



Hearings Office

City of Portland

1900 SW 4th Avenue, Room 3100, Portland, OR 97201

www.portlandoregon.gov/hearings

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phone: 503.823.7307

fax: 503.823.4347



DECISION OF THE HEARINGS OFFICER

I. GENERAL INFORMATION

File Number: LU 20-136055 EN (Hearings Office 4200011)

Applicant: Nicole Rodriguez
Kinder Morgan
1001 Louisiana Street, Suite 1000
Houston, TX 77002

Applicant's Representative: Paige Anderson
Aecom
111 SW Columbia Street #1500
Portland, OR 97201

Property Owner: Portland Parks & Recreation
Attn: Dylan Paul
1120 SW 5th Avenue, Room 858
Portland, OR 97204

Hearings Officer: Fred Wilson

Bureau of Development Services (BDS) Staff Representative: Morgan Steele

Site Address: Forest Park (near the intersection of NW Leif Erikson Drive and the Wiregate Trail)

Legal Description: TL 600 157.63 ACRES, SECTION 14 1N 1W

Tax Account Number: R961140030

State ID Number: 1N1W14 00600

Quarter Section: 2219, 2318, 2319 2418, 2419, 2320

Neighborhoods: Forest Park, Linnton

Business District: None

District Neighborhood Coalition: Neighbors West/Northwest

Zoning: *Base Zone:* Open Space (OS); *Overlay Zones:* Environmental Conservation (c), Environmental Protection (p)

Land Use Review: Type III, EN – Environmental Review

BDS Staff Recommendation to Hearings Officer: Approval with conditions.

Public Hearing: The hearing was opened at 9:01 a.m. on June 22, 2020 in the third floor hearing room, 1900 SW 4th Avenue, Portland, Oregon, and was closed at 9:28 a.m. The record closed at the end of the hearing.

Testified at the Hearing:

Morgan Steele
Noah Herlocker

II. ANALYSIS

The Staff Report provides an excellent summary of the proposed use and the subject property:

“The applicant, Kinder Morgan, is requesting approval for the repair and maintenance of an existing pipeline in Forest Park. SFPP, L.P., a subsidiary of Kinder Morgan, owns and operates an existing 115-mile refined petroleum products pipeline (Oregon Pipeline - Line Section 14 [LS 14]) that runs from Portland to Eugene, Oregon. Near pipeline milepost (MP) 1.45 and approximately 250 feet northwest of the intersection of NW Leif Erikson Drive and the Wiregate Trail, the pipeline crosses a steep valley, which contains the upper tributary to Doane Creek. Three voids (sinkholes) around the pipeline on a section of steep slope above Doane Creek have been identified and are in need of repair and maintenance.

“A combination of earth movement, groundwater, and surface drainage has caused erosion and resulted in the sinkholes around and below the pipeline in this area. The voids were first identified in 2015 and have been monitored since that time annually, which indicates that groundwater seepage is continually eroding the backfill/native material below the pipeline.

“Maintenance and repair of the pipeline and its vicinity, including site access, will require a total of 17,087 square feet of temporary and 16 square feet of permanent disturbance. Four native trees, totaling 48 inches diameter breast height (DBH), are proposed for removal as a result of this project. To mitigate for these temporary and permanent impacts, the applicant is proposing to plant a total of nine trees, 416 shrubs, and a native hydroseed mix in all temporarily disturbed areas.” Staff Report, page 2.

The Staff Report gives a thorough and compelling explanation as to how all of the applicable approval criteria are satisfied. There was no opposition to the application. Therefore, it would be a waste of the City’s money and resources to review and repeat all of the unchallenged findings. I have reviewed the findings in the Staff Report, and I agree with those findings. I therefore adopt and incorporate the findings in the Staff Report in this decision.

Although there was no opposition to the application, one person did express concern regarding the survival of mitigation plantings. The planner included a condition of approval (“F.”) that requires the applicant to be responsible for maintaining the survival of landscaping plants for two years (and to replace any dead plants).

All of the applicable approval criteria are satisfied.

III. CONCLUSIONS

The applicant has satisfied all of the applicable approval criteria. Therefore, the application is **APPROVED** with the following conditions of approval.

