Todd Prager & Associates LLC

# MEMORANDUM

**DATE:** June 12, 2024

**TO:** Tim Lawler (Greenlight Development)

**FROM:** Christine Johnson, ASCA Registered Consulting Arborist® #823

**RE:** Salem Apartments Tree Protection and Removal Plan for Phase 2

## Summary

Salem Apartments is a proposed apartment complex at the intersection of Center Street NE and 23rd Street NE in Salem, Oregon. There are 14 non-exempt trees within the project limits for Phase 2, 10 of which will be retained and protected. Retained trees will be protected with tree protection fencing and project arborist oversight during construction.

Compliance with the provided tree protection plan and tree protection specifications should result in successful retention of 10 non-exempt trees over 10-inches in diameter. Tree removal does not exceed 75 percent and does not require additional mitigation trees. Since over 30 percent of the critical root zone of tree 3602 will be disturbed during construction, a tree variance may be required.

## Background

The site is located at 2561 Center Street NE (tax ID 527113 (4000)). The property is 9.85 acres and zoned Mixed Use I (MU-I). Trees over 10-inches in diameter (DBH) exist on the property, requiring compliance with Section 808 (Preservation of Trees and Vegetation) of the Salem Development Code. Heritage trees do not exist on the property. The property is in Marion County. There are no applicable insect pest quarantines or control area orders related to this project.[1] This tree protection plan is for Phase 2 of the project, focusing on the west side of the property.

### *Assignment*

The scope of work requested of our firm was:

1. Conduct one site visit to tag and inventory up to 90 trees at the Salem Apartments project site. Inventory to include the tree number, species, DBH, health and structural conditions of the trees, and pertinent comments.
2. Prepare a tree protection plan in accordance with Salem Code Chapter 808 – Preservation of Trees and Vegetation.
3. Separate arborist reports are to be provided for each phase of the overall development.

[1] "Quarantines and Control Areas," Oregon Department of Agriculture, accessed January 19, 2023, https://www.oregon.gov/oda/programs/IPPM/Pages/Quarantines.aspx.

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## Tree Inventory

The tree inventory was completed on January 10, 2024. There are 15 trees within in the project limits, one of which is exempt due to size (tree 4147). The following information was collected for each tree: tree number, common name, scientific name, DBH (diameter at breast height), single-stem DBH, approximate crown radius, health condition, structural condition, significant tree status, pertinent comments, whether the tree is exempt from Section 808 of the Salem Development Code and treatment (Attachment 1). The tree numbers in the inventory in Attachment 1 correspond to the tree numbers on the tree protection plan in Attachment 2.

## Protection Measures During Construction (808.046)

The tree protection plan is in Attachment 2. There are 10 non-exempt trees greater than 10-inches in diameter proposed for preservation in Phase 2 of the project. Four trees are recommended for removal (trees 4320, 7011, 7012, 7013). Seven (7) significant trees are proposed for preservation. During Phase 2, 10 of the 14 non-exempt trees will be preserved and protected. This is a preservation rate of 71 percent and a removal rate of 29 percent.

The critical root zones[2] for preserved trees in the Phase 2 area of the project are shown on the tree protection plan. This section of the report provides an overview of the trees proposed for preservation in Phase 2.

### *Giant Sequoia (Tree 3602)*

Tree 3602 is mature 80-inch DBH giant Sequoia (*Sequoiadendron giganteum*). During Phase 1 of construction, a drive aisle and associated sidewalk and parking will be constructed to the east. During Phase 2, grading will occur to the south, west, and north. Tree protection fencing is proposed at the edge of grading. A sanitary sewer line is proposed 30 feet north of tree 3602. The project arborist shall oversee excavation for the sewer line within the tree protection fencing areas as shown on Attachment 2.

Since over 30 percent of the critical root zone of tree 3602 will be disturbed during construction from Phases 1 and 2, a tree variance may be required.

### *Western redcedar grove (trees 7077 through 7085)*

The row of mature western redcedars (*Thuja plicata*) along the west property line are being retained and protected with tree protection fencing, compaction prevention, and project arborist oversight during excavation. Tree protection fencing is proposed approximately10 feet east of the property line. An 8-foot-wide access path comprised of geotextile fabric and a 12-inch-thick layer of wood chips shall be installed from the edge of tree protection fencing to the edge of the foundation footprint. The project arborist should be onsite to guide excavation for the west and southwest edges of Building N's foundation. While large diameter roots are not anticipated at this distance, the species is sensitive to construction impacts and care should be taken when pruning roots.

[2] Section 808.005. "*Critical root zone* means the circular area beneath a tree established to protect the tree's trunk, roots, branches, and soil to ensure the health and stability of the tree. The critical root zone measures one-foot in radius for every one-inch of dbh of the tree or, as an alternative for non-significant trees, may be specifically determined by an arborist."

The following tree protection measures are recommended:

