



April 17, 2025

Smartlink  
10 Church Circle  
Annapolis, MD 21401

RE: Mitigation Plan Update – PD31 Bethany Crest  
13937 NW Springville Road  
Portland, Multnomah County, OR 97229

Black Mountain Project No. 240032-MIT REVISED

Dear M. Debbie Griffin;

Black Mountain Consulting, LLC (Black Mountain) is pleased to submit this Mitigation Plan Update Report for the proposed telecommunications facility at the location noted above (The Project). The purpose of this Report was to provide supplemental information in support of a General Application for the proposed development of a telecommunications facility on a 20.07-acre property at 13937 NW Springville Road, Portland, Multnomah County, Oregon. The project site is located within portions of Significant Environmental Concern (SEC) overlay zones, including Significant Wildlife Habitat (SEC-h) and Significant Streams (SEC-s). In accordance with the Multnomah County Code (MCC) 39.5520(A), this report supports an application for SEC-h and SEC-s permits and complies with the approval criteria outlined in MCC 39.5540 and 39.5550/39.5590. The attached report reflects the requested changes/requirements.

Please do not hesitate to contact us should you have any questions or comments regarding this report or our recommendations. Black Mountain appreciates the opportunity to be of service to you.

Respectfully submitted,

Thank you,

A handwritten signature in black ink, appearing to read "Tammy Stempel", written over a circular scribble.

Tammy Stempel  
Principal

# MITIGATION PLAN

PD31 Bethany Crest  
13937 NW Springville Rd  
Portland, OR 97229  
Multnomah County  
Tax Lot: 1N1W16C 00100

APRIL 2, 2025



**Submitted by:**

Streamscape Environmental LLC  
3182 Wiltsey St SE  
Salem, OR 97317

**Submitted to:**

Tammy Stempel, Principal  
Black Mountain Consulting LLC  
*for New Cingular Wireless PCS LLC*

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# 1. INTRODUCTION

This mitigation plan has been prepared by StreamScape Environmental LLC (StreamScape) to provide supplemental information in support of a General Application for the proposed development of a telecommunications facility on a 20.07-acre property at 13937 NW Springville Road, Portland, Multnomah County, Oregon. The project site is situated within portions of Significant Environmental Concern (SEC) overlay zones, including Significant Wildlife Habitat (SEC-h) and Significant Streams (SEC-s).

The proposed development includes construction of a 50-foot by 50-foot fenced compound to house a new 140-foot-tall Monofir tower with antennas and ancillary equipment, construction of a 298-foot access road, a five-foot landscape buffer surrounding the compound, and a 10,625-square-foot mitigation area (0.24 acres) where nuisance vegetation will be removed and native trees and shrubs installed. Construction of the compound, landscape buffer, and access road will require vegetation removal and minor grading across approximately 8,610 square feet, excluding the mitigation area. Diagrams of the proposed development are included in the Site Plans in Appendix A.

In accordance with Multnomah County Code (MCC) 39.5520(A), this document supports an application for SEC-h and SEC-s permits. It includes a description of the proposed development, descriptions and maps of existing vegetation and soil types, an assessment of current habitat conditions, a vegetation inventory, a comprehensive mitigation plan, and a demonstration of how the proposed development, in conjunction with mitigation measures, complies with the approval criteria outlined in MCC 39.5540 and 39.5550/39.5590.

**Project Name:** PD31 Bethany Crest

**Applicant:** New Cingular Wireless PCS, LLC

**Parcel Address:** 13937 NW SPRINGVILLE ROAD, PORTLAND, OR 97229

**Tax Lot #:** 1N1W16C 00100

**Property Owner(s):** ROBERT L. ZAHLER & GAYLA G. ZAHLER TRUST

**Project Coordinates:** 45.569567°, -122.825219°

# 2. ASSESSMENT METHODOLOGY

## Qualifications

This mitigation plan was prepared by StreamScape Environmental LLC, under contract to Black Mountain Consulting LLC. The principal author is John Klock, a career botanist and restoration ecologist with recent experience as a District Botanist with the U.S. Department of the Interior, Bureau of Land Management. John performed the botanical and restoration assessment for the site, reviewed existing information, and drafted the mitigation plan.

StreamScape's Principal Ecologist, Jennifer Mongolo, provided project oversight and quality assurance, led GIS mapping, and conducted the final review of the plan. With over 20 years of experience in natural resource management, Jen specializes in natural resource inventories, site assessments, impact analysis, strategic environmental planning, environmental permitting, and technical writing.

Professional resumes are included in Appendix C.

## Methodology

Prior to the site visit, StreamScape personnel conducted a thorough review of Multnomah County's Significant Environmental Concern (SEC) Code and Overlays, as detailed in Chapter 39 Part 5.H of Multnomah County Zoning Code. Additional research included an examination of critical areas regulations, technical resources, GIS data, state and federal databases, and other available literature to evaluate the potential range and condition of natural and biological resources in and around the project area.

The Multnomah County SEC-h and SEC-s overlays, collectively referred to as SEC overlays, were utilized in this assessment and are based on GIS maps developed by the County. These overlays provide guidance for the protection, conservation, enhancement, restoration, and maintenance of significant natural and human-made features of public value. These features include important ecological, hydrological, geological, and cultural resources, such as wetlands, riparian habitats, flood storage areas, and scenic or historic sites.

On Tuesday, March 25, at 10:30 AM, StreamScape biologist John Klock conducted a comprehensive vegetation and site survey of the project area. The weather was sunny, approximately 65°F, with a light breeze. Starting at the junction of Springville Road and the access road near Shackleford Road, Klock conducted an intuitive controlled survey, a method commonly used for areas larger than one hectare. This method involves focused surveying of habitats most likely to support special-status species, while ensuring coverage of a representative cross-section of the site's major habitats and topographic features.

Klock's survey focused on the 8,610-square-foot tower compound and buffer area, as well as the entire 20-acre Bethany Crest parcel. The property includes over six acres of forested riparian habitat (Riparian Wildlife Habitat Classes I & II and Upland Wildlife Habitat Class B) surrounding tributaries of Abbey Creek in the eastern portion. The western portion of the site, where the Monofir tower is proposed, contains less than 0.33 acres of SEC-s overlay and consists primarily of cleared brush and forested habitat (Riparian Wildlife Habitat Class II and Upland Wildlife Habitat Class C).

The evaluation included a detailed assessment of vegetation and habitat conditions within the project site and along both sides of the access road. A bird survey was also conducted, with a

focus on areas where tree and vegetation removal is proposed. Field data collection included inventories of flora and fauna, as well as representative site photographs.

### Technical resources and information databases:

- Multnomah County Codes that Apply to Development within SEC Overlays: <https://multco.us/info/zoning-codes>
- Bethany Crest Stormwater Control Certificate, Feb. 10, 2025
- Oregon Biodiversity Center: <https://inr.oregonstate.edu/orbic>
- Multnomah County Open Data Center: <https://gis-multco.opendata.arcgis.com>
- US Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System (IPaC) database: <https://www.fws.gov/service/information-planning-and-consultation>
- US Department of Agriculture, Natural Resources Conservation Service (NRCS) Soil Survey for Multnomah County, Oregon
- Oregon Department of Fish and Wildlife [https://www.dfw.state.or.us/wildlife/diversity/species/threatened\\_endangered\\_species.asp](https://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_species.asp)
- Oregon Department of Fish and Wildlife: <https://nrimp.dfw.state.or.us/nrimp/default.aspx?p=259>
- Oregon Hub Explorer: <https://hub.oregonexplorer.info/pages/data>

## 3. PROJECT DESCRIPTION

The proposed development includes the construction of a communication facility within a 50-foot by 50-foot compound. Key site improvements will include a new gravel access drive, security fencing, a 140-foot Monofir tower, a 16-foot by 20-foot concrete pad, radio equipment, and enhanced landscaping around the facility. The total new impervious surface area will be approximately 8,610 square feet.

Minimal site grading will be required, and no soil stockpiling is anticipated. Topsoil removed during gravel installation will be off-hauled to an approved disposal site. Best Management Practices (BMPs) for temporary erosion and sediment control will be implemented during construction in accordance with County guidelines.

Vegetation removal and minor grading will be required to prepare the site. Approximately seven mature deciduous trees—primarily Oregon ash, English hawthorn, beaked hazelnut, and bigleaf maple—ranging from 20 to 30 feet in height, will be removed within the 50-by-50-foot compound area and along the gravel access drive. In addition, a similar number of young or partial trees (1 to 5 feet tall) will also be removed.

To mitigate impacts from these activities, a 10,625-square-foot mitigation area has been designated. Invasive plant species will be removed from this area, and native vegetation will be established to enhance ecological function and offset development-related impacts.

## 4. SITE DESCRIPTION

### Vegetation

The project site encompasses three distinct habitat types: Forested Habitat, Shrub-Dominated Habitat, and Open Areas (Figure 1). The parcel also contains a small coniferous forest in its eastern extent, far removed from the development site.

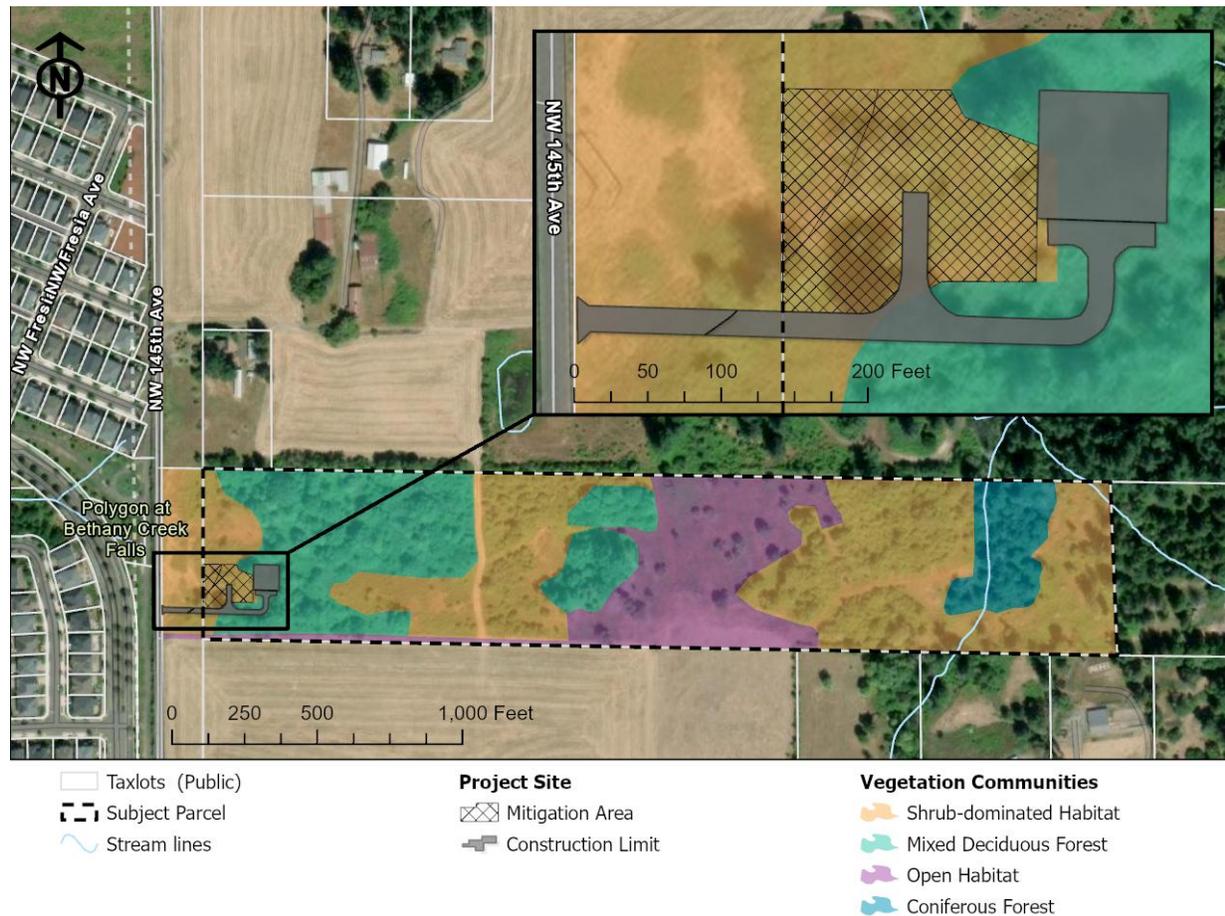


Figure 1. Vegetation Communities within Subject Parcel, Project Site, and Mitigation Area

The Mixed Deciduous Forest Habitat is characterized by a closed canopy of early second-growth trees, including conifers such as Douglas-fir and western red cedar, and deciduous species like Oregon ash, bigleaf maple, red alder, and English hawthorn. The understory supports native shrubs such as salal and snowberry; however, canopy gaps have allowed Himalayan blackberry to become well established in some areas.

