

Attention:

Multnomah County Planning

RE:

Tree Protection Plan – Oxbow Park Water Distribution
Replacement

HARRITY

TREE SPECIALISTS, INC.

PO Box 12395

PORTLAND, OR 97212

503-331-0452

mattsanchez@harritytrees.com

Harrity Tree Specialists, Inc. was contracted by Metro to provide project and design recommendations and a Tree Protection Plan for the potable distribution system replacement project at Oxbow Regional Park. This potable distribution system replaces the existing waterline and services, largely within the existing park roadway. I visited the site in October of 2023 in order to provide recommendations to the design team as to how best to limit tree impacts. Following preliminary design, I visited the site on various occasions in June 2024 to provide specific recommendations on construction methodology and horizontal alignment of the proposed water line to limit tree impacts. During my site visits I examined the location of proposed water system improvements and the size, condition, species, and root cover of trees along the proposed alignments. I evaluated potential construction impacts based on existing conditions and proposed work conditions and made recommendations to limit impacts to tree roots, summarized in this Tree Protection Plan.

MATTHEW SANCHEZ

CERTIFIED ARBORIST

PNW/ ISA #7830A

TRAQ QUALIFIED

CCB #84426

Harrity has been providing arborist services to Metro for Oxbow Regional Park for 15 years and has a thorough understanding of this forest's condition and health. The park is made up of a mosaic of Douglas fir, Western Red Cedar, Western Hemlock, Cottonwood, Bigleaf Maple, and Red Alder. In large sections of the park the forest would be considered old growth, making preservation a key goal of the infrastructure improvements. During my site visit, the trees appeared to be in *(generally good health considering their growth in a natural, forested environment)*. History of care along the park roadway has been *(limited to pruning back branches for vehicle and equipment clearance)*. All the existing trees respond in a wide spectrum to ground disturbances during construction activity. Specific prescription for single trees was not a necessary action when observing the site.

After consulting with the project engineers and reviewing construction techniques, the recommended approach is to utilize a combination of directional boring and open

trenching. To ensure maximum tree protection and the least disturbance, directional boring is recommended in specific areas in order to limit ground disturbances, so long as directional boring was deemed feasible by the design team. Directional boring was selected in anticipation of small ground disturbances in appropriate locations along the roadway, with the new water line bored a significant distance below the anticipated extent of tree roots, resulting in no disturbance. In other locations, where existing conditions dictate that it is appropriate, open trenching will be utilized.

Given the location and proposed construction techniques, the project is intentionally low impact on the surrounding forest. Based on my assessment, I recommend against installing tree protection fencing along the park roadway. It should be noted that all of the trees along the proposed waterline alignment grow immediately adjacent to the park roadway pavement, and these trees' driplines extend directly over the existing pavement. Any staking for tree protection fencing would need to be placed outside of the roadway pavement, close to tree trunks. As such, staking for tree protection fencing would negatively impact the root zones of these trees. It is unnecessary to install exhaustive standard tree protection fencing miles in length along both sides of the roadway. More negative forest and natural resource disturbance and unnecessary resource commitment would be incurred in exchange for no protective benefit.

For waterline installed within the roadway pavement, I would instead recommend that the tree protection zone be delineated by high-visibility caution tape in order to provide a visual delineation without surface disturbances.

There are some areas outside of the roadway where water services are being replaced, and I would recommend that the tree protection zone be delineated by tree protection fencing and signage in those areas.

To ensure tree protection; no direct contact or injury by equipment, materials or disturbances and the preservation of roots and soil in an intact and non-compacted state I propose the following conditions be required on this project.

For all proposed improvements:

- Preconstruction pruning clearance, if and as needed for construction equipment to access and travel roadway.
- Arborist to be on site and inspect excavation work. If roots are revealed, arborist to perform needed root inspections and direct contractor on any needed protection measures.
- All excavated materials must be stored outside of the tree protection boundary.

- All construction disturbance, staging, and stockpile areas must be clearly marked and equipment kept within the limits.
- Arborist to be on site to inspect excavation work. If roots are revealed, arborist to perform needed root inspections and direct contractor on any needed protection measures.

For work taking place within the park roadway pavement:

- Tree protection zone delineation using high-visibility caution tape in order to provide a visual delineation without surface disturbances.
- The protection zone must be marked with signs, stating that penalties will apply for violations, and include project arborist information

For work taking place outside park roadway pavement:

- Given the condensed areas of impact, work occurring in mostly open areas, away from trees, and minimal tree canopy impacts, standard tree protection fencing (orange construction fencing) can be utilized to protect the root zones, prevent intrusion, and protect against disturbances.
- Installing of wooden stakes with highly visible laminated sign denoting tree protection area. The protection zone must be marked with signs, stating that penalties will apply for violations, and include project arborist information

Harrity Tree Specialists, INC. understands that this is an inherently complicated task within a notably sensitive ecosystem. It is our best intention to provide strict on site oversight for the duration of this park project. Weekly reports on site progress associated with ground disturbance shall be provided to METRO and distributed as needed. Harrity Tree Specialists, Inc. cannot guarantee the survival of all trees impacted by this project based on the current health of the forest and climate driven impacts it is likely to incur in coming years. Preservation of all trees with a conservative lens is the goal of the project arborist that shall be translated to everyone associated with ground disturbance work on site for the duration.

Thank you,



Matt Sanchez

10/17/24