1. **Tree protection fencing.**
    a. *Height*: Provide a minimum 6-foot-high metal fence (chain-link or chain-link panels).
    b. *Posts & Spacing:* Place concrete footers, steel footers, or metal t-posts no more than 10-feet apart.
    c. *Existing Grade*: Install fencing flush with the initial undisturbed grade of the protection zone.
    d. *Locations:* Install fencing as shown in Attachment 2.
2. **Tree protection signage.**
    a. Weatherproof tree protection signage shall be placed on tree protection fencing.
    b. Signage should be placed at intervals of every third fence panel/section.
    c. See Attachment 3 for an example tree protection sign.
3. **Prevent protection zone impacts.** The following activities are prohibited within a protection zone:
    a. Dumping of harmful chemicals and materials, such as paints, thinners, cleaning solutions, petroleum products, concrete or dry wall excess, construction debris, or run-off;
    b. Storage of materials such as building supplies, soil, rocks, or waste items;
    c. Placement of portable toilets, drop-boxes, or similar temporary items;
    d. Parking of vehicles or equipment; and,
    e. Excavation, trenching, grading, root pruning, or similar activities unless directed by an arborist present on site.
4. **Tree protection fencing maintenance and removal:**
    a. *Maintenance*: Maintain protection fencing in good effective condition at the approved and inspected location. Fencing that is damaged during site work shall be repaired and placed in the approved location prior to resuming work in the area. Failure to maintain tree protection fencing in the approved locations may result in a code violation.
    b. *Removal*: Fencing may be removed when all building demolition activity that could cause damage or harm to trees and other vegetation has been completed and is no longer occurring on site (i.e., no use of heavy equipment; no delivery trucks and contractor vehicles driving or parking off driveway; no utility trenching; etc.).
5. **Branch Pruning.** Trees proposed for preservation should be pruned prior to construction commencing. Dead, dying, and hanging branches should be pruned to reduce the likelihood of branch failure and increase site safety. Branches that may conflict with equipment may also be considered for removal. Branches that may be in conflict with required building, pedestrian, and road clearance should also be removed *prior* to construction. The following limitations apply to these pruning specifications:
    a. Climbing spurs shall not be used.
    b. All pruning cuts shall be made in a matter that is consistent with the ANSI A300 Part 1 pruning cuts section 7.
    c. Cuts should be 2 to 4-inches in diameter, not to exceed 4-inches unless approved by the project arborist.

d. No more than one-fourth of the live crown of the tree shall be pruned in an annual growing season. If more than one-fourth of the live crown of the tree needs to be pruned to accomplish the pruning objectives, the additional pruning shall be delayed until the following annual growing season.
e. Work practices shall be consistent with the current ANSI A300 Part 1 pruning practices section 8 and the ANSI Z133 standard.

6. **Root Pruning.** Excavation should be done slowly and methodically, several inches at a time to avoid root damage. Roots in conflict with proposed structures will either be cut or preserved, which may require site modifications. If roots are in direct conflict with proposed improvements, the arborist will guide the cutting of roots. A reciprocating saw with a clean, wood cutting blade should be used. The cut surface should then be covered with native soil. Cut roots will be documented for the property owner. Post-construction treatment, such as providing supplemental watering and fertilizer may be recommended.
7. **Compaction Prevention**. Prior to construction, a 12-inch layer of wood chips shall be placed over geotextile fabric to minimize compaction from heavy equipment within the critical root zones of trees 7077 through 7085. The fabric and wood chips shall be removed when improvements within the critical root zones under project arborist supervision are complete, and compaction is no longer an issue. Approved alternatives to fabric and wood chips such as the use of steel plates may be used.
8. **Erosion control.** Straw wattles should be used as erosion control at the edge of the root protection zone if required by the City of Salem. Do not trench or use sediment fencing inside tree protection fencing.
9. **Supplemental water during construction.** Preserved trees should be provided supplemental water twice a week between the months of May and September. Trees should be watered deeply, moisture reaching 12 inches below existing. A water truck will likely be required to provide adequate supplemental water to retained trees.
10. **Project arborist oversight.**
    a. The project arborist will oversee the following work:
        i. Excavation within the critical root zones of trees 7077 through 7085.
        ii. Excavation for the sanitary sewer within the tree protection area for tree 3602.
    b. The project arborist will document findings for the owner.
11. **Report sharing**. Share this report in its entirety with the project team and construction staff.
12. **Additional tree protection measures**. Additional tree protection measures consistent with the City of Salem tree code and industry standards are in Attachment 5.

## Conclusion

Phase 2 of the Salem Apartments project is compatible with tree protection measures outlined in Salem Code Chapter 808 – Preservation of Trees and Vegetation. There are 14 non-exempt trees within project limits for Phase 2. Ten of the 14 non-exempt trees, or 71 percent, are proposed for preservation. Tree protection fencing and project arborist oversight during excavation for the foundation for Building N will protect preserved trees.

Please contact me if you have any questions about the information outlined in this report.

Sincerely,

Christine Johnson

Christine Johnson
*ASCA Registered Consulting Arborist® #823*
*ISA Certified Arborist®, PN-8730A*
*ISA Tree Risk Assessment Qualified*
*ASCA Tree and Plant Appraial Qualified*
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Enclosures:
Attachment 1 – Tree Inventory
Attachment 2 – Tree Protection Plan
Attachment 3 – Tree Protection Signage
Attachment 4 – Tree Protection Specifications
Attachment 5 – Assumptions and Limiting Conditions

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**Attachment 1 - Tree Inventory**
Salem Apartments - 2561 Center Street NE
January 10, 2024