The Shrub-Dominated Habitat includes native species such as Douglas spirea, Oregon grape, sword fern, and snowberry. A few Oregon white oaks were also observed, indicating that the area may have once supported an oak woodland community.

The Open Areas contain some native forbs, but are primarily dominated by non-native species, including reed canary grass, orchard grass, perennial ryegrass, and patches of Himalayan blackberry.

A complete list of observed plant species is provided in Table 1, and Appendix B includes representative photographs of each habitat type. No plant species of conservation concern—such as those listed by the Oregon Conservation Strategy, the Oregon Biodiversity Information Center (ORBIC), or state and federal threatened and endangered species lists—were observed within the project area. All documented vegetation consisted of common native or naturalized species, including several known invasive species.

Table 1. Plant Species observed on March 26, 2025

Common Name	Scientific Name	Invasive Species	Special Status Species
Beaked Hazelnut	<i>Corylus cornuta</i>		
Bigleaf Maple	<i>Acer macrophyllum</i>		
Cascara	<i>Rhamnus purshiana</i>		
Common Bracken Fern	<i>Pteridium aquilinum</i>		
Creeping Thistle	<i>Cirsium arvense</i>	Yes	
Crevice alumroot	<i>Heuchera micrantha</i>		
Douglas Fir	<i>Pseudotsuga menziesii</i>		
Douglas Spirea	<i>Spiraea douglasii</i>		
Elderberry	<i>Sambucus racemosa</i>		
English Ivy	<i>Hedera helix</i>	Yes	
English Hawthorn	<i>Crataegus monogyna</i>		
Himalayan Blackberry	<i>Rubus armeniacus</i>	Yes	
Indian Poke	<i>Veratrum viride</i>		
Oregon Ash	<i>Fraxinum latifolia</i>		
Oregon grape	<i>Mahonia nervosa</i>		
Oregon White Oak	<i>Quercus garryana</i>		
Oxeye Daisy	<i>Leucanthemum vulgare</i>	Yes	
Queen Anne's Lace	<i>Daucus carota</i>	Yes	
Red Alder	<i>Alnus rubra</i>		
Orchard Grass	<i>Dactylis glomerata</i>		
Nootka Rose	<i>Rosa nutkana</i>		
Salal	<i>Gaultheria shallon</i>		
Scotch Broom	<i>Cytisus scoparius</i>	Yes	
Snowberry	<i>Symphoricarpos albus</i>		
St. John's Wort	<i>Hypericum perforatum</i>	Yes	
Sword Fern	<i>Polystichum munitum</i>		
Tall Oregon Grape	<i>Mahonia aquifolium</i>		
Tansy ragwort	<i>Senecio jacobaea</i>		
Western Red Cedar	<i>Thuja plicata</i>		
Trailing Blackberry	<i>Rubus ursinus</i>		

## Wildlife

Wildlife observations within the project site and along the access road were limited. A pair of ospreys were observed flying over the site, and a single rabbit was seen along the edge of the development footprint. Various common pollinators (e.g., bumblebees) and numerous native bird species were noted in the surrounding forest (see Table 2). While several bird species were observed in the study area, no evidence of nesting activity was recorded. All bird species observed during the survey are native and protected under the federal Migratory Bird Treaty Act. No evidence of nesting or use by special-status species was documented.

Deer and elk sign—including scat and tracks—were detected in the eastern half of the parcel. No nests, mounds, burrows, or other indications of wildlife habitation were found.

Table 2. Avian Species Observed on March 26, 2025 (All are native species protected under the US Migratory Bird Treaty Act)

Common Name	Scientific Name
American Crow	<i>Corvus brachyrhynchos</i>
American Robin	<i>Turdus migratorius</i>
Bewick's Wren	<i>Thryomanes bewickii</i>
Black-capped Chickadee	<i>Poecile atricapillus</i>
Brown Creeper	<i>Certhia americana</i>
California Scrub Jay	<i>Aphelocoma californica</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>
Common Raven	<i>Corvus corax</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Morning Dove	<i>Zenaida macroura</i>
Northern Flicker	<i>Colaptes auratus</i>
Osprey	<i>Pandion haliaetus</i>
Pine Siskin	<i>Spinus pinus</i>
Purple Finch	<i>Haemorhous purpureus</i>
Dark-eyed Junco	<i>Junco hyemalis</i>
Red-breasted Nuthatch	<i>Sitta canadensis</i>
Song Sparrow	<i>Melospiza melodia</i>
Spotted Towhee	<i>Pipilo maculatus</i>
Steller's Jay	<i>Cyanocitta stelleri</i>
Turkey Vulture	<i>Cathartes aura</i>
Western Tanager	<i>Piranga ludoviciana</i>
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>

## Site Conditions and Disturbances

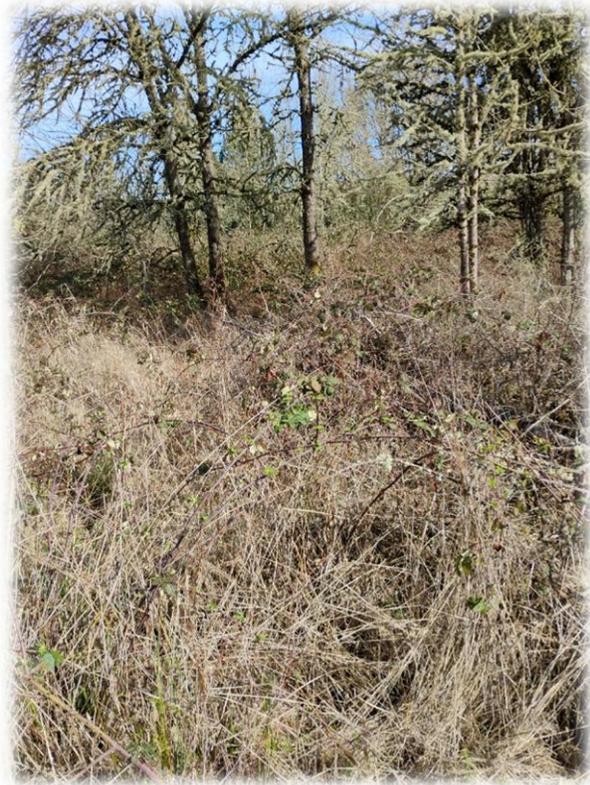
The project area lies within the headwaters of Bethany Creek, a westward-flowing stream that originates south of a 0.46-acre irrigation pond. From there, Bethany Creek flows through developed areas south of NW Springville Road, likely sustained in part by stormwater management and conveyance systems. The creek then expands into an in-stream pond (Bethany Lake), ultimately converging with Rock Creek at an overflow dam on the lake's west

end. Bethany Creek is not designated by the Oregon Department of Fish and Wildlife (ODFW) as essential salmonid habitat.

Cleared portions of the property include a Bonneville Power Administration (BPA) transmission line corridor, where ongoing maintenance involves regular removal of young trees, promoting the dominance of herbaceous and shrub vegetation. Despite these disturbances, relatively unmanaged habitat remains across much of the property, supporting a wildlife corridor along the ridgeline. This corridor is somewhat fragmented by a long fence line along the Multnomah–Washington County boundary and by the BPA corridor. The mitigation area and development footprint currently contain at least 30% cover by invasive Himalayan blackberry. Near the access road entrance and within the proposed compound area, young trees approximately 20 to 30 feet in height—including English hawthorn, Oregon ash, and beaked hazelnut—are interspersed with dense Himalayan blackberry and non-native grasses (see Figure 3).

The site survey identified some unmanaged and relatively undisturbed habitat areas across the subject property, including a wildlife corridor that traverses the ridge. This corridor is somewhat fragmented by a long fence line along the Multnomah-Washington County boundary and the BPA transmission corridor. Elk and deer trails, as well as other signs of wildlife use, were observed in this area.

A small, approximately 0.25-acre pond is located about 120 feet north of the northern property line—more than 600 feet from the development footprint—on adjacent private land. The pond attracts ducks and osprey (see Figure 3). Additionally, a 704-foot intermittent stream runs north to south at the eastern end of the subject property. The stream passes through a culvert that is overgrown with Himalayan blackberry.



*Figure 2. Young disturbed mixed deciduous grove within development footprint.*

Evidence of recent disturbance was observed on site, including vegetation clearing, soil displacement, and brush piles—likely the result of recent site exploration or evaluation activities. Invasive vegetation is primarily concentrated along the disturbed edges of the long-established dirt road, with Himalayan blackberry being the most prevalent. Overall, invasive plant species are estimated to cover approximately 30% of the project site.

## 5. HABITAT WITHIN SEC OVERLAYS

### Significant Streams (SEC-s)

The subject property is an elongated, 20-acre parcel that sits atop Bethany Crest, with drainage flowing east toward Abbey Creek and west toward Bethany Creek. The property supports over six acres of forested riparian habitat—mapped in the Portland Metro Title 13 Inventory as Riparian Wildlife Habitat Class I and II and Upland Wildlife Habitat Class B—surrounding the Abbey Creek tributaries in the eastern portion (Figure 3). In the western portion of the property, where the Monofir tower is proposed, the SEC-s overlay encompasses less than 0.25-acres of the subject parcel and includes a mix of cleared shrubland and forested habitat (Figure 4). These areas are classified as Riparian Wildlife Habitat Class II and Upland Wildlife Habitat Class C by the Portland Metro Title 13 Inventory.

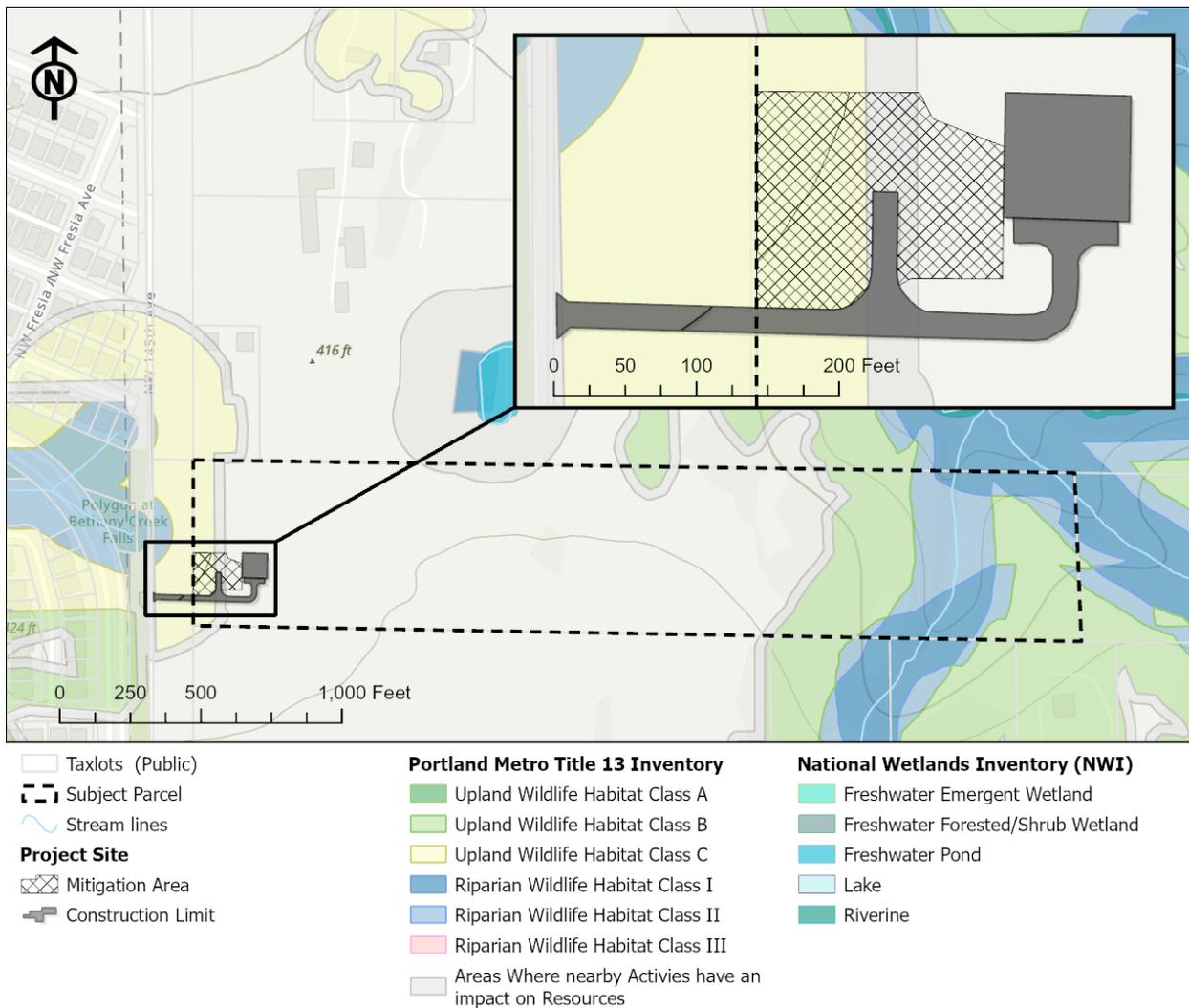


Figure 3. Bethany Crest project parcel with Metro Title 13 Inventory Habitat and NWI Wetlands

