway into an entry courtyard and creating a new driveway to connect to the garage extension.

### Trees

I inventoried and assessed seven large (regulated) trees on-site. Of the on-site trees assessed, six met the exceptional tree criteria as defined in MICC 19.16.010. I tagged each tree with a numbered aluminum tree tag, and the tree identifiers in the attached Table of Trees correspond to the number on each tag.

One tree grove consisting of eight trees with diameters of 10 inches or greater was observed (see Appendix C). The trees within this grove are considered exceptional trees and should be prioritized for retention pursuant to MICC 19.10.060.A.2(b).

All trees on adjacent properties were estimated from the subject site or public property such as the adjacent right-of-way (ROW). I used alphabetical tree identifiers for trees off-site. There were six adjacent trees that required documentation for this property. Trees on neighboring properties were documented if they appeared to be large (regulated) or exceptional trees and their driplines extended over the property line.

Of the tree inventoried, most were mature native species including Douglas fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), and western redcedar (*Thuja plicata*). The majority of the trees were determined to be in good health and structural condition.

I have included an annotated survey of the site to serve as the site map and attached a Table of Trees that has detailed information about each tree.

#### *Tree Removals: Trees 402-404*

Trees 402 and 403 are two healthy exceptional western hemlocks that are proposed for removal. They are located just west of the existing driveway and north of the house. I believe it would be difficult to retain the trees due to the proposed locations of the new driveway and garage extension, which would be within feet of their trunks. Tree 404 is a fairly healthy regulated Japanese maple that is located within the footprint of the new garage and will thus need to be removed.

#### *Trees 408 and 409*

Trees 408 and 409 are two healthy exceptional western redcedars located just north/northwest of the existing garage in the eastern section of the house. Both had full canopies and sound structural conditions and are excellent candidates for retention. The base of tree 409 is approximately four feet from the existing garage's foundation (see Appendix D ).

#### *Trees 401 and 405*

Trees 401 and 405 are two Douglas-firs in good health condition located near the northwestern property line and located within the existing tree grove. I observed two dyer's polypore (*Phaeolus schweinitzii*) fruiting bodies near the base of tree 401. Dyer's polypore is a wood decay fungi that can impact the structure of the wood (see Appendix D ). I recommend conducting an advanced assessment using a microresistance drill to determine the extent of decay.

#### *Tree C*

Tree C is a healthy exceptional western redcedar located just off-site along the northwestern property line and is located within the existing tree grove.

#### *Tree 407*

Tree 407 is a non-regulated southern magnolia growing on the west side of the house approximately two feet from the existing foundation. The tree is in good health and structural condition and can continue to be clearance pruned away from the house as needed.

## **Discussion—Tree Regulations**

### **Required Tree Retention**

MICC 19.10.060.A.2(a) requires that 30 percent of trees with a diameter of ten inches or greater be retained over a five-year period located in a single-family residential zone. Four trees are proposed to be retained for 67 percent retention on-site. This meets the MICC's retention requirements.

### **Exceptional Trees**

The city of Mercer Island requires projects to minimize the removal of exceptional trees, trees greater than 24 inches in diameter, and trees that are part of a healthy grove per MICC 19.10.060.A.2(b). Trees located outside of the area of land disturbance must also be retained unless their retention conflicts with proposed utilities, driveways, etc.

Exceptional trees exceeding 24 inches in diameter are protected by MICC 19.10.060.A.3 and can only be removed for the following reasons:

- Retaining the tree would result in an unavoidable hazardous situation.
- Retaining the tree would limit constructable gross floor area to below 85 percent of the maximum.

- Retaining the tree would prevent the creation of a residential lot through an otherwise allowable subdivision.

The project currently proposes the removal of two exceptional trees (trees 402 and 403) to facilitate proposed improvements, one of which (403) is also greater than 24 inches in diameter. To remove tree 403, it must be demonstrated to the city that the tree meets one or more of the criteria listed above.

### **Trees Located on Public Property**

Trees located on public property are regulated under MICC 19.10.100. A tree permit must be obtained prior to removing or pruning any tree located on public property, including the ROW.

No trees on public property are currently proposed for removal. All trees on public property must be protected during construction.

### **Replacement Trees**

Replacement trees are required to be planted for trees removed for site development per MICC 19.10.070. Replacement tree requirements are outlined in Table 1 below.

**Table 1.** Tree replacement requirements (*Per MICC 19.10.070 – Tree Replacement*)

<b>Diameter of Removed Tree</b>	<b>Number of Replacement Trees Required</b>
Less than 10 inches	1
10 inches up to 24 inches	2
24 inches up to 36 inches	3
More than 36 inches and any exceptional trees	6

For this project a total of 12 replacement trees will be required to replace two exceptional trees (trees 402 and 403) proposed for removal.

In general, replacement trees are required to be planted on-site and are required to be species native to the Pacific Northwest. Planted deciduous trees must be at least 1.5 inches in caliper and planted evergreen trees must be at least 6 feet tall. The city arborist may approve off-site planting such as in an adjacent public right-of-way (ROW) if there is insufficient space on-site. Further, they may authorize alternative replacement species if it is demonstrated that they are more suited to the site conditions.

Replacement trees should be planted in the wet season between October 1 and April 1. In the case of development projects, the city arborist may allow for an extension to ensure optimal planting and weather conditions for tree replacement survival.

Per MICC 19.10.070.C, fees-in-lieu may be authorized by the city arborist if it is determined that there is insufficient area on-site or in the adjacent ROW. Costs are determined based upon the expected tree replacement cost including labor, materials, and maintenance for each tree and the most current council tree and landscaper appraisers guide for plant appraisal (MICC 19.10.070.C.3).

