Arborist Report-New SFR
January 26th, 2023

Prepared for:
Charles Hately

Site Address:
4114 83rd Ave.
Mercer Island, Wa

Prepared by:
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Discussion

Arborist notes for Charles Hately. Site address: 4114 83rd Ave. SE., Mercer Island Washington. January 18, 2023. 11:30 AM.

Thank you for having me out to assess the condition of the trees on the site. It is my understanding that there is a proposed new single-family residence at this address and The City of Mercer Island is requiring an arborist arborist report and full inventory of the woody plant systems at this site as part of the building permit application package. During the site visit, I used a fabric diameter tape to collect diameter at standard height measurements of all the trees. Diameter at standard height measurements for multi-stem systems was obtained by taking the square root of the sum of the squares of the individual stems. Drip line radii were collected with a rate laser rangefinder and/or a measuring tape. For the purposes of determining critical root zones of the trees at this site, I will be using the diameter at standard height measurements as well as the drip line measurements in combination with analysis of each individual specimen as well as its unique access to soil volume. During the site, I attached numbered plaques to all of the woody plant systems on or adjacent to the site. I did not attached numbered plaques to the group of Windmill Palms (*Trachycarpus fortunii*) that is growing just to the west of the front door. Most of these Windmill Palms are at the end of their life curves and will not be viable for much longer. Further details about that group of trees will be included further down in the report.

Tree number 1371 is in the northwest corner of the lot. It is a Ponderosa Pine (*Pinus ponderosa*) tree next with a diameter at standard height of 23.5 inches. The tree has a fairly narrow upper canopy and its drip line measures 16 feet. Condition 6.

There are some Witch Hazel (*Corylus cornuta*) shrubs is surrounding the aforementioned Ponderosa Pine that are not appropriate to include on the inventory.

Moving directly to the east away from the pine, we come to tree number **1372**, which is a saucer Magnolia that is growing on the north neighbor's property. This tree has three main stems that have diameter at standard height readings of 6 inches, 6 inches, and 5 inches. This is a low, sprawling tree, whose canopy mostly grows to the east to get away from the aforementioned ponderosa pine. The drip line diameter for this tree is 20 feet when measured with the laser rangefinder. Condition 4.

Tree number 1373 is on the south neighbor's lot. It is an Evergreen Magnolia (*Magnolia grandiflora*) that is condition 6. This tree has three main stems with diameter at standard height readings of 12 inches, 8 inches, and 9 inches. A nice specimen with excellent access to light and a well-proportioned canopy. This tree has a drip line radius of 14 foot. I advise the client to place Tree Protection Fencing around the entire drip line of this tree prior to construction activities commencing. The tree protection fencing should be clearly indicated on the site plan that gets submitted to the city for permitting.

Just inside the entrance to the backyard is a group of Crabapples (*Malus sp*.) that are clustered on the east side of the house. The southernmost tree is **1374** and it is a three stem system with stems measuring 6 inches, 7 inches, and 3 inches. It is apparent that this tree is suffering from some early-season fungal pathogens and it is condition 4. Its drip line radius is 12 feet.

Tree number 1375 is another Crabapple that is located just to the north of the aforementioned system. This tree's drip line radius is only 8 feet as it is sandwiched between the two other trees and relatively narrow. This tree has two stems with diameter at standard height readings of 6 inches and 4 inches. This tree is condition 2/3.

Tree number 1376 is the broadest of the Crabapple trees and it has four stems. DSH readings are 7 inches, 7 inches, 6 inches, and 4 inches. The drip line radius of this tree is 15 feet. This tree is condition 4/5.