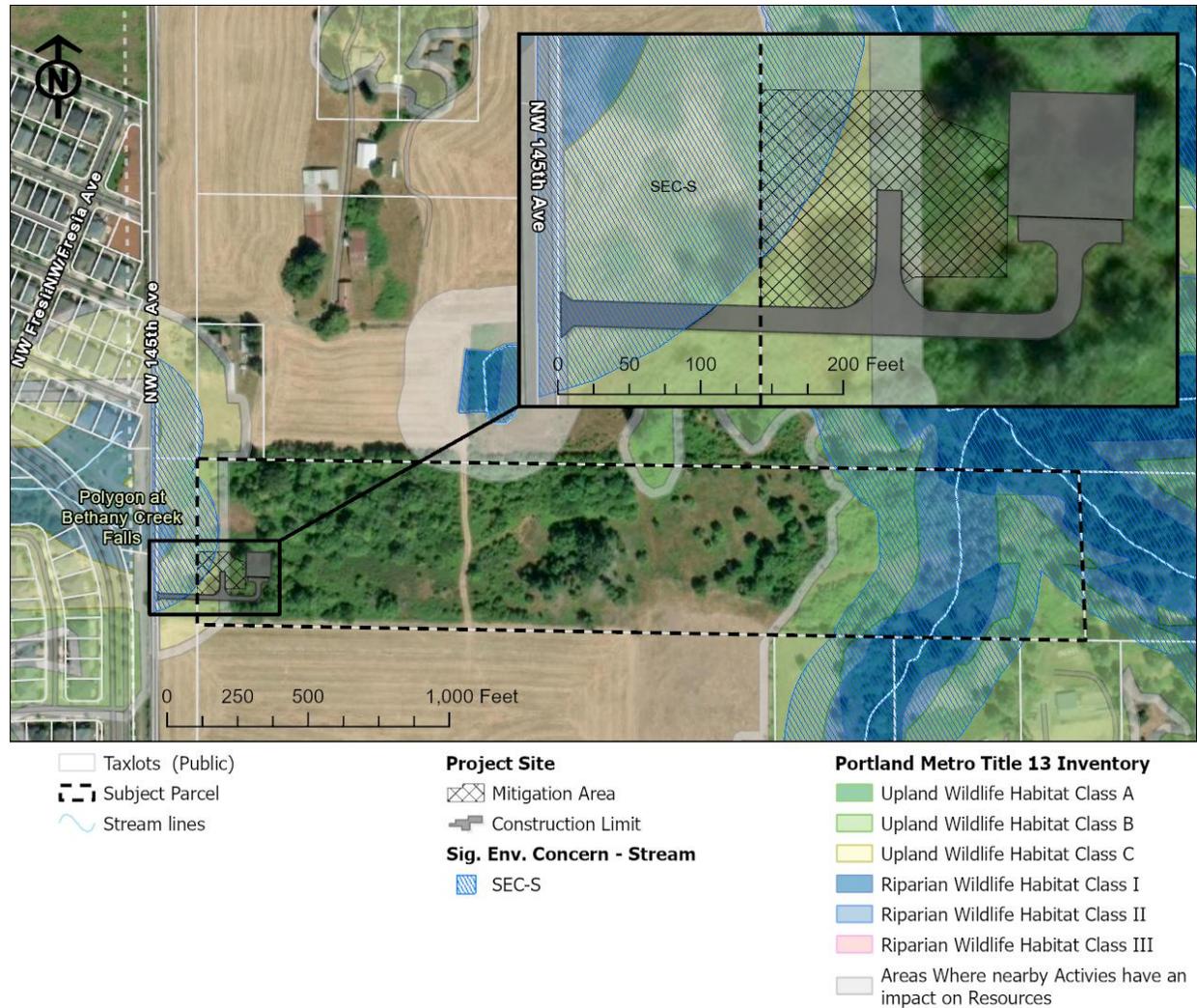


Figure 4. Project Parcel with SEC-s Overlay with Portland Metro Title 13 Inventory Habitats

Multnomah County defines Significant Streams (SEC-s) as protected streams that have been evaluated through a Goal 5 ESEE analysis and designated by ordinance, as well as streams and wetlands mapped by Metro’s Title 13 as Habitat Conservation Areas. The Stream Conservation Area identified on County zoning maps extends perpendicularly from the stream centerline, with the width of the overlay varying by location. These mapped overlays are intended to protect stream corridors and associated upland functions and are designated as SEC-s on the Multnomah County Zoning Maps. Within the project parcel, the proposed project avoids direct impacts to the area mapped as SEC-s; however, the proposed access road will cross the mapped SEC-s overlay outside the parcel, resulting in approximately 900 square feet of impact, as shown in Figure 4.

The property is located in the headwaters of Bethany Creek, a westward-flowing stream that originates below an irrigation pond. It flows through developed areas south of NW Springville

Road, likely sustained in part by stormwater management infrastructure, before expanding into Bethany Lake and eventually converging with Rock Creek at an overflow dam at the lake’s west end. Bethany Creek is not designated by the Oregon Department of Fish and Wildlife (ODFW) as essential salmonid habitat.

### Significant Wildlife Habitats (SEC-h)

The entire 20-acre subject parcel is mapped as Significant Wildlife Habitat (SEC-h) under Multnomah County’s Goal 5 Natural Resource Inventory (Figure 5). This designation applies to non-riparian and non-wetland areas that support important habitat values, including wooded areas and habitat for rare or endangered flora and fauna. According to Multnomah County Code, SEC-h includes both the identified habitat and a 25-foot buffer to protect the root zone of vegetation. Both the proposed development footprint and the mitigation area are entirely located within the mapped SEC-h overlay.

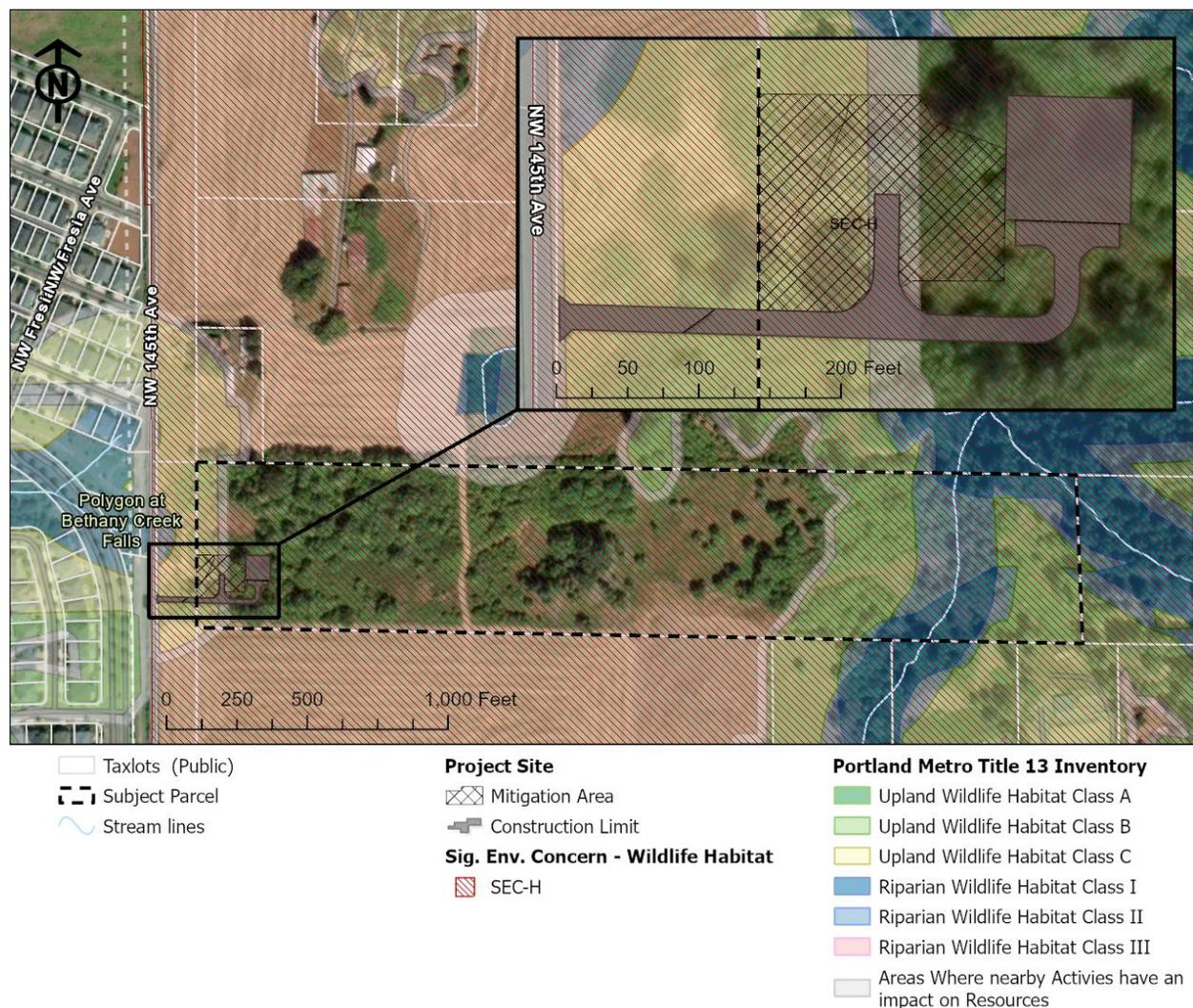


Figure 5. Subject parcel with SEC-h Overlay and Metro Title 13 Inventory

## Vegetation Communities

The subject property includes a variety of habitat types within the mapped SEC-h and SEC-s overlay zones. These habitats were assessed based on vegetation structure and dominant species composition and are described in three general categories: forested habitat, shrub-dominated habitat, and open habitat. The descriptions below summarize observed plant communities, habitat conditions, and the presence of invasive species in each habitat type.

### *Forested Habitat*

Forested areas within the project site are characterized by mixed coniferous and deciduous canopy cover. Dominant species include Douglas-fir (*Pseudotsuga menziesii*) and western red cedar (*Thuja plicata*), along with deciduous trees such as Oregon ash (*Fraxinus latifolia*), bigleaf maple (*Acer macrophyllum*), English hawthorn (*Crataegus monogyna*), and red alder (*Alnus rubra*). The canopy is closed, with greater than 75 percent coverage.

The understory includes native shrubs such as Nootka rose (*Rosa nutkana*), beaked hazelnut (*Corylus cornuta*), sword fern (*Polystichum munitum*), Oregon grape (*Mahonia nervosa*), and snowberry (*Symphoricarpos albus*), along with a minor component of young cascara (*Rhamnus purshiana*). English ivy (*Hedera helix*) is present in the understory and climbing into the upper canopy, while Himalayan blackberry (*Rubus armeniacus*) is dense throughout.

### *Shrub-dominated Habitat*

Shrub-dominated areas are located primarily within the BPA transmission line corridor and along the forest edge. Much of the shrub cover consists of nuisance plant species, including those listed in Metro's Nuisance Plant and Prohibited Plant lists and the Oregon State Noxious Weed List. Within the riparian shrub habitat near Bethany Creek, English hawthorn occurs sporadically, and Himalayan blackberry is widespread and dominant.