### **Discussion—Construction Impacts**

*This report is preliminary as we have not reviewed finalized design or construction plans for this area. However, general tree protection recommendations are discussed below for planning purposes.*

### **Tree Removal**

Trees 402 and 403 are proposed for removal because the proposed garage extension will encroach well within their minimum limits of disturbance (MLOD) and a new driveway that will be routed to the garage will run through their existing locations (see Appendix D .

All removed trees must be felled directionally or be pieced down by an ISA certified arborist to avoid damage to adjacent retained trees.

The stumps of trees 402 and 403 should be ground or be cut to grade and left to decay because they are within the MLOD of tree 401. This will avoid collateral damage to adjacent root systems of retained trees caused by pulling the stump out with an excavator. If the stumps must be removed entirely for the new driveway, then alternative methods such as stump grinding, severing with a flat front bucket, or hydro-excavation and cutting the roots should be used to expose and sever roots before the stumps are removed (see Appendix G .

### **Tree Protection**

All retained, on-site trees and all off-site trees must be protected during construction to the standards outlined in MICC 19.10.080.

No ground disturbance is allowed within the MLOD, defined as five times diameter at standard height (DSH), or 6 feet from the tree trunk, whichever is greater. Development work within the MLOD has a high potential for mechanical damage to structural roots and may destabilize trees.

Development work may occur within the recommended limits of disturbance (RLOD), defined as eight times DSH or greater, depending on individual tree species and/or condition. All work proposed within the RLOD must be reviewed and approved by the project arborist and the City of Mercer Island. Tree protection fencing consisting of 6-foot-tall chain-link fencing is required to be installed at the RLOD of each protected tree. The RLOD for each retained tree is listed in the attached Table of Trees.

The areas contained within the tree protection fencing are referred to as Tree Protection Zones (TPZs). Per arborist approval, TPZ fencing may be placed at the edge of existing hardscape (e.g. existing driveway) within the TPZ to allow for staging and traffic.

When possible, trees should be retained as a group and the fencing shall encompass the entire area including all landscape beds or lawn areas associated with the grove. Reductions to the limits of disturbance to below the RLOD, or work proposed within the RLOD will likely require specialized construction techniques including, but not limited to, alternative excavation, soil protection, and arborist monitoring.

Additional tree protection specifications can be found in Appendix G .

Specific tree protection recommendations for individual trees are discussed below:

#### *Trees 408 and 409*

Trees 408 and 409 are located northwest and north, respectively, of the existing garage. In my professional experience western redcedars are particularly vulnerable to excavation and compaction. I recommend that tree protection fencing be installed outside the RLODs and at the edges of the existing driveway. If the existing driveway is to be used for construction access, I recommend that it remains in

place during initial phases of the project and demolished later in the project. This will help to reduce overall compaction and damage to any potential surface roots.

#### *Tree 401, 405, 406, B, and C*

Trees 401, 405, 406, B, and C are located adjacent to the existing driveway and may be impacted by the proposed driveway connecting to the new garage.<sup>1</sup> I recommend that tree protection fencing be installed at the edges of the existing driveway and moved to outside the RLODs once the driveway is demolished. These five trees may be protected with fencing as a group including the landscaping beds and lawns included in their RLODs (see Appendix D).

The existing driveway should be kept in place for as long as possible and should be demolished carefully to avoid damaging tree roots that extend beneath the existing slabs. Construction equipment should work from closest to the house backwards, always operating on paved surfaces. Other acceptable methods of soil protection include applying 3/4-inch plywood over 4-6 inches of wood chip mulch or use of AlturnaMats® (see Appendix G). No regrading should take place, and I recommend having an arborist on-site to monitor driveway demolition since it is within the MLODs of trees 401, 408, and 409.

#### *Mulch and Irrigation*

I recommend installing a 4-to-6-inch layer of coarse woody mulch (arborist woodchips) throughout the TPZs surrounding retained trees to mitigate health impacts to the trees induced by construction.

Supplemental irrigation should also be implemented within the TPZ during the dry summer months from June through September. Irrigation should run once per week and should wet the soil to a depth of 8 inches below the mulch layer. Continued summertime irrigation is also recommended for the 3 years following construction.

## **Recommendations**

### **Pre-Construction**

- Obtain all necessary permits and approval from the city prior to commencement of site work.
- Plan to protect all retained trees and all off-site trees to the standards outlined in MICC 19.10.080 and Appendix G.
- All relevant plan sheets must include:
  - The MLOD and RLOD of all retained trees.
  - The proposed locations of tree protection fencing consistent with the recommendations in this report.
  - The locations of all trees proposed for removal marked with an X.
  - Notes pertaining to specific tree protection efforts described in this report.
- Prepare an exhibit to demonstrate the infeasibility of retaining tree 403 during site development in accordance with the exceptions outlined in the MICC.

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<sup>1</sup> Tree 406 is a non-regulated tree but is a healthy vine maple and could be protected within the tree protection fencing along with the rest of the tree grove if desired.

- Add 12 replacement trees to the landscape plan or pursue alternate planting or fees-in-lieu of planting.
- Have the project arborist present a pre-construction meeting to coordinate tree protection efforts.

**During Construction**

- Tree protection consisting of 6-foot-tall chain-link fencing should be installed at the precise locations outlined in the body of this report prior to any construction related activities including demolition.
- Install a 4- to 6-inch layer of woodchip mulch within all TPZs.
- Establish and maintain supplemental irrigation within the TPZs from June to September.
- Any required pruning or removals should be conducted by an ISA certified arborist in accordance with current and applicable ANSI A300 pruning standards.
- All removed trees must be felled directionally or be pieced down by an ISA certified arborist to avoid damage to adjacent retained trees, and the stumps of trees 402 and 403 should be ground or be cut to grade and left to decay.

**Post-Construction**

- Plant all required replacement trees.
- Continue supplemental summer irrigation for the 3 years following construction.

