Carmen Rubio, Commissioner
Rebecca Esau, Director
Phone: (503) 823-7300
TTY: 711
www.portland.gov/bds

RECORDER
Please stamp the County Recorder's copy of the recording sheet and return with the attached decision to City of Portland, BDS 299/5000/BDS LUR

Multnomah County Official Records
E Murray, Deputy Clerk

2023-048418
08/03/2023 10:47:31 AM
LUA-LUA Pgs=7 Stn=41 ATRA
$35.00 $11.00 $60.00
$106.00

Date: July 19, 2023

To: Interested Person

From: Timothy Novak, Land Use Services
503-823-5395 / Timothy.Novak@portlandoregon.gov

NOTICE OF A TYPE II DECISION ON A PROPOSAL IN YOUR NEIGHBORHOOD

The Bureau of Development Services has approved a proposal in your neighborhood. The mailed copy of this document is only a summary of the decision. The reasons for the decision are included in the version located on the BDS website http://www.portlandonline.com/bds/index.cfm?c=46429. Click on the District Coalition then scroll to the relevant Neighborhood, and case number. If you disagree with the decision, you can appeal. Information on how to do so is included at the end of this decision.

CASE FILE NUMBER: LU 22-183308 PV
UNINCORPORATED MULTNOMAH COUNTY

GENERAL INFORMATION

Applicant: Meredith Armstrong | *Portland General Electric (PGE) Company*
121 SW Salmon St; 1 Wtc 1302 | Portland, OR. 97204
Meredith.Armstrong@pgn.com | (503) 464-2174

Property Owner: City of Portland
1221 SW 4th Ave #130 | Portland, OR. 97204-1900

Consultant:	Andy Clodfelter | *AECOM* 888 SW 5th Ave #600 | Portland, OR. 97204
Site Address:	Springwater Corridor, *approximately 475 feet west of SE Jenne Rd and directly south of 5140 SE Circle Ave. Adjacent to the back corner of 5125 SE Jenne Rd.*
Legal Description:	TL 5200 4.27 ACRES, SECTION 18 1S 3E
Tax Account No.:	R993180830
State ID No.:	1S3E18B 05200
Quarter Section:	3647,3547,3548
Neighborhood:	Pleasant Valley, contact Steve Montgomery at foxtrotlove@hotmail.com
Business District:	None
District Coalition:	East Portland Community Office, contact at info@eastportland.org
Plan District:	Johnson Creek Basin & Pleasant Valley
Other Designations:	Unincorporated Multnomah County, Resource Site: Powell-Jenne Valley Subarea, *Pleasant Valley Natural Resources Protection Plan (2004)*
Zoning:	Open Space (OS) base zone Residential Farm/Forest (RF) base zone Pleasant Valley Natural Resources (v) overlay zone
Case Type:	Pleasant Valley Resource Review (PV)
Procedure:	Type II, an administrative decision with appeal to the Hearings Officer.

Proposal:
The purpose of the proposed project is to replace a decaying steel lattice tower structure with a new steel monopole along an existing electric transmission line located within the Springwater Corridor.

PGE declared and provided supporting documentation that the tower replacement is an emergency procedure. As such, the work under review has already been conducted under 33.465.080.B, which allows for a temporary exemption from the regulations of 33.465 for "emergency procedures necessary for the protection of life, health, safety, or property." Therefore, this review is considered retroactive and will focus on the mitigation of impacts resulting from the work.

The proposal indicates that two native Scouler's willow trees and one native hazelnut shrub were removed as part of the work; the willow trees were 7-inches and 8-inches in diameter. Total permanent disturbance is approximately 19 square feet. Total temporary disturbance is approximately 3,209 square feet. Access to the Springwater Corridor and the work area was from SE Jenne Rd/SE 174th Ave at the intersection with the Springwater Corridor path.

Mitigation for the tree removal and disturbance area are proposed off-site. The proposed mitigation includes the removal of approximately 5,000 square feet of pavement from an existing parking lot at 507 W Powell Blvd. The area where the pavement will be removed will be replanted after clean soil is brought in. The area will be designed to support stormwater management at the site, which currently directs untreated stormwater to Johnson Creek, about 700 feet away. The mitigation project will be managed and carried out by the Johnson Creek Watershed Council; PGE will fund the project as mitigation for this

case and for a similar case (LU 22-146810 EN) near Johnson Creek and State Highway 99E (McLoughlin Blvd).

Certain standards must be met for development in the Pleasant Valley Natural Resources overlay to be allowed outright. In this case, the proposal doesn't meet 33.465.155.B because the disturbance area is more than 15 feet wide. Additionally, the mitigation proposal doesn't meet 33.465.180.A size of the mitigation area, which requires a 2:1 ratio of mitigation to disturbance area, 33.465.180.B which requires on-site mitigation, and 33.465.180.D because the percentage of trees may be less than one per 100 square feet. Therefore, a Type II Pleasant Valley Resource Review is required.

Relevant Approval Criteria:
In order to be approved, this proposal must comply with the approval criteria of Title 33. The relevant criteria are:

- 33.465.250.C - Other development in the Pleasant Valley Natural Resources overlay zone;
- 33.645.250.E - Alternative mitigation.

CONCLUSIONS

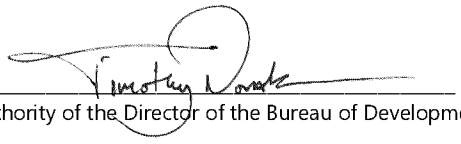
The applicant carried out work to remove a failing steel utility tower and install a replacement monopole in the Pleasant Valley Natural Resource overlay utilizing 33.465.080.B, which provides a temporary exemption for emergency procedures. Since completion of the work, as detailed above, the applicant has demonstrated that the work was carried out to minimize impacts to high value resources and that the proposed mitigation will off-set and enhance the resources and functional values at the site and in Johnson Creek. Therefore, the applicant has shown that the project meets all the applicable approval criteria and, as such, this case should be approved subject to the conditions state below.

ADMINISTRATIVE DECISION

Retroactive approval of the installation of a steel utility monopole and removal of a steel utility tower, as well as the removal of two trees, per the approved site plans, Exhibits C-3 through C-6, signed and dated on July 14, 2023, subject to the following condition:

A. The applicant shall pay $9,294.76 to the Johnson Creek Watershed Council to provide funding for the Trinity Lutheran Church Stormwater Retrofit Project (Exhibits A.5.a through d). The payment shall be completed within one month of the date of the final decision on this case. The applicant and the Johnson Creek Watershed Council shall notify the Staff Planner once the payment has been.

Staff Planner: Timothy Novak

Decision rendered by:  **on July 14, 2023**
By authority of the Director of the Bureau of Development Services

Decision mailed: July 19, 2023

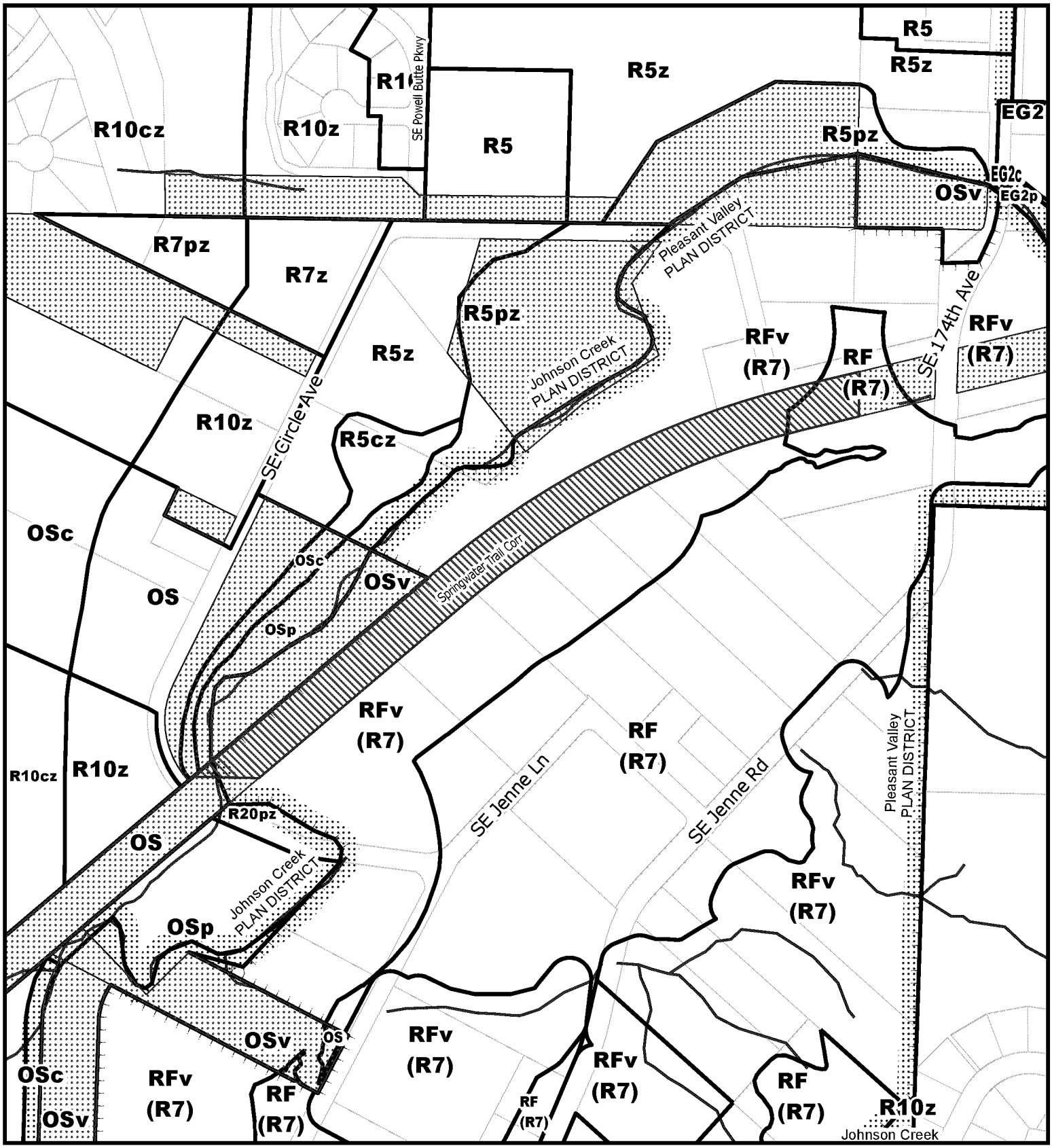
Last date to Appeal: August 2, 2023 by 4:30 pm
Effective Date (if no appeal): August 3, 2023 Decision may be recorded on this date

Kimberly Tallant, Principal Planner

City of Portland
Bureau of Development Services
1900 SW Fourth Ave, #5000
Portland, OR 97201

Date: August 3, 2023

Representative



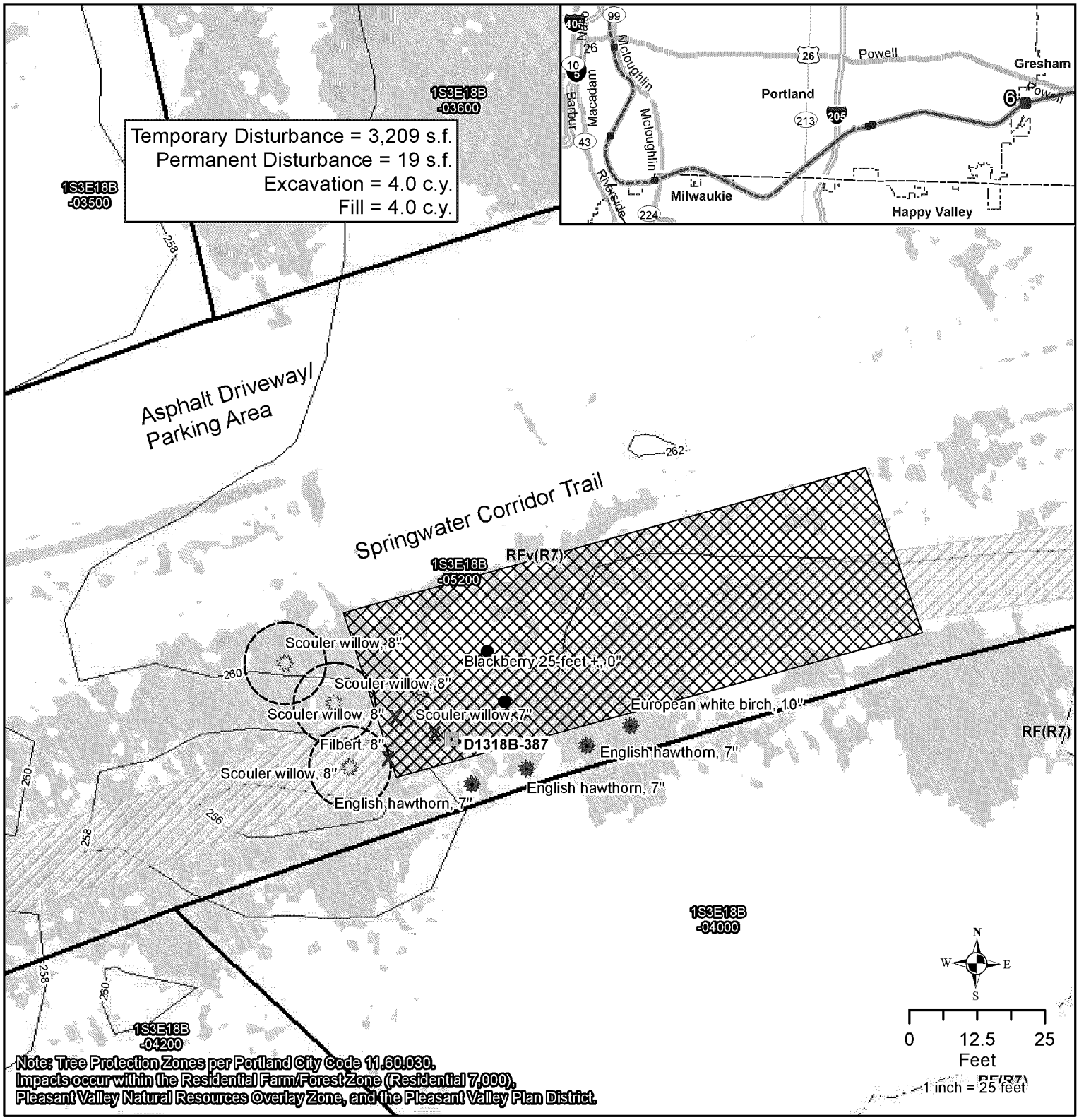
For Zoning Code in effect Post August 1, 2021

ZONING

UNINCORPORATED MULTNOMAH COUNTY
JOHNSON CREEK BASIN
PLEASANT VALLEY PLAN DIST

Site
Also Owned Parcels
Stream

File No.	LU 22 - 183308 PV
1/4 Section	3547,3548,3647
Scale	1 inch =300 feet
State ID	1S3E18B 5200
Exhibit	B Sep 15, 2022



Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Contour (2 ft)
- Wetland/Water (NWI)
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Root Protection Zone

Approved
City of Portland
Bureau of Development Services
Planner_____
Date July 14, 2023
*This approval applies only to the reviews requested and is subject to all conditions of approval. Additional zoning requirements may apply.

FIGURE 5
As-Built Disturbance Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

April 2023

AECOM

Exhibit C.4, LU 22-183308 PV

Trinity Lutheran Church Stormwater Retrofit Project Site Map

Johnson Creek Watershed Council is working with Trinity Lutheran Church to remove impervious pavement and install stormwater retrofits, such as rain gardens. The goal of the project is to help alleviate stormwater runoff and flooding on the property, and to infiltrate a portion of the property's stormwater to reduce stormwater outfall flows and stormwater pollutants making it to Johnson Creek.

City of Portland, Oregon
Bureau of Development Services
Land Use Services
FROM CONCEPT TO CONSTRUCTION

Carmen Rubio, Commissioner
Rebecca Esau, Director
Phone: (503) 823-7300
TTY: 711
www.portland.gov/bds

Date: July 19, 2023

To: Interested Person

From: Timothy Novak, Land Use Services
503-823-5395 / Timothy.Novak@portlandoregon.gov

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Meredith.Armstrong@pgn.com | (503) 464-2174

Consultant: Andy Clodfelter | *AECOM*
888 SW 5th Ave #600 | Portland, OR. 97204

Property Owner: City of Portland
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Site Address: Springwater Corridor, *approximately 475 feet west of SE Jenne Rd and directly south of 5140 SE Circle Ave. Adjacent to the back corner of 5125 SE Jenne Rd.*

Legal Description: TL 5200 4.27 ACRES, SECTION 18 1S 3E
Tax Account No.: R993180830
State ID No.: 1S3E18B 05200
Quarter Section: 3647,3547,3548

Neighborhood: Pleasant Valley, contact Steve Montgomery at foxtrotlove@hotmail.com
Business District: None
District Coalition: East Portland Community Office, contact at info@eastportland.org

Plan District: Johnson Creek Basin & Pleasant Valley

Other Designations: Unincorporated Multnomah County,
Resource Site: Powell-Jenne Valley Subarea, *Pleasant Valley Natural Resources Protection Plan (2004)*

Zoning: Open Space (OS) base zone
Residential Farm/Forest (RF) base zone
Pleasant Valley Natural Resources (v) overlay zone

Case Type: Pleasant Valley Resource Review (PV)
Procedure: Type II, an administrative decision with appeal to the Hearings Officer.

Proposal:
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Certain standards must be met for development in the Pleasant Valley Natural Resources overlay to be allowed outright. In this case, the proposal doesn't meet 33.465.155.B because the disturbance area is more than 15 feet wide. Additionally, the mitigation proposal doesn't meet 33.465.180.A size of the mitigation area, which requires a 2:1 ratio of mitigation to disturbance area, 33.465.180.B which requires on-site mitigation, and 33.465.180.D because the percentage of trees may be less than one per 100 square feet. Therefore, a Type II Pleasant Valley Resource Review is required.

Relevant Approval Criteria:
In order to be approved, this proposal must comply with the approval criteria of Title 33. The relevant criteria are:

- 33.465.250.C - Other development in the Pleasant Valley Natural Resources overlay zone;
- 33.645.250.E - Alternative mitigation.

ANALYSIS

Site and Vicinity: The site is in unincorporated Multnomah County, on the south side of the Springwater trail corridor, approximately 460 feet west of SE Jenne Rd. The area is a mix of low-density residential, open space, and limited industrial uses just to the north. Johnson Creek runs about 280 feet to the north of the project area, which is located between Jenne and Powell Buttes. The site itself is in a drainage channel that is listed on the National Wetlands Inventory. Vegetation is a mix of nuisance and native species, with a dominant presence of Himalayan blackberry.

Zoning: (*Note that zoning designations below are those in place at the site on the date that the application was submitted. As of October 2022, the zoning has changed and the project area is no longer in the 'v' overlay.)

Base Zone: Residential Farm/Forest (RF)
Overlay: Pleasant Valley Natural Resources (v)
Plan Districts: Johnson Creek Basin, Pleasant Valley

Resource Site: Powell-Jenne Valley. The Powell-Jenne Valley subarea is located north of the Kelley Creek basin along Johnson Creek in the vicinity of Jenne Lane. This subarea is situated in a narrow valley between Powell and Jenne Buttes. It contains a broad floodplain with varied wetland habitats. The subarea is 298 acres in size (136 acres within the site); this reach of Johnson Creek is approximately 4,170 lineal feet in length. The subarea contains a variety of wetland, riparian, and upland habitats, and provides high quality amphibian breeding sites. Habitat types include conifer, hardwood and mixed forests (115.07 acres), meadow (12.90 acres), and wetland (13.18 acres).

Riparian and Upland Habitat Functions. The following basic resource functions provide the foundation for the Pleasant Valley significance criteria:
• Water quality
• Channel dynamics and morphology
• Water quantity: stream flow, sources, and storage
• Microclimate
• Fish and aquatic habitat
• Organic inputs
• Riparian and upland wildlife habitat quality
• Upland sensitive species
• Upland interior habitat

Land Use History: City records indicate there are no prior land use reviews for this site.

Agency Review: A "Notice of Proposal in Your Neighborhood" was mailed **October 12, 2022**. The complete agency responses are included in the 'E' Exhibits. No objections were expressed nor conditions of approval requested.

The Oregon Dept of State Lands provided a Wetland Land Use Notice Response (Exhibit E.7). It states that as long as the cumulative disturbance in the "ditch" involves less than 50 cubic yards of fill or removal, a Removal-Fill Permit is not required and a Wetland Delineation is not needed. According to the applicant's narrative, only 4 cubic yards of fill/removal occurred (Exhibit A.4, page 7).

Neighborhood Review: A Notice of Proposal in Your Neighborhood was mailed on October 12, 2022. No written responses have been received from either the Neighborhood Association or notified property owners in response to the proposal.

ZONING CODE APPROVAL CRITERIA

33.465.250 Approval Criteria for Pleasant Valley Natural Resource Review

A Pleasant Valley resource review application will be approved if the review body finds that the applicant has shown that all of the applicable approval criteria are met. When Pleasant Valley resource review is required because a proposal does not meet one or more of the development standards, the approval criteria will be applied only to the aspect of the proposal that does not meet the development standard or standards.

Findings: The approval criteria applicable to the proposed development are found in Sections 33.465.250.C & E. Section 33.465.250.E contains the criteria related to construction activities and the improvements. Section 33.465.250.E contains the criteria for the mitigation. The applicant has provided findings for these approval criteria. BDS Land Use Services staff has referenced and when needed updated or revised these findings or added conditions as necessary to meet the approval criteria.

In many instances, the approval criteria in Section A and in Section E are nearly or actually identical. In these cases, staff may write one set of findings that address the criterion from both sections. All findings will be preceded by which criterion or criteria they are addressing.

33.465.250.C Other Development in the Pleasant Valley Natural Resources overlay zone. Development within the Pleasant Valley Natural Resources overlay zone will be approved if the applicant's impact evaluation demonstrates that all of the following are met:

33.465.250.E Alternative mitigation. Where mitigation is proposed that does not meet Section 33.465.180, Mitigation, these approval criteria must be met. Mitigation will be approved if all of the following are met:

C.1. Proposed development locations, designs, and construction methods have the least significant detrimental impact to identified resources and functional values of other practicable and significantly different alternatives including alternatives outside the resource area of the Pleasant Valley Natural Resources overlay zone;

Findings: The applicant provided an alternatives analysis in the narrative to demonstrate that the project meets this approval criterion (Exhibit A.4, pages 10-12):

Because the project is site-specific (existing line), no alternative sites were considered. Re-routing the transmission line would have significantly greater environmental impacts. Specific criteria necessary to achieve the project design objectives include the following:

1. Project must utilize the existing Milliken transmission alignment
2. New tower structures must meet design standards for stability and span
3. New structures must meet seismic resiliency standards

Based on these criteria, the no action alternative as well as the following three practicable but significantly different alternatives were considered…and are summarized in Table 2 [below]:

• Alternative 1. No Action Alternative;
• Alternative 2. Proposed Project - Tower replacement with an adjacent steel monopole;
• Alternative 3. Repair of the existing failing tower structure; and

• Alternative 4. Placing the new monopole within the same footprint as the existing tower.

The No Action Alternative, which would avoid impacts to wetlands and waters, would not replace aging and unstable structures, thereby leaving the existing Milliken Transmission line vulnerable to failure and outages. The No Action Alternative does not achieve the project purpose and was therefore not selected.

Alternative designs that meet the project-specific criteria listed above are limited. Infrastructure other than steel monopoles would not provide the stability necessary for the transmission line. Steel monopoles offer high service life, low maintenance, and high fire/seismic residency so they limit future disturbance from maintenance/repair. The transmission line would continue to operate at its existing capacity (57-kilovolt).

The proposed project (Alternative 1) incorporates the smallest practicable footprint considering construction requirements to perform the work. The temporary disturbance area was selected based on the type and size of equipment needed to access the site. It is likely that the entire disturbance area will not be needed for maintenance activities; however, the maximum estimated area was identified for this land use approval process.

PGE's contractor will use equipment that is properly sized to replace the large transmission towers. The project cannot be safely and effectively implemented with the use of smaller equipment. Vegetation trimming is required at the site to provide access for construction equipment and tower removal and installation since project activities cannot be performed from the Springwater Trail. The minimum number of trees will be removed to complete the project. Construction equipment will be staged on the paved trail which will reduce impacts to vegetation within the Springwater Corridor. There are no other practicable alternatives to conduct the maintenance project that would reduce impacts beyond those proposed by the preferred alternative.

Table 2 below evaluates the alternatives relative to the objectives specified in Section 1.2. Alternative 2 would satisfy Objectives 1 and 2, whereas Alternative 1, 3, and 4 would not satisfy both objectives. Therefore, Alternative 2 is the preferred alternative for the project.

Table 2.

Alternative	*Objective 1 – Replace Decaying Structure*	*Objective 2 – Limit E-Zone Encroachment*	*Impact on Resources and Functional Values*
1. No Action Alternative	*Does not meet*	*Does not meet*	*Failure to replace the structure would result in an unstable and unsafe transmission line. Therefore, Objective 1 would not be achieved under this alternative.* *Alternative 1 would avoid the immediate need for tree removal and vegetation trimming, thus eliminating potential impacts to wildlife and native plants. However, the transmission line would not be stable and could result in outages. This could result in increased fire risk, along with more frequent maintenance and repair visits, thereby increasing environmental encroachment. Therefore, this alternative would not achieve Objective 2.* *Also, it should be noted that under the no action alternative, trees and vegetation are regularly pruned*

			or trimmed around the transmission lines as part of routine maintenance, so some level of disturbance regularly occurs at this site.
2. Proposed Project - Replacement of existing structure with new steel monopole	*Meets*	*Meets*	*This alternative would involve installing a new steel monopole structure near the existing lattice tower it is replacing, transferring wire from the old lattice tower to the new steel monopole, demolishing and removing the old lattice tower, and restoring ground and vegetation conditions within the work area. Objective 1 would be achieved under this alternative. Tower replacement at this site will require some tree removal and ground disturbance so crews can access and replace the failing tower (Figure 3 of Appendix A). BMPs (as described in Section 3.2) would minimize impacts to wildlife and the general public. Trees would be replanted at a 2:1 ratio and any bare ground areas reseeded with a native seed mix within the temporary disturbance area to restore the site. The installation of the new steel monopole would ensure the transmission line's integrity and safe operation, thereby minimizing potential fire risk and maintenance/repair frequency and reducing environmental impacts. Thus, this alternative would limit environmental encroachment to the maximum extent practicable and achieve Objective 2.*
3: Repair of the existing failing tower structure	*Does Not Meet*	*Does Not Meet*	*Under this alternative, the existing tower would be repaired by replacing the damaged tower foundation. A new foundation would be installed adjacent to the tower legs. A large excavation area would be needed to install the new concrete foundations and temporarily support structures while the existing legs are removed. Due to the extensive damage to the tower legs, there is no repair that could restore the integrity of the structure without significant excavation.* *This would exceed the environmental impacts of installing a new steel monopole adjacent to the existing tower. Therefore, Objectives 1 and 2 would not be achieved under this alternative.*
4: Placing the new monopole within the same footprint as the existing tower.	*Does Not Meet*	*Meets*	*A new pole needs to be installed before the existing line can be transferred over. As such, it is not feasible to place a new monopole in the same footprint as the existing tower. Although environmental impacts would be minimized relative to the preferred alternative, this option is not feasible so it would not meet Objective 1.*

Staff generally concurs with the applicant's findings about the three practicable alternatives. While there is some question about the extent of the disturbance area during the tower replacement, which has already occurred, tree removal was minimal and the mitigation, as detail below, fully compensates for the disturbance. It is worth noting that as of October 1, 2022, the project area is no longer within the 'v'

overlay, meaning that analysis of the site during the E-Zone Map Correction Project found a lack of significant resources requiring the additional protections that the overlay provides.

As such, staff finds that *this approval criterion is met*.

C.2. There will be no significant detrimental impact on resources and functional values in areas designated to be left undisturbed;

E.3. There will be no detrimental impact on identified resources and functional values in areas designated to be left undisturbed;

Findings: The applicant has provided findings that describe the construction management measures that were utilized during removal of the tower and installation of the new monopole and supporting elements (Exhibit A.4). Some of those measures include:

- Utilizing the paved Springwater Corridor for access and staging of heavy equipment;
- Hand-digging to cut tower footings;
- Delineating the boundary of the temporary disturbance area with orange construction fencing;
- Cleaning equipment before entering the site to avoid spreading seed from non-native and nuisance vegetation;
- Fueling heavy machinery off site;
- Pre-disturbance meeting with work crew to discuss tree protection, as well as marking trees to be removed with bright flagging; and
- Implementing erosion control measures in conformance with Title 10.

The on-site mitigation is limited to re-seeding by hand, which will not result in detrimental impacts to the site resources and functional values. The off-site mitigation is occurring in a fully-paved parking lot upstream from the resources and functional values that the 'v' overlay near the project site is intended to protect and will in fact provide and beneficial impact to those resources by removing pollutants from stormwater before it enters Johnson Creek.

Based on the foregoing, *these criteria are met*.

C.3. The mitigation plan demonstrates that all significant detrimental impacts on resources and functional values will be compensated for; and

E.2. The proposed mitigation results in a significant improvement of at least one functional value;

Findings: As has been noted, as of October 1, 2022, the project area is no longer within the 'v' overlay, meaning that analysis of the site during the E-Zone Map Correction Project found a lack of significant resources requiring the additional protections that the overlay provides. The removal of the overlay from the project area does not mean that there is an absence of resources and functional values on the site, but that they are not particularly high value, which speaks to the constraints in the project area, such as the pruning and cutting of vegetation that occurs as part of regular utility corridor maintenance. Another constraint is the project area's isolation from the higher value resources associated with Johnson Creek and the forested slopes of nearby Jenne and Powell Buttes. The project area is a slim strip of land separated from these higher value locations by pavement and land that is highly managed and/or developed.

Because of the points above, compensating for any detrimental impacts from the project doesn't necessitate a robust mitigation plan in the project area. The work removed two native trees, a 6-inch and

a 7-inch Scouler's willow. The total amount of temporary disturbance area is 3,209 square feet, all of which was reseeded with an erosion control native seed mix. Additionally, since only above-ground portions of the two Scouler's willows were removed (as witnessed by staff at the site post-construction), it is likely that these trees, whose regenerative abilities to resprout from the root crown are considered "vigorous" (See Exhibit G.3), will likely re-establish their presence in the project area over the coming seasons. Both of these elements will help to compensate for impacts at the project area.

To further compensate for detrimental impacts from the disturbance area and tree removal and to provide a significant improvement in at least one functional value, the applicant proposes to support a project by the Johnson Creek Watershed Council to remove approximately 5,000 square feet of pavement from a parking lot that drains through a storm sewer directly into Johnson Creek and convert the exposed area to vegetated stormwater facilities that will be amended with soil and planted with Willamette Valley native plants (Exhibit A.5.a). These vegetated stormwater facilities address:

- Hydromodification that can lead to erosion, sedimentation, and alteration to the flow, volume, and duration of storm events on Johnson Creek. These impacts of hydromodification can have a deleterious effect on salmonoids.
- Reduce detrimental inputs of oils, gasoline, and tire particles from vehicles into Johnson Creek. These pollutants are known to be deleterious to coho salmon and steelhead, who spawn in the creek.

By removing the pavement and installing vegetated stormwater facilities, the proposed mitigation will significantly improve water quality (reduction of toxic inputs and sediments) and water quantity (desynchronization that reduces hydromodification) off the mitigation site and into Johnson Creek downstream of the outfall where stormwater from the site empties into the creek. As described on pages 15 and 16 (pages 17 and 18 on the pdf counter) of the *Pleasant Valley Natural resources Protection Plan*, both Water Quality and Water Quantity are "basic resource functions that provide the foundation for the Pleasant Valley significance criteria."

In order to ensure that the mitigation project can occur, achieve its goals, and meet these approval criteria, the applicant will be required to provide funding to the Johnson Creek Watershed Council, the applicant's representative for the mitigation project, in the sum of $9,294.76. This amount is based on the percentage of the total disturbance area between this project and LU 22-146810 EN and is intended to be combined with the payment for mitigation associated with LU 22-146810 EN to provide the total amount needed by the watershed council for the entire de-paving and stormwater retrofit project, which is $14,100. (see Exhibit A.5.c). The payment is based both on the amount of disturbance area and also the number and size of trees removed and is intended to compensate for both. The applicant shall provide the required funding to the Johnson Creek Watershed Council within 1 month of the date of the final decision on this case. The applicant and the applicant's representative in the Mitigation Project, shall notify City Staff once the payment has been made.

Based on the foregoing information and with the aforementioned conditions*, these approval criteria can be met.*

C.4. There will be no detrimental impact to the migration, rearing, feeding or spawning of fish.

E.4. Where the proposed mitigation includes alteration or replacement of development in a stream channel, wetland, or other water body, there will be no detrimental impact related to the migration, rearing, feeding, or spawning of fish;

Findings: While the project area included seasonal wetlands listed on the National Wetlands Inventory, both BES and DSL identify the feature on the inventory as a ditch. At most, it is seasonally inundated, BES data indicates no direct overland hydraulic connection with any waterbodies, including Johnson Creek, which is the nearest one. Additionally, the National Wetlands Inventory shows the same gap and shows a connection limited to the presence of "Predominantly Hydric Soils", one of three wetland indicators. These sources help to show that there is little indication of a sustained connection between the project disturbance area and nearby waterbodies that harbor fish. As the applicant also explains in the narrative under the 3.2 Conservation Measures and BMPs, steps are being taken to prevent direct impacts to surface and subsurface water sources by implementing erosion control and construction management practices and by meeting State and Federal Clean Water regulations:

- *Vehicles and equipment (with the exception of chainsaws) would not be fueled on-site to prevent potential fuel spills on-site. Chainsaws would be fueled on site but would be kept away from existing vegetation during fueling.*

- *Erosion control BMPs will be implemented as detailed in Figure 4 of Appendix A. Erosion control devices (e.g., wattles) will be placed west of and downgradient of the temporary disturbance area, as needed, to prevent the potential release of sediments or sediment-laden water into the adjacent wetland. Additional stormwater management measures may include covering any soils removed from the site with a tarp prior to disposal and avoiding work during heavy rain events.*

- *PGE has submitted a Preconstruction Notification to the USACE to demonstrate compliance with Nationwide Permit 3 and Section 404 of the Clean Water Act. PGE will submit the City's approved LUCS to DEQ so they can issue a Section 401 Water Quality Certification for the project site due to wetland impacts. The project will not require a removal/fill permit from Oregon DSL because wetland impacts for each Milliken Immediate Action project site are below DSL's permit threshold.*

Thus, the construction of the project will not result in detrimental impacts to fish migration, rearing, feeding, or spawning grounds. Additionally, even though the mitigation at the site is limited to reseeding with native grasses, and that some of that mitigation may be partially in areas identified as wetlands, there is not a risk that mitigation to reseed the disturbance area will create a potential for detrimental impacts to fish migration, rearing, feeding, or spawning grounds.

Furthermore, the proposed mitigation project has been designed, as detailed above, to reduce detrimental inputs of oils, gasoline, and tire particles from vehicles into Johnson Creek. These pollutants are known to be deleterious to coho salmon and steelhead, who spawn in the creek. So, not only is the mitigation on site not resulting in a detrimental impact to the migration, rearing, feeding or spawning of fish, the off-site mitigation is remediating a site that likely does.

Therefore, *these criteria are met.*

E.1. The proposed mitigation occurs at a minimum 2:1 ratio of mitigation area to proposed disturbance area;

Findings: As noted above, the whole of the project disturbance area, 3,209 square feet, will be reseeded with an erosion control native seed mix. Additionally, since only above-ground portions of the two Scouler's willows were removed (as witnessed by staff at the site post-construction), it is likely that these trees, whose regenerative abilities to resprout from the root crown are considered "vigorous" (See Exhibit G.3), will likely re-establish their presence in the project area over the coming seasons.

The off-site mitigation area is approximately 5,000 square feet, which is sufficient to accommodate an area equal in size to the disturbance area for this site and for the disturbance area (1,659 square feet) of the work being reviewed for case LU 22-146810 EN, which will also contribute to the same mitigation project to meet its mitigation-related approval criteria.

Therefore at least 6,418 square feet will be mitigated, which is a ratio of 2:1 to the disturbance area and *This criterion is met.*

E.5. The applicant owns the mitigation site, possesses a legal instrument that is approved by the City (such as an easement or deed restriction) sufficient to carry out and ensure the success of the mitigation program, or can demonstrate legal authority to acquire the property through eminent domain.

Findings: As evidenced by Exhibit A.5.d, a legal agreement between the landowner of the mitigation site, Cathy Yost, and the Johnson Creek Watershed Council (JCWC), who is the applicant's representative to carry out the project, the applicant, via their representative, has a legal agreement sufficient to carry out and ensure the success of the mitigation program.

Therefore, *this criterion is met.*

DEVELOPMENT STANDARDS

Unless specifically required in the approval criteria listed above, this proposal does not have to meet the development standards in order to be approved during this review process. The plans submitted for a building or zoning permit must demonstrate that all development standards of Title 33 can be met, or have received an Adjustment or Modification via a land use review prior to the approval of a building or zoning permit.

CONCLUSIONS

The applicant carried out work to remove a failing steel utility tower and install a replacement monopole in the Pleasant Valley Natural Resource overlay utilizing 33.465.080.B, which provides a temporary exemption for emergency procedures. Since completion of the work, as detailed above, the applicant has demonstrated that the work was carried out to minimize impacts to high value resources and that the proposed mitigation will off-set and enhance the resources and functional values at the site and in Johnson Creek. Therefore, the applicant has shown that the project meets all the applicable approval criteria and, as such, this case should be approved subject to the conditions state below.

ADMINISTRATIVE DECISION

Retroactive approval of the installation of a steel utility monopole and removal of a steel utility tower, as well as the removal of two trees, per the approved site plans, Exhibits C-3 through C-6, signed and dated on July 14, 2023, subject to the following condition:

A. The applicant shall pay $9,294.76 to the Johnson Creek Watershed Council to provide funding for the Trinity Lutheran Church Stormwater Retrofit Project (Exhibits A.5.a through d). The payment shall be completed within one month of the date of the final decision on this case. The applicant and the Johnson Creek Watershed Council shall notify the Staff Planner once the payment has been.

Staff Planner: Timothy Novak

Decision rendered by: _____ **on July 14, 2023**
By authority of the Director of the Bureau of Development Services

Decision mailed: July 19, 2023

About this Decision. This land use decision is **not a permit** for development. Permits may be required prior to any work. Contact the Development Services Center at 503-823-7310 for information about permits.

Procedural Information. The application for this land use review was submitted on September 14, 2022, and was determined to be complete on October 5, 2022.

Zoning Code Section 33.700.080 states that Land Use Review applications are reviewed under the regulations in effect at the time the application was submitted, provided that the application is complete at the time of submittal, or complete within 180 days. Therefore this application was reviewed against the Zoning Code in effect on September 14, 2022.

ORS 227.178 states the City must issue a final decision on Land Use Review applications within 120-days of the application being deemed complete. The 120-day review period may be waived or extended at the request of the applicant. In this case, the applicant requested that the 120-day review period be extended 245 days (Exhibit A.3). Unless waived by the applicant, **the 120 days will expire on: October 5, 2023.**

Some of the information contained in this report was provided by the applicant.
As required by Section 33.800.060 of the Portland Zoning Code, the burden of proof is on the applicant to show that the approval criteria are met. The Bureau of Development Services has independently reviewed the information submitted by the applicant and has included this information only where the Bureau of Development Services has determined the information satisfactorily demonstrates compliance with the applicable approval criteria. This report is the decision of the Bureau of Development Services with input from other City and public agencies.

Conditions of Approval. If approved, this project may be subject to a number of specific conditions, listed above. Compliance with the applicable conditions of approval must be documented in all related permit applications. Plans and drawings submitted during the permitting process must illustrate how applicable conditions of approval are met. Any project elements that are specifically required by conditions of approval must be shown on the plans, and labeled as such.

These conditions of approval run with the land, unless modified by future land use reviews. As used in the conditions, the term "applicant" includes the applicant for this land use review, any person undertaking development pursuant to this land use review, the proprietor of the use or development approved by this land use review, and the current owner and future owners of the property subject to this land use review.

Appealing this decision. This decision may be appealed to the Hearings Officer, and if appealed a hearing will be held. The appeal application form can be accessed at https://www.portlandoregon.gov/bds/45477. Appeals must be received **by 4:30 PM on August 2, 2023**. **The completed appeal application form must be emailed to LandUseIntake@portlandoregon.gov and to the planner listed on the first page of this decision.** If you do not have access to e-mail, please telephone the planner listed on the front page of this notice

about submitting the appeal application. **An appeal fee of $250 will be charged**. Once the completed appeal application form is received, Bureau of Development Services staff will contact you regarding paying the appeal fee. The appeal fee will be refunded if the appellant prevails.

Appeal fee waivers. Multnomah County may cover the appeal fees for their recognized associations. An appeal filed by a recognized association must be submitted to the City with either the appropriate fee or the attached form signed by the County. Contact Multnomah County at 503-988-3043, 1600 SE 190th, Portland, OR 97233.

If you are interested in viewing information in this file, please contact the planner listed on the front of this notice. The planner can email you documents from the file. A fee would be required for all requests for paper copies of file documents. Additional information about the City of Portland, and city bureaus is available online at https://www.portland.gov. A digital copy of the Portland Zoning Code is available online at https://www.portlandoregon.gov/zoningcode.

Attending the hearing. If this decision is appealed, a hearing will be scheduled, and you will be notified of the date and time of the hearing. The decision of the Hearings Officer is final; any further appeal must be made to the Oregon Land Use Board of Appeals (LUBA) within 21 days of the date of mailing the decision, pursuant to ORS 197.620 and 197.830. Contact LUBA at 775 Summer St NE, Suite 330, Salem, Oregon 97301-1283, or phone 1-503-373-1265 for further information.

Failure to raise an issue by the close of the record at or following the final hearing on this case, in person or by letter, may preclude an appeal to the Land Use Board of Appeals (LUBA) on that issue. Also, if you do not raise an issue with enough specificity to give the Hearings Officer an opportunity to respond to it, that also may preclude an appeal to LUBA on that issue.

Recording the final decision.
If this land use review is approved the final decision will be recorded with the County Recorder. *Unless appealed,* the final decision will be recorded by the Bureau of Development Services on or after August 3, 2023.

Expiration of this approval. An approval expires three years from the date the final decision is rendered unless a building permit has been issued, or the approved activity has begun.

Where a site has received approval for multiple developments, and a building permit is not issued for all of the approved development within three years of the date of the final decision, a new land use review will be required before a permit will be issued for the remaining development, subject to the Zoning Code in effect at that time.

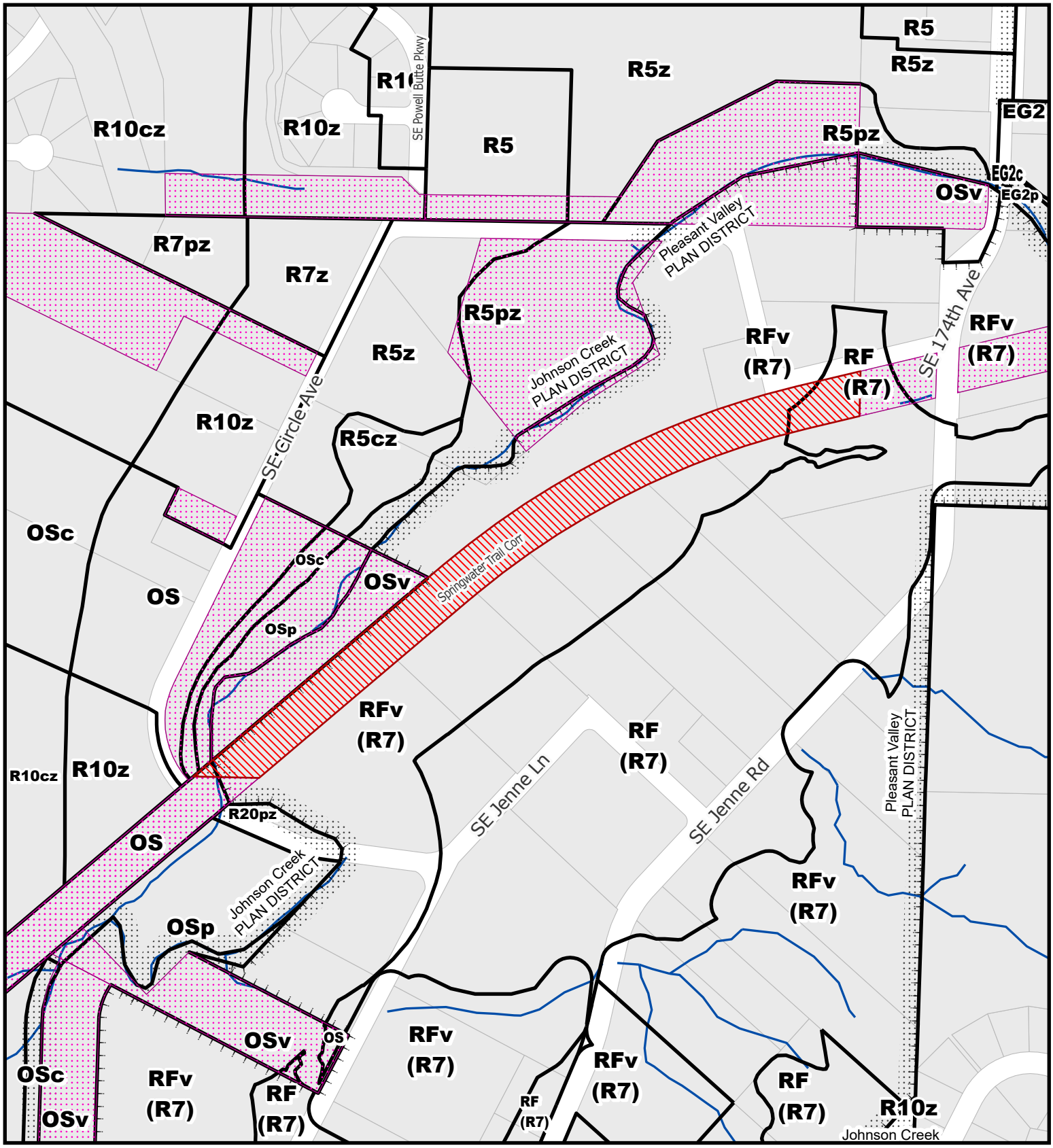
Applying for your permits. A building permit, occupancy permit, or development permit may be required before carrying out an approved project. At the time they apply for a permit, permittees must demonstrate compliance with:

- All conditions imposed herein;
- All applicable development standards, unless specifically exempted as part of this land use review;
- All requirements of the building code; and
- All provisions of the Municipal Code of the City of Portland, and all other applicable ordinances, provisions and regulations of the City.