### *Open Habitat*

Open habitat is found primarily in the center of the property, with some small areas occurring within and adjacent to the project site. These habitats support a mix of herbaceous vegetation including orchard grasses and Douglas spiraea (*Spiraea douglasii*), along with a variety of nuisance and invasive species. Common species include bull thistle (*Cirsium vulgare*), tansy ragwort (*Senecio jacobaea*), English ivy, and Himalayan blackberry. Portions of the open riparian habitat surrounding the headwaters of Bethany Creek are located adjacent to the access road, pedestrian pathways, and nearby residential development.

## Soils

Two soil types are mapped within the project site (Figure 6): Cascade silt loam (7B) and Delena silt loam (14C). These soils reflect the site's position on low upland slopes and terraces with silty alluvial or loess parent material. Both soil types are classified as prime farmland or farmland of

statewide importance by the Natural Resources Conservation Service (NRCS), depending on drainage.

*Cascade silt loam, 3 to 8 percent slopes (7B)*

Cascade silt loam is the predominate soil type in the project site and mitigation area. Its parent material is loess, and it is somewhat poorly drained. The restrictive fragipan layer is found between 20 and 30 inches, and the water table typically occurs at a depth of 18 to 30 inches.

The typical profile includes:

- H1: 0–8 inches – silt loam
- H2: 8–27 inches – silt loam
- H3: 27–60 inches – silt loam

*Delena silt loam, 3 to 12 percent slopes (14C)*

Delena silt loam is designated as farmland of statewide importance. The parent material is silty colluvium, and the soil is poorly drained. A fragipan layer occurs at 20 to 30 inches depth, and the seasonal high water table is close to the surface—typically 0 to 18 inches. The typical profile includes:

- H1: 0–13 inches – silt loam
- H2: 13–23 inches – silty clay loam
- H3: 23–60 inches – silty clay loam

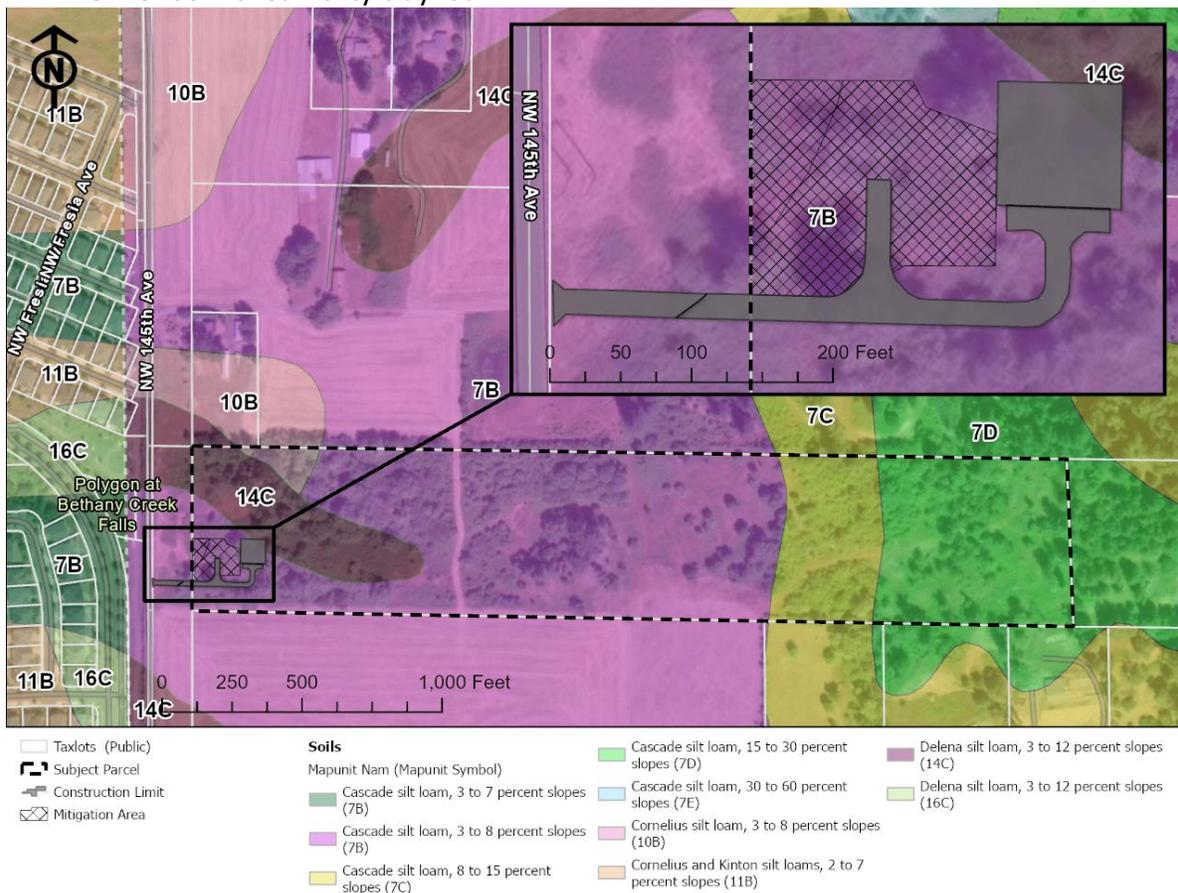


Figure 6. Mapped Soils in the Project Area

## 6. MITIGATION PLAN

To address unavoidable impacts within the SEC-s and SEC-h overlays, a mitigation plan has been developed that restores and enhances a total of 10,625 square feet of degraded shrub-dominated habitat adjacent to the development site. This mitigation area includes 2,310 square feet within the overlapping SEC-s and SEC-h overlays, and 8,315 square feet within the SEC-h overlay alone.

The mitigation site was selected for its proximity to the impact area, existing degraded conditions, and suitability for restoration, including ease of access for maintenance and irrigation. Restoration will focus on removing invasive species, establishing native vegetation, and improving ecological structure and function, consistent with Multnomah County Zoning Code requirements.

### Mitigation for SEC-s Impacts

The impacted area within the SEC-s overlay totals approximately 900 square feet and is best classified as a Degraded Corridor per MCC 39.5590(D)(1)(c), with limited native plant cover and a high presence of invasive species. Because the entire site lies more than 150 feet from the top of bank of Bethany Creek, it qualifies as a Low Impact Site under MCC 29.5500(C)(2).

Per MCC 39.5590(C)(3), on-site restoration within degraded corridors is permitted at a 1:1 ratio. Mitigation will occur within a 2,310 square feet of overlapping SEC-s and SEC-h habitat in the selected restoration area, exceeding the minimum area requirement and enhancing the adjacent riparian buffer. No tree removal is proposed within the SEC-s overlay.

### Mitigation for SEC-h Impacts

This plan addresses approximately 8,610 square feet of proposed disturbance within the SEC-h overlay. All mitigation plantings will occur within the SEC-h overlay on the same Lot of Record, consistent with MCC 39.5515(F)(3)(d)(iii), and the approval will be recorded in the Multnomah County deed records.

To meet or exceed the mitigation requirements outlined in MCC 39.5515(F)(3)(d), the plan includes:

- 110 native trees
- 321 native shrubs
- A native pollinator meadow mix, to be sown between woody plantings

These totals are based on the requirement of one native tree and one native shrub per 100 square feet of disturbance, and the restoration area covers a total of 10,625 square feet—sufficient to meet mitigation needs for the 8,610 square feet of impact.

All selected plants are drawn from the Metro Native Plant List, and planting will follow spacing and container size standards outlined in MCC 39.5515(F)(3)(g). Tree spacing (generally 8–15 feet on center) reflects mature canopy size, ecological function, and site access needs. Shrubs will be spaced 4–5 feet on center or planted in species-specific clusters to enhance habitat structure. Slight variation in spacing may occur in the field to accommodate micro-site conditions and allow for naturalistic groupings.

## Mitigation Goals and Restoration Actions

The mitigation effort is designed to:

- Remove invasive and nuisance vegetation (e.g., Himalayan blackberry, reed canarygrass)
- Restore ecological function and habitat diversity
- Enhance riparian and upland habitat connectivity
- Support long-term vegetative cover through layered planting (trees, shrubs, groundcover, and meadow species)

Details of the proposed woody species, quantities, spacing, and acceptable substitutes are provided in Table 3: Recommended Planting Plan for Mitigation Area, followed by a description of the proposed native pollinator meadow seed mix.

*Note: Native landscaping plants proposed in the Landscaping Plan to surround the Monofir site fencing are not included in this planting list or the mitigation totals above.*

Table 3. Recommended Planting Plan for Mitigation Area

Vegetation Layer	Species	Quantity	Acceptable Substitutes	Cluster Size	Spacing (ft)
Tree	Big leaf maple ( <i>Acer macrophyllum</i> )	25	Red alder ( <i>Alnus rubra</i> )	1 tree	12 to 15
Tree	Douglas hawthorn ( <i>Crataegus douglasii</i> )	25	Quaking aspen ( <i>Populus tremuloides</i> )	1 tree	8 to 12
Tree	Douglas fir ( <i>Pseudotsuga menziesii</i> )	25	Ponderosa pine ( <i>Pinus ponderosa</i> var. <i>benthamiana</i> )	1 tree	10 to 15
Tree	Western red cedar* ( <i>Thuja plicata</i> )	15	Incense cedar ( <i>Calocedrus decurrens</i> )	1 tree	10 to 15
Tree	Cascara ( <i>Frangula purshiana</i> )	20	Vine maple ( <i>Acer circinatum</i> )	1 tree	6 to 10
Shrub	Creeping Oregon grape	50	Kinnikinnick* ( <i>Arctostaphylos uva-ursi</i> )	1 shrub	2.5

	( <i>Mahonia repens</i> )				
Shrub	Black twinberry ( <i>Lonicera involucrata</i> )	50	Salmonberry ( <i>Rubus spectabilis</i> )	4 shrubs	8 to 12
Shrub	Cascara buckthorn ( <i>Rhamnus purshiana</i> )	50	Red-flowering currant ( <i>Ribes sanguineum</i> )	4 shrubs	8 to 12
Shrub	Red-flowering currant ( <i>Ribes sanguineum</i> )	56	Osoberry ( <i>Oemleria cerasiformis</i> )	4 shrubs	8 to 12
Shrub	Nootka rose ( <i>Rosa nutkana</i> )	55	Red-flowering currant ( <i>Ribes sanguineum</i> )	4 shrubs	8 to 12
Shrub	Snowberry ( <i>Symphoricarpos albus</i> )	60	Salal ( <i>Gaultheria shallon</i> )	4 shrubs	8 to 12
<b>Total</b>			<b>110 trees and 321 shrubs</b>		

\*These plants also included in the landscaping surrounding the fencing

A native pollinator meadow mix will be used to establish early- and late-season foraging habitat between woody plantings, contributing to habitat diversity and long-term site resilience. This mix is designed to provide continuous foraging resources throughout the growing season and is composed of native species selected from the Metro Native Plant List. The proposed seed mix includes the following:

- Annual wildflowers (29%)  
Douglas meadowfoam (*Limnanthes douglasii*), globe gilia (*Gilia capitata*), farewell to spring (*Clarkia amoena*), sea blush (*Plectritis congesta*), bicolor lupine (*Lupinus bicolor*), white meadowfoam (*Limnanthes alba*), and large flower collomia (*Collomia grandiflora*)
- Perennial wildflowers (47%)  
Self heal (*Prunella vulgaris*), western yarrow (*Achillea millefolium*), large camas (*Camassia leichtlinii*), riverbank lupine (*Lupinus rivularis*), bigleaf lupine (*Lupinus polyphyllus*), meadow checkermallow (*Sidalcea campestris*), woolly sunflower (*Eriophyllum lanatum*), western buttercup (*Ranunculus occidentalis*), showy fleabane (*Erigeron speciosus*), common camas (*Camassia quamash*), and prairie cinquefoil (*Potentilla gracilis*)
- Native grasses (24%)  
Roemer's fescue (*Festuca roemerii*), tufted hairgrass (*Deschampsia cespitosa*), and meadow barley (*Hordeum brachyantherum*)

This mix will help establish a resilient herbaceous layer, provide habitat and nectar sources for native pollinators, and contribute to overall biodiversity within the mitigation area. If specific

species are not available at the time of installation, substitutions of comparable native species from the Metro Native Plant List may be made, with preference given to functionally similar plants that support pollinator diversity and habitat value. Minor adjustments to species composition or proportions may also occur based on seed availability and ecological site conditions at the time of restoration.

