Arborist Report
October 11th, 2021

Prepared for:
Imani Homes
2405 74th Ave SE
Mercer Island, Wa

Prepared by:
Seattle Tree Consulting
Douglas Smith (Certified Arborist PN 6116-A/TRAQ)
3907 Aurora Ave N.
Seattle, Wa. 98103
(206)457-5706
doug@seattletreeconsulting.com

Discussion

Arborist report for Imani homes. 7249 33rd Ave. SE., Mercer Island Washington. October 5, 2021. 1 PM. Address updated to: 2405 74th Ave SE. Mercer Island, Wa.

Thank you for having us out to assess the condition of the trees on the site. It is our understanding that the client recently purchased this site and is interested in constructing a new primary residence at this address. There is a row of significant conifers on the north property line that the client is intending to preserve. The reason for this site visit was to construct an inventory of the significant tree systems on the site, gauge their condition, and to dictate the tree protection specifications for them. Most of the trees on the north property line are Western Red Cedar. Some of the trees have branch unions at 4 1/2 foot above grade where diameter at standard height measurements would normally be taken. Because of the tight clusters of stems in some of the trees, DSH measurements were taken at the narrowest point below the branch unions. Drip line measurements were obtained with a measuring tape as there was too much foliage to use a laser for this process. Data with respect to the individual trees is as follows:

Tree number 444 is in the northwest corner of the lot. It is a Western Red Cedar (*Thuja plicata*) with a diameter at standard height of 25 inches. This tree is condition one, despite the fact that it splits into multiple iterations approximately 12 foot above grade. This tree is not in need of any work, but some lifting of the low canopy on the southern side would create more usable space in the front yard and would not sacrifice privacy.

Moving toward the east, tree number 445 is a Western Red Cedar with a diameter at standard height of 15 inches. This tree is condition one despite also splitting into multiple iterations approximately 12 foot above grade.

Because of the multi-stemmed presentations that they have, it is likely that this entire row was topped. The canopies on these trees are dense but in a safe condition. These trees are likely doing a good job of buffering wind around their entire canopies. An ISA Certified Arborist would be able to lift the low southern canopies artfully, as well as alleviate some compression in the branch unions so that the trees could grow out with sustainable structure.

Tree number 446 is a Western Red Cedar with several main stems that originate approximately 3 foot above grade. The diameter at standard height reading of 23 inches was taken at the narrowest point below the branch union. This tree is condition one.

Tree number 447 is a Western Red Cedar that has a diameter at standard height reading of 21 inches. This tree is condition one and also a multi-stemmed specimen.

Tree number 448 is a Douglas Fir (*Pseudotsuga mensiezii*) with a diameter at standard height of 30 inches. This tree also appears to have been height reduced at approximately 20 foot above grade. This tree is condition two. There is quite a bit of deadwood in the low canopy and some of

the low scaffolds have gotten quite heavy because of the loss of apical dominance. A Certified Arborist could restructure this tree so that it grows out nicely.

Tree number 449 is a Western Red Cedar with a diameter at standard height reading of 27 inches. This tree is condition two. It splits into multiple stems approximately 8 foot above grade and this particular tree has quite a bit of compression between the main stems.

The easternmost tree is another Western Red Cedar. It is tree number 450 and it has a diameter at standard height reading of 24.5 inches. Like the other trees, this one splits into multiple iterations approximately 10 foot above grade. The tree is condition two.

All of the trees in this row appear to have been planted at the same time, most likely when the previous home was constructed. The entire stand has a drip line radius of 20 foot that starts in the center of each of the root flares. Despite some structural challenges, all of the trees are in healthy condition. There is some seasonal flagging on the Western Red Cedars, but there are no health concerns associated with these tree systems, nor are there any hazard issues that need to be addressed.

