



3907 AURORA AVE N, SEATTLE WA 98103
December 1, 2025

Guihua Zheng

Dear Guihua,

Thank you for contracting with us to assess the trees and provide the following report. During our field investigation of the trees located at 4620 88th Ave SE, Mercer Island WA, we identified all onsite, offsite and right-of-way (ROW) trees regulated by the City of Mercer Island. This report outlines our observations and recommendations in relation to the proposed redevelopment. You may submit it to the permitting office as part of your permit application.

Please contact me if you have any questions or need further information.

Respectfully submitted,

Douglas Smith

Douglas Smith
ISA Board Certified Master Arborist PN 6116-B
Tree Risk Assessment Qualified (TRAQ)
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Pre-construction Arborist Report

Prepared by:

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Report narrative

Site information

Address: 4620 88th Ave SE, Mercer Island, WA

Zoning: R9.6

KC parcel: 019110-0705

KC parcel size: 10,239

Site visit date: 8/28/2025

Time of site visit: 10am

Introduction and assignment

The customer would like to add a garage and expand the width of the driveway. This report is in response to the screening notice from the city by land use planning reviewer Madelyn Nelson.

All onsite and right of way (ROW) trees have been tagged with numbered metal tree tags that correspond to the numbers in this report and the site map. Offsite trees, if any, are not tagged and are located on the site map using letters instead of numbers to distinguish them. A **site plan** has been provided showing tree locations and proposed TPZ fencing marked with red lines.

Observation and discussion

Site Observations:

The subject property is a **single-family residential parcel** located on **Mercer Island**. The lot is relatively flat, and there are **no known Environmentally Critical Areas (ECAs)**.

Tree Inventory and assessments:

- No onsite trees will need to be removed for this construction project: 100% tree retention onsite.
- One right-of-way (ROW) cherry tree (ROW-5077) will need to be removed and replaced with 2 trees. See **site map**.
- See site map for planting plan showing location and species of replacement tree.
- Tree protection fencing will be needed for the two remaining cherry trees in the front yard. In addition, I recommend that a single fence running at the back edge of the garage will protect all of the trees in the backyard and all offsite trees.
- Construction access is via the driveway, which is pre-existing.
- I recommend staging of materials in the parking area in front of the main house.

Replanting with native trees

For native trees in the ROW, I recommend the following **small trees** due to overhead wires nearby, two of which can replace the cherry that will be removed: shore pine, **mountain hemlock**, pacific yew, Douglas maple, cascara, Pacific dogwood, or vine maple.

DO NOT USE LEYLAND CYPRESS OR OTHER LARGE TREE AT THIS LOCATION.

Code considerations

A permit is required to remove any tree with a diameter of greater than ten inches. 30 percent of the regulated trees must be retained over a rolling 5 year period. Any trees removed must be replaced according to MIMC 19.10.070. A planting plan must be provided including Species, quantity, location, and planting specification.

Diameter of removed tree	Number of replacement trees required
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 tree(s)	6

Recommendations

- 1) Do not remove or relocate any trees over 10” diameter without a permit.
- 2) Retain and protect existing onsite and offsite trees to maximize ecosystem services and home value. As a general rule, we recommend retaining all trees with condition 4 or better unless development plans preclude retention. Trees with condition 2 and lower should be removed and replaced with more vigorous species/specimen. Trees with condition 3 may require removal based on other factors, or should have mulch (4-6” of arborist chips) and deep irrigation monthly during the dry season, which has been shown to improve such trees to condition 4 or better.
- 3) Update the site plan to show all current trees and their TPZ’s per our inventory. Place an X over all trees that will be removed. Confirm and ensure that there will be no disturbance to inner TPZ of retained trees.
- 4) Designate staging and access paths on your site plan that avoid TPZs of existing and future trees. Use existing paved areas for staging materials in order to minimize impact to the critical root zones (CRZs).

- 5) Include tree protection requirements on all site-related construction documents. Root damage or soil compaction within the TPZ may cause irreparable harm to trees whose root zones are in the path of construction, staging and access areas.
- 6) Create a planting plan to show future planting including quantity, location, caliper, genus and species of new trees.
- 7) Any clearance pruning must be provided by a registered tree service provider (TSP) to ANSI A300 tree pruning standards.
- 8) Notify landscape planner and installer not to disturb soils within the TPZ of any tree using a rototiller or with other mechanical soil turning tool. This can destroy a large volume of feeder roots and harm the tree. When placing new plants, do not remove roots larger than 1" and adjust planting locations around larger roots. Adding soils above the tree roots can smother the roots, however adding mulch (especially arborist chips) up to 6" can augment soil quality, aeration, and water retention, benefitting the tree's roots.
- 9) Remove all invasive vegetation and roots thereof including English holly, English laurel, English ivy and Himalayan blackberry.