Respectfully submitted,

Julian Garcia  
Consulting Arborist

## Appendix A Glossary

**DBH or DSH:** diameter at breast or standard height; the diameter of the trunk measured 54 inches (4.5 feet) above grade (Council of Tree and Landscape Appraisers 2019)

**tree grove:** a group of eight or more trees each 10 inches or more in diameter that form a continuous canopy. Trees that are part of a grove shall also be considered exceptional trees, unless they also meet the definition of a hazardous tree. (MICC 19.16.010)

**exceptional tree:** a tree measuring 36 inches DSH or greater or with a diameter that is equal to or greater than the diameter listed in the Exceptional Tree Table (MICC 19.16.010)

**ISA:** International Society of Arboriculture

**large tree (regulated):** a tree measuring 10 inches or greater DSH (MICC 19.16.010)

**microresistance drill:** a tool used to test for decay in the trees. These drill systems measure the amount of resistance presented to the drilling needle as it is driven into the wood, perpendicular to the annual rings. The drilling needle is driven into the wood, at a constant rate, up to ½ meter deep, and can detect minute changes in wood density. The data is recorded as a graphic resistance profile using a vertical scale that represents wood density. It is then analyzed.

**MLOD (Minimum Limits of Disturbance)** Minimum Limits of Disturbance: represents a distance five (5) times that of the trunk or 6-feet, whichever is greater, and is the minimum distance from a trunk that a structural root can be cut to maintain tree stability.

**RLOD (Recommend Limits of Disturbance):** as outlined in ISA Best Management Practices: Managing Trees During Construction, this is calculated as a radial distance 8 times the trunk diameter or greater depending on tree species and/or condition. For the purpose of this report, this represents the critical root zone (CRZ).

**small tree (non-regulated):** a tree measuring less than 10 inches DSH (MICC 19.16.010)

**Visual Tree Assessment (VTA):** method of evaluating structural defects and stability in trees by noting the pattern of growth (Mattheck & Breloer 1994)

## Appendix B References

Accredited Standards Committee A300 (ASC 300). ANSI A300 (Part 1) Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning). Londonderry: Tree Care Industry Association, 2017.

Council of Tree and Landscape Appraisers, Guide for Plant Appraisal, 10<sup>th</sup> Edition Second Printing. Atlanta, GA: The International Society of Arboriculture (ISA), 2019.

Fite, Kelby and Dr. E. Thomas Smiley. Best Management Practices: Managing Trees During Construction, Second Edition. Champaign, IL: International Society of Arboriculture (ISA), 2016.

Mattheck, Claus and Helge Breloer, The Body Language of Trees.: A Handbook for Failure Analysis. London: HMSO, 1994.

Mercer Island Municipal Code (MICC) 19.16.010. Definitions

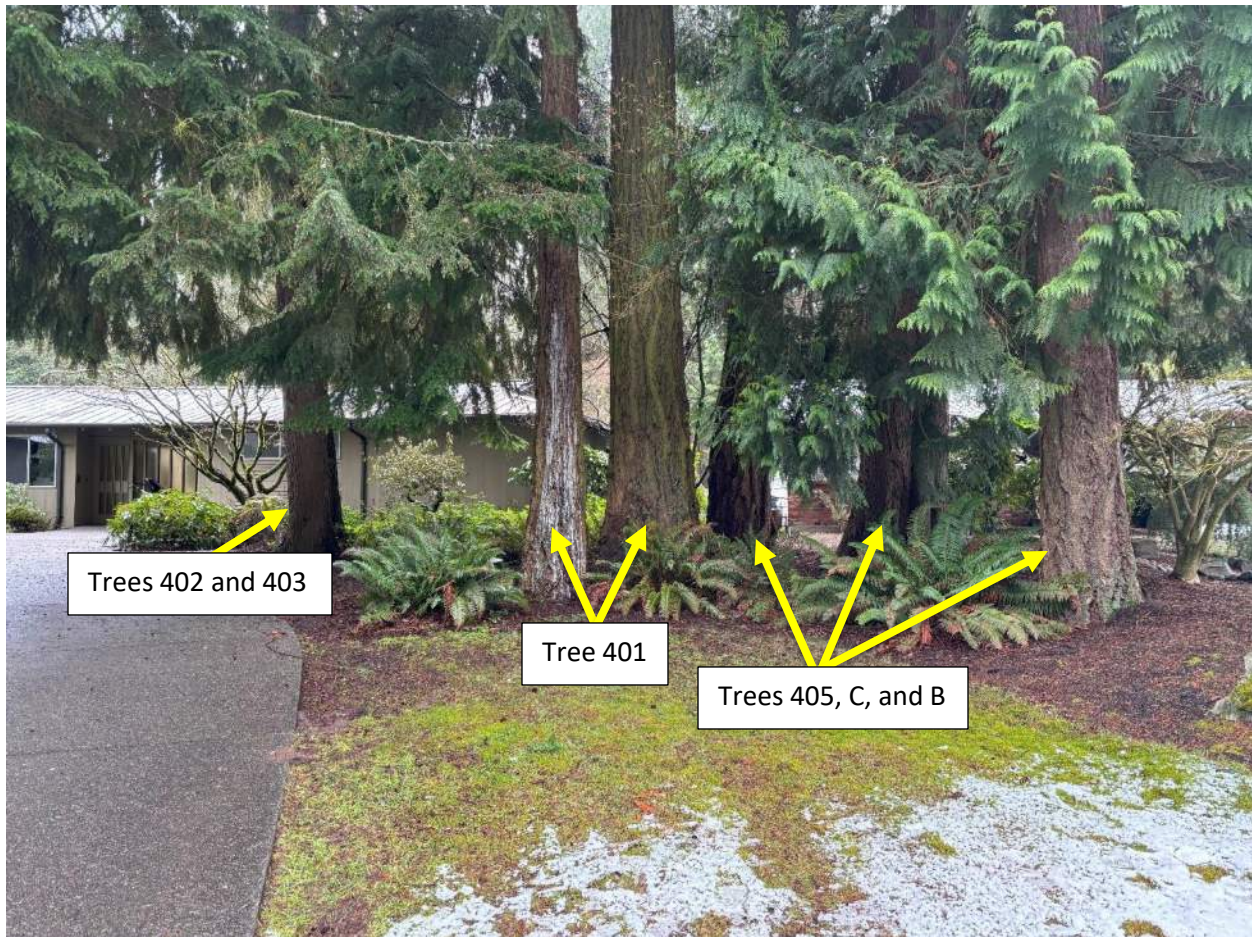
Mercer Island Municipal Code (MICC) 19.10. Trees