The clients informed me that ingress and egress for the construction project, as well as the new residence on the site, will come from the east instead of from the north. Wrapping Tree Protection fencing around the entire drip lines of these systems prior to demolition activities commencing will be a simple matter and the tree systems will not be in the way of construction or demolition. At the time of the site visit, I had not yet seen plans for proposed developments to the lot. Doing clearance pruning on the southern canopies of the conifers will not have an adverse effect on the health of the systems. In general, conifers can be limbed up by one third of their total height without having an adverse effect on the health of the systems. At the time of the site visit, the live crown ratio of all of the trees in the row was 100%. Plenty of foliage is in ground contact.

Summary

So long as tree protection fencing is installed at this site prior to activities commencing, all of the trees should endure the construction process without adverse effects to their health. Line clearance pruning is being conducted on the east side of the systems along 74th Ave SE.

Tree Inventory

DSH-Diameter at Standard Height (DSH's of multi-stemmed trees obtained by taking the square root of the sum of the squares of the individual stems), DLR-Drip Line Radius or Limit of Disturbance, CRZ-Critical Root Zone

Condition Ratings

1-Natural structure with good proportions, expected amounts of vigor and deadwood, sound attachments, pedestal in good condition, and adequate root zone
2-Acceptable overall structure but in need of minor pruning or cabling to enhance health and safety threshold
3-Declining specimen in need of serious corrective work and support or a potential candidate for removal
4-Tree is at a critical point and must be reduced to a safe habitat snag or removed