EXHIBITS
NOT ATTACHED UNLESS INDICATED

A. Applicant's Statement
   1. Original Submittal Packet
   2. Revised Submittal Packet (10/5/2022)
   3. 120-day Timeline Extension Request
   4. Revised Submittal Packet #2 (6/1/2023)
   5. Stormwater Retrofit Mitigation Documents
      a. Narrative
      b. Site Plan
      c. Cost Breakdown
      d. Legal Agreement to carry-out and maintain mitigation project
B. Zoning Map (attached)
C. Plans/Drawings:
   1. Existing Conditions Map
   2. Proposed Development Map
   3. Construction Management Map
   4. As-Built Disturbance Map (attached)
   5. On-Site Mitigation Plan
   6. Off-Site Mitigation Plan (attached)
D. Notification information:
   1. Mailing list
   2. Mailed notice
E. Agency Responses:
   1. Bureau of Environmental Services
   2. Bureau of Transportation Engineering and Development Review
   3. Water Bureau
   4. Fire Bureau
   5. Site Development Review Section of BDS
   6. Life Safety Review Section of BDS
   7. DSL Wetland LU Notice Response
F. Correspondence: NONE
G. Other:
   1. Original LUR Application
   2. Request for Emergency Temporary Exemption
   3. Scouler's Willow Characteristics from US Forest Service

The Bureau of Development Services is committed to providing equal access to information and hearings. Please notify us no less than five business days prior to the event if you need special accommodations. Call 503-823-7300 (TTY 503-823-6868).



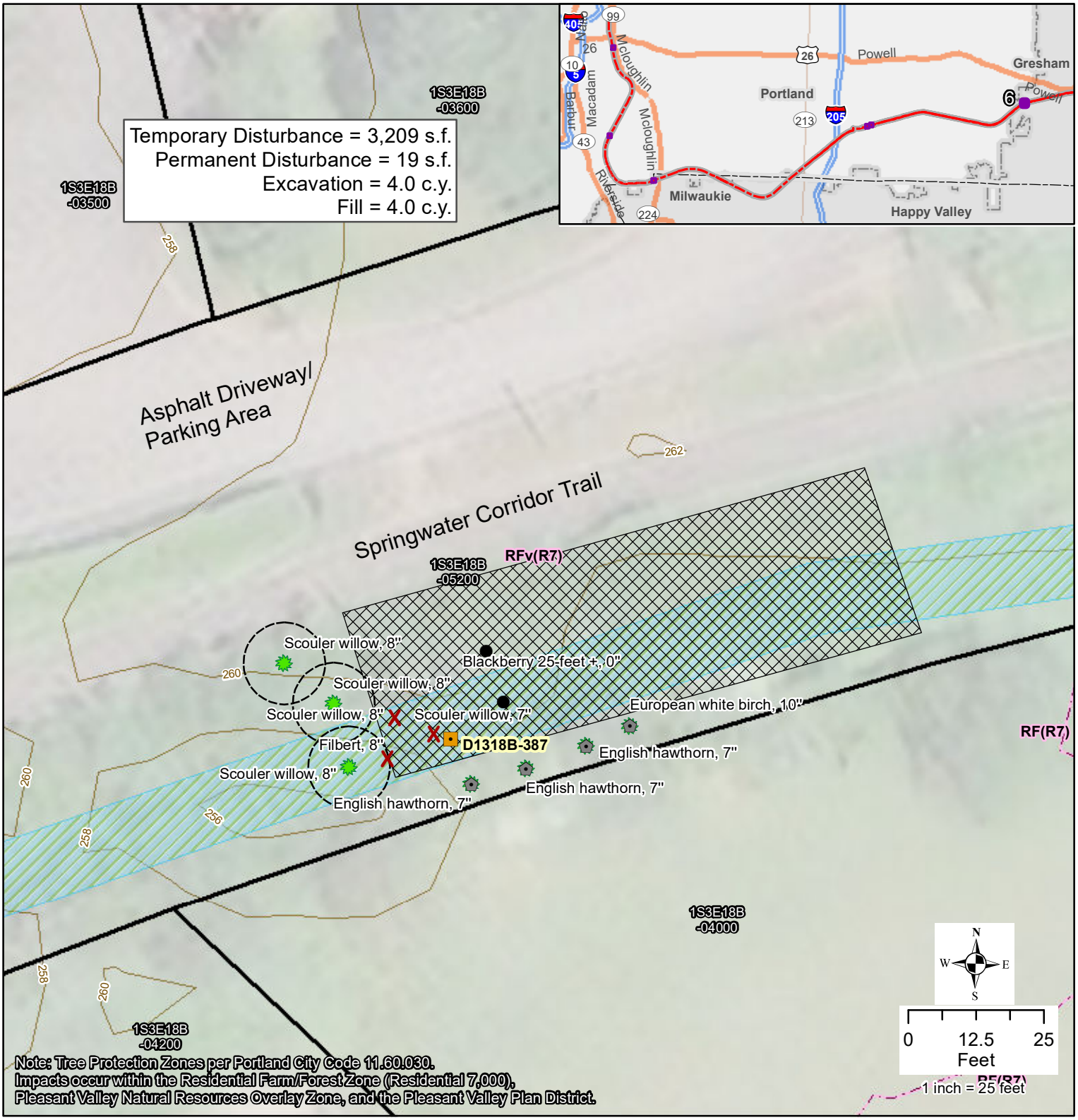
For Zoning Code in effect Post August 1, 2021

ZONING

UNINCORPORATED MULTNOMAH COUNTY
JOHNSON CREEK BASIN
PLEASANT VALLEY PLAN DIST

Site
Also Owned Parcels
Stream

File No.	LU 22 - 183308 PV
1/4 Section	3547,3548,3647
Scale	1 inch =300 feet
State ID	1S3E18B 5200
Exhibit	B Sep 15, 2022



Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Contour (2 ft)
- Wetland/Water (NWI)
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Root Protection Zone

Approved
City of Portland
Bureau of Development Services
Planner
Date July 14, 2023
*This approval applies only to the reviews requested and is subject to all conditions of approval. Additional zoning requirements may apply.

FIGURE 5
As-Built Disturbance Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

April 2023

AECOM

Exhibit C.4, LU 22-183308 PV

Trinity Lutheran Church Stormwater Retrofit Project Site Map

Johnson Creek Watershed Council is working with Trinity Lutheran Church to remove impervious pavement and install stormwater retrofits, such as rain gardens. The goal of the project is to help alleviate stormwater runoff and flooding on the property, and to infiltrate a portion of the property's stormwater to reduce stormwater outfall flows and stormwater pollutants making it to Johnson Creek.

Exhibit C.6, LU 22-183308 PV

AECOM Imagine it. Delivered.

City of Portland Pleasant Valley Resource Review Application

Milliken Immediate Action Tower Replacement Project
Tower D1318B-387
Springwater Corridor near SE Circle Ave
Zoning Permit File No. 22-154065 ZP

Portland General Electric Company

Sept. 2022

Prepared for:

Portland General Electric Company
121 SW Salmon St
Portland, Oregon 97204

Prepared by:

AECOM
888 SW 5th Ave
Suite 600
Portland, Oregon 97204

Table of Contents

Tables

Appendices

1 Introduction

1.1 Background

Portland General Electric Company (PGE) has an immediate need to replace 18 decaying, steel lattice tower structures (Milliken Towers) with new steel monopoles along an existing electric transmission line right-of-way (ROW) located within the Springwater Corridor in the City of Portland (City). The replacement towers are within an existing Utility Corridor. The entire line extends east of the City, continuing to Estacada, Oregon (Figure 1 of Appendix A).

PGE previously requested City approval fortwo land use compatibility statements (LUCS): January 14, 2022 for 12 of the 18 towers exempt from City land use review; and April 7, 2022 for the remaining 6 structures that may require City land use review. Of the six structures in the response to the April 19, 2022 LUCS, Tower D1318B-387 was identified by the City as needing a Zoning Permit if it could meet standards. On September 7, 2022, the City determined that the project could not meet standards and Pleasant Valley Resource Review was needed because the temporary disturbance area at this site would be greater than 15 feet wide. Project details are summarized in Table 1.

Table 1. Tower D1318B-387 Project Summary

Tower Number	Latitude	Longitude	Township / Range/ Section	Tax Lot	Maximum Estimated Temporary Impact Area (SF)	Permanent Disturbance Area (SF)	Permanent Impact Volume (CY)	Wetland Impact?	Tree Removal?
D1318B-387	45.48499°N	-122.487044°W	1S/1E/18	1S3E18B -05200	783	16	2.2	Yes	Yes- 3 trees ≥6" DBH

The project falls within the Pleasant Valley Natural Resources Overlay Zone (NROZ) in which the current plans submitted under the Zoning Permit (File No. 22-154065 ZP) indicated that while the development activity of the tower replacement is exempt, the removal of three regulated trees >6 inches DBH does not meet the exemption condition under Section 33.465.080(C)(6)(b). A Land Use Application Review is needed because the width of the disturbance area would exceed the 15-foot width threshold (Section 33.465.155(B). This narrative addresses the application requirements described in Section 33.730.060 as well as Pleasant Valley NROZ Section 33.465.130.

The project site is located in a narrow (approximately 50-foot wide) vegetated wetland strip adjacent to the Springwater Trail. For the purposes of this narrative, the "project site" includes all areas that may be subject to permanent or temporary disturbance from the proposed project (Figures 2-4 of Appendix A). As such, the description of existing conditions and potential project impacts described herein will be limited to the disturbance area and not encompass the adjacent overlay zones, management areas, or local watershed.

The project site and vicinity support wildlife habitat and recreational uses, such as walking, biking, and nature observations. Vegetation is managed to maintain the transmission line. Proposed uses would be consistent with existing uses. Mitigation for tree removal and best management practices (BMPs) as outlined in Sections 3.2 and 3.3 will ensure protection of sensitive natural resources in the project vicinity.

1.2 Project Purpose and Need

The purpose of the proposed project is to replace decaying steel lattice tower structures with new steel monopoles along an existing electric transmission line ROW located within the Springwater Corridor. Existing structures are unstable, thereby leaving the existing Milliken Transmission line vulnerable to

failure and outages. Steel monopoles improve stability and offer high service life, low maintenance, and high fire/seismic residency so they limit future disturbance from maintenance/repair.

The following objectives are associated with the project:

- Objective 1: Safely replace decaying tower structure with new structure to ensure adequate safety measures for the existing electric transmission line.
- Objective 2: Limit environmental encroachment to the maximum extent practicable.

2 Existing Project Site Conditions

2.1 Topography, Vegetation, and Hydrology

Tower D1318B-387 is located in the City of Portland near SE Circle Avenue, and immediately adjacent to the Springwater Corridor Trail. Vegetation along the paved Springwater Corridor Trail is disturbed non-native grasses and shrubs with mature native and non-native trees in a narrow strip surrounded by development along SE Jenne Road and SE Circle Ave. To the north and west of the project site is the Powell Butte Nature Park, and to the south and east is the Jenne Butte Park. The proposed project is located 270 feet south of Johnson Creek and is separated from the creek by development. The 2022 National Wetlands Inventory (NWI) database indicates that the project site is within a waterway. However, this is not accurate. The site reconnaissance performed by AECOM found that wetlands were present on site but generally limited to the western portion of the disturbance area. No defining stream characteristics (bed/banks) were identified at the project site so there will not be any work below the ordinary high water mark of a stream. The proposed project is located outside the flood zone for Johnson Creek.

2.2 Land Uses and Zoning

The proposed project consists of a work area and access route for replacement of a pole that lies adjacent to the Springwater Corridor (an existing paved path). Based on a review of the City of Portland's zoning website, the project location is zoned as residential farm / forest (RF) and located within the Pleasant Valley Plan District and Pleasant Valley Natural Resources Overlay Zone (Chapter 33.465).

- Pleasant Valley Natural Resources Overlay Zone (Chapter 33.465)

  The Pleasant Valley NROZ provides an inventory of the significant natural resources identified within the Pleasant Valley study area and describes the functional values, or benefits, of the resources. The purpose of this code is to protect and conserve these identified natural resources, facilitate restoration and enhancement of stream corridors, wetlands and forests, maintain the community amenity of streams and riparian corridors, protect upland habitats and enhance connections between upland and riparian habitats, maintain and enhance water quality and control erosion, and to conserve the scenic, recreational, and educational values of these resources.

2.3 Resources and Functional Values

As described above in Section 2.1, the project site is largely surrounded by development, with the exception of a narrow strip of vegetation along the Springwater Corridor Trail. The project site is approximately 270 feet south of Johnson Creek. Vegetation along the Trail consists of a mix of native and non-native/invasive trees and shrubs. The area provides food and cover for resident and migratory urban wildlife. The Springwater Corridor Trail provides passive recreational opportunities (e.g., walking, biking, nature observation). The project is not within a scenic overlay zone.

The project site is largely surrounded by development and open space areas including the Powell Butte Nature Park to the west, Jenne Butte Park to the south and east, and the Lower Powell Butte Floodplain to the south. Although the site is maintained for transmission line clearance, the site and surrounding area

does provide some shading, organic inputs, nutrient cycling, and a wildlife habitat corridor within a wetland area. The wetland appears to continue to the west offsite and connect with Johnson Creek near the SE Circle Ave. crossing.

3 Project Description

3.1 Work Details

Construction for Tower D1318B-387 will be completed in four steps: 1) install new steel monopole structure near the existing lattice tower it is replacing, 2) transfer wire from the old lattice tower to the new steel monopole, 3) demolish and remove the old lattice tower, and 4) restore ground and vegetation conditions within the work area. Tower replacement would be completed within 2-3 days and is scheduled for September 2022.

Construction equipment will likely involve the following: auger drill rig, bucket truck, digger derrick, boom truck, and pole trailer. The tower location will be accessed from SE Circle Avenue and Springwater Corridor which would reduce impacts to the vegetated corridor. Heavy equipment will largely operate from the paved areas. Once the new poles are placed, the material from the tower demolition will be placed within the designated disturbance area or on the pavement.

The new tower structure will be installed using the direct embed methods--an auger drill rig will be used to excavate a hole, and excavated soil will be temporarily stockpiled on the ground (or on a tarp or truck if soils are wet) next to the removal site, with topsoil separated from subsoil. Excess soil will be removed from the site for disposal. The new pole will be directly embedded into the excavated hole, which would be backfilled with compacted gravel, concrete slurry, or structural concrete (depending on the soil conditions and structure design). The excavated hole will be 2 feet in diameter and up to 15 feet below ground. The new monopole will be placed 10 feet away from (and in-line with) the existing tower. The permanent impact area and volume is 16 square feet and 2.2 cubic yards, respectively. The estimated maximum temporary impact area is 783 square feet; however, the contractor will minimize impacts so the actual disturbance area will likely be much less.

The existing lattice structure has 4 steel legs that are directly embedded into the ground; the tower does not have concrete footings. Removal of tower footings will consist of hand digging to approximately 2 feet with hydraulic sheers used to cut each leg. The remaining hole will be backfilled with stockpiled native soil from the new tower and seeded with a native upland or wetland seed mix. Any transmission structure material (steel, concrete, wires and fasteners) removed from the project corridor will be transported to a local landfill or PGE storage facility for disposal or recycling. An existing conditions map, proposed development plan, construction management plan, and mitigation plan are provided in Appendix A.

3.2 Conservation Measures and BMPs

Project construction would adhere to the Construction Management Plan (Figure 4 of Appendix A) which was prepared in accordance with 33.465.240(A)(2). The following BMPs would be implemented prior to, during, and/or after the project to avoid or minimize potential impacts to site resources and functional values.

Construction Limits

- Construction access will be from SE Jenne Rd., SE Circle Ave, and the Springwater Trail. The boundary of the temporary disturbance area will be delineated with orange construction fencing to protect off-site vegetation.
- Heavy equipment will remain on the paved area when not in use.

Tree Protection

- To protect trees, shrubs, and other vegetation off-site, the boundaries of the temporary disturbance area and access route will be clearly delineated. No tree protection is proposed since root protection zones of native trees are outside of the disturbance area. Root protection zones of four non-native trees along the southern boundary of the disturbance area cannot be protected. They will not be removed but native trees will be replanted within the mitigation area if they are damaged (Figure 5 of Appendix A).

Sensitive Resource Protection

- All motor vehicles and equipment would be cleaned and weed-free upon entering the project site.
- Vehicles and equipment (with the exception of chainsaws) would not be fueled on-site to prevent potential fuel spills on-site. Chainsaws would be fueled on site but would be kept away from existing vegetation during fueling.
- Since work will not occur during the primary nesting season (April 15 – July 31), it will not be necessary to conduct pre-construction bird nest surveys in accordance with the City requirements detailed in *"Protecting Nesting Birds: Best Management Practices for Vegetation and Construction Projects"* (City 2017).
- The trees proposed for removal would be discussed in detail with the tree work crew prior to beginning work and would be clearly marked with bright flagging.
- Vegetation trimming will be confined to the smallest portion of the project site necessary for completion of the work. Vegetation will be cut to the base and allowed to regrow following construction. It should be noted that all woody vegetation growing within the existing transmission corridor is periodically trimmed to prevent interference with transmission wires and poles.

Water Quality Protection

- Erosion control BMPs will be implemented as detailed in Figure 4 of Appendix A. Erosion control devices (e.g., wattles) will be placed west of and downgradient of the temporary disturbance area, as needed, to prevent the potential release of sediments or sediment-laden water into the adjacent wetland. Additional stormwater management measures may include covering any soils removed from the site with a tarp prior to disposal and avoiding work during heavy rain events.
- PGE has submitted a Preconstruction Notification to the USACE to demonstrate compliance with Nationwide Permit 3 and Section 404 of the Clean Water Act. PGE will submit the City's approved LUCS to DEQ so they can issue a Section 401 Water Quality Certification for the project site due to wetland impacts. The project will not require a removal/fill permit from Oregon DSL because wetland impacts for each Milliken Immediate Action project site are below DSL's permit threshold.

Construction Vehicles, Equipment, and Roadway Use

- Construction workers would access the site from SE Jenne Rd., SE Circle Ave., and Springwater Trail.
- Signage, coning, and/or fencing would be used along the access route and Springwater Corridor Trail as deemed necessary to advise the public of construction work and any associated potential hazards.
- Cones would be placed around the work area to keep cyclists and pedestrians away from vehicles, equipment, and active project work.

Post-Construction Restoration and Mitigation

- PGE will replant removed trees and perform mitigation as required by the Pleasant Valley Resource Review process. Additional details are provided in Section 5.2.

4 Alternatives Evaluation

Because the project is site-specific (existing line), no alternative sites were considered. Re-routing the transmission line would have significantly greater environmental impacts. Specific criteria necessary to achieve the project design objectives include the following:

1. Project must utilize the existing Milliken transmission alignment
2. New tower structures must meet design standards for stability and span
3. New structures must meet seismic resiliency standards

Based on these criteria, the no action alternative as well as the following three practicable but significantly different alternatives were considered (33.865.100(A)(3)(b)), and are summarized in Table 2:

- Alternative 1. No Action Alternative;
- Alternative 2. Proposed Project - Tower replacement with an adjacent steel monopole;
- Alternative 3. Repair of the existing failing tower structure; and
- Alternative 4. Placing the new monopole within the same footprint as the existing tower.

The No Action Alternative, which would avoid impacts to wetlands and waters, would not replace aging and unstable structures, thereby leaving the existing Milliken Transmission line vulnerable to failure and outages. The No Action Alternative does not achieve the project purpose and was therefore not selected.

Alternative designs that meet the project-specific criteria listed above are limited. Infrastructure other than steel monopoles would not provide the stability necessary for the transmission line. Steel monopoles offer high service life, low maintenance, and high fire/seismic residency so they limit future disturbance from maintenance/repair. The transmission line would continue to operate at its existing capacity (57-kilovolt).

The proposed project (Alternative 1) incorporates the smallest practicable footprint considering construction requirements to perform the work. The temporary disturbance area was selected based on the type and size of equipment needed to access the site. It is likely that the entire disturbance area will not be needed for maintenance activities; however, the maximum estimated area was identified for this land use approval process.

PGE's contractor will use equipment that is properly sized to replace the large transmission towers. The project cannot be safely and effectively implemented with the use of smaller equipment. Vegetation trimming is required at the site to provide access for construction equipment and tower removal and installation since project activities cannot be performed from the Springwater Trail. The minimum number of trees will be removed to complete the project. Construction equipment will be staged on the paved trail which will reduce impacts to vegetation within the Springwater Corridor. There are no other practicable alternatives to conduct the maintenance project that would reduce impacts beyond those proposed by the preferred alternative.

Table 2 below evaluates the alternatives relative to the objectives specified in Section 1.2. Alternative 2 would satisfy Objectives 1 and 2, whereas Alternative 1, 3, and 4 would not satisfy both objectives. Therefore, Alternative 2 is the preferred alternative for the project.

Table 2. Evaluation of Practicable and Significantly Different Project Alternatives

Alternative	Project Objectives		Impact on Resources and Functional Values
	1: Replacement of decaying structure	2: Limit environmental encroachment	
1: No Action Alternative	Does Not Meet	Does Not Meet	Failure to replace the structure would result in an unstable and unsafe transmission line. Therefore, Objective 1 would not be achieved under this alternative.

Alternative	Project Objectives		Impact on Resources and Functional Values
	1: Replacement of decaying structure	2: Limit environmental encroachment	
			Alternative 1 would avoid the immediate need for tree removal and vegetation trimming, thus eliminating potential impacts to wildlife and native plants. However, the transmission line would not be stable and could result in outages. This could result in increased fire risk, along with more frequent maintenance and repair visits, thereby increasing environmental encroachment. Therefore, this alternative would not achieve Objective 2. Also, it should be noted that under the no action alternative, trees and vegetation are regularly pruned or trimmed around the transmission lines as part of routine maintenance, so some level of disturbance regularly occurs at this site.
2: Proposed Project - Replacement of existing structure with new steel monopole	Meets	Meets	This alternative would involve installing a new steel monopole structure near the existing lattice tower it is replacing, transferring wire from the old lattice tower to the new steel monopole, demolishing and removing the old lattice tower, and restoring ground and vegetation conditions within the work area. Objective 1 would be achieved under this alternative. Tower replacement at this site will require some tree removal and ground disturbance so crews can access and replace the failing tower (Figure 3 of Appendix A). BMPs (as described in Section 3.2) would minimize impacts to wildlife and the general public. Trees would be replanted at a 2:1 ratio and any bare ground areas reseeded with a native seed mix within the temporary disturbance area to restore the site. The installation of the new steel monopole would ensure the transmission line's integrity and safe operation, thereby minimizing potential fire risk and maintenance/repair frequency and reducing environmental impacts. Thus, this alternative would limit environmental encroachment to the maximum extent practicable and achieve Objective 2.
3: Repair of the existing failing tower structure	Does Not Meet	Does Not Meet	Under this alternative, the existing tower would be repaired by replacing the damaged tower foundation. A new foundation would be installed adjacent to the tower legs. A large excavation area would be needed to install the new concrete foundations and temporarily support structures while the existing legs are removed. Due to the extensive damage to the tower legs, there is no repair that could restore the integrity of the structure without significant excavation. This would exceed the environmental impacts of installing a new steel monopole adjacent to the existing tower. Therefore, Objectives 1 and 2 would not be achieved under this alternative.
4: Placing the new monopole within the same footprint as the existing tower.	Does Not Meet	Meets	A new pole needs to be installed before the existing line can be transferred over. As such, it is not feasible to place a new monopole in the same footprint as the existing tower. Although environmental impacts would be minimized relative to the preferred alternative, this option is not feasible so it would not meet Objective 1.

5 Project Impacts

5.1 Short-Term Impacts

Potential short-term impacts from tower replacement, tree removal, and vegetation trimming include noise disturbance, temporary modifications to wildlife habitat, and minor disruption of recreational use of the trail. Tower replacement at this site will require some vegetation trimming and ground disturbance so crews can access and replace the failing tower. Impacts to natural resources would be minimized to the extent practicable. The tower location will be accessed from Springwater Trail. All vehicles and equipment will remain on the paved areas when accessing the site. Once the new pole is placed, the material from the tower demolition will be hauled off from the site. It is not anticipated that the project would impact the entire temporary disturbance area shown in the project figures. Any short-term impacts would be minimized through the implementation of the BMPs described in Section 3.2. Further, as described in Section 6, PGE would replant trees and reseed any bare ground areas, as required by City code requirements offset short-term effects from tower replacement.

Three trees are identified for removal at this site (Table 3). These include a 6" and 7" DBH Scouler's willow (*Salix scouleriana*) and an 8" DBH filbert (*Corylus, sp.*). Some trees and shrubs smaller than 6" DBH may be pruned or trimmed around each replacement structure to create a clear zone for construction equipment to access and perform the work. To protect nearby trees (and their root zones), fencing or staked flagging will be placed around the temporary disturbance area. All work will occur outside the root protection zones of adjacent trees (Figures 3 and 4 of Appendix A). Vegetation trimming will be confined to the smallest portion of the project area necessary for completion of the work. Vegetation will be cut to the base and allowed to regrow following construction. It should be noted that all woody vegetation growing within the existing transmission corridor is periodically trimmed to prevent interference with transmission wires and poles.

Recreational use of Springwater Trail within the project site by cyclists and pedestrians would continue during project work. Appropriate signage would be implemented (as described in Section 3.2) to ensure the safety of cyclists and pedestrians. Surrounding trails would not be impacted during project work.

Table 3. Existing Trees Proposed for Removal

Tree Number	Species	DBH (inches)	Tree on Nuisance List?
1	Scouler's willow, *Salix scouleriana*	6	No
2	Scouler's willow, *Salix scouleriana*	7	No
3	Filbert, *Corylus Spp.*	8	No

5.2 Long-Term Impacts

No significant, adverse long-term impacts are anticipated to natural or scenic resources and values from the proposed project. The project site is located near a large floodplain wetland and not on the mainstem Willamette River; as such, there would be no river-dependent or river-related restrictions. There would be no removal or fill in the waterway or below the ordinary high-water mark.

Potential impacts from tree removal and pruning include a reduction in tree canopy cover, shade, microclimate regulation, wildlife refuge, and nesting/brooding areas associated with deciduous forest cover. However, these functions are reduced since vegetation is regularly maintained at the site. If feasible and safe to do so, the three removed trees would be left in place as standing dead snags, thereby providing important habitat for wildlife and maintaining slope stability. Mitigation would be performed as specified in Section 33.465 to compensate for loss of trees and shrubs (Section 6).

The new monopole would be narrower and less conspicuous than the steel lattice tower, which would improve scenic value at the site. Permanent ground disturbance would be limited to the removal of the tower footings, which encompasses an area of 12.6 square feet, and the installation of a replacement

pole, which would encompass an area of 3.1 square feet. The maximum estimated temporary impact area is 783 square feet. Mitigation would help offset any potential long-term project impacts. Long term benefits from tower replacement include improved safety and disaster resiliency along the line.

6 Mitigation Approach

Mitigation will be performed as required under Section 33.465.180 (A-G) and Section 33.248.090. Large trees cannot be planted on-site for mitigation based on the clearance requirement for the transmission lines. Six native trees (replacement at 2:1 ratio) will be planted within the temporary disturbance area after construction to meet City code requirements. On-site mitigation plantings would include low canopy species such as cascara (*Rhanmus purshiana*), vine maple (*Acer circinatum*), and beaked hazelnut (*Corylus cornuta*) within the temporary disturbance area and any bare ground areas would be reseeded with an erosion control seed mix (20% of the seed mix will be comprised of pollinator species seeds). Additional mitigation will be performed at a ratio of 2:1 (mitigation area to project disturbance area). Mitigation will be performed once construction is complete. Proposed mitigation plans are shown in Figure 5 of Appendix A. The mitigation approach may be subject to change based on coordination with the City.

PGE would comply with the following conditions specified in Section 33.248.090, as required:

- Plant materials will be native and selected from the Portland Plant List. They will be non-clonal in origin, seed source must be as local as possible, and plants will be nursery propagated unless transplanted from on-site areas approved for disturbance. Plant materials are to be used for restoration purposes. Standard nursery practices for growing landscape plants, such as use of pesticides, fungicides or fertilizers, and the staking of trees will not be employed.
- Plants listed on the Nuisance Plants List will not be planted in the mitigation area and will not be counted as existing vegetation.
- The mitigation area will be cleared of groundcovers and shrubs listed on the Nuisance Plants List. Trees listed on the Nuisance Plants List will be removed from the mitigation area.
- Plant materials will be supported only when necessary due to extreme winds at the planting site. Where support is necessary, stakes, guy wires or other measures will be removed as soon as the plant can support itself.
- New plantings will be manually watered regularly during the first growing season. During later seasons, watering will be done as needed to ensure survival of the plants.
- Monitoring of landscape areas will be the ongoing responsibility of PGE on behalf of the property owner (City of Portland). Plants that die will be replaced in kind. Written proof that all specifications of this section have been met will be provided one year after the planting is completed. The property owner will provide this documentation to BDS.

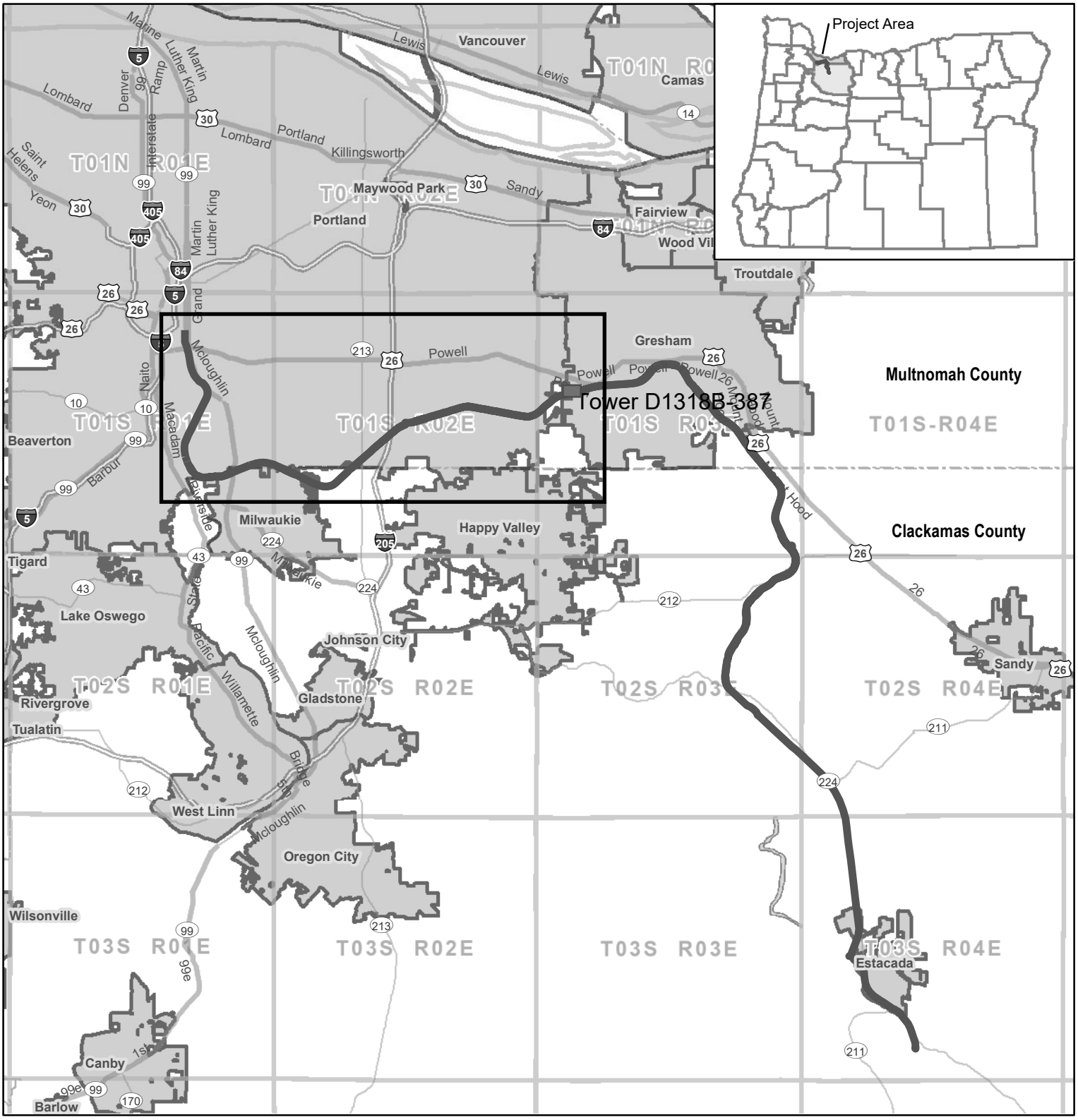
7 References

City of Portland, Environmental Services (City). 2017. Protecting Nesting Birds: Best Management Practices for Vegetation and Construction Projects. May 2017.

City of Portland (City). 2022. Zoning Map. Available at https://www.portlandmaps.com/detail/property/SPRINGWATER-CORRIDOR/R340552_did/?action_override=zoning Accessed Sep 9, 2022.

U.S. Fish and Wildlife Service (USFWS). 2022. National Wetlands Inventory. Available at https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/, Accessed Sept 9, 2022.

Appendix A. Figures



Legend

- Milliken Transmission Line (Project Area)
- City Boundary
- County Boundary
- Approximate Location of Towers

N
W E
S

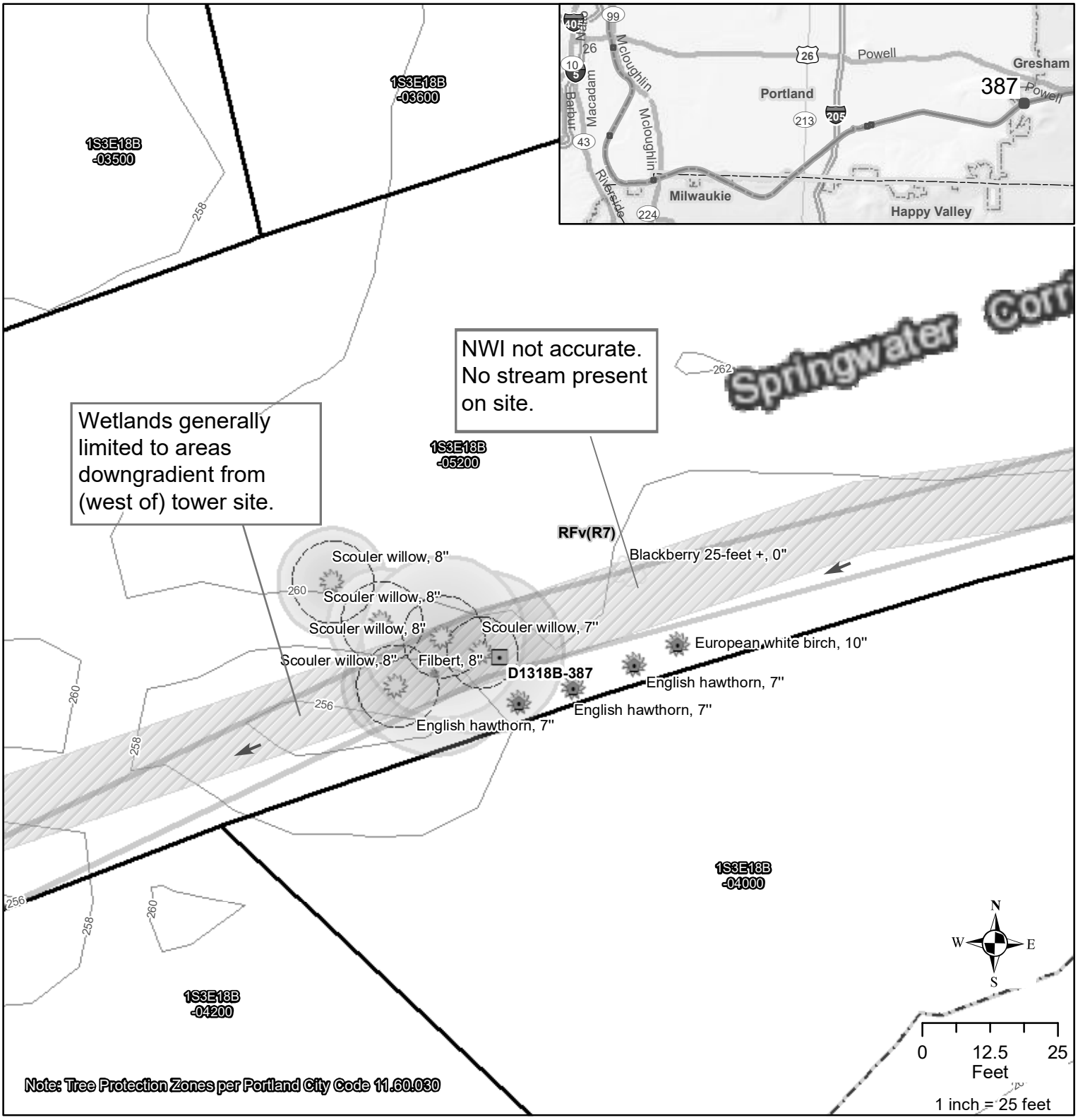
0 5 10
Miles

FIGURE 1
Vicinity Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

June 2022

AECOM



Legend

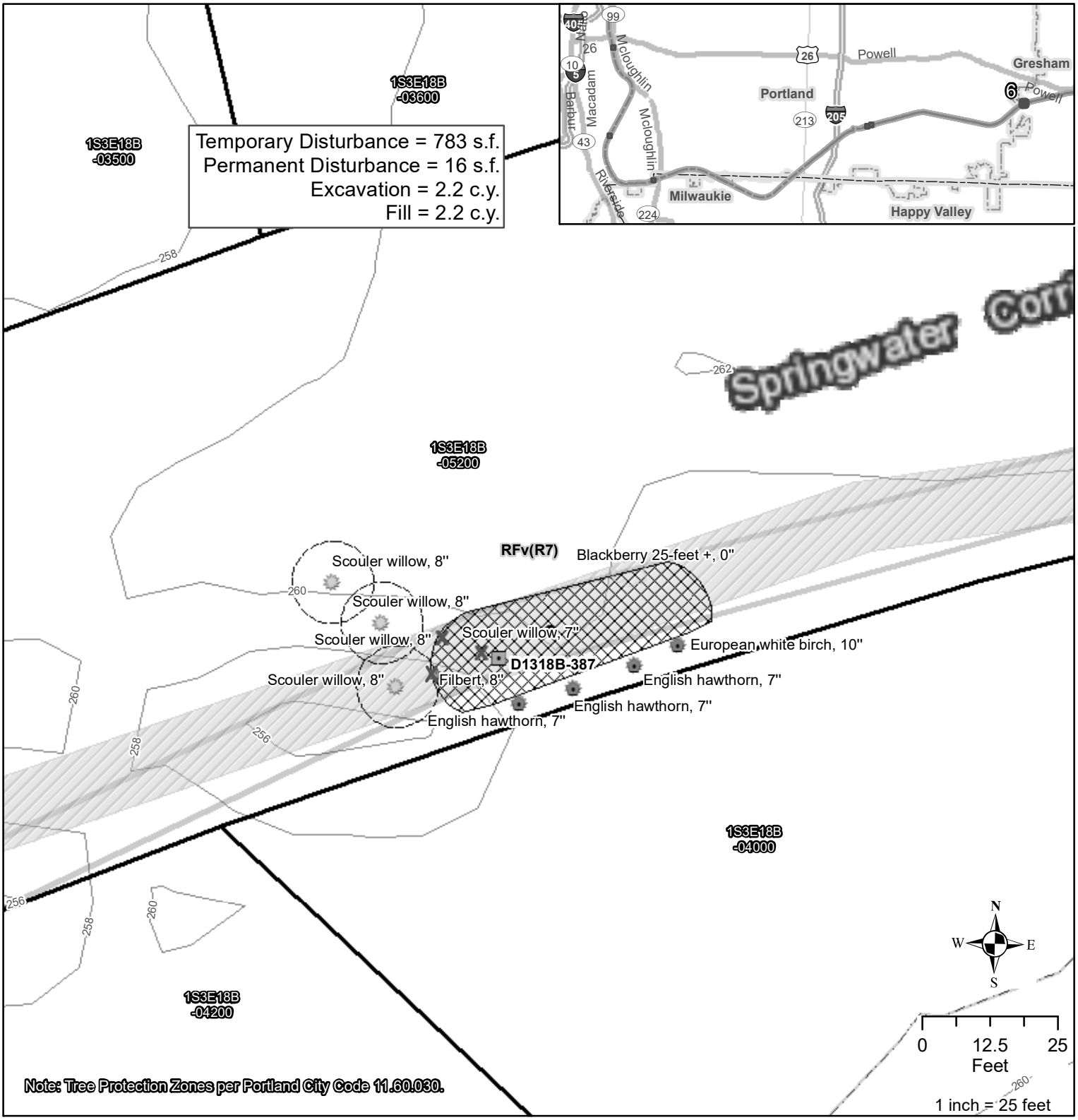
- Tax Lot
- Zoning
- Contours_2ft_SP Tower 387
- Wetland (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Surveyed Tree
- Tree on Nuisance List
- Root Protection Zone
- Canopy Crown Spread

FIGURE 2
Existing Conditions Site Plan

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

July 2022

AECOM



Legend

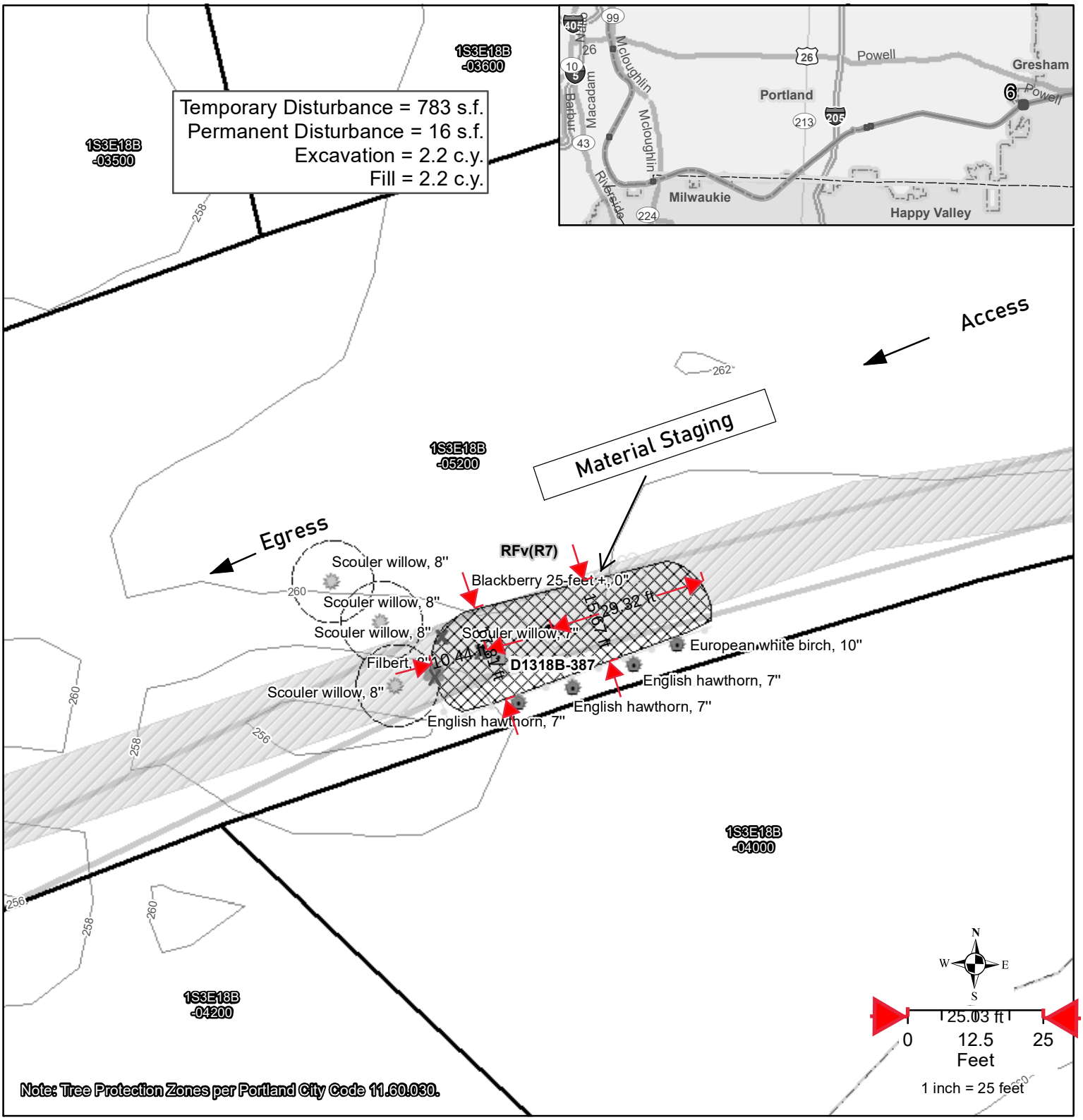
- Tax Lot
- Zoning
- Contour (2 ft)
- Wetland/Water (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Root Protection Zone

FIGURE 3
Proposed Development Plan

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

August 2022

AECOM



Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Contour (2 ft)
- Wetland/Water (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area (boundary to be marked)
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Erosion Control Devices (silt fence/wattle)
- Root Protection Zone

FIGURE 4
Construction Management Plan

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

August 2022

AECOM

Native Erosion Control Seed Mix		
Scientific Name	**Common Name**	**Percent of Mix**
Hordeum brachyantherum	meadow barley	40
Bromus carinatus	California brome	35
Festuca rubra rubra	native red fescue	20
Deschampsia caespitosa	tufted hairgrass	3
Agrostis exarata	spike bentgrass	2

Note: Seed mix available from Sunmark Seeds in Portland, Oregon. Use 1 lb per 1,000 sq.ft. on bare soils.

