WASHINGTON PARK RESERVOIRS

TREE PROTECTION AND PRESERVATION PLAN AND TREE REMOVAL PLAN FOR THE E-ZONE AND S-ZONE

Portland, Oregon
PROTECTION/PRESERVATION/REMOVAL PLAN
Phase 1 – The Environmental Conservation (E-Zone) and the Scenic Overlay Zone (S-Zone) Tree Study, Tree Protection and Preservation Plan and Tree Removal Plan with Recommendations for Washington Park Reservoirs #3 and #4
Portland, OR

PREPARED FOR
City of Portland Water Bureau
1120 SW 5th Avenue, Suite 600
Portland, OR 97204

PREPARED BY
Don Richards, President
Applied Horticultural Consulting, Inc.
P.O. Box 2355
Lake Oswego, Oregon 97035

TREE STUDY/SURVEY DATES
Tree Study/Survey Dates:

REPORT DATE
July 13, 2015
TREE PROTECTION/PRESERVATION/REMOVAL REPORT
Project Arborist’s Report - Phase 1 Tree Study, Tree Protection and Preservation Plan and Tree Removal Plan for the Environmental Conservation Zone (E-Zone) and the Scenic Overlay Zone (S-Zone) Areas at the Washington Park Reservoirs #3 and #4 in Portland, OR

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City of Portland Water Bureau
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Prepared By:

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P.O. Box 2355
Lake Oswego, Oregon 97035
Certified Arborist
ISA Certification Number PN-5536A

July 13, 2015
Scope and Limitation of Work

General

A request was made by AECOM Consulting Engineers, the design engineers for this project, on behalf of the City of Portland Water Bureau, for a certified arborist’s report containing a tree study and tree survey of existing tree species in the Environmental Conservation Zone (E-Zone) and the Scenic Overlay Zone (S-Zone) on the site and an opinion on specifications for existing tree protection/preservation and post-construction tree care. The City of Portland Water Bureau plans to replace reservoir #3 and decommission reservoir #4. The certified arborist’s scope of work includes reporting of all applicable tree-related requirements for the E-Zone and the S-Zone as outlined in the City of Portland’s Tree Code Title 11 01-24, 2013 inclusive, revised in 2014.

An initial pre-construction tree inventory and existing conditions evaluation was conducted over several months. This report includes the location of each 6” DBH tree identified within the E-Zone and the S-Zone included on the survey base maps (attached as Appendix B). The tree inventory includes the common name and the botanical genus and species of each tree, the current size of each tree measured in DBH\(^1\), and all other pertinent or special tree information associated with this project or required by code.

Trees within or just adjacent to the revised limited area of disturbance within the E-Zone may require a modified RPZ or MRPZ (refer to attached Appendix A and Appendix B identifying the trees on the site that are proposed for mitigation and possible removal if they don’t survive; and those that will require a modified RPZ or MRPZ). The alternative plan outlines the MRPZ that will be delineated with fencing (conforming or non-conforming), marked with signage and will meet all other applicable requirements of 11.60.030.C.2.

There are no trees within the S-Zone or within the 20 foot buffer that are identified as requiring a modified RPZ or MRPZ.

Timetable

A revised timetable for completion of Phase 1 of the project as proposed in the scope of work was confirmed as the week of July 13, 2015.

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\(^1\) DBH is diameter at breast height measured 4.5 feet above existing grade.
Standards

General

Research and documentation for this Phase 1 report and the attachments consists of:

- A measurement of trees identified in the Phase 1 E-Zone and the S-Zone study area by size;
- An identification of trees in the Phase 1 E-Zone and the S-Zone study area by common and botanical names;
- A visual inspection of trees in the Phase 1 E-Zone and the S-Zone study area for general health and existing conditions prior to construction;
- A review of applicable tree protection specifications, all sections and subsections from the City of Portland’s 2013 Tree Code, Title 11 revised 2014;
- Recommendations for pre-construction tree protection/preservation and pruning or limb removal in the Phase 1 E-Zone and the S-Zone study area;
- Recommendations for post-construction tree care in the phase 1 E-Zone and the S-Zone study area;
- A base map indicating the trees surveyed and the location of the proposed protection fencing (to code standard and/or recommended as alternative non-conforming) with identification of all 6" DBH and larger trees within the Phase 1 E-Zone and the S-Zone study area (attached as Appendix B); and
- Identification of all 6" DBH and larger trees within the Phase 1 E-Zone and the S-Zone study area designated for removal, mitigation and those requiring a MRPZ (attached as Appendix B).