IV. DECISION

Approval of an Environmental Review for:

- Removal of four native trees over 6 inches dbh;
- Installation of biodegradable slope armor (GreenArmor System), five trench plugs, one subsurface porous drainpipe, and one riprap apron; and
- 17,087 square feet of temporary and 16 square feet of permanent disturbance;

all within the Environmental Conservation and Environmental Protection overlay zones, and in substantial conformance with Exhibits C.1 through C.9. Approval is subject to the following conditions:

<p>NOTE: Activities which expose soil to direct contact with stormwater between October 1 and April 30 are prohibited.</p>

A. A Bureau of Development Services construction permit is required for development.

The Conditions of Approval listed below shall be noted on appropriate plan sheets submitted for permits (building, Zoning, grading, Site Development, erosion control, etc.). Plans shall include the following statement, "**Any field changes shall be in substantial conformance with approved LU 20-136055 EN Exhibits C.1 through C.9.**"

B. Prior to issuance of permit(s) for construction, the applicant must show documentation they have received approval of the Portland Parks & Recreation Non-Park Use Permit (NPUP).

C. Temporary, 4-foot high, bright orange construction fencing, or tree protection fencing, shall be placed along the Limits of Construction Disturbance line, as depicted on Exhibit C.3, to separate approved construction areas from areas to remain undisturbed.

1. No mechanized construction vehicles are permitted outside of the approved "Limits of Construction Disturbance" delineated by the temporary construction fence. All planting work, invasive vegetation removal, and other work to be done outside the Limits of Construction Disturbance shall be conducted using handheld equipment.

D. The Bureau of Development Services Construction permit shall include inspection and approval of a mitigation plan for a total of nine trees, 416 shrubs, and coarse woody debris placement in substantial conformance with Exhibits C.4 and C.5, Mitigation and Restoration site plan. Any plant substitutions shall be selected from the *Portland Plant List* and shall be substantially equivalent in size to the original plant. Conifers must be replaced with conifers.

1. Permit plans shall show:

- a. Permit plans shall show the general location of the trees, shrubs, and ground covers required by this condition to be planted in the mitigation area and labeled as "new required landscaping." The plans shall include a "typical," scalable planting layout for each planting zone and shall illustrate a naturalistic arrangement of plants and should include a planting table listing the species, quantity, spacing, and sizes of plants to be planted.
- b. The applicant shall indicate on the plans selection of either tagging plants for identification or accompanying the Bureau of Development Services inspector for an on-site inspection.

2. Plantings shall be installed between October 1 and March 31 (the planting season).

3. Prior to installing required mitigation plantings, non-native invasive plants shall be removed from all areas within 10 feet of mitigation plantings, using handheld equipment.

4. If plantings are installed prior to completion of construction, a temporary orange, 4-foot high construction fence shall be placed to protect plantings from construction activities.
5. All mitigation and restoration shrubs and trees shall be marked in the field by a tag attached to the top of the plant for easy identification by the City Inspector; or the applicant shall arrange to accompany the Bureau of Development Services inspector to the site to locate mitigation plantings for inspection. If tape is used, it shall be a contrasting color that is easily seen and identified.
6. After installing the required mitigation plantings, the applicant shall request inspection of mitigation plantings and finalize the Bureau of Development Services Zoning Permit.

E. The landowner shall maintain the required plantings to ensure survival and replacement. The landowner is responsible for ongoing survival of required plantings during and beyond the designated two-year monitoring period. After the 2-year initial establishment period, the landowner shall:

1. Obtain a Zoning Permit for a final inspection at the end of the 2-year maintenance and monitoring period. The applicant shall arrange to accompany the Bureau of Development Services inspector to the site to locate mitigation plantings for inspection. The permit must be finalized no later than two years from the final inspection for the installation of mitigation planting, for the purpose of ensuring that the required plantings remain. Any required plantings that have not survived must be replaced.
2. All required landscaping shall be continuously maintained, by the landowner in a healthy manner, with no more than 15 percent cover by invasive species. Required plants that die shall be replaced in kind.

F. Failure to comply with any of these conditions may result in the City's reconsideration of this land use approval pursuant to Portland Zoning Code Section 33.700.040 and/or enforcement of these conditions in any manner authorized by law.