Native Tree Planting Table						
# and Size of Trees Removed	**Replacement Ratio**	**Proposed Replacement Tree Scientific Name**	**Proposed Replacement Tree Common Name (map symbol)**	**Quantity**	**Size**	**Spacing**
3	2:1	*Rhamnus purshiana*	Cascara (C)	6	1-gal	6' O.C.
Non-Native Nuissance Trees						
3 @ 7" 1 @ 10"	1:1 2:1	*Acer circinatum*	Vine maple (VM)	5	1-gal	6' O.C.

1S3E18B -05200

Temporary Disturbance Area = 783 s.f.
Mitigation Planting/Seeding Area = 1,566 s.f.

RFv(R7)

Scouler willow

Scouler willow

D1318B-387

Scouler willow

European white birch

English hawthorn

English hawthorn

English hawthorn

260

260

258

256

1S3E18B

RF(R7)

260

Additional Mitigation in Pleasant Valley Natural Resource Overlay Zone							
Area of Disturbance, Mitigation Ratio	**Mitigation**		**Proposed Replacement Tree Scientific Name**	**Proposed Replacement Tree Common Name (map symbol)**	**Quantity**	**Size**	**Spacing**
783 s.f. @ 2:1	1,566 s.f.	1 tree/ 100 s.f.	*Rhamnus purshiana*	Cascara (C)	10*	1-gal	5-6' O.C.
		3 shrubs/ 100 s.f.	*Acer circinatum*	Vine maple (VM)	11*	1-gal	5-6' O.C.
			Corylus cornuta	Beaked hazelnut (H)	15	1-gal	5-6' O.C.
		4 other plants/ 100 s.f.	*Rosa nutkana*	Nootka rose (R)	15	1-gal	5-6' O.C.
			Symphoricarpos albus	Snowberry (S)	16	1-gal	5-6' O.C.
			Salix scouleriana	Scouler's willow (W)	16	live stake	5-6' O.C.
			Cornus alba	Red-osier dogwood (D)	16	live stake	5-6' O.C.

* Per 33.465.155.4.D, six cascara and five vine maple from tree removal mitigation were counted towards the disturbance area mitigation.

Note: 90 percent vegetative cover will be achieved within one year.

Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Proposed Monopole
- Temporary Disturbance Seeding/Planting Area
- Preserved Tree

N W E S

0 12.5 25
Feet

1 inch = 25 feet

FIGURE 5
Mitigation and Landscape Plan

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

August 2022

AECOM

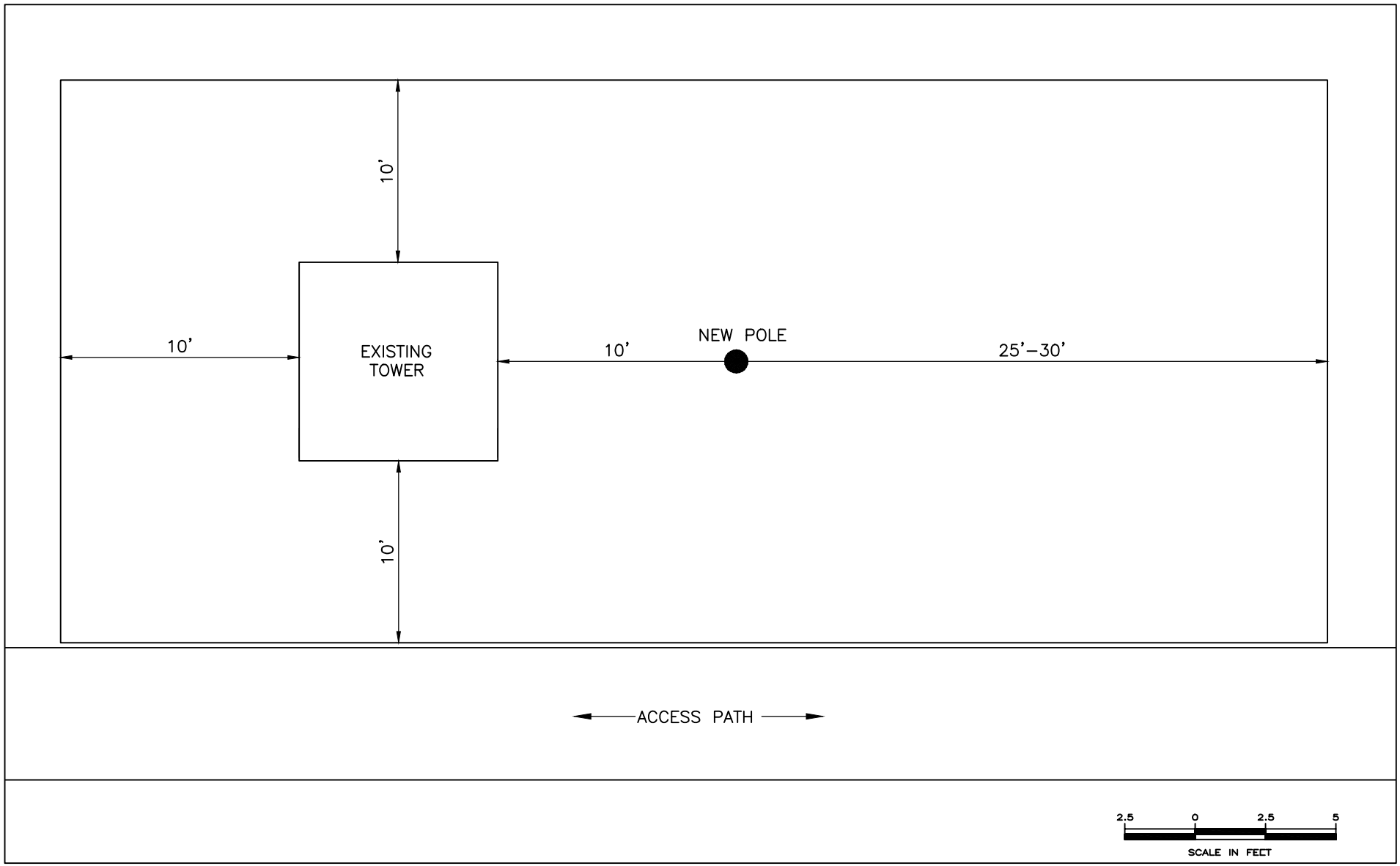


Figure 6
TEMPORARY WORK AREA DIMENSIONS

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

January 2022

AECOM

K:\PGE\Milliken\MXD\Prod_Detail.dwg Oct. 12, 2021 - 1:55pm

Land Use Review Application

File Number:

FOR INTAKE, STAFF USE ONLY

Date Rec _____ by _____

❑ Type I ❑ Type Ix ❑ Type II ❑ Type IIx ❑ Type III ❑ Type IV

LU Reviews _____

[Y] [N] Unincorporated MC

[Y] [N] Flood Hazard Area (LD & PD only)

[Y] [N] Potential Landslide Hazard Area (LD & PD only)

[Y] [N] 100-year Flood Plain [Y] [N] DOGAMI

Qtr Sec Map(s) _____ Zoning _____

Plan District _____

Historic and/or Design District _____

Neighborhood _____

District Coalition _____

Business Assoc _____

Related File # _____

APPLICANT: Complete all sections below that apply to the proposal. Please print legibly.
Email this application and supporting documents to: LandUseIntake@portlandoregon.gov

Development Site Address or Location Adjacent to Springwater Corridor Trail (45.48499°N, -122.487044°W)

Cross Street SE Circle Ave. and Springwater Trail **Sq. ft./Acreage** 1450 sq. ft.

Site tax account number(s)

R R340550 (1S3E18B-5200) **R** _____ **R** _____

R _____ **R** _____ **R** _____

Describe project (attach additional page if necessary)

See attached

Describe proposed stormwater disposal methods

Not applicable. No impervious surface is proposed.

Identify requested land use reviews

Type II Pleasant Valley Resource Review per City correspondence confirming this review process on September 7, 2022.

- **Design & Historic Reviews -** For **new development**, provide project valuation. $ N/A
  For **renovation**, provide exterior alteration value. $ N/A
  AND provide total project valuation. $ N/A
- **Land Divisions -** Identify number of lots (include lots for existing development). N/A
  New street (public or private)? ❑ yes ☑ no
- **Affordable Housing -** For buildings containing five or more dwelling units, will 50% or more of the units be affordable to households with incomes equal to or less than 60% of the median family income for the county or state, whichever is greater? ❑ yes ❑ no ☑ N/A

continued / over

Applicant Information

- Identify the primary contact person, applicant, property owner and contract purchaser. Include any person that has an interest in your property or anyone you want to be notified. Information provided, including telephone numbers and e-mail addresses, will be included in public notices.
- For all reviews, the applicant must sign the Responsibility Statement.
- For land divisions, all property owners must sign the application.

PRIMARY CONTACT:

Typed Full Name Meredith Armstrong ☑ I acknowledge this typed name as my signature

Company/Organization Portland General Electric Company

Mailing Address 121 SW Salmon St; 1 WTC 1302

City Portland State OR Zip Code 97204

Day Phone 503-464-2174 FAX _____ email Meredith.armstrong@pgn.com

Check all that apply ■ Applicant ☐ Owner ☐ Other

Typed Full Name Andy Clodfelter ☑ I acknowledge this typed name as my signature

Company/Organization AECOM

Mailing Address 888 SW 5th Ave, Suite 600

City Portland State OR Zip Code 97204

Day Phone 971-323-6277 FAX _____ email andy.clodfelter@aecom.com

Check all that apply ☐ Applicant ☐ Owner ■ Other Consultant

Typed Full Name _____ ☐ I acknowledge this typed name as my signature

Company/Organization _____

Mailing Address _____

City _____ State _____ Zip Code _____

Day Phone _____ FAX _____ email _____

Check all that apply ☐ Applicant ☐ Owner ☐ Other

Typed Full Name _____ ☐ I acknowledge this typed name as my signature

Company/Organization _____

Mailing Address _____

City _____ State _____ Zip Code _____

Day Phone _____ FAX _____ email _____

Check all that apply ☐ Applicant ☐ Owner ☐ Other

Responsibility Statement As the applicant submitting this application for a land use review, I am responsible for the accuracy of the information submitted. The information being submitted includes a description of the site conditions. I am also responsible for gaining the permission of the owner(s) of the property listed above in order to apply for this review and for reviewing the responsibility statement with them. If the proposal is approved, the decision and any conditions of the approval must be recorded in the County Deed Records for the property. The City of Portland is not liable if any of these actions are taken without the consent of the owner(s) of the property. In order to process this review, City staff may visit the site, photograph the property, or otherwise document the site as part of the review. I understand that the completeness of this application is determined by the Director. By my signature, I indicate my under-standing and agreement to the Responsibility Statement.

Name of person submitting this application agrees to the above Responsibility Statement and acknowledges typed name as signature:

Meredith Armstrong Date: 9-14-22

Phone number: 503-464-2174

Email this application and supporting documents to LandUseIntake@portlandoregon.gov

Submittal of locked or password protected documents will delay intake of your application.

AECOM Imagine it. Delivered.

City of Portland Pleasant Valley Resource Review Application

Milliken Immediate Action Tower Replacement Project
Tower D1318B-387
Springwater Corridor near SE Circle Ave
Zoning Permit File No. 22-154065 ZP

Portland General Electric Company

Sept. 2022

Prepared for:

Portland General Electric Company
121 SW Salmon St
Portland, Oregon 97204

Prepared by:

AECOM
888 SW 5th Ave
Suite 600
Portland, Oregon 97204

Table of Contents

Tables

Appendices

1 Introduction

1.1 Background

Portland General Electric Company (PGE) has an immediate need to replace 18 decaying, steel lattice tower structures (Milliken Towers) with new steel monopoles along an existing electric transmission line right-of-way (ROW) located within the Springwater Corridor in the City of Portland (City). The replacement towers are within an existing Utility Corridor. The entire line extends east of the City, continuing to Estacada, Oregon (Figures 1a and 1b of Appendix A).

PGE previously requested City approval fortwo land use compatibility statements (LUCS): January 14, 2022 for 12 of the 18 towers exempt from City land use review; and April 7, 2022 for the remaining 6 structures that may require City land use review. Of the six structures in the response to the April 19, 2022 LUCS, Tower D1318B-387 was identified by the City as needing a Zoning Permit if it could meet standards. On September 7, 2022, the City determined that the project could not meet standards and Pleasant Valley Resource Review was needed because the temporary disturbance area at this site would be greater than 15 feet wide. Project details are summarized in Table 1.

Table 1. Tower D1318B-387 Project Summary

Tower Number	Latitude	Longitude	Township / Range/ Section	Tax Lot	Maximum Estimated Temporary Impact Area (SF)	Permanent Disturbance Area (SF)	Permanent Impact Volume (CY)	Wetland Impact?	Tree Removal?
D1318B-387	45.48499°N	-122.487044°W	1S/1E/18	1S3E18B -05200	1,450	16	2.2	Yes	Yes- 3 trees ≥6" DBH

The project falls within the Pleasant Valley Natural Resources Overlay Zone (NROZ) in which the current plans submitted under the Zoning Permit (File No. 22-154065 ZP) indicated that while the development activity of the tower replacement is exempt, the removal of three regulated trees >6 inches DBH does not meet the exemption condition under Section 33.465.080(C)(6)(b). A Land Use Application Review is needed because the width of the disturbance area would exceed the 15-foot width threshold (Section 33.465.155(B). This narrative addresses the application requirements described in Section 33.730.060 as well as Pleasant Valley NROZ Section 33.465.130.

The project site is located in a narrow (approximately 50-foot wide) vegetated wetland strip adjacent to the Springwater Trail. For the purposes of this narrative, the "project site" includes all areas that may be subject to permanent or temporary disturbance from the proposed project (Figures 2-4 of Appendix A). As such, the description of existing conditions and potential project impacts described herein will be limited to the disturbance area and not encompass the adjacent overlay zones, management areas, or local watershed.

The project site and vicinity support wildlife habitat and recreational uses, such as walking, biking, and nature observations. Vegetation is managed to maintain the transmission line. Proposed uses would be consistent with existing uses. Mitigation for tree removal and best management practices (BMPs) as outlined in Sections 3.2 and 3.3 will ensure protection of sensitive natural resources in the project vicinity.

1.2 Project Purpose and Need

The purpose of the proposed project is to replace decaying steel lattice tower structures with new steel monopoles along an existing electric transmission line ROW located within the Springwater Corridor. Existing structures are unstable, thereby leaving the existing Milliken Transmission line vulnerable to

failure and outages. Steel monopoles improve stability and offer high service life, low maintenance, and high fire/seismic residency so they limit future disturbance from maintenance/repair.

The following objectives are associated with the project:

- Objective 1: Safely replace decaying tower structure with new structure to ensure adequate safety measures for the existing electric transmission line.
- Objective 2: Limit environmental encroachment to the maximum extent practicable.

2 Existing Project Site Conditions

2.1 Topography, Vegetation, and Hydrology

Tower D1318B-387 is located in the City of Portland near SE Circle Avenue, and immediately adjacent to the Springwater Corridor Trail. Vegetation along the paved Springwater Corridor Trail is disturbed non-native grasses and shrubs with mature native and non-native trees in a narrow strip surrounded by development along SE Jenne Road and SE Circle Ave. To the north and west of the project site is the Powell Butte Nature Park, and to the south and east is the Jenne Butte Park. The proposed project is located 270 feet south of Johnson Creek and is separated from the creek by development. The 2022 National Wetlands Inventory (NWI) database indicates that the project site is within a waterway. However, this is not accurate. The site reconnaissance performed by AECOM found that wetlands were present on site but generally limited to the western portion of the disturbance area. No defining stream characteristics (bed/banks) were identified at the project site so there will not be any work below the ordinary high water mark of a stream. The proposed project is located outside the flood zone for Johnson Creek.

2.2 Land Uses and Zoning

The proposed project consists of a work area and access route for replacement of a pole that lies adjacent to the Springwater Corridor (an existing paved path). Based on a review of the City of Portland's zoning website, the project location is zoned as residential farm / forest (RF) and located within the Pleasant Valley Plan District and Pleasant Valley Natural Resources Overlay Zone (Chapter 33.465).

- Pleasant Valley Natural Resources Overlay Zone (Chapter 33.465)

  The Pleasant Valley NROZ provides an inventory of the significant natural resources identified within the Pleasant Valley study area and describes the functional values, or benefits, of the resources. The purpose of this code is to protect and conserve these identified natural resources, facilitate restoration and enhancement of stream corridors, wetlands and forests, maintain the community amenity of streams and riparian corridors, protect upland habitats and enhance connections between upland and riparian habitats, maintain and enhance water quality and control erosion, and to conserve the scenic, recreational, and educational values of these resources.

2.3 Resources and Functional Values

As described above in Section 2.1, the project site is largely surrounded by development, with the exception of a narrow strip of vegetation along the Springwater Corridor Trail. The project site is approximately 270 feet south of Johnson Creek. Vegetation along the Trail consists of a mix of native and non-native/invasive trees and shrubs. The area provides food and cover for resident and migratory urban wildlife. The Springwater Corridor Trail provides passive recreational opportunities (e.g., walking, biking, nature observation). The project is not within a scenic overlay zone.

The project site is largely surrounded by development and open space areas including the Powell Butte Nature Park to the west, Jenne Butte Park to the south and east, and the Lower Powell Butte Floodplain to the south. Although the site is maintained for transmission line clearance, the site and surrounding area

does provide some shading, organic inputs, nutrient cycling, and a wildlife habitat corridor within a wetland area. The wetland appears to continue to the west offsite and connect with Johnson Creek near the SE Circle Ave. crossing.

3 Project Description

3.1 Work Details

Construction for Tower D1318B-387 will be completed in four steps: 1) install new steel monopole structure near the existing lattice tower it is replacing, 2) transfer wire from the old lattice tower to the new steel monopole, 3) demolish and remove the old lattice tower, and 4) restore ground and vegetation conditions within the work area. Tower replacement would be completed within 2-3 days and is scheduled for October 2022.

Construction equipment will likely involve the following: auger drill rig, bucket truck, digger derrick, boom truck, and pole trailer. The tower location will be accessed from SE Circle Avenue and Springwater Corridor which would reduce impacts to the vegetated corridor. Heavy equipment will largely operate from the paved areas. Once the new poles are placed, the material from the tower demolition will be placed within the designated disturbance area or on the pavement.

The new tower structure will be installed using the direct embed methods--an auger drill rig will be used to excavate a hole, and excavated soil will be temporarily stockpiled on the ground (or on a tarp or truck if soils are wet) next to the removal site, with topsoil separated from subsoil. Excess soil will be removed from the site for disposal. The new pole will be directly embedded into the excavated hole, which would be backfilled with compacted gravel, concrete slurry, or structural concrete (depending on the soil conditions and structure design). The excavated hole will be 2 feet in diameter and up to 15 feet below ground. The new monopole will be placed 10 feet away from (and in-line with) the existing tower. The permanent impact area and volume is 16 square feet and 2.2 cubic yards, respectively. The estimated maximum temporary impact area is 1,450 square feet; however, the contractor will minimize impacts so the actual disturbance area will likely be much less.

The existing lattice structure has 4 steel legs that are directly embedded into the ground; the tower does not have concrete footings. Removal of tower footings will consist of hand digging to approximately 2 feet with hydraulic sheers used to cut each leg. The remaining hole will be backfilled with stockpiled native soil from the new tower and seeded with a native upland or wetland seed mix. Any transmission structure material (steel, concrete, wires and fasteners) removed from the project corridor will be transported to a local landfill or PGE storage facility for disposal or recycling. An existing conditions map, proposed development plan, construction management plan, and mitigation plan are provided in Appendix A.

3.2 Conservation Measures and BMPs

Project construction would adhere to the Construction Management Plan (Figure 4 of Appendix A) which was prepared in accordance with 33.465.240(A)(2). The following BMPs would be implemented prior to, during, and/or after the project to avoid or minimize potential impacts to site resources and functional values.

Construction Limits

- Construction access will be from SE Jenne Rd., SE Circle Ave, and the Springwater Trail. The boundary of the temporary disturbance area will be delineated with orange construction fencing to protect off-site vegetation.
- Heavy equipment will remain on the paved area when not in use.

Tree Protection

- To protect trees, shrubs, and other vegetation off-site, the boundaries of the temporary disturbance area and access route will be clearly delineated. No tree protection is proposed since root protection zones of native trees are outside of the disturbance area. Root protection zones of four non-native trees along the southern boundary of the disturbance area cannot be protected. They will not be removed but native trees will be replanted within the mitigation area if they are damaged (Figure 5 of Appendix A).

Sensitive Resource Protection

- All motor vehicles and equipment would be cleaned and weed-free upon entering the project site.
- Vehicles and equipment (with the exception of chainsaws) would not be fueled on-site to prevent potential fuel spills on-site. Chainsaws would be fueled on site but would be kept away from existing vegetation during fueling.
- Since work will not occur during the primary nesting season (April 15 – July 31), it will not be necessary to conduct pre-construction bird nest surveys in accordance with the City requirements detailed in *"Protecting Nesting Birds: Best Management Practices for Vegetation and Construction Projects"* (City 2017).
- The trees proposed for removal would be discussed in detail with the tree work crew prior to beginning work and would be clearly marked with bright flagging.
- Vegetation trimming will be confined to the smallest portion of the project site necessary for completion of the work. Vegetation will be cut to the base and allowed to regrow following construction. It should be noted that all woody vegetation growing within the existing transmission corridor is periodically trimmed to prevent interference with transmission wires and poles.

Water Quality Protection

- Erosion control BMPs will be implemented as detailed in Figure 4 of Appendix A. Erosion control devices (e.g., wattles) will be placed west of and downgradient of the temporary disturbance area, as needed, to prevent the potential release of sediments or sediment-laden water into the adjacent wetland. Additional stormwater management measures may include covering any soils removed from the site with a tarp prior to disposal and avoiding work during heavy rain events.
- PGE has submitted a Preconstruction Notification to the USACE to demonstrate compliance with Nationwide Permit 3 and Section 404 of the Clean Water Act. PGE will submit the City's approved LUCS to DEQ so they can issue a Section 401 Water Quality Certification for the project site due to wetland impacts. The project will not require a removal/fill permit from Oregon DSL because wetland impacts for each Milliken Immediate Action project site are below DSL's permit threshold.

Construction Vehicles, Equipment, and Roadway Use

- Construction workers would access the site from SE Jenne Rd., SE Circle Ave., and Springwater Trail.
- Signage, coning, and/or fencing would be used along the access route and Springwater Corridor Trail as deemed necessary to advise the public of construction work and any associated potential hazards.
- Cones would be placed around the work area to keep cyclists and pedestrians away from vehicles, equipment, and active project work.

Post-Construction Restoration and Mitigation

- PGE will replant removed trees and perform mitigation as required by the Pleasant Valley Resource Review process. Additional details are provided in Section 5.2.

4 Alternatives Evaluation

Because the project is site-specific (existing line), no alternative sites were considered. Re-routing the transmission line would have significantly greater environmental impacts. Specific criteria necessary to achieve the project design objectives include the following:

1. Project must utilize the existing Milliken transmission alignment
2. New tower structures must meet design standards for stability and span
3. New structures must meet seismic resiliency standards

Based on these criteria, the no action alternative as well as the following three practicable but significantly different alternatives were considered (33.865.100(A)(3)(b)), and are summarized in Table 2:

- Alternative 1. No Action Alternative;
- Alternative 2. Proposed Project - Tower replacement with an adjacent steel monopole;
- Alternative 3. Repair of the existing failing tower structure; and
- Alternative 4. Placing the new monopole within the same footprint as the existing tower.

The No Action Alternative, which would avoid impacts to wetlands and waters, would not replace aging and unstable structures, thereby leaving the existing Milliken Transmission line vulnerable to failure and outages. The No Action Alternative does not achieve the project purpose and was therefore not selected.

Alternative designs that meet the project-specific criteria listed above are limited. Infrastructure other than steel monopoles would not provide the stability necessary for the transmission line. Steel monopoles offer high service life, low maintenance, and high fire/seismic residency so they limit future disturbance from maintenance/repair. The transmission line would continue to operate at its existing capacity (57-kilovolt).

The proposed project (Alternative 1) incorporates the smallest practicable footprint considering construction requirements to perform the work. The temporary disturbance area was selected based on the type and size of equipment needed to access the site. It is likely that the entire disturbance area will not be needed for maintenance activities; however, the maximum estimated area was identified for this land use approval process.

PGE's contractor will use equipment that is properly sized to replace the large transmission towers. The project cannot be safely and effectively implemented with the use of smaller equipment. Vegetation trimming is required at the site to provide access for construction equipment and tower removal and installation since project activities cannot be performed from the Springwater Trail. The minimum number of trees will be removed to complete the project. Construction equipment will be staged on the paved trail which will reduce impacts to vegetation within the Springwater Corridor. There are no other practicable alternatives to conduct the maintenance project that would reduce impacts beyond those proposed by the preferred alternative.

Table 2 below evaluates the alternatives relative to the objectives specified in Section 1.2. Alternative 2 would satisfy Objectives 1 and 2, whereas Alternative 1, 3, and 4 would not satisfy both objectives. Therefore, Alternative 2 is the preferred alternative for the project.

Table 2. Evaluation of Practicable and Significantly Different Project Alternatives

Alternative	Project Objectives		Impact on Resources and Functional Values
	1: Replacement of decaying structure	2: Limit environmental encroachment	
1: No Action Alternative	Does Not Meet	Does Not Meet	Failure to replace the structure would result in an unstable and unsafe transmission line. Therefore, Objective 1 would not be achieved under this alternative.

Alternative	Project Objectives		Impact on Resources and Functional Values
	1: Replacement of decaying structure	2: Limit environmental encroachment	
			Alternative 1 would avoid the immediate need for tree removal and vegetation trimming, thus eliminating potential impacts to wildlife and native plants. However, the transmission line would not be stable and could result in outages. This could result in increased fire risk, along with more frequent maintenance and repair visits, thereby increasing environmental encroachment. Therefore, this alternative would not achieve Objective 2. Also, it should be noted that under the no action alternative, trees and vegetation are regularly pruned or trimmed around the transmission lines as part of routine maintenance, so some level of disturbance regularly occurs at this site.
2: Proposed Project - Replacement of existing structure with new steel monopole	Meets	Meets	This alternative would involve installing a new steel monopole structure near the existing lattice tower it is replacing, transferring wire from the old lattice tower to the new steel monopole, demolishing and removing the old lattice tower, and restoring ground and vegetation conditions within the work area. Objective 1 would be achieved under this alternative. Tower replacement at this site will require some tree removal and ground disturbance so crews can access and replace the failing tower (Figure 3 of Appendix A). BMPs (as described in Section 3.2) would minimize impacts to wildlife and the general public. Trees would be replanted at a 2:1 ratio and any bare ground areas reseeded with a native seed mix within the temporary disturbance area to restore the site. The installation of the new steel monopole would ensure the transmission line's integrity and safe operation, thereby minimizing potential fire risk and maintenance/repair frequency and reducing environmental impacts. Thus, this alternative would limit environmental encroachment to the maximum extent practicable and achieve Objective 2.
3: Repair of the existing failing tower structure	Does Not Meet	Does Not Meet	Under this alternative, the existing tower would be repaired by replacing the damaged tower foundation. A new foundation would be installed adjacent to the tower legs. A large excavation area would be needed to install the new concrete foundations and temporarily support structures while the existing legs are removed. Due to the extensive damage to the tower legs, there is no repair that could restore the integrity of the structure without significant excavation. This would exceed the environmental impacts of installing a new steel monopole adjacent to the existing tower. Therefore, Objectives 1 and 2 would not be achieved under this alternative.
4: Placing the new monopole within the same footprint as the existing tower.	Does Not Meet	Meets	A new pole needs to be installed before the existing line can be transferred over. As such, it is not feasible to place a new monopole in the same footprint as the existing tower. Although environmental impacts would be minimized relative to the preferred alternative, this option is not feasible so it would not meet Objective 1.

5 Project Impacts

5.1 Short-Term Impacts

Potential short-term impacts from tower replacement, tree removal, and vegetation trimming include noise disturbance, temporary modifications to wildlife habitat, and minor disruption of recreational use of the trail. Tower replacement at this site will require some vegetation trimming and ground disturbance so crews can access and replace the failing tower. Impacts to natural resources would be minimized to the extent practicable. The tower location will be accessed from Springwater Trail. All vehicles and equipment will remain on the paved areas when accessing the site. Once the new pole is placed, the material from the tower demolition will be hauled off from the site. It is not anticipated that the project would impact the entire temporary disturbance area shown in the project figures. Any short-term impacts would be minimized through the implementation of the BMPs described in Section 3.2. Further, as described in Section 6, PGE would replant trees and reseed any bare ground areas, as required by City code requirements offset short-term effects from tower replacement.

Three trees are identified for removal at this site (Table 3). These include a 6" and 7" DBH Scouler's willow (*Salix scouleriana*) and an 8" DBH filbert (*Corylus, sp.*). Some trees and shrubs smaller than 6" DBH may be pruned or trimmed around each replacement structure to create a clear zone for construction equipment to access and perform the work. To protect nearby trees (and their root zones), fencing or staked flagging will be placed around the temporary disturbance area. All work will occur outside the root protection zones of adjacent trees (Figures 3 and 4 of Appendix A). Vegetation trimming will be confined to the smallest portion of the project area necessary for completion of the work. Vegetation will be cut to the base and allowed to regrow following construction. It should be noted that all woody vegetation growing within the existing transmission corridor is periodically trimmed to prevent interference with transmission wires and poles.

Recreational use of Springwater Trail within the project site by cyclists and pedestrians would continue during project work. Appropriate signage would be implemented (as described in Section 3.2) to ensure the safety of cyclists and pedestrians. Surrounding trails would not be impacted during project work.

Table 3. Existing Trees Proposed for Removal

Tree Number	Species	DBH (inches)	Tree on Nuisance List?
1	Scouler's willow, *Salix scouleriana*	6	No
2	Scouler's willow, *Salix scouleriana*	7	No
3	Filbert, *Corylus Spp.*	8	No

5.2 Long-Term Impacts

No significant, adverse long-term impacts are anticipated to natural or scenic resources and values from the proposed project. The project site is located near a large floodplain wetland and not on the mainstem Willamette River; as such, there would be no river-dependent or river-related restrictions. There would be no removal or fill in the waterway or below the ordinary high-water mark.

Potential impacts from tree removal and pruning include a reduction in tree canopy cover, shade, microclimate regulation, wildlife refuge, and nesting/brooding areas associated with deciduous forest cover. However, these functions are reduced since vegetation is regularly maintained at the site. If feasible and safe to do so, the three removed trees would be left in place as standing dead snags, thereby providing important habitat for wildlife and maintaining slope stability. Mitigation would be performed as specified in Section 33.465 to compensate for loss of trees and shrubs (Section 6).

The new monopole would be narrower and less conspicuous than the steel lattice tower, which would improve scenic value at the site. Permanent ground disturbance would be limited to the removal of the tower footings, which encompasses an area of 12.6 square feet, and the installation of a replacement

pole, which would encompass an area of 3.1 square feet. The maximum estimated temporary impact area is 1,450 square feet. Mitigation would help offset any potential long-term project impacts. Long term benefits from tower replacement include improved safety and disaster resiliency along the line.

6 Mitigation Approach

Mitigation will be performed as required under Section 33.465.180 (A-G) and Section 33.248.090. Large trees cannot be planted on-site for mitigation based on the clearance requirement for the transmission lines. Six native trees (replacement at 2:1 ratio) will be planted within the temporary disturbance area after construction to meet City code requirements. On-site mitigation plantings would include low canopy species such as cascara (*Rhanmus purshiana*), vine maple (*Acer circinatum*), and beaked hazelnut (*Corylus cornuta*) within the temporary disturbance area and any bare ground areas would be reseeded with an erosion control seed mix (20% of the seed mix will be comprised of pollinator species seeds). Additional mitigation will be performed at a ratio of 2:1 (mitigation area to project disturbance area). Mitigation will be performed once construction is complete. Proposed mitigation plans are shown in Figure 5 of Appendix A. The mitigation approach may be subject to change based on coordination with the City.

PGE would comply with the following conditions specified in Section 33.248.090, as required:

- Plant materials will be native and selected from the Portland Plant List. They will be non-clonal in origin, seed source must be as local as possible, and plants will be nursery propagated unless transplanted from on-site areas approved for disturbance. Plant materials are to be used for restoration purposes. Standard nursery practices for growing landscape plants, such as use of pesticides, fungicides or fertilizers, and the staking of trees will not be employed.
- Plants listed on the Nuisance Plants List will not be planted in the mitigation area and will not be counted as existing vegetation.
- The mitigation area will be cleared of groundcovers and shrubs listed on the Nuisance Plants List. Trees listed on the Nuisance Plants List will be removed from the mitigation area.
- Plant materials will be supported only when necessary due to extreme winds at the planting site. Where support is necessary, stakes, guy wires or other measures will be removed as soon as the plant can support itself.
- New plantings will be manually watered regularly during the first growing season. During later seasons, watering will be done as needed to ensure survival of the plants.
- Monitoring of landscape areas will be the ongoing responsibility of PGE on behalf of the property owner (City of Portland). Plants that die will be replaced in kind. Written proof that all specifications of this section have been met will be provided one year after the planting is completed. The property owner will provide this documentation to BDS.

7 References

City of Portland, Environmental Services (City). 2017. Protecting Nesting Birds: Best Management Practices for Vegetation and Construction Projects. May 2017.

City of Portland (City). 2022. Zoning Map. Available at https://www.portlandmaps.com/detail/property/SPRINGWATER-CORRIDOR/R340552_did/?action_override=zoning Accessed Sep 9, 2022.

U.S. Fish and Wildlife Service (USFWS). 2022. National Wetlands Inventory. Available at https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/, Accessed Sept 9, 2022.

Appendix A. Figures

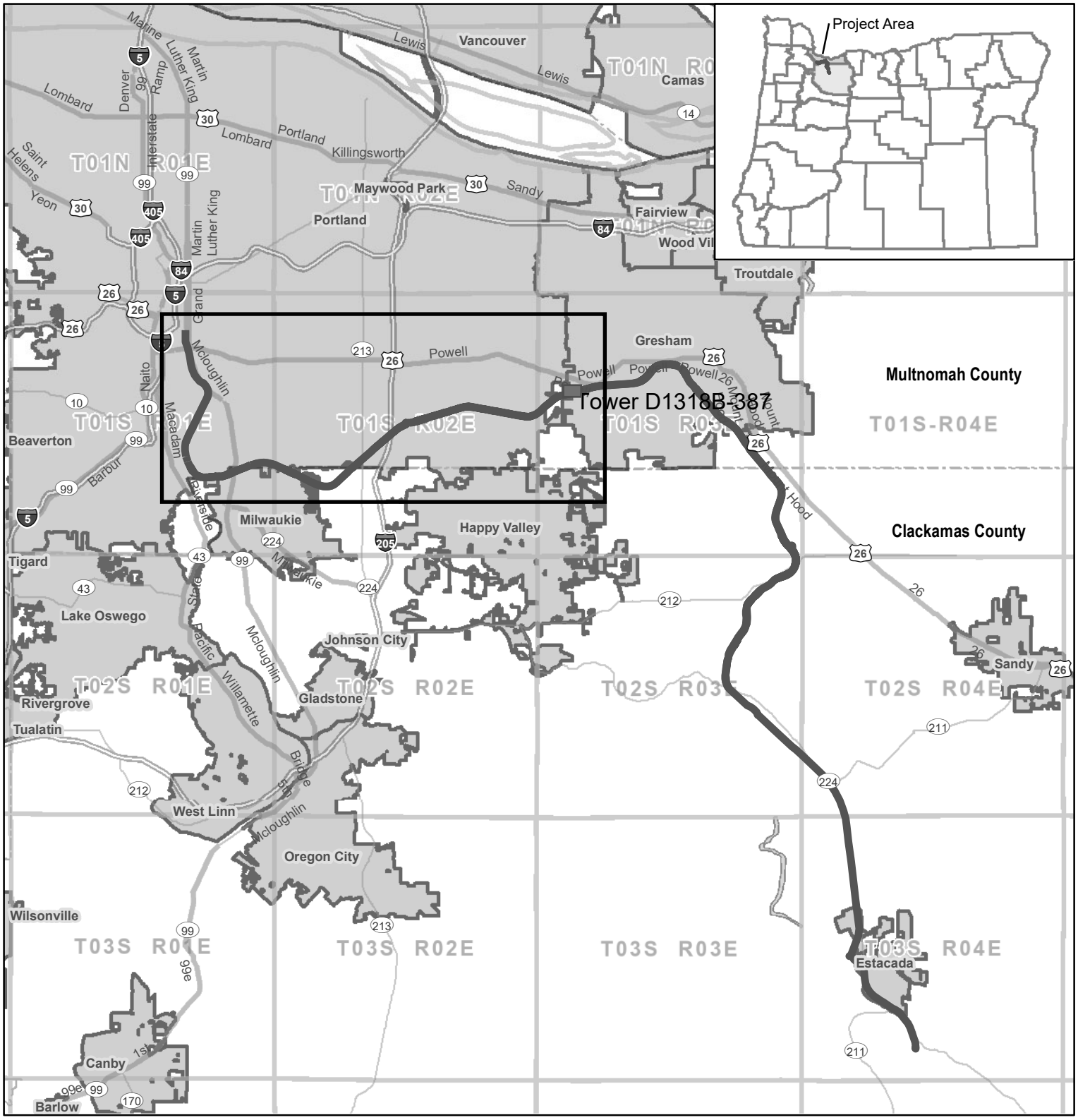


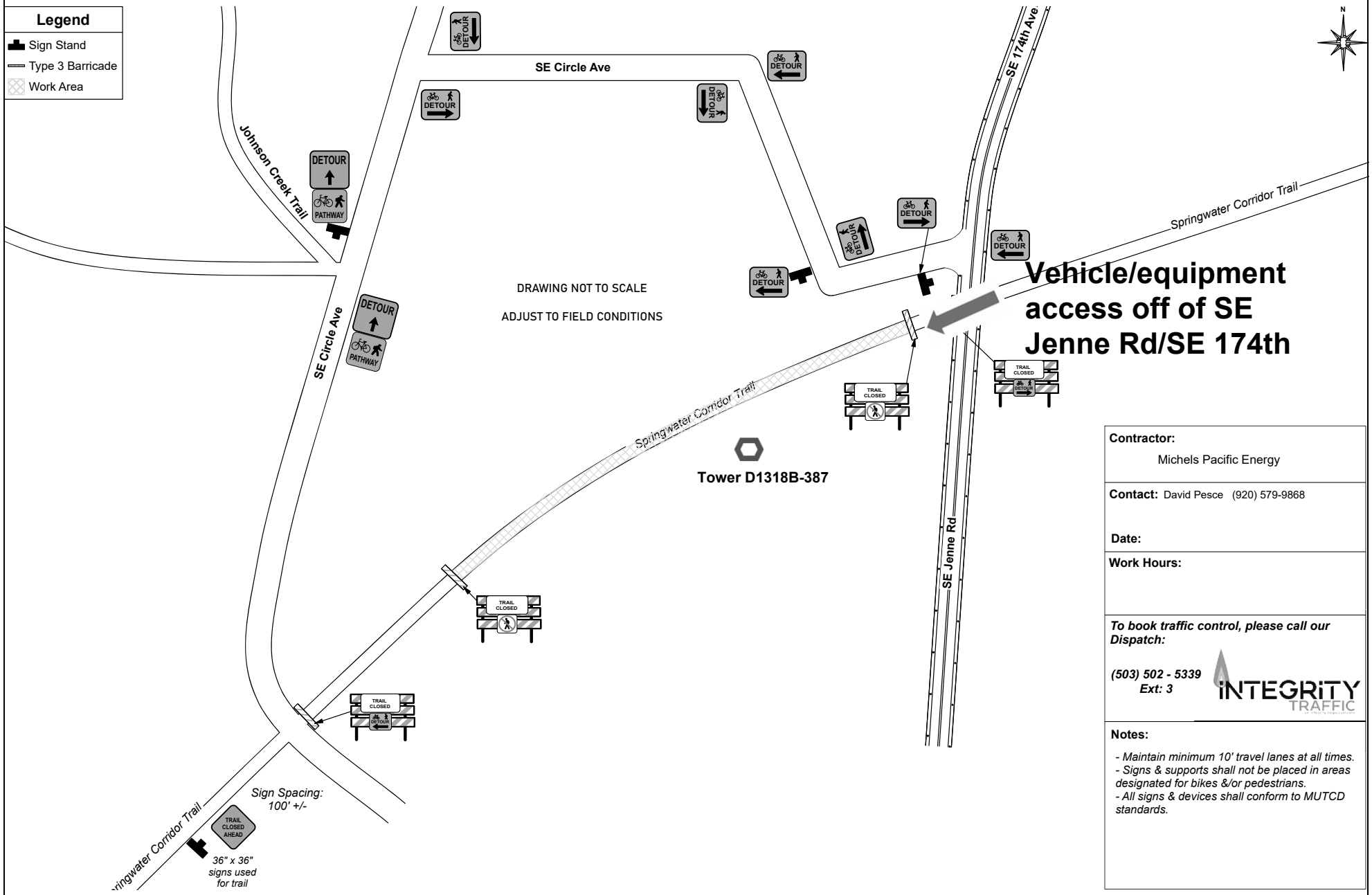
FIGURE 1a
Project Location and Milliken Line

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

June 2022

AECOM

Vicinity and equipment access map Tower 387



Contractor:
Michels Pacific Energy

Contact: David Pesce (920) 579-9868

Date:

Work Hours:

To book traffic control, please call our Dispatch:

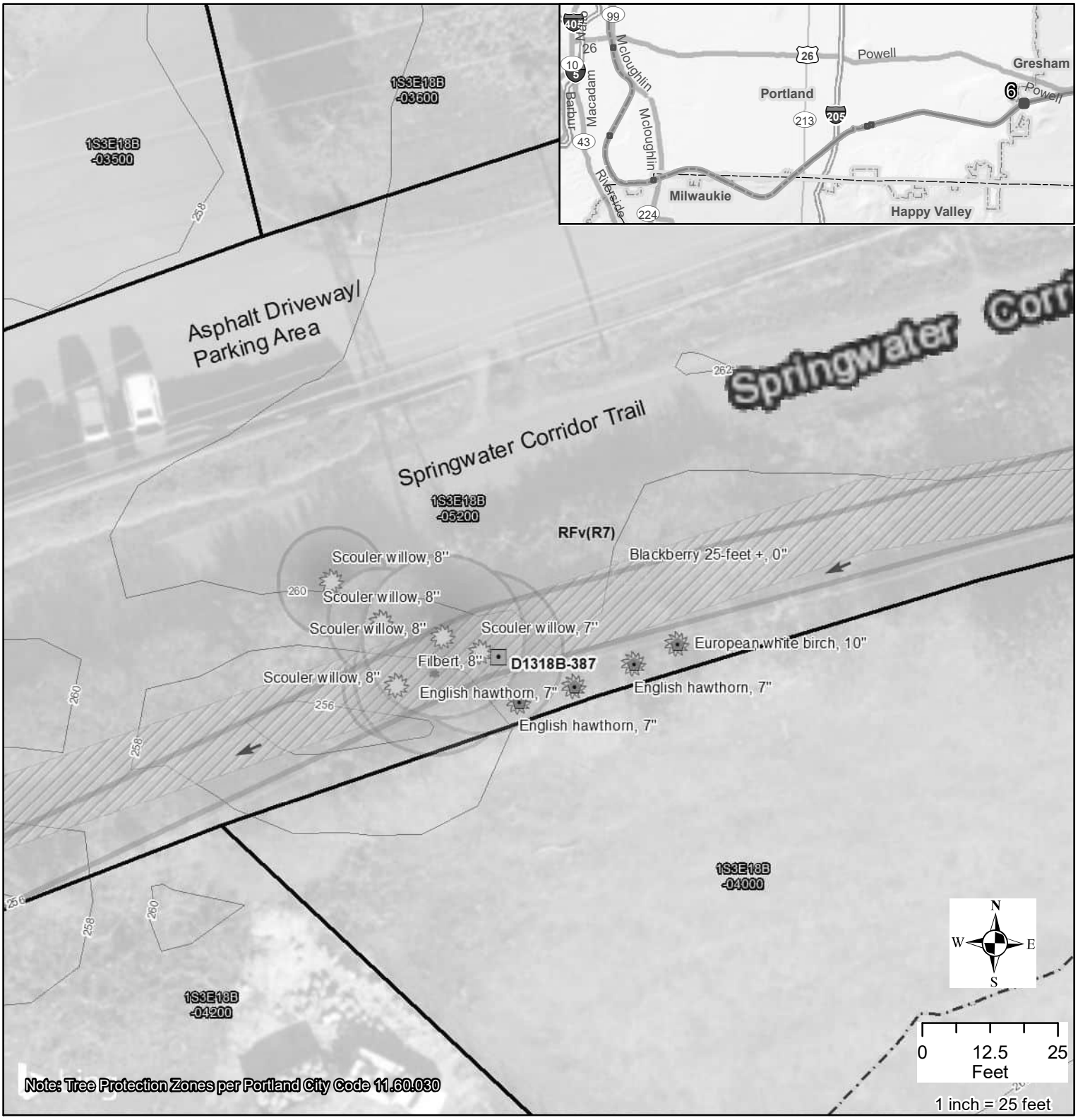
(503) 502 - 5339
Ext: 3

INTEGRITY TRAFFIC

Notes:

- Maintain minimum 10' travel lanes at all times.
- Signs & supports shall not be placed in areas designated for bikes &/or pedestrians.
- All signs & devices shall conform to MUTCD standards.