Specifications

Specifications for existing tree protection/preservation and retention will be based on information gathered during the tree study/survey conducted on September 16, 17, 18, 26, 27, October 2 and 3 and November 11, 2013 again on August 12, 13, 14 and 15, 2014, and again on January 5 through February 5, 2015 for trees 6" DBH and larger in the E-Zone and S-Zone.

Additional specifications to be used for tree protection/preservation will be developed from information contained in the reference Trees and Building Sites, 2014.

Observations of quality, existing conditions and canopy cover were made during the tree study/survey and all of the trees surveyed and designated for retention within the E-Zone and S-Zone warrant protection/preservation where possible with the exception of those nuisance varieties identified on attachment Appendix B.

2 Including the 20 foot buffer.
Standards (continued)

The complete recommendations for tree protection/preservation and retention will be based on the final development plans to be submitted as part of the permit application.

Tree Mitigation and Possible Removal if They Do Not Survive

E-Zone

Trees identified for mitigation and possible removal if they do not survive within the E-Zone totaled (26). This was (4) trees in area 4; (13) trees in area 6; (8) trees in area 8 and; (1) in area 11. These (26) trees scheduled for mitigation and possible removal if they do not survive range in size from 6 inch to 58 inch DBH and are marked as “M” on attached Appendix B.

S-Zone

There were no trees identified for mitigation and possible removal if they do not survive within the S-Zone or within the 20 foot buffer. This was (4) trees in area 2.

Tree Removal

E-Zone

Trees scheduled for complete removal within the E-Zone are delineated on attached Appendix B. Trees identified for complete removal within the E-Zone totaled (45). These (45) trees scheduled for complete removal range in size from 6 inch to 61 inch DBH. Another (12) trees are scheduled to be removed as nuisance species in the E-Zone.

S-Zone

Trees identified for complete removal in the S-Zone and within the 20 foot buffer totaled (4). These (4) trees scheduled for complete removal range in size from 15 inch to 28 inch DBH.

Recommendations

On Site and Pre-Construction Care and Maintenance

The prevention of damage to overhanging branches that could be caused by construction equipment should be identified by the contractor and a certified arborist and a course of action agreed to by the City of Portland Urban Forestry Project Inspector before construction begins. Selective branch removal may be performed in these limited sites. A certified arborist must prepare and submit a pruning plan and supervise or conduct the work.
Recommendations (continued)

On Site and Pre-Construction Care and Maintenance (continued)

The pruning plan should describe the nature and extent of the proposed pruning as necessary to ensure proper arboricultural practices are followed\(^3\). If the potential for damage during construction is foreseen or occurs on site, a certified arborist should oversee and make pruning recommendations to remove any branches that could be or have been damaged during construction.

Any activities that may impact tree protection such as the transport or movement of large equipment that may damage overhanging branches must be approved by a certified arborist and agreed to by the City of Portland Urban Forestry Project Inspector in advance.

Prescriptive Path

Delineation of a code-conforming “Root Protection Zone” RPZ should be by prescriptive path methods where practicable. For trees on the development site - a minimum of 1 foot radius (measured horizontally away from the face of the tree trunk) for each inch of tree diameter shall constitute the conforming RPZ.

Prescriptive Path Use of Code Conforming Tree Protection Fencing

All conforming RPZ’s should be delineated using a minimum 6 foot high, chain link metal fence secured with 8-foot metal posts secured 2 feet in the ground, with a maximum separation of 10 feet at the edge of the root protection zone. A note that clearly informs all site contractors about the necessity of preventing damage to the trees should be incorporated on all appropriate construction plan drawings. Tree protection fencing must remain in place until final permit inspection or until work has been completed in the immediate area and no chance for any further construction, excavation or equipment use is guaranteed. Removal of fencing must be approved by a certified arborist and agreed to by the City of Portland Urban Forestry Project Inspector in advance.