## Vegetation Management Schedule

Vegetation management during the pre-planting and planting periods will focus on the removal of nuisance species and the installation of native plant materials. Wherever feasible, invasive vegetation will be removed mechanically, followed by spot applications of aquatic-safe herbicide applied by a licensed applicator to suppress regrowth. Site preparation for planting should begin in the fall prior to scheduled installation and will consist of a combination of mechanical removal and targeted herbicide treatment.

The timeline for these vegetation management tasks and associated objectives is summarized in Table 4. Supplemental planting will be implemented as needed to ensure adequate establishment and cover of native species throughout the mitigation area.

Table 4. Vegetation Management Timeline

Period	Activity	Date	Objective
Pre-planting	Site Preparation: Mechanical treatment of nonnative invasive plants (Cut)	Fall 2025	Treat Himalayan blackberry and other nonnative invasive plants
Pre-planting	Site Preparation: Herbicide treatment of nonnative invasive plants (Spray)	Spring-Summer 2026	Spot-treatment of aquatic-safe herbicide application across site to prepare for planting
Pre-planting	Site Preparation: Nonnative invasive plant treatment (Cut and Selective Spray)	Fall 2026	Mechanical and targeted aquatic-safe herbicide application to prepare for plantings
Planting	Woody plant installation	Winter 2027	Establish woody plant community dominated by native trees and shrubs
Seeding	Application of herbaceous seed mix	Winter 2027	Establish native groundcover
Maintenance Year 1	Irrigation, Spot Treatment of Invasive Plants (Cut or Spray)	Summer-Fall 2027	Use water truck to irrigate plants during the dry period
Monitoring Year 1	Track plant survival, invasive species cover, and overall vegetation performance relative to	Winter 2028	Progress toward meeting Year 1 performance standards

	project's success criteria.		
Maintenance Year 2	Irrigation, Spot Treatment of Invasive Plants (Cut or Spray)	Summer - Fall 2028	Use water truck to irrigate plants during the dry period
Monitoring Year 2	Track plant survival, invasive species cover, and overall vegetation performance relative to project's success criteria.	Winter 2029	Progress toward meeting Year 2 performance standards
Monitoring Year 3	Track plant survival, invasive species cover, and overall vegetation performance relative to project's success criteria.	Winter 2030	Progress toward meeting Year 3 performance standards
Monitoring Year 4	Track plant survival, invasive species cover, and overall vegetation performance relative to project's success criteria.	Winter 2031	Maintain vegetation health and meet long-term goals
Monitoring Year 5	Track plant survival, invasive species cover, and overall vegetation performance relative to project's success criteria.	Spring 2032 to Fall 2032	Confirm compliance with final performance standards; implement any final maintenance as needed

## Adaptive Management

The adaptive management strategy provides a framework for responding to both anticipated and unforeseen challenges that may affect the success of vegetation establishment. This plan assumes an initial plant mortality rate of up to 20 percent in the first year, with supplemental planting anticipated in the second year to address any early losses.

If areas within the mitigation site fail to establish at the desired density or composition, they will be assessed to determine underlying causes such as soil conditions, competition from invasive species, or planting technique. Based on these observations, appropriate remedial actions will be implemented. These may include replanting with species better suited to specific microhabitat conditions, adjusting spacing or species mix, or modifying weed control strategies to improve establishment outcomes.

## Monitoring Plan

This monitoring plan complies with the requirements of MCC 39.5515 (SEC-h) and MCC 39.5590 (SEC-s). Performance standards are tailored to reflect achievable targets for a five-year monitoring period following planting. Two primary standards apply:

1. **Woody Plant Survival (SEC-h)**

A minimum of 80 percent of the trees and shrubs planted must be alive on the fifth anniversary of initial installation. Dead plants will be replaced in kind to meet this requirement. Based on a total of 110 trees and 321 shrubs, at least 88 trees and 257 shrubs must remain alive by Year 5.

2. **Vegetation Establishment and Cover (SEC-s)**

Within the SEC-s portion of the mitigation area, the vegetated corridor must achieve the County's definition of a *Good Corridor* within five years. As defined in MCC 39.5590(D)(1)(a), a Good Corridor includes a combination of native trees, shrubs, and groundcover covering more than 80 percent of the area, with greater than 50 percent tree canopy cover, measured using aerial imagery. Vegetation must be maintained in a healthy, naturalized condition through supplemental planting and maintenance as needed.

## Monitoring and Reporting Protocol

The applicant or property owner will be responsible for monitoring the mitigation area for five years following initial planting. Monitoring will occur annually and include:

- Counting the number of surviving trees and shrubs
- Assessing overall plant health and vigor
- Estimating percent cover of native and invasive vegetation
- Observing plant naturalization and vegetative structure development
- Identifying areas that require replanting or additional weed control

Monitoring results will inform adaptive management actions, including targeted replanting or changes to weed control strategies. Dead or unhealthy plants will be replaced as needed to meet performance standards.

A Yearly Report will be submitted to Multnomah County Land Use Planning for each of the five monitoring years. Reports will summarize site conditions, document progress toward meeting performance standards, and identify any proposed changes to the mitigation plan. All modifications must be reviewed and approved by Multnomah County in writing before implementation.

At the conclusion of the five-year monitoring period, the project team will provide written certification by a qualified professional (e.g., wetland or riparian consultant, fish and wildlife biologist, or landscape architect) that the mitigation area was implemented in accordance with the approved mitigation plan and meets the required performance standards, including the “Good Corridor” condition within the SEC-s overlay.

### Long-Term Maintenance Considerations

Due to the site’s location beneath power lines and adjacent to communication infrastructure, there is a high likelihood of persistent invasive species pressure from species such as reed canarygrass (*Phalaris arundinacea*) and Himalayan blackberry (*Rubus armeniacus*). Ongoing maintenance will include targeted invasive species control and debris removal. Monitoring and adaptive management strategies will ensure long-term vegetation health and habitat quality.

## 7. COMPLIANCE WITH MCC 39.5530(C)

The proposed development and associated mitigation plan comply with the approval criteria for activities within the Significant Environmental Concern overlay as outlined in MCC 39.5540(C). The Monofir tower and associated improvements have been sited within a previously cleared and degraded area beneath a BPA transmission corridor, thereby avoiding higher-quality riparian and wildlife habitats. Vegetation removal is limited to approximately 8,610 square feet, and no disturbance will occur within 100 feet of the top of bank of Bethany Creek or within mapped wetlands or floodplains.

To offset unavoidable impacts, a 10,625-square-foot mitigation area has been established immediately adjacent to the development site. This area includes 2,310 square feet within the overlapping SEC-s and SEC-h overlays and 8,315 square feet within the SEC-h overlay. The mitigation site was selected based on its location between the impact area and the protected stream, degraded vegetation condition, and suitability for long-term restoration. Restoration actions include the removal of invasive species such as Himalayan blackberry and reed canarygrass, and installation of native trees, shrubs, and a pollinator meadow seed mix selected from the Metro Native Plant List.

The project will improve ecological structure and function, enhance scenic quality, and support continuous habitat corridors through layered plantings and native groundcover. Planting densities meet or exceed County requirements, and vegetation will be maintained in a healthy, naturalized condition through supplemental watering, maintenance, and adaptive management during the five-year monitoring period.

All soil disturbance will occur during the dry season and be stabilized before the onset of fall rains using appropriate erosion control measures. No stormwater infrastructure or lighting is proposed within high-quality habitat areas. The only fencing to be installed is a 6-foot chain-link fence enclosing the tower compound; this fencing will be coated in non-reflective green paint and located entirely within a previously disturbed portion of the SEC-h overlay. The fence does not encircle the mitigation area or obstruct existing wildlife corridors and is not anticipated to disrupt

wildlife passage. Lighting will be minimal, shielded, motion-activated, and directed downward to limit ambient light and reduce impacts to nocturnal wildlife.

No essential salmonid habitat or documented sensitive wildlife species occur on the site. Common native birds protected under the Migratory Bird Treaty Act were observed, but no nesting activity was recorded. The parcel does not contain mapped cultural or archaeological resources, and no indicators of historic use were identified during the site evaluation. The area has been previously disturbed and is not located within a mapped historic resource overlay. Ground-disturbing activities will be limited and contained within the designated development footprint.

In total, the project has been designed to avoid and minimize environmental impacts to the extent practicable and to fully compensate for those impacts through on-site restoration. The proposed development and mitigation actions are consistent with the intent and specific criteria of MCC 39.5540(C), including the protection of significant habitats, preservation of water and air quality, compatibility with surrounding natural features, and consistency with the applicable Comprehensive Plan policies.

## 8. COMPLIANCE WITH MCC 39.5540(C) AND (D)

The proposed development and mitigation plan comply with the applicable approval and mitigation criteria for projects within the Habitat Conservation Area (SEC-h) as outlined in MCC 39.5540(C) and (D).

The development is located within an existing cleared area under a transmission corridor. The site will be accessed by a private road within the BPA right-of-way, and as such, requires a Type II SEC-h permit. This mitigation plan is provided to meet the requirements of a Type II review, pursuant to MCC 39.5540 subsection D. The mitigation area is located within an existing non-forested disturbed area contiguous with the mixed-deciduous forest adjacent to the project site, and partially within a degraded stream riparian area.

No ground disturbance will occur within 100 feet of a mapped water body, and all site preparation and planting will be timed to comply with seasonal work windows.

No fencing is proposed outside of the cleared development area, and all lighting will be minimized and directed away from natural habitat areas. Nuisance and invasive species will be removed and replaced with native vegetation in accordance with County requirements.

The mitigation plan meets or exceeds all planting requirements, including planting density, spacing, container size, and species diversity. Plantings will be located within the SEC-h overlay or its contiguous degraded corridor on the same Lot of Record. Native soils will be retained and reused on site to the extent practicable.

Long-term maintenance, annual reporting, and final certification by a qualified professional are all included in the monitoring plan to ensure compliance with both SEC-h and SEC-s standards.

## 9. COMPLIANCE WITH 39.5590(C) AND (E)

The proposed development complies with the applicable approval criteria under MCC 39.5590(C) and (E) for activities within the Stream Conservation Area (SEC-s). The project qualifies as a Low Impact Site under subsection (C)(2), as the entire development footprint is located more than 100 feet from the top of bank of Bethany Creek, a protected water feature. Because of this, an alternatives analysis under subsection (C)(3) is not required.

The project has been designed to avoid impacts to existing trees and minimize disturbance within the Riparian Area. No tree removal is proposed within the SEC-s overlay. Existing native vegetation will be preserved where practicable, and invasive species—including Himalayan blackberry and reed canarygrass—will be removed and replaced with a diverse mix of native trees, shrubs, and groundcovers. The mitigation area maintains habitat connectivity with surrounding vegetation and contributes to overall ecological function and visual resource quality. Vegetation within the SEC-s portion of the mitigation area will be restored to meet the definition of a “Good Corridor” within five years, as defined in MCC 39.5590(D)(1)(a), with greater than 80% native vegetation cover and more than 50% tree canopy coverage.

All soil-disturbing activity will occur during the dry season, between June 15 and September 15, with revegetation and stabilization completed by October 15. The boundaries of the Riparian Area will be clearly marked prior to construction and will remain undisturbed except where authorized. No fencing, lighting, or stormwater infrastructure is proposed within the SEC-s area, and no trees will be used to anchor construction equipment. Any areas with erosion risk will be stabilized using appropriate best management practices. Nuisance and invasive non-native plant species will not be used in landscaping, and all revegetation will be completed using species from the Metro Native Plant List.

Pursuant to MCC 39.5590(E), the mitigation area will be monitored for five years to ensure successful vegetation establishment. Annual monitoring reports will be submitted to Multnomah County Land Use Planning, documenting the condition of plantings and recommending any necessary modifications. At the end of the monitoring period, a qualified professional will certify that the Riparian Area was restored according to the mitigation plan and that the vegetated corridor qualifies as a Good Corridor consistent with County requirements. Work areas will be carefully marked to avoid unnecessary impacts during construction, and no trees in the Riparian Area will be used to stabilize equipment.