| No. | Common Name | Species Name | DBH[1] (in) | Single DBH (in) | C-Rad[2] (ft) | Health[3] | Structure[3] | Sig[4] | On property before | On property after | Phase | Comments | Exempt | Treatment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1193 | hornbeam | *Carpinus* spp. | 23 | 23 | 20 | good | fair | no | yes | yes | 1 | Numerous upright leaders, inclusion, some branch decay, diameter measured at 1.5' | non-exempt | remove |
| 1194 | Norway maple | *Acer platanoides* | 9 | 9 | 15 | poor | poor | no | yes | yes | n/a | Invasive species, large and expansive surface roots with damage, one-sided crown to E, dead branches | exempt (<10-inch DBH) | n/a |
| 1195 | Norway maple | *Acer platanoides* | 11 | 11 | 13 | good | good | no | yes | yes | 1 | Invasive species, surface roots with damage | non-exempt | remove |
| 1196 | Norway maple | *Acer platanoides* | 12 | 12 | 18 | fair | good | no | yes | yes | 1 | Invasive species, large and expansive surface roots with damage | non-exempt | remove |
| 1197 | Norway maple | *Acer platanoides* | 13 | 13 | 16 | fair | fair | no | yes | yes | 1 | Invasive species, small dead branches, large and expansive surface roots with damage | non-exempt | remove |
| 1198 | Norway maple | *Acer platanoides* | 13 | 13 | 15 | fair | fair | no | yes | yes | 1 | Invasive species, small dead branches, large and expansive surface roots with damage, trunk cavity at 6' | non-exempt | remove |
| 1199 | saucer magnolia | *Magnolia × soulangeana* | 6 | 6 | 5 | poor | poor | no | yes | yes | n/a | lost top, small diameter dead, watersprouts | exempt (<10-inch DBH) | n/a |
| 1340 | Norway maple | *Acer platanoides* | 10 | 10 | 10 | fair | fair | no | yes | yes | 1 | Invasive species, moderate structure, surface roots with damage, small dead branches, diameter measured at 3.5' | non-exempt | remove |
| 1341 | Norway maple | *Acer platanoides* | 11 | 11 | 9 | fair | fair | no | yes | yes | 1 | Invasive species, basal decay with hollow, surface roots with damage, small dead and broken branches, poor past pruning, diameter measured at 4' | non-exempt | remove |
| 1837 | Norway maple | *Acer platanoides* | 12 | 12 | 10 | fair | fair | no | yes | yes | 1 | Invasive species, surface root damage, codominant stems, small dead branches, branch decay | non-exempt | remove |
| 1839 | Norway maple | *Acer platanoides* | 16 | 16 | 15 | fair | fair | no | yes | yes | 1 | Invasive species, large and expansive surface roots with damage, trunk wound | non-exempt | remove |
| 1840 | Norway maple | *Acer platanoides* | 11 | 11 | 15 | fair | fair | no | yes | yes | 1 | Invasive species, moderate structure, small dead branches, large and expansive surface roots with damage | non-exempt | remove |
| 1841 | Norway maple | *Acer platanoides* | 11 | 11 | 10 | fair | fair | no | yes | yes | 1 | Invasive species, small dead branches, large and expansive surface roots with damage, thin | non-exempt | remove |
| 2419 | pin oak | *Quercus palustris* | 21 | 21 | 16 | good | fair | no | yes | yes | 1 | Moderate structure, codominant stems and multiple upright leaders, trunk wounds, some history of small branch failures, diameter measured at 3.5' | non-exempt | retain |
| 2420 | pin oak | *Quercus palustris* | 21 | 21 | 28 | good | fair | no | yes | yes | 1 | Moderate structure, some history of small branch failures, lower basal and trunk wounds all sides | non-exempt | retain |
| 2421 | deodar cedar | *Cedrus deodara* | 26 | 26 | 26 | good | good | no | yes | yes | 1 | Trunk wound S face, codominant crown class with 2422 | non-exempt | remove |
| 2422 | deodar cedar | *Cedrus deodara* | 29 | 29 | 22 | fair | fair | no | yes | yes | 1 | Self-correcting lean, trunk wound SE face, codominant crown class with 2421 | non-exempt | remove |
| 2423 | ponderosa pine | *Pinus ponderosa* | 26 | 26 | 22 | fair | fair | no | yes | yes | 1 | Western gall rust infection, significant sequoia pitch moth infestation, trunk wounds | non-exempt | remove |
| 2427 | Norway maple | *Acer platanoides* | 13 | 13 | 16 | fair | fair | no | yes | yes | 1 | Invasive species, large and expansive surface roots with damage, small dead branches | non-exempt | remove |
| 2428 | Norway maple | *Acer platanoides* | 14 | 14 | 12 | fair | fair | no | yes | yes | 1 | Invasive species, large and expansive surface roots with damage, small dead branches | non-exempt | remove |
| 2429 | hornbeam | *Carpinus* spp. | 23 | 23 | 18 | good | fair | no | yes | yes | 1 | Numerous upright leaders, surface and circling roots, diameter measured at 2' | non-exempt | retain |