Figure 1b. Vicinity Map



Legend

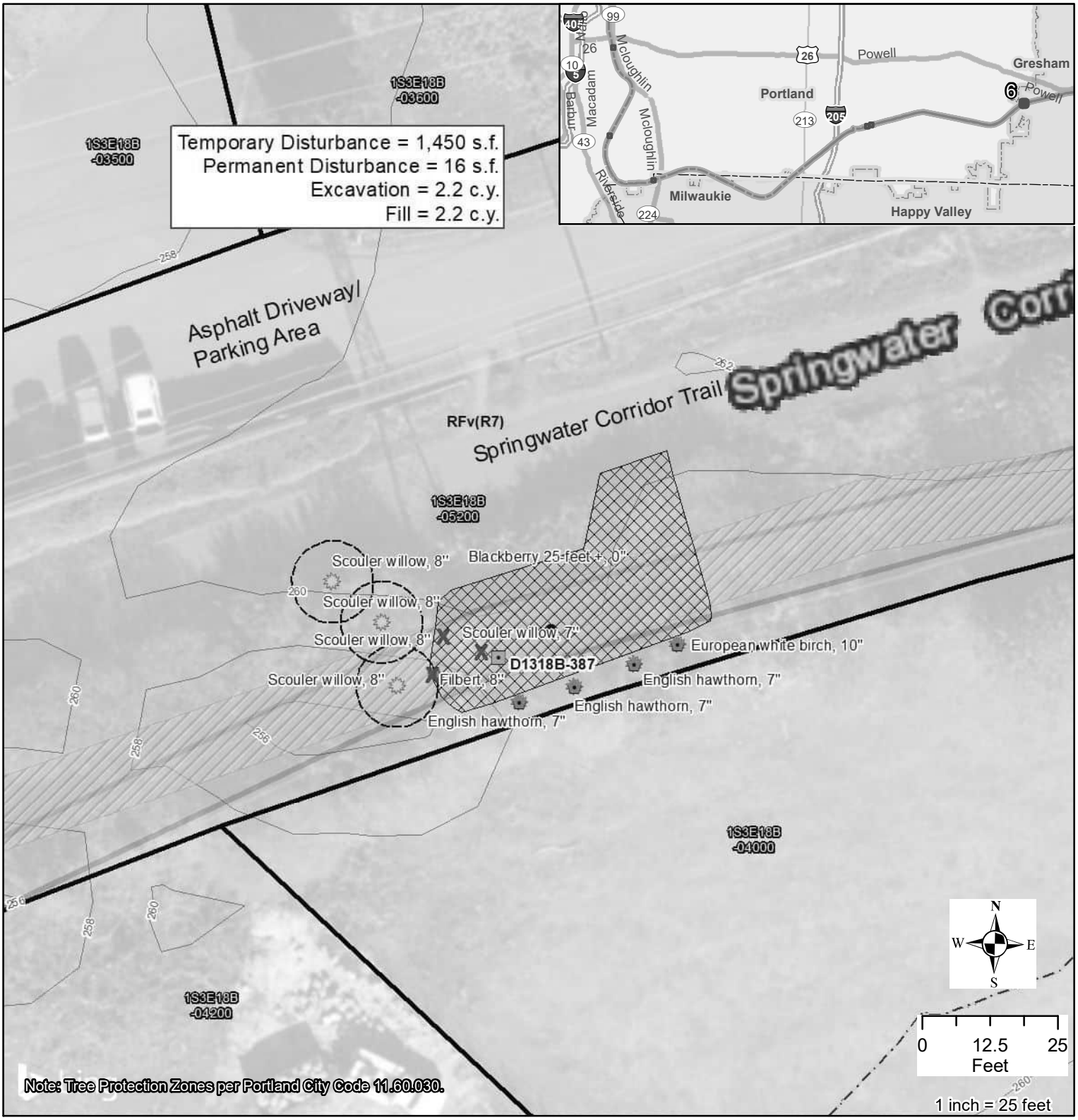
- Tax Lot
- Zoning
- Contour (2 ft)
- Wetland/Water (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Surveyed Tree
- Tree on Nuisance List
- Canopy Crown Spread

FIGURE 2
Existing Conditions Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

September 2022

AECOM



Legend

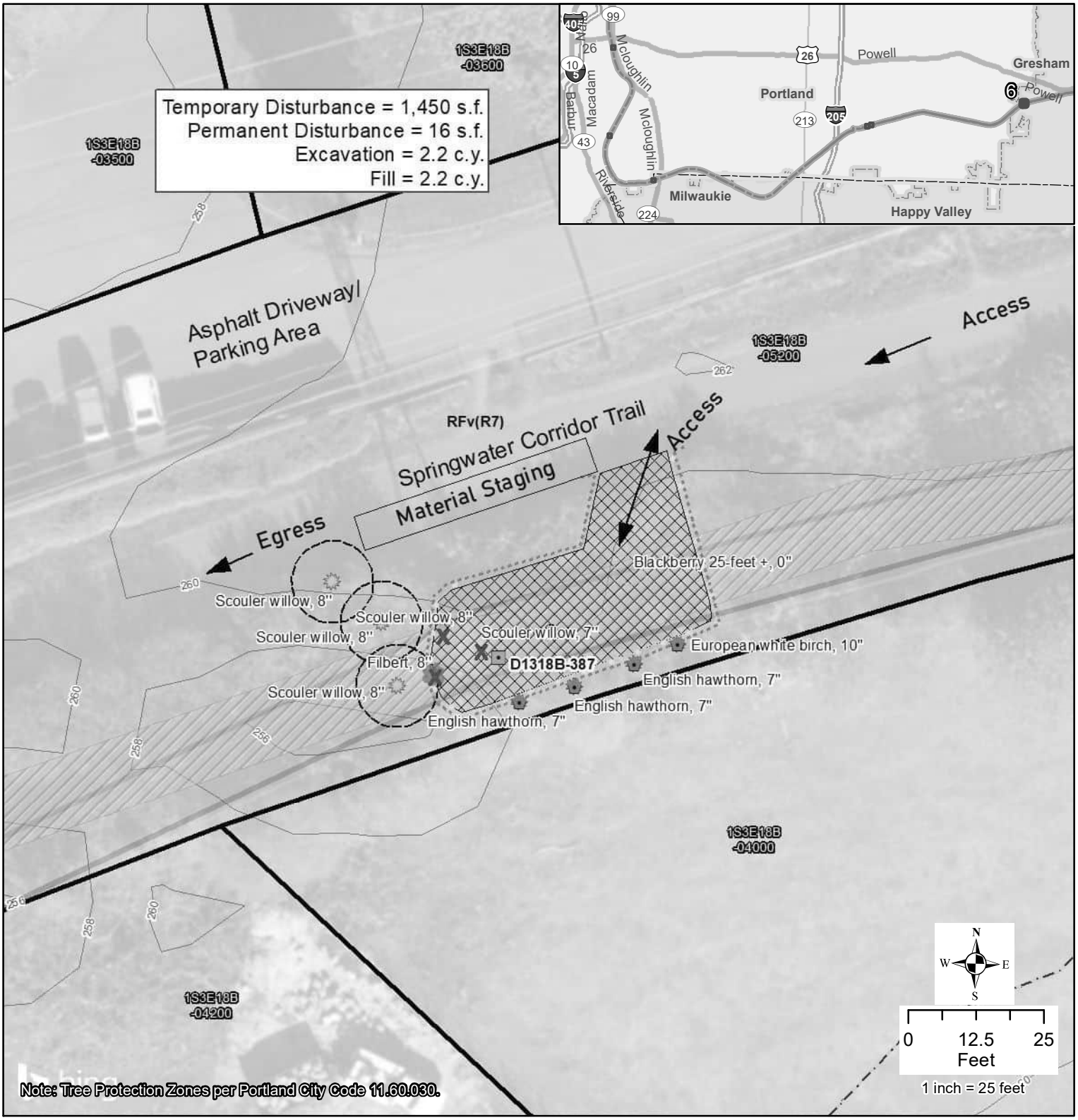
- Tax Lot
- Zoning
- Contour (2 ft)
- Wetland/Water (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Root Protection Zone

FIGURE 3
Proposed Development Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

September 2022

AECOM



Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Contour (2 ft)
- Wetland/Water (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area (boundary to be marked)
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Erosion Control (straw wattle)
- Root Protection Zone
- Construction Fence

FIGURE 4
Construction Management Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

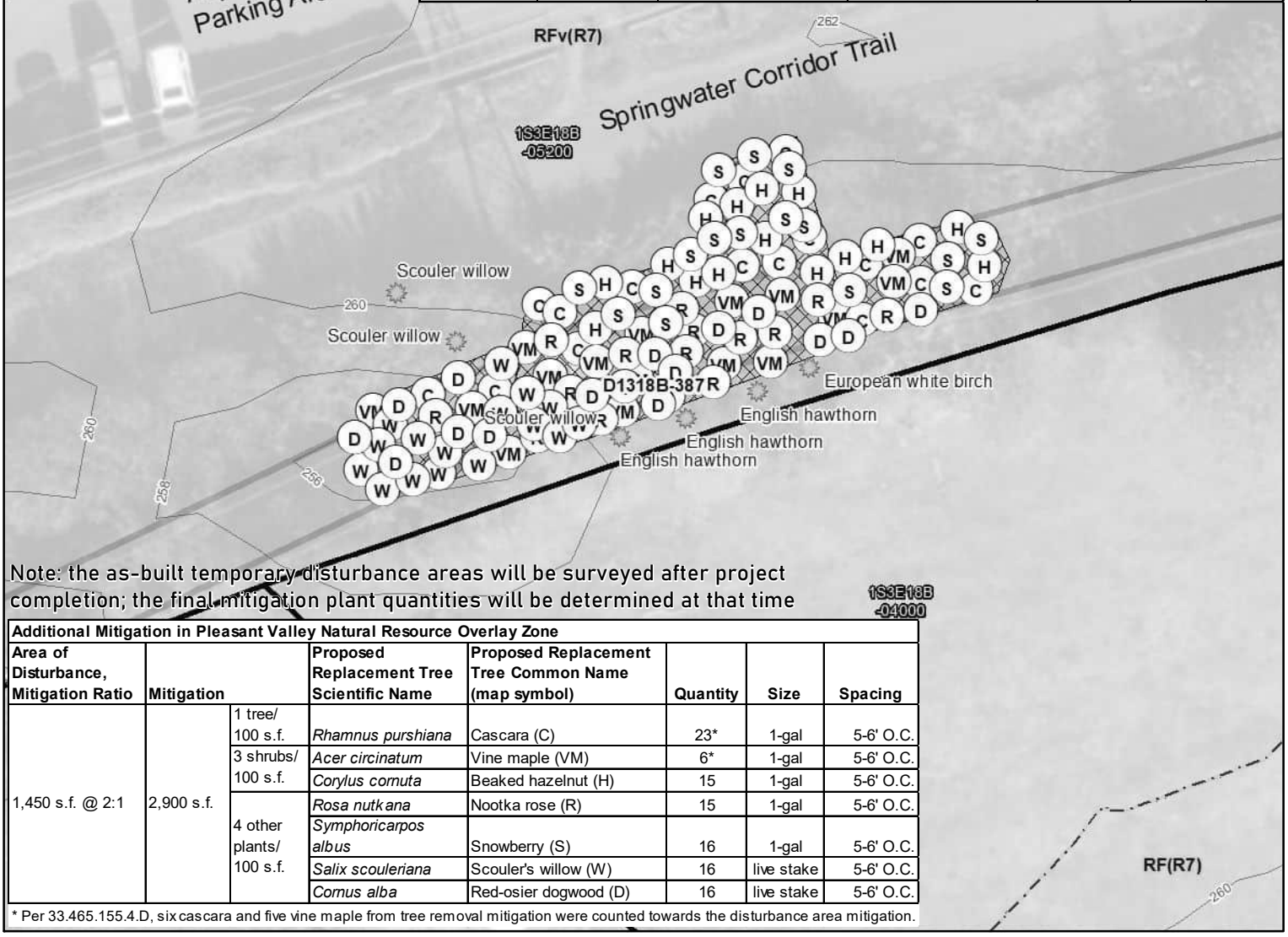
October 2022

AECOM

Native Erosion Control Seed Mix		
Scientific Name	**Common Name**	**Percent of Mix**
Hordeum brachyantherum	meadow barley	40
Bromus carinatus	California brome	35
Festuca rubra rubra	native red fescue	20
Deschampsia caespitosa	tufted hairgrass	3
Agrostis exarata	spike bentgrass	2

Note: Seed mix available from Sunmark Seeds in Portland, Oregon. Use 1 lb per 1,000 sq.ft. on bare soils.

Native Tree Planting Table						
# and Size of Trees Removed	**Replacement Ratio**	**Proposed Replacement Tree Scientific Name**	**Proposed Replacement Tree Common Name (map symbol)**	**Quantity**	**Size**	**Spacing**
4 @ <12"	1:1	*Rhamnus purshiana*	Cascara (C)	4	1-gal	5-6' O.C.



Note: the as-built temporary disturbance areas will be surveyed after project completion; the final mitigation plant quantities will be determined at that time

Additional Mitigation in Pleasant Valley Natural Resource Overlay Zone							
Area of Disturbance, Mitigation Ratio	**Mitigation**		**Proposed Replacement Tree Scientific Name**	**Proposed Replacement Tree Common Name (map symbol)**	**Quantity**	**Size**	**Spacing**
1,450 s.f. @ 2:1	2,900 s.f.	1 tree/ 100 s.f.	*Rhamnus purshiana*	Cascara (C)	23*	1-gal	5-6' O.C.
		3 shrubs/ 100 s.f.	*Acer circinatum*	Vine maple (VM)	6*	1-gal	5-6' O.C.
			Corylus cornuta	Beaked hazelnut (H)	15	1-gal	5-6' O.C.
		4 other plants/ 100 s.f.	*Rosa nutkana*	Nootka rose (R)	15	1-gal	5-6' O.C.
			Symphoricarpos albus	Snowberry (S)	16	1-gal	5-6' O.C.
			Salix scouleriana	Scouler's willow (W)	16	live stake	5-6' O.C.
			Cornus alba	Red-osier dogwood (D)	16	live stake	5-6' O.C.

* Per 33.465.155.4.D, six cascara and five vine maple from tree removal mitigation were counted towards the disturbance area mitigation.

Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Proposed Monopole
- Temporary Disturbance Seeding/Planting Area
- Preserved Tree

N W E S

0 12.5 25
Feet

1 inch = 25 feet

FIGURE 5
Mitigation Site Plan

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

September 2022

AECOM

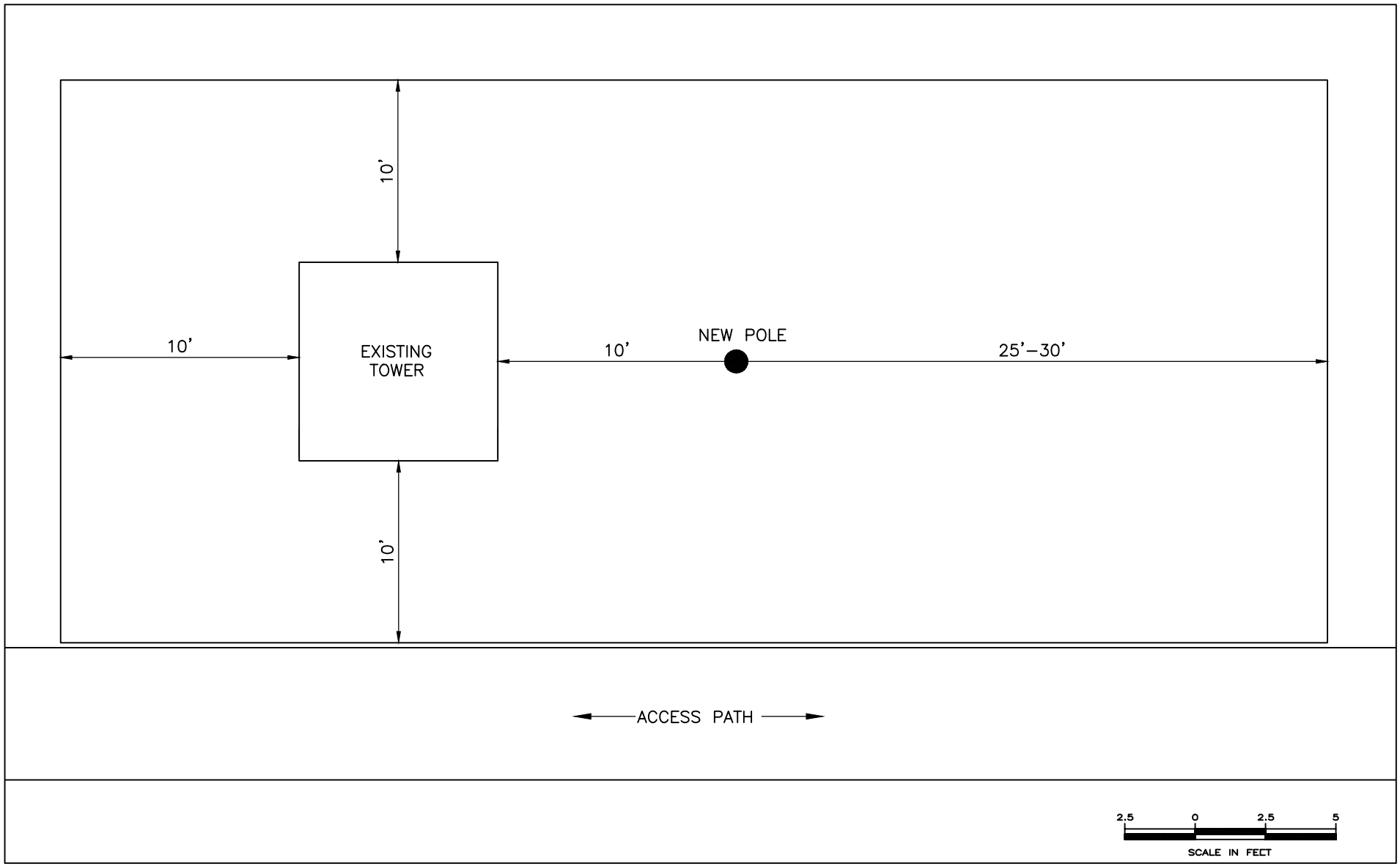


Figure 6
TEMPORARY WORK AREA DIMENSIONS

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

January 2022

AECOM

City of Portland, Oregon - Bureau of Development Services
1900 SW Fourth Avenue · Portland, Oregon 97201 | 503-823-7300 | www.portlandoregon.gov/bds

Request for Extension of 120-Day Review Period

State law requires the City to issue a final decision on land use reviews within 120 days of receiving a complete application. State law also allows the applicant to request in writing an extension of the 120-day review period for up to an additional 245 days. When extensions are requested, it is important to ensure that there is adequate time to accommodate the required public review, drafting the decision, and any required hearings (including appeals) within the extended review period. Generally, a final decision must be rendered approximately 60 days prior to the end of the review period in order to accommodate appeals.

If requesting an extension of the 120-day review period, please sign this form and return it to the Bureau of Development Services (BDS) planner assigned to your case.

Case Information

1. Applicant Name: Portland General Electric Company
2. Land Use Case Number: LU # 22-183308 PV
3. BDS Planner Name: Timothy Novak

Extension Request

Please check one of the following:

☐ Extend the 120-day review period for an additional _____ days.
(insert number)

■ Maximum allowed extension: 245 days

The total number of extensions requested cannot exceed 245 days.

By signing this form, I acknowledge that the 120-day review period for my land use review application will be extended for the number of days specified.

Applicant Signature: _____ Date 11/3/22

BDS Staff Complete This Section

Received by (print name): Timothy Novak Date Received 11/3/2022

120-Day Extension Request Form 05/16/16

Land Use Review Application

File Number:

FOR INTAKE, STAFF USE ONLY

Date Rec _____ by _____

❑ Type I ❑ Type Ix ❑ Type II ❑ Type IIx ❑ Type III ❑ Type IV

LU Reviews _____

[Y] [N] Unincorporated MC

[Y] [N] Flood Hazard Area (LD & PD only)

[Y] [N] Potential Landslide Hazard Area (LD & PD only)

[Y] [N] 100-year Flood Plain [Y] [N] DOGAMI

Qtr Sec Map(s) _____ Zoning _____

Plan District _____

Historic and/or Design District _____

Neighborhood _____

District Coalition _____

Business Assoc _____

Related File # _____

APPLICANT: Complete all sections below that apply to the proposal. Please print legibly.
Email this application and supporting documents to: LandUseIntake@portlandoregon.gov

Development Site Address or Location Adjacent to Springwater Corridor Trail (45.48499°N, -122.487044°W)

Cross Street SE Circle Ave. and Springwater Trail **Sq. ft./Acreage** 1450 sq. ft.

Site tax account number(s)

R R340550 (1S3E18B-5200) **R** _____ **R** _____

R _____ **R** _____ **R** _____

Describe project (attach additional page if necessary)

See attached

Describe proposed stormwater disposal methods

Not applicable. No impervious surface is proposed.

Identify requested land use reviews

Type II Pleasant Valley Resource Review per City correspondence confirming this review process on September 7, 2022.

- **Design & Historic Reviews -** For **new development**, provide project valuation. $ N/A
  For **renovation**, provide exterior alteration value. $ N/A
  AND provide total project valuation. $ N/A
- **Land Divisions -** Identify number of lots (include lots for existing development). N/A
  New street (public or private)? ❑ yes ☑ no
- **Affordable Housing -** For buildings containing five or more dwelling units, will 50% or more of the units be affordable to households with incomes equal to or less than 60% of the median family income for the county or state, whichever is greater? ❑ yes ❑ no ☑ N/A

continued / over

Applicant Information

- Identify the primary contact person, applicant, property owner and contract purchaser. Include any person that has an interest in your property or anyone you want to be notified. Information provided, including telephone numbers and e-mail addresses, will be included in public notices.
- For all reviews, the applicant must sign the Responsibility Statement.
- For land divisions, all property owners must sign the application.

PRIMARY CONTACT:

Typed Full Name Meredith Armstrong ☑ I acknowledge this typed name as my signature

Company/Organization Portland General Electric Company

Mailing Address 121 SW Salmon St; 1 WTC 1302

City Portland State OR Zip Code 97204

Day Phone 503-464-2174 FAX _____ email Meredith.armstrong@pgn.com

Check all that apply ☑ Applicant ☐ Owner ☐ Other

Typed Full Name Andy Clodfelter ☑ I acknowledge this typed name as my signature

Company/Organization AECOM

Mailing Address 888 SW 5th Ave, Suite 600

City Portland State OR Zip Code 97204

Day Phone 971-323-6277 FAX _____ email andy.clodfelter@aecom.com

Check all that apply ☐ Applicant ☐ Owner ☑ Other Consultant

Typed Full Name _____ ☐ I acknowledge this typed name as my signature

Company/Organization _____

Mailing Address _____

City _____ State _____ Zip Code _____

Day Phone _____ FAX _____ email _____

Check all that apply ☐ Applicant ☐ Owner ☐ Other

Typed Full Name _____ ☐ I acknowledge this typed name as my signature

Company/Organization _____

Mailing Address _____

City _____ State _____ Zip Code _____

Day Phone _____ FAX _____ email _____

Check all that apply ☐ Applicant ☐ Owner ☐ Other

Responsibility Statement As the applicant submitting this application for a land use review, I am responsible for the accuracy of the information submitted. The information being submitted includes a description of the site conditions. I am also responsible for gaining the permission of the owner(s) of the property listed above in order to apply for this review and for reviewing the responsibility statement with them. If the proposal is approved, the decision and any conditions of the approval must be recorded in the County Deed Records for the property. The City of Portland is not liable if any of these actions are taken without the consent of the owner(s) of the property. In order to process this review, City staff may visit the site, photograph the property, or otherwise document the site as part of the review. I understand that the completeness of this application is determined by the Director. By my signature, I indicate my under-standing and agreement to the Responsibility Statement.

Name of person submitting this application agrees to the above Responsibility Statement and acknowledges typed name as signature:

Meredith Armstrong Date: 9-14-22

Phone number: 503-464-2174

Email this application and supporting documents to LandUseIntake@portlandoregon.gov

Submittal of locked or password protected documents will delay intake of your application.

AECOM Imagine it. Delivered.

City of Portland Pleasant Valley Resource Review Application

Milliken Immediate Action Tower Replacement Project
Tower D1318B-387
Springwater Corridor near SE Circle Ave
~~Zoning~~ Permit File No. ~~22-154065 ZP~~ 22-183308 PV

Portland General Electric Company

Original Submittal: Sept. 2022
Updated with As-Built Survey Information: May 2023

Prepared for:

Portland General Electric Company
121 SW Salmon St
Portland, Oregon 97204

Prepared by:

AECOM
888 SW 5th Ave
Suite 600
Portland, Oregon 97204

Table of Contents

Tables

Appendices

[Note: Red and ~~strikethrough~~ text indicates text that has been added or modified since the previous submittal of this application.]

1 Introduction

1.1 Background

Portland General Electric Company (PGE) has an immediate need to replace 18 decaying, steel lattice tower structures (Milliken Towers) with new steel monopoles along an existing electric transmission line right-of-way (ROW) located within the Springwater Corridor in the City of Portland (City). Tower D1318B-387 is one of these towers in need of replacement. Tower replacement is required for safety reasons and to preserve the functionality of the transmission line. The towers are within an existing Utility Corridor. The entire line extends east of the City, continuing to Estacada, Oregon (Figures 1a and 1b of Appendix A).

As part of the permitting process, the Oregon Department of Environmental Quality (DEQ) requires the City to sign a land use compatibility statement (LUCS) for tower replacement in wetlands before they can issue the 401 Water Quality Certification (WQC). However, the City requires the land use review process to be completed before they will sign the LUCS. As such, land use review narratives, forms, and plan sets were prepared and submitted on behalf of PGE to obtain City approval in 2022.

PGE previously requested City approval for two LUCS: January 14, 2022, for 12 of the 18 towers exempt from City land use review; and April 7, 2022 for the remaining 6 structures that may require City land use review. In their April 19, 2022 response, the City stated that Tower D1318B-387 would just need a Zoning Permit if it could meet standards. On September 7, 2022, the City determined that the project could not meet standards and Pleasant Valley Resource Review was needed because the temporary disturbance area at this site would be greater than 15 feet wide. Project details are summarized in Table 1.

Due to the urgent situation, PGE could not wait until land use review was completed (and all required permits issued) to perform tower replacement. In August 2022, PGE submitted an emergency declaration to the US Army Corps of Engineers and received written approval to proceed with tower replacement and then complete permitting requirements after-the-fact. The City then issued zoning permits which allowed PGE to proceed with tower replacement, contingent on PGE obtaining all necessary land use review approvals following completion of the work. Tower replacement was completed in October 2022.

After the towers were replaced, the City observed several temporary disturbance areas that exceeded approved thresholds as well as sites where more than one monopole was installed. The City requested that PGE conduct field verification surveys of the tower replacement sites to delineate the actual disturbance areas and number of tree removals, and confirm the number of new monopoles installed. They also requested that PGE update the zoning and land use review applications accordingly to account for as-built conditions in order to determine actual impacts and mitigation requirements.

On March 13 and 14, 2023, two AECOM biologists visited the immediate action tower replacement locations and GPS-surveyed the actual (as-built) disturbance areas. They also noted any additional trees that appeared to have been removed for this project and the availability of potential mitigation areas beyond the actual disturbance area. As such, this narrative has been updated to ensure that as-built conditions were included. Some minor revisions were also made to the narrative description for clarification.

A new As-Built Disturbance Map (Figure 5) shows the surveyed as-built disturbance area and the trees removed at the site. The Mitigation Plan (Figure 6) was updated with the as-built disturbance area. Figures 1 through 4 were not changed from the initial submittal. All figures are shown in Appendix A.

Table 1. Tower D1318B-387 Project Summary

Tower Number	Latitude	Longitude	Township / Range/ Section	Tax Lot	Maximum Estimated Temporary Impact Area (SF)	Permanent Disturbance Area (SF)	Permanent Impact Volume (CY)	Wetland Impact?	Tree Removal?
D1318B-387	45.48499°N	-122.487044°W	1S/1E/18	1S3E18B -05200	~~1,450~~ 3,209	~~16~~ 19	~~2.2~~ 4.0	Yes	Yes- 3 trees ≥6" DBH

The project falls within the Pleasant Valley Natural Resources Overlay Zone (NROZ) in which the current plans submitted under the Zoning Permit (File No. 22-154065 ZP) indicated that while the development activity of the tower replacement is exempt, the removal of three regulated trees >6 inches diameter-at-breast height (DBH) does not meet the exemption condition under Section 33.465.080(C)(6)(b). A Land Use Application Review is needed because the width of the disturbance area would exceed the 15-foot width threshold (Section 33.465.155(B). This narrative addresses the application requirements described in Section 33.730.060 as well as Pleasant Valley NROZ Section 33.465.130.

The project site is located in a narrow (approximately 50-foot wide) vegetated wetland strip adjacent to the Springwater Trail. For the purposes of this narrative, the "project site" includes all areas that may be subject to permanent or temporary disturbance from the proposed project (Figures 2-4 of Appendix A). As such, the description of existing conditions and potential project impacts described herein will be limited to the disturbance area and not encompass the adjacent overlay zones, management areas, or local watershed.

The project site and vicinity support wildlife habitat and recreational uses, such as walking, biking, and nature observations. Vegetation is managed to maintain the transmission line. Proposed uses would be consistent with existing uses. Mitigation for tree removal and best management practices (BMPs) as outlined in Sections 3.2 and 3.3 will ensure protection of sensitive natural resources in the project vicinity.

1.2 Project Purpose and Need

The purpose of the proposed project is to replace decaying steel lattice tower structures with new steel monopoles along an existing electric transmission line ROW located within the Springwater Corridor. Existing structures are unstable, thereby leaving the existing Milliken Transmission line vulnerable to failure and outages. Steel monopoles improve stability and offer high service life, low maintenance, and high fire/seismic residency so they limit future disturbance from maintenance/repair.

The following objectives are associated with the project:

- Objective 1: Safely replace decaying tower structure with new structure to ensure adequate safety measures for the existing electric transmission line.
- Objective 2: Limit environmental encroachment to the maximum extent practicable.

2 Existing Project Site Conditions

2.1 Topography, Vegetation, and Hydrology

Tower D1318B-387 is located in the City of Portland near SE Circle Avenue, and immediately adjacent to the Springwater Corridor Trail. Vegetation along the paved Springwater Corridor Trail is disturbed non-native grasses and shrubs with mature native and non-native trees in a narrow strip surrounded by development along SE Jenne Road and SE Circle Ave. To the north and west of the project site is the Powell Butte Nature Park, and to the south and east is the Jenne Butte Park. The proposed project is located 270 feet south of Johnson Creek and is separated from the creek by development. The 2022 National Wetlands Inventory (NWI) database indicates that the project site is within a waterway. However,

this is not accurate. The site reconnaissance performed by AECOM found that wetlands were present on site but generally limited to the western portion of the disturbance area. No defining stream characteristics (bed/banks) were identified at the project site so there will not be any work below the ordinary high water mark of a stream. The proposed project is located outside the flood zone for Johnson Creek.

2.2 Land Uses and Zoning

The proposed project consists of a work area and access route for replacement of a pole that lies adjacent to the Springwater Corridor (an existing paved path). Based on a review of the City of Portland's zoning website, the project location is zoned as residential farm / forest (RF) and located within the Pleasant Valley Plan District and Pleasant Valley Natural Resources Overlay Zone (Chapter 33.465).

- Pleasant Valley Natural Resources Overlay Zone (Chapter 33.465)

  The Pleasant Valley NROZ provides an inventory of the significant natural resources identified within the Pleasant Valley study area and describes the functional values, or benefits, of the resources. The purpose of this code is to protect and conserve these identified natural resources, facilitate restoration and enhancement of stream corridors, wetlands and forests, maintain the community amenity of streams and riparian corridors, protect upland habitats and enhance connections between upland and riparian habitats, maintain and enhance water quality and control erosion, and to conserve the scenic, recreational, and educational values of these resources.

2.3 Resources and Functional Values

As described above in Section 2.1, the project site is largely surrounded by development, with the exception of a narrow strip of vegetation along the Springwater Corridor Trail. The project site is approximately 270 feet south of Johnson Creek. Vegetation along the Trail consists of a mix of native and non-native/invasive trees and shrubs. The area provides food and cover for resident and migratory urban wildlife. The Springwater Corridor Trail provides passive recreational opportunities (e.g., walking, biking, nature observation). The project is not within a scenic overlay zone.

The project site is largely surrounded by development and open space areas including the Powell Butte Nature Park to the west, Jenne Butte Park to the south and east, and the Lower Powell Butte Floodplain to the south. Although the site is maintained for transmission line clearance, the site and surrounding area does provide some shading, organic inputs, nutrient cycling, and a wildlife habitat corridor within a wetland area. The wetland appears to continue to the west offsite and connect with Johnson Creek near the SE Circle Ave. crossing.

3 Project Description

3.1 Work Details

Construction for Tower D1318B-387 will be completed in four steps: 1) install new steel monopole structure near the existing lattice tower it is replacing, 2) transfer wire from the old lattice tower to the new steel monopole, 3) demolish and remove the old lattice tower, and 4) restore ground and vegetation conditions within the work area. Tower replacement would be completed within 2-3 days and is scheduled for October 2022.

Construction equipment will likely involve the following: auger drill rig, bucket truck, digger derrick, boom truck, and pole trailer. The tower location will be accessed from SE Circle Avenue and Springwater Corridor which would reduce impacts to the vegetated corridor. Heavy equipment will largely operate from the paved areas. Once the new poles are placed, the material from the tower demolition will be placed within the designated disturbance area or on the pavement.

The new ~~tower~~ pole structure will be installed using the direct embed methods--an auger drill rig will be used to excavate a hole, and excavated soil will be temporarily stockpiled on the ground (or on a tarp or truck if soils are wet) next to the removal site, with topsoil separated from subsoil. Excess soil will be removed from the site for disposal. The new pole will be directly embedded into the excavated hole, which would be backfilled with compacted gravel, concrete slurry, or structural concrete (depending on the soil conditions and structure design). The excavated hole will be 2 feet in diameter and up to 15 feet below ground. The new monopole will be placed 10 feet away from (and in-line with) the existing tower. The permanent impact area and volume is ~~16~~ 19 square feet and ~~2.2~~ 4.0 cubic yards, respectively. The estimated maximum temporary impact area is ~~1,450~~ 3,209 square feet.

The existing lattice structure has 4 steel legs that are directly embedded into the ground; the tower does not have concrete footings. Removal of tower footings will consist of hand digging to approximately 2 feet with hydraulic sheers used to cut each leg. The remaining tower holes will be backfilled with stockpiled native soil from the new ~~tower~~ pole and seeded with a native upland or wetland seed mix. Any transmission structure material (steel, concrete, wires and fasteners) removed from the project corridor will be transported to a local landfill or PGE storage facility for disposal or recycling. An existing conditions map, proposed development plan, construction management plan, and mitigation plan are provided in Appendix A.

3.2 Conservation Measures and BMPs

Project construction would adhere to the Construction Management Plan (Figure 4 of Appendix A) which was prepared in accordance with 33.465.240(A)(2). The following BMPs would be implemented prior to, during, and/or after the project to avoid or minimize potential impacts to site resources and functional values.

Construction Limits

- Construction access will be from SE Jenne Rd., SE Circle Ave, and the Springwater Trail. The boundary of the temporary disturbance area will be delineated with orange construction fencing to protect off-site vegetation.
- Heavy equipment will remain on the paved area when not in use. Any ground disturbance will be covered with weed-free straw following tower replacement.

Tree Protection

- To protect trees, shrubs, and other vegetation off-site, the boundaries of the temporary disturbance area and access route will be clearly delineated. No tree protection is proposed since root protection zones of native trees are outside of the disturbance area. Root protection zones of four non-native trees along the southern boundary of the disturbance area cannot be protected. They will not be removed but native trees will be ~~replanted within the mitigation area~~ included in the mitigation plan if they are damaged (Figure 5 of Appendix A).

Sensitive Resource Protection

- All motor vehicles and equipment would be cleaned and weed-free upon entering the project site.
- Vehicles and equipment (with the exception of chainsaws) would not be fueled on-site to prevent potential fuel spills on-site. Chainsaws would be fueled on site but would be kept away from existing vegetation during fueling.
- Since work will not occur during the primary nesting season (April 15 – July 31), it will not be necessary to conduct pre-construction bird nest surveys in accordance with the City requirements detailed in *"Protecting Nesting Birds: Best Management Practices for Vegetation and Construction Projects"* (City 2017).
- The trees proposed for removal would be discussed in detail with the tree work crew prior to beginning work and would be clearly marked with bright flagging.

- Vegetation trimming will be confined to the smallest portion of the project site necessary for completion of the work. Vegetation will be cut to the base and allowed to regrow following construction. It should be noted that all woody vegetation growing within the existing transmission corridor is periodically trimmed to prevent interference with transmission wires and poles.

Water Quality Protection

- Erosion control BMPs will be implemented as detailed in Figure 4 of Appendix A. Erosion control devices (e.g., wattles) will be placed west of and downgradient of the temporary disturbance area, as needed, to prevent the potential release of sediments or sediment-laden water into the adjacent wetland. Additional stormwater management measures may include covering any soils removed from the site with a tarp prior to disposal and avoiding work during heavy rain events.
- PGE has submitted a Preconstruction Notification to the USACE to demonstrate compliance with Nationwide Permit 3 and Section 404 of the Clean Water Act. PGE will submit the City's approved LUCS to DEQ so they can issue a Section 401 Water Quality Certification for the project site due to wetland impacts. The project will not require a removal/fill permit from Oregon DSL because wetland impacts for each Milliken Immediate Action project site are below DSL's permit threshold.

Construction Vehicles, Equipment, and Roadway Use

- Construction workers would access the site from SE Jenne Rd., SE Circle Ave., and Springwater Trail.
- Signage, coning, and/or fencing would be used along the access route and Springwater Corridor Trail as deemed necessary to advise the public of construction work and any associated potential hazards.
- Cones would be placed around the work area to keep cyclists and pedestrians away from vehicles, equipment, and active project work.

Post-Construction Restoration and Mitigation

- PGE will replant removed trees and perform mitigation, or provide a payment-in-lieu fee to support Johnson Creek Watershed Council water quality improvement projects, as required by the Pleasant Valley Resource Review process. Additional details are provided in Section 5.2.

4 Alternatives Evaluation

Because the project is site-specific (existing line), no alternative sites were considered. Re-routing the transmission line would have significantly greater environmental impacts. Specific criteria necessary to achieve the project design objectives include the following:

1. Project must utilize the existing Milliken transmission alignment
2. New tower structures must meet design standards for stability and span
3. New structures must meet seismic resiliency standards

Based on these criteria, the no action alternative as well as the following three practicable but significantly different alternatives were considered (33.865.100(A)(3)(b)), and are summarized in Table 2:

- Alternative 1. No Action Alternative;
- Alternative 2. Proposed Project - Tower replacement with an adjacent steel monopole;
- Alternative 3. Repair of the existing failing tower structure; and
- Alternative 4. Placing the new monopole within the same footprint as the existing tower.

The No Action Alternative, which would avoid impacts to wetlands and waters, would not replace aging and unstable structures, thereby leaving the existing Milliken Transmission line vulnerable to failure and outages. The No Action Alternative does not achieve the project purpose and was therefore not selected.

Alternative designs that meet the project-specific criteria listed above are limited. Infrastructure other than steel monopoles would not provide the stability necessary for the transmission line. Steel monopoles offer high service life, low maintenance, and high fire/seismic residency so they limit future disturbance from maintenance/repair. The transmission line would continue to operate at its existing capacity (57-kilovolt).

The proposed project (Alternative 1) incorporates the smallest practicable footprint considering construction requirements to perform the work. The temporary disturbance area was selected based on the type and size of equipment needed to access the site. It is likely that the entire disturbance area will not be needed for maintenance activities; however, the maximum estimated area was identified for this land use approval process.

PGE's contractor will use equipment that is properly sized to replace the large transmission towers. The project cannot be safely and effectively implemented with the use of smaller equipment. Vegetation trimming is required at the site to provide access for construction equipment and tower removal and installation since project activities cannot be performed from the Springwater Trail. The minimum number of trees will be removed to complete the project. Construction equipment will be staged on the paved trail which will reduce impacts to vegetation within the Springwater Corridor. There are no other practicable alternatives to conduct the maintenance project that would reduce impacts beyond those proposed by the preferred alternative.

Table 2 below evaluates the alternatives relative to the objectives specified in Section 1.2. Alternative 2 would satisfy Objectives 1 and 2, whereas Alternative 1, 3, and 4 would not satisfy both objectives. Therefore, Alternative 2 is the preferred alternative for the project.

Table 2. Evaluation of Practicable and Significantly Different Project Alternatives

Alternative	Project Objectives		Impact on Resources and Functional Values
	1: Replacement of decaying structure	2: Limit environmental encroachment	
1: No Action Alternative	Does Not Meet	Does Not Meet	Failure to replace the structure would result in an unstable and unsafe transmission line. Therefore, Objective 1 would not be achieved under this alternative. Alternative 1 would avoid the immediate need for tree removal and vegetation trimming, thus eliminating potential impacts to wildlife and native plants. However, the transmission line would not be stable and could result in outages. This could result in increased fire risk, along with more frequent maintenance and repair visits, thereby increasing environmental encroachment. Therefore, this alternative would not achieve Objective 2. Also, it should be noted that under the no action alternative, trees and vegetation are regularly pruned or trimmed around the transmission lines as part of routine maintenance, so some level of disturbance regularly occurs at this site.
2: Proposed Project - Replacement of existing structure with new steel monopole	Meets	Meets	This alternative would involve installing a new steel monopole structure near the existing lattice tower it is replacing, transferring wire from the old lattice tower to the new steel monopole, demolishing and removing the old lattice tower, and restoring ground and vegetation conditions within the work area. Objective 1 would be achieved under this alternative. Tower replacement at this site will require some tree removal and ground disturbance so crews can access and replace the failing tower (Figure 3 of Appendix A). BMPs (as described in Section 3.2) would minimize impacts to wildlife and the general public. Trees would be replanted at a 2:1 ratio and any bare ground areas reseeded with a

Alternative	Project Objectives		Impact on Resources and Functional Values
	1: Replacement of decaying structure	2: Limit environmental encroachment	
			native seed mix within the temporary disturbance area to restore the site. The installation of the new steel monopole would ensure the transmission line's integrity and safe operation, thereby minimizing potential fire risk and maintenance/repair frequency and reducing environmental impacts. Thus, this alternative would limit environmental encroachment to the maximum extent practicable and achieve Objective 2.
3: Repair of the existing failing tower structure	Does Not Meet	Does Not Meet	Under this alternative, the existing tower would be repaired by replacing the damaged tower foundation. A new foundation would be installed adjacent to the tower legs. A large excavation area would be needed to install the new concrete foundations and temporarily support structures while the existing legs are removed. Due to the extensive damage to the tower legs, there is no repair that could restore the integrity of the structure without significant excavation. This would exceed the environmental impacts of installing a new steel monopole adjacent to the existing tower. Therefore, Objectives 1 and 2 would not be achieved under this alternative.
4: Placing the new monopole within the same footprint as the existing tower.	Does Not Meet	Meets	A new pole needs to be installed before the existing line can be transferred over. As such, it is not feasible to place a new monopole in the same footprint as the existing tower. Although environmental impacts would be minimized relative to the preferred alternative, this option is not feasible so it would not meet Objective 1.

5 Project Impacts

5.1 Short-Term Impacts

Potential short-term impacts from tower replacement, tree removal, and vegetation trimming include noise disturbance, temporary modifications to wildlife habitat, and minor disruption of recreational use of the trail. Tower replacement at this site will require some vegetation trimming and ground disturbance so crews can access and replace the failing tower. Impacts to natural resources would be minimized to the extent practicable. The tower location will be accessed from Springwater Trail. All vehicles and equipment will remain on the paved areas when accessing the site. Once the new pole is placed, the material from the tower demolition will be hauled off from the site. It is not anticipated that the project would impact the entire temporary disturbance area shown in the project figures. Any short-term impacts would be minimized through the implementation of the BMPs described in Section 3.2. Further, as described in Section 6, PGE would replant trees and reseed any bare ground areas, as required by City code requirements offset short-term effects from tower replacement.