## 10. REFERENCES

Multnomah County Codes that Apply to Development within SEC-S Overlay:

<https://multco.us/info/zoning-codes>

Oregon Biodiversity Center: <https://inr.oregonstate.edu/orbic>

Bethany Crest Stormwater Control Certificate, Feb. 10, 2025

Multnomah County Open Data Center: <https://gis-multco.opendata.arcgis.com>

US Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System (IPaC) database: <https://www.fws.gov/service/information-planning-and-consultation>

US Department of Agriculture, Natural Resources Conservation Service (NRCS) Soil Survey for Multnomah County, Oregon

Oregon Department of Fish and Wildlife.

[https://www.dfw.state.or.us/wildlife/diversity/species/threatened\\_endangered\\_species.asp](https://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_species.asp)

Oregon Department of Fish and Wildlife: <https://nrimp.dfw.state.or.us/nrimp/default.aspx?p=259>

Oregon Hub Explorer: <https://hub.oregonexplorer.info/pages/data>

## Appendix A: Site Plans

NOTES:  
 1. THE OVERALL SITE PLAN IS GENERATED FROM MULTIPLE SOURCES INCLUDING, BUT NOT LIMITED TO, GIS MAPS, AERIAL MAPS, PHOTOS, IMAGES, AND TOPOGRAPHIC SURVEY (IF PROVIDED).



DRAWN BY: MS/CH  
 CHECKED BY: BU

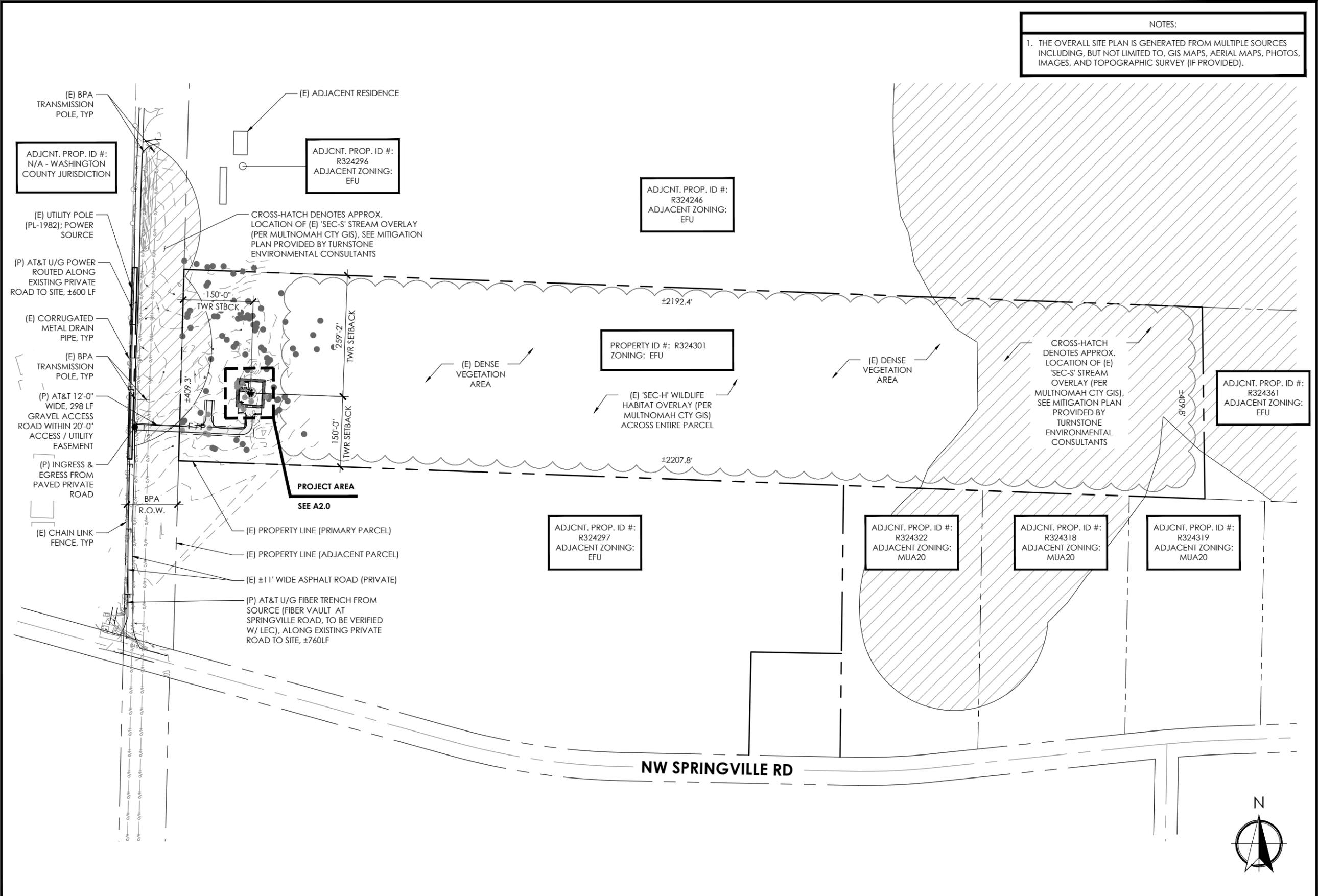
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VER.	DATE	DESCRIPTION
1	08/26/24	90% ZONING DRAWINGS
2	09/18/24	CLIENT COMMENTS
3	09/25/24	100% ZONING DRAWINGS
4	01/31/25	STORMWATER UPDATE
5	03/03/25	JX COMMENTS

LICENSER  
 PRELIMINARY UNLESS SIGNED

PROJECT INFORMATION  
 PD31  
 BETHANY CREST  
 PARCEL #R324301  
 13937 NW SPRINGVILLE ROAD  
 PORTLAND, OR 97229

SHEET TITLE  
 OVERALL SITE PLAN

SHEET NO.  
 A1.0



ADJCNT. PROP. ID #:  
N/A - WASHINGTON  
COUNTY JURISDICTION

ADJCNT. PROP. ID #:  
R324296  
ADJACENT ZONING:  
EFU

ADJCNT. PROP. ID #:  
R324246  
ADJACENT ZONING:  
EFU

PROPERTY ID #:  
R324301  
ZONING:  
EFU

ADJCNT. PROP. ID #:  
R324361  
ADJACENT ZONING:  
EFU

ADJCNT. PROP. ID #:  
R324297  
ADJACENT ZONING:  
EFU

ADJCNT. PROP. ID #:  
R324322  
ADJACENT ZONING:  
MUA20

ADJCNT. PROP. ID #:  
R324318  
ADJACENT ZONING:  
MUA20

ADJCNT. PROP. ID #:  
R324319  
ADJACENT ZONING:  
MUA20

- (E) BPA TRANSMISSION POLE, TYP
- (E) ADJACENT RESIDENCE
- (E) UTILITY POLE (PL-1982); POWER SOURCE
- (P) AT&T U/G POWER ROUTED ALONG EXISTING PRIVATE ROAD TO SITE, ±600 LF
- (E) CORRUGATED METAL DRAIN PIPE, TYP
- (E) BPA TRANSMISSION POLE, TYP
- (P) AT&T 12'-0" WIDE, 298 LF GRAVEL ACCESS ROAD WITHIN 20'-0" ACCESS / UTILITY EASEMENT
- (P) INGRESS & EGRESS FROM PAVED PRIVATE ROAD
- (E) CHAIN LINK FENCE, TYP
- (E) PROPERTY LINE (PRIMARY PARCEL)
- (E) PROPERTY LINE (ADJACENT PARCEL)
- (E) ±11' WIDE ASPHALT ROAD (PRIVATE)
- (P) AT&T U/G FIBER TRENCH FROM SOURCE (FIBER VAULT AT SPRINGVILLE ROAD, TO BE VERIFIED W/ LEC), ALONG EXISTING PRIVATE ROAD TO SITE, ±760LF

CROSS-HATCH DENOTES APPROX. LOCATION OF (E) 'SEC-S' STREAM OVERLAY (PER MULTNOMAH CTY GIS), SEE MITIGATION PLAN PROVIDED BY TURNSTONE ENVIRONMENTAL CONSULTANTS

(E) DENSE VEGETATION AREA

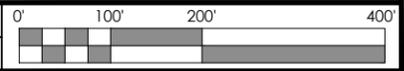
(E) 'SEC-H' WILDLIFE HABITAT OVERLAY (PER MULTNOMAH CTY GIS) ACROSS ENTIRE PARCEL

(E) DENSE VEGETATION AREA

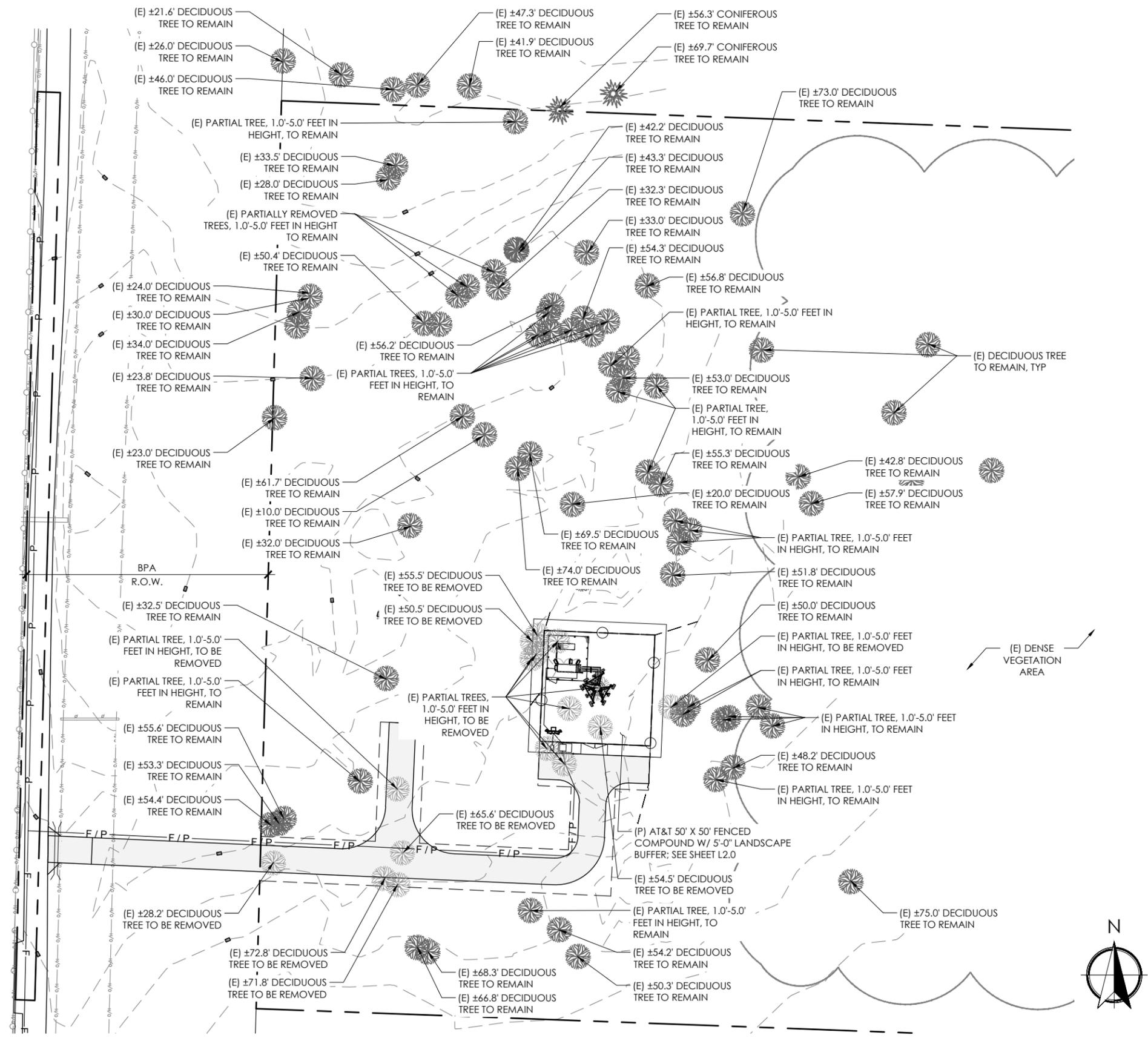
CROSS-HATCH DENOTES APPROX. LOCATION OF (E) 'SEC-S' STREAM OVERLAY (PER MULTNOMAH CTY GIS), SEE MITIGATION PLAN PROVIDED BY TURNSTONE ENVIRONMENTAL CONSULTANTS