Thank you and please reach out if you have any questions.
Douglas Smith

Resources

Mercer Island tree code: https://library.municode.com/wa/mercer_island/codes/city_code?nodeId=CIC0OR_TIT19UNLADECO_CH19.10TR_19.10.005PU

Tree protection guidebook: https://www.dnr.wa.gov/Publications/rp_urban_treeprtctnguidbk.pdf

Tree risk assessment: https://www.isa-arbor.com/education/resources/educ_Portal_Risk_AN.pdf

Why use arborist chips / wood chip mulch: <https://s3.wp.wsu.edu/uploads/sites/403/2015/03/wood-chips.pdf>

Chip drop for free wood chips: <https://getchipdrop.com>

ISA planting recommendations full content: <https://www.isa-arbor.com/education/onlineresources/cadplanningspecifications#Irrigation>

Planting on level ground: <https://www.isa-arbor.com/education/onlineresources/cad/drawings/Planting/>

L_tree%20planting_24inch%20to%2036inch%20box_single%20berm_modified_D.pdf

Planting on a slope: <https://www.isa-arbor.com/education/onlineresources/cad/drawings/Planting/>

L_tree%20planting_24inch%20to%2036inch%20box_slope_unmodified_D.pdf

Tree Inventory Table

Tree table for Zheng 4620 88th Ave SE Mercer Island 8/28/2025

Tree #	Common name	Species	DSH	DLR	Class	Cond	TPZ	ITPZ	Retain	NOTES
ROW-5077	Cherry	Prunus sp	11.2	11	ROW	4	11.1	5.6	No	Multistem 8.5,7.3
5078	Cherry	Prunus sp	10.5	6	Regulated	3	8.3	4.1	yes	Topped. Multistem 6.5,6.5,5
5079	Cherry	Prunus sp	10.5	12	Regulated	4	11.3	5.6	yes	
5080	Greenleaf plum	Prunus sp	10.5	14	Regulated	4	12.3	6.1	yes	
5081	Douglas fir	Psuedotsuga menziesii	23.5	17	Regulated	4	20.3	10.1	yes	Grove-1
5082	Western red cedar	Thuja plicata	48.8	20	Exceptional	6	34.4	17.2	yes	Grove-1
5083	Douglas fir	Psuedotsuga menziesii	47.7	30	Exceptional	6	38.9	19.4	yes	Grove-1
5084	Atlas cedar	Cedrus atlantica	23	17	Regulated	4	20.0	10.0	yes	Low LCR
5085	Atlas cedar	Cedrus atlantica	17	14	Regulated	4	15.5	7.8	yes	Low LCR
5086	Atlas cedar	Cedrus atlantica	24.5	18	Regulated	4	21.3	10.6	yes	Low LCR
5087	Atlas cedar	Cedrus atlantica	20	20	Regulated	4	20.0	10.0	yes	
Adjacent										
A	Western red cedar	Thuja plicata	20	14	Regulated	5	17.0	8.5	yes	Grove-1
B	Douglas fir	Psuedotsuga menziesii	20	15	Regulated	4	17.5	8.8	yes	Grove-1
C	Big leaf maple	Acer macrophyllum	30.3	38	Exceptional	5	34.2	17.1	yes	Grove-1. Multistem 28,11.7
D	Western red cedar	Thuja plicata	27	17	Regulated	5	22.0	11.0	yes	Grove-1

Refer to **Site Map** below to see tree locations.

Tree Inventory Key and Definitions

DSH = Diameter at Standard Height of 4.5', measured in inches.

Multi-stem DSH = DSH of multi-stemmed trees is calculated using the square root of the sum of the squares of the individual stems.
DLR = Drip Line Radius is assessed on site by measuring from the center of the tree to the outermost tips of the branches measured in feet.
TPZ = Tree Protection Zone radius is calculated as an average of DSH and DLR values and converted to feet, with some noted exceptions.
ITPZ = Inner Tree Protection Zone. The radius for the ITPZ is calculated as 50% of the outer TPZ radius, and shall not be disturbed.
Condition Ratings: 6 = Excellent condition, 5 = Good, 4 = Fair, 3 = Poor, 2 = Very Poor, 1 = Dying/Dead