### Appendix C Figures



**Figure 1.** Tree grove located north of existing house (Google Maps accessed on 02.20.2025)

## Appendix D Photographs



**Photograph 1.** As seen from the north, trees 402 and 403, to be removed, and trees 401, 405, B, and C, to be retained along the new driveway to the garage extension. Retained trees should be protected together as a group with tree protection fencing.



**Photograph 2.** Tree 408, shown above, is proposed for retention and is located approximately four feet from the existing garage's foundation. In order to retain, no disturbance should occur within its MLOD as western redcedars are particularly vulnerable to excavation and compaction.



**Photograph 3.** As seen from the north, trees to be removed due to their conflict with the footprint of the garage extension and new driveway.



**Photograph 4.** *P. schweinitzii* fruiting bodies, circled above, observed south/southwest of the base of tree 401. If the tree is retained, I recommend an advanced assessment by microresistance drill to test for sound wood.

## Appendix E Assumptions & Limiting Conditions

- 1 Consultant assumes that the site and its use do not violate, and is in compliance with, all applicable codes, ordinances, statutes or regulations.
- 2 The consultant may provide a report or recommendation based on published municipal regulations. The consultant assumes that the municipal regulations published on the date of the report are current municipal regulations and assumes no obligation related to unpublished city regulation information.
- 3 Any report by the consultant and any values expressed therein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event, or upon any finding to be reported.
- 4 All photographs included in this report were taken by Tree Solutions, Inc. during the documented site visit, unless otherwise noted. Sketches, drawings and photographs (included in, and attached to, this report) are intended as visual aids and are not necessarily to scale. They should not be construed as engineering drawings, architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by the consultant as to the sufficiency or accuracy of the information.
- 5 Unless otherwise agreed, (1) information contained in any report by consultant covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, climbing, or coring.
- 6 These findings are based on the observations and opinions of the authoring arborist, and do not provide guarantees regarding the future performance, health, vigor, structural stability or safety of the plants described and assessed.
- 7 Measurements are subject to typical margins of error, considering the oval or asymmetrical cross-section of most trunks and canopies.
- 8 Tree Solutions did not review any reports or perform any tests related to the soil located on the subject property unless outlined in the scope of services. Tree Solutions staff are not and do not claim to be soils experts. An independent inventory and evaluation of the site's soil should be obtained by a qualified professional if an additional understanding of the site's characteristics is needed to make an informed decision.
- 9 Our assessments are made in conformity with acceptable evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.

## Appendix F Methods

### **Measuring**

I measured the diameter of each tree at 54 inches above grade, diameter at standard height (DSH). If a tree had multiple stems, I measured each stem individually at standard height and determined a single-stem equivalent diameter by using the method outlined in the Guide for Plant Appraisal, 10<sup>th</sup> Edition Second Printing published by the Council of Tree and Landscape Appraisers. A tree is regulated based on this single-stem equivalent diameter value. Because this value is calculated in the office following field work, some unregulated trees may be included in our data set. These trees are included in the tree table for informational purposes only and not factored into tree totals discussed in this report.

### **Tagging**

I tagged each tree with a circular aluminum tag at eye level. I assigned each tree a numerical identifier on our map and in our tree table, corresponding to this tree tag. I used alphabetical identifiers for trees off-site.

### **Evaluating**

I evaluated tree health and structure utilizing visual tree assessment (VTA) methods. The basis behind VTA is the identification of symptoms, which the tree produces in reaction to a weak spot or area of mechanical stress. A tree reacts to mechanical and physiological stresses by growing more vigorously to re-enforce weak areas, while depriving less stressed parts. An understanding of the uniform stress allows the arborist to make informed judgments about the condition of a tree.

### **Rating**

When rating tree health, I took into consideration crown indicators such as foliar density, size, color, stem and shoot extensions. When rating tree structure, I evaluated the tree for form and structural defects, including past damage and decay. Tree Solutions has adapted our ratings based on the Purdue University Extension formula values for health condition (*Purdue University Extension bulletin FNR-473-W - Tree Appraisal*). These values are a general representation used to assist arborists in assigning ratings.

#### **Health**

Excellent - Perfect specimen with excellent form and vigor, well-balanced crown. Normal to exceeding shoot length on new growth. Leaf size and color normal. Trunk is sound and solid. Root zone undisturbed. No apparent pest problems. Long safe useful life expectancy for the species.

Good - Imperfect canopy density in few parts of the tree, up to 10% of the canopy. Normal to less than ¾ typical growth rate of shoots and minor deficiency in typical leaf development. Few pest issues or damage, and if they exist they are controllable or tree is reacting appropriately. Normal branch and stem development with healthy growth. Safe useful life expectancy typical for the species.

Fair - Crown decline and dieback up to 30% of the canopy. Leaf color is somewhat chlorotic/necrotic with smaller leaves and “off” coloration. Shoot extensions indicate some stunting and stressed growing conditions. Stress cone crop clearly visible. Obvious signs of pest problems contributing to lesser condition, control might be possible. Some decay areas found in main stem and branches. Below average safe useful life expectancy

Poor - Lacking full crown, more than 50% decline and dieback, especially affecting larger branches. Stunting of shoots is obvious with little evidence of growth on smaller stems. Leaf size and color

reveals overall stress in the plant. Insect or disease infestation may be severe and uncontrollable. Extensive decay or hollows in branches and trunk. Short safe useful life expectancy.