PROJECT AREA  
 SEE A2.0

NW SPRINGVILLE RD







DRAWN BY: MS/CH  
 CHECKED BY: BU

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	08/26/24	90% ZONING DRAWINGS
2	09/18/24	CLIENT COMMENTS
3	09/25/24	100% ZONING DRAWINGS
4	01/31/25	STORMWATER UPDATE
5	03/03/25	JX COMMENTS

LICENSER  
 PRELIMINARY UNLESS SIGNED

PROJECT INFORMATION  
**PD31**  
**BETHANY CREST**  
 PARCEL #R324301  
 13937 NW SPRINGVILLE ROAD  
 PORTLAND, OR 97229

SHEET TITLE  
**TREE REMOVAL & RETENTION PLAN**

SHEET NO.  
**L1.0**



- ALL LANDSCAPING SHALL BE INSTALLED PRIOR TO RECEIVING FINAL BUILDING INSPECTION APPROVAL.
- ALL PLANTINGS ARE DROUGHT TOLERANT, NO IRRIGATION IS REQUIRED FOLLOWING INITIAL WATERING AT INSTALLATION. IF SEVERE DROUGHT OCCURS, CONTRACTOR / OWNER TO RE-SOAK TREE RINGS TO SATURATE AS NEEDED (ONE INCH OF RAINFALL ALLOWS TREE RING TO SEEP WATER FOR A PERIOD OF 30 DAYS PER MANUFACTURER).
- ALL PLANTINGS WILL BE WARRANTED BY LANDSCAPER FOR A PERIOD OF ONE YEAR FROM INSTALLATION.
- ALL DEBRIS AND EXISTING GROUND COVER REMOVAL IS TO BE DONE BY THE CONTRACTOR.
- MULCH (AS A GROUND COVER) MUST BE CONFINED TO AREAS UNDERNEATH PLANTS AND IS NOT A SUBSTITUTE FOR GROUND COVER PLANTS.
- CONTRACTOR TO PROVIDE SUFFICIENT WATERING UPON INITIAL INSTALLATION OF PLANTINGS.
- ALL PLANTINGS SHALL BE FERTILIZED PER SPECIFIC SPECIE REQUIREMENTS.
- THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE TO ARRANGE AN ON-SITE MEETING TO DISCUSS PROJECT PRIOR TO COMMENCEMENT OF ANY WORK.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES AND OTHER OBSTRUCTIONS THAT MAY AFFECT THE WORK, AND SHALL BE RESPONSIBLE FOR REPAIRING AND/OR REPLACING, AT HIS OR HER OWN EXPENSE, ANY DAMAGES FROM HIS OR HER OPERATION.
- CLEAR AND GRUB ALL NEW PLANTING AREAS PRIOR TO THE INSTALLATION OF ANY NEW PLANT MATERIAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL EXISTING LANDSCAPED AREAS DAMAGED AS A RESULT OF THE CONSTRUCTION OF THIS PROJECT, AND REPLANT WITH SAME SPECIES AS NEEDED.

## 1 NOTES

### TREE RING INSTALLATION INSTRUCTIONS:

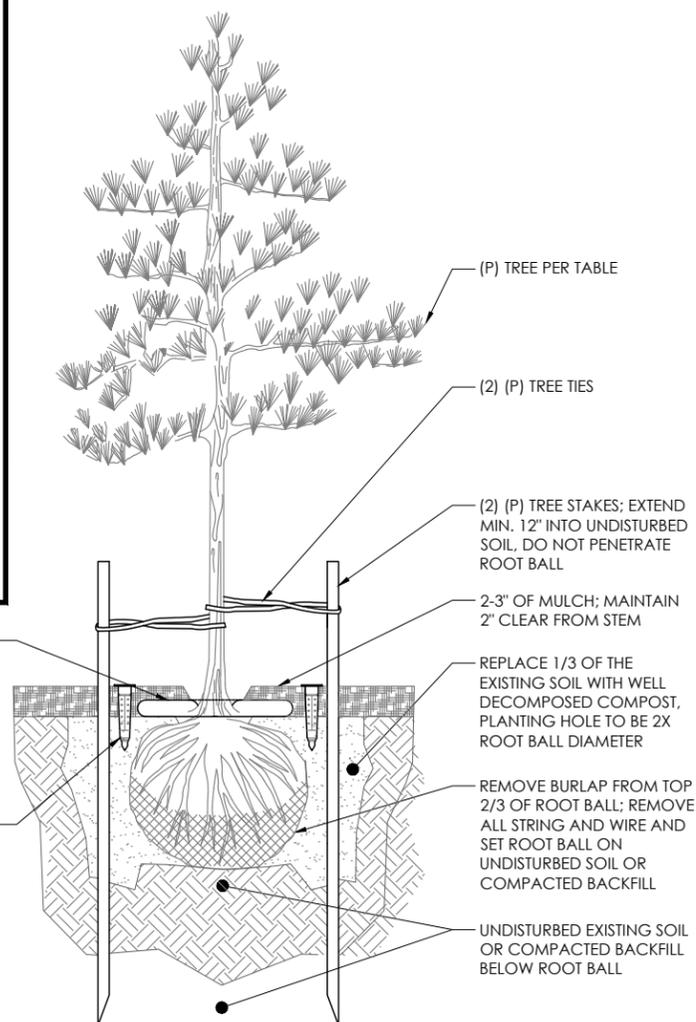
- PLACE THE TREE RING COMPLETELY SUBMERGED IN WATER FOR AT LEAST 5 HOURS OR OVERNIGHT PRIOR TO INSTALLING.
- COVER WITH 2-3" OF MULCH. DO NOT PLACE ANY SOIL, DIRT, FINE SAND, COMPOST, OR IRON-BASED STICKS OR TOMATO CAGE ON TOP OF PRODUCT.
- DO NOT ALLOW FERTILIZERS TO COME INTO CONTACT WITH THE PRODUCT. DO NOT POKE TREE RING WITH STICK, DAMAGE TO THE SURFACE MAY DECREASE FUNCTIONALITY.
- INSTALL PER MANUFACTURER RECOMMENDATIONS.
- WATER TREES ONCE EVERY 3-4 WEEKS IF LESS THAN 1" OF RAIN FALLS DURING THAT PERIOD.

### ROOT FLOW INSTALLATION INSTRUCTIONS:

- USING A SCREWDRIVER, CREATE A PILOT HOLE, AND MOVE SCREWDRIVER IN CIRCLES TO WIDEN THE HOLE.
- USE A MALLET TO INSTALL THE STAKE INTO THE GROUND NEAR THE ROOT BALL, ENSURING NOT TO PUNCTURE TREE RING.
- ENSURE ROOT FLOW IS FLUSH MOUNT TO THE GROUND, AND CLEAR OF ANY NEW MULCH COVER.

(P) STEADY SPRING 36" TREE WATERING BAG, TYP (1) PER TREE, BY SMART SPRING (OR APPROVED EQUAL)

(P) ROOT FLOW TREE WATERING STAKE, MODEL # RF-L, TYP (4) PER TREE, BY SMART SPRING (OR APPROVED EQUAL)

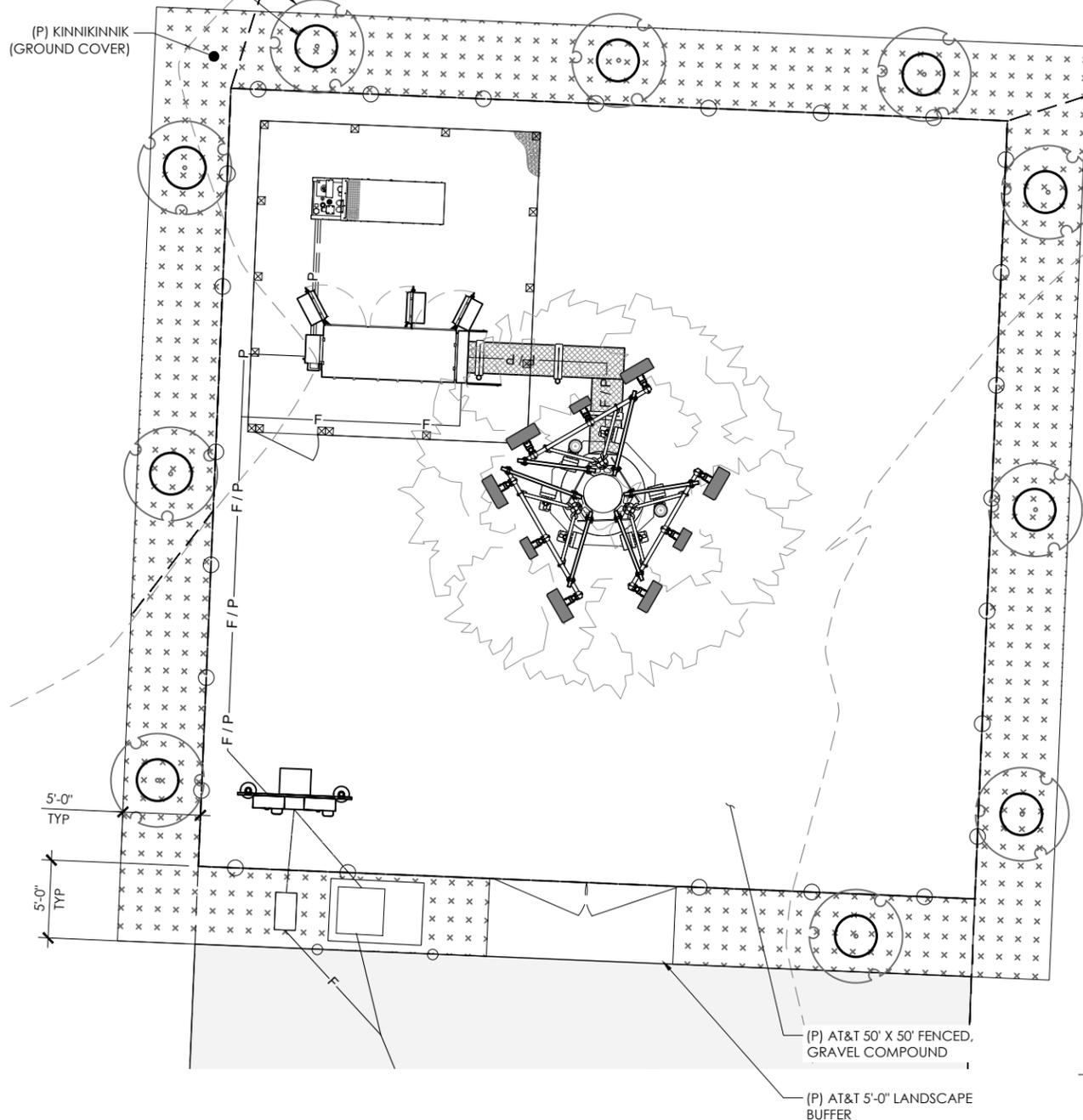


PLANT LIST					
SYMBOL	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	CLASS.
	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNIK (BEARBERRY)	(T.B.D.)	1 GAL. & 30" O.C. EACH WAY	GROUND COVER
	THUJA PLICATA	WESTERN RED CEDAR	(10)	6' HT. MIN. @ PLANTING	TREE

(P) WESTERN RED CEDAR, TYP OF (10), SEE 2/-

(1) (P) 36" TREE RING W/ (4) ROOT FLOW STAKES, TYP FOR EACH TREE TO BE INSTALLED; SEE DETAIL 2/-

(P) KINNIKINNIK (GROUND COVER)



## 2 TREE / SHRUB PLANTING

11X17 SCALE: NTS  
22 X 34 SCALE: NTS

## 3 LANDSCAPE PLAN

11X17 SCALE: 1" = 10'-0"  
22 X 34 SCALE: 1" = 5'-0"



DRAWN BY: MS/CH  
CHECKED BY: BU

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	08/26/24	90% ZONING DRAWINGS
2	09/18/24	CLIENT COMMENTS
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PRELIMINARY UNLESS SIGNED