Tree number 1377 is located in the southeast corner of the lot. This tree is a Coast Redwood (*Sequoia sempervirens*) with two main stems that originate approximately 2 foot above the root flare. The eastern stem has a diameter at standard height reading of 31 inches and the western stem has a diameter at standard height reading of all 42 inches. This is an open grown specimen with excellent access to light and a live crown ratio of nearly 100%. This tree is in excellent condition and pruning on this tree should be limited to clearance for adjacent structures and minor lifting of the low canopy, if at all. For the purposes of establishing a critical root zone radius for this tree, it is more appropriate to use the drip line measurement than the diameter at standard height measurement to extrapolate the geometry. This tree's drip line radius is 23 foot plus the additional distance to the center of the system; totaling 26 feet. It is my suggestion that the client place Tree Protection Fencing around the entirety of the drip line of this tree prior to construction activities commencing and that that fencing be left in place for the duration of the project.

Tree number 1378 is just to the north of the aforementioned Redwood. It is a young Big Leaf Maple (*Acer macrophyllum*) tree with a diameter at standard height reading of 8 inches and a drip line radius of 6 foot. This tree is condition 6 and has a critical root zone with an 8 foot radius.

Tree number 1379 is a Vine Maple (*Acer circinatum*) that is located just to the northwest of the aforementioned maple. This tree has three stems with diameter at standard height readings of 5 inches, 2 inches, and 3 inches. This tree has a drip line at diameter of 22 feet. It is a fairly broad specimen, despite the small DSH measurement.

Just to the northeast of the Vine Maple is tree number **1380**. It is an Evergreen Magnolia (*Magnolia grandiflora*) with a diameter at standard height reading of 6 inches and a drip line radius 6 foot. Condition six.

There is one more tree on the north property line. It is a Bitter Cherry (*Prunus emarginaita*) with a diameter at standard height reading of 5 inches. This tree is too small to be considered in the inventory.

Over the fence in the backyard, the north neighbor has installed a row of Leyland Cypress (Cupressus x Lelandii) within 1 or 2 foot of the wooden fence. During the site visit, I counted approximately 12 trees that have acquired a height of approximately 35 foot. This installation will continue to grow quite a bit and at the time of the site visit, the branches of these trees were extending 16 foot to the south and onto my clients property. Placing tree protection fencing around the drip lines of the Leland Cypress is a good idea prior to construction.