Three trees are identified for removal at this site (Table 3). These include a 6" and 7" DBH Scouler's willow (*Salix scouleriana*) and an 8" DBH filbert (*Corylus sp*.). Some trees and shrubs smaller than 6" DBH may be pruned or trimmed around each replacement structure to create a clear zone for construction equipment to access and perform the work. To protect nearby trees (and their root zones), fencing or staked flagging will be placed around the temporary disturbance area. All heavy machinery work will occur outside the root protection zones of adjacent trees (Figures 3 and 4 of Appendix A). Vegetation trimming will be confined to the smallest portion of the project area necessary for completion of the work. Vegetation will be cut to the base and allowed to regrow following construction. It should be

noted that all woody vegetation growing within the existing transmission corridor is periodically trimmed to prevent interference with transmission wires and poles.

Recreational use of Springwater Trail within the project site by cyclists and pedestrians would continue during project work. Appropriate signage would be implemented (as described in Section 3.2) to ensure the safety of cyclists and pedestrians. Surrounding trails would not be impacted during project work.

Table 3. Existing Trees Proposed for Removal

Tree Number	Species	DBH (inches)	Tree on Nuisance List?
1	Scouler's willow, *Salix scouleriana*	6	No
2	Scouler's willow, *Salix scouleriana*	7	No
3	Filbert, *Corylus sp.*	8	No

5.2 Long-Term Impacts

No significant, adverse long-term impacts are anticipated to natural or scenic resources and values from the proposed project. The project site is located near a large floodplain wetland and not on the mainstem Willamette River; as such, there would be no river-dependent or river-related restrictions. There would be no removal or fill in the waterway or below the ordinary high-water mark.

Potential impacts from tree removal and pruning include a reduction in tree canopy cover, shade, microclimate regulation, wildlife refuge, and nesting/brooding areas associated with deciduous forest cover. However, these functions are reduced since vegetation is regularly maintained at the site. If feasible and safe to do so, the three removed trees would be left in place as standing dead snags, thereby providing important habitat for wildlife and maintaining slope stability. Mitigation would be performed as specified in Section 33.465 to compensate for loss of trees and shrubs (Section 6).

The new monopole would be narrower and less conspicuous than the steel lattice tower, which would improve scenic value at the site. Permanent ground disturbance would be limited to the removal of the tower footings, which encompasses an area of 12.6 square feet, and the installation of ~~a~~ two replacement poles, which would encompass an area of ~~3.1~~ 6.2 square feet. The maximum estimated temporary impact area is ~~1,450~~ 3,209 square feet. Mitigation would help offset any potential long-term project impacts. Long term benefits from tower replacement include improved safety and disaster resiliency along the line.

6 Mitigation Approach

PGE's preferred mitigation approach for tree removals and disturbance area is to provide a payment-in-lieu (PIL) fee to support Johnson Creek Watershed Council's water quality improvement projects. If needed, alternate or additional mitigation will be performed as required under Section 33.465.180 (A-G) and Section 33.248.090. Large trees cannot be planted on-site for mitigation based on the clearance requirement for the transmission lines. Six native trees (replacement at 2:1 ratio) will be planted within the temporary disturbance area after construction to meet City code requirements. On-site mitigation plantings would include low canopy species such as cascara (*Rhanmus purshiana*), vine maple (*Acer circinatum*), and beaked hazelnut (*Corylus cornuta*) within the temporary disturbance area and any bare ground areas would be reseeded with an erosion control seed mix (up to 20% of the seed mix will be comprised of pollinator species seeds). Additional mitigation will be performed at a ratio of 2:1 (mitigation area to project disturbance area). Mitigation will be performed once construction is complete. Proposed mitigation plans are shown in Figure ~~5~~ 6 of Appendix A. The mitigation approach may be subject to change based on coordination with the City.

PGE would comply with the following conditions specified in Section 33.248.090, as required:

- Plant materials will be native and selected from the Portland Plant List. They will be non-clonal in origin, seed source must be as local as possible, and plants will be nursery propagated unless transplanted from on-site areas approved for disturbance. Plant materials are to be used for restoration purposes. Standard nursery practices for growing landscape plants, such as use of pesticides, fungicides or fertilizers, and the staking of trees will not be employed.
- Plants listed on the Nuisance Plants List will not be planted in the mitigation area and will not be counted as existing vegetation.
- The mitigation area will be cleared of groundcovers and shrubs listed on the Nuisance Plants List. Trees listed on the Nuisance Plants List will be removed from the mitigation area.
- Plant materials will be supported only when necessary due to extreme winds at the planting site. Where support is necessary, stakes, guy wires or other measures will be removed as soon as the plant can support itself.
- ~~New plantings will be manually watered regularly during the first growing season. During later seasons, watering will be done as needed to ensure survival of the plants.~~
- Monitoring of landscape areas will be the ongoing responsibility of PGE on behalf of the property owner (City of Portland). Plants that die will be replaced in kind. Written proof that all specifications of this section have been met will be provided one year after the planting is completed. The property owner will provide this documentation to BDS.

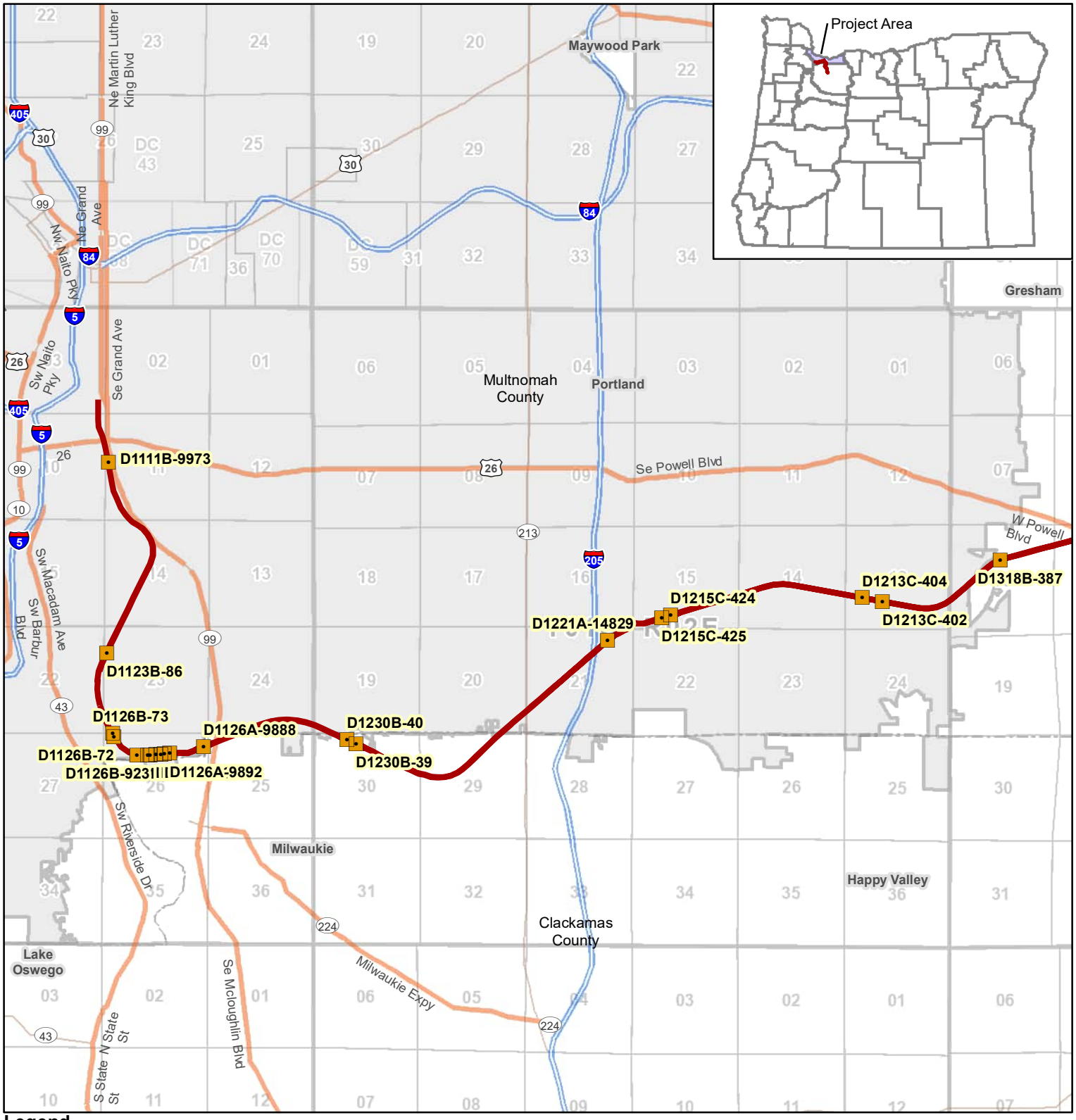
7 References

City of Portland, Environmental Services (City). 2017. Protecting Nesting Birds: Best Management Practices for Vegetation and Construction Projects. May 2017.

City of Portland (City). 2022. Zoning Map. Available at https://www.portlandmaps.com/detail/property/SPRINGWATER-CORRIDOR/R340552_did/?action_override=zoning Accessed September 9, 2022.

U.S. Fish and Wildlife Service (USFWS). 2022. National Wetlands Inventory. Available at https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/, Accessed September 9, 2022.

Appendix A. Figures



Legend

- Milliken Transmission Line (Springwater Corridor)
- Immediate Action Tower
- City of Portland
- County Boundary

N
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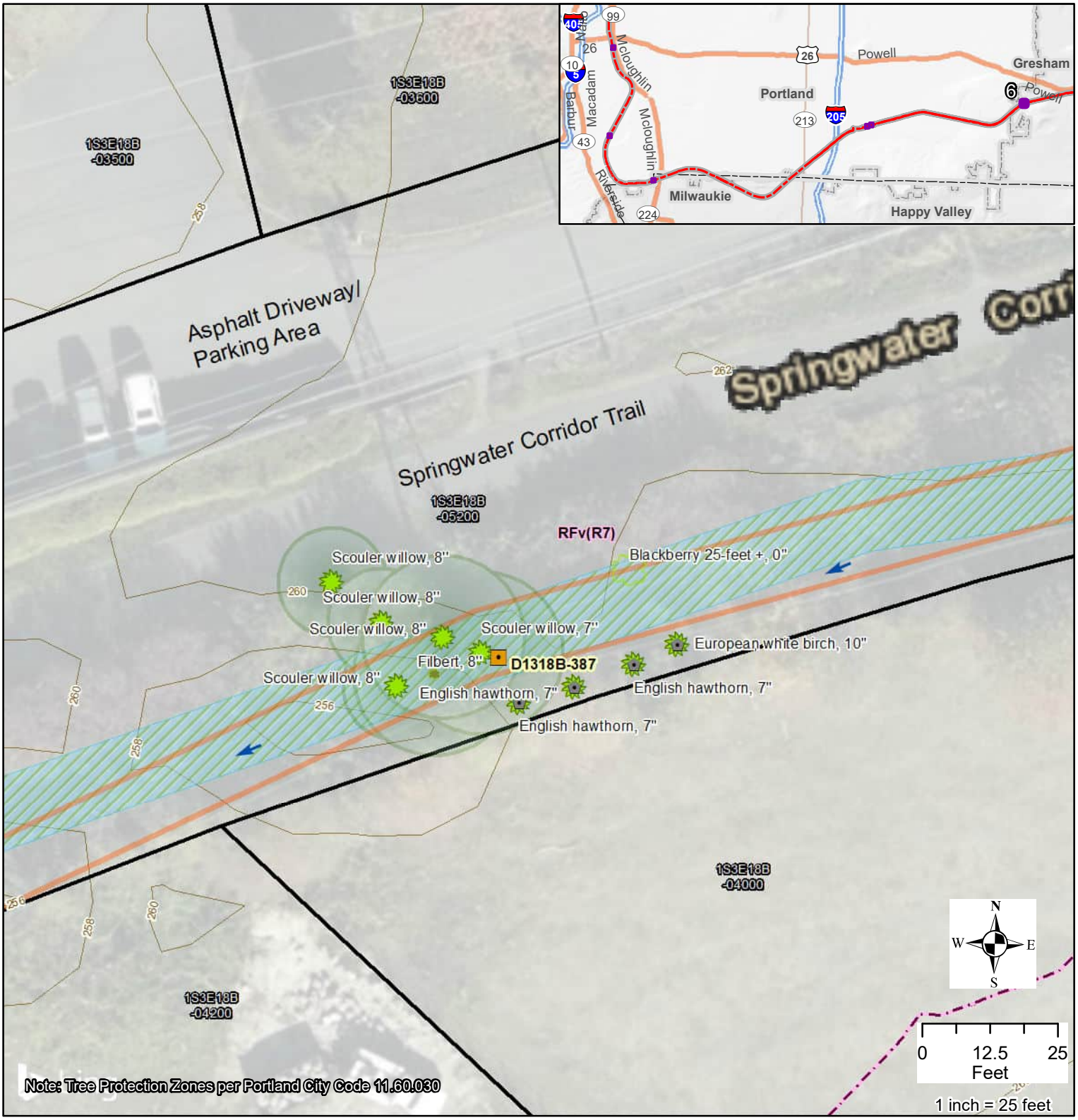
FIGURE 1
Vicinity Map

PGE - Milliken Immediate Action Tower Replacements
City of Portland, Oregon

July 2022

AECOM



Legend

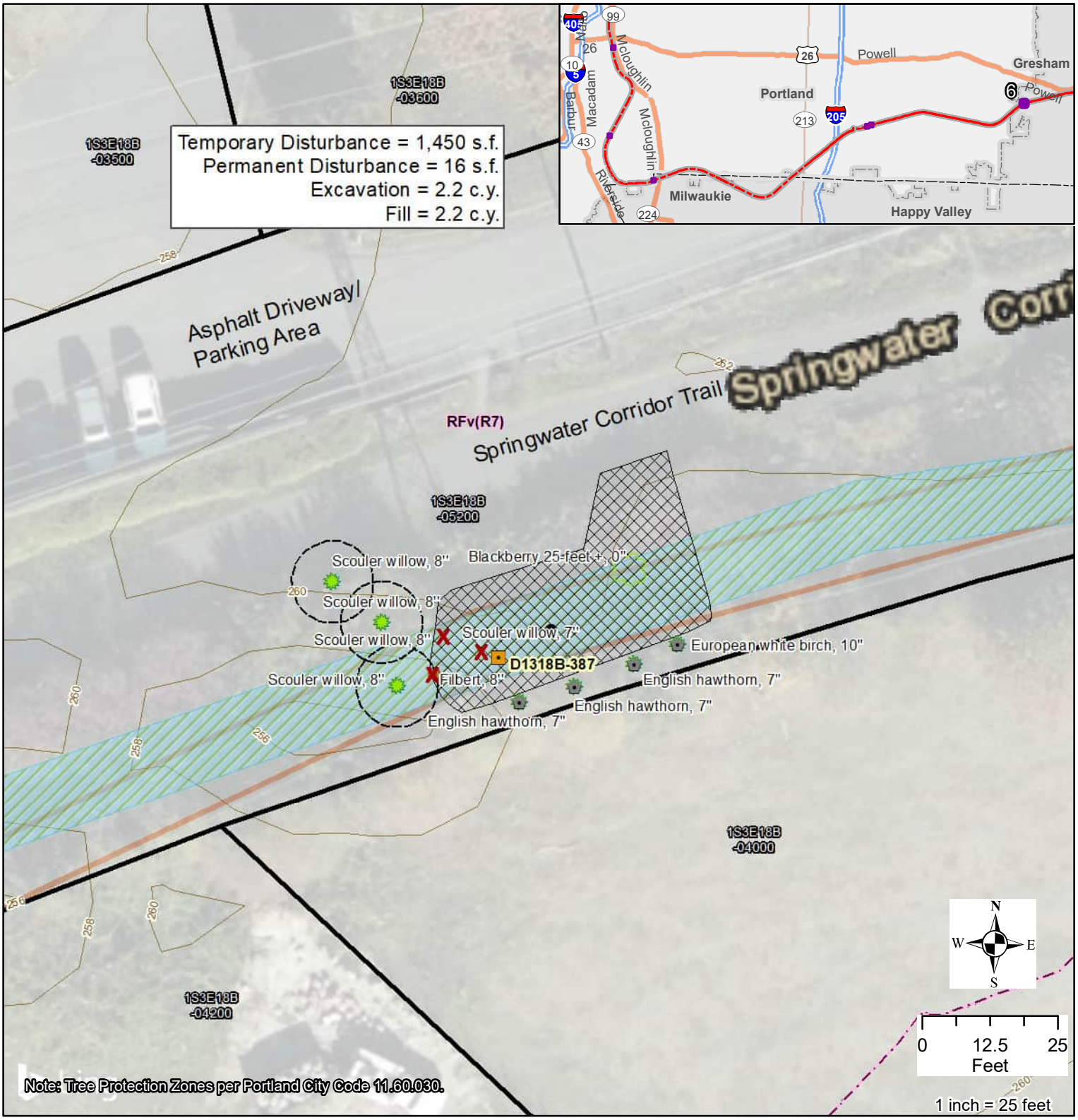
- Tax Lot
- Zoning
- Contour (2 ft)
- Wetland/Water (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Surveyed Tree
- Tree on Nuisance List
- Canopy Crown Spread

FIGURE 2
Existing Conditions Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

September 2022

AECOM



Legend

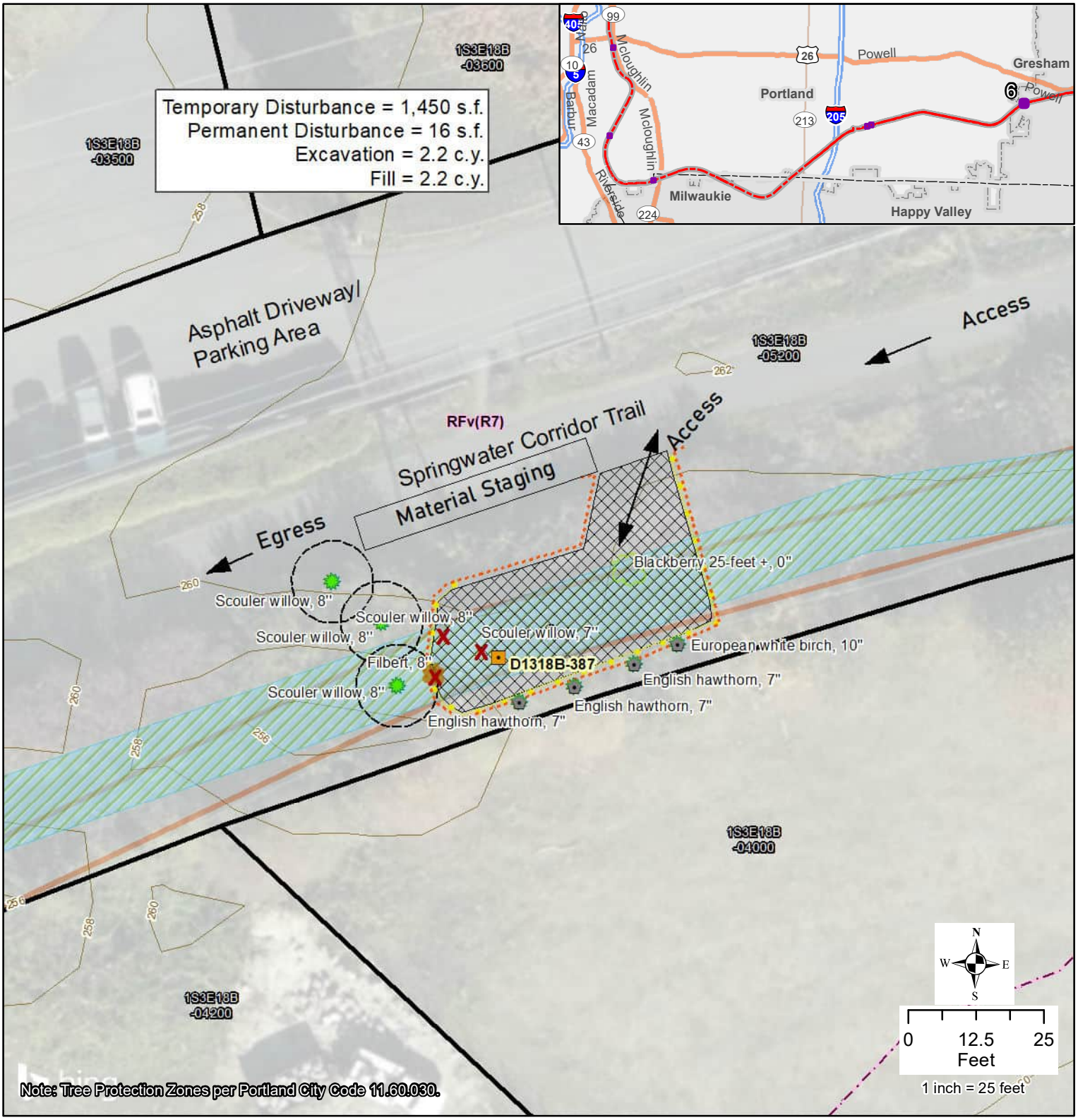
- Tax Lot
- Zoning
- Contour (2 ft)
- Wetland/Water (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Root Protection Zone

FIGURE 3
Proposed Development Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

September 2022

AECOM



Legend

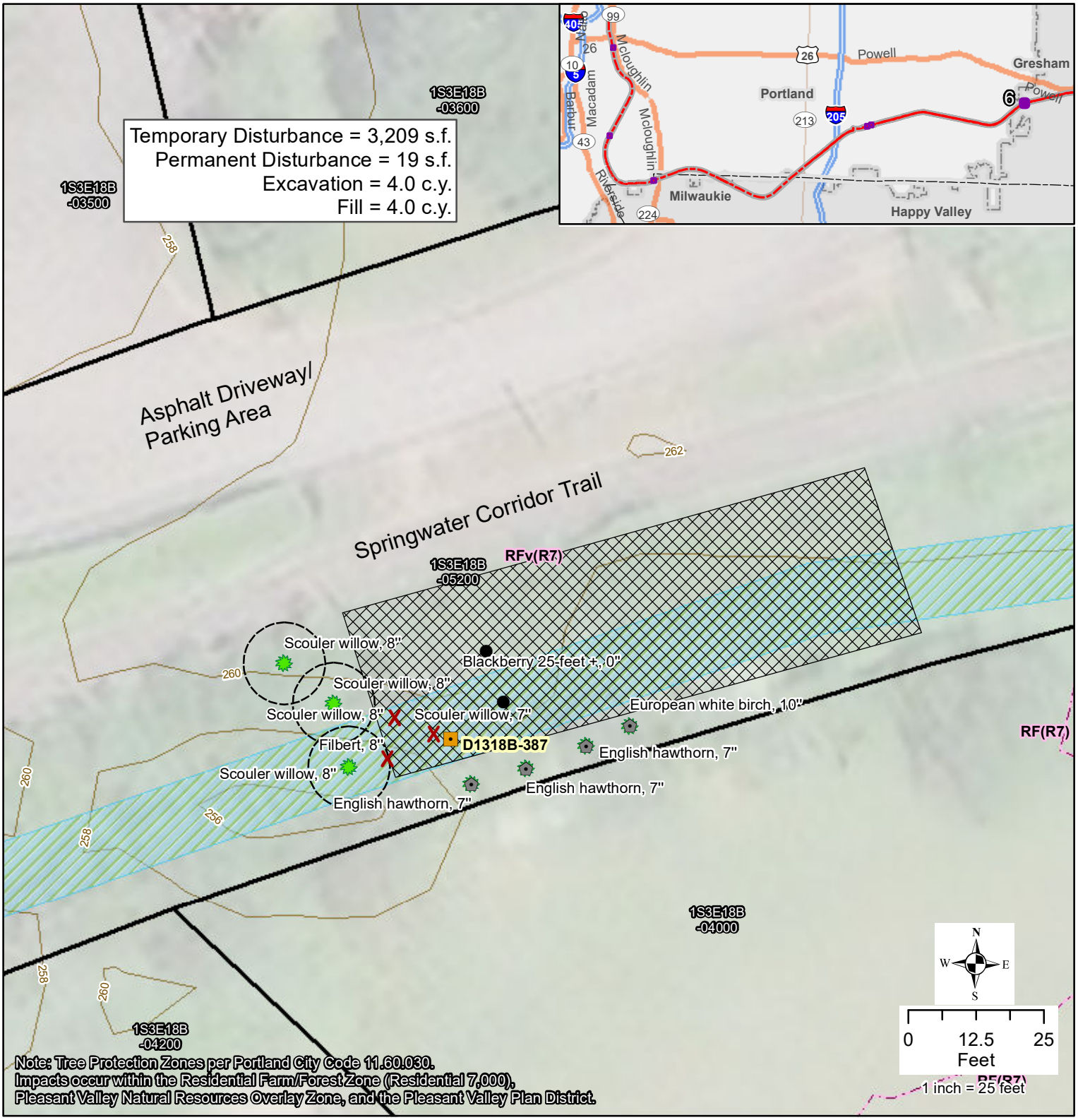
- Tax Lot
- Zoning
- Contour (2 ft)
- Contour (2 ft)
- Wetland/Water (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area (boundary to be marked)
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Erosion Control (straw wattle)
- Root Protection Zone
- Construction Fence

FIGURE 4
Construction Management Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

October 2022

AECOM



Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Contour (2 ft)
- Wetland/Water (NWI)
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Root Protection Zone

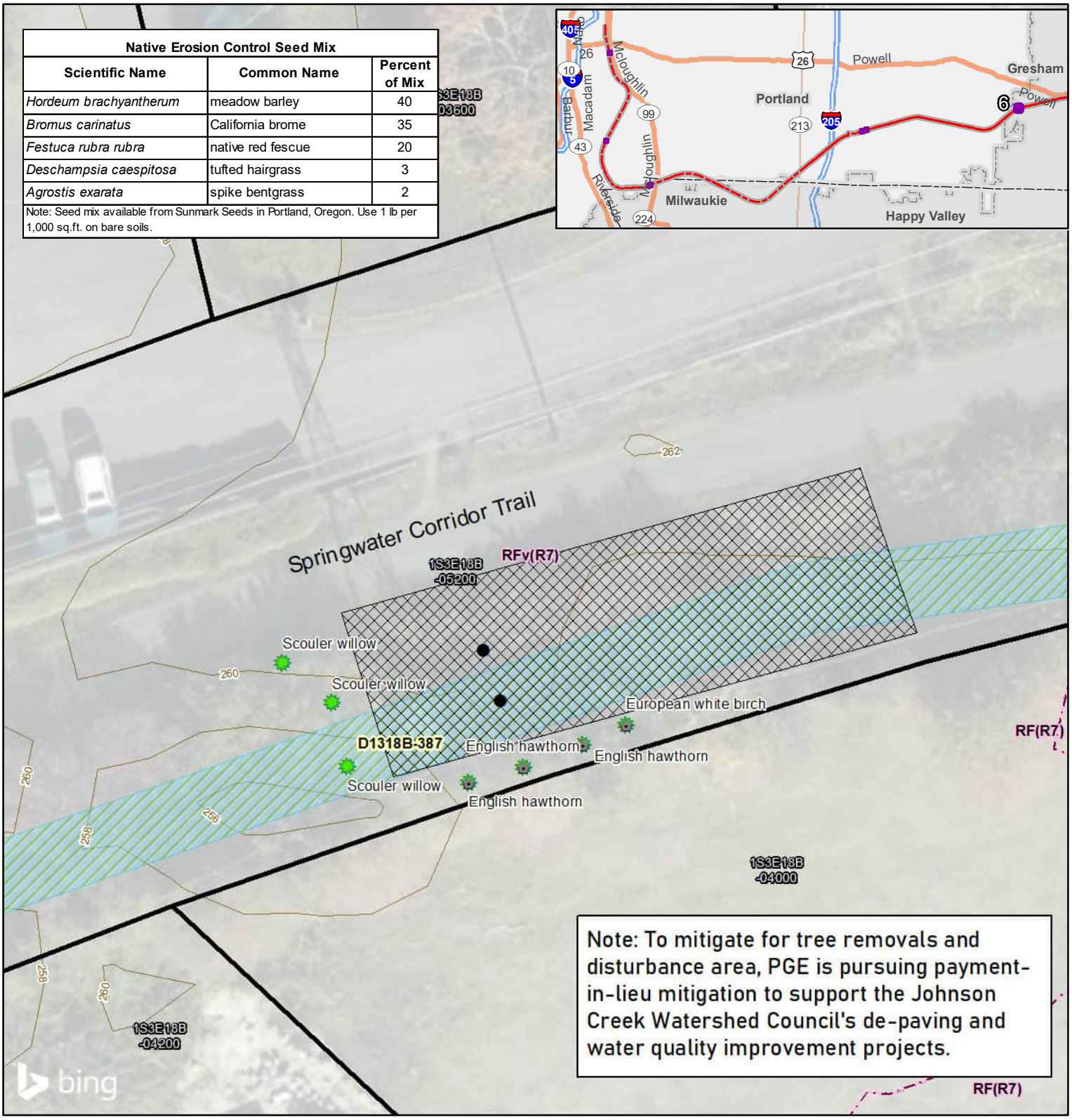
FIGURE 5
As-Built Disturbance Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

April 2023

AECOM

Native Erosion Control Seed Mix		
Scientific Name	**Common Name**	**Percent of Mix**
Hordeum brachyantherum	meadow barley	40
Bromus carinatus	California brome	35
Festuca rubra rubra	native red fescue	20
Deschampsia caespitosa	tufted hairgrass	3
Agrostis exarata	spike bentgrass	2
Note: Seed mix available from Sunmark Seeds in Portland, Oregon. Use 1 lb per 1,000 sq.ft. on bare soils.		



Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Wetland/Water (NWI)
- New Monopole
- Temporary Work/ Seeding Area
- Preserved Tree
- Tree on Nuisance List

N
W E
S

0 12.5 25
Feet

1 inch = 25 feet

FIGURE 6
Mitigation Site Plan

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

June 2023

AECOM

Gresham Trinity Lutheran Church Stormwater Reduction Project excerpt:

Project Summary: Give a brief overview of the project need, what it will seek to accomplish, and the means by which it will be accomplished.

This stormwater retrofit project will be located at the Trinity Lutheran Church in Gresham, Oregon (507 W Powell Blvd, Gresham, OR 97030). This church is located within the Johnson Creek watershed and currently the stormwater from this property flows into the City of Gresham's municipal separated storm sewer system and directly to Johnson Creek.

The church property is almost completely made up of impervious surfaces, mostly an asphalt parking lot, so stormwater flowing from this property into Johnson Creek is potentially transporting pollutants such as oils, gasoline, and tire particles straight into Johnson Creek. This is especially concerning since Johnson Creek is a spawning creek for coho salmon and steelhead, which are very sensitive to these pollutants. Additionally, stormwater outfalls, like the outfall draining the Church's stormwater into Johnson Creek, can cause hydromodification to the creek.

This project is part of a larger watershed-wide stormwater prioritization analysis by the Johnson Creek Watershed Council to install stormwater retrofits on commercial and industrial properties to reduce stormwater runoff draining directly into Johnson Creek. This project will remove asphalt and install rain gardens to infiltrate most of the property's stormwater on the property.

Project Description: Give enough details for the reader to understand the specific elements of the project, including where it will take place, its ecological merits, the methods that will be used to measure project outcomes, and what project success looks like in the long term.

The project will infiltrate approximately two thirds of the stormwater runoff from impervious surfaces on the property through the removal of asphalt and installation of rain gardens. Around 5,000 square feet of asphalt will be removed and replaced with rain gardens. A flow directing structure, possibly a speed bump, will be constructed between the rain gardens to direct the overflow from the smaller rain garden to the larger rain garden, as well as capture stormwater runoff that flows between the rain gardens. These rain gardens will be planted with Willamette Valley native plants.

Removing pavement and possibly planting the rain gardens will be completed by volunteers. These volunteer events will not only serve to construct the rain gardens but to also inform the public about the importance of treating and infiltrating stormwater and how rain gardens can help improve water quality in the creek. The project steps include:

1. Planning and design of the project features.
2. Cutting the asphalt to be removed.
3. Asphalt removal volunteer event, in which volunteers pry up patches of asphalt and load into removal boxes.
4. Excavation of underlay material and native ground to make room for amended soil and pooling depth.
5. Install amended soil and mulch.
6. Plant the rain gardens with Willamette Valley native plants. This may be another volunteer event, providing

another opportunity to educate the public about the project.
7. Maintenance once or twice a year to remove trash, and replace mulch and plants that have died.

Project Justification: Provide an explanation of why the project is important for anadromous fish species and/or their habitat.

Johnson Creek, like most streams with a significant urban watershed component, experiences significant
hydromodification and degradation of water quality. Hydromodification is defined as the alteration of hydrologic characteristics caused by urbanization. Its impacts include erosion, sedimentation, and alteration to stormwater flow, volume, and duration.

Hydromodification is the direct result of a high area of contributing impervious surfaces in a watershed. Typical substances that are delivered to a stream because of urbanization include metals and hydrocarbons, and arrive in surface streams via the stormwater system.

A large percentage of impervious surface causes rainfall to drain quickly to human conveyance systems (primarily stormwater and underground injection controls rather than sanitary sewer or combine sewer overflows in Johnson Creek) rather than infiltrating on site, leading to a quicker delivery of that rainfall to streams and higher storm peak flows. This brings with it higher flow velocities, which in turn can scour redds and wash juvenile salmonids downstream and cause physical damage and difficulty locating food for salmonids at all life stages.

Pollutants associated with transportation in particular are mobilized via paved roadways, and ultimately are transported to streams via stormwater systems. Copper from brake pads, polyaromatic hydrocarbons from leaking vehicles are examples of these transportation-related source pollutants.

Municipalities operating under Municipal Stormwater (MS4) permits from Oregon DEQ, are obligated to address hydromodification. To a large extent, corrective measures deal largely with requiring green infrastructure in new development and redevelopment. This can have a significant impact in rapidly developing or re-developing areas, but leaves largely unanswered the question of addressing hydromodification in urban areas that were paved or developed prior to MS4 permitting obligations.
Other techniques have been somewhat successful in filling in the gaps, such as energy dissipation at stormwater outfalls and requiring settling basins for individual commercial or industrial property owners with 1200-Z permits.

Soil & Water Conservation Districts and local non-profits have existing voluntary programs to retrofit residential properties and a few church & schools.

The unaddressed piece is that group of industrial & commercial taxlot owners in the watershed that are not operating under a 1200-Z permit or those who do have such a permit but whose vast area of impervious surface makes those taxlots good candidates for additional on-site infiltration. This project site is likely not operating under a 1200-Z permit and was developed well before any stormwater requirements existed and the stormwater from the property flows into the City's municipal separated storm sewer system and directly into Johnson Creek. By infiltrating stormwater from this property on-site, water quality and hydromodification issues discussed above can be avoided.

Trinity Lutheran Church Stormwater Retrofit Project Site Map

Johnson Creek Watershed Council is working with Trinity Lutheran Church to remove impervious pavement and install stormwater retrofits, such as rain gardens. The goal of the project is to help alleviate stormwater runoff and flooding on the property, and to infiltrate a portion of the property's stormwater to reduce stormwater outfall flows and stormwater pollutants making it to Johnson Creek.

From:	Daniel Newberry
To:	Novak, Timothy
Cc:	tina.tippin@pgn.com; Chip Bloomer; Fletcher, Brian; Anderson, Paige
Subject:	Re: PGE mitigation for tower removal/pole installation (LU 22-146810 EN & 22-183308 PV)
Date:	Thursday, June 1, 2023 12:45:46 PM

Hi Timothy,

I'm working on this--we staff program manager is in the field all week, so we're limited in communication time. He's working on this, so I hope to have an answer for you tomorrow. Do you have a budget range for the tree planting/invasives removal work? We have a few taxlots we're working on near Leach Botanical Garden that could work.

Regarding the depaving project in Gresham, here is the funding related directly to the plants:

$3,000 - 3000 plants * $1/plant
$3,600 - Excavation of sub-lot debris
$6,000 - New soil, delivered (200 cuyd * $30/cuyd)
$1,500 - Rain garden maintenance, 3 years

$14,100

There are other costs associated with the project, but aren't as directly related to the plants. I understand this may be more than your budget, so please choose which pieces you prefer to fund. Though we're still trying to fund the last piece of this project, we can easily get permission to move funding among grant line items.
--
Daniel Newberry
Executive Director
Johnson Creek Watershed Council
503-652-7477 x103
he/him

On Tue, May 30, 2023 at 2:16 PM Novak, Timothy <Timothy.Novak@portlandoregon.gov> wrote:

> Hi all,
>
> I spoke with my team and we are supportive of PGE providing financial support to Johnson Creek Watershed Council for the de-paving and water quality improvement project at 507 W Powell Blvd.
>
> ....
>
> Daniel, it will be helpful to get a better sense of the project cost breakdown and size, as well as anticipated costs to maintain the plantings through establishment to be able to determine how much of the required mitigation for the two PGE projects will be satisfied through their contribution to this project.

As an aside, Council will be reviewing and hopefully approving the Ordinance that will allow payment for mitigation in Forest Park that will resolve the outstanding mitigation situation with the Cornell Tunnels EN Review. The proposed fee schedule for tree replacement is Fee structure based on tree diameter. Provided that the ordinance is approved, I will also be using this fee table for these two projects.

Tree diameter	*Fee*
≥6 and <12 inches	*$675 per tree*
≥12 and <20 inches	*$1,800 per tree*
≥20 inches	*$450 per inch*

Timothy Novak *(he/him)*, City Planner

City of Portland - Bureau of Development Services

Land Division and Environmental Section

Land Use Services Division

1900 SW 4th Avenue, Ste. 5000

Portland, OR 97201

(503) 823-5395

Hours: 9am – 7pm (Tues-Fri)

9am – 6pm / Off (Every other Mon)

LANDOWNER AGREEMENT

FOR TRINITY LUTHERAN CHURCH STORMWATER BMP PROJECT

This Agreement for the TRINITY LUTHERAN CHURCH STORMWATER BMP PROJECT ("Agreement") is between Johnson Creek Watershed Council, an Oregon non-profit, public benefit corporation (hereinafter referred to as "JCWC") and Trinity Lutheran Church, 507 W Powell Blvd, Gresham, OR (hereinafter referred to as "Landowner"), and is effective on the last date of signature below.

WHEREAS, JCWC and Landowner wish to enter into an agreement to provide for restoration activities on the Project Site (the "Project Site" for purposes of this Agreement is shown in a map attached hereto as Exhibit A). The activities provided for herein shall be referred to as the "Stormwater BMP Project" or "Project".

Accordingly, in consideration of the terms and conditions set forth herein, and for good and valuable consideration, JCWC and Landowner agree as follows:

1. Project Description and Purpose. JCWC and Landowner have entered into this Agreement to provide for the on-site infiltration of stormwater at the Project Site. The overall goal and purpose of the Project is to redirect stormwater, that currently enters stormwater pipes, and ultimately to Johnson Creek, through the creation of large rain gardens, to on-site infiltration, and revegetation of the project site with native plants. The Landowner' participation and responsibilities are limited to granting permission for JCWC to access the property for the purposes of site assessment and preparation, allowing depaving portions of the Site parking lot, creation of rain gardens and subsequent native plantings, and managing the property where the work occurs in a manner consistent with the purposes set forth in this Agreement, including but not limited to maintaining plantings after the second growing season. JCWC agrees to be solely responsible for any and all environmental permitting and compliance, including any necessary remediation.

2. JCWC's Obligations. JCWC shall do the following:

2.1**.** Construction Contract. JCWC shall provide the necessary funding, and where needed for the completion of the Project, hire a contractor.

2.1.1 JCWC shall ensure that the removal of portions of asphalt and underlying artificial fill material, redirection of flow patterns, and creation of rain gardens in the depaved areas, are conducted in a way that complies with all relevant laws, and the design has been pre-approved, in writing, by the Landowner.

2.1.2 JCWC shall avoid damage during construction to existing infrastructure, including, but not limited to, subsurface electrical, plumbing, sewage, internet, and other utilities.

2.1.3 JCWC shall manage any permitting or government approvals necessary for the completion of the Project.

2.2 Site Revegetation. JCWC shall provide all necessary funding, create a planting plan, and establish new plantings in the project area.

2.2.1 Planting Plan Development. JCWC shall work with the Landowner in developing 1) a planting plan that meets the goals of both the Landowner and JCWC, and 2) a long-term maintenance plan to be carried out by the Landowner.

2.3 Landowner as Third-Party Beneficiaries. JCWC shall have the direct administrative, management and supervisory obligations over the construction contractor(s), and Landowner shall be designated as third party beneficiaries of the construction contract. Landowner shall not be liable for any obligation of JCWC for any work performed pursuant to the construction contract. To the extent that there is any inconsistency between this Agreement and the construction contract, the terms and conditions of this Agreement shall control.

2.4 Funding. Prior to beginning of construction activities on the Property pursuant to this Agreement, JCWC shall secure funding for one hundred percent (100%) of the total Project costs, including contingencies for the performance of all aspects of the work set out in the Project Description and Purpose above. Construction will not commence until 100% of the project cost has been secured by JCWC. If 100% of the funding cannot be secured, JCWC reserves the right to cancel this agreement prior to any construction activities.

2.5 Insurance. JCWC shall require any entity, contracted for this Project, to secure and maintain during the term of this Contract, general and automobile liability insurance in the amount of $500,000.00, designating JCWC and Landowner as additional insured, to cover claims, liabilities, costs, or damages on the properties that may result from or be in any way related to contractor's negligent activities or obligations on the Project. JCWC shall also require the contractor to secure and maintain Workers Compensation and Professional liability insurance during the term of this contract.

3. Landowner's Obligations. Landowner shall do the following:

3.1 Permit JCWC and its officers, agents, employees, contractors and invitees to enter onto the property where the work is, was or will be done for the purposes of performing the work, inspecting the condition of the work, and monitoring the effectiveness of the work. **Said entry shall be at times reasonably agreeable to Landowner.**

3.5 Access. Landowner shall allow access to the Project Site by JCWC as of the date of execution of this Agreement for one year to implement and an additional year to monitor the project. Said entry shall be at times reasonably agreeable to the Landowner, with at least three days' notice.

3.6 Long-Term Maintenance of the Project. The plantings will require the Landowner to manage the property where the work occurs in a manner consistent with the purposes set forth in this Agreement, including but not limited to maintaining plantings after the second growing season.

4. JCWC and Landowner each agree:

4.1 Notify in Writing. The parties agree to promptly inform one another in writing if, for any reason, problems arise during the course of the Project that may slow or stop progress of the Project.

4.3 Project Managers. JCWC appoints **Daniel Newberry** as its Project Officer and Landowner appoints **Cathy Yost** as the Project Officers. The parties may change their respective Project Officer(s) at any time by providing the other party with the name of their new Project Officer in writing.

5. This Agreement shall become effective as of the last date of signature below, and shall thereafter continue in force until JCWC and Landowner have deemed the construction on the Project is complete.

6. Modifications in Writing. This Agreement may be modified only by the mutual prior written agreement of Landowner and JCWC; and JCWC shall make no modifications to the final construction contract unless such modifications are also agreed to in writing by Landowner.

7. Miscellaneous Provisions.

7.1 No Agency, Joint Venture or Partnership. The parties agree and acknowledge that this Agreement does not create any agency, joint venture or partner relationship between them. No party is authorized to enter into any agreements or undertakings for or on behalf of the others or to hold themselves out as agents or representatives of the others.

7.2 Dispute Resolution. The parties agree that should disagreement arise over the meaning or interpretation of any provision of this Agreement, or performance under this Agreement, the parties shall first meet to discuss resolution in person. If resolution cannot be achieved in person, the parties will submit said dispute to mediation in Portland, Oregon, prior to filing suit to enforce the terms of this Agreement.

7.3 Capacity to Obligate. The parties hereby represent and warrant that they each have the capacity and authority to obligate and bind their respective corporations and are acting with full and complete knowledge of their respective corporations in signing this Agreement.

7.4 Counterparts. This Agreement may be executed in counterparts, each of which shall be an original and all of which, when taken together, shall constitute one and the same agreement.

7.5 Waiver. Failure of any party at any time to require performance of any provisions of this Agreement shall not limit the right of such party to enforce the provision, nor shall any waiver by such party of any breach of any provision be a waiver of any succeeding breach of that provision, or a waiver of that provision itself, or any other provisions, including this anti-waiver provision.

7.6 Interpretation. This Agreement and the rights and obligations of each of the parties hereunder shall be governed and construed in accordance with the laws of the State of Oregon.

In the event any action is brought to enforce this Agreement, venue shall be in Multnomah County, Oregon, and each party hereby irrevocably consents to the jurisdiction of the Oregon state courts.

This Agreement has been submitted to the scrutiny of all parties hereto and shall be given a fair and reasonable interpretation in accordance with the words hereof, without consideration or weight being given to its having been drafted by any party hereto or such party's counsel. It is not the intent of the parties hereto to violate any applicable laws. If for any reason any non-material provision of this Agreement does violate any such laws or is not fully enforceable in accordance with the terms and provisions hereof, this Agreement shall nevertheless be limited or construed to comply with such laws and shall be enforced to the fullest extent permitted by such laws, and the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

7.7 Notice. All notices required to be given hereunder shall be made in writing and shall be deemed to have been duly given, made, and received only (a) upon delivery, if personally delivered to a party; (b) one business day after the date of dispatch, if by facsimile transmission; (c) one business day after deposit, if delivered by a nationally recognized courier service offering guaranteed overnight delivery; or (d) three business days after having been deposited in the United States mail, certified mail, postage prepaid, return receipt requested. The parties' addresses are as follows:

Landowner
Cathy Yost
507 W Powell Blvd
Gresham, OR 97030

JCWC
Attn: Daniel Newberry
4033 SW Woodstock BLVD
Portland, OR 97202

7.8 Third Parties. Nothing contained herein nor the transactions contemplated hereby, expressed or implied, shall be deemed to inure to the benefit of any person or entity not a party to this Agreement, nor shall it confer upon any such party or entity any right or remedy of any nature whatsoever.