Tree Protection Requirements

1. For the trees being retained, tree protection fencing should be installed at the outer edge of the drip line or as close to it as is practically possible.
2. Fencing should be installed prior to construction activities and remain in place for the duration of the project. Fencing should only be moved temporarily if minor disturbances must occur within the drip line and the fencing should be replaced immediately once that portion of the work is completed.
3. The tree protection area is designated to be an area of no impact, no storing of materials, no encroachment and no staging of debris.
4. The tree protection fencing should have signs every 8' facing access that indicate the area is a tree protection zone.
5. Trenching through the TPZ for utilities is not permitted (tunneling is the preferred method).
6. Grade changes in the TPZ are not permitted.
7. Vehicle maintenance and washing of equipment (especially concrete), is not permitted.
8. No attaching anything to the tree with cinching knots or hardware.
9. Root flare should be protected with chips so that lawn maintenance equipment does not have to work close to the system.
10. Proper clearances should be maintained.
11. The TPZ or critical root zone needs to be protected. The Inner TPZ is 50% of the radius of the TPZ and there should be zero disturbance in this zone. The Outer TPZ surrounds the ITPZ. A disturbance of up to 33% of the Outer TPZ is sometimes permissible provided that any heavy digging equipment works toward the tree, and that any roots encountered that are over 1" in diameter are excavated around with hand tools and cut clean with a sharp saw behind the excavation zone so that the root can bifurcate and continue to grow. In some cases, if excessive pruning has been done, the TPZ can be larger than the Drip Line Radius.
12. Add a 4-6" layer of arborist wood chips to the TPZ of all trees in or adjacent to the path of construction for root and soil protection and health.

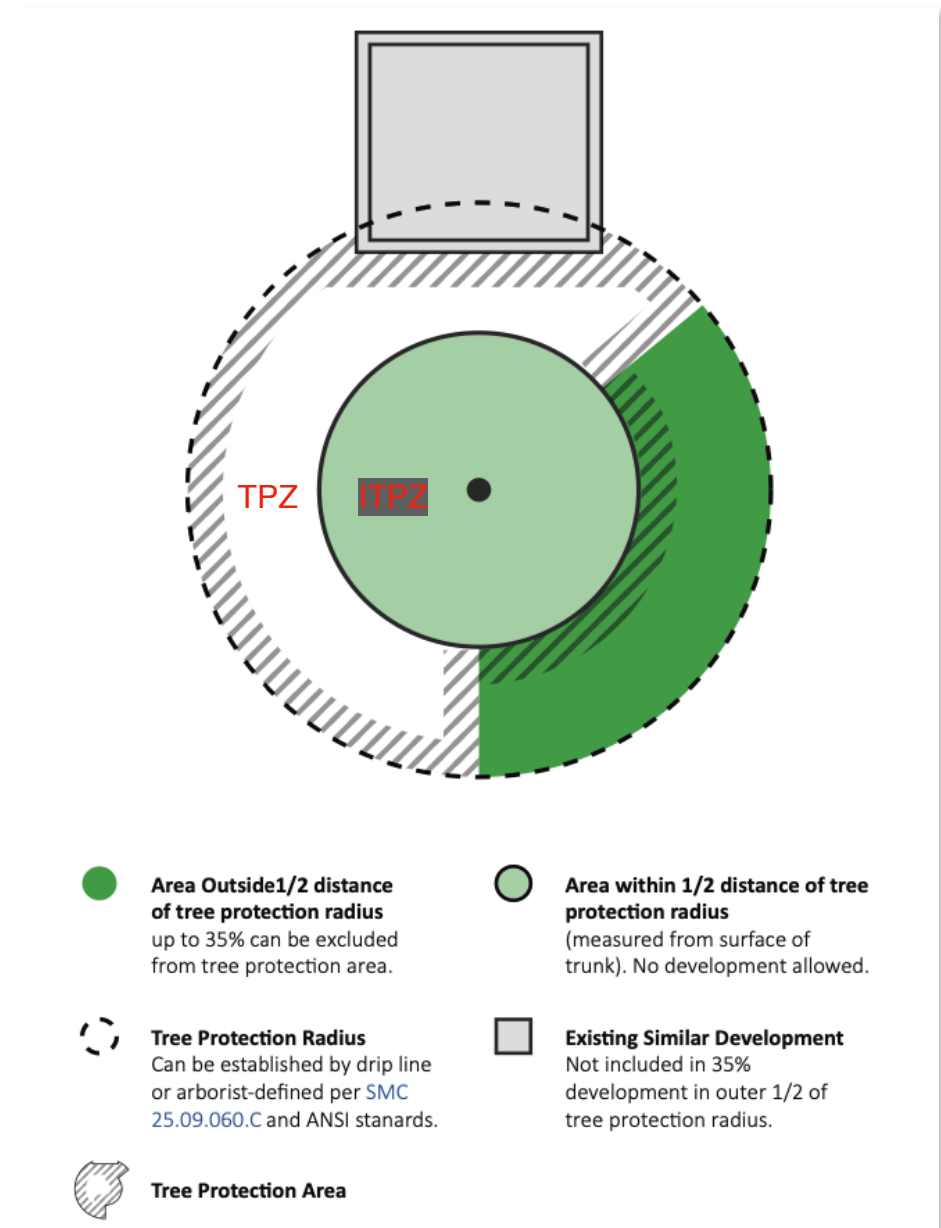
Tree protection zone (TPZ) and inner tree protection zone (ITPZ)

This illustration is taken from Seattle Tip 242A, and is helpful for understanding generally accepted protection zones for the critical root areas of an urban tree.