PROJECT INFORMATION  
**PD31**  
**BETHANY CREST**  
PARCEL #R324301  
13937 NW SPRINGVILLE ROAD  
PORTLAND, OR 97229

SHEET TITLE  
**LANDSCAPE PLAN**

SHEET NO.  
**L2.0**

## Appendix B: Site Photographs

**Site Photos from the Access Road Leading to the Proposed Tower (Shrub- and invasive dominated habitat)**



**Site Photos of the Development Footprint and Mitigation Site  
(Shrub- and invasive-dominated habitat)**



Site photos of Mixed Deciduous Forest Near Development Footprint



**Site Photo of Open Habitat**



**Site Photo of Adjacent Farmland**



**Site Photo of Pond to North of Parcel**



**Site Photo of Douglas Fir forest on East side of Parcel**



## Appendix C: Consultant Resumes

## John S. Klock

Phone: 541-714-5685 | Email: biology@hotmail.com

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### Summary of Qualifications

- Accomplished environmental professional with over 15 years of experience in natural resource management, environmental planning, and land stewardship.
  - Extensive experience in project management, including preparing NEPA documentation, and state and federal regulatory compliance for large-scale environmental and land use projects.
  - Demonstrated expertise in managing multidisciplinary teams, mentoring junior staff, and delivering client satisfaction while building and maintaining successful relationships with agencies, stakeholders, and private entities.
- 

### EDUCATION

- **Master of Science in Botany**, Ohio University, Athens, Ohio
  - **Master of Arts in International Affairs (Southeast Asian Studies)**, Ohio University
  - **Bachelor of Science in Range-Forest Management**, Colorado State University
- 

### Professional Experience

#### District Botanist, Bureau of Land Management, Salem, Oregon

(2020–2024)

- Managed a large botany program covering over one million forested acres. Directed plant conservation, invasive species management, restoration, and special habitat projects.
- Managed Seeds of Success programs involving wild native seed collection for habitat restoration and seed banking.
- Managed a \$1M restoration budget and NEPA Environmental Analysis for various projects, including timber sales and habitat restoration.
- National Environmental Policy Act Environmental Analysis included: timber sales, wildland fire restoration, integrated pest management, wetland restoration, dam removal, special status plant species habitat restoration, aquatic habitat restoration.
- Conducted botanical surveys, rare plant surveys, noxious weed inventory and monitoring, and botanical field scouting.
- Worked in interdisciplinary teams to develop environmental assessments on BLM lands for National Environmental Policy Act and Endangered Species Act (ESA) compliance.

- NEPA documents include Environmental Assessments, Environmental Impact Statements, and Categorical Exclusions (CEs).
  - Worked on aquatic restoration projects and helped develop wetland-related documents when needed.
  - As a botanist in interdisciplinary teams, oversaw timber harvest activities with foresters including threatened species, critical habitats, mapping, road construction, and maintenance.
- Restoration: five oak savanna-oak woodland habitat restoration projects; eleven threatened and endangered species habitat restoration assignments; twenty Areas of Critical Environmental Concern (ACECS) ranging from 1 acre to 150 acres.

### **Botanist, Bureau of Land Management, Springfield, Oregon**

*(2018–2019)*

- Managed the botany program for the southern portion of the Northwest Oregon District.
- Conducted botanical surveys, rare plant surveys, noxious weed inventory and monitoring, and botanical field scouting.
- National Environmental Policy Act Environmental Analysis included: timber sales, fire restoration, pest management, and aquatic habitat restoration.

### **Natural Resources Specialist, Bureau of Land Management, Lakeview, Oregon**

*(2016–2018)*

- Served as the botanist for over 3.5 million acres of Sagebrush Steppe in Eastern Oregon.
- Conducted botanical surveys, rare plant surveys, noxious weed inventory and monitoring, and botanical field scouting.
- National Environmental Policy Act Environmental Analysis included: rangeland grazing permits, fire restoration, special status species habitat restoration, aquatic habitat restoration.
- Coordinated natural resources projects, including botanical surveys in the Columbia Plateau and Basin and Range regions of Eastern Oregon. Familiar with high desert and sagebrush steppe vegetation.

### **Natural Resources Specialist, Dept. of Navy, Lemoore, California**

*(2015–July 2016)*

- Led vegetation improvement projects, biological surveys, and renewable energy initiatives.

## Skills

- Environmental Impact Assessments
  - Conservation & Habitat Restoration
  - Wetland Management & Mitigation
  - Regulatory Compliance & NEPA Documentation
  - Botanical assessment of timber harvest activities with foresters including threatened species, critical habitats, mapping, road construction, and maintenance.
  - Business Development & Client Relations
  - Team Leadership & Mentoring
  - Project Budgeting & Forecasting
  - Stakeholder Engagement & Public Relations
  - Cross-Cultural Collaboration
- 

## Professional Experience with Regulatory Agencies

- **National Environmental Policy Act (NEPA):** Extensive experience in preparing and reviewing NEPA documents for a variety of projects including energy facility siting, land use, and natural resource management.
- **State and Local Environmental Permitting:** Skilled in navigating the permitting processes for land use, and wetlands.
- **U.S. Army Corps of Engineers:** Worked on wetland restoration with Army Corps botanists.
- **U.S. Fish & Wildlife Service (USFWS):** Collaborated on projects to protect endangered species and restore critical habitats, including aquatic and riparian ecosystems.
- **National Marine Fisheries Service (NMFS):** Ensured compliance with fisheries regulations for aquatic habitat restoration and fish migration projects.

**State Historic Preservation Agencies:** Worked to protect cultural and historic resources during land use projects, ensuring compliance

# JENNIFER MONGOLO

(503) 508-0298



Ecologist and Conservationist

jen@streamscape-env.com



3182 Wiltsey St SE, Salem, OR 97317



## SUMMARY

Environmental professional with over 20 years of experience across North America, specializing in natural resources management, ecological restoration, urban forestry, and land conservation. As the founder and principal of Streamscape Environmental, I apply a holistic, community-focused approach to tackling complex environmental challenges with innovative solutions and committed stewardship. My diverse background and expertise drive my dedication to fostering sustainable, resilient environments and thriving communities.

## EDUCATION

### Antioch University New England

MS in Resource Management and Conservation  
2007 – 2009

### Humboldt State University

BS in Natural Resources Planning & Interpretation  
2000 – 2004

## SKILLS

- Exceptional communicator, including consolidating and translating complex scientific information for diverse audiences
- Experienced in managing staff, interns, volunteers, and contractors and leading scientific and technical collaborations
- Extensive experience managing challenging and often contentious environmental projects and addressing emerging issues
- Proficient with GIS Software and Field Apps
- Experienced in managing budgets and handling financial documents

## PUBLICATIONS

- Mongolo, Jennifer, et al. (2017). A longitudinal temperature profile of the Los Angeles River from June through October 2016. *Bulletin of the Southern California Academy of Sciences*, 116(3).
- Dagit, Rosi., et al. (2017). The effects of a prolonged drought on southern Steelhead Trout (*Oncorhynchus mykiss*) in a coastal creek, Los Angeles County, California. *Bulletin of the Southern California Academy of Sciences*, 116(3).
- Cooper, Daniel, et al. (2017). Status of the California Gnatcatcher at the northern edge of its range. *Western Birds*, 48(2):124-140

## PROFESSIONAL EXPERIENCE

### Owner and Principal Ecologist

Streamscape Environmental LLC | July 2013 – Present

- Lead and manage diverse environmental planning projects, delivering strategic support across various sectors such as land use planning, sustainable urban development, community forestry, transportation, utilities, and water resources.
- Develop and implement comprehensive restoration and mitigation plans, including mitigation banking strategies, to address complex environmental challenges.
- Secure, oversee, and manage grants and permits for a wide range of environmental projects, ensuring regulatory compliance and project success.

### Senior Natural Resources Planner/Acting Manager

City of Salem, Oregon | January 2021 – May 2024

- Guided the City's conservation, stewardship and restoration agenda.
- Managed diverse projects ranging from floodplain restoration to developing strategies for coexisting with wildlife to planning for, protecting and restoring streams, waterbodies, riparian corridors, wetlands, natural areas, and urban tree canopy.
- Led diverse work groups to accomplish common goals.
- Supervised professional level staff (Natural Resources Planner II).
- Managed numerous grants, consultants, budgets, timelines, and partner coordination.
- Acting Natural Resources Planning Manager, May 2023 to May 2024

### Environmental Planner

County of Los Angeles

Department of Beaches & Harbors | January 2019 – December 2020

- Project Manager for water quality and contaminated sediment projects in Marina del Rey Harbor (toxics and bacteria TMDLs) and County beaches in Santa Monica Bay (trash TMDL).
- Managed environmental consultant and water quality enhancement contracts with combined annual budgets exceeding \$1 million.
- Supervised student intern and part time professional consultant working as staff extender.
- Led and facilitated diverse projects related to biological resources, including nesting birds, marine mammals, bats, native plants, lagoons/estuaries, living shorelines, dunes, and tide pools.

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## SPECIALIZED TRAINING

- Executive Seminar in Natural Resources Leadership, Restoring the Willamette River Case Study, Portland State University, 2023
- Oregon Rapid Wetland Assessment Protocol (ORWAP), OR Department of State Lands, 2022
- Emerald Ash Borer Field Training, Oregon State University Extension & Clean Water Services, 2022.
- Wetland Delineation Workshop, Clackamas Community College, 2021.
- Field Data Collection & Management Using ArcGIS, ESRI, 2020.
- Planning Effective Projects for Resilient Coasts, NOAA, 2016.

## BOARDS & COMMITTEES

- Secretary & Natural Resources Chair, North Santiam Watershed Council, 2024-Present.
- Willamette Water Trail Steering Committee, 2022-2024.
- Willamette Habitat Technical Team, 2022-2024.
- Chair, Aldo Leopold Award Committee, The Wildlife Society, 2021-2023.
- Diversity Award Committee, The Wildlife Society, 2021.
- Topanga Lagoon Restoration, Interagency Technical Advisory Committee, 2020.
- Chair, Environmental Review Board, 2019-2020.
- SCCWRP Technical Advisory Committee, 2018.

## PRESENTATIONS & TALKS

- Bilingual Guided Nature Walk, with Vive NW/Willamette Riverkeeper, 2023.
- Natural Resources Regulations & Beaver Habitat Training, City of Salem Stream Crew, annual.
- Oregon Master Naturalist Field Course, Floodplain ecosystems and restoration, 2023.
- *Coexisting with Beaver in an Urban Setting*, Council of Water Leaders Symposium, Feb 2023.
- City of Salem Bald Eagle Nest Monitoring Volunteer Training, annual.
- *Leveraging Collaborative Partnerships to Guide and Support Adaptation Efforts*, ASBPA Conference, 2020.
- Sustainable Landscaping, Green Gardens Group, 2016-2018.

*professional experience continued...*

### Biologist

County of Los Angeles

Department of Regional Planning | January 2017 - January 2019

- Analyzed proposed development projects for impacts to biological and natural resources to ensure compliance with county, state, and federal regulations, presenting analysis and recommendations to technical review committees and at public hearings as needed.
- Developed mitigation measures and worked with code enforcement to monitor mitigation requirements.
- Co-led update to Significant Ecological Areas Ordinance, including writing ordinance language and implementation guide, facilitating work groups, conducting outreach, and presenting at public meetings and seminars.
- Environmental Review Board coordinator.

### Conservation Biologist

Resource Conservation District of the Santa Monica Mountains |

July 2015 - January 2019

- Prepared biological reports and plans related to restoration and slope stabilization, monitoring, and scientific research.
- Conducted and co-led scientific research and special status species monitoring, with primarily focus on steelhead trout, arroyo chub, tidewater goby, and southwestern pond turtle.
- Wrote grant and project proposals, prepared and managed budgets, and prepared estimates and contracts for new projects.
- Supervised team of six field biologists, one graduate intern, and team of about 15 volunteers.

### Natural Resources Management Specialist

US Peace Corps, Mexico Program | August 2010 - October 2012

- Collaborated with researchers at two local universities to evaluate impacts of historic mine tailings on ecological and human health in a small indigenous community along the Rio Xichu in the Sierra Gorda Biosphere Reserve in Guanajuato, Mexico.
- Led a reforestation project on 50 hectares of highly degraded land working with a crew of approximately 70 local laborers and local government officials.
- Advised the chief of the State of Tlaxcala's Environmental Management Unit on surface water management and water conservation methods, troubleshooting current problems and providing management recommendations and restoration strategies.

### CEO and Principal Ecologist

Streamscape Environmental | February 2009 - August 2010

### Research Assistant

Antioch New England Institute | November 2006 - June 2008

### Front Country Ranger (Forestry Technician)

Bridger Teton National Forest | July 2004 - October 2005