7.9 Facsimile and Electronic Signatures. Signatures and/or consents may be evidenced by facsimile, and may be evidenced by E-Mail and/or electronic signatures. Documents with original signatures shall be provided upon request of any party.

7.10 Entire Agreement. This Agreement, and the final exhibits and attachments attached hereto, constitute the entire agreement between the parties and any prior agreements, whether oral or written, have been merged and integrated into this Agreement.

7.11 Representation. Landowner and JCWC have been afforded an opportunity to select and receive counsel with respect to this Agreement from their own attorneys and professional advisors before signing this Agreement.

THIS AGREEMENT shall bind and inure to the benefit of not only the immediate parties hereto but their respective heirs, executors, administrators, personal representatives, successors in interest and assigns.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the last date of signature below.

Landowner:

Cathy Yost
Signature of Cathy Yost

6/16/2023
Date

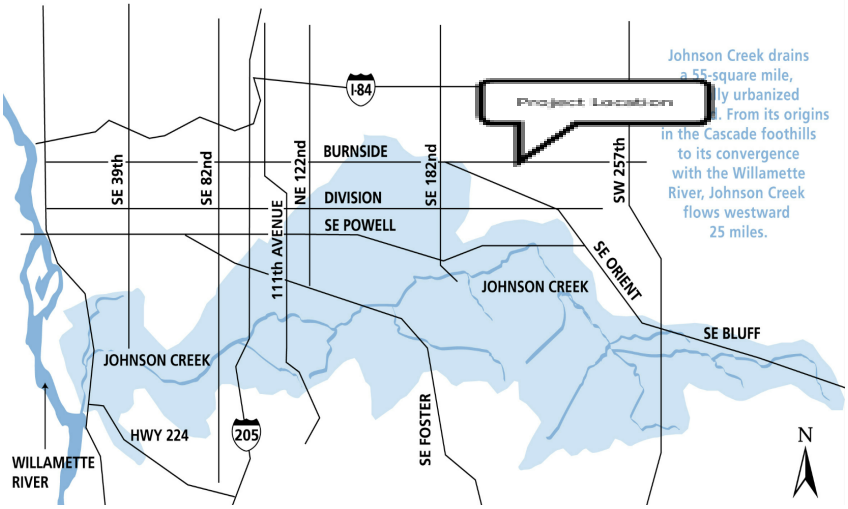
Johnson Creek Watershed Council:

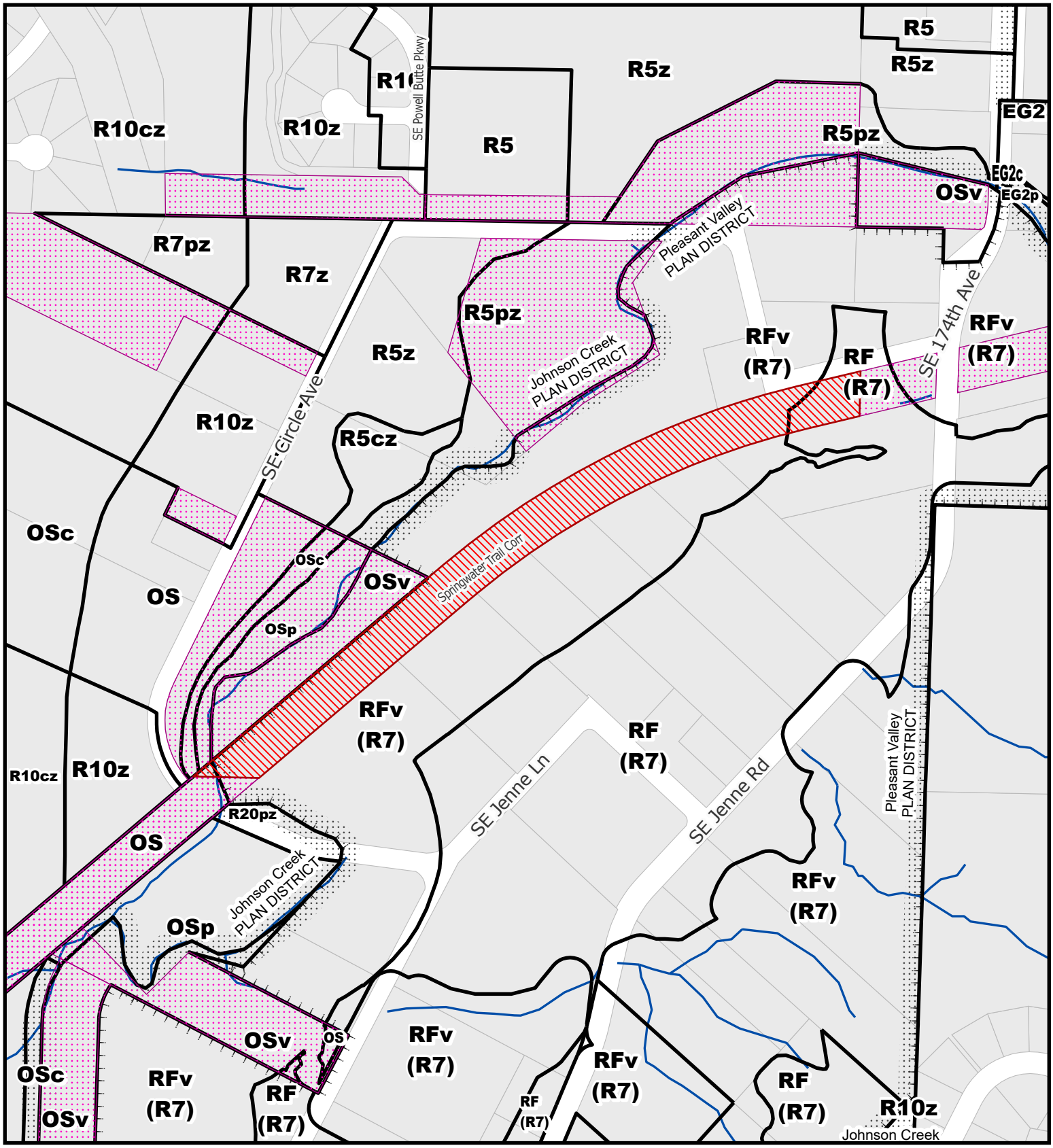
Daniel Newberry
Print name of Project Officer for JCWC & JCWC Executive Director

Daniel G.S. Newberry
Project Officer signature

6/16/2023
Date

EXHIBIT A: Map of Project Site





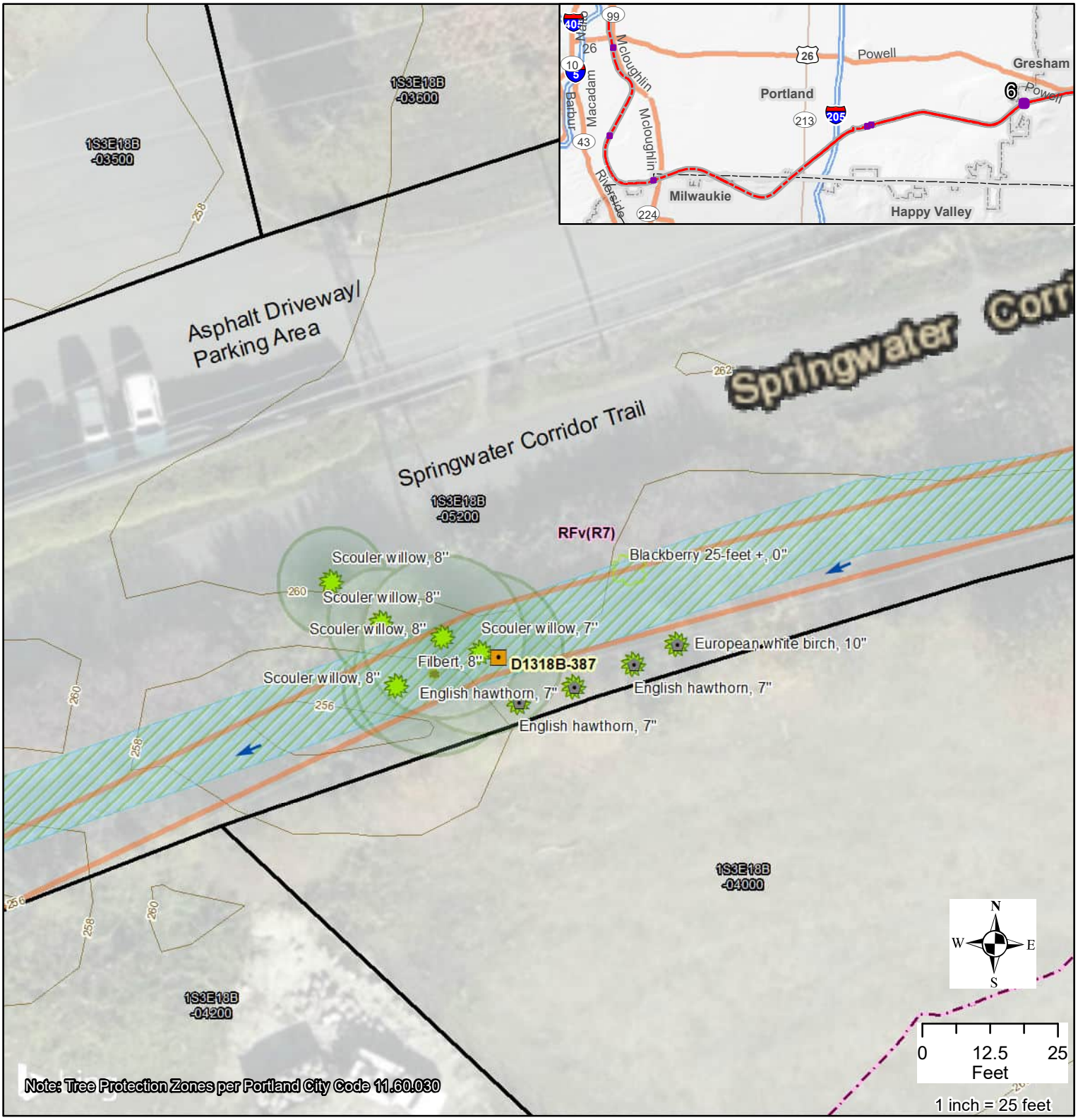
For Zoning Code in effect Post August 1, 2021

ZONING

UNINCORPORATED MULTNOMAH COUNTY
JOHNSON CREEK BASIN
PLEASANT VALLEY PLAN DIST

Site
Also Owned Parcels
Stream

File No.	LU 22 - 183308 PV
1/4 Section	3547,3548,3647
Scale	1 inch =300 feet
State ID	1S3E18B 5200
Exhibit	B Sep 15, 2022



Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Wetland/Water (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Surveyed Tree
- Tree on Nuisance List
- Canopy Crown Spread

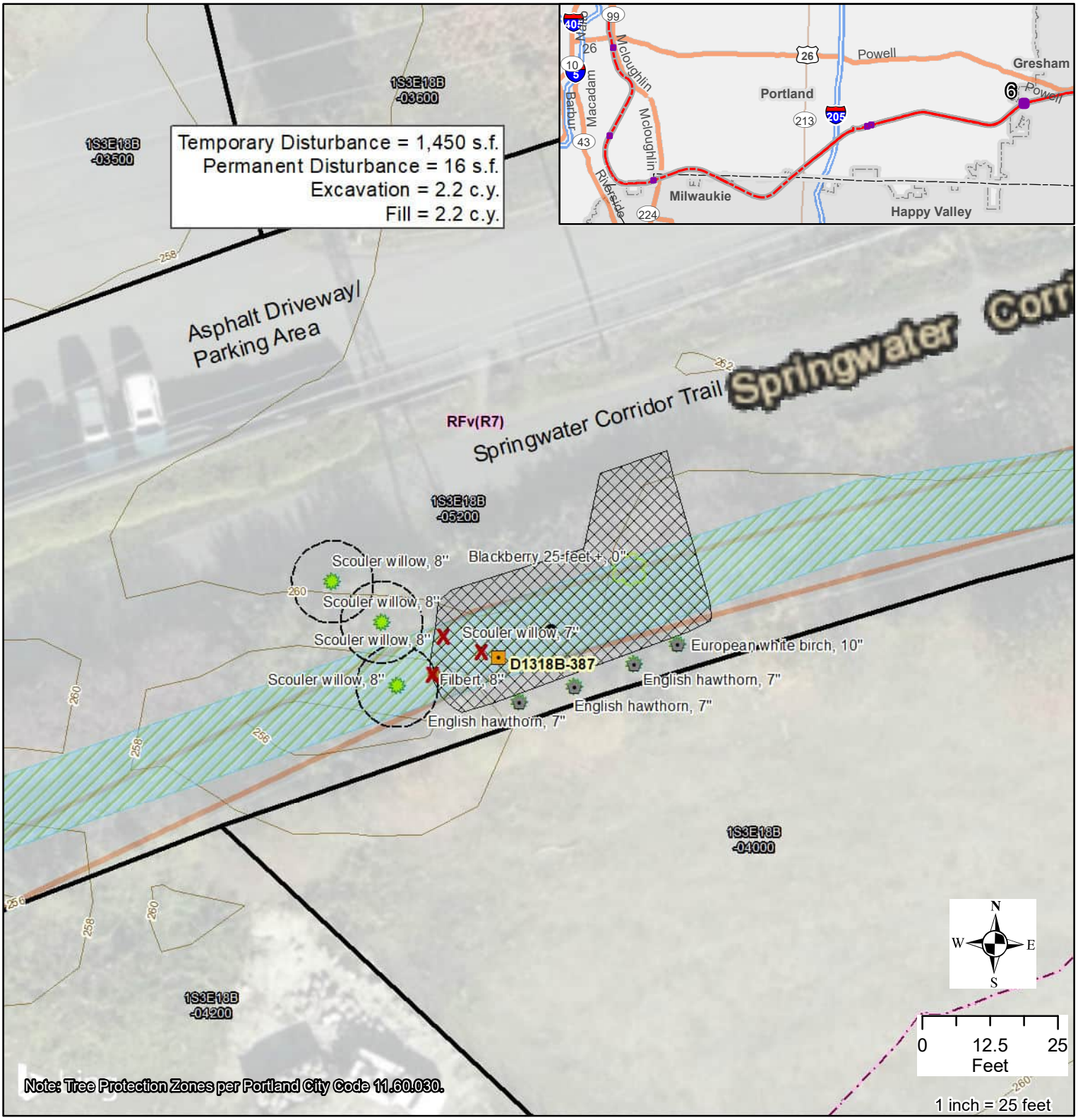
FIGURE 2
Existing Conditions Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

September 2022

AECOM

Exhibit C.1, LU 22-183308 PV



Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Wetland/Water (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Root Protection Zone

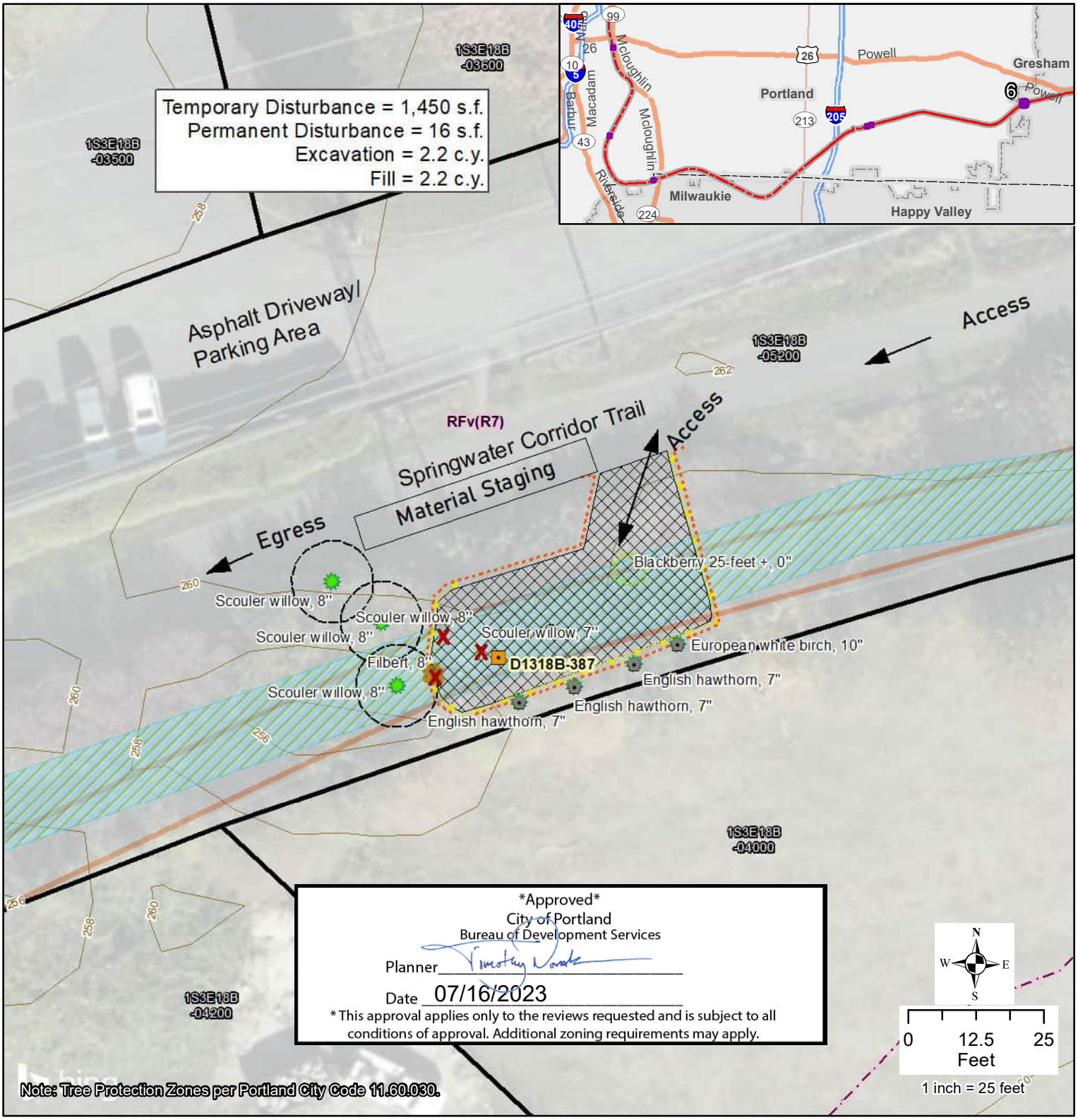
FIGURE 3
Proposed Development Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

September 2022

AECOM

Exhibit C.2, LU 22-183308 PV



Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Contour (2 ft)
- Wetland/Water (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area (boundary to be marked)
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Erosion Control (straw wattle)
- Root Protection Zone
- Construction Fence

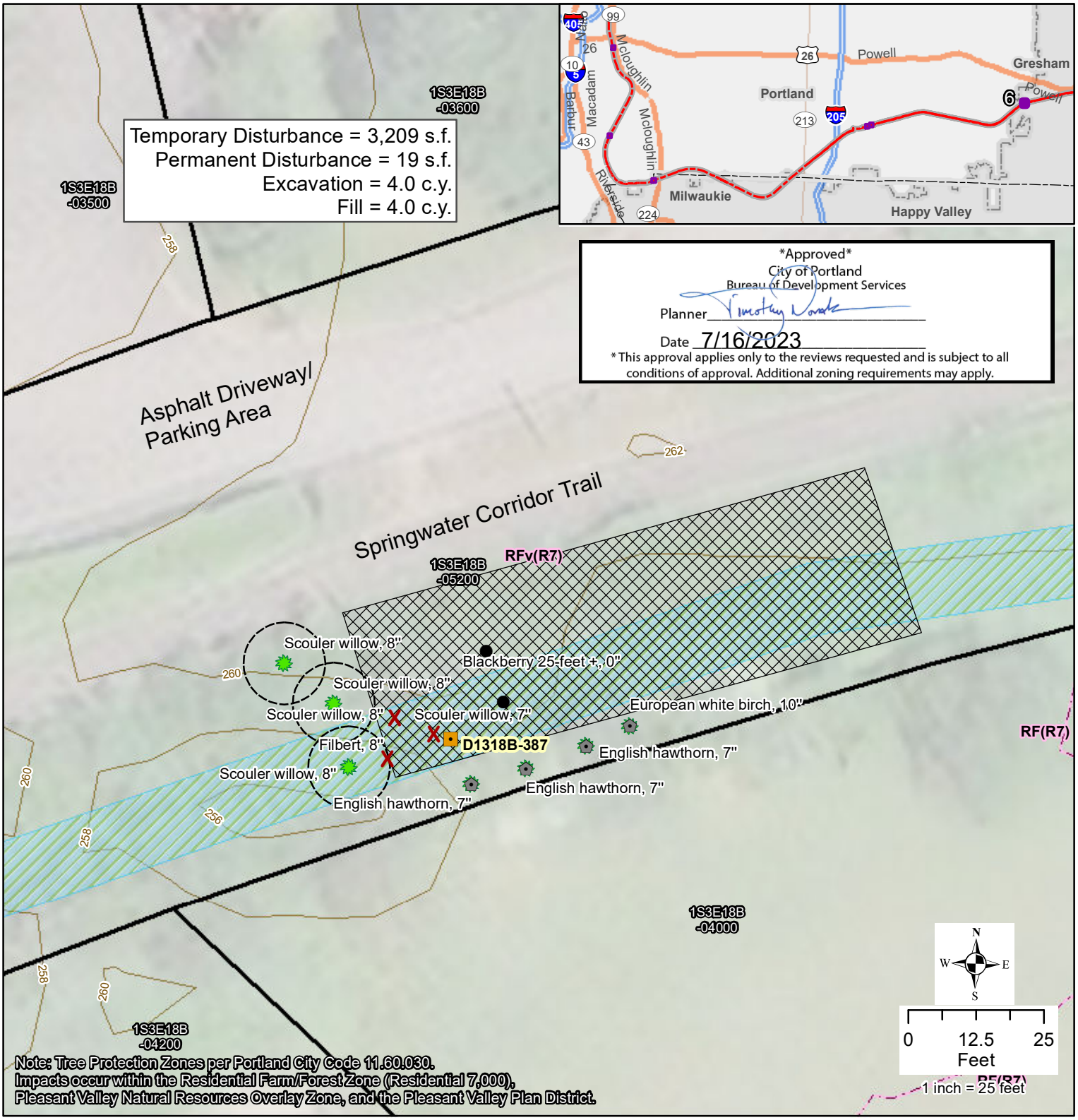
FIGURE 4
Construction Management Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

October 2022

AECOM

Exhibit C.3, LU 22-183308 PV



Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Contour (2 ft)
- Wetland/Water (NWI)
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Root Protection Zone

FIGURE 5
As-Built Disturbance Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

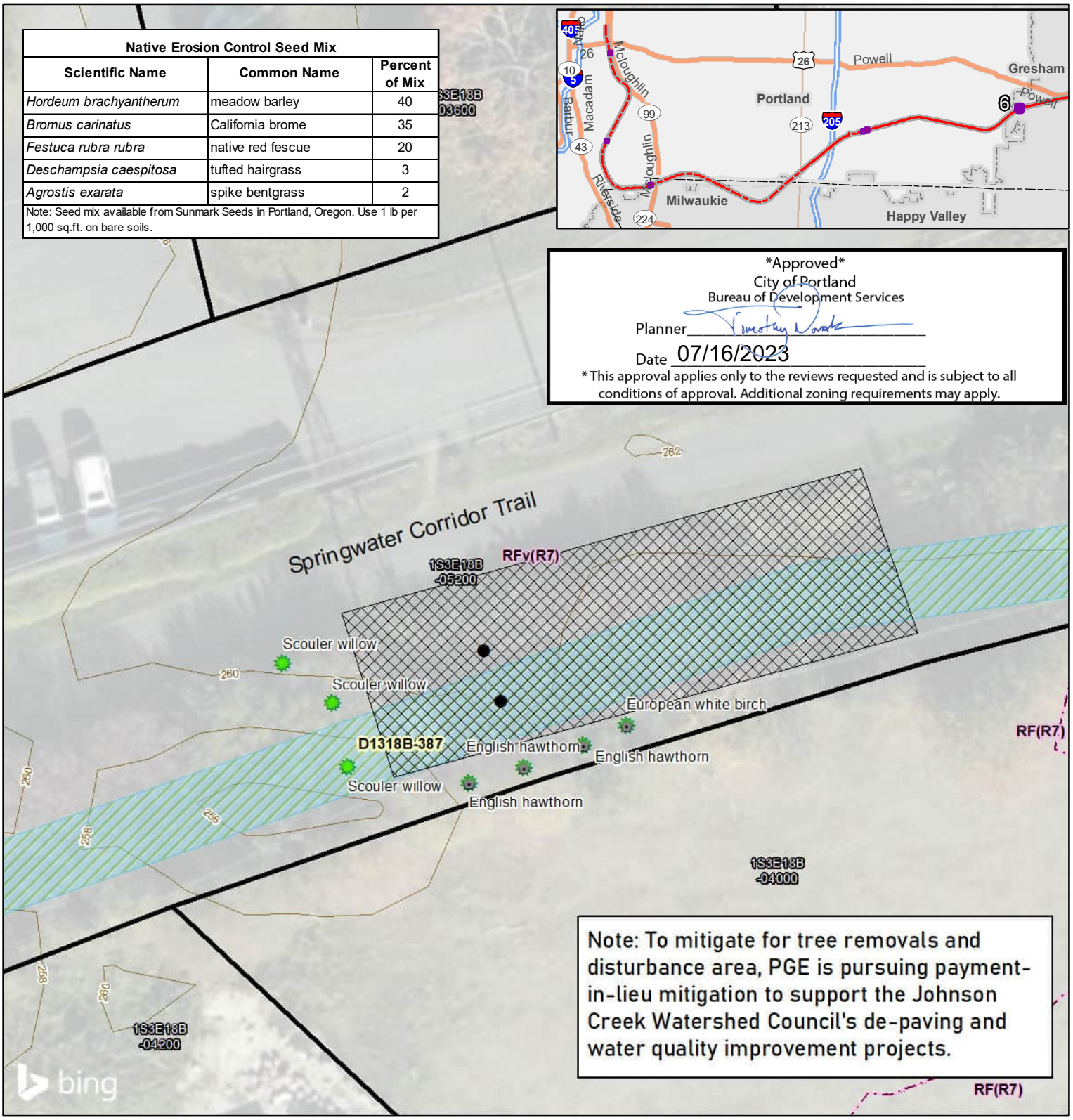
April 2023

AECOM

Exhibit C.4, LU 22-183308 PV

Native Erosion Control Seed Mix		
Scientific Name	**Common Name**	**Percent of Mix**
Hordeum brachyantherum	meadow barley	40
Bromus carinatus	California brome	35
Festuca rubra rubra	native red fescue	20
Deschampsia caespitosa	tufted hairgrass	3
Agrostis exarata	spike bentgrass	2
Note: Seed mix available from Sunmark Seeds in Portland, Oregon. Use 1 lb per 1,000 sq.ft. on bare soils.		

Approved
City of Portland
Bureau of Development Services
Planner Timothy Wood
Date 07/16/2023
* This approval applies only to the reviews requested and is subject to all conditions of approval. Additional zoning requirements may apply.



Note: To mitigate for tree removals and disturbance area, PGE is pursuing payment-in-lieu mitigation to support the Johnson Creek Watershed Council's de-paving and water quality improvement projects.

Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Wetland/Water (NWI)
- New Monopole
- Temporary Work/ Seeding Area
- Preserved Tree
- Tree on Nuisance List

N W E S

0 12.5 25
Feet

1 inch = 25 feet

FIGURE 6
Mitigation Site Plan

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

June 2023

AECOM

Exhibit C.5, LU 22-183308 PV

Trinity Lutheran Church Stormwater Retrofit Project Site Map

Johnson Creek Watershed Council is working with Trinity Lutheran Church to remove impervious pavement and install stormwater retrofits, such as rain gardens. The goal of the project is to help alleviate stormwater runoff and flooding on the property, and to infiltrate a portion of the property's stormwater to reduce stormwater outfall flows and stormwater pollutants making it to Johnson Creek.

Alternative #2, 5/30/23

Legend

- Potential Rain Garden Locations
- Stormwater Runoff Flow Direction
- Flow directing feature
- Existing downspout

Approved
City of Portland
Bureau of Development Services
Planner Timothy Novak
Date 07/16/2023
* This approval applies only to the reviews requested and is subject to all conditions of approval. Additional zoning requirements may apply.

NW Eastman Pkwy

NW Ava Ave

Trinity Lutheran Church

W Powell Blvd

	A	B	C	D	E	F
1	ENDORSEMENT	INFO1	INFO2	NAME	ADDRESS/IO ADDRESS	CITYSTATEZIP/ADDRESSEE
2	RETURN SERVICE REQUESTED		1S3E18B 3000	PORTLAND CITY OF	1120 SW 5TH AVE #858	PORTLAND OR 97204-1912
3	RETURN SERVICE REQUESTED		1S3E18B 3100	PUMPELLY FAMILY TR	5340 SE CIRCLE AVE	PORTLAND OR 97236
4	RETURN SERVICE REQUESTED		1S3E18B 3200	SIDEY MATTHEW E & SIDEY GINGER D	5320 SE CIRCLE AVE	PORTLAND OR 97236
5	RETURN SERVICE REQUESTED		1S3E18B 3400	PORTLAND CITY OF	1900 SW 4TH AVE #7007	PORTLAND OR 97201
6	RETURN SERVICE REQUESTED		1S3E18B 3500	OBRIST FAMILY TR	8102 SE 242ND AVE	GRESHAM OR 97080-7300
7	RETURN SERVICE REQUESTED		1S3E18B 3900	MY NS LLC	5031 SE JENNE RD	PORTLAND OR 97236
8	RETURN SERVICE REQUESTED		1S3E18B 4000	DAVIS POLLY J	5125 SE JENNE RD	PORTLAND OR 97236
9	RETURN SERVICE REQUESTED		1S3E18B 4200	CHA BRUCE A	9459 SE TARNAHAN DR	HAPPY VALLEY OR 97086
10	RETURN SERVICE REQUESTED	1S3E18B 4300	SANCHEZ LAURENCIO CARLOS &	CASAS ELVIRA CATANO	5415 SE JENNE RD	PORTLAND OR 97236-1634
11	RETURN SERVICE REQUESTED		1S3E18B 4400	WYBORNY ANTHONY & WYBORNY AMY	5445 SE JENNE RD	PORTLAND OR 97236
12	RETURN SERVICE REQUESTED		1S3E18B 4500	FRANCES V HYSON TR	5501 SE JENNE LN	PORTLAND OR 97236
13	RETURN SERVICE REQUESTED		1S3E18B 4700	MONTGOMERY JOYCE & STEVEN	5557 SE JENNE LN	PORTLAND OR 97236
14	RETURN SERVICE REQUESTED		1S3E18C 3400	METRO & PORTLAND CITY OF	600 NE GRAND AVE	PORTLAND OR 97232-2736
15	RETURN SERVICE REQUESTED		1S3E18C 3500	MILLER CAREN L & MILLER ROY V	5465 SE CIRCLE AVE	PORTLAND OR 97236-1610
16				CURRENT RESIDENT	5505 SE JENNE LN	PORTLAND OR 97236
17				CURRENT RESIDENT	5509 SE CIRCLE AVE	PORTLAND OR 97236
18				CURRENT RESIDENT	5140 SE CIRCLE AVE #C	PORTLAND OR 97236
19				CURRENT RESIDENT	5140 SE CIRCLE AVE #A	PORTLAND OR 97236
20				CURRENT RESIDENT	5140 SE CIRCLE AVE #B	PORTLAND OR 97236
21	RETURN SERVICE REQUESTED	OWNER	1S3E18A 3400	PORTLAND CITY OF	1221 SW 4TH AVE #130	PORTLAND OR 97204-1900
22	RETURN SERVICE REQUESTED	APPLICANT	PORTLAND GENERAL ELECTRIC COMPANY	ARMSTRONG MEREDITH	121 SW SALMON ST 1 WTC 1302	PORTLAND OR 97204
23	RETURN SERVICE REQUESTED	CONSULTANT	AECOM	CLODFELTER ANDY	888 SW 5TH AVE #600	PORTLAND OR 97204
24	RETURN SERVICE REQUESTED		MIDWAY BUSINESS ASSOCIATION	DAY DAVID	3758 SE 122ND AVE	PORTLAND OR 97236
25	RETURN SERVICE REQUESTED		LAND USE CONTACT	MIDWAY BUSINESS ASSOCIATION	11918 SE DIVISION ST #352	PORTLAND OR 97266
26	RETURN SERVICE REQUESTED		PLEASANT VALLEY NA	MONTGOMERY STEVE	1017 NE 117TH AVE	PORTLAND OR 97220
27	RETURN SERVICE REQUESTED		LAND USE CONTACT	EAST PORTLAND COMMUNITY OFFICE	1120 SW 5TH AVE #114	PORTLAND OR 97204
28	RETURN SERVICE REQUESTED		LAND USE CONTACT	LEACH GARDEN FRIENDS	6704 SE 122ND AVE	PORTLAND OR 97236-5037
29	RETURN SERVICE REQUESTED	LAND USE CONTACT	GRESHAM (CITY BOUNDARY)	CITY OF GRESHAM RON PAPSDORF	1333 NW EASTMAN PARKWAY	GRESHAM OR 97030
30	RETURN SERVICE REQUESTED	LAND USE CONTACT	GRESHAM (CITY BOUNDARY)	CITY OF GRESHAM ANN PYTYNIA	1333 NW EASTMAN PARKWAY	GRESHAM OR 97030
31	RETURN SERVICE REQUESTED		PORTLAND METRO REGIONAL SOLUTIONS	C/O DLCD REGIONAL REPRESENTATIVE	1600 SW FOURTH AVE #109	PORTLAND OR 97201
32	RETURN SERVICE REQUESTED		LAND USE CONTACT	PORT OF PORTLAND PLANNING	PO BOX 3529	PORTLAND OR 97208
33	RETURN SERVICE REQUESTED		LAND USE CONTACT	TRANSIT DEVELOPMENT	1800 SW FIRST AVE #300	PORTLAND OR 97201
34	RETURN SERVICE REQUESTED			PORTLAND PARK TRAIL	TATE WHITE	B106/R1302
35				LAND USE CONTACT	PROSPER PORTLAND	129/PROSPER
36					DAWN KRANTZ	B299/R5000

City of Portland, Oregon
Bureau of Development Services
Land Use Services
FROM CONCEPT TO CONSTRUCTION

Dan Ryan, Commissioner
Rebecca Esau, Director
Phone: (503) 823-7300
Fax: (503) 823-5630
TTY: (503) 823-6868
www.portland.gov/bds

Date: October 12, 2022

To: Interested Person

From: Timothy Novak, Land Use Services
503-823-5395/Timothy.Novak@portlandoregon.gov

NOTICE OF A TYPE II PROPOSAL IN YOUR NEIGHBORHOOD

Development has been proposed in your neighborhood. The proposed development requires a land use review. The proposal, review process, and information on how to respond to this notice are described below. A copy of the site plan and zoning map is attached. I am the staff person handling the case. Please call me if you have questions regarding this proposal. Please contact the applicant if you have questions regarding any future development on the site.

Because we must publish our decision within 28 days, **we need to receive your written comments by 5 p.m. on November 2, 2022**. **Your comments must be e-mailed to the assigned planner listed above;** please include the Case File Number, LU 22-183308 PV, in your e-mail. If you do not have access to e-mail, please telephone the planner listed above about submitting comments. Please note that all correspondence received will become part of the public record.

CASE FILE NUMBER: LU 22-183308 PV
UNINCORPORATED MULTNOMAH COUNTY

Applicant: Meredith Armstrong | *Portland General Electric (PGE) Company*
121 SW Salmon St; 1 Wtc 1302 | Portland, OR. 97204
Meredith.Armstrong@pgn.com | (503) 464-2174

Consultant: Andy Clodfelter | *AECOM*
888 SW 5th Ave #600 | Portland, OR. 97204

Property Owner: City of Portland
1221 SW 4th Ave #130 | Portland, OR. 97204-1900

Site Address: Springwater Corridor, *approximately 475 feet west of SE Jenne Rd and directly south of 5140 SE Circle Ave. Adjacent to the back corner of 5125 SE Jenne Rd.*

Legal Description: TL 5200 4.27 ACRES, SECTION 18 1S 3E
Tax Account No.: R993180830
State ID No.: 1S3E18B 05200
Quarter Section: 3647,3547,3548

Neighborhood: Pleasant Valley, contact Steve Montgomery at foxtrotlove@hotmail.com
Business District: None
District Coalition: East Portland Community Office, contact at info@eastportland.org

Plan District: Johnson Creek Basin & Pleasant Valley

Other Designations: Unincorporated Multnomah County,
Resource Site: Powell-Jenne Valley Subarea, *Pleasant Valley Natural Resources Protection Plan (2004)*

Zoning: Open Space (OS) base zone
Residential Farm/Forest (RF) base zone
Pleasant Valley Natural Resources (v) overlay zone

Case Type: Pleasant Valley Resource Review (PV)
Procedure: Type II, an administrative decision with appeal to the Hearings Officer.

Proposal:
The purpose of the proposed project is to replace a decaying steel lattice tower structure with a new steel monopole along an existing electric transmission line located within the Springwater Corridor.

The proposal indicates that two native Scouler willow trees and one native hazelnut shrub will need to be removed as part of the work; the willow trees are 7-inches and 8-inches in diameter. Access to the Springwater Corridor and the work area is proposed from SE Jenne Rd/SE 174th Ave at the intersection with the Springwater Corridor path.

Certain standards must be met for development in the Pleasant Valley Natural Resources overlay to be allowed outright. In this case, the proposal doesn't meet 33.465.155.B because the disturbance area is more than 15 feet wide. Therefore, a Type II Pleasant Valley Resource Review is required.

PGE has declared and provided supporting documentation that the tower replacement is an emergency procedure. As such, the work proposed has been approved to proceed while this case is under review under 33.465.080.B, which allows for a temporary exemption from the regulations of 33.465 for "emergency procedures necessary for the protection of life, health, safety, or property." Therefore, this review is considered retroactive and will focus on the mitigation of impacts resulting from work. City staff reviewed the construction management plan prior to issuance of the zoning permit for the work to ensure that the construction management proposed minimizes and where possible, avoids impacts to the site's natural resources. It is possible that in the formulation of their mitigation plan, which hasn't yet been submitted, that the applicant may choose an alternative mitigation approach that doesn't meet Standard 33.465.155.F. If so, then the mitigation proposal will also be subject to a Type II Pleasant Valley Resource Review.

Relevant Approval Criteria:
In order to be approved, this proposal must comply with the approval criteria of Title 33. The relevant criteria are:

- 33.465.250.C - Other development in the Pleasant Valley Natural Resources overlay zone;
- 33.645.250.E - Alternative mitigation.

Zoning Code Section *33.700.080* states that Land Use Review applications are reviewed under the regulations in effect at the time the application was submitted, provided that the application is complete at the time of submittal, or complete within 180 days. This application was submitted on September 14, 2022 and determined to be complete on October 5, 2022.

DECISION MAKING PROCESS
The Bureau of Development Services will make a decision on this proposal.
After we consider your comments we will do one of the following:

- Approve the proposal;
- Approve the proposal with conditions; or

- Deny the proposal.

The neighborhood association listed on the first page of this notice may take a position on this application. They may also schedule an open meeting prior to making their recommendation to the Bureau of Development Services. Please contact the person listed as the neighborhood contact to determine the time and date of this meeting.

ORS 227.178 states the City must issue a final decision on Land Use Review applications within 120-days of the application being deemed complete. The 120-day review period may be extended at the request of the applicant.

If you are interested in viewing information in this file, please contact the planner listed on the front of this notice. The planner can email you documents from the file. A fee would be required for all requests for paper copies of file documents. Additional information about the City of Portland, and city bureaus is available online at https://www.portland.gov. A digital copy of the Portland Zoning Code is available online at https://www.portlandoregon.gov/zoningcode.

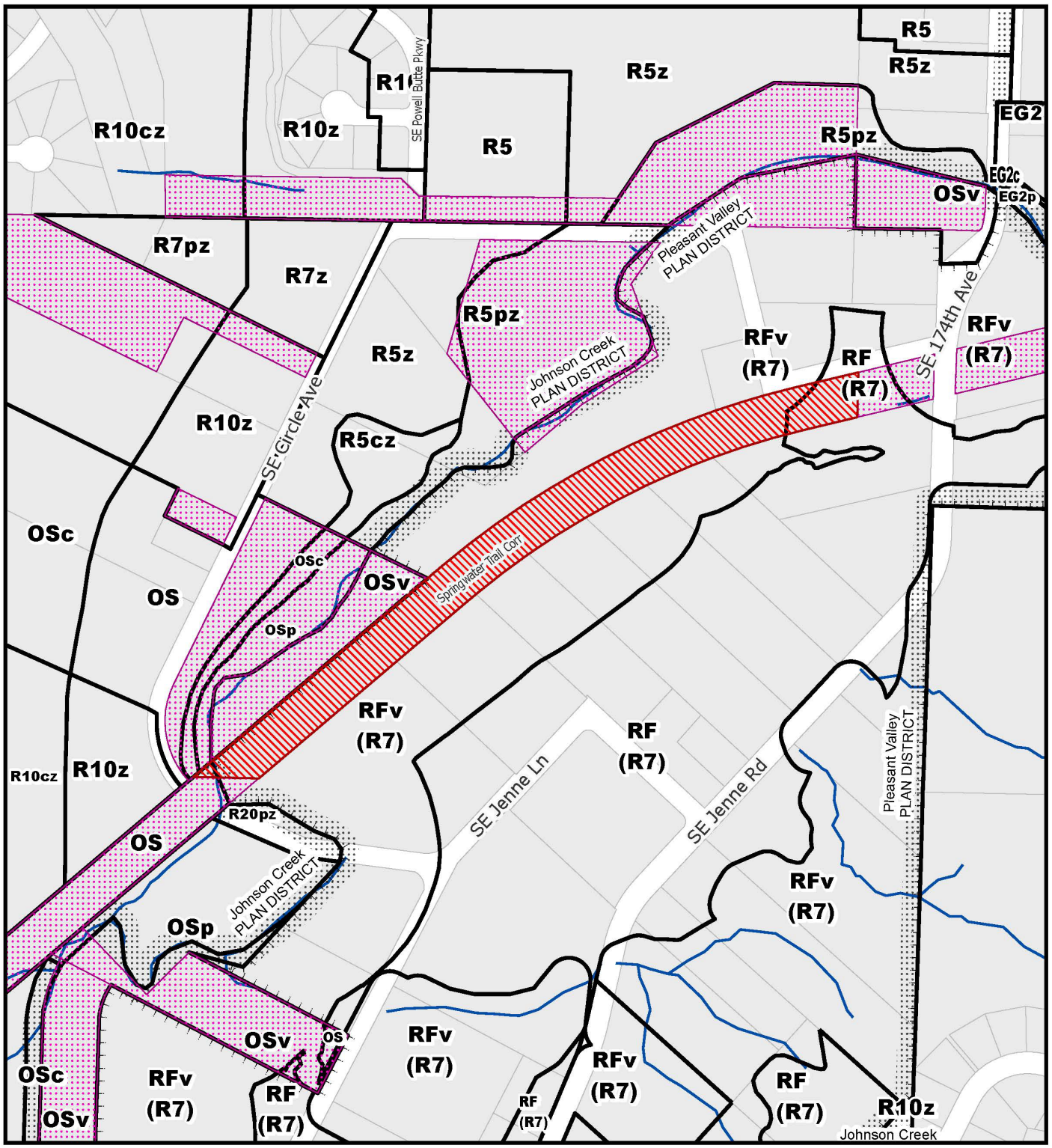
APPEAL PROCESS
If you disagree with the Bureau of Development Services administrative decision, you can appeal the decision to the Hearings Officer. This review body will hold a public hearing for the appeal. When the decision is mailed, the criteria used to make the decision and information on how to file an appeal will be included. If you do not send any comments, you can still appeal the decision. There is a 14-day deadline to file an appeal beginning on the day the decision is mailed. The reason for the appeal must be specifically defined in order for the review body to respond to the appeal. If an appeal is filed, you will be notified of the time and location of the appeal hearing.

Appeal fee waivers. Multnomah County may cover the appeal fees for their recognized associations. An appeal filed by a recognized association must be submitted to the City with either the appropriate fee or the attached form signed by the County. Contact Multnomah County at 503-988-3043, 1600 SE 190th, Portland, OR 97233.

APPEAL OF THE FINAL CITY DECISION
After an appeal hearing, the review body decision may be appealed to the Oregon Land Use Board of Appeals (LUBA) at 775 Summer St NE, Suite 330, Salem, Oregon 97301-1283. The phone number for LUBA is 1-503-373-1265. Issues that may provide the basis for an appeal to LUBA must be raised prior to the comment deadline or prior to the conclusion of the hearing if a local appeal is requested. If you do not raise an issue with enough specificity to give the Bureau of Development Services an opportunity to respond to it, that may also preclude an appeal to LUBA on that issue.

The Bureau of Development Services is committed to providing equal access to information and hearings. Please notify us no less than five business days prior to the event if you need special accommodations. Call 503-823-7300 (TTY 503-823-6868).