Fred Wilson, Hearings Officer

June 30, 2020
Date

Application Determined Complete:	May 8, 2020
Report to Hearings Officer:	June 12, 2020
Decision Mailed:	June 30, 2020
Last Date to Appeal:	4:30 p.m., July 14, 2020
Effective Date (if no appeal):	July 15, 2020

Conditions of Approval. 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.

Appeal of the decision. ANY APPEAL OF THE HEARINGS OFFICER'S DECISION MUST BE E-MAILED TO LANDUSEINTAKE@PORTLANDOREGON.GOV. The appeal application form can be accessed at <https://www.portlandoregon.gov/bds/45477>. If you do not have access to e-mail, please telephone (503) 823-7617 for assistance on how to submit the appeal; please allow one business day for staff to respond. An appeal fee of \$0 will be charged (one-half the application fee for this case, up to a maximum of \$5,000.00.)

Who can appeal: You may appeal the decision only if you wrote a letter which is received before the close of the record on hearing or if you testified at the hearing, or if you are the property owner or applicant. If you or anyone else appeals the decision of the Hearings Officer, only evidence previously presented to the Hearings Officer will be considered by the City Council.

Appeal Fee Waivers: Neighborhood associations recognized by the Office of Neighborhood Involvement may qualify for a waiver of the appeal fee provided that the association has standing to appeal. The appeal must contain the signature of the Chairperson or other person authorized by the association, confirming the vote to appeal was done in accordance with the organization’s bylaws.

Neighborhood associations, who wish to qualify for a fee waiver, must complete the Type III Appeal Fee Waiver Request for Organizations Form and submit it prior to the appeal deadline. The Type III Appeal Fee Waiver Request for Organizations Form contains instructions on how to apply for a fee waiver, including the required vote to appeal.

Recording the final decision.

If this Land Use Review is approved, the final decision must be recorded with the Multnomah County Recorder.

A few days prior to the last day to appeal, the City will mail instructions to the applicant for recording the documents associated with their final land use decision.

- *Unless appealed*, the final decision may be recorded on the day following the last day to appeal. The mailed instructions will state that date.
- A building or zoning permit will be issued only after the final decision is recorded.

The applicant, builder, or a representative may record the final decision as follows:

- **By Mail:** Send the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to: Multnomah County Recorder, P.O. Box 5007, Portland OR 97208. The recording fee is identified on the recording sheet. Please include a self-addressed, stamped envelope.
- **In Person:** Bring the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to the County Recorder's office located at 501 SE Hawthorne Boulevard, #158, Portland OR 97214. The recording fee is identified on the recording sheet.

For further information on recording, please call the County Recorder at 503-988-3034.

For further information on your recording documents please call the Bureau of Development Services Land Use Services Division at 503-823-0625. All land use reviews, except those for **only** a Subdivision and/or Planned Unit Development (PUD), must be recorded in this manner. Building or development permits will be issued only after this decision is recorded.

Expiration of the approval. Recorded approvals (except Comprehensive Plans and Zoning Map Amendments) expire three years from the date of the final decision unless:

- A building permit has been issued, or
- The approved activity has begun, or
- In situations involving only the creation of lots, the land division has been recorded.

Recording the land division. The final land division plat **must** be submitted to the City **within three years** of the date of the City's final approval of the preliminary plan. This final plat must be recorded with the County Recorder and Assessors Office after it is signed by the City Planning Director, the City Engineer, and the City Land Use Hearings Officer, and approved by the County Surveyor. **The approved preliminary plan will expire unless a final plat is submitted within three years of the date of the City's approval of the preliminary plan.**

Recording other land use decisions. If the preliminary land division approval also contains approval of other land use decisions (examples include adjustments, conditional uses, and environmental reviews), these other approvals must be recorded by the Multnomah County Recorder before any building or zoning permits can be issued.

The applicant, builder, or their representative may record the final decisions on these other land use decisions as follows:

- By Mail: Send the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to: Multnomah County Recorder, P.O. Box 5007, Portland OR 97208. The recording fee is identified on the recording sheet. Please include a self-addressed, stamped envelope.
- In Person: Bring the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to the County Recorder's office located at 501 SE Hawthorne Boulevard, #158, Portland OR 97214. The recording fee is identified on the recording sheet.