The TPZ for each tree is listed in the **Tree Inventory Table** (above) and represents only a portion (30-50%) of a typical tree's root area. However, a tree can sustain disturbance of up to 35% of the outer TPZ, shown in dark green, and still sustain itself good health.

The ITPZ represents the structural root zone of the tree, and is equal to an area with a radius of 50% of the TPZ radius. No grade change or disturbance in this area is allowed or the tree will need to be removed for safety reasons.

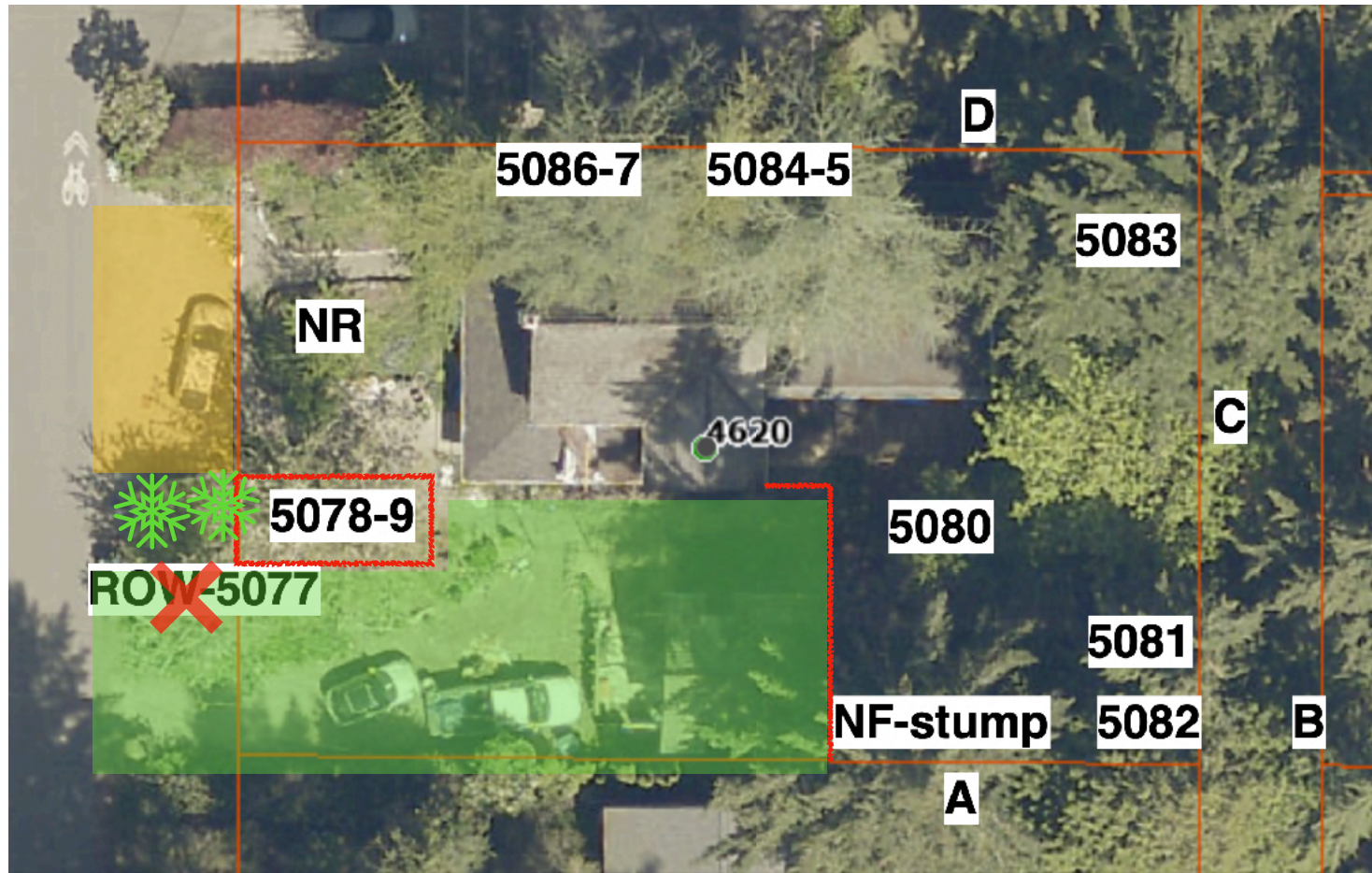
In this example, the gray hashed area represents the tree protection area for this tree during construction.



