ARBOR SCIENCE TREE CARE
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February 5th 2024

Integrity Building and Construction.
214 Wasco Loop
Hood River, OR 97031

Site address:

290 1st Ave White Salmon, WA 98672
Parcel # 03102420003200
Legal Lot 2 WS-BLA 2020-003; 24-3-10

RE: Tree protection plan and encroachment easements per City of White Salmon, WA. WSMC 18.40 Heritage Oak Trees *(quercus garryana).*

Tree Protection:
Tree, Vegetation and Soil Protection During Construction.

During construction. Prior to initiating tree removal on the site, soils, vegetated areas and individual trees to be preserved shall be protected from potentially damaging activities pursuant to the following standards.

A. Placing Materials Near Trees. No person may conduct any activity within the protected area of any tree designated to remain, including, but not limited to, parking equipment, placing solvents, storing building material and soil deposits, dumping concrete washout and locating burn holes.

1. During construction, no person shall attach any object to any tree designated for protection.

B. Protective Barrier. Before development, land clearing, filling or any land alteration for which a Tree Removal Permit is required, the applicant:

1. Shall erect and maintain readily visible protective tree fencing along the outer edge and completely surrounding the protected area of all protected trees or groups of trees that are to remain undisturbed. Fences shall be constructed of chain link or high visibility HDPE fencing and at least four feet high, unless other type of fencing is authorized by the planning official.

2.Shall prohibit excavation or compaction of earth or other potentially damaging activities within the barriers.

3. Shall maintain the protective barriers in place until the planning official authorizes their removal or a final certificate of occupancy is issued, whichever occurs first

4. Shall ensure that any landscaping done in the protected zone subsequent to the removal of the barriers shall be accomplished with light machinery or hand labor. No turf or lawn areas are to be installed within protected area.

5. In addition to the above, the planning official may require the following:

- Cover with mulch to a depth of at least six (6) inches or with plywood or similar material the areas adjoining the critical root zone of a tree in order to protect roots from damage caused by heavy equipment.

- Minimize root damage by excavating a two (2) foot deep trench, at edge of critical root zone, to cleanly sever the roots of trees to be retained.

- Have corrective pruning performed on protected trees in order to avoid damage from machinery or building activity.

- Maintain trees throughout construction period by watering and fertilizing if recommended by Arborist.

C. Grade.

1. The grade shall not be elevated or reduced within the critical root zone of trees to be preserved without the planning official's authorization. The planning official may allow coverage of up to one half of the area of the tree's critical root zone with light soils (no clay) to the minimum depth necessary to carry out grading or landscaping plans, if it will not imperil the survival of the tree. Aeration devices may be required to ensure the tree's survival.

2. If the grade adjacent to a preserved tree is raised such that it could slough or erode into the tree's critical root zone, it shall be permanently stabilized to prevent suffocation of the roots.

3. The contractor shall not install an impervious surface within the critical root zone of any tree to be retained without the authorization of the planning official. The planning official may require specific construction methods and/or use of aeration devices to ensure the tree's survival and to minimize the potential for root induced damage to the impervious surface.

4. To the greatest extent practical, utility trenches shall be located outside of the critical root zone of trees to be retained. The planning official may require that utilities be tunneled under the roots of trees to be retained if the planning official determines that trenching would significantly reduce the chances of the tree's survival.

5. Trees and other vegetation to be retained shall be protected from erosion and sedimentation. Clearing operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, shrubs, ground cover and stumps shall be maintained on the individual lots, where feasible. Where not feasible appropriate erosion control practices shall be implemented pursuant to best management practices within industry standards.

D. Additional requirements. The planning official or Arborist may require additional tree, vegetation and soil protection measures which are consistent with accepted best management practices.

Tree Protection Easement:

Per WSMC 18.40 Special provisions- Heritage Trees. The tree protection area shall be equal to ten times the trunk diameter of the tree or the average diameter of the area enclosed within the outer edge of the drip line of the canopy, whichever is greater.

Individual Oak Tree Protection Easement Values (approximate)**:**

Tree #	DBH	Species	Critical root zone diameter	Critical root zone surface area (ft/2)	Approximate % of easement encroachment
1	32”	*q.garryana*	26.6'	555.7 ft/2	0.00%
2	30”	*q.garryana*	25'	490.8 ft/2	<10%
3	30”	*q.garryana*	25'	490.8 ft/2	15-20%
4	30”	*q.garryana*	25'	490.8 ft/2	0.00%
5	32”	*q.garryana*	26.6'	555.7 ft/2	0.00%

See attached proposed site plan for proximity and placement.
The above values are estimated pending final site plan.

Conclusions and Arborist's Opinion:
The tree developed improvements on the proposed site plan do not encroach more than the accepted industry standard of 25%.
This group of oak trees presents as a very healthy stand with exceptional form and growth habits. I feel that the proposed development plan will have a very insignificant impact on the critical root volume of these trees.
Oak trees are quite resilient and have an exceptional ability to correct and restore any deficits caused by environmental or cultural activities. The development plan does incorporate natural and undisturbed areas to to be retained for these trees. The addition of natural mulch media and protection to these reserved areas will undoubtedly benefit health and root restoration.

In my observations, and having cared for trees for 25 years the perception that new developments can have detrimental impacts on tree health and sustainability is not always accurate. When trees are retained for the benefit of a neighborhood they often receive more awareness, care and attention than before. Homeowners often have more of a vested interest in the health and sustainability of trees and incorporate them into their landscape care strategy.

Brandon Cheney
ISA Certified Arborist PN 7163A
Tree Risk Assessment Qualified