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January 10, 2024

| No. | Common Name | Species Name | DBH[1] (in) | Single DBH (in) | C-Rad[2] (ft) | Health[3] | Structure[3] | Sig[4] | On property before | On property after | Phase | Comments | Exempt | Treatment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3173 | Norway maple | *Acer platanoides* | 12 | 12 | 13 | fair | fair | no | yes | yes | 1 | Invasive species, small dead branches, surface roots with damage, girdling roots | non-exempt | remove |
| 3253 | camelia | *Camelia spp.* | 6,4,4,4,4 | 10 | 10 | poor | poor | no | yes | yes | 1 | tree may no longer exist, there is a multi-stem camelia here. | non-exempt | remove |
| 3254 | Japanese maple | *Acer palmatum* | 8,7,7 | 13 | 4 | very poor | very poor | no | yes | yes | 1 | Poor structure, history of branch failure, trunk decay | non-exempt | remove |
| 3502 | sweetgum | *Liquidambar styraciflua* | 17 | 17 | 15 | good | good | no | yes | no | 1 | ivy | n/a | n/a |
| 3543 | sweetgum | *Liquidambar styraciflua* | 18 | 18 | 16 | good | fair | no | yes | yes | 1 | Expansive surface roots with damage, trunk wound, broken branches | non-exempt | remove |
| 3602 | giant sequoia | *Sequoiadendron giganteum* | 80 | 80 | 28 | good | good | yes | yes | yes | 2 | diameter estimated, surface roots with mower damage, some ivy covering base | non-exempt | retain |
| 3618 | Norway maple | *Acer platanoides* | 14 | 14 | 14 | fair | fair | no | yes | yes | 1 | Invasive species, surface roots with damage, dead and broken branches, crown decay | non-exempt | remove |
| 4097 | ponderosa pine | *Pinus ponderosa* | 29 | 29 | 22 | fair | fair | no | yes | yes | 1 | diameter estimated, multiple leaders, heavily infested with sequoia pitch moth | non-exempt | remove |
| 4098 | blue Atlas cedar | *Cedrus atlantica* 'Glauca' | 23 | 23 | 22 | good | fair | no | yes | yes | 1 | diameter estimated, multiple leaders | non-exempt | retain |
| 4147 | Japanese maple | *Acer palmatum* | 8 | 8 | 10 | good | fair | no | yes | yes | 2 | Some branch decay at old branch failures | exempt (<10-inch DBH) | n/a |
| 4156 | European white birch | *Betula pendula* | 17 | 17 | 18 | poor | poor | no | yes | yes | 1 | Invasive species, dying from top down, codominant leaders, dead and broken branches, sapsuckers, suspect bronze birch borer | non-exempt | remove |
| 4320 | western redcedar | *Thuja plicata* | 2x19 | 27 | 18 | poor | fair | no | yes | yes | 2 | Codominant stems, thin crown, chlorotic | non-exempt | remove |
| 4644 | plum | *Prunus* spp. | 18 | 18 | 14 | poor | poor | no | no | no | n/a | multiple leaders, topped for utility lines and utility pole clearance, crown decay, numerous sprouts | n/a | n/a |
| 4645 | Japanese maple | *Acer palmatum* | 8 | 8 | 12 | good | fair | no | no | no | n/a | diameter measured at 3', crossing branches | n/a | n/a |
| 4646 | Japanese maple | *Acer palmatum* | 8 | 8 | 12 | good | fair | no | no | no | n/a | diameter measured at 3.5, poor scaffold branch structure | n/a | n/a |
| 4647 | Japanese maple | *Acer palmatum* | 7 | 7 | 12 | good | good | no | no | no | n/a | diameter measured at 4' | n/a | n/a |
| 4648 | Japanese maple | *Acer palmatum* | 5 | 5 | 12 | good | good | no | no | no | n/a | diameter measured at 3' | n/a | n/a |
| 5103 | Austrian pine | *Pinus nigra* | 25 | 25 | 25 | good | fair | no | no | no | n/a | Basal swelling in W face, some sequoia pitch moth, not on property | n/a | n/a |
| 5190 | flowering pear | *Pyrus calleryana* | 9 | 9 | 8 | good | good | no | no | no | n/a | Surface roots, not on property | n/a | n/a |
| 5235 | flowering pear | *Pyrus calleryana* | 10 | 10 | 10 | good | fair | no | no | no | n/a | Some history of branch failure or poor past pruning, not on property | n/a | n/a |
| 5267 | hornbeam | *Carpinus* spp. | 36 | 36 | 20 | poor | poor | yes | no | no | n/a | Multiple stems, diameter approximated severely topped and pruned for utility line clearance, crown and trunk decay; not on property | n/a | n/a |

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| No. | Common Name | Species Name | DBH[1] (in) | Single DBH (in) | C-Rad[2] (ft) | Health[3] | Structure[3] | Sig[4] | On property before | On property after | Phase | Comments | Exempt | Treatment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5360 | Japanese maple | *Acer palmatum* | 5 | 5 | 5 | fair | fair | no | no | no | n/a | Multiple stems, diameter measured at 1.5', poorly pruned, trunk damage W face, not on property | n/a | n/a |
| 5409 | Japanese maple | *Acer palmatum* | 7,6 | 9 | 12 | fair | fair | no | no | no | n/a | Diameter 8" below codominant stem juncture, pruned away from building, crown is reaching utility lines, not on property | n/a | n/a |
| 5410 | Japanese maple | *Acer palmatum* | 7,7 | 10 | 12 | good | poor | no | no | no | n/a | Diameter 8" below codominant stem juncture, trunk damage W face, pruned away from building, crown is reaching utility lines, not on property | n/a | n/a |
| 5416 | flowering pear | *Pyrus calleryana* | 8 | 8 | 12 | good | good | no | no | no | n/a | self-correcting lean, not on property | n/a | n/a |
| 5451 | plum | *Prunus* spp. | 18 | 18 | 16 | poor | poor | no | yes | yes | 1 | Very poor structure, dead and broken branches, numerous sprouts, cracked branches | non-exempt | remove |
| 5506 | katsura | *Cercidiphyllum spp.* | 10 | 10 | 10 | fair | fair | no | no | no | n/a | Multiple upright leaders, surface roots with damage, trunk damage 0-3' on SW face, inclusion, diameter measured at 3.5' | n/a | n/a |
| 5508 | katsura | *Cercidiphyllum spp.* | 11 | 11 | 10 | fair | fair | no | no | no | n/a | Multiple leaders, surface roots with damage, trunk damage SW face, cord compartmentalized in W leader; diameter measured at 3.5' | n/a | n/a |
| 6101 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | tree does not exist (stump remains) | n/a | n/a |
| 6102 | red oak | *Quercus rubra* | 9 | 9 | 12 | good | good | no | yes | yes | n/a | girdling root north side | exempt (<10-inch DBH) | n/a |
| 6103 | red oak | *Quercus rubra* | 9 | 9 | 15 | good | good | no | yes | yes | n/a | minor surface root damage, possible poor drainage | exempt (<10-inch DBH) | n/a |
| 6104 | Norway maple | *Acer platanoides* | 20 | 20 | 18 | fair | fair | no | yes | yes | 1 | Invasive species, dead and broken branches, surface roots with damage | non-exempt | retain |
| 6105 | red oak | *Quercus rubra* | 10 | 10 | 14 | good | good | no | yes | yes | 1 | | non-exempt | retain |
| 6106 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | tree does not exist (stump remains) | n/a | n/a |
| 6107 | red maple | *Acer rubrum* | 18 | 18 | 20 | fair | fair | no | yes | yes | 1 | Moderate structure, some included bark, surface roots with damage, girdling roots | non-exempt | remove |
| 6108 | red maple | *Acer rubrum* | 14 | 14 | 18 | fair | fair | no | yes | yes | 1 | Multiple leaders, some included bark, hollow with some decay W trunk face, surface roots with damage | non-exempt | remove |
| 6111 | red maple | *Acer rubrum* | 20 | 20 | 26 | fair | fair | no | yes | yes | 1 | Multiple leaders, some included bark, surface and circling roots with damage | non-exempt | remove |
| 6112 | red maple | *Acer rubrum* | 18 | 18 | 26 | fair | fair | no | yes | yes | 1 | Codominant leaders with included bark and open seam, surface roots with damage, trunk wound | non-exempt | remove |
| 6122 | Austrian pine | *Pinus nigra* | 25 | 25 | 20 | fair | fair | no | yes | yes | 1 | Unidentified decrepit mushrooms ~2' from trunk NE face, codominant leaders, self corrected lean | non-exempt | remove |
| 6183 | Japanese maple | *Acer palmatum* | 2x4 | 6 | 10 | fair | fair | no | yes | yes | n/a | Codominant stems with included bark, surface roots with damage | exempt (<10-inch DBH) | n/a |
| 6184 | Japanese maple | *Acer palmatum* | 3x5 | 9 | 14 | very poor | very poor | no | yes | yes | n/a | Multiple stems, previous stem failure left large wound on remaining E stem, crown asymmetry | exempt (<10-inch DBH) | n/a |
| 6185 | Japanese maple | *Acer palmatum* | 5,5 | 7 | 13 | fair | fair | no | yes | yes | n/a | one-sided crown to south, girdling root | exempt (<10-inch DBH) | n/a |

