

September 14, 2021

Ned Flanders
50 Portland Avenue
Portland, OR 97239



Arborist Report Letter - 50 Portland Avenue, Portland OR

Ned,

You are planning to build an ADU in Portland, OR. The project is in the design phase and the City of Portland requires an Arborist Report discussing impacts to trees and tree protection measures to preserve trees. This letter provides information about the construction and tree preservation measures planned for those trees.

I visited the site to assess the trees on September 1, 2021 at 1 PM. The site has a long driveway connecting the property to Portland Avenue. The yard to west of the single-family home was primarily asphalt parking surrounded by landscaping. Three trees were growing in this area; the locations of these trees are shown on *Attachment A. Tree Protection Plan* and their characteristics are shown on *Attachment B. Tree Data*.

Two mature *Thuja plicata* (western red cedar) were growing within a few feet of the asphalt parking area. Tree #1 (photo below left) was in poor condition with a thin crown and more brown foliage than healthy *T. plicata* like #2 (photo below center). In the northwest corner of the property a *Prunus cerasifera* cvs. (purpleleaf plum) had a dense crown and unusual branch attachments (photo below right).



The City of Portland protects trees 12" and greater on private property. These trees cannot be removed without City approval. To encourage property owners to preserve trees during construction projects, the City has fees associated with removing trees. The fee for removing trees greater than 20 inches in diameter or more than 2/3 of the trees on a property is \$450.00 per inch diameter.

I evaluated how trees will be impacted by construction using *Site Plan* created by Portland Architects dated June 21, 2021. The plan shows a new ADU that will be built in the northwestern corner of the property. Overall, the impacts to trees will likely be:

Tree #	Species	Diameter	Disposition	Comments
1	<i>Thuja plicata</i>	33	Remove	Within planned driveway
2	<i>Thuja plicata</i>	39	Potentially Preserve	Approx. 8 feet from ADU
3	<i>Prunus cerasifera cvs.</i>	15	Remove	Adjacent to planned ADU

Tree #3 is not shown on the plans, but I estimate its location at approximately the northwestern corner of the ADU and will be removed to complete this construction. Along with building the ADU, the plans show extending and straightening the driveway which currently meanders around tree #1. This hardscape re-configuration will require the removal of tree #1.

The City of Portland prefers that projects follow the Prescriptive Pathways for tree preservation in which the Root Protection Zone is established for each tree as 1 foot radius for every 1 inch trunk diameter. Construction cannot encroach within more than 25% of the Root Protection Zone and cannot encroach closer to the trunk than ½ the Root Protection Zone radius. The ADU is planned approximately 8 feet from a 39 inch diameter tree. The Prescriptive Pathway cannot be used without a Root Protection Zone of at least 19 feet.

Tree #2 will be impacted above ground and below ground. The crown extends approximately 20 feet west towards the planned ADU location. With the planned roof approximately 20 feet above grade, I estimate that the planned construction will remove approximately 10-15% of the trees foliage. Below ground impacts are more difficult to predict. Building Section 2 shows a concrete slab poured approximately at existing ground level and no footing on the eastern side of the building closest to tree #2. I expect the excavation to construct the footing to cause moderate damage to tree #2. The tree's ability to survive this level of root loss will depend on how many roots are growing in this area. This tree is listed as Potentially Preserve, because we won't know whether this tree will survive that construction until excavation occurs. I recommend the Project Arborist monitors this construction and provides final disposition recommendations at that time.

The plans of re-orienting the hardscape allows for removal of some of the hardscape under the canopy of tree #2. It will be important to demolish this asphalt carefully to not damage existing tree roots. But, this removal of hardscape should improve the environment for roots to develop in the future.

Tree Protection Measures

The goal of tree preservation on construction projects is to have healthy trees that are valuable assets to the site for years into the future. Trees that do not have sufficient Root Protection Zones or are not adequately protected during construction can become liabilities rather than assets. These Tree Protection Measures are designed to help increase the chances of having healthy trees many years after construction is complete.

Design Phase

1. As plans change or when final plans are approved, forward to the Project Arborist for review.

Pre-Construction Phase

2. Schedule a meeting with the Project Arborist and contractors working on site to discuss construction activities, Tree Protection Measures, and monitoring schedule.
3. Install tree protection fencing to protect the Root Protection Zone from the existing deck ramp to the perimeter fence as shown in the Tree Protection Plan (attached) prior to any construction activities. Fencing shall be 6 foot high metal chain link fence secured with 8 foot metal posts. Signs shall be prominently secured to each fence designating the Root Protection Zone, penalties for violations and contact information for the Project Arborist.
4. The following activities are prohibited within the Root Protection Zone:
 - a. Ground disturbance or construction activity including vehicle or equipment access)
 - b. Storage of equipment or materials including soil, temporary or permanent stockpiling
 - c. Proposed buildings, impervious surfaces, underground utilities
 - d. Excavation or fill, trenching or other work activities.
5. A Certified Arborist shall prune tree #2 for clearance prior to construction. Construction personnel should advise what clearance will be required.