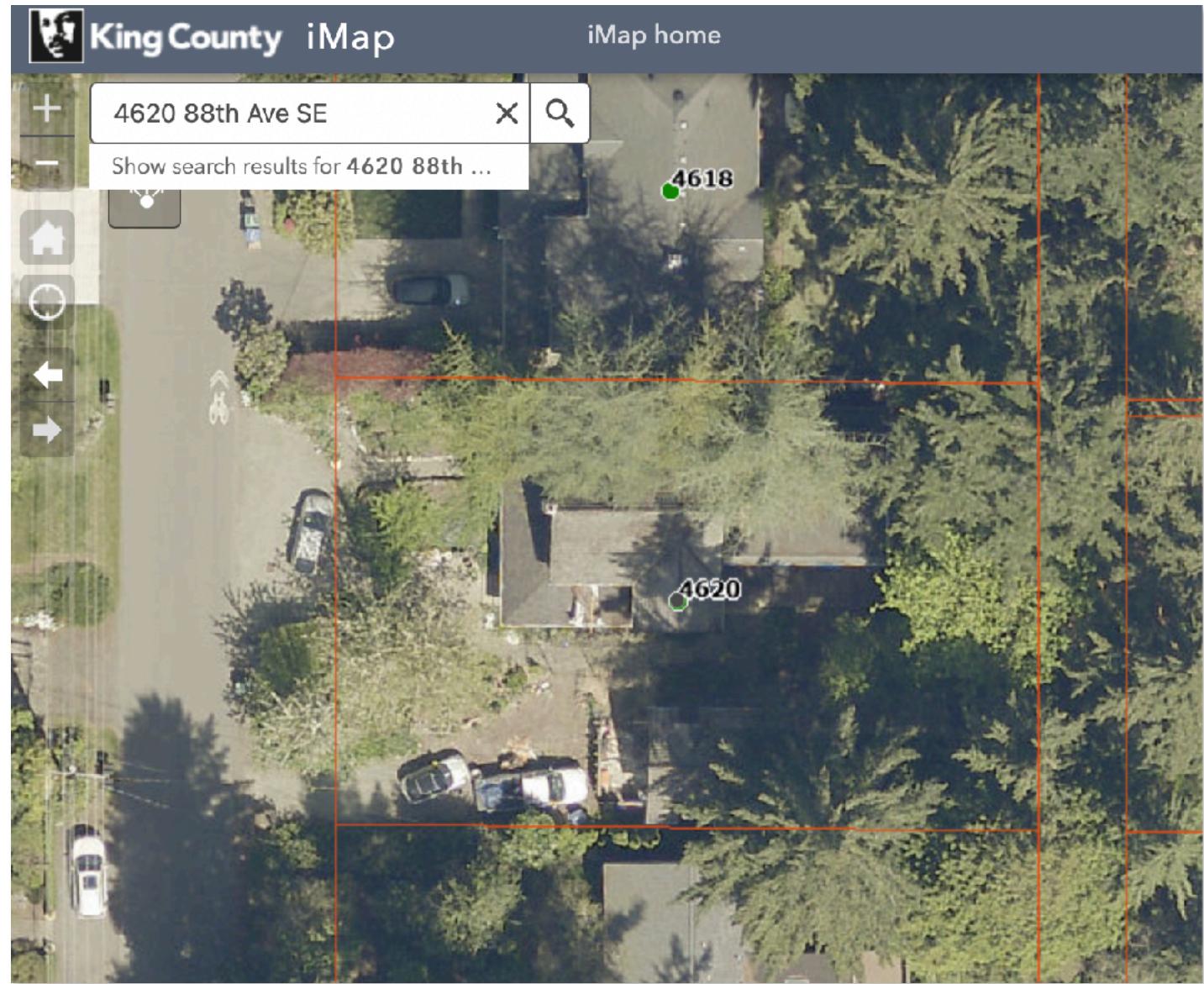
Site Map

Red chalk lines indicate proposed tree protection zone fencing plan for retained trees. Not to scale. Use TPZ data from enclosed tree table to determine actual TPZ dimensions. **Green shaded area** represents recommended limited construction, staging and access zone. **Orange shaded area** represents the recommended soils and concrete staging area away from critical root zones, ideally located on existing pavement. **NR** = Not regulated. **NF** = Not found. **Letters** are for offsite trees.

 = 2 new tree locations for Mountain hemlock, *Tsuga mertensiana*



King County Parcel Data and Aerial View from 2023



PARCEL

Parcel Number	019110-0705
Name	MA LINGYAN & ZHENG GUIHUA
Site Address	4620 88TH AVE SE 98040
Legal	ALLVIEW HEIGHTS ADD PARCEL B MERCER ISLAND SHORT PLAT NO 79-08-29 REC NO 7910040812

BUILDING

Year Built	1989
Total Square Footage	3200
Number Of Bedrooms	5
Number Of Baths	2.25
Grade	8 Good
Condition	Good
Lot Size	10239
Views	No
Waterfront	



Street view from 2024

This view shows the current driveway entrance that will be expanded to the left. The ROW cherry tree (center) will be removed and replaced with a native species further left of current location.



