ARBORIST REPORT

Date:
September 17, 2019

Prepared for:
Whitney-Gedeon Residence

Site Address:
4219 91st Ave SE

Prepared by:
Tom Quigley
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NARRATIVE

Scope of Work
You have asked me to inventory and assess the trees located at the above referenced site in preparation for a permit to remodel the residential structure.

Methodology
The methods used for this assessment are as outlined in *Tree Risk Assessment* by Julian Dunster and as adopted by the International Society of Arboriculture (ISA). The end goal of most assessments is to provide the owner or manager of the tree(s) with factual information, enabling them to make decisions about the management of the tree(s). For this particular assessment, I used a Level II Assessment that includes inspection of the root collar, lower trunk, and canopy of the tree as can be seen from the ground. Basic assessment does not include climbing the tree or excavation of soils to inspect root structure or condition.

I placed a metal numbered tag on each tree and created a Tree Inventory that details each tree by Tree Tag #, Species, Size, Condition, Drip-line radius, with remarks as needed. I measured each tree for its Diameter at Breast Height (DBH), an industry standard of measuring trees at 4.5' above grade.

You provided a revised Site Plan A1.2, revised September 12, 2019 and have worked with your contractor to establish that access for heavy equipment and/or materials will be to the south of the house and then around to the NW corner of the existing structure where the remodeling will take place.

Findings and Observations
The subject site is a mostly level residential property that is primarily forested in Douglas fir trees. There are twelve (12) Douglas fir on-site and one (1) Douglas for off-site but with limbs that overhang the subject property. There are two (2) Western red cedar and two (2) ornamental landscape trees on the property.

The proposed construction does not require the removal of any trees. There are two trees in particular that could be potentially impacted; Fig tree #460 and Douglas fir #452.

Considerations
Tree #460 is a fruiting fig tree that some people say is more of a large vine than a true tree. Regardless, the root system is likely located in the pathway where equipment and material will be transported to the backyard. This is a natural pathway around the south end of the house, therefor the soils in this area are surely compacted to some degree by years of foot traffic and previous projects. Additional compaction could be avoided by the placement of thick plywood in the area near the tree and where the proposed excavator and materials will be handled. The moderately restricted access to the south of the house will restrict the size of the excavator. If there was any concern about excess weight, a second layer of plywood could be cross-laid.

Restricting the number of trips in-and out with the heavy machinery will also mitigate the compaction potential.

Tree #452 is a 12" DBH Douglas fir with a slightly crooked trunk that appears to be growing right on the property line. This tree has a 14' drip-line radius which overhangs the proposed excavation for the new addition and remodel. Of primary concern would be the extent of root removal or damage as a result of the construction activity and addition. It is not possible to know the extent or location of roots in this area without exploration. Actual exploration will better inform the tree preservation and mitigation decisions by identifying any roots that are of elevated concern. The exploration can be at the time the equipment is brought in or it can occur days before. A qualified tree person should be on-site during this work or photo documentation might work. The work should take two hours or less, even if done by hand. All root pruning should be done with proper pruning tools.

Soil exploration for this site could be accomplished by hand trenching with care or by the use of a pneumatic excavator, or so-called 'air-spade'. The exploration trench should be dug at the location of the proposed limits of disturbance (LOD). This would also be very near the location of the Tree Protection Fencing. In this case, the LOD should be as close to the foundation footing forms as possible, yet still provide for construction access and for the construction of the exterior walls of the proposed addition. If significant structural roots were encountered or if some other information was revealed by the excavation, a decision could be made then and there regarding retention or removal.

Mitigation for tree #452 would include covering the exposed roots with moist compost as soon as reasonable following the initial excavation. Additional hydration over the entire drip-line radius would be beneficial. Redirecting downspout run-off, as may be possible, can provide significant additional hydration.

If limbs of this tree interfere with the new addition, proper pruning practices should be undertaken in the removal of the limbs or branches. Limb removal should be limited to providing structural clearance.

The other evergreen trees located along the western property line likely have roots that extend beyond their drip-lines. Protection for these roots should be in the form of a protection fence, installed at the dripline of the individual trees or of the 'stand' of trees. Fencing should be a minimum of 4' tall orange poly fencing or as specified by the City arborist. Signage should be placed ever 20' along the fence stating the area is a tree protection area and that no equipment of material is to be stored there. The fencing should be installed as detailed in the above referenced Site Plan.

Conclusions

Provided the above detailed protection and mitigation measures are undertaken, the impacts to the trees should be minimal.

My experience tells me that the specific impacts to Douglas fir tree #452 will be tolerable. The tree is young and vigorous and the species has shown good tolerance to root pruning in a younger age.

This report was prepared by Thomas Quigley, ISA certified arborist PN0655A. Tree Risk Assessment Qualified (TRAQ) by the International Society of Arboriculture (ISA).