### **Structure**

Excellent - Root plate undisturbed and clear of any obstructions. Trunk flare has normal development. No visible trunk defects or cavities. Branch spacing/structure and attachments are free of any defects.

Good - Root plate appears normal, with only minor damage. Possible signs of root dysfunction around trunk flare. Minor trunk defects from previous injury, with good closure and less than 25% of bark section missing. Good branch habit; minor dieback with some signs of previous pruning. Codominant stem formation may be present, requiring minor corrections.

Fair - Root plate reveals previous damage or disturbance. Dysfunctional roots may be visible around the main stem. Evidence of trunk damage or cavities, with decay or defects present and less than 30% of bark sections missing on trunk. Co-dominant stems are present. Branching habit and attachments indicate poor pruning or damage, which requires moderate corrections.

Poor - Root plate disturbance and defects indicate major damage, with girdling roots around the trunk flare. Trunk reveals more than 50% of bark section missing. Branch structure has poor attachments, with several structurally important branches dead or broken. Canopy reveals signs of damage or previous topping or lion-tailing, with major corrective action required.

## Appendix G Tree Protection Specifications

*The following is a list of protection measures that must be employed before, during and after construction to ensure the long-term viability of retained trees.*

1. **Project Arborist:** The project arborists shall at minimum have an International Society of Arboriculture (ISA) Certification and ISA Tree Risk Assessment Qualification.
2. **Tree Protection Zone (TPZ):** The TPZ is to be set at the Recommended Limits of Disturbance listed in the Table of Trees. In some cases, the TPZ may extend outside tree protection fencing. Work within the TPZ must be approved and monitored by the project arborist.
3. **Tree Protection Fencing:** Tree protection shall consist of 6-foot-tall chain-link fencing installed at the TPZ as approved by the project arborist. Fence posts shall be anchored into the ground or bolted to existing hardscape surfaces.
  - a. Where trees are being retained as a group the fencing shall encompass the entire area including all landscape beds or lawn areas associated with the grove.
  - b. Per arborist approval, TPZ fencing may be placed at the edge of existing hardscape within the TPZ to allow for staging and traffic.
  - c. Where work is planned within the TPZ, install fencing at edge of TPZ and move to limits of disturbance at the time that the work within the TPZ is planned to occur. This ensures that work within the TPZ is completed to specification.
  - d. Where trees are protected at the edge of the project boundary, construction limits fencing shall be incorporated as the boundary of tree protection fencing.
4. **Access Beyond Tree Protection Fencing:** The project manager or project arborist shall be present when tree protection areas are accessed.
5. **Tree Protection Signage:** Tree protection signage shall be affixed to fencing every 20 feet. Signage shall be fluorescent, at least 2' x 2' in size. Signage will note: "Tree Protection Area – Do Not Enter: Entry into the tree protection area is prohibited unless authorized by the project manager." Signage shall include the contact information for the project manager and instructions for gaining access to the area.
6. **Filter / Silt Fencing:** Filter / silt fencing within or at the edge of the TPZ of retained trees shall be installed in a manner that does not sever roots. Install so that filter / silt fencing sits on the ground and is weighed in place by sandbags or gravel. Do not trench to insert filter / silt fencing into the ground.
7. **Monitoring:** The project arborist shall monitor all ground disturbance at the edge of or within the TPZ, including where the TPZ extends beyond the tree protection fencing.
8. **Soil Protection:** No parking, foot traffic, materials storage, or dumping (including excavated soils) are allowed within the TPZ. Heavy machinery shall remain outside of the TPZ. Access to the tree protection area will be granted under the supervision of the project arborist. If project arborist allows, heavy machinery can enter the area if soils are protected from the load. Acceptable methods of soil protection include applying 3/4-inch plywood over 4-6 inches of wood chip mulch or use of AlturnaMats® (or equivalent product approved by the project arborist). Retain existing paved surfaces within or at the edge of the TPZ for as long as possible.
9. **Soil Remediation:** Soil compacted within the TPZ of retained trees shall be remediated using pneumatic air excavation according to a specification produced by the project arborist.
10. **Canopy Protection:** Where fencing is installed at the limits of disturbance within the TPZ, canopy management (pruning or tying back) shall be conducted to ensure that vehicular traffic does not damage canopy parts. Exhaust from machinery shall be located 5 feet outside the dripline of retained trees. No exhaust shall come in contact with foliage for prolonged periods of time.