Enclosures:
Zoning Map
Site/Construction Management Plan



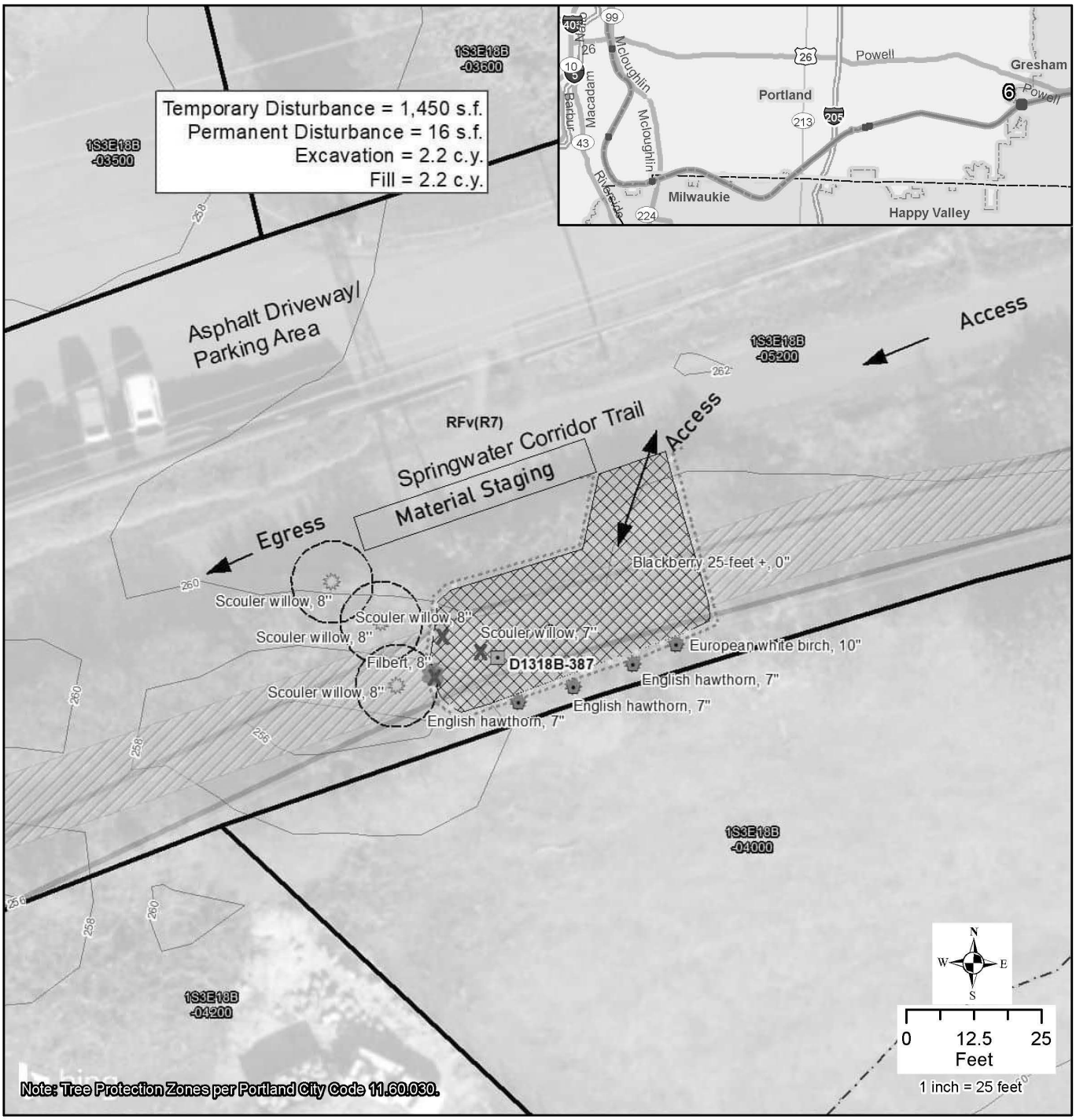
For Zoning Code in effect Post August 1, 2021

ZONING

UNINCORPORATED MULTNOMAH COUNTY
JOHNSON CREEK BASIN
PLEASANT VALLEY PLAN DIST

Site
Also Owned Parcels
Stream

File No.	LU 22 - 183308 PV
1/4 Section	3547,3548,3647
Scale	1 inch =300 feet
State ID	1S3E18B 5200
Exhibit	B Sep 15, 2022



Legend

- Tax Lot
- Zoning
- Contour (2 ft)
- Contour (2 ft)
- Wetland/Water (NWI)
- Existing Milliken Transmission Line
- Immediate Action Tower
- Proposed Monopole
- Temporary Work Area (boundary to be marked)
- Proposed Tree Removal
- Preserved Tree
- Tree on Nuisance List
- Erosion Control (straw wattle)
- Root Protection Zone
- Construction Fence

FIGURE 4
Construction Management Map

PGE - Milliken Immediate Action
Non-Exempt Tower Replacements
City of Portland, Oregon

October 2022

AECOM

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

1120 SW Fifth Avenue, Suite 613, Portland, Oregon 97204 ▪ Mingus Mapps, Commissioner ▪ Michael Jordan, Director

Land Use Response

Date: November 2, 2022
To: Timothy Novak, BDS Land Use Services
503-823-5395, Timothy.Novak@portlandoregon.gov
From: Ella Indarta, BES Systems Development
503-823-8068, Ella.Indarta@portlandoregon.gov
Marc Peters, BES Watershed Review
Case File: LU 22-183308
Location: SPRINGWATER CORRIDOR
R#: R340550
Proposal: The purpose of the proposed project is to replace a decaying steel lattice tower structure with a new steel monopole along an existing electric transmission line located within the Springwater Corridor.

The following comments are based on the land use review plans and documents provided to the Bureau of Environmental Services (BES). Some references to Portland City Code (PCC) are included below; the applicant may also refer to the Auditor's Office Online Charter and Code page.

A. Response Summary

BES does not object to approval of the pleasant valley resource review application. The proposed development will be subject to BES standards and requirements during the permit review process.

B. Sanitary Service

For BES to recommend approval of the pleasant valley resource review application, the applicant must demonstrate that the proposed project will accommodate sanitary disposal facilities that are approvable under PCC 17.32 and that are reflected in the project's proposed disturbance limits. The comments below relate to this requirement.

1. *Existing Sanitary Infrastructure*: According to available GIS data, the following sewer infrastructure is located in the vicinity of the project site:
    a. Public 12-inch CSP sanitary sewer in SE Circle Ave (BES as-built # 3754).
2. *Service Availability*: Sanitary connections from private property that are to be permitted according to PCC 17.32.090 must be separately conveyed to the property line and connected through individual laterals to a City sanitary or combined sewer. All discharge must be connected via a route of service approved by the BES Chief Engineer.
    a. *Proposed Development*: No changes to the sanitary system have been proposed.

BES does not have specific approval criteria related to pleasant valley resource reviews. Staff has provided the above information in order to assist BDS Land Use Services with review of relevant approval criteria and to inform the applicant of sewer requirements that will apply to future development of the site.

C. Stormwater Management

For BES to recommend approval of the pleasant valley resource review application, the applicant must demonstrate that the proposed project will accommodate stormwater management facilities

that are approvable under PCC 17.38 and that are reflected in the project's proposed disturbance limits. The comments below relate to this requirement.

1. *Existing Stormwater Infrastructure*: According to available GIS data, the following stormwater infrastructure is located in the vicinity of the project site:
    a. There are no public storm-only sewers available to this property.
2. *Private Property Stormwater Management*: Stormwater runoff from this project must comply with all applicable standards of the SWMM and be conveyed to a discharge point along a route of service approved by the BES Director or the Director's designee.
    a. From the submitted site plans, it appears that the proposed project will add or redevelop less than 500 square feet of impervious area. Therefore, stormwater management requirements of the SWMM are not triggered. Because the proposed redevelopment is less than 500 square feet, stormwater from the addition can be directed into the existing storm system if it has available capacity and is in adequate condition.
3. *Public Right-of-Way Stormwater Management*: Stormwater runoff from public right-of-way improvements as required by the City of Portland Bureau of Transportation (PBOT) must be managed according to the standards of the SWMM and the Sewer and Drainage Facilities Design Manual. There are no public right-of-way improvements that will trigger BES public stormwater drainage improvements.

BES does not have specific approval criteria related to pleasant valley resource reviews. Staff has provided the above information in order to assist BDS Land Use Services with review of relevant approval criteria and to inform the applicant of stormwater management requirements that will apply to future development of the site.

D. SITE CONSIDERATIONS

The following information relates to specific site conditions or features that may impact the proposed project.

1. *Plantings*: Portland's Zoning Code (33.248) includes specific requirements for mitigation and restoration plantings, including that the plant materials must be native and selected from the Portland Plant List. Where mitigation and/or restoration plantings are not required, BES still recommends the use of native plants to help stabilize soils and minimize erosion.
2. *Mature Trees*: The site contains mature trees which are beneficial because they intercept at least 30% of precipitation that falls on the canopy, filter stormwater, help prevent erosion, and provide shade which cools the air and stormwater runoff. Trees also increase property values and help support Portland's adaptation to climate change. It is difficult to mitigate for the removal of mature trees as it can take decades for new trees to provide equivalent benefits. BES recommends that future development at this site include measures to preserve as many of the site's existing trees as possible. Financial incentives for existing trees taller than 15 feet on private property may be available for ratepayers who register with Clean River Rewards, the City's stormwater discount program. Call 503-823-1371 for more information.
3. *Nesting Birds*: BES recommends that the applicant avoid disturbance (i.e. tree removal) between primary nesting season, April 15 – July 31. If tree removal is necessary during this time, it is recommended that the applicant survey the trees slated for removal for signs of nesting. If an active nest is found (one with eggs or young), it is recommended that the applicant avoid removing it until the young have fledged. Information on avoiding impacts on nesting birds can be found in BES's Terrestrial Ecology Enhancement Strategy guidance document. Additional information can be found in the City's Resource Guide for Bird-friendly Building Design.
4. *100-Year Floodplain*: This site is located in or near the delineated 100-year floodplain. The 100-year floodplain boundary is an estimate based on the best available data. BES

recommends that the applicant coordinate with BDS Site Development for related requirements that may apply to this site.

5. *Natural Resource Inventory:* Natural resources at this site were identified in the City of Portland's Natural Resource Inventory, an inventory of locally significant riparian corridors and wildlife habitat. Specified resources and functions include the following:

   To protect the natural functions provided by these resources, BES recommends that the applicant minimize site disturbance and replant disturbed areas with native vegetation. Doing so will help minimize erosion, protect slope stability, and restore lost functions.

6. *Slope Information*: This site is steeply sloped (>20%); therefore, BES recommends that slope stability be carefully considered in all aspects of site development. This may include strategies such as replanting disturbed areas with native plants to help stabilize soils and minimize erosion, and placing stormwater facilities in areas that will protect slope stability.

7. *Soil Information*: Cascade silt loam soils predominate in this area. Cascade soils have an under layer (substratum) of dense silt loam (fragipan) that can restrict water flow. This type of soil is moderately- to poorly-drained and can become saturated during the rainy season, resulting in surface runoff, erosion, and landslides. To minimize these effects and to protect slope stability, BES recommends that native plants be planted on disturbed areas.

E. CONDITIONS OF APPROVAL

BES has no recommended conditions of approval.

G. ADMINISTRATIVE REVIEW

The applicant may request a modification of a decision presented in this response, as applicable, via an administrative review as outlined in PCC sections 17.06.050, 17.32.150, 17.33.100, 17.34.115, 17.36.110, 17.38.060 and 17.39.120 and in those sections' associated administrative rules. Some portions of this response are not decisions, but guidance related to requirements that this proposal may be subject to during City review of other processes, such as a building permit or public works permit review. While these are not decisions that are ripe to be considered through an administrative review, if the outcome of a future administrative review needs to be anticipated at this time in order to inform the land use action, the administrative review process may be utilized. Some items, such as technical standards, are not reviewable. For guidance on whether a modification can be requested and whether the land use process is the proper time to request it, consult with the BES staff identified above prior to submitting a request.

There is no fee charged for an administrative review, and all BES penalties and late fees will be stayed pending the outcome of the review process, as applicable. To request an administrative review, the applicant must complete the Administrative Review Request Form (located here: www.portlandoregon.gov/bes/68285) and submit it to the Systems Development staff listed above within 20 business days of the mailing date of this response. The applicant should coordinate with the BDS planner to determine whether applying for an administrative review would have an impact on state-mandated land use timelines.

PBOT
PORTLAND BUREAU OF TRANSPORTATION
1900 SW Fourth Ave., Suite 5000 Portland, OR 97201 503-823-5185
Fax 503-823-7576 TTY 503-823-6868 www.portlandoregon.gov/transportation
Jo Ann Hardesty Commissioner Chris Warner Director

RESPONSE TO THE BUREAU OF DEVELOPMENT SERVICES
LAND USE REVIEW REQUEST

Portland Transportation
Development Review
Bureau of Transportation Engineering & Development

LU: 22-183308-000-00-LU Date: October 31, 2022

To: Timothy Novak, Bureau of Development Services, B299/R5000

From: Michael Pina, B106/800, 503-823-4249

Applicant: Meredith Armstrong, PORTLAND GENERAL ELECTRIC COMPANY
121 SW SALMON ST; 1 WTC 1302
PORTLAND, OR 97204

Location: SE JENNE RD

TYPE OF REQUEST: Type 2 procedure PV - Pleasant Valley Resources Review

DESCRIPTION OF PROJECT

The purpose of the proposed project is to replace a decaying steel lattice tower structure with a new steel monopole along an existing electric transmission line located within the Springwater Corridor. The proposal indicates that two native Scouler willow trees and one native hazelnut shrub will need to be removed as part of the work; the willow trees are 7-inches and 8-inches in diameter. Access to the Springwater Corridor and the work area is proposed from SE Jenne Rd/SE 174th Ave at the intersection with the Springwater Corridor path. Certain standards must be met for development in the Pleasant Valley Natural Resources overlay to be allowed outright. In this case, the proposal doesn't meet 33.465.155.B because the disturbance area is more than 15 feet wide. Therefore, a Type II Pleasant Valley Resource Review is required. PGE has declared and provided supporting documentation that the tower replacement is an emergency procedure. As such, the work proposed has been approved to proceed while this case is under review under 33.465.080.B, which allows for a temporary exemption from the regulations of 33.465 for "emergency procedures necessary for the protection of life, health, safety, or property." Therefore, this review is considered retroactive and will focus on the mitigation of impacts resulting from work. City staff reviewed the construction management plan prior to issuance of the zoning permit for the work to ensure that the construction management proposed minimizes and where possible, avoids impacts to the site's natural resources. It is possible that in the formulation of their mitigation plan, which hasn't yet been submitted, that the applicant may choose an alternative mitigation approach that doesn't meet Standard 33.465.155.F. If so, then the mitigation proposal will also be subject to a Type II Pleasant Valley Resource Review.

RESPONSE

Portland Transportation/Development Review has reviewed the application for its potential impacts regarding the public right-of-way, traffic impacts and conformance with adopted policies, street designations, Title 33, Title 17, and for potential impacts upon transportation services.

Pleasant Valley Resource Review Approval Criteria (33.465.250.C)
There are no applicable transportation-related approval criteria associated with the proposed Pleasant Valley Resource Review. The proposed monopile does not propose to modify or alter any established driveways, nor affects the transportation system in the abutting Rights-of-Way (ROW). Accordingly, PBOT has no objections to this request.

RECOMMENDATION
PBOT has no objection to the Pleasant Valley Resource Request.

2022 183308 000 00 LU Land Use Review **Pending**

Back To List

+ Land Use Review (5)
+ Site Development (1)
+ Life Safety (1)
+ Fire Bureau (1)
+ Environmental Services (3)
+ Transportation (1)
– Water Bureau Review (1)

Water Review - LU
No concerns

+ Status Change (4)

General | Memo(1) | Deficiency | Attachment

Attempt +Attempt Checklist Info

Water Review - LU (20055) No concerns SPRINGWATER CORRIDOR , GRESHAM, Oregon, 97236, USA

Team
Team

Assigned User
Puckett,Michael

Baseline Start Date
Oct 12, 2022 12:37:39

Baseline En
Nov 02, 202

To Start
Oct 12, 2022 12:37:39

To End
Nov 02, 2022 12:37:39

Sign Off User
Puckett,Michael

Discipline
OPDR

Started
Oct 25, 2022 15:19:59

Ended
Oct 25, 2022 15:20:04

Created By

Reference
Reference

People
People

Last Modified By
Puckett,Michael

Display Order
640

Inspection Number
Inspection Number

Last Modified
Oct 25, 2022 15:20:04

Comments
Comments

2022 183308 000 00 LU Land Use Review Pending

Back To List

+ Land Use Review (5)
+ Site Development (1)
+ Life Safety (1)
– Fire Bureau (1)

Fire Review - LU
No concerns

+ Environmental Services (3)
+ Transportation (1)
+ Water Bureau Review (1)
+ Status Change (4)

General | Memo(1) | Deficiency | Attachment

Attempt +Attempt Checklist Info

Optio

Fire Review - LU (20105) No concerns SPRINGWATER CORRIDOR , GRESHAM, Oregon, 97236, USA

Team
Team

Assigned User
Krantz,Dawn

Baseline Start Date
Oct 12, 2022 12:37:39

Baseline End Date
Nov 02, 2022 12:37:3

To Start
Oct 12, 2022 12:37:39

To End
Nov 02, 2022 12:37:39

Sign Off User
Krantz,Dawn

Discipline
OPDR

Started
Oct 27, 2022 11:27:46

Ended
Oct 27, 2022 11:28:09

Created By

Reference
Reference

People
People

Last Modified By
Krantz,Dawn

Display Order
660

Inspection Number
Inspection Number

Last Modified
Oct 27, 2022 11:28:09

Comments
Comments

City of Portland, Oregon
Bureau of Development Services
Site Development
FROM CONCEPT TO CONSTRUCTION

Carmen Rubio, Commissioner
Rebecca Esau, Director
Phone: (503) 823-7300
TTY: 711
www.portland.gov/bds

Land Use Review Response
Site Development Section, BDS

To:	Timothy Novak, LUR Division
From:	Kevin Wells, Site Development (503-823-5618)
Location/Legal:	TL 5200 4.27 ACRES, SECTION 18 1S 3E
Land Use Review:	LU 22-183308
Proposal:	The purpose of the proposed project is to replace a decaying steel lattice tower structure with a new steel monopole along an existing electric transmission line located within the Springwater Corridor. The proposal indicates that two native Scouler willow trees and one native hazelnut shrub will need to be removed as part of the work; the willow trees are 7-inches and 8-inches in diameter. Access to the Springwater Corridor and the work area is proposed from SE Jenne Rd/SE 174th Ave at the intersection with the Springwater Corridor path. Certain standards must be met for development in the Pleasant Valley Natural Resources overlay to be allowed outright. In this case, the proposal doesn't meet 33.465.155.B because the disturbance area is more than 15 feet wide. Therefore, a Type II Pleasant Valley Resource Review is required. PGE has declared and provided supporting documentation that the tower replacement is an emergency procedure. As such, the work proposed has been approved to proceed while this case is under review under 33.465.080.B, which allows for a temporary exemption from the regulations of 33.465 for ¿emergency procedures necessary for the protection of life, health, safety, or property. Therefore, this review is considered retroactive and will focus on the mitigation of impacts resulting from work. City staff reviewed the construction management plan prior to issuance of the zoning permit for the work to ensure that the construction management proposed minimizes and where possible, avoids impacts to the site¿s natural resources. It is possible that in the formulation of their mitigation plan, which hasn¿t yet been submitted, that the applicant may choose an alternative mitigation approach that doesn¿t meet Standard 33.465.155.F. If so, then the mitigation proposal will also be subject to a Type II Pleasant Valley Resource Review.
Quarter Sec. Map:	3647,3547,3548
Date:	November 2, 2022

Development section of the Bureau of Development Services (BDS) has reviewed the land use application materials to identify potential development issues and requirements. The following is a summary of issues and requirements that may impact the project or are submittal requirements for building permit review.

Response Summary
Site Development does not object to the proposed project.

Site Conditions
Topography: The site is gently sloping. Site Development does not anticipate significant grading to facilitate the proposed improvements.

Potential Landslide Hazard Area: The site is not in a Landslide Hazard Area.

Flood Hazards: The site is not in a FEMA or City of Portland Flood Hazard Area.

Conditions of Approval
Site Development does not request conditions of approval.

City of Portland, Oregon - Bureau of Development Services

1900 SW Fourth Avenue • Portland, Oregon 97201 | 503-823-7300 | www.portland.gov/bds

To: Timothy Novak
From: Tara Carlson, Life Safety Plans Examiner
Date: October 27, 2022
RE: SPRINGWATER CORRIDOR, 22-183308-LU

LIFE SAFETY PLAN REVIEW RESPONSE

The following comments are based on the plans and documents provided to the Life Safety Plan reviewer. They are intended to provide the applicant with preliminary Building Code information that could affect the Land Use Review, Public Records request and/or future Building Permit reviews. The comments may not identify all conflicts between the Land Use proposal and the Building Codes. A complete Life Safety plan review will be provided at the time of Building Permit submittal at which time any additional Building Code issues will be noted. The comments are based on the Oregon Structural Specialty Code (OSSC), the International Existing Building Code (IEBC), the Oregon Mechanical Specialty Code (OMSC), or the Oregon Residential Specialty Code (ORSC).

RESPONSE SUMMARY

☒ Life Safety Plan Review does not object to the approval of this proposal. The applicant should be aware that several building code requirements may impact the final design of this building. For information regarding future compliance, see the **GENERAL LIFE SAFETY COMMENTS** below.

☐ Life Safety Plan Review does not object to the approval of this proposal. This approval is conditional on the finalization of the property line adjustment approved through this LUR/PR. If this public record is not finalized, a Covenant Not to Sell the Properties Separately must be established for this project. For information regarding future compliance, see the **GENERAL LIFE SAFETY COMMENTS** below.

☐ Life Safety Plan Review does not object to the approval of this proposal. Prior to Life Safety approval of the final plat or Land Use proposal, the applicant must address the Building Code issues listed as part of the **GENERAL LIFE SAFETY COMMENTS** below.

☐ Life Safety Plan Review cannot support approval of the current Land Use proposal. Prior to Life Safety approval of the final plat, the applicant must address the Building Code issues listed as part of **the GENERAL LIFE SAFETY COMMENTS** below.

Item #	GENERAL LIFE SAFETY COMMENTS
1	**Building Permit Required -** A separate Building Permit is required for the work proposed and the proposal must be designed to meet all applicable building codes and ordinances. Information about submitting a permit application request is available online at https://www.portland.gov/bds/permit-review-process/apply-or-pay-permits.

Wetland Land Use Notice Response

Response Page

Department of State Lands (DSL) WN# *

WN2022-0688

Responsible Jurisdiction

Staff Contact	Jurisdiction Type	Municipality
Tyler Mann	City	portland

Local case file #	County
22-154065 ZP	Multnomah

Activity Location

Township	Range	Section	QQ section	Tax Lot(s)
01S	03E	18	B	5200

Street Address

Near SE Circle Ave & SE Jenne Rd

Address Line 2

City	State / Province / Region
Pleasant Valley	OR

Postal / Zip Code	Country
97236	Multnomah

Latitude	Longitude
45.485030	-122.486972

Wetland/Waterway/Other Water Features

- [x] There are/may be wetlands, waterways or other water features on the property that are subject to the State Removal-Fill Law based upon a review of wetland maps, the county soil survey and other available information.

- [x] The National Wetlands Inventory shows wetland, waterway or other water features on the property

Your Activity

- [x] It appears that the proposed project **may** impact wetlands and **may** require a State permit.

Applicable Oregon Removal-Fill Permit Requirement(s)

☑ A state permit is required for 50 cubic yards or more of fill removal or other ground alteration in wetlands, below ordinary high water of waterways, within other waters of the state, or below highest measured tide.

Closing Information

Additional Comments

Based on the submitted site plan, it appears that the proposed project may impact a ditch. Additional information would be needed to determine if this ditch is state jurisdictional.

However, Figure 4 of the plan set appears to indicate that the project involves less than 50 cy of disturbance. As long as the project does not exceed this threshold, a Removal-Fill permit is not required and a wetland delineation is not needed. If cumulative temporary & permanent impacts to the ditch are close to the 50 cy threshold or over, it is recommended that you reach out to Melinda Butterfield to confirm that a permit is not required.

This is a preliminary jurisdictional determination and is advisory only.

This report is for the State Removal-Fill law only. City or County permits may be required for the proposed activity.

Contact Information

- For information on permitting, use of a state-owned water, wetland determination or delineation report requirements please contact the respective DSL Aquatic Resource, Proprietary or Jurisdiction Coordinator for the site county. The current list is found at: http://www.oregon.gov/dsl/ww/pages/wwstaff.aspx
- The current Removal-Fill permit and/or Wetland Delineation report fee schedule is found at: https://www.oregon.gov/dsl/WW/Documents/Removal-FillFees.pdf

Response Date

8/4/2022

Response by:

Jessica Salgado

Response Phone:

541-388-6421

City of Portland, Oregon - Bureau of Development Services

1900 SW Fourth Avenue • Portland, Oregon 97201 | 503-823-7300 | www.portland.gov/bds

Land Use Review Application

File Number:

FOR INTAKE, STAFF USE ONLY

Date Rec _____ by _____

❑ Type I ❑ Type Ix ❑ Type II ❑ Type IIx ❑ Type III ❑ Type IV

LU Reviews _____

[Y] [N] Unincorporated MC

[Y] [N] Flood Hazard Area (LD & PD only)

[Y] [N] Potential Landslide Hazard Area (LD & PD only)

[Y] [N] 100-year Flood Plain [Y] [N] DOGAMI

Qtr Sec Map(s) _____ Zoning _____

Plan District _____

Historic and/or Design District _____

Neighborhood _____

District Coalition _____

Business Assoc _____

Related File # _____

APPLICANT: Complete all sections below that apply to the proposal. Please print legibly.
Email this application and supporting documents to: LandUseIntake@portlandoregon.gov

Development Site Address or Location Adjacent to Springwater Corridor Trail (45.48499°N, -122.487044°W)

Cross Street SE Circle Ave. and Springwater Trail **Sq. ft./Acreage** 1450 sq. ft.

Site tax account number(s)

R R340550 (1S3E18B-5200) **R** _____ **R** _____

R _____ **R** _____ **R** _____

Describe project (attach additional page if necessary)

See attached

Describe proposed stormwater disposal methods

Not applicable. No impervious surface is proposed.

Identify requested land use reviews

Type II Pleasant Valley Resource Review per City correspondence confirming this review process on September 7, 2022.

- **Design & Historic Reviews -** For **new development**, provide project valuation. $ N/A
  For **renovation**, provide exterior alteration value. $ N/A
  AND provide total project valuation. $ N/A
- **Land Divisions -** Identify number of lots (include lots for existing development). N/A
  New street (public or private)? ❑ yes ☑ no
- **Affordable Housing -** For buildings containing five or more dwelling units, will 50% or more of the units be affordable to households with incomes equal to or less than 60% of the median family income for the county or state, whichever is greater? ❑ yes ❑ no ☑ N/A

continued / over

Applicant Information

- Identify the primary contact person, applicant, property owner and contract purchaser. Include any person that has an interest in your property or anyone you want to be notified. Information provided, including telephone numbers and e-mail addresses, will be included in public notices.
- For all reviews, the applicant must sign the Responsibility Statement.
- For land divisions, all property owners must sign the application.

PRIMARY CONTACT:

Typed Full Name Meredith Armstrong ☑ I acknowledge this typed name as my signature

Company/Organization Portland General Electric Company

Mailing Address 121 SW Salmon St; 1 WTC 1302

City Portland State OR Zip Code 97204

Day Phone 503-464-2174 FAX _____ email Meredith.armstrong@pgn.com

Check all that apply ☑ Applicant ☐ Owner ☐ Other

Typed Full Name Andy Clodfelter ☑ I acknowledge this typed name as my signature

Company/Organization AECOM

Mailing Address 888 SW 5th Ave, Suite 600

City Portland State OR Zip Code 97204

Day Phone 971-323-6277 FAX _____ email andy.clodfelter@aecom.com

Check all that apply ☐ Applicant ☐ Owner ☑ Other Consultant

Typed Full Name _____ ☐ I acknowledge this typed name as my signature

Company/Organization _____

Mailing Address _____

City _____ State _____ Zip Code _____

Day Phone _____ FAX _____ email _____

Check all that apply ☐ Applicant ☐ Owner ☐ Other

Typed Full Name _____ ☐ I acknowledge this typed name as my signature

Company/Organization _____

Mailing Address _____

City _____ State _____ Zip Code _____

Day Phone _____ FAX _____ email _____

Check all that apply ☐ Applicant ☐ Owner ☐ Other

Responsibility Statement As the applicant submitting this application for a land use review, I am responsible for the accuracy of the information submitted. The information being submitted includes a description of the site conditions. I am also responsible for gaining the permission of the owner(s) of the property listed above in order to apply for this review and for reviewing the responsibility statement with them. If the proposal is approved, the decision and any conditions of the approval must be recorded in the County Deed Records for the property. The City of Portland is not liable if any of these actions are taken without the consent of the owner(s) of the property. In order to process this review, City staff may visit the site, photograph the property, or otherwise document the site as part of the review. I understand that the completeness of this application is determined by the Director. By my signature, I indicate my under-standing and agreement to the Responsibility Statement.

Name of person submitting this application agrees to the above Responsibility Statement and acknowledges typed name as signature:

Meredith Armstrong Date: 9-14-22

Phone number: 503-464-2174

Email this application and supporting documents to LandUseIntake@portlandoregon.gov

Submittal of locked or password protected documents will delay intake of your application.

Portland General Electric
121 SW Salmon Street · Portland, Ore. 97204

Office of Larry Bekkedahl
Senior Vice President
Advanced Energy Delivery
Portland General Electric Company
Larry.Bekkedahl@pgn.com

August 30, 2022

Via U.S. First-Class Mail
Via Electronic Mail

Commissioner Dan Ryan
Portland City Hall
1221 SW Fourth Avenue, Suite 240
Portland, OR 97204
Dan.Ryan@portlandoregon.gov

and

Director Rebecca Esau, Bureau of Development Services
Portland City Hall
1221 SW Fourth Avenue, Suite 240
Portland, OR 97204
Rebecca.Esau@portlandoregon.gov

Subject: Request for an Emergency Declaration

Dear Commissioner Ryan and Director Esau,

The purpose of this communication is to request an Emergency Declaration for 5 of PGE's Milliken Towers. This declaration from the City is necessary to allow PGE to make urgent repairs to these 5 structures, within the permitting jurisdiction of the City of Portland, which are failing and pose a threat to public safety if they are not replaced before the upcoming storm season. A concurrent request is being submitted to the U.S. Army Corps of Engineers (USACE), as it too has permitting authority over 4 of the 5 structures within the City of Portland's jurisdiction, and over 8 other structures that are outside the City's jurisdiction. The City of Gresham will also be receiving a request for an Emergency Declaration regarding 14 similarly situated towers that are within their jurisdiction. Although PGE submitted its land use applications, land use review narratives, and plan sets to obtain the necessary approvals from Portland and Gresham, it does not appear that those permits will be issued until early next year, well into the storm season, hence, the need for emergency declarations now.

PGE owns and operates the transmission line commonly referred to as the Milliken Towers that runs along the Springwater Corridor. Many of these towers are up to 100 years old. While PGE has been able to secure permits for repairs on some structures and/or been able to implement repairs without permits, a total of 19 remaining structures (still pending permitting) have been identified as having critical damage, meaning the damage is severe enough to threaten the ongoing serviceability and integrity of the structures. PGE's engineers have advised me that these 19 towers need to be replaced before the upcoming storm season.

It is also worthy of note that, because many of the Milliken Towers run parallel to the Springwater Corridor Trail, it is not uncommon to have heavy pedestrian traffic on and around the trail, including below most of the 19 towers that are compromised. Consequently, PGE believes these towers present a threat to public safety and they cannot reasonably be expected to withstand another storm season. As such, an emergency declaration is necessary, and it appears to be the only appropriate option to allow the towers to be promptly replaced prior to completion of the permitting processes, to mitigate the risk to life and property that these towers pose in the vicinity of the Springwater Corridor Trail. Trail closures are likely to last between 7 days and five weeks, with each of eight individual segments re-opening after PGE replaces the tower(s) within. Crews will work 7 days/week from approximately 7 am-7 pm to help hasten trail re-openings.

Attached to this end of this letter is some additional background information about how the condition of the towers was verified and the permitting processes that have been underway since last year. I have also attached photos of the damage observed on each of the 5 towers that are the subject of this request, and a simple table showing each of the 19 towers to be replaced, the local jurisdiction where permitting is pending, those towers where USACE is also involved, and the specific locations and length of closure (in miles), where applicable, of the trail beneath each of the towers.

I hope that I have adequately conveyed the concern we, at PGE, have for the safety of the public and the sense of urgency we feel about the need to replace these towers as soon as possible. Thank you in advance for your consideration of this request and your cooperation in allowing us to mitigate the risks posed by these towers as we concurrently persevere in our efforts to satisfy all necessary permitting requirements. If you have any questions about this matter, please contact Matt Gordanier, Manager T&D Line Design Engineering, in PGE's T&D Line Engineering Department at (503) 736-5724 or via email at Matt.Gordanier@pgn.com

Sincerely,

Larry Bekkedahl
Senior Vice-President, Advanced Energy Delivery

CC: Karen Guillen-Chapman: karen.guillen-chapman@portlandoregon.gov
Dylan Paul: dylan.paul@portlandoregon.gov
Stephanie Beckman: Stephanie.Beckman@portlandoregon.gov

Dan -
Please call me if you have any questions.
Jim

Background and Additional Supporting Information for this Request

How the condition of the towers was verified

PGE's Line Design Engineering group commissioned a third-party investigation of its Milliken Towers. The third-party vendor utilized industry standards and applicable experiences to assess the below-ground condition of the Milliken Towers. The investigation involved exposing the below ground transition-zone of each tower to a 3-foot depth below-grade. Steel damage/corrosion was observed and assessed via measurements and visual indicators to determine a relative condition rating for each structure. The 19 structures that PGE plans to replace on an emergency basis all contain at least one main structural element with critical damage; "main structural element" refer to a tower's legs that support the entirety of the tower body.

To help visual the severity of the damage, I have included an attachment to this request that contains images depicting the damage observed on each of the 5 structures, within the City of Portland's jurisdiction, that we are planning to replace. These images were taken by one of two independent third parties, either AMPJACK or OSMOSE, to document the condition of each of the towers. All 19 compromised towers will be replaced by line crews that have been specially hired for this effort.

Permitting requirements; status of permitting

After reviewing the findings made by the third-party vendor, PGE initially assumed that all repairs of the towers would constitute "maintenance" within the existing easement--an action that is typically compatible with the underlying land use regulations. However, upon requesting the Land Use Compatibility statements (LUCs) from Portland, Gresham, and Clackamas County, PGE learned that the local governments disagreed with PGE's assumptions, and they were not willing to deem such maintenance "compatible" without a separate land use review for each proposed tower replacement site. Due to public safety considerations, Clackamas County ultimately signaled a willingness to accept permit documentation after-the-fact; however, the cities of Gresham and Portland have maintained their position that land use approval is required before completing the LUCs.

Accordingly, and after reviewing a complex set of various land use approval procedures, overlay zones, and plan districts, PGE prepared land use applications and land use review narratives, forms, and plan sets to obtain the necessary approvals from Portland, Gresham, and Clackamas County. Since then, replacements of 36 other towers have been completed that were either proven to be exempt from permitting, or where the governing jurisdiction provided authorization under PGE's initial request for urgent action.

PGE contacts for more information

Engineering Matters: Matt Gordanier, Manager T&D Line Design Engineering, in PGE's T&D Line Engineering Department at (503) 736-5724 or via email at Matt.Gordanier@pgn.com

Permitting Matters and Traffic Control Plans: Tina Tippin, Sr. Property Services Specialist, at (503) 464-7672 or via email at Tina.Tippin@pgn.com

Media Relations: Andrea Platt, Andrea.platt@pgn.com or (503)475-7261

Line Item	Tower/STR number	City Jurisdiction	USACE (wetland impacts)	Cross street closures	Length of Closure (miles)
1	86	Portland	Yes	No closure – see new map (trail other side of RR tracks – flaggers will be in place	n/a
2	9888	Portland	No	No closure – trail elevated (not in work zone)	n/a
3	424	Portland	Yes	Between SE Foster and SE 11th Ave.	.33
4	425	Portland	Yes	Between SE Foster and SE 11th Ave.	.33
5	387	Portland	Yes	Between SE Circle Ave. and SE 111th Ave.	.38
6	376	Gresham	No	Between SW Pleasant View Dr. and Gresham Fairview Trail/W Powell Loop	.09
7	372	Gresham	Yes	Between W Powell Loop/Gresham Fairview Trail and SW 8th Dr.	.65
8	371	Gresham	Yes	Between W Powell Loop/Gresham Fairview Trail and SW 8th Dr.	.65
9	370	Gresham	Yes	Between W Powell Loop/Gresham Fairview Trail and SW 8th Dr.	.65
10	365	Gresham	Yes	Between SW Towle Rd/Eastman Parkway and SW 7th	.53
11	364	Gresham	No	Between SW Towle Rd/Eastman Parkway and SW 7th Between SW Towle Rd/Eastman Parkway and SW 7th	.53
12	363	Gresham	No	Between SW Towle Rd/Eastman Parkway and SW 7th	.53
13	362	Gresham	No	Between SW Towle Rd/Eastman Parkway and SW 7th	.53
14	361	Gresham	Yes	Between SW Towle Rd/Eastman Parkway and SW 7th	.53
15	360	Gresham	Yes	Between SW Towle Rd/Eastman Parkway and SW 7th	.53
16	357	Gresham	Yes	Between SW 7th and SW Walters Dr.	.24
17	355	Gresham	No	Between SW Walters Dr. and SW Main Ave.	.19
18	351	Gresham	No	Between SW Main Ave. and SW Park	.22
19	345	Gresham	Yes	Between SE Regner Rd and SE Liberty Ave.	.24

STR 86


STR 9888

STR 424

STR 425

STR 387

SPECIES: Salix scouleriana

INTRODUCTORY

AUTHORSHIP AND CITATION:
Anderson, Michelle D. 2001. Salix scouleriana. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: https://www.fs.usda.gov/database/feis/plants/tree/salsco/all.html [2023, July 12].

ABBREVIATION:
SALSCO

SYNONYMS:
No entry

NRCS PLANT CODE [252]:
SASC
SASCB
SASCC
SASCC2
SASCF
SASCP
SASCT

COMMON NAMES:
Scouler's willow
upland willow

TAXONOMY:

The currently accepted scientific name of Scouler's willow is *Salix scouleriana* Barratt ex Hook (Salicaceae) [98,112,114,175].

Currently recognized varieties are [112]:

Salix scouleriana var. *brachystachys* (Benth.) M.E. Jones
Salix scouleriana var. *coetanea* Ball
Salix scouleriana var. *crassijulis* (Anderss.) Schneid.
Salix scouleriana var. *flavescens* (Nutt.) J.K. Henry
Salix scouleriana var. *poikila* Schneid.
Salix scouleriana var. *thompsonii* Ball

LIFE FORM:
Tree-shrub

FEDERAL LEGAL STATUS:
No special status

OTHER STATUS:
No entry

DISTRIBUTION AND OCCURRENCE

SPECIES: Salix scouleriana

GENERAL DISTRIBUTION:
Scouler's willow is found primarily in the boreal forests of North America [49]. It is widely distributed, occurring in Canada from the Yukon Territory south through British Columbia and east through Alberta, Saskatchewan and into Manitoba. In the United States, Scouler's willow occurs in Alaska, south through the western states and into Mexico in the mountains, and east to the Black Hills of South Dakota [8,9,10,32,72,121,178]. PLANTS database provides a distribution map for Scouler's willow.

ECOSYSTEMS [81]:
FRES20 Douglas-fir
FRES21 Ponderosa pine
FRES22 Western white pine
FRES23 Fir-spruce
FRES24 Hemlock-Sitka spruce
FRES25 Larch
FRES26 Lodgepole pine
FRES27 Redwood
FRES28 Western hardwoods
FRES34 Chaparral-mountain shrub

FRES35 Pinyon-juniper
FRES37 Mountain meadows

STATES:

AK	AZ	CA	CO	ID	MT	NV
NM	OR	SD	UT	WA	WY	
AB	BC	MB	SK	YK		
MEXICO						

BLM PHYSIOGRAPHIC REGIONS [27]:
1 Northern Pacific Border
2 Cascade Mountains
3 Southern Pacific Border
4 Sierra Mountains
5 Columbia Plateau
6 Upper Basin and Range
8 Northern Rocky Mountains
9 Middle Rocky Mountains
10 Wyoming Basin
11 Southern Rocky Mountains
12 Colorado Plateau
15 Black Hills Uplift
16 Upper Missouri Basin and Broken Lands

KUCHLER [123] PLANT ASSOCIATIONS:
K001 Spruce-cedar-hemlock forest
K002 Cedar-hemlock-Douglas-fir forest
K003 Silver fir-Douglas-fir forest
K004 Fir-hemlock forest
K005 Mixed conifer forest
K006 Redwood forest
K007 Red fir forest
K008 Lodgepole pine-subalpine forest
K010 Ponderosa shrub forest
K011 Western ponderosa forest
K012 Douglas-fir forest
K013 Cedar-hemlock-pine forest
K014 Grand fir-Douglas-fir forest
K015 Western spruce-fir forest
K016 Eastern ponderosa forest
K017 Black Hills pine forest
K018 Pine-Douglas-fir forest
K019 Arizona pine forest
K020 Spruce-fir-Douglas-fir forest
K021 Southwestern spruce-fir forest
K023 Juniper-pinyon woodland
K025 Alder-ash forest
K028 Mosaic of K002 and K026

K029 California mixed evergreen forest
K034 Montane chaparral
K052 Alpine meadows and barren
K063 Foothills prairie

SAF COVER TYPES [64]:
201 White spruce
202 White spruce-paper birch
203 Balsam poplar
204 Black spruce
205 Mountain hemlock
206 Engelmann spruce-subalpine fir
207 Red fir
208 Whitebark pine
210 Interior Douglas-fir
211 White fir
212 Western larch
213 Grand fir
215 Western white pine
216 Blue spruce
217 Aspen
218 Lodgepole pine
219 Limber pine
220 Rocky Mountain juniper
221 Red alder
222 Black cottonwood-willow
224 Western hemlock
225 Western hemlock-Sitka spruce
227 Western redcedar-western hemlock
228 Western redcedar
229 Pacific Douglas-fir
230 Douglas-fir-western hemlock
232 Redwood
234 Douglas-fir-tanoak-Pacific madrone
235 Cottonwood-willow
237 Interior ponderosa pine
239 Pinyon-juniper
243 Sierra Nevada mixed conifer
244 Pacific ponderosa pine-Douglas-fir
245 Pacific ponderosa pine
247 Jeffrey pine
248 Knobcone pine
251 White spruce-aspen
252 Paper birch
253 Black spruce-white spruce
254 Black spruce-paper birch
256 California mixed subalpine

SRM (RANGELAND) COVER TYPES [215]:
110 Ponderosa pine-grassland
203 Riparian woodland
209 Montane shrubland
213 Alpine grassland
216 Montane meadows

411 Aspen woodland
412 Juniper-pinyon woodland
422 Riparian
504 Juniper-pinyon pine woodland
901 Alder
904 Black spruce-lichen
906 Broadleaf forest
912 Low scrub shrub birch-ericaceous
917 Tall shrub swamp
920 White spruce-paper birch
921 Willow

HABITAT TYPES AND PLANT COMMUNITIES:
With its widespread distribution, Scouler's willow occurs in many different vegetation types, but it is dominant in a small percentage of plant communities [80,256]. In the northern part of its distribution, Scouler's willow is a common understory component of several forest types, including California fir (*Abies magnifica*) [205], larch (*Larix occidentalis*)/Douglas-fir (*Pseudotsuga menziesii*) [73,207], lodgepole pine (*Pinus contorta*)/white spruce (*Picea glauca*) [196], Engelmann spruce (*Picea engelmannii*) [73], black spruce (*Picea mariana*) [184,253], Douglas-fir [4,25,60,102,126,128,139,144,162,164], lodgepole pine [25,73,144], grand fir (*Abies grandis*) [25,151], ponderosa pine (*Pinus ponderosa*) [19,24,25,102,126,128,153], subalpine fir (*Abies lasiocarpa*) [60], cedar (*Thuja* spp.)/hemlock (*Tsuga* spp.) [70], white spruce/hardwood [138,184,260], paper birch (*Betula papyrifera*)/white spruce [50], aspen (*Populus* spp.) and aspen/conifer stands [122,138,225], spruce (*Picea* spp.)/fir (*Abies* spp.) [210,211,244], birch (*Betula* spp.)/willow (*Salix* spp.) [180], and spruce/birch/willow [184]. It occupies grassland, low-elevation forests, and forest ecotones in the northern Rocky Mountains [23]; and occurs in both tree-dominated vegetation in Alaska and the Yukon Territory as well as in the treeless vegetation of southern coastal Alaska [9].

In the southern part of its distribution, Scouler's willow is a common understory component of spruce/fir [244], Douglas-fir/Engelmann spruce/ponderosa pine [109], ponderosa pine, mixed conifer [109,167], Douglas-fir/white fir (*Abies concolor*) [95], high-altitude willow [125], montane chaparral [43], and scree forests [129]. It also occurs occasionally in stands of giant sequoia (*Sequoia gigantea*) [118,257].