Prescriptive Path Allowed Encroachments in to the Conforming RPZ

Encroachments into the root protection zone are allowed provided:
(a) The area of all encroachments is less than 25% of the total root protection zone area; and
(b) No encroachment is closer than 1/2 the required radius distance (see example taken from City Code Title 11.60\(^4\));

\(^3\) *City of Portland Tree Code* 2014, section 11.40, item b. 2, pages 38 and 39.
\(^4\) *City of Portland Tree Code* 2014, section 11.60, item 3 b, page 61.
Recommendations (continued)

Allowed Encroachments in to the Conforming RPZ (continued)

_Permissible RPZ Encroachments_\(^5\)

Performance Path

In areas where the prescriptive path protection methods are not applicable or cannot be met, an alternative tree protection plan has been prepared by a certified arborist using the performance path method of Portland Tree Code Section 11.60.030.C.2. This alternative plan outlined herein provides the rationale used to demonstrate that the alternate methods recommended provide an adequate level of protection based on the findings from the site visits. The alternative tree protection plan must be approved by the City of Portland Urban Forestry Project Inspector in advance.

\(^5\) _City of Portland Tree Code_ 2014, section 11.60, item 3 b, exhibit 61, page 61.
Recommendations (continued)

Alternative Tree Protection Within the E-Zone

Trees within or just adjacent to the limited area of disturbance within the E-Zone may require a “Modified Root Protection Zone” or MRPZ (refer to attached Appendix A and Appendix B identifying the trees on the site that are proposed for mitigation and possible removal if they do not survive; and those that will require a modified RPZ within the E-Zone). The alternative plan identified herein outlines the MRPZ that will be delineated with tree protection as required, maintaining each tree in their existing condition. Each MRPZ must be approved by the City of Portland Urban Forestry Project Tree Inspector. MRPZ’s must be marked with signage and must meet all other applicable requirements of 11.60.030.C.2.

Alternative Tree Protection Within the S-Zone

There are no trees within or just adjacent to the limited area of disturbance in the S-Zone or within the 20 foot buffer that will require a “Modified Root Protection Zone” or MRPZ.

Use of Alternative, Non-Conforming Tree Protection Fencing in the E-Zone

Due to the size of the site and the number of trees either within or just adjacent to the limited area of disturbance in the E-Zone, a MRPZ should be provided by performance path methods. This alternative, non-conforming tree protection must be adequate to protect trees that are upslope in this area and must be approved by the City of Portland Urban Forestry Project Tree Inspector. Existing site fencing may be utilized for MRPZ fencing where appropriate along Sherwood Boulevard or incorporated into the temporary MRPZ fencing to be erected.

Use of Alternative, Non-Conforming Tree Protection Fencing in the S-Zone

There are no trees within or just adjacent to the limited area of disturbance in the S-Zone or within the 20 foot buffer that will require alternative, non-conforming tree protection fencing.

Fencing Specifications and Installation

All fencing, whether conforming or non-conforming, should be installed before any ground-disturbing activities take place, including clearing and grading, excavation and construction. A note that clearly informs all site contractors about the necessity of preventing damage to the trees should be incorporated on the appropriate construction plans. Tree protection fencing must remain in place until final permit inspection or until work has been completed in the immediate area and no chance for any further construction, excavation or equipment use is guaranteed. Removal of tree protection fencing must be approved by a certified arborist and agreed to by the City of Portland Urban Forestry Project Inspector in advance.
Recommendations (continued)

E-Zone Wind Corridor

Trees in the E-Zone as currently proposed between Murray Street and Sherwood Boulevard may become prone to damage due to a wind corridor that will be created from tree removal in adjacent locations. These trees may require selective pruning to reduce the potential of hazardous conditions to pedestrians and vehicle traffic. All selective pruning should be outlined by a certified arborist and agreed to by the City of Portland Urban Forestry Project Inspector in advance.

Signage

The tree protection zone should be marked with signage stating that penalties will apply for violations\(^6\), and the contact number for a certified arborist with oversight responsibilities on the project\(^7\). Signage should be secured in a prominent location on each protection fence at regular interval spacing.

Title 11 Performance Criteria

The RPZ and MRPZ should be protected at all times from chemicals and contaminants, which may be injurious to the root systems of trees.

The RPZ and MRPZ should be protected at all times from erosion or sediment depositing as a result of construction and soil excavation.