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Expiration of the approval. Recorded approvals (except Comprehensive Plans and Zoning Map Amendments) expire three years from the date of the final decision unless:

- A building permit has been issued, or
- The approved activity has begun, or
- In situations involving only the creation of lots, the land division has been recorded.

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. Applicant's Narrative, April 2020
 - 2. Deed & Easement Documentation
 - 3. Geotechnical Report
 - 4. Wetland Delineation Report
 - 5. Snag Creation & Downed Wood Retention Guidance Memorandum
 - 6. Extension to the 120-Day Timeline
- B. Zoning Map
- C. Plans and Drawings
 - 1. Existing Conditions Site Plan
 - 2. Proposed Development Site Plan
 - 3. Construction Management and Erosion Control Site Plan
 - 4. Mitigation/Tree Plan
 - 5. Mitigation and Restoration Site Plan
 - 6. Project Site Vicinity
 - 7. Analysis of Project Alternatives
 - 8. Tree Survey Map
 - 9. Site Access & Trail Closure Map
- D. Notification information
 - 1. Request for response
 - 2. Posting letter sent to applicant
 - 3. Notice to be posted
 - 4. Applicant's statement certifying posting
 - 5. Mailing list
 - 6. Mailed notice
- E. Agency Responses
 - 1. Bureau of Environmental Services
 - 2. Bureau of Transportation
 - 3. Life Safety
 - 4. Fire Bureau
 - 5. Site Development Review Section of Bureau of Development Services
 - 6. Bureau of Parks & Recreation, Forestry Division
 - 7. Bureau of Parks & Recreation
 - 8. Oregon Department of State Lands
- F. Letters
 - 1. Erik Goodfriend, May 28, 2020
- G. Other
 - 1. Original LUR Application
 - 2. ODSL WLUN

- H. Received in the Hearings Office
 - 1. Hearing Notice - Steele, Morgan
 - 2. Staff Report - Steele, Morgan (**attached**)
 - 3. PowerPoint presentation printout - Steele, Morgan
 - 4. Record Closing Information - Hearings Office



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

Ted Wheeler, Mayor
Rebecca Esau, Director
Phone: (503) 823-7300
Fax: (503) 823-5630
TTY: (503) 823-6868
www.portlandoregon.gov/bds

STAFF REPORT AND RECOMMENDATION TO THE HEARINGS OFFICER

CASE FILE: LU 20-136055 EN
PC # 19-252423
REVIEW BY: Hearings Officer
WHEN: June 22, 2020, 9:00 AM

Due to the City's Emergency Response to COVID19, this land use hearing will be limited to remote participation via Zoom. The instructions to observe and participate can be accessed online:

[www.https://zoom.us/join](https://zoom.us/join) or <https://zoom.us/j/97997414440>
Meeting ID: 979 9741 4440

It is important to submit all evidence to the Hearings Officer. City Council will not accept additional evidence if there is an appeal of this proposal.

BUREAU OF DEVELOPMENT SERVICES STAFF: MORGAN STEELE / MORGAN.STEELE@PORTLANDOREGON.GOV

GENERAL INFORMATION

Applicant: Nicole Rodriguez | Kinder Morgan
1001 Louisiana Street, Suite 1000 | Houston, TX 77002

Owner: Portland Parks & Recreation | Attn: Dylan Paul
1120 SW 5th Avenue, Room 858 | Portland, OR 97204

Representative: Paige Anderson | Aecom
111 SW Columbia Street, #1500 | Portland, OR 97201
paige.anderson@aecom.com

Site Address: Forest Park (near the intersection of NW Leif Erikson Drive and the Wiregate Trail)

Legal Description: TL 600 157.63 ACRES, SECTION 14 1N 1W
Tax Account No.: R961140030
State ID No.: 1N1W14 00600
Quarter Section: 2219, 2318, 2319 2418, 2419, 2320

Neighborhood: Forest Park, contact Jerry Grossnickle at 503-289-3046, Linnton, contact at chair@linntonna.org

Business District: None
District Coalition: Neighbors West/Northwest, contact Mark Sieber at 503-823-4212.