Photos of the Site

1371

4 Windmall Palms west of existing SFR. These will need to be removed for the build.

1372 Neighbor’s Magnolia

1373

1373 Again

1374

1375

1376

1377

1377 Again

1378

1379

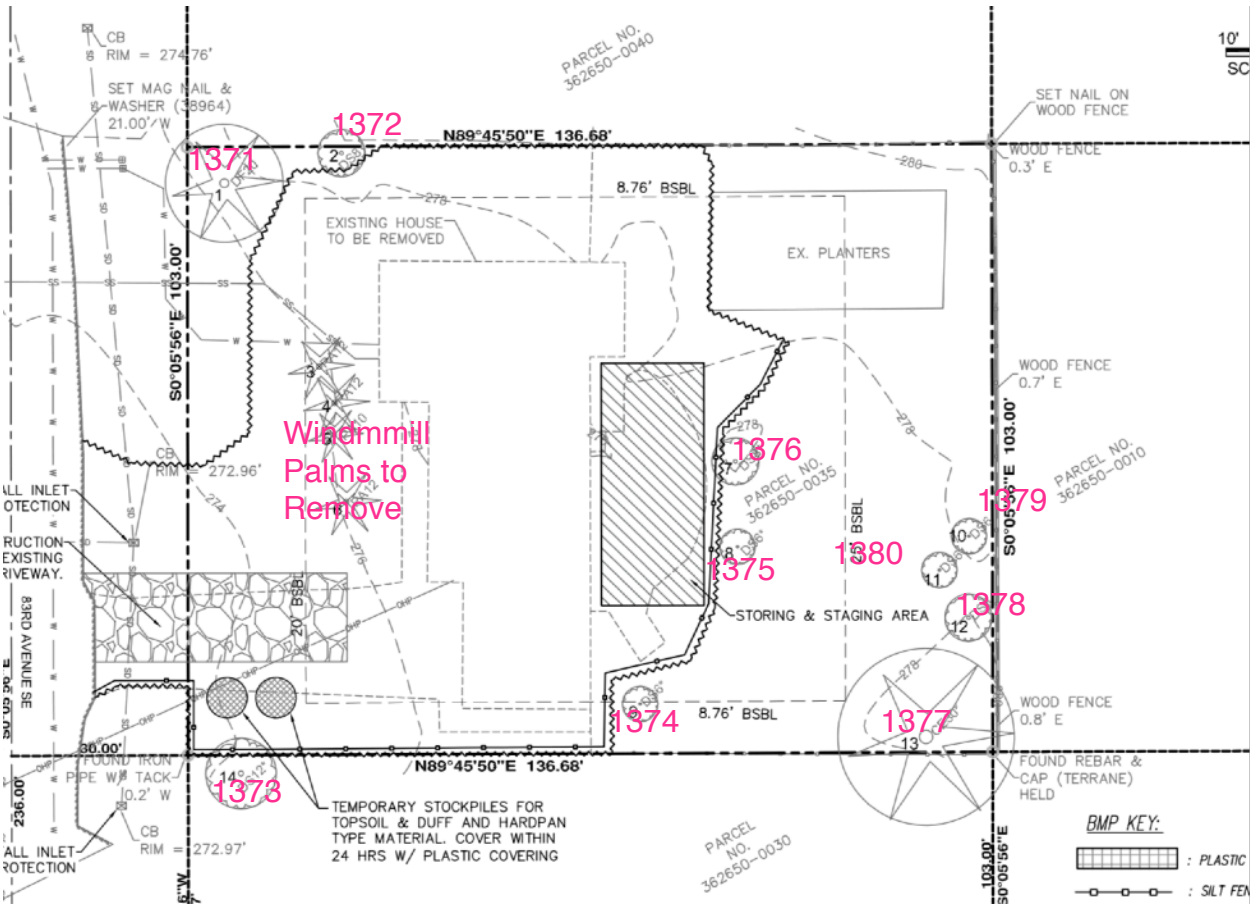
1380

North neighbor’s Leland Hedge

Data about the Trees

19287 6th Ave NE 12/27/2022

Tree Number	Common Name	Latin Name	Diameter at Standard Height in inches (obtained with fabric D-Tape). DSH of multi-stemmed trees is obtained by taking the square root of the sum of the squares of the individual DSH measurements.	Critical Root Zone Radius in feet (determined by analysis of DSH measurement, drip line radius, and access to soil volume)	Drip Line Radius in feet	Condition Ratings 6 = Excellent condition, 5 = Good, 4 = Fair, 3 = Poor, 2 = Very Poor, and 1 = Dying/Dead	Over 24"	Remove/Retain
1371	Ponderosa Pine	*Pinus ponderosa*	23.5	24.5	16		No	Retain
1372	Saucer Magnolia	*Magnolia x soulangiana*	10	20	20	4	No	Retain
1373	Evergreen Magnolia	*Magnolia grandiflora*	17	14	14	6	No	Retain
1374	Crabapple	*Malus sp.*	10	12	12	4	No	Remove
1375	Crabapple	*Malus sp.*	7	7	8	2/3	No	Remove
1376	Crabapple	*Malus sp.*	12	12	15	4/5	No	Remove
1377	Coast Redwood	*Sequoia sempervirens*	52	26	26	6	Yes	Retain
1378	Big Leaf Maple	*Acer macrophyllum*	8	8	6	6	No	Retain
1379	Vine Maple	*Acer circinatum*	6	12	22	6	No	Retain
1380	Evergreen Magnolia	*Magnolia grandiflora*	6	6	6	6	No	Retain



Summary

The proposed new SFR will require the removal of the Windmill Palms and Crabapples (Tree #'s 1374, 1375, and 1376. All of the other trees can be protected and will not be adversely affected by the proposed developments. Tree Protection Fencing should be placed at the drip line of each retained tree prior to construction activities commencing.

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 maintained.
-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.

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.