11. **Duff/Mulch:** Apply 4-6 inches of arborist wood chip mulch or hog fuel over bare soil within the TPZ to prevent compaction and evaporation. TPZ shall be free of invasive weeds to facilitate mulch application. Keep mulch 1 foot away from the base of trees and 6 inches from retained understory vegetation. Retain and protect as much of the existing duff and understory vegetation as possible.
12. **Excavation:** Excavation done at the edge of or within the TPZ shall use alternative methods such as pneumatic air excavation or hand digging. If heavy machinery is used, use flat front buckets with the project arborist spotting for roots. When roots are encountered, stop excavation and cleanly sever roots. The project arborist shall monitor all excavation done within the TPZ.
13. **Fill:** Limit fill to 1 foot of uncompacted well-draining soil, within the TPZ of retained trees. In areas where additional fill is required, consult with the project arborist. Fill must be kept at least 1 foot from the trunks of trees.
14. **Root Pruning:** Limit root pruning to the extent possible. All roots shall be pruned with a sharp saw making clean cuts. Do not fracture or break roots with excavation equipment.
15. **Root Moisture:** Root cuts and exposed roots shall be immediately covered with soil, mulch, or clear polyethylene sheeting and kept moist. Water to maintain moist condition until the area is back filled. Do not allow exposed roots to dry out before replacing permanent back fill.
16. **Hardscape Removal:** Retain hardscape surfaces for as long as practical. Remove hardscape in a manner that does not require machinery to traverse newly exposed soil within the TPZ. Where equipment must traverse the newly exposed soil, apply soil protection as described in section 8 of these specifications. Replace fencing at edge of TPZ if soil exposed by hardscape removal will remain for any period of time.
17. **Tree Removal:** All trees to be removed that are located within the TPZ of retained trees shall not be ripped, pulled, or pushed over. The tree should be cut to the base and the stump either left in place or ground out. A flat front bucket can also be used to sever roots around all sides of the stump, or the roots can be exposed using hydro or air excavation and then cut before removing the stump.
18. **Irrigation:** Retained trees with soil disturbance within the TPZ will require supplemental water from June through September. Acceptable methods of irrigation include drip, sprinkler, or watering truck. Trees shall be watered three times per month during this time.
19. **Pruning:** Pruning required for construction and safety clearance shall be done with a pruning specification provided by the project arborist in accordance with American National Standards Institute ANSI-A300 2017 Standard Practices for Pruning. Pruning shall be conducted or monitored by an arborist with an ISA Certification.
20. **Plan Updates:** All plan updates or field modification that result in impacts within the TPZ or change the retained status of trees shall be reviewed by the senior project manager and project arborist prior to conducting the work.
21. **Materials:** Contractor shall have the following materials onsite and available for use during work in the TPZ:
  - **Sharp and clean bypass hand pruners**
  - **Sharp and clean bypass loppers**
  - **Sharp hand-held root saw**
  - **Reciprocating saw with new blades**
  - **Shovels**
  - **Trowels**
  - **Clear polyethylene sheeting**
  - **Burlap**
  - **Water**



**Table of Trees**  
8621 SE 63rd St  
Mercer Island, WA

Arborist: JG  
Date of Inventory: 02.06.2025  
Table Prepared: 02.28.2025

DSH (Diameter at Standard Height) is measured 4.5 feet above grade, or as specified in the Guide for Plant Appraisal, 10th Edition, published by the Council of Tree and Landscape Appraisers.  
DSH for multi-stem trees are noted as a single stem equivalent, which is calculated using the method defined in the Guide for Plant Appraisal, 10th Edition.  
Letters are used to identify trees on neighboring property with overhanging canopies.  
Minimum Limit of Disturbance (MLOD) is defined as 5 times trunk diameter or 6 feet, whichever is greater.  
Recommended Limit of Disturbance (RLOD) is 8 times trunk diameter or greater depending on tree species and/or condition.  
Dripline is measured from the center of the tree to the outermost extent of the canopy.

Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	Dripline (feet)	Exceptional Threshold	Exceptional	24-Inch DSH or Greater	Grove	MLOD (feet)	RLOD (feet)	Proposed Action	Notes
Large (regulated) trees															
401	<i>Pseudotsuga menziesii</i>	Douglas-fir	41.6	35.9,21	Good	Fair	23.7	30.0	Exceptional - Size	Yes	Grove	17	28	Impacted	Pitching along north side of trunk up to 12 feet; 2 <i>Phaeolus</i> fruiting bodies found at base and 2 feet away on west/southwest side; smaller stem has broken top
402	<i>Tsuga heterophylla</i>	Western hemlock	18.3		Good	Good	21.8	24.0	Exceptional - Grove	-	Grove	8	15	Remove	1.5 feet west of existing driveway
403	<i>Tsuga heterophylla</i>	Western hemlock	25.1		Good	Good	22.0	24.0	Exceptional - Size	Yes	Grove	10	21	Remove	3 feet southwest of existing driveway; heavy cone set
404 (Dead)	<i>Acer palmatum</i>	Japanese maple	11.5	4.5,4.5,3.5,4.3,9,4.9	Fair	Good	12.5	12.0	-	-	-	6	8	Remove	3 feet north of existing house; tree is dead as of April 2025
405	<i>Pseudotsuga menziesii</i>	Douglas-fir	33.6		Good	Good	23.4	30.0	Exceptional - Size	Yes	Grove	14	22	Impacted	-
408	<i>Thuja plicata</i>	Western redcedar	56.9		Good	Good	27.4	30.0	Exceptional - Size	Yes	Grove	24	47	Retain	Appears very healthy; little to no flagging; full canopy; codominant stems at 30 feet
409	<i>Thuja plicata</i>	Western redcedar	48.5		Good	Good	19.0	30.0	Exceptional - Size	Yes	Grove	20	40	Retain	4-5 feet north of existing garage
Small (non-regulated) trees															
406	<i>Acer circinatum</i>	Vine maple	6.8	5.3,2.5,2.9,1.5,1	Good	Good	15.3	8.0	-	-	-	6	5	Retain	Phototropic growth to south
407	<i>Magnolia grandiflora</i>	Southern magnolia	7.6	6.3,3,3	Good	Good	7.3	16.0	-	-	-	6	5	Retain	Clearance pruned away from existing house; 2 feet from foundation
410	<i>Magnolia stellata</i>	Star magnolia	9.7	6.4,5.1,5.2	Good	Good	10.4	-	-	-	-	6	6	Retain	-
411	<i>Prunus x subhirtella 'Pendula'</i>	Weeping flowering cherry	7.8		Fair	Good	10.3	-	-	-	-	6	5	Impacted	Potential impact from future pavilion if area is regraded
Off-site trees															
A	<i>Acer palmatum</i>	Japanese maple	4.4	3,2,2.5	Good	Good	5.2	12.0	-	-	-	6	3	Retain	-
B	<i>Pseudotsuga menziesii</i>	Douglas-fir	25.0		Good	Good	19.0	30.0	Exceptional - Grove	Yes	Grove	10	17	Retain	Broken top
C	<i>Thuja plicata</i>	Western redcedar	32.0		Good	Good	26.3	30.0	Exceptional - Size	Yes	Grove	13	21	Impacted	2 large buttress roots growing to east
D	<i>Acer circinatum</i>	Vine maple	6.1	3,3.5,4	Good	Good	20.3	8.0	-	-	-	6	4	Retain	Very close to southern property line
E	<i>Acer circinatum</i>	Vine maple	12.1	8,5,3,7	Good	Good	19.5	8.0	Exceptional - Size	-	-	6	8	Retain	Phototropic lean to north
F	<i>Acer macrophyllum</i>	Bigleaf maple	12.0		Good	Fair	38.5	30.0	-	-	-	6	8	Retain	Overhanging canopy
G	<i>Prunus emarginata var. mollis</i>	Bitter cherry	11.0		Good	Good	21.5	-	-	-	-	6	7	Retain	Slight corrected lean to northeast
H	<i>Acer macrophyllum</i>	Bigleaf maple	10.0		Good	Fair	20.4	30.0	-	-	-	6	7	Retain	Broken top