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| No. | Common Name | Species Name | DBH[1] (in) | Single DBH (in) | C-Rad[2] (ft) | Health[3] | Structure[3] | Sig[4] | On property before | On property after | Phase | Comments | Exempt | Treatment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6186 | Austrian pine | *Pinus nigra* | 18 | 18 | 18 | poor | poor | no | yes | yes | 1 | codominant stems with included bark, history of branch failure, sequoia pitch moth, lost top | non-exempt | remove |
| 6187 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | tree no longer exists (stump remains) | n/a | n/a |
| 6188 | London planetree | *Platanus × acerifolia* | 23 | 23 | 32 | good | fair | no | yes | yes | 1 | Expansive surface roots with damage, trunk wounds N face | non-exempt | remove |
| 6189 | Norway maple | *Acer platanoides* | 17 | 17 | 21 | fair | fair | no | yes | yes | 1 | Invasive species, hollow with some decay W face lower trunk, thin | non-exempt | remove |
| 6190 | Norway maple | *Acer platanoides* | 22 | 22 | 24 | fair | poor | no | yes | yes | 1 | Invasive species, surface roots with damage, basal damage E face. Bacterial slim flux | non-exempt | remove |
| 6191 | Norway maple | *Acer platanoides* | 22 | 22 | 22 | good | good | no | yes | yes | 1 | Invasive species, few surface roots with damage | non-exempt | remove |
| 6550 | sweetgum | *Liquidambar styraciflua* | 19 | 19 | 22 | poor | poor | no | yes | yes | 1 | previous large leader failure, ivy, broken top, broken branched | non-exempt | remove |
| 7005 | sweetgum | *Liquidambar styraciflua* | 8,12 | 14 | 12 | fair | fair | no | yes | no | 1 | Codominant stems, extensive ivy | n/a | n/a |
| 7006 | sweet cherry | *Prunus avium* | 16,20 | 26 | 25 | fair | poor | no | yes | no | 1 | Invasive species, poor structure, codominant stems, history of branch failure, crown decay, ivy | n/a | n/a |
| 7007 | European white birch | *Betula pendula* | 2x18 | 25 | 28 | fair | poor | no | yes | yes | 3 | Invasive species, poor structure, dead and broken branches, ivy | non-exempt | remove |
| 7008 | European white birch | *Betula pendula* | 28 | 28 | 26 | fair | fair | no | yes | yes | 3 | Invasive species, moderate structure, small dead and broken branches | non-exempt | remove |
| 7009 | European white birch | *Betula pendula* | 20 | 20 | 15 | poor | poor | no | yes | yes | 3 | Invasive species, mostly dead, numerous branch failures, ivy covering lower trunk | non-exempt | remove |
| 7010 | European white birch | *Betula pendula* | 22 | 22 | 24 | poor | poor | no | yes | yes | 3 | Invasive species, dense row, poor structure, dead and broken branches, extensive ivy | non-exempt | remove |
| 7011 | European white birch | *Betula pendula* | 19 | 19 | 32 | fair | fair | no | yes | yes | 2 | Invasive species, dense row, moderate structure | non-exempt | remove |
| 7012 | European white birch | *Betula pendula* | 18 | 18 | 24 | fair | fair | no | yes | yes | 2 | Invasive species, dense row, moderate structure | non-exempt | remove |
| 7013 | European white birch | *Betula pendula* | 16 | 16 | 20 | poor | poor | no | yes | yes | 2 | Invasive species, dense row, poor structure, multiple leaders, dead and broken branches, ivy, not accessible during 2024 update | non-exempt | remove |
| 7077 | western redcedar | *Thuja plicata* | 3x16 | 28 | 20 | fair | fair | no | yes | yes | 2 | Dense row, multiple stems, some ivy, 7077-7085 are most suitable for retention as intact group, not accessible during 2024 update | non-exempt | retain |
| 7078 | western redcedar | *Thuja plicata* | 2x20 | 28 | 20 | fair | fair | no | yes | yes | 2 | Dense row, multiple stems, some ivy, 7077-7085 are most suitable for retention as intact group, not accessible during 2024 update | non-exempt | retain |
| 7079 | western redcedar | *Thuja plicata* | 30 | 30 | 20 | fair | fair | yes | yes | yes | 2 | Dense row, codominant stems, some ivy, 7077-7085 are most suitable for retention as intact group, not accessible during 2024 update | non-exempt | retain |
| 7080 | western redcedar | *Thuja plicata* | 10,26 | 28 | 20 | fair | fair | no | yes | yes | 2 | Dense row, multiple stems, some ivy, 7077-7085 are most suitable for retention as intact group, not accessible during 2024 update | non-exempt | retain |
| 7081 | western redcedar | *Thuja plicata* | 34 | 34 | 20 | fair | fair | yes | yes | yes | 2 | Dense row, multiple stems, some ivy, 7077-7085 are most suitable for retention as intact group, not accessible during 2024 update | non-exempt | retain |