The RPZ and MRPZ should be protected at all times from excess water, mud or debris that may accumulate as a result of construction and soil excavation.

The RPZ and MRPZ should be protected at all times from compaction and mechanical tamping as a result of construction and soil excavation.

No machinery should be allowed in the RPZ or MRPZ of the trees to be retained during excavation and construction, unless approved by a certified arborist and the City of Portland Urban Forestry Project Inspector.

Based on the growth habits of the existing tree species, it may be a common occurrence to encounter subsurface roots that are 2 inch or greater outside the RPZ and the MRPZ. It will be important to avoid damaging these subsurface roots that are 2 inch in diameter or greater during excavation and construction.

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\(^6\) City of Portland Tree Code 2014, chapter 11.60, chapter 3, section 2, item c, page 62.

\(^7\) City of Portland Landscape Manual 2014, performance path, chapter 4, section 2, item c, page 34.
Recommendations (continued)

Title 11 Performance Criteria (continued)

Soil excavation outside the RPZ or MRPZ is expected to be accomplished mechanically. No roots within the RPZ or MRPZ should be removed using excavation or construction equipment. Any roots 2 inch in diameter or greater that may be exposed outside the RPZ or MRPZ should only be removed with the approval of a certified arborist and must be inspected by the City of Portland Urban Forestry Division Project Inspector prior to implementation.

If roots 2 inch in diameter or greater are encountered outside the RPZ or MRPZ and approved for removal by the certified arborist and the City of Portland Urban Forestry Division Project Inspector, they should be uncovered by hand and removed using a saw with a clean cut at an angle perpendicular with the growth of the root in accordance with good arboricultural standards.

On Site and Post-Construction Care and Maintenance

Recommendations for post-excavation and construction care of the trees to be retained by both prescriptive and performance methods include, but may not be limited to; pruning of limbs and branches that appear to have been impacted as a result of excavation or construction activities; fertilization and irrigation adequate for the proper health and maintenance of the trees equal to or greater than that which existed prior to excavation and construction and; pest management if trees show serious pest infestation resulting from excavation or construction activities, after completion of the project. Mulch, prune, irrigate, and fertilize as necessary. It is recommended to keep a regular inspection schedule after construction for a period of 3-5 years to determine ongoing maintenance needs and possible changes in condition. Any plants that die should be replaced by the property owner.

Mitigation

Replacement of trees to be removed

Replacement or mitigation of the trees scheduled for removal due to their proximity to the construction zone, grade changes or other factors within the E-Zone and the S-Zone within the 20 foot buffer will be determined by the project landscape architect. The project landscape architect will provide a plan for comprehensive, on-site mitigation, off-site mitigation and/or payment in lieu of mitigation as part of the permit application process.

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8 OSU Tree Protection on Construction and Development Sites BMP’s 2009, approved reference.
9 Trees and Building Sites 2014, requirements for adequate tree protection, chapter 12, page 147.
10 City of Portland Monitoring During Construction Document 2014, page 1, paragraph 2.
Certification of Report

♦ Don Richards, President, AHC, Inc.  
Arborist’s Name and Title

♦ September 16, 2013 through May 5, 2015  
As-Of Date for Inspections

♦ Don Richards  
Arborist’s Signature and ISA Cert. Number

♦ July 13, 2015  
Date of Final Phase 1 Report DRAFT
# Washington Park Reservoirs #3 and #4
## Phase 1 Tree Preservation and Tree Protection Recommendations