Arborist: J. Garcia  
Phone: 206-528-4670

Tree Inventory Date: 02/06/2025

On-site trees are identified with a number. This number corresponds with the metal tree tag unless otherwise noted.

Inventory also includes all off-site trees that had overhanging canopies or that were likely to be impacted by site work. Off-site trees are identified by a letter unless otherwise noted.

Diameter at standard height, dripline measurements, species, and other tree specifics are listed in the tree table produced by Tree Solutions Inc.

Survey and site plans should be updated to include tree identifiers and accurate dripline data prior to any design related to tree protection.

● Approximate location of inventoried tree not included in provided survey  
□ Tree grove

NR : Not regulated trees (<10 inches) or shrubs

\*Tree locations added to the survey are approximate and should be confirmed and added to the survey.

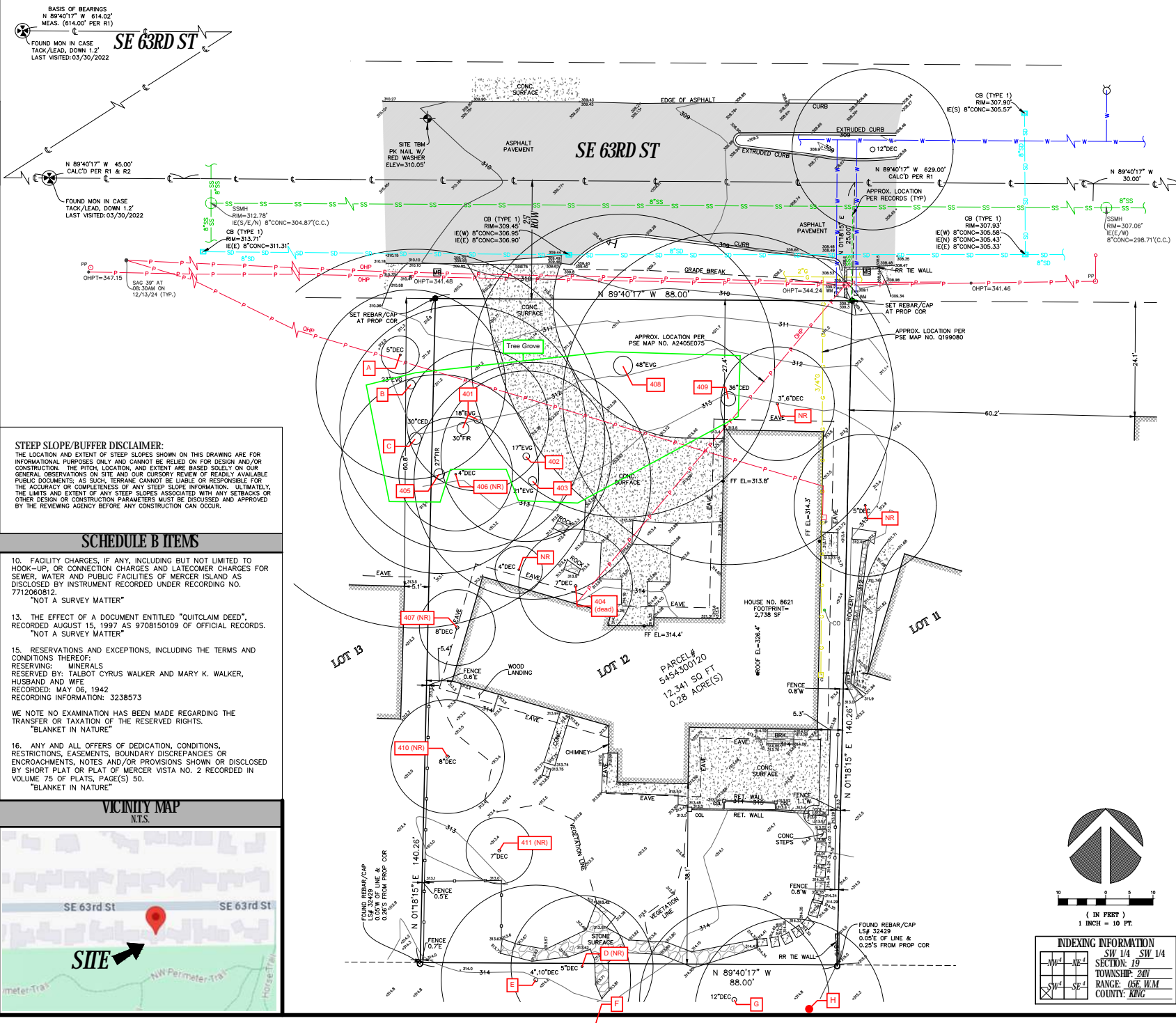
### SURVEYORS NOTES

1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN DECEMBER OF 2024. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 5454300120
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 12,341 S.F. (0.28 ACRES)
6. ALL TITLE INFORMATION SHOWN ON THIS MAP HAS BEEN EXTRACTED FROM FIRST AMERICAN TITLE INSURANCE COMPANY'S "COMMITMENT NO. 4209-4182699, DATED AUGUST 22, 2024. IN PREPARING THIS MAP, TERRANE, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS TERRANE, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND DISCLOSED BY THE REFERENCED "COMMITMENT". TERRANE, INC. HAS RELIED WHOLLY ON FIRST AMERICAN TITLE INSURANCE COMPANY'S REPRESENTATIONS OF THE TITLE'S CONDITION TO PREPARE THIS SURVEY AND TERRANE, INC. QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.
7. EXISTING STRUCTURE(S) LOCATION AND DIMENSIONS ARE MEASURED FROM THE FACE OF THE SIDING UNLESS OTHERWISE NOTED.
8. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 3-SECOND TOTAL STATION AND/OR SURVEY GRADE. GPS OBSERVATIONS, ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

### LEGEND

	BENCHMARK		SEWER LINE
	CENTERLINE ROW		FIRE HYDRANT
	FENCE LINE (WOOD)		WATER METER
	MONUMENT (IN CASE, FOUND)		WATER LINE
	MONUMENT (SURFACE, FOUND)		BLDG. BUILDING
	PROPERTY LINE (SUBJECT)		C.C. CENTER CHANNEL
	REBAR & CAP (SET)		CALC'D CALCULATED
	REBAR AS NOTED (FOUND)		CB CATCH BASIN
	RETAINING WALL		CO CLEANOUT
	RIGHT-OF-WAY LINES		COL COLUMN
	MAILBOX (RESIDENTIAL)		CONC CONCRETE
	BUILDING		COR CORNER