Todd Prager & Associates LLC

**Attachment 1 - Tree Inventory**
Salem Apartments - 2561 Center Street NE
January 10, 2024

| No. | Common Name | Species Name | DBH[1] (in) | Single DBH (in) | C-Rad[2] (ft) | Health[3] | Structure[3] | Sig[4] | On property before | On property after | Phase | Comments | Exempt | Treatment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7082 | western redcedar | *Thuja plicata* | 30 | 30 | 20 | fair | fair | yes | yes | yes | 2 | Dense row, some ivy, 7077-7085 are most suitable for retention as intact group, not accessible during 2024 update | non-exempt | retain |
| 7083 | western redcedar | *Thuja plicata* | 20,26 | 33 | 20 | fair | fair | yes | yes | yes | 2 | Dense row, multiple stems, some ivy, 7077-7085 are most suitable for retention as intact group, not accessible during 2024 update | non-exempt | retain |
| 7084 | western redcedar | *Thuja plicata* | 2x26 | 37 | 20 | fair | fair | yes | yes | yes | 2 | Dense row, multiple stems, some ivy, 7077-7085 are most suitable for retention as intact group. not accessible during 2024 update | non-exempt | retain |
| 7085 | western redcedar | *Thuja plicata* | 2x22 | 31 | 15 | fair | fair | yes | yes | yes | 2 | Dense row, codominant stems, 7077-7085 are most suitable for retention as intact group, not accessible during 2024 update | non-exempt | retain |
| 7086 | western redcedar | *Thuja plicata* | 19 | 19 | 20 | fair | fair | no | no | no | n/a | One-sided crown to SE, lower trunk damage S face, not accessible during 2024 update | n/a | n/a |

[1]**DBH** is tree diameter measured at 4.5-feet above the ground level in inches, except as otherwise noted; multiple trunks splitting below DBH are measured separately and individual trunk measurements are separated by a comma, except multiple trunks of the same size are indicated as quantity x size.

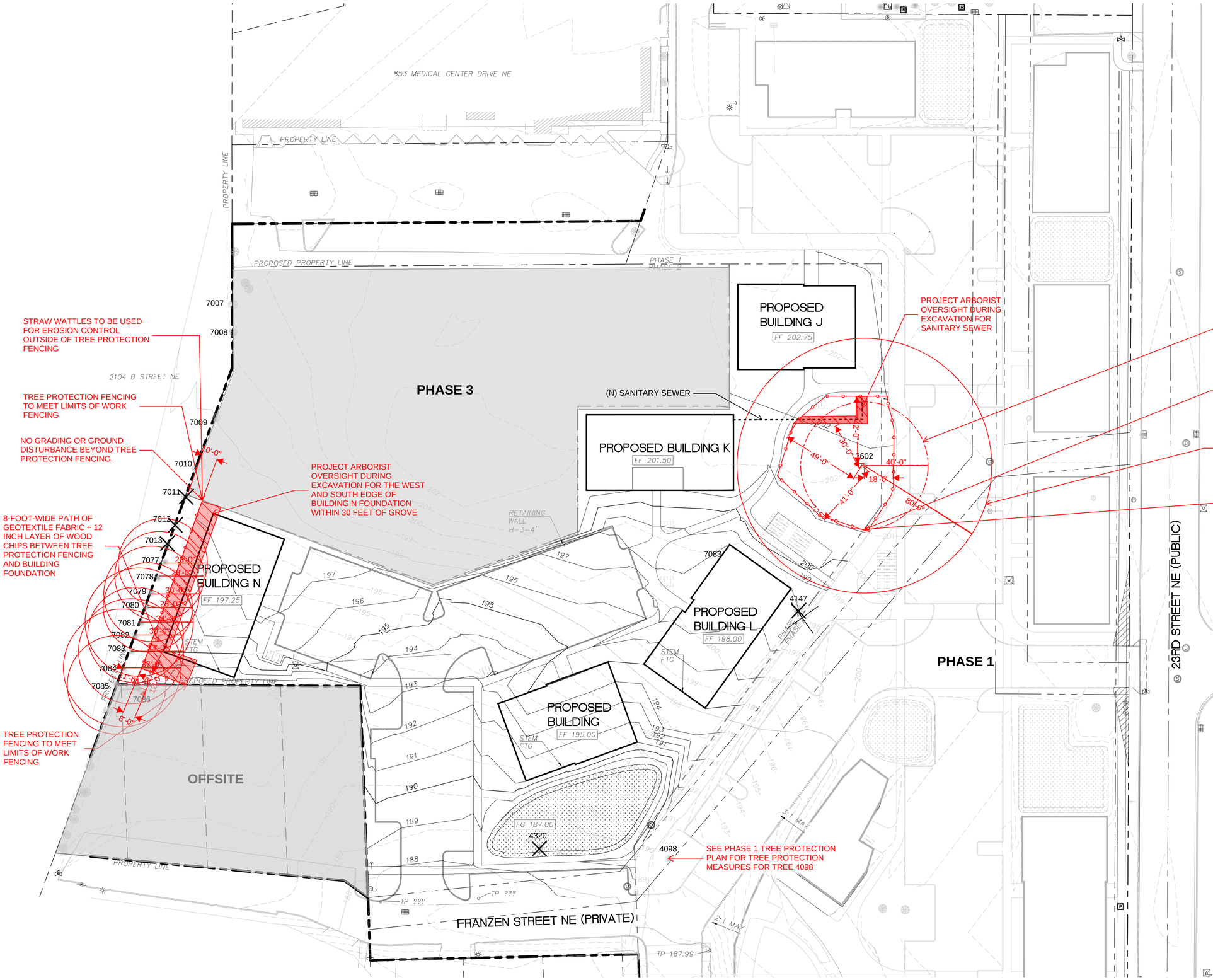
[2]**C-Rad** is crown radius measured in feet.