Site Photos from 08/28/2025

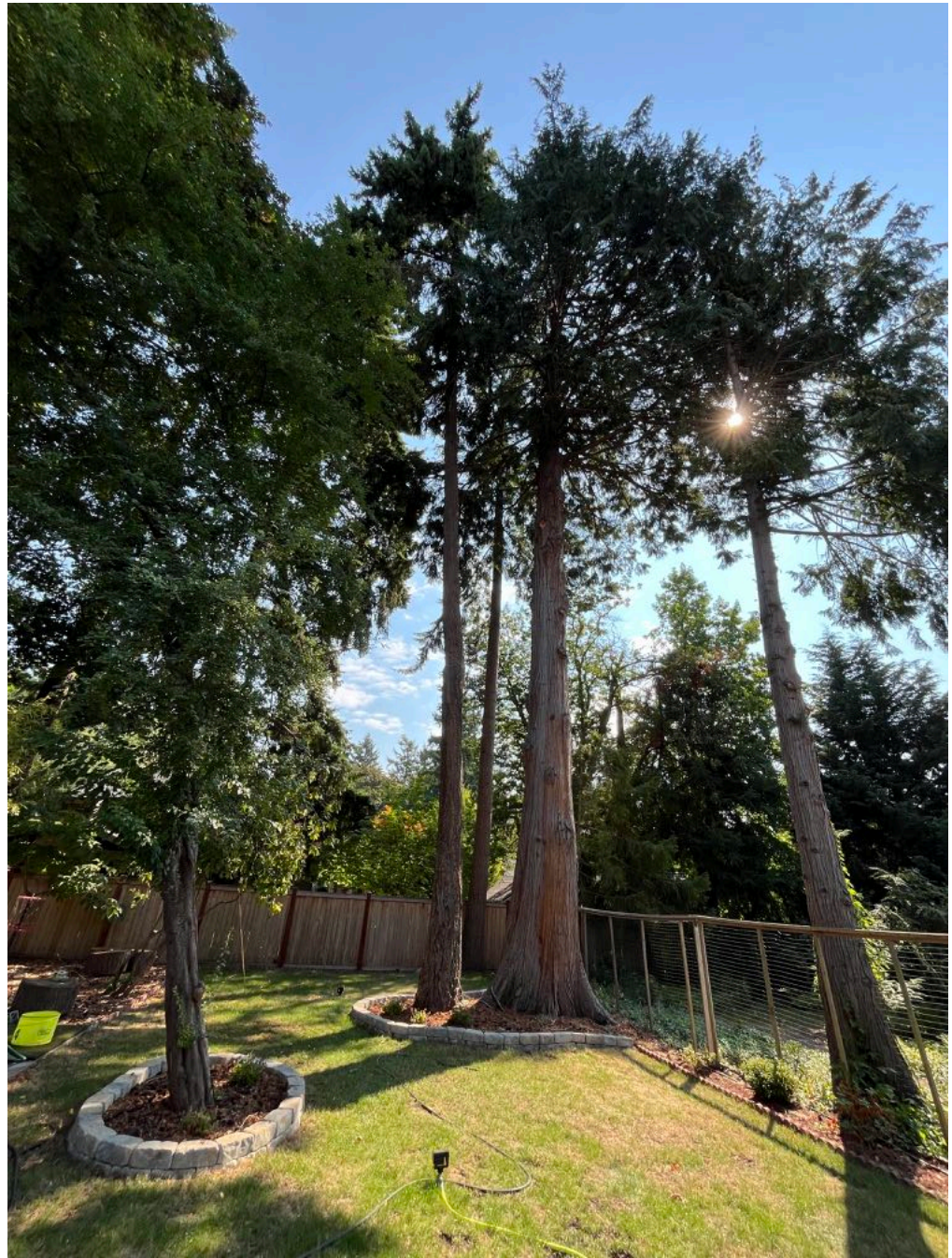
ROW tree 5077



Cherry trees 5078 and 5079 will be retained.
5078 may not be viable but poses no risk.



Trees behind the existing outbuilding should be protected from construction by fencing off the back yard from access.



Assumptions and Limiting Conditions

Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownership to any property are assumed to be good and marketable. No responsibility is assumed for matters of legal character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

It is assumed that any property is not in violation of any applicable codes, ordinances, statutes, or other government regulations.

Care has been taken to obtain all information from reliable sources. All data has been verified so far as possible, however, the consultant/appraiser can neither guarantee nor be responsible for accuracy of information provided by others.

The consultant/appraiser shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payments of additional fees for such services as described in the fee schedule and contract engagement.

Loss or alteration of any of this report invalidates the entire report.

Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any person other than to whom it is addressed, without prior written consent of the consultant/appraiser.

Neither all nor any part of the content in this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written consent of the consultant/appraiser--particularly as to value conclusions, identity of the consultant/appraiser, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant/appraiser as stated in his qualification.

Addendum B: Trees and Home Value

Research has shown that retaining or planting large trees can increase property values anywhere from 3% to 15%. Additionally, properly selected and located trees can reduce heating and cooling costs by up to 25% annually. Trees take decades to reach optimal value for homeowners, making tree retention a high priority if the trees on a building site are healthy and thoughtfully located. On the left is a chart of additional benefits of mature trees.