Construction Phase

6. Tree Protection Fencing shall remain in place and not be moved without prior approval from the Project Arborist and/or City. No construction activities are allowed within the Root Protection Zone.
7. Have the Project Arborist monitor the excavation to install the foundation for the ADU and demolition of the asphalt within 20 feet of tree #2. The Project Arborist shall evaluate visible root damage and evaluate the health and structural stability of the tree.
8. Cut all roots cleanly with a saw before being broken or ripped by equipment. If clean cuts cannot be achieved, additional hand digging to expose healthy root to cut at may be necessary.
9. Stop construction activities in the area and contact the Project Arborist anytime a root larger than 2" is encountered.
10. Contact the Project Arborist any time a tree is injured to evaluate the health and structural stability of the tree.
11. Do not store, dump or clean any materials or equipment within the Root Protection Zone. No waste water, concrete, paint, etc. shall be dumped in the Root Protection Zone.

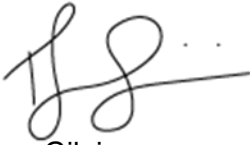
Post-Construction Phase

12. Prior to removing tree protection fencing, the Project Arborist shall conduct a final inspection and report on the health and impacts to trees during construction.

Long Term maintenance

13. Construction can be impactful on trees in ways that may not be apparent for years. Often the site is a completely different environment, in which the tree may not thrive. The property owner should request periodic tree monitoring by a Certified Arborist for health and structural stability. Regular maintenance and inspections are good practices for all trees, especially those that experienced construction impacts.

If you have any questions about my observations and recommendations, please contact me.



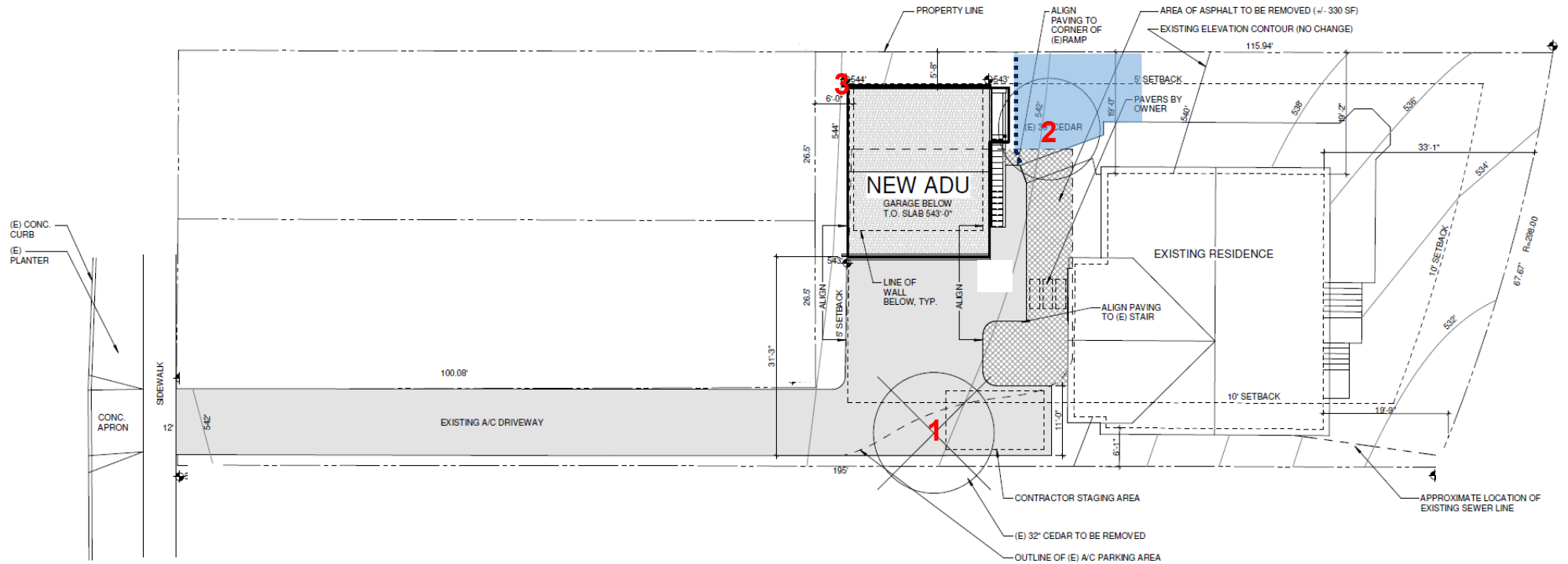
Ryan Gilpin
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Nidus Consulting

Attachment A. Tree Protection Plan

50 Portland Avenue
Portland, OR



September 14, 2021



① SITE PLAN
1" = 10'-0"



Legend

- # Tree number
- Tree protection fence
- Root Protection Zone



Basemap: *Site Plan* created by Portland Architects dated June 21, 2021.



Attachment B. Tree Data
 50 Portland Avenue, Portland
 September 1, 2021

Tree #	Species	Diameter	Status	Condition			Suitability for Preservation
1	<i>Thuja plicata</i>	33	Protected 20"+	Poor	Health Poor Structure Fair Form Fair	Thin crown, brown foliage, low vigor Trunk flat and damage at north base of trunk Codominant trunks arise from 35', branches sweep up	Low Poor condition, base 2' from asphalt
2	<i>Thuja plicata</i>	39	Protected 20"+	Good	Health Excellent Structure Good Form Excellent	Dense green crown Difficult to see upper crown Strong excurrent form	Moderate Base adjacent to deck ramp, much of crown over asphalt, edge of trunk 10' west of house
3	<i>Prunus cerasifera</i> cvs.	15	Protected	Fair	Health Good Structure Fair Form Fair	Dense purple crown Included bark at unusual branch attachments Crown one sided west with semi-seeping form	Moderate 5' from both fences