<table>
<thead>
<tr>
<th>TREE NUMBER (KEYED TO SURVEY NUMBERS)</th>
<th>AREA NUMBER</th>
<th>TREE TYPE (COMMON NAME, GENUS AND SPECIES)</th>
<th>TREE SIZE (&quot; DBH)</th>
<th>EXISTING CONDITIONS, LOCATION AND TREE PROTECTION CRITERIA FOR THE E-ZONE = ENVIRONMENTAL CONSERVATION ZONE</th>
<th>TREES SCHEDULED FOR MITIGATION AND REMOVAL IF THEY DO NOT SURVIVE AND REQUESTED MODIFICATIONS TO THE RPZ</th>
</tr>
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<tbody>
<tr>
<td>999 4</td>
<td>Douglas Fir - Pseudotsuga Menziesii</td>
<td>23&quot;</td>
<td>Healthy Tree - West Slope - Above R3 - E-Zone - Tree Scheduled for Mitigation - MRPZ Established at 6' and the Revised Line of Disturbance</td>
<td>Tree Scheduled for Mitigation - Modification to RPZ - Fence at trunk and at 6' on two sides</td>
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<tr>
<td>1000 4</td>
<td>Douglas Fir - Pseudotsuga Menziesii</td>
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<td>Healthy Tree - West Slope - Above R4 &amp; Above Murray St. - E-Zone - Tree Scheduled for Mitigation - MRPZ Established at trunk along W. edge of Murray St. with a 6' MRPZ measured from the base of the tree on 2 sides with the upslope side open</td>
<td>Tree Scheduled for Mitigation - Modification to MRPZ - Fence at trunk and at 6' on two sides</td>
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<td>1682 4</td>
<td>Western Red Cedar - Thuja Plicata</td>
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<td>Healthy Tree - West Slope - Above R4 &amp; Above Murray St. - E-Zone - Tree Scheduled for Mitigation - MRPZ Established at the 25' E-Zone transition boundary with the upslope side open</td>
<td>Tree Scheduled for Mitigation - Modification to RPZ - Fence at 25' E-Zone transition boundary</td>
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<td>Tree Scheduled for Mitigation - Modification to RPZ - Fence at 25' E-Zone transition boundary</td>
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<td>Healthy Tree - West Slope - Above R4 &amp; Above Murray St. - E-Zone - Tree Scheduled for Mitigation - MRPZ Established at 3' measured from the base of the tree along W. edge of Murray St. and on 2 sides with the upslope side open</td>
<td>Tree Scheduled for Mitigation - Modification to RPZ - Fence at 3' on three sides</td>
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<td>Tree Scheduled for Mitigation - Modification to RPZ - Fence at 4' on three sides</td>
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APPENDIX A - TREES IN THE ENVIRONMENTAL CONSERVATION ZONE (E-ZONE)
**Washington Park Reservoirs #3 and #4**  
**Phase 1 Tree Preservation and Tree Protection Recommendations**

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<td>3544</td>
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<td>Healthy Tree - West Slope - Above R4 - E-Zone - Tree Scheduled for Mitigation - MRPZ Established at 6' measured from the base of the tree along W. edge of Murray St. and on 2 sides with the upslope side open</td>
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**TREES IN THE ENVIRONMENTAL CONSERVATION ZONE (E-ZONE)**
### TREE NUMBER (KEYED TO SURVEY NUMBERS) | AREA NUMBER | TREE TYPE (COMMON NAME, GENUS AND SPECIES) | TREE SIZE (" DBH) | EXISTING CONDITIONS, LOCATION AND TREE PROTECTION CRITERIA FOR THE E-ZONE = ENVIRONMENTAL CONSERVATION ZONE | TREES SCHEDULED FOR MITIGATION AND REMOVAL IF THEY DO NOT SURVIVE AND REQUESTED MODIFICATIONS TO THE RPZ
---|---|---|---|---|---
8638 | 8 | Douglas Fir - Pseudotsuga Menziesii | 40" | Healthy Tree - West Slope - Above R4 & Above Murray St. - E-Zone - Tree Scheduled for Mitigation - MRPZ Established at 4' measured from the base of the tree along W. edge of Murray St. and on 2 sides with the upslope side open | Tree Scheduled for Mitigation - Modification to RPZ - Fence at 4' on three sides
11024 | 8 | Douglas Fir - Pseudotsuga Menziesii | 32" | Healthy Tree - West Slope - Above R4 & Above Murray St. - E-Zone - Tree Scheduled for Mitigation - MRPZ Established at 10' measured from the base of the tree along W. edge of Murray St. and on 2 sides with the upslope side open | Tree Scheduled for Mitigation - Modification to RPZ - Fence at 10' on three sides
11025 | 8 | Douglas Fir - Pseudotsuga Menziesii | 34" | Healthy Tree - West Slope - Above R4 & Above Murray St. - E-Zone - Tree Scheduled for Mitigation - MRPZ Established at 6' measured from the base of the tree along W. edge of Murray St. and on 2 sides with the upslope side open | Tree Scheduled for Mitigation - Modification to RPZ - Fence at 6' on three sides
11026 | 8 | Douglas Fir - Pseudotsuga Menziesii | 31" | Healthy Tree - West Slope - Above R4 & Above Murray St. - E-Zone - Tree Scheduled for Mitigation - MRPZ Established at 6' measured from the base of the tree along W. edge of Murray St. and on 2 sides with the upslope side open | Tree Scheduled for Mitigation - Modification to RPZ - Fence at 6' on three sides
13080 | 8 | Big Leaf Maple - Acer Macrophyllum | 12" | Healthy Tree - West Slope - Above R4 - E-Zone - Tree Scheduled for Mitigation - MRPZ Established at 14' measured from the base of the tree along W. edge of Murray St. and on 2 sides with the upslope side open | Tree Scheduled for Mitigation - Modification to RPZ - Fence at 14' on three sides
13033 | 11 | Douglas Fir - Pseudotsuga Menziesii | 45" | Healthy Tree - West Slope - Above Pump Station 2 - E-Zone - Tree Scheduled for Mitigation - MRPZ Established at 14' measured from the base of the tree along W. edge of the revised limits of disturbance with the upslope side open | Tree Scheduled for Mitigation - Modification to RPZ - Fence at the revised limits of disturbance