Aspect	Commercial Benefits	Residential Benefits
Aesthetic Appeal	Enhance the overall look and visual appeal of the property	Beautify the landscape and create a welcoming atmosphere
Curb Appeal	Increase attractiveness to potential customers and clients	Boost first impressions for potential buyers or renters
Outdoor Spaces	Provide shaded areas for outdoor seating and relaxation for people to gather.	Create private outdoor spaces for residents to enjoy
Cooling Effect	Shade and transpiration reduce energy costs for cooling systems	Lower cooling costs by providing natural shade to homes
Air Quality	Improve air quality by absorbing pollutants and releasing oxygen	Enhance indoor air quality and create healthier living environments
Noise Reduction	Act as natural sound barriers, reducing noise from traffic or nearby areas	Help reduce noise pollution and create a more peaceful environment
Community Benefits	Contribute to a greener urban environment, attracting businesses and customers. Also shown to increase worker efficiency.	Foster a sense of community and promote neighborhood appeal
Property Value	Increase property value and demand for commercial spaces	Enhance property values and demand for residential homes. Trees are shown to reduce crime by up to 12%
Rent and Lease Rates	Allow for higher rental rates due to improved surroundings	Enable landlords to charge premium rents for homes with scenic views
ROI for Landlords	Yield higher returns on investment for property owners	Attract higher-paying tenants and increase rental income
Long-Term Investment	Mature trees appreciate in value, enhancing the property's worth	Trees mature over time, boosting property value over the years
Increased Health Outcomes	Trees increase the physical and mental health outcomes for workers.	Trees increase the physical and mental healthy outcomes for families.
Reduced Erosion	Tree root systems help prevent soil erosion on properties by absorbing urban pollutants and particulate matter.	Protect against soil erosion and contribute to landscape stability
Enhanced Privacy	Create natural barriers that enhance privacy for businesses	Provide privacy screens for homeowners and shield properties from view
Biodiversity Benefits	Support local ecosystems and promote biodiversity	Attract birds and wildlife, creating a diverse and vibrant environment
Marketing Advantage	Use green features to market commercial spaces effectively	Highlight green features to attract eco-conscious buyers and renters
Stormwater Management	Trees combined with WSUD principles can help mitigate flooding to commercial assets.	Trees absorb excess water in high rain events reducing flooding

Addendum C: Exceptional trees



EXCEPTIONAL TREE TABLE

9611 SE 36th Street | Mercer Island, WA 98040
 www.mercerisland.gov | (206) 275-7605

NATIVE SPECIES			
Species	Threshold Diameter	Species	Threshold Diameter
Big Leaf MAPLE (<i>Acer macrophyllum</i>)	2 ft 6 in	Pacific YEW (<i>Taxus brevifolia</i>)	6 in
Black HAWTHORN (<i>Crataegus douglasii</i>)	6 in	Paper BIRCH (<i>Betula papyrifera</i>)	1 ft 8 in
CASCARA (<i>Rhamnus purshiana</i>)	8 in	Quaking ASPEN (<i>Populus tremuloides</i>)	1 ft
Douglas FIR (<i>Pseudotsuga menziesii</i>)	2 ft 6 in	Shore PINE (<i>Pinus contorta 'contorta'</i>)	1 ft
Dwarf or Rocky Mountain MAPLE (<i>Acer glabrum</i> var. <i>Douglasii</i>)	6 in	Sitka SPRUCE (<i>Picea sitchensis</i>)	6 in
Grand FIR (<i>Abies grandis</i>)	2 ft	Vine MAPLE (<i>Acer circinatum</i>)	8 in
Lodgepole PINE (<i>Pinus contorta</i>)	6 in	Western HEMLOCK (<i>Tsuga heterophylla</i>)	2 ft
MADRONA (<i>Arbutus menziesii</i>)	6 in	Western Red CEDAR (<i>Thuja plicata</i>)	2 ft 6 in
Oregon ASH (<i>Fraxinus latifolia</i>)	2 ft	Western SERVICEBERRY (<i>Amelanchier alnifolia</i>)	6 in
Oregon White or Garry OAK (<i>Quercus garryana</i>)	6 in	Western White PINE (<i>Pinus monticola</i>)	2 ft
Pacific CRABAPPLE (<i>Malus fusca</i>)	1 ft	WILLOW (All native species) — <i>Salix</i> sp. (<i>Geyeriana</i> var. <i>meleina</i> , <i>eriocephala</i> ssp. <i>mackenzieana</i> , <i>Hookeriana</i> , <i>Piperi</i> , <i>Scouleriana</i> , <i>sitchensis</i>)	8 in
Pacific DOGWOOD — <i>Cornus nuttallii</i>	6 in		