Though Scouler's willow is also known as upland willow and occupies drier habitats than most willows [54], it occurs in riparian communities and floodplains in the northwest [9,147,258] and may dominate early seral vegetation on gravel bars [67]. It is also a characteristic species of riparian woodlands and scrub in the southwest [95,129,137,248], and occurs in wet meadow vegetation [29].

Plant Associations:
Scouler's willow is commonly associated with quaking aspen (*Populus tremuloides*), paper birch, Rocky Mountain maple (*Acer glabrum*), white spruce, common juniper (*Juniperus communis*), greyleaf willow (*Salix glauca*), and American green alder (*Alnus viridis* ssp. *crispa*) [7,73,92,189,245,253]. In Idaho, it is frequently associated with quaking aspen, water birch (*Betula occidentalis*), thinleaf alder (*Alnus tenuifolia*), and black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) overstories at the low to mid-elevations; with aspen, Engelmann spruce, Douglas-fir, or lodgepole pine open overstories at the higher elevations; and in upland forest openings created by disturbance [33]. In the cedar-hemlock zone of northern Idaho, Scouler's willow is negatively associated with redstem ceanothus (*Ceanothus sanguineus*), Utah honeysuckle (*Lonicera utahensis*), and elderberry (*Sambucus* spp.), but positively associated with thimbleberry (*Rubus parviflorus*) [171]. It has specifically been identified in the following plant associations: white spruce-gray leaved willow-scrub birch (*Betula glandulosa*) association, lodgepole pine-scrub birch-lichen association [154,155], aspen/birch/red-osier dogwood (*Cornus sericea*) association [90],

Habitat and Community Types:
Scouler's willow is a seral species common in the following habitat types: Douglas-fir/pinegrass (*Calamagrostis rubescens*) [86], Pacific silver fir (*Abies amabilis*)/devil's club (*Oplopanax horridus*), Alaska-cedar

(*Chamaecyparis nootkatensis*)/ovalleaf huckleberry (*Vaccinium ovalifolium*) [71], grand fir/blue huckleberry (*Vaccinium globulare*) [75], subalpine fir/beargrass (*Xerophyllum tenax*) [218], white fir/prince's pine (*Chimaphila umbellata*) [152], Douglas-fir/white spiraea (*Spiraea betulifolia*) [76], grand fir/Rocky mountain maple [78], Douglas-fir/ninebark (*Physocarpus malvaceus*) [12,41,247,251,268], Engelmann spruce/myrtle huckleberry, subalpine fir/forest fleabane (*Erigeron eximius*), subalpine fir/thimbleberry, blue spruce (*Picea pungens*)/red-osier dogwood, white fir/Rocky mountain maple, white fir/forest fleabane [129], and Engelmann spruce/forest fleabane [166]. In Montana and Idaho, it is common to many habitat types in the Douglas-fir, grand fir, and subalpine fir series [46,66,80].

Scouler's willow is dominant in the mid-seral, Scouler's willow shrub layer group of the following habitat types: grand fir (Abies grandis)/blue huckleberry [226], Douglas-fir/pinegrass [229], Douglas-fir/blue huckleberry [17], Douglas-fir/ninebark [17,228], Douglas-fir/Rocky mountain maple [227], Douglas-fir/white spirea [233], subalpine fir/fool's huckleberry (*Menziesia ferruginea*) [17], and grand fir/mountain maple (Acer glabrum) [228,231]. It may also dominate seral stands in warm, moderate to dry habitat types of Douglas-fir, grand fir, and ponderosa pine [222].

Scouler's willow occurs in a variety of community types, which include the lodgepole pine-subalpine fir, quaking aspen-white spruce, quaking aspen-lodgepole pine-white spruce [185], and lodgepole pine-white spruce-subalpine fir community types in British Columbia [186]; and white spruce-russet buffaloberry (*Shepherdia canadensis*), white spruce-quaking aspen-russet buffaloberry-twinflower (*Linnaea borealis*), and quaking aspen-bearberry (*Arctostaphylos uva-urs*i) community types in the Yukon Territory [55]. Scouler's willow occurs as a dominant in the tall mountain shrub component of the north Idaho seral brushfields [21,42,56,92,96,97,141,172,181,242,251,262,266]. It is dominant in the Scouler's willow community type in the Yukon, with russet buffaloberry as the most prominent understory shrub [55], and may dominate other deciduous forest communities in the montane zone of British Columbia and the Yukon Territory [55,94]. Scouler's willow occurs as a dominant shrub in aspen stands and in the *Salix* spp. community type of Wyoming [35,81]. In Nevada, Scouler's willow is a dominant in the Scouler's willow/tall forb community type and may dominate the tall forb undergrowth vegetation type that is transitional from riparian to upland sites [149]. Scouler's willow dominates the Scouler's willow riparian community type in the southwestern United States [248]. It is also a codominant tree in the quaking aspen/Scouler's willow community type [63,174].

Classifications describing plant communities in which Scouler's willow is a dominant species are as follows:

Arizona [248,250]
British Columbia [119]
California [99]
Idaho [174,226,227,228,229,231,232,233]
Nevada [149,174]
New Mexico [248,250]
Utah [174]

BOTANICAL AND ECOLOGICAL CHARACTERISTICS

SPECIES: Salix scouleriana

GENERAL BOTANICAL CHARACTERISTICS:
Scouler's willow is generally a shrub, reaching 6 to 35 feet (2-10.6 m) in height [8,41,72,109,178,179,204]. It occasionally grows as a tree and may reach 65 feet (20 m) in height [8,32,34,53,76,171,178]. It is nonrhizomatous [218] with a deep, extensive root system [23,24,213,234] and may be multistemmed [23,24,79,204] or have one main trunk with twigs spreading or ascending [53]. It occurs in thickets and forests [202] forming a tall shrub layer in young stands [7,40], but is intolerant of shade and can persist only under thin canopies [7]. Beneath a tree canopy, Scouler's willow exhibits a tall, upright growth form [72,218,234], but if top-killed by disturbance it sprouts from the root crown creating a round growth form up to 16 feet (4.8 m) in diameter [234].

Scouler's willow has slender stems and branches [72] reaching 4 to 8 inches (10-20 cm) in diameter at the base [9,33,80]; smooth to flaky bark; and glabrous twigs [72]. Leaves are glabrous to leathery, obovate to oblanceolate, and occasionally serrate [9,54,72,109,121,194]. Twigs and leaf undersides of Scouler's willow are densely to thinly pubescent, with appressed, reddish hairs [8,10,33,72,121]. Young twigs and vigorous shoots are often densely pubescent, while older stems are smooth [9,121,194]. Stripped bark of Scouler's willow has a skunky odor [33,54,121].

A dioecious plant, Scouler's willow has large, single-scaled, floral winter buds [10,32,89], and lacks a terminal bud [89]. Aments, expanding before or with leaves and quickly deciduous [32,121], are usually sessile or borne on a short spur shoot and flower profusely [9,10]. Fruiting catkins are 0.8 to 2.4 inches long (2-6 cm) by 0.4 to 0.6 inches thick (1-1.5 cm) with dark floral bracts 4-5 mm long, one gland, and a capsule 5-8 mm long with dense, short hairs and a somewhat long beak [32,33,54,121,194].

RAUNKIAER [197] LIFE FORM:
Phanerophyte
Geophyte

REGENERATION PROCESSES:
Scouler's willow regenerates from both from seed and vegetatively. Scouler's willow probably begins producing seed before 10 years of age [32]. Insects, especially bees, are important pollinators [88]. Seeds disperse in late spring, disseminated by wind and water [9,32,51,91,179,195,218]. These seeds have cottony hairs that allow them to travel long distances [32]. Seedlings may regenerate from windborne seed from as far as several miles away [87]. Scouler's willow seeds are nondormant and remain viable for only a few days without moisture [227]. Willow seeds are characterized by a short seed life and rapid germination [179,187], and Scouler's willow seeds usually germinate within 12 to 24 hours of dispersal [32]. The seeds are scarified by light burning [110] and moist mineral soil is required for germination and seedling establishment [187,218,227,267]. Zasada and others [267] found that on artificially seeded sites Scouler's willow had substantially more germinants, 1st year survivors, and 3rd year survivors on heavily burned sites than moderately burned sites.

In the laboratory, the germinative capacity of fresh seeds is high; normally 95 to 100% of seed germinates within 3 days [32,52]. The seeds contain substantial amounts of chlorophyll, and photosynthesis generally occurs as soon as the seed is moistened [32]. Field experiments found that Scouler's willow seeds were not viable under dry outdoor conditions; most seeds did not germinate and those that did produced abnormal seedlings [52]. Light is required for good germination. Seed may be stored up to 4 to 6 weeks if kept moist at 32 to 41 degrees Fahrenheit (0-5 ^{o}C) [32].

High seed to seedling ratios on seeded plots suggest that seeding is an inefficient way of using seed, and planting artificially regenerated plants may be a more successful method of establishment and a more efficient use of available seed [267].

Scouler's willow regenerates asexually by vigorously sprouting from a subterranean root crown [1,2,3,17,23,24,40,195]. This basal sprouting occurs in response to disturbance, including fire, flooding, and mechanical damage [1,2,47]. Scouler's willow sprouts typically have a tall, fast growth response [169].

Scouler's willow generally propagates readily from cuttings, with 40 to 80% rooting success [58,100,213] and roots developing within 4 weeks of planting in lab and field experiments [100]. Initial roots develop on the basal portion of the cutting [49] and continued rooting progresses along buried stem surfaces [62,100]. Root development is more rapid and successful with cuttings collected during the growing season [49,89]. Densmore and Zasada [49] found that cuttings planted in the field had a survival rate of 17% after two growing seasons. In general, willow cuttings are better able to establish if planted as rooted stock [168]. Softwood cuttings of Scouler's willow root as well or better than hardwood cuttings, which may offer alternatives for vegetative propagation and flexibility in producing stock for conservation planting [62].

SITE CHARACTERISTICS:
Scouler's willow has a wide range of adaptation [39]. It is found in drier habitats than most willows [72], occurring as scattered individuals on dry uplands as well as swamps, and mountain streams [8,33,107,108,121,129,179,200], and is capable of establishing in dry rocky conditions at high elevations [39]. Scouler's willow commonly grows on gentle to moderate slopes [40,41,128]. While it does occur in riparian areas, Scouler's willow is more common on upland sites above riparian areas [80,90,146,195], and is found primarily in forests, meadows, on slopes [54,193], and in transitional zones between riparian and upland areas [149].

Scouler's willow may be found rarely on wet areas, but more commonly on moist areas or intermittent watercourses, and establishes both within gullies and at their bases [20,63,81,120,129]. In riparian areas, Scouler's willow establishes on relatively stable banks and lower sideslopes in valleys, reflecting a preferred environment of transport rather than retention of materials and moisture [63,212].

Scouler's willow is found on shallow to moderately deep soils [19,23,40,166]. It exhibits tolerance to a range of soil moisture conditions [38], occurring on moderately- to well-drained soils [38,41,54,80,166,180,185,193]. Scouler's willow commonly occurs on stony and silty soil with upper soil horizons dry during most of the growing season [63], and Forsyth [70] found that the cover of Scouler's willow was greater at intermediate soil moisture levels than at either extreme. Soils on Scouler's willow sites ranges from fine textured to gravelly [29,38,90,155,185,194,204]. It is commonly found on a variety of depositional land forms, including gravel bars [67]; glacial till; morainal blankets; river terraces; pumice flows; and alluvial, colluvial, and lacustrine deposits [7,55,152,155,185,189]. Parent materials are derived from a broad range of materials [19,23,174], but appear to be of little significance in distribution [125]. Scarification of the soil surface provides mineral soil important for Scouler's willow establishment [87].

The elevational range of Scouler's willow includes sea level to over 10,000 feet (3000 m) [4,8,10,11,19,20,23,29,33,42,51,53,54,60,63,72,129,149,174,205,244,249,260]. Scouler's willow is found in the lower and upper montane elevational belts in the northwest U.S. [4,33,51,96,260] and higher elevations in the southwest [10,129,149,244,249]. Annual precipitation on these sites may range from 9.5 to 63 inches (240-1600 mm) [4,7,19,23,29,42].

In British Columbia, Scouler's willow prefers drier, low elevation sites; mid- to lower slopes with rolling terrain and level to moderately sloping [90,194]. In the western U.S., it is most common in upland forests, cut-over areas, and burned areas in drier locations [53]. The range of Scouler's willow stretches from valley bottoms to the lower subalpine forest zone in Idaho. At the low to mid-elevations it grows in moist riparian habitats and generally attains a small tree stature; at the higher elevations it becomes a medium to large shrub and tends to inhabit relatively drier sites [33]. It may occur more frequently on north- and east-facing slopes in the western U.S. [72,125,129,174]; Irwin and Peek [106] found that maximum height growth of Scouler's willow in Idaho shrubfields occurred on east facing slopes. However, Mueggler [171] found that frequency and cover were not substantially related to aspect. Quaking aspen/Scouler's willow communities in the Intermountain Region range from 5,800 to 7,400 feet (1,800-2,300 m) in elevation [174]. Distribution of Scouler's willow in the southern part of its range may be somewhat restricted to montane riparian zones or other moist sites at high elevations [101,112,149,204,205,249], though in the southwest, Scouler's willow occurs in mixed conifer forests on steep relatively dry slopes [10] and in low elevation canyons [113]. In California it may also grow from near sea level to 10,000 feet (3048 m) [204]. In northern Mexico, it has been found in the mountains on north-facing aspects [11].

Scouler's willow is common in open areas following disturbance [165,178] and readily sprouts in ravines and on roadsides [47]. Its limited shade tolerance, tall growth habit, and sprouting ability enable it to persist in small openings on timbered sites [171,218,226]. Scouler's willow occurrence increases with full sunlight [70,172]; Mueggler [171] found that the frequency and crown cover of Scouler's willow was substantially higher under tree cover less than 25% than under tree cover exceeding 41%. Hungerford [103] found that maximum height of Scouler's willow coincides with 40 to 50% of available light during canopy development. As a result of logging and slash burning in Douglas-fir/ponderosa pine forests in Montana, Scouler's willow became established in direct proportion to the amount of stand opening and ground disturbance [53].

SUCCESSIONAL STATUS:
Scouler's willow is a shade intolerant, persistent seral species [17,55,104,238]. It is often a minor understory component in a variety of forest types [5,43,44,45,59,68,72,76,77,85,95,110,163,185,258,260], occurring as scattered individuals in small openings. However, it increases after disturbance, including clearcutting, prescribed fire, soil disturbance, and wildfire [1,5,9,17,47,53,61,70,71,72,89,106,138,145,150,171,194,222].

Scouler's willow is an early to mid-seral species [43,44,73,84,85,94,102,103,127,132,145,184,185,198,218,236]. Where not already present, it rapidly invades disturbed sites [24,45,91,214,238] facilitated by its wind-dispersed seed [216,265], or sprouts following canopy removal [1,69,265]. It capitalizes on moderate to severely burned sites [110,177]. In clearcuts and young stands it forms a tall shrub layer, comprising a substantial percentage of the plant cover [7,41,104]. In some areas, Scouler's willow may dominate early seral plant communities following fire or clearcutting [28,55,150,210,211,265] and on river terraces and gravel bars [1,67]. It forms a mid-seral shrub layer, the Scouler's willow layer group, in several habitat types of the northern Rocky Mountains [17,226,227,228,229,231]. In the past, these layer groups formed in response to stand-replacing wildfires, but may also develop following mechanical scarification in clearcuts. Scouler's willow may persist in late seral and climax stands, but the layer groups fade as succession progresses [226,229].

Scouler's willow reaches its highest frequency and cover in stands at least 20 years old, with maximum frequency and cover reached between 30 and 40 years [171]. Slight shade tolerance, tall growth habit, and ability to sprout allow Scouler's willow to persist under moderately dense tree cover because small openings in the canopy can stimulate sprouting and rejuvenate individuals, making it somewhat less vulnerable to successional replacement [218,222,227]. It may remain present but substantially less abundant in climax cover types [17,41,55,68,76,95,185,260]. On paired stands of uncut and clearcut grand fir forest, Scouler's willow appeared only in the clearcut stands, 7 to 16 years after disturbance [6,7]. Following a stand replacing fire, Scouler's willow appeared in stands 30 to 90 years old but was not present in stands greater than 150 years old [7]. Presence and cover of Scouler's willow has been found to decrease with increasing stand maturity [17,172,219,240]; in one study, both values decreased significantly ($p<0.05$) as stands progressed from immature (<90 years old) to old growth (>150 years old) [5]. The disappearance of Scouler's willow from maturing stands is attributed to the increasing competition for light and moisture as the tree cover develops [34].

Successional trends in northern Idaho, following the removal of climax coniferous forests from wildfire or logging (occasionally accompanied by prescribed fire), show that the initial postfire vegetation is dominated by a grass-forb stage [42,72,92,115,133]. Within a few years this gives way to dense brushfields, of which Scouler's willow is often a dominant or co-dominant [42,56,70,72,92,97,106,108,115,133,240]. These brushfields eventually return to conifer-dominated sites; the time frame depends upon fire intensity, reburn history, seed sources, climatic conditions, and site characteristics [72].

SEASONAL DEVELOPMENT:
Scouler's willow bud development begins in April, leafing out occurs in April and May, stem elongation occurs May through July, and leaf fall occurs in July through November [56,181]. Earlier leaf fall is correlated with limited moisture availability [56]. Flowering occurs in April through June, with fruit ripening and seed dispersal occurring in May through July [32,254].

FIRE ECOLOGY

FIRE ECOLOGY OR ADAPTATIONS:
Willows are greatly favored by fire in most habitats [89,148,253]. As a survivor and off-site colonizer [117,237,241,242,243], Scouler's willow is abundant following fire [146] and has a moderate regeneration period [121]. It is adapted to fire by rapidly resprouting from the root crown [145,167,179,216], and establishes from seed on severely burned sites [179]. Wind dispersed seeds facilitate rapid recolonization of burned areas [216,217]. In a north-west Montana study Scouler's willow was found on 80% of burned sites with no previous Scouler's willow presence [237]. Stand replacing fires favor regeneration of Scouler's willow [167], and good response from Scouler's willow seedlings can be expected on sites where fire damage is thorough enough to expose mineral soil [87]. However, it is rarely present on sites where more than 50% of the prefire overstory remains [70].

Scouler's willow layer groups are distinct shrub layers that occur in various habitat types and are created by stand replacing fires [218,227,228,229,231]. Severe wildfires expose patches of bare mineral soil, encouraging the development of Scouler's willow shrub layers [229,231]. These layer groups may also develop in response to mechanical scarification in clearcuts and broadcast burns, especially where exposed soil was mounded to trap water behind the mounds, creating well-watered seedbeds of mineral soil [229,231,233].

Scouler's willow is frequently a dominant or codominant in the persistent seral brushfields of northern Idaho. These brushfields are likely the result of dry weather patterns after canopy removal and repeated severe fires, which remove most large woody material, litter, and herbaceous fuels. Standing shrubs comprise most of the biomass, and these brushfields can burn in almost any season. If surface fuels are continuous and dry, spring fires spread readily. In the summer, brushfields are often hot and dry, and conditions are exacerbated where nighttime inversions occur. Hot, dry winds during drought conditions can drive severe fires through the shrub layer, with Scouler's willow readily regenerating from seed and sprouting [222].

In interior Alaska, Foote [69] identified six community developmental stages following fire in black spruce forests. These are: 1) newly burned, 2) moss-herb, 3) tall shrub-sapling, 4) dense tree, 5) hardwood or mixed hardwood-spruce, and 6) black spruce. Arising from sprouts, Scouler's willow can average up to a few thousand stems per hectare 1 year following wildfire depending on preburn density, and thus is an important part of the newly burned stage. It is then often dominant or co-dominant through the tall shrub-sapling stage of succession for about 30 years. It thereafter becomes less frequent, as larger trees outgrow and overtop it.

Sprouting occurs in response to overstory thinning [217] where Scouler's willow is well-distributed and in need of rejuvenation [87]. Generally, fast spreading fires produce more willow sprouts than slow fires that can damage root crowns [222]. Density and canopy coverage frequently increase after fire because root crowns produce multiple sprouts [179]. Four years postfire in Alaska, Scouler's willow presence was 4 times greater on burned sites than on adjacent unburned sites [253]. In northern Idaho, Scouler's willow cover was much higher on burned clearcuts than on unburned clearcuts, particularly where there had been repeated fires over a 30 year period [172]. Postfire immature stands (<90 years) in Montana have significantly more ($p<0.05$) presence and percent cover of Scouler's willow than old growth stands (>150 years) [5]. The increased presence of Scouler's willow in Douglas-fir/ponderosa pine stands following elimination of frequent fires is likely the result of stand opening associated with logging [19]. Sprouting Scouler's willow creates a round growth form up to 16 feet in diameter and may as a result promote reestablishment of shade tolerant species like Douglas-fir, in turn posing a greater risk of stand replacing fires and favoring growth of Scouler's willow [234].

Without fire, closing conifer canopies lead to the deterioration of Scouler's willow [84]. In dense second growth stands of sequoia in California, Scouler's willow debris creates a fuel hazard; formerly abundant stands of Scouler's willow grew in dense clones that were shaded out and killed, forming dense tangles of fuel for wildfire [28].

FIRE REGIMES:
Fire reutrn intervals for plant communities and ecosystems in which Scouler's willow occurs are summarized below. Find further fire regime information for the plant communities in which this species may occur by entering the species name in the FEIS home page under "Find Fire Regimes".

Community or Ecosystem	Dominant Species	Fire Return Interval Range (years)
silver fir-Douglas-fir	*Abies amabilis-Pseudotsuga menziesii* var. *menziesii*	> 200
grand fir	*A. grandis*	35-200 [14]
California montane chaparral	*Ceanothus* and/or *Arctostaphylos* spp.	50-100
Rocky Mountain juniper	*Juniperus scopulorum*	< 35 [188]
western larch	*Larix occidentalis*	25-100
Engelmann spruce-subalpine fir	*Picea engelmannii-Abies lasiocarpa*	35 to > 200 [14]
black spruce	*P. mariana*	35-200
conifer bog*	*P. m.-Larix laricina*	35-200 [57]
blue spruce*	*P. pungens*	35-200 [14]
pinyon-juniper	*Pinus-Juniperus* spp.	< 35 [188]
whitebark pine*	*P. albicaulis*	50-200 [14]
Rocky Mountain lodgepole pine*	*P. contorta* var. *latifolia*	25-300+ [13,14,201]
Sierra lodgepole pine*	*P. c.* var. *murrayana*	35-200
Jeffrey pine	*P. jeffreyi*	5-30
western white pine*	*P. monticola*	50-200
Pacific ponderosa pine*	*P. ponderosa* var. *ponderosa*	1-47
Rocky Mountain ponderosa pine*	*P. p.* var. *scopulorum*	2-10
Arizona pine	*P. p.* var. *arizonica*	2-10 [14]
aspen-birch	*Populus tremuloides-Betula papyrifera*	35-200 [57,255]
quaking aspen (west of the Great Plains)	*P. t.*	7-120 [14,83,156]
mountain grasslands	*Pseudoroegneria spicata*	3-40 (10**) [13,14]
Rocky Mountain Douglas-fir*	*Pseudotsuga menziesii* var. *glauca*	25-100 [14]
coastal Douglas-fir*	*P. m.* var. *menziesii*	40-240 [14,170,199]
California mixed evergreen	*P. m.* var. *m.-Lithocarpus densiflorus-Arbutus menziesii*	< 35 [14]
redwood	*Sequoia sempervirens*	5-200 [14,65,246]
western redcedar-western hemlock	*Thuja plicata-Tsuga heterophylla*	> 200
western hemlock-Sitka spruce	*T. h.-Picea sitchensis*	> 200
mountain hemlock*	*T. mertensiana*	35 to > 200 [14]

*fire return interval varies widely; trends in variation are noted in the species summary
**mean

POSTFIRE REGENERATION STRATEGY [241]:
Tall shrub, adventitious bud/root crown
Initial off-site colonizer (off-site, initial community)

FIRE EFFECTS

SPECIES: Salix scouleriana

IMMEDIATE FIRE EFFECT ON PLANT:
Scouler's willow is sensitive to fire [121] and may be top-killed [234]. Scouler's willow crown mortality following fire can vary from 0 to 100% depending on fire severity [183]. Severe fires that destroy the organic layer may result in 100% aboveground mortality [145]. However, even when aboveground plant parts are destroyed by fire, underground plant parts usually survive.

DISCUSSION AND QUALIFICATION OF FIRE EFFECT:
Scouler's willow may be resistant to fire, and there is a greater than 65% chance that 50% of the population on a site will survive or immediately reestablish after passage of a fire with an average flame length of 12 inches (30.5 cm) [195]. Mortality of Scouler's willow to burning was low in different prescribed fire treatments in Montana ponderosa pine stands [24].

PLANT RESPONSE TO FIRE:
Sprouting: Willows sprout quickly after fire if depth of the burn in the soil is low to moderate [93]. When fire is intense enough to kill live foliage but does not kill the vascular cambium, Scouler's willow experiences vigorous epicormic sprouting from the root crown [2,3,19,24,30,31,47,76,103,131,134,139,140,142,153,171,172,191,222,226,230,239,247,261]. Root crowns of Scouler's willow are often so large that some buds always survive, except when disturbance is really severe [169]. New shoots have been observed growing within days of a fire [69], and rapid sprouting after burning results in low overall plant mortality [19]. Multiple sprouts result in increased Scouler's willow density following fire [116]. Scouler's willow has a high postfire response rating; the species population will regain its preburn frequency and cover in 5 years or less [195].

Scouler's willow increases dramatically following a variety of burn intensities, especially on relatively moist sites [195]. Basal area after 3 years may exceed that on unburned sites [253]. Dramatic increases in volume occur over the first 15 years postfire [239]. Sprout height growth may be dramatic, reaching up to 10 feet (3 m) after the first growing season [46,131,259]. Within 3 years after burning, plant crowns can average over 11 feet (3.4 m) in height [131]. Following a prescribed summer burn in Idaho, nearly 80% of height growth of Scouler's willow over a 7-year period was attained within 2 growing seasons [140]. Following a summer wildfire in northern Idaho, Scouler's willow reached peak cover values within 8 years [240].

Scouler's willow plants that experience severe canopy mortality apparently concentrate their nutrients into vigorous new growth more than plants which experience only light canopy mortality. Analysis of aboveground plant part mortality classes from controlled burns in Idaho revealed that Scouler's willow plants which experience top-kill exhibit the most vigorous regrowth. Twig growth (length and weight) of Scouler's willow following fire was 3 to 4 times greater on plants with greater than 50% canopy mortality than on plants with less than 50% canopy mortality [183].

Seeding: Scouler's willow also has the potential to regenerate from off-site seed sources [30,31,46,86,91,103,172,222,226,239,247,258], and can establish in moist mineral soil postfire [30,31,66,76,222,226]. Sowing Scouler's willow seeds on different severity burns in upland black spruce sites in Alaska showed that germination occurred only on moderately (organic layers partially consumed) and severely (ash layer present, organic material in soil consumed or nearly so to mineral soil) burned seedbeds. Severely

burned sites had the best germination percentages and represented the only burn severity class where Scouler's willow seedlings survived past 3 years [267]. Scouler's willow establishes quickly, but the rate of cover development or increase is slow [237,238,240].

Germinating seed originating from off-site plants often raises Scouler's willow frequency far above what would be expected from on-site surviving plants [140,145,240]. Stickney [240] observed that after a stand-replacing wildfire in northern Idaho, Scouler's willow seedlings made up the majority of the shrub component of the vegetation. The importance of seedlings in the postfire community was similarly observed by Lyon [140]. He recorded the postfire density of Scouler's willow plants for 7 years, summarized below (density = # of plants >18 inches (46 cm) tall per 1,000 ft^2):

		Postfire year						
	Prefire - 1963	1 - 1964	2 - 1965	3 - 1966	4- 1967	5 - 1968	6 - 1969	7 - 1970
Density	0.3	0.1	0.2	0.2	0.6	2.4	3.6	4.4

DISCUSSION AND QUALIFICATION OF PLANT RESPONSE:
Lyon's Research Paper (Lyon 1971) and the following Research Project Summaries provide information on prescribed fire use and postfire responses of plant community species including Scouler's willow:

- The effects of experimental fires in an Alaskan black spruce/feather moss community
- Forest floor and plant responses to experimental fires in an Alaskan black spruce/feather moss community
- Understory recovery after low- and high-intensity fires in northern Idaho ponderosa pine forests of western Montana
- Vegetation response to restoration treatments in ponderosa pine-Douglas-fir forests

FIRE MANAGEMENT CONSIDERATIONS:
Prescribed fire is widely used as a wildlife management tool to rejuvenate decadent willow stands and stimulate sprouting. In areas where Scouler's willow is scattered through the vegetation and in low vigor due to overbrowsing, prescribed fires that kill aboveground plant parts and expose mineral soils are favorable. This allows existing shrubs to sprout and creates favorable seedbeds for establishment of Scouler's willow. In Douglas-fir/pinegrass habitat types of Montana, burning during late summer or fall exposes 30 to 50% of mineral soil [87]. A quick, hot fire maximizes sprouting while slower, longer burns cause more extensive damage and reduce browse [89]. The deep root system and multistemmed growth of Scouler's willow allows for higher tolerance to disturbance [19], and it establishes rapidly in clearcut and heavily burned areas [61,80]. Scouler's willow is favored by conditions on burned areas; it is scarce on areas not subjected to fire but very abundant on broadcast burns [171]. However, broadcast burns do not always burn hot enough to duplicate the effects of severe wildfire and create an adequate seedbed for Scouler's willow, which is favored by light soil scarification [150,218,226,227,228,229]. Competition may limit Scouler's willow establishment; the frequency and percent cover of Scouler's willow were significantly less ($p<0.05$ and $p<0.01$ respectively) on a burned, artificially seeded site than on a burned, unseeded site [208].

On sites in northern Idaho, Scouler's willow had substantially higher cover on a 30-year-old burn than after any intensive silvicultural treatment (ranging from thinning to clearcut), with no presence in the control [104]. However, after 30 to 40 years of fire exclusion in ponderosa pine forests, Scouler's willow presence increased [22]. Logging and fire suppression allowed vigorous development of Scouler's willow in a Douglas-fir/ponderosa pine community [87].

Prescribed fire enhances vigorous regrowth and germination of Scouler's willow, and it is effective in increasing biomass [24]. In the cedar-hemlock zone of Idaho, it generally produces the most cover of any shrub species on broadcast burned areas. Cover and frequency of Scouler's willow is substantially higher on broadcast burns than on areas not broadcast burned, as are the mean height values [171]. Total shrub volume of Scouler's willow in Douglas-fir stands increased from 15 to 80% 2 years postfire [139]. Mean canopy coverage of Scouler's willow

increased significantly ($p<0.01$) following selective logging and low intensity broadcast burning (intensity ~ 127 kcal/m/s) [12]. In the 1st year following burning, Scouler's willow may produce up to 28 times as many sprouts as the previous year [136,162]. Scouler's willow may grow significantly wider and taller ($p<0.05$) after fall burning than after spring burning [136]. However, fall burning removes the following winter's food supply for animals, while spring burns have substantial regrowth by summer [130]. After stand mechanical treatment and understory burning, Scouler's willow was reduced by 9% from mechanical damage and an additional 16% from fire. The surviving plants were substantially more vigorous post-treatment [15,16]. While modest Scouler's willow mortality may result after overstory removal and prescribed fire, the percentage of high vigor plants increases; in one study the amount of vigorous plants increased from 15% at pretreatment to 70% post treatment [23]. In northern Idaho, burning at 5-year intervals did not result in decreased vigor [135]. Scouler's willow was not markedly affected by burning until it suffered deep charring of the root crown. The following table presents the change in Scouler's willow population characteristics in response to different treatments (% change is relative to pretreatment conditions) [23]:

Treatment	Cover reduction	Mortality	High vigor plants
Control	1	3	15
Harvest only (shelterwood cut)	33	14	60
Low consumption (shelterwood cut and low consumption burn)	62	22	71
High consumption (shelterwood cut and high consumption burn)	58	26	69

Shelterwood cuts combined with prescribed burning in a ponderosa pine resulted in modest Scouler's willow mortality; plants remaining in the harvest only and burned treatments had higher vigor than those in the control [19,23].

A summary of Scouler's willow's response to different types of disturbance is presented below [228]:

Type of disturbance:	Clearcut, no site prep	Shelterwood cut, mechanical scarification	Clearcut, mechanical scarification	Clearcut, broadcast burn	Stand destroying wildfire
Response:	major vegetative response	minor vegetative response	major vegetative response, minor response from seed	major vegetative response, minor response from seed	major vegetative response, minor response from seed

MANAGEMENT CONSIDERATIONS

SPECIES: Salix scouleriana

WOOD PRODUCTS VALUE:
The light colored wood of Scouler's willow offers no striking grain pattern, but its light weight and ability to absorb shocks make it suitable for specialty products like prosthetic devices [182].

IMPORTANCE TO LIVESTOCK AND WILDLIFE:
Scouler's willow is an important browse species for domestic livestock and wildlife ungulates

[6,8,17,36,60,68,124,131,132,150,164,179,204,218,219,226,227], providing critical winter and spring browse [19]. It is often the most preferred browse in ponderosa pine forests for mule deer, white-tailed deer, elk, bighorn sheep, moose, and domestic livestock [23,24]. Upland sites are heavily used by deer and elk; in riparian areas moose particularly prefer Scouler's willow [26,146,179,190,192,223,235,256,260,264], especially in winter months [87]. In disturbed areas, Scouler's willow may contribute more moose forage than any other species present [194]. Scouler's willow, occurring in younger stands, is more important in the moose diet than willows present in older stands [219]. Scouler's willow leaves, twigs, and bark are utilized as browse [209].

In British Columbia, it is of moderate to high importance for black-tail deer, is utilized from April through November, and is favored during spring and summer months [45]. Areas of high Scouler's willow cover have been associated with high elk use [82]. In Idaho, it is preferred elk forage, important in both summer and winter months [105,108,130]. Elk use tends to be higher in early rather than late summer [60]. In Montana, Scouler's willow is a large part of the regular winter diet for elk as well as a reservoir of surplus feed on which elk depend whenever climatic conditions are of unusual severity [73]. It is also heavily utilized by white-tailed deer and mule deer in Montana and Idaho, predominately as winter forage [115,116]. In Utah, it provides important summer browse for mule deer [221]. In California, Scouler's willow provides abundant browse of satisfactory quality for domestic livestock and deer. Domestic cattle feed on it in all habitats, while domestic sheep and goats feed on it on drier sites. It has been rated good to fair browse for domestic sheep and goats, fair for deer and domestic cattle, and poor for horses [204]. Small mammals also browse Scouler's willow [264], and it provides food for grizzly bears [48].

Upland game birds, ducks, and other birds feed on willow buds, leaves, twigs, and seeds [8,89], and Scouler's willow provides nesting and feeding habitat for small birds [226,227]. Scouler's willow buds provide an important winter food source for grouse, Clark's nutcracker, and the Rocky Mountain jay [95,179,218].

In the early spring, honey bees use willow pollen and nectar as a source of food for brood rearing [8].

PALATABILITY:
Like most willows [8,18], Scouler's willow is moderately to highly palatable for white-tailed deer, mule deer, and elk [40,41,73,89,104,121,165,206,209]. The leaves and twigs are highly palatable for black-tail deer in British Columbia [45]. Scouler's willow is of intermediate quality and high palatability for moose [44]. It is moderately palatable for beaver and for domestic livestock [121]. The palatability of Scouler's willow for livestock and wildlife has been rated as follows [52,73,115,130,204,226]:

	CA	CO	ID	MT	UT	WY
Cattle	fair	fair	fair	fair	fair	----
Sheep	good	fair	good	good	fair	----
Horses	poor	fair	----	fair	poor	----
Pronghorn	----	----	----	----	poor	poor
Moose	----	----	good	good	good	good
Elk	----	----	good	good	good	fair
Mule deer	fair	----	good	----	good	good
White-tailed deer	----	----	good	----	----	good
Small mammals	----	----	----	----	fair	good
Small nongame birds	----	----	----	----	fair	fair
Upland game birds	----	----	----	----	fair	good
Waterfowl	----	----	----	----	----	good

NUTRITIONAL VALUE:

Fresh willow browse has the following average nutrition content [176]:

Nutritional component:	Dry matter	Crude fiber	Ether extract	N-free extract	Protein
Willow browse:	41%	11.2%	2%	20.8%	4%

Overall, Scouler's willow is of intermediate nutritive quality, containing relatively high amounts of carotene and ascorbic acid, important for ungulate nutrition [44]. In an Alaskan study, Scouler's willow contained 5.6 to 6.7% protein [146]. The nutritional value may be improved by burning by increasing levels of phosphorus and crude protein and decreasing lignin content [24]. The following table contains the mean nutritional content (in µg/g) for Scouler's willow on 4 sites in Montana [224]:

Site/Aspect	Ca	Cu	Fe	K	Mg	Mn	N	Na	P	Zn
#1/SW	10,348	12	42	5,034	1,426	58	9,890	93	473	48
#2/SW	12,022	11	65	5,182	1,344	146	10,453	122	501	89
#3/SE	10,965	12	66	4,847	1,375	86	11,278	104	503	99
#4/SE	12,248	10.4	67	4,647	1,411	118	12,003	90	497	110

Nutritional analysis of Scouler's willow in Idaho shows that protein and digestibility remain high through the end of September. Seasonal changes in these nutritional attributes are summarized below [36]:

Date:	7/7	7/22	8/9	8/24	9/13	9/29
% crude protein	16.7	15.7	19.7	15.5	14.4	9.9
% in vitro digestible dry matter	62.2	60.9	57.5	60.7	51.9	53.8

COVER VALUE:
Willows may produce dense thickets, making them valuable cover and nesting habitat for birds and small mammals and providing shade for fish in streams and ponds [8,89]. Willows are also valuable for cavity nesting woodpeckers [89]. Scouler's willow provides both visual and thermal cover for deer and elk, and nesting habitat, cover, and food for nongame birds, upland game birds, and small mammals [40,41,95,103,107,140,256]. In riparian areas, it provides shade, cooling stream temperatures and providing escape cover for fish [79].

The degree to which Scouler's willow provides cover for wildlife species is as follows [52,130]:

	ID	UT	WY
Pronghorn	----	poor	poor
Elk	good	fair	fair
Mule deer	----	good	good
White-tailed deer	----	----	good
Small mammal	----	good	good
Small nongame birds	----	good	good
Upland game birds	----	good	good
Waterfowl	----	----	fair

VALUE FOR REHABILITATION OF DISTURBED SITES:
Scouler's willow is effective in revegetating canyons disturbed by flooding water and debris. It is especially

successful in establishing in riparian areas and at the base of dry slopes with sufficient moisture [38]. Willows contribute to streambank stability [79], and Scouler's willow is useful for stabilizing steep, erodible banks on drier sties above river courses [62,256] and is recommended for riparian revegetation projects [37]. It may also be useful for rehabilitating recreation areas; 90% rooting success has been achieved for planted cuttings [220].

Scouler's willow may provide site protection for conifer seedlings [226,227,228,256]. It provides light cover for the establishment of larch and Engelmann spruce after disturbance, encouraging revegetation [218,226,228]. Scouler's willow may also enhance Douglas-fir regeneration by providing a suitable microclimate for seedlings [111,218]. It provides "safe-site" cover to improve tree seedling establishment in revegetating grand fir habitat types; it is rated neutral to moderately efficient based on the ratio of "safe-site" cover to the percentage of seedlings occurring there [78]. However, Scouler's willow is a formidable competitor of ponderosa pine, which must outgrow Scouler's willow to survive. High densities of Scouler's willow may preclude ponderosa pine success following disturbance because it is shaded out by the height and lateral spread of Scouler's willow [227,228].

Scouler's willow has received the following ratings for reclamation suitability [256]:

Reclamation Suitability Criteria	Suitability Rating			
Drought tolerance	Very high	High	Medium	Low
Salt tolerance			X	X
pH tolerance		X (acid)		
Winter hardiness		X		
Erosion control			X	
Persistence		X		
Palatability		X		
Browse tolerance	X			
Moisture preference	Moist to wet, well to poorly drained waterlogged soils			
Soil preference	Wide texture range, includes peat soils			

OTHER USES AND VALUES:
Willows are useful for erosion control and windbreaks [8], and provide medicine for many ailments including indigestion, worms, and stomach complaints [121]. It is the source of "diamond wood", used in carving and furniture making [256]. Scouler's willow was used by Native Americans for traps, snares, sweathouse frames, burden baskets, toys, musical instruments, and medicine [203].

OTHER MANAGEMENT CONSIDERATIONS:
The deep root system, multiple stems, and ability to sprout from a subterranean root crown rather than surface sprouting may increase Scouler's willow's tolerance to disturbance [24].

Fire can be used to maintain shrub productivity on seral brushfields and encourage shrub dominance after harvest. Tree establishment can be encouraged by excluding wildfire, using site preparation methods that do not encourage grass or shrub species, and planting and seeding pioneer species under the shade of killed shrubs [222].

Prescribed fire has been used to stimulate sprouting of Scouler's willow that has grown out of reach of big game browsers [130,131,135]. In burned areas, the current annual growth of willows is considerably higher than in

control areas, and fire increases both browse production and availability [18]. Prescribed fire was used in the 1960's to rejuvenate northern Idaho brushfields for elk winter range [136]. When prescribed burning causes greater than 50% canopy mortality, substantially higher current annual growth (CAG) of Scouler's willow is produced. CAG of vigorously growing plants has a higher nutritive value and nutrient concentration than mature, slower growing plants [183]. Big game prefer browsing on the current annual growth of burned willows than that of unburned willows [18]. Utilization by elk demonstrated an obvious preference for the sprouts of burned Scouler's willow following mechanical treatment and understory burning; the surviving plants were substantially more vigorous, with greater live biomass and better palatability than the unburned plants [15,16,23,131]. Scouler's willow experiences a dramatic increase in available browse production immediately following burning, the result of shrub removal and sprouting that reduces the height and increases the availability of browse [130,134,139,140,263]. In one study, Scouler's willow reached 10 feet in height 4 years after burning, with 80% of twig production available for elk browse. However, repeated treatment may be necessary to maintain browse availability [132]. Scouler's willow browse production increased from 6.5 to 44.1 kg/ha 3 to 7 years after wildfire in Alaska. The increase in production was due to an increase in the number of shrubs during the 1st 5 years and an increase in the number of twigs per shrub during all 7 years. Stems were available after the first 2 years; 4 years postfire, browse production in the burned area was twice that in the unburned area; and at 7 years postfire browse was 5 times greater. Browse production is likely to peak at 10-15 years and decrease by 20 years postfire [264].

Scouler's willow responds well to both fall and spring burning; however, fall burning eliminates the following winter's food supply for animals. Spring burns regrow rapidly, with 5 foot (1.5 m) sprouts common by summer on burns in Idaho [130]. It has shown no decreased vigor from burning at 5 year intervals [135]. Brushfield burning to improve elk winter range in Idaho has often occurred during the spring or fall. However, another very important browse species, redstem ceanothus, is not always replaced by seedlings under these treatments because the seedcoat required high soil temperatures to crack and allow germination. Therefore, for winter range improvement, summer prescribed fires may need to be considered [259].

Willows produce, within limits, denser growth when they are browsed [8], with browsed stems branching laterally [253]. Browsing stimulates production of Scouler's willow, though continuous browsing over several years may eventually deplete plant or soil reserves resulting in an eventual decline in productivity [263]. Following wildfires in Alaska, Scouler's willow sprouts have suffered intense browsing by snowshoe hares, which often migrate to burned areas to feed. In some locations, 100% of the current annual growth of sprouts was removed for 2 succeeding winters [253,263]. This impact normally lasts for only a few years. Flowering and fruit production of Scouler's willow are affected by heavy browsing, possibly resulting in low seedling success and recruitment, and browsing may suppress sprouting [24,34]. In burned and unburned clearcuts, grazed sites had no Scouler's willow present, while ungrazed sites had 5 to 7% Scouler's willow cover 11 years after treatment [61]. Where it is subject to overbrowsing, the loss of Scouler's willow may result in substantial losses to elk herds [73].

Mechanical thinning may prevent suppression of Scouler's willow in Douglas-fir/ponderosa pine forests [87]. Scouler's willow increased in biomass and vigor in response to thinning in a Douglas-fir/ponderosa pine stand in Montana, indicating a positive response to overstory reduction [24]. Winter carrying capacity for mule deer may be substantially increased after mechanical treatment due to the establishment and growth of Scouler's willow [87]. It is difficult to achieve control of Scouler's willow using mechanical treatment due to the sprouting of damaged shrubs, and clearcutting can result in major canopy increases. Chemical treatments may be required if managing for ponderosa pine establishment due to its inability to compete with Scouler's willow [227,228].

Herbicide treatments of Scouler's willow aimed at increasing sprouting and maintaining production at a height available to big game have erratic and complex results; the production of sprouts did not persist, but the reduction in crown height did persist [143]. Scouler's willow is highly sensitive to light applications of 2,4-D and 2,4,5-T. With 2,4-D, basal sprouting was proportional to crown kill; the maximum crown height was reduced and the proportion of live crown within reach of deer and elk increased accordingly. Sprout production was most favored by treatment in August and least by treatment in October; plant kill was highest following September treatment [173]. In other studies, crown volume and cover of Scouler's willow were reduced by 50%

after herbicide treatment [157]. Herbicide control of Scouler's willow may be effective in allowing Douglas-fir to regenerate in the seral brushfields of Idaho [92]. Percent control of Scouler's willow with different herbicides ranges from 33 to 100% [158,159,160,161].

Salix scouleriana: References

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