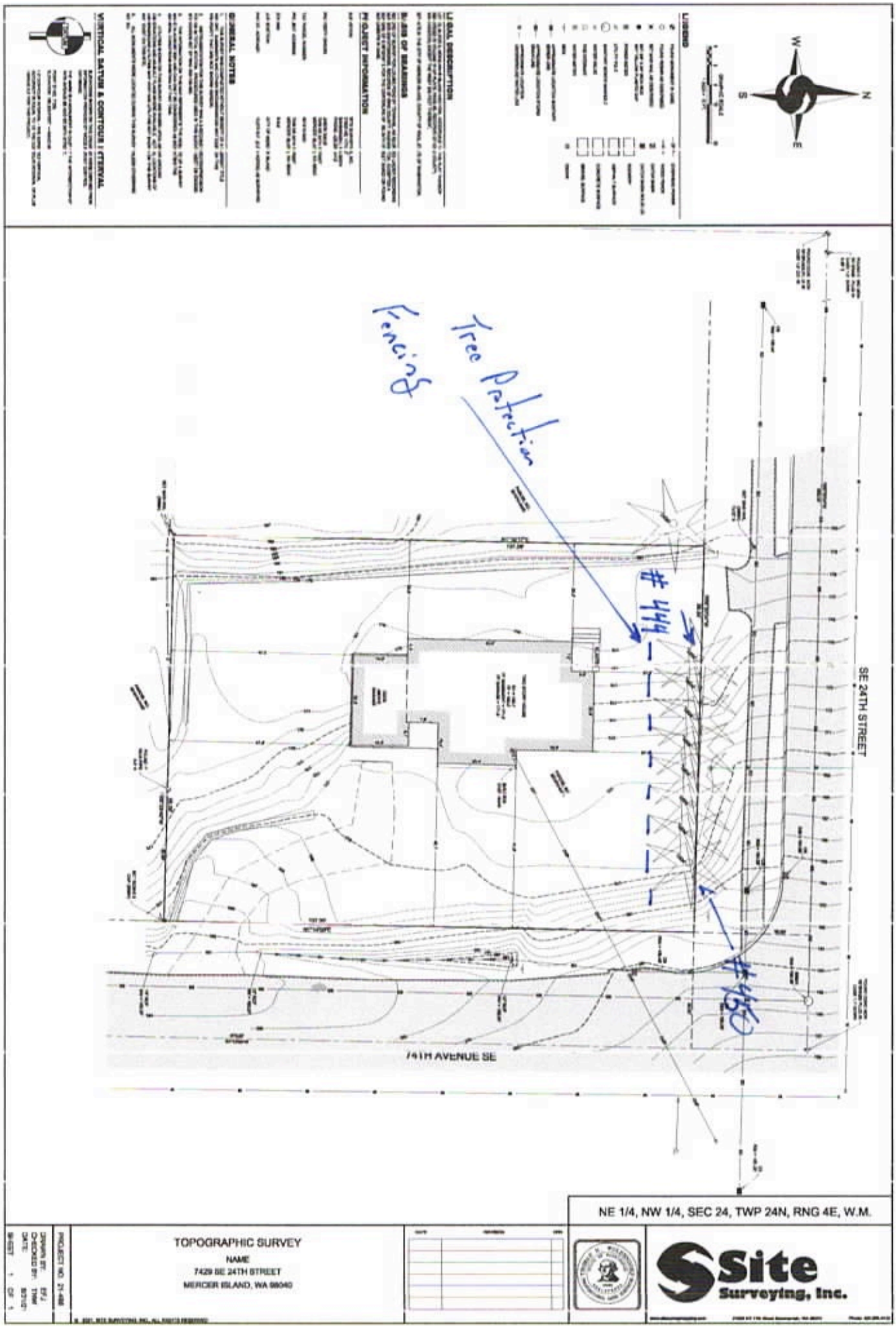
Tree Protection

-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.
-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.
-The tree protection area is designated to be an area of no impact, no storing of materials, no encroachment and no staging of debris.
-The tree protection fencing should have signs every 8' facing access that indicate the area is a tree protection zone.
-Trenching through the CRZ for utilities is not permitted (tunneling is the preferred method).
-Grade changes in the CRZ are not permitted.
-Vehicle maintenance and washing of equipment (especially concrete), is not permitted.
-No attaching anything to the tree with cinching knots or hardware.
-Root flare should be protected with chips so that lawn maintenance equipment does not have to work close to the system.
-Proper clearances should be monitored.
-The CRZ or critical root zone needs to be protected. The Inner CRZ is 50% of the radius of the CRZ and there should be zero disturbance in this zone. A disturbance of up to 33% of the Outer CRZ is 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 CRZ can be larger than the Drip Line Radius.

Photos of the Trees


74TH AVE SE

Tree Number	Common Name	Latin Name	Diameter at Standard Height in Inches (obtained with fabric D-Tape). Multi-stemmed trees are calculated by taking the square root of the sum of the squares of the individual DSH Measurements.	Critical Root Zone Radius (obtained by looking DSH measurements versus drip line radius and access to soil volume)	**Condition Ratings** 1-Natural structure with good proportions, expected amounts of vigor and deadwood, sound attachments, pedestal in good condition, and adequate root zone 2-Acceptable overall structure but in need of minor pruning or cabling to enhance health and safety threshold 3-Declining specimen in need of serious corrective work and support or a potential candidate for removal 4-Tree is at a critical point and must be reduced to a safe habitat snag or removed	Remove/Retain	Drip Line Radius in feet
444	Western Red Cedar	Thuja plicata	25	20	1	Retain	20
445	Western Red Cedar	Thuja plicata	15	15	1	Retain	20
446	Western Red Cedar	Thuja plicata	23	20	1	Retain	20
447	Western Red Cedar	Thuja plicata	21	20	1	Retain	20
448	Douglas Fir	Pseudotsuga mensiezii	30	20	2	Retain	28
449	Western Red Cedar	Thuja plicata	27	20	2	Retain	20
450	Western Red Cedar	Thuja plicata	24.5	20	2	Retain	20



NE 1/4, NW 1/4, SEC 24, TWP 24N, RNG 4E, W.M.

TOPOGRAPHIC SURVEY

NAME

7429 SE 24TH STREET

MERCER ISLAND, WA 98040

Site Surveying, Inc.

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.