**SUMMARY:** E-Zone = 26 Trees Scheduled for Mitigation and Removal if They Do Not Survive Requiring a Modified RPZ.

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**APPENDIX A - TREES IN THE ENVIRONMENTAL CONSERVATION ZONE (E-ZONE)**
APPENDIX

B

2. City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

3. MITIGATION LIMITS FOR THERMAL LENGTHS OF INVASIVE REMOVAL boundary unless noted otherwise.

4. See Planting Plans and Schedules for proposed planting on sheet RP3_L_7421.

5. Tree protection fencing shall meet City of Portland Tree Protection Specification 11.60.030.

---

**General Notes:**


2. City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

3. MITIGATION LIMITS FOR THERMAL LENGTHS OF INVASIVE REMOVAL boundary unless noted otherwise.

4. See Planting Plans and Schedules for proposed planting on sheet RP3_L_7421.

5. Tree protection fencing shall meet City of Portland Tree Protection Specification 11.60.030.
Existing Evergreen Tree to Remain

Existing Deciduous Tree to Remain

Tree Protection Fencing

Recommended Invasive Removal

Beyond Limit of Disturbance Line

Invasive Removal Notes:

1. Remove plants on the Nuisance Plant List within the Limits of Disturbance boundary. Invasive plant removal may occur outside of the Limits of Disturbance where noted.

2. Nuisance plant removal entails actions such as the removal of roots, the above-ground portion of the plant, and the seeds of the plant such that existing non-nuisance or newly installed non-nuisance plants can grow and thrive. The non-nuisance plants are maintained free of nuisance plants.

3. The cleared area must be replanted as follows:
   a. Seed the entire area of removal with a native grass seed - see Plant Schedule.
   b. Install seven groundcover plants and two shrubs per 50 square feet.
   c. Use native or wildflower mixtures per four-inch pots and the shrubs a minimum size of one gallon pot.
   d. Replace wildflower and other non-nuisance trees are replanted in accordance with Section 33.430.140 M.
   e. Planting native species based on the Portland Plant List is required.

4. See plant schedules on plant detail sheets for seed mix species.

5. See plant schedules on plant detail sheets for invasive reproduction groundcover and shrub mitigation species.

General Tree Mitigation Notes:

1. Trees cut are replaced as shown in Table 430-3. Replacement trees must be at least one inch in diameter, shrubs must be in at least a 2-gallon container or the equivalent in ball and burlap. All trees and shrubs must be selected from the Portland Plant List and planted anywhere on the site. Conifers must be replaced with conifers and shrubs must consist of at least two different species.

2. There are approximately 20% more trees and shrubs planted than required for EZone mitigation to account for some loss during establishment.

3. Major adjustments to species mix may be necessary based on plant availability. All substitutions shall be from Portland’s Native Plant List.