NON-NATIVE SPECIES			
Species	Threshold Diameter	Species	Threshold Diameter
American ELM (<i>Ulmus americana</i>)	2 ft 6 in	Japanese SNOWBELL (<i>Styrax japonica</i>)	1 ft
American SWEETGUM (<i>Liquidambar styraciflua</i>)	2ft 3in	KATSURA (<i>Cercidiphyllum japonicum</i>)	2 ft 6 in
Atlas CEDAR (<i>Cedrus atlantica</i>)	2 ft 6 in	Kousa DOGWOOD (<i>Cornus kousa</i>)	1 ft
Austrian Black PINE (<i>Pinus nigra</i>)	2 ft	Lawson CYPRESS (<i>Chamaecyparis lawsoniana</i>)	2 ft 6 in
Callery PEAR (<i>Pyrus calleryana</i>)	1 ft 1 in	Littleleaf LINDEN (<i>Tilia cordata</i>)	2 ft 6 in
Coastal REDWOOD (<i>Sequoia sempervirens</i>)	2 ft 6 in	London PLANE (<i>Platanus acerifolia</i>)	2 ft 6 in
Common HAWTHORN (<i>Crataegus laevigata</i>)	1 ft 4 in	MONKEY PUZZLE TREE (<i>Araucaria Araucana</i>)	1 ft 10 in
Deodor CEDAR (<i>Cedrus deodara</i>)	2 ft 6 in	MOUNTAIN-ASH (<i>Sorbus aucuparia</i>)	2 ft 5 in
Eastern DOGWOOD (<i>Cornus florida</i>)	1 ft	Orchard (Common) APPLE (<i>Malus</i> sp.)	1 ft 8 in
English ELM (<i>Ulmus procera</i>)	2 ft 6 in	Paperbark MAPLE (<i>Acer griseum</i>)	1 ft
European ASH (<i>Fraxinus excelsior</i>)	1 ft 10 in	Pin OAK (<i>Quercus palustris</i>)	2 ft 6 in
European BEECH (<i>Fagus sylvatica</i>)	2 ft 6 in	Ponderosa PINE (<i>Pinus ponderosa</i>)	2 ft 6 in
European HORNBEAM (<i>Carpinus betulus</i>)	1 ft 4 in	Raywood ASH (<i>Fraxinus oxycarpa</i>)	2 ft
European White BIRCH (<i>Betula pendula</i>)	2 ft	Red MAPLE (<i>Acer rubrum</i>)	2 ft 1 in
Flowering CHERRY (<i>Prunus</i> sp. (<i>serrula</i> , <i>serrulata</i> , <i>sargentii</i> , <i>subhirtella</i> , <i>yedoensis</i>))	1 ft 11 in	Red OAK (<i>Quercus rubra</i>)	2 ft 6 in
Flowering PLUM (<i>Prunus cerasifera</i>)	1 ft 9 in	Scot's PINE (<i>Pinus sylvestris</i>)	2 ft
Giant SEQUOIA (<i>Sequoiadendron giganteum</i>)	2 ft 6 in	Southern MAGNOLIA (<i>Magnolia grandiflora</i>)	1 ft 4 in
GINGKO (<i>Ginkgo biloba</i>)	2 ft	Sugar MAPLE (<i>Acer saccharum</i>)	2 ft 6 in
Green ASH (<i>Fraxinus pennsylvanica</i>)	2 ft 6 in	Sycamore MAPLE (<i>Acer pseudoplatanus</i>)	2 ft
Honey LOCUST (<i>Gleditsia triacanthos</i>)	1 ft 8 in	TULIP TREE (<i>Liriodendron tulipifera</i>)	2 ft 6 in
Incense CEDAR (<i>Calocedrus decurrens</i>)	2 ft 6 in	Washington HAWTHORN (<i>Crataegus phaenopyrum</i>)	9 in
Japanese MAPLE (<i>Acer palmatum</i>)	1 ft	WILLOW (All nonnative species)	2 ft

Addendum D: Planting recommendations:

- Plant trees in the fall after the first rain if possible.
- Native plants are a great pick for local soils. If not using native trees, test the soil to ensure the pH and nutrient availability matches the requirements of the species. Augment soil regularly or choose a different species that meets the typical pH of the soil.
- Dig a hole that is at least 3x the diameter of the root ball and amend soil with 5-10% organic compost.
- Irrigate thoroughly during installation and after.
- Add 4-6" of arborist chips to the full extent of the dripline but not touching the bark of the trunk.
- Ensure that the top of the new tree's root flare is at or slightly above grade. Many trees are planted too deeply, and may arrive to the site in a container that has too much soil on top, covering the root flare. This is not good for the tree.
- Stake the tree allowing some movement, and remove stakes after 1 year of root growth.
- Retain 4-6" arborist chips in the 2-3x dripline of the planted trees for soil nutrient enhancement and water retention after construction is completed. Do not put grass up to the base of newly planted trees. Early injury from mowers will risk infection and may cause failure to thrive.