[3]**Health** and **Structure** are rated as good, fair, poor, very poor, to dead.

[4]**Sig** notes whether or not trees are "significant" per SRC Section 808.005.

**Attachment 2 - Tree Protection Plan**



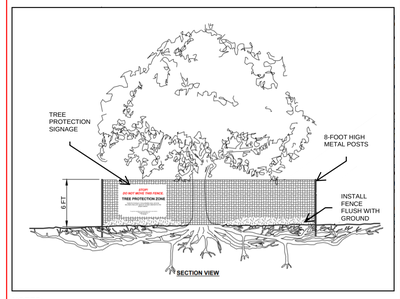



## SHEET LEGEND

| | |
|---|---|
| — — 201 — — | EXISTING CONTOUR |
| —— 201 —— | PROPOSED CONTOUR |
| BS XXX.XX | GRADE AT BOTTOM OF STAIRS |
| G XXX.XX | GRADE AT GUTTER |
| TC XXX.XX | GRADE AT TOP OF CURB |
| TP XXX.XX | GRADE AT TOP OF PAVEMENT |
| TS XXX.XX | GRADE AT TOP OF STAIRS |
| TF XXX.XX | GRADE AT TOP OF FOOTING |
| FF XX.XX | FINISH FLOOR ELEVATION |
| FG XXX.XX | FINISHED GRADE |
| TW XXX.XX | GRADE AT TOP OF WALL |
| EG XXX.XX | EXISTING GRADE |
| (E) | EXISTING |
| X.X% | SLOPE ARROW |
| GB | GRADE BREAK |

## TREE PROTECTION FENCING DETAIL

FULLY ENCLOSE TREES WITH 6 FT TALL METAL FENCING SECURED TO THE GROUND WITH CONCRETE BLOCKS, METAL FOOTERS, OR 8-FOOT TALL T-POSTS.




***NOTES:***

1. THE FENCE SHALL BE INSTALLED BEFORE ANY GROUND DISTURBING ACTIVITIES INCLUDING CLEARING AND GRADING, OR CONSTRUCTION STARTS, AND SHALL REMAIN IN PLACE UNTIL FINAL INSPECTION.
2. FENCING SHALL BE 6 FT TALL METAL FENCING. FENCING SHALL BE SECURED WITH METAL POSTS SHALL BE ESTABLISHED AT THE EDGE OF THE ROOT PROTECTION ZONE AND PERMISSIBLE ENCROACHMENT AREA ON THE DEVELOPMENT SITE AS INDICATED ON THE TREE PROTECTION PLAN.
3. SIGNAGE DESIGNATING THE PROTECTION ZONE AND PENALTIES FOR VIOLATIONS SHALL BE SECURED IN A PROMINENT LOCATION ON EACH PROTECTION FENCE AT A MINIMUM OF EVERY 30 FT OR EVERY THIRD FENCE PANEL.
4. THE FOLLOWING IS PROHIBITED WITHIN THE ROOT PROTECTION ZONE OF EACH TREE OR OUTSIDE THE LIMITS OF THE DEVELOPMENT IMPACT AREA: GROUND DISTURBANCE OR CONSTRUCTION ACTIVITY INCLUDING VEHICLE OR EQUIPMENT ACCESS (BUT EXCLUDING ACCESS ON EXISTING STREETS OR DRIVEWAYS), STORAGE OF EQUIPMENT OR MATERIALS INCLUDING SOIL, TEMPORARY OR PERMANENT STOCKPILING, PROPOSED BUILDINGS, IMPERVIOUS SURFACES, UNDERGROUND UTILITIES, EXCAVATION OR FILL, TRENCHING OR OTHER WORK ACTIVITIES.

GRADING PLAN
SCALE: 1"=30'

GRAPHIC SCALE
0 30 60
1 inch = 30 ft.