Tree Mitigation Replacement Reference Tables:

**Table 430-3 Tree Replacement in Preservation and Conservation Overlay Zones**

<table>
<thead>
<tr>
<th>Size of trees to be removed (inches in diameter)</th>
<th>Option A (no. of trees to be planted)</th>
<th>Option B (combination of trees and shrubs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 24</td>
<td>10</td>
<td>1 tree and 10 shrubs</td>
</tr>
<tr>
<td>24 to 28</td>
<td>7</td>
<td>5 trees and 7 shrubs</td>
</tr>
<tr>
<td>28 to 32</td>
<td>10</td>
<td>7 trees and 12 shrubs</td>
</tr>
</tbody>
</table>

**Table 430-3 Tree Replacement Requirements in Scenic Overlay Zone**

<table>
<thead>
<tr>
<th>Size of trees to be removed (inches in diameter)</th>
<th>Option A (no. of trees to be planted)</th>
<th>Option B (combination of trees and shrubs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All trees 6 to less than 9</td>
<td>1 tree</td>
<td>not applicable</td>
</tr>
<tr>
<td>All trees 6 inches and 23 trees</td>
<td>1 tree</td>
<td>not applicable</td>
</tr>
<tr>
<td>All trees 6 inches and 23 trees</td>
<td>1 tree</td>
<td>not applicable</td>
</tr>
<tr>
<td>All trees 72</td>
<td>Tree Replacement required (see 33.430.140 M)</td>
<td></td>
</tr>
</tbody>
</table>

**Table 480-1**

<table>
<thead>
<tr>
<th>Size of trees to be removed (inches in diameter)</th>
<th>Option A (no. of trees to be planted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All trees 6 inches and 23 trees</td>
<td>1 tree</td>
</tr>
</tbody>
</table>

**Table 480-2**

<table>
<thead>
<tr>
<th>Size of trees to be removed (inches in diameter)</th>
<th>Option A (no. of trees to be planted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All trees 72</td>
<td>Tree Replacement required (see 33.430.140 M)</td>
</tr>
</tbody>
</table>

Trees that do not qualify for removal under Sections 33.430.140 M.2.b. above, may be removed at a subsequent time review as provided in Chapter 33.853, Tree Review. Tree removal in areas with an Environmental overlay zone is subject to environmental review rather than tree review.
1. There are no trees in the Conservation Overlay (E-Zone) zone on this sheet.
2. There are no trees within the 20' Scenic Buffer on this sheet.

**Tree Removal and Preservation Legend:**
- OSs = Scenic Overlay Zone
- ES = Conservation Overlay Zone Boundary
- ESs = Scenic Overlay Zone Boundary
- Matchline
- Existing Evergreen Tree to Remain
- Existing Deciduous Tree to Remain
- Tree Protection Fencing
- Recommended Invasive Removal Beyond Limit of Disturbance Line
- Trees to be Saved or Mitigated (Tree Replacement)
- Invasive Tree to be Removed

**General Notes:**
2. City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Foresty Permit. Trees removed as part of this review are found on sheet SIT_L_1180.
3. Limits of Disturbance shall define extents of Invasive Removal boundary unless noted otherwise.
4. See Planting Plans and Schedules for proposed planting on sheet RP3_L_7421.
There are no trees in the Conservation Overlay (E-Zone) zone on this sheet.

See sheet SIT_L_1121 for General Tree Preservation, Invasive Removal Notes, and Tree Removal and Mitigation Calculations.

City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

Limits of Disturbance shall define extents of Invasive Removal boundary unless noted otherwise.

See Planting Plans and Schedules for proposed planting on sheet RP3_L_7421.
1. There are no trees in the Conservation Overlay (E-Zone) or Scenic Overlay zones on this sheet.

2. See sheet SIT_L_1121 for General Tree Preservation, Invasive Removal Notes, and Tree Removal and Mitigation Calculations.

3. City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

4. Limits of Disturbance shall define extents of Invasive Removal boundary unless noted otherwise.

5. See Parking Plans and Schedules for proposed planting on sheet SIT_L_1170.

Sheet Notes:

General Notes:


2. City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

3. Limits of Disturbance shall define extents of Invasive Removal boundary unless noted otherwise.

4. See Parking Plans and Schedules for proposed planting on sheet SIT_L_1170.
1. There are no trees in the Scenic Overlay zone on this sheet.

2. See sheet SIT_L_1121 for General Tree Preservation, Invasive Removal Notes, and Tree Removal and Mitigation Calculations.