	SIGN (AS NOTED)		DEC DECIDUOUS
	TREE (AS NOTED)		ELEV ELEVATION
	ASPHALT SURFACE		EVG EVERGREEN
	BRICK SURFACE		FF FINISH FLOOR
	CONCRETE SURFACE		G GAS
	PAVER SURFACE		LS# LAND SURVEYOR NUMBER
	ROCKY		MAS# MEASURED
	GAS METER		MON MONUMENT
	GAS LINE		OHP OVERHEAD POWER
	POWER METER		PROP PROPERTY
	POWER POLE		(R) RECORD DATA
	POWER POLE W/ LIGHT		ROS RECORD OF SURVEY
	POWER (OVERHEAD)		ROW RIGHT OF WAY
	INLET (TYPE 1)		SQ FT SQUARE FEET
	STORM DRAIN LINE		SSM# SANITARY SEWER MANHOLE
	CLEANOUT		SSS SANITARY SIDE SEWER
	SEWER MANHOLE		SF SQUARE FEET

# TOPOGRAPHIC & BOUNDARY SURVEY

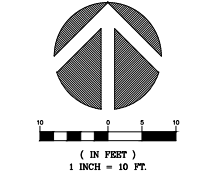
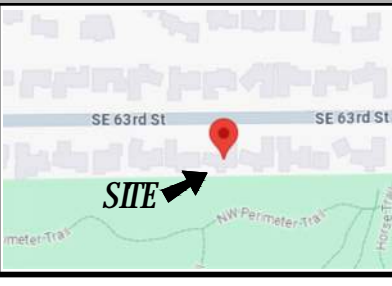


**STEEP SLOPE/BUFFER DISCLAIMER:**  
THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS. AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

### SCHEDULE B ITEMS

10. FACILITY CHARGES, IF ANY, INCLUDING BUT NOT LIMITED TO HOOK-UP, OR CONNECTION CHARGES AND LATECOMER CHARGES FOR SEWER, WATER AND PUBLIC FACILITIES OF MERCER ISLAND AS DISCLOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 7712060812. "NOT A SURVEY MATTER"
  13. THE EFFECT OF A DOCUMENT ENTITLED "QUITCLAIM DEED", RECORDED AUGUST 15, 1997 AS 9708150109 OF OFFICIAL RECORDS. "NOT A SURVEY MATTER"
  15. RESERVATIONS AND EXCEPTIONS, INCLUDING THE TERMS AND CONDITIONS THEREOF:  
RESERVING: MINERALS  
RESERVED BY: TALBOT CYRUS WALKER AND MARY K. WALKER, HUSBAND AND WIFE  
RECORDED: MAY 06, 1942  
RECORDING INFORMATION: 3238573
- WE NOTE NO EXAMINATION HAS BEEN MADE REGARDING THE TRANSFER OR TAXATION OF THE RESERVED RIGHTS.  
"BLANKET IN NATURE"
16. ANY AND ALL OFFERS OF DEDICATION, CONDITIONS, RESTRICTIONS, EASEMENTS, BOUNDARY DISCREPANCIES OR ENCROACHMENTS, NOTES AND/OR PROVISIONS SHOWN OR DISCLOSED BY SHORT PLAT OR PLAT OF MERCER VISTA NO. 2 RECORDED IN VOLUME 75 OF PLATS, PAGE(S) 50.  
"BLANKET IN NATURE"

### VICINITY MAP N.T.S.



INDEXING INFORMATION			
SW 1/4	SW 1/4	SW 1/4	SW 1/4
SECTION: 19			
TOWNSHIP: 34N			
RANGE: 06E W1M			
COUNTY: KING			

TOPOGRAPHIC & BOUNDARY SURVEY  
PARCEL NO. 5454300120  
FORE-SLOCUM RESIDENCE  
8621 SOUTHEAST 63RD STREET  
MERCER ISLAND, WA 98040



# TERRANE

11235 SE 6th St, Suite 130  
Bellevue, WA 98004  
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JOB NUMBER:	
242248	
DATE:	
12/17/24	
DRAFTED BY:	
JBA	
CHECKED BY:	
JMP	
SCALE:	
1" = 10'	
REVISION HISTORY	
SHEET NUMBER	
1 OF 1	

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