NOT FOR CONSTRUCTION

POLYPHON
ARCHITECTURE & DESIGN, LLC
4103 NE TILLAMOOK STREET | PORTLAND, OR 97212
polyphon.com

REGISTERED PROFESSIONAL ENGINEER
18684
PRELIMINARY
OREGON
JULY 16, 1982
DAVID J. HUMPHREY
EXPIRES 6-30-25

# SALEM APARTMENTS
891 23RD ST. NE SALEM, OR

CLIENT :
HOME FIRST DEVELOPMENT/ GREEN LIGHT DEVELOPMENT

ISSUE DATES:

JOB # : 2248
STATUS : LUR
PRINTED : 10/26/2023 12:19:05 PM

GRADING PLAN

C20
ORIGINAL SHEET SIZE : 22"x34"

**Attachment 3 - Tree Protection Sign**



# *STOP!*
# *DO NOT MOVE THIS FENCE.*

# TREE PROTECTION ZONE

Inside the fencing is a tree protection zone, not to be disturbed unless prior approval has been obtained from the project arborist.

For questions regarding tree protection please call the project arborist:
Todd Prager & Associates, LLC
todd@toddprager.com
971.295.4835

# Attachment 4 - Tree Protection Recommendations

The following recommendations will help to ensure that the trees to be retained are adequately protected:

**Before Construction Begins**

1. **Notify all contractors of the tree protection procedures.** For successful tree protection on a construction site, all contractors must know and understand the goals of tree protection.
    a. Hold a tree protection meeting with all contractors to explain goals of tree protection.
    b. Have all contractors sign memoranda of understanding regarding the goals of tree protection. The memoranda should include a penalty for violating the tree protection plan. The penalty should equal the appraised value of the tree(s) within the violated tree protection zone per the current Trunk Formula Method as outlined in the current edition of the ***Guide for Plant Appraisal*** plus any resulting fines by government agencies.
    c. The penalty should be paid to the owner of the property.
2. **Fencing.**
    a. Establish fencing around each tree or group of trees to be retained.
    b. The fencing should be put in place before the ground is cleared to protect the trees and the soil around the trees from disturbance.
    c. Fencing should be established by the project arborist based on the needs of the trees to be protected and to facilitate construction.
    d. Fencing should consist of 6-foot-high chain-link fencing secured to concrete footers, steel footers, or metal t-posts to prevent it from being moved by contractors, sagging or falling down.
    e. Fencing should remain in the position that is established by the project arborist and not be moved without approval from the project arborist until final project approval.
3. **Signage**.
    a. All tree protection fencing should be provided signage so that all contractors understand the purpose of the fencing.
    b. Signage should be placed on every other fence panel.
    c. Signage should be weathered and secured to fencing.
    d. Signage has been included in Attachment 3.

## During Construction

1. **Protection Guidelines Within the Tree Protection Zones.**
    a. No traffic should be allowed within the tree protection zones. This includes but is not limited to vehicle, heavy equipment, or even repeated foot traffic.
    b. No storage of materials including but not limiting to soil, construction material, or waste from the site should be permitted within the tree protection zones. Waste includes but is not limited to concrete wash out, gasoline, diesel, paint, cleaner, thinners, etc.
    c. Construction trailers should not to be parked/placed within the tree protection zones.
    d. No vehicles should be allowed to park within the tree protection zones.
    e. No activity should be allowed that will cause soil compaction within the tree protection zones.
2. The trees should be protected from any cutting, skinning or breaking of branches, trunks, or woody roots.
3. The project arborist should be notified prior to the cutting of woody roots from trees that are to be retained to evaluate and oversee the proper cutting of roots with sharp cutting tools. Cut roots should be immediately covered with soil or mulch to prevent them from drying out.
4. No grade changes should be allowed within the tree protection zones.
5. Trees that have woody roots cut should be provided supplemental water during the summer months.
6. Any necessary passage of utilities through the tree protection zones should be by means of tunneling under woody roots by hand digging or boring with oversight by the project arborist.
7. Any deviation from the recommendations in this section should receive prior approval from the project arborist.

## After Construction

1. **Carefully landscape the areas within the tree protection zones.** Do not allow trenching for irrigation or other utilities within the tree protection zones.
2. **Carefully plant new plants within the tree protection zones.** Avoid cutting the woody roots of trees that are retained.
3. **Irrigation**. Do not install permanent irrigation within the tree protection zones unless it is drip irrigation to support a specific planting, or the irrigation is approved by the project arborist.
4. **Drainage**. Provide adequate drainage within the tree protection zones and do not alter soil hydrology significantly from existing conditions for the trees to be retained.
5. **Inspect landscape for pests and disease.** Provide for the ongoing inspection and treatment of insect and disease populations that can damage the retained trees and plants.
6. **Fertilization**. The retained trees may need to be fertilized if recommended by the project arborist.
7. Any deviation from the recommendations in this section should receive prior approval from the project arborist.

# Attachment 5 - Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. The site plans and construction information provided by Greenlight Development and their consultants was the basis of the information provided in this report.
2. It is assumed that this property is not in violation of any codes, statutes, ordinances, or other governmental regulations.
3. The consultant is not responsible for information gathered from others involved in various activities pertaining to this project. Care has been taken to obtain information from reliable sources.
4. Loss or alteration of any part of this delivered report invalidates the entire report.
5. Drawings and information contained in this report may not be to scale and are intended to be used as display points of reference only.
6. The consultant's role is only to make recommendations. Inaction on the part of those receiving the report is not the responsibility of the consultant.
7. The purpose of this Phase 2 arborist report is to:
    a. Conduct one site visit to tag and inventory up to 90 trees at the Salem Apartments project site. Inventory to include the tree number, species, DBH, health and structural conditions of the trees, and pertinent comments.
    b. Prepare a tree protection plan in accordance with Salem Code Chapter 808 – Preservation of Trees and Vegetation.