3. City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

4. Limits of Disturbance shall define extents of Invasive Removal boundary unless noted otherwise.

5. See Planting Plans and Schedules for proposed planting on sheet RP3_L_7421.
There are no trees in the Scenic Overlay zone on this sheet.

City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

Limits of Disturbance shall define extents of Invasive Removal Boundary and Construction Fencing Overlay Zone (E-Zone).

See Sheet SIT_L_1121 for General Tree Preservation, Invasive Removal Notes, and Tree Removal and Mitigation Calculations.

City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

See Planting Plans and Schedules for proposed planting on sheet RP3_L_7421.

Tree Removal and Preservation Legend:

- **OSc**: Conservation Overlay Zone (E-Zone)
- **OSs**: Scenic Overlay Zone

1. **Area 1**: Trees for Type 3 Permit
2. **Area 2**: Trees for Urban Forestry Permit
3. **Area 3**: Existing Evergreen Tree to Remain
4. **Area 4**: Existing Deciduous Tree to Remain
5. **Area 5**: Existing Evergreen Tree to be Removed
6. **Area 6**: Existing Deciduous Tree to be Removed
7. **Area 7**: Saved But Mitigated Tree
8. **Area 8**: Invasive Tree to be Removed

**Table:**

<table>
<thead>
<tr>
<th>Tree Removal - Conservation Overlay Zone (OSc)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area</strong></td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>11110</td>
</tr>
<tr>
<td>11120</td>
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<tr>
<td>11290</td>
</tr>
<tr>
<td>11300</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
1. There are no trees in the Scenic Overlay zone on this sheet.

2. See sheet SIT_L_1121 for General Tree Preservation, Invasive Removal Notes, and Tree Removal and Mitigation Calculations.

3. City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

4. Limits of Disturbance shall define extents of Invasive Removal boundary unless noted otherwise.

5. See Planting Plans and Schedules for proposed planting on sheet RP3_L_7421.
There are no trees in the Scenic Overlay zone on this sheet.

See sheet SIT_L_1121 for General Tree Preservation, Invasive Removal Notes, and Tree Removal and Mitigation Calculations.

City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

Limits of Disturbance shall define extents of Invasive Removal boundary unless noted otherwise.

See Planting Plans and Schedules for proposed planting on sheet RP_L_7421.
1. There are no trees in the Scenic Overlay zone on this sheet.

Sheets Notes:

General Notes:

2. City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.
3. Limits of Disturbance shall define extents of Invasive Removal boundary unless noted otherwise.
4. See Planting Plans and Schedules for proposed planting on sheet RP6_L_7425.
1. There are no trees in the Conservation Overlay (E-Zone) or Scenic Overlay zones on this sheet.

2. See sheet SIT_L_1121 for General Tree Preservation, Invasive Removal Notes, and Tree Removal and Mitigation Calculations.

3. City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

4. Limits of Disturbance shall define extents of Invasive Removal boundary unless noted otherwise.

5. See Planting Plans and Schedules for proposed planting on sheet RP3_L_7421.

General Notes:

Sheet Notes:

1. There are no trees in the Conservation Overlay (E-Zone) or Scenic Overlay zones on this sheet.
1. There are no trees in the Scenic Overlay or Conservation (E-Zone) zone on this sheet.

2. City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

3. Limits of Disturbance shall define extents of Invasive Removal boundary unless noted otherwise.

4. See Planting Plans and Schedules for proposed planting on sheet RP3_L_7421.

General Notes:
2. City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.
3. Limits of Disturbance shall define extents of Invasive Removal boundary unless noted otherwise.
4. See Planting Plans and Schedules for proposed planting on sheet RP3_L_7421.

Sheet Notes:
1. There are no trees in the Scenic Overlay zone on this sheet.

2. See sheet SIT_L_1121 for General Tree Preservation, Invasive Removal Notes, and Tree Removal and Mitigation Calculations.

3. City Forester tree replacement/mitigation standards will be addressed as part of the PP&R Urban Forestry Permit. Trees removed as part of this review are found on sheet SIT_L_1180.

4. Limits of Disturbance shall define extents of Invasive Removal boundary unless noted otherwise.

5. See Planting Plans and Schedules for proposed planting on sheet RP3_L_7421.