Plan District: Northwest Hills - Forest Park

Other Designations: *Forest Park Natural Resources Management Plan; Northwest Hills Natural Area Protection Plan, 95 – Doane Creek; Land Hazard Area*

Zoning: *Base Zone: Open Space (OS)
Overlay Zones: Environmental Conservation (c), Environmental Protection (p)*

Case Type: EN – Environmental Review

Procedure: Type III, with a public hearing before the Hearings Officer. The decision of the Hearings Officer can be appealed to City Council.

Proposal:

The applicant, Kinder Morgan, is requesting approval for the repair and maintenance of an existing pipeline in Forest Park. SFPP, L.P., a subsidiary of Kinder Morgan, owns and operates an existing 115-mile refined petroleum products pipeline (Oregon Pipeline - Line Section 14 [LS 14]) that runs from Portland to Eugene, Oregon. Near pipeline milepost (MP) 1.45 and approximately 250 feet northwest of the intersection of NW Leif Erikson Drive and the Wiregate Trail, the pipeline crosses a steep valley, which contains the upper tributary to Doane Creek. Three voids (sinkholes) around the pipeline on a section of steep slope above Doane Creek have been identified and are in need of repair and maintenance.

A combination of earth movement, groundwater, and surface drainage has caused erosion and resulted in the sinkholes around and below the pipeline in this area. The voids were first identified in 2015 and have been monitored since that time annually, which indicates that groundwater seepage is continually eroding the backfill/native material below the pipeline.

Maintenance and repair of the pipeline and its vicinity, including site access, will require a total of 17,087 square feet of temporary and 16 square feet of permanent disturbance. Four native trees, totaling 48 inches diameter breast height (DBH), are proposed for removal as a result of this project. To mitigate for these temporary and permanent impacts, the applicant is proposing to plant a total of nine trees, 416 shrubs, and a native hydroseed mix in all temporarily disturbed areas.

The site is within the City's Environmental Conservation and Environmental Protection overlay zones, within the City's *Forest Park Natural Resource Management Plan* (Forest Park NRMP) area. The Forest Park NRMP includes a list of certain projects/actions that are in conformance with the NRMP and which are allowed without a land use review. The NRMP does not specifically address the repair, maintenance, and stabilization of the Kinder Morgan pipeline and vicinity. Therefore, this proposal is considered an "exception" to the NRMP and is required to go through a Type III Environmental Review.

The site is also within the Forest Park Subdistrict of the Northwest Hills Plan District and must meet the additional approval criteria for that subdistrict.

Approval Criteria: In order to be approved, this proposal must comply with the approval criteria of Title 33, Portland Zoning Code. The applicable approval criteria are:

- ❖ The “**Approval Criteria for Exceptions**” including criteria **A through E in Section B** on page 217 of the [Forest Park Natural Resources Management Plan](#), and
- ❖ Approval Criteria for Environmental Review within the Forest Park Subdistrict in the [Northwest Hills Plan District](#) in Zoning Code section **33.563.210 A, B, and C**. The proposal is also subject to the prohibition of clearing between October 1 and April 30 in section 33.563.200.

ANALYSIS

Site and Vicinity: The pipeline crosses Forest Park about one-half mile south of the St. John's Bridge in Northwest Portland. The project area consists of an approximately 20-foot wide, 1.8-mile long corridor extending southwest from the intersection of NW St. Helens Road/US Highway 30 and NW Front Avenue, across Forest Park, to NW Skyline Boulevard just north of NW Saltzman Road.

The corridor is within the Central Management Unit of Forest Park and traverses the areas identified in the *Northwest Hills Natural Area Protection Plan* as Site 95 – Doane Creek Headwaters. This site is part of the 770-acre Doane Creek sub-watershed. Doane Creek is a year-round stream that flows northeast from its headwaters toward the Willamette River. The existing pipeline easement crosses tributaries to Doane Creek in two locations, but it otherwise avoids the riparian corridor and generally follows the ridgelines of the adjacent hills.

The overall project area is characterized by hilly terrain, which includes slopes in excess of 25 percent. The majority of the project site and adjacent park areas are covered by a mixed upland coniferous/deciduous forest with a mix of native understory of shrubs and herbaceous groundcovers. English Ivy is present in some areas including the lower Doane Creek riparian corridor.

The pipeline corridor crosses Doane Creek's intermittent upper tributary within the project site. The tributary flows to the east within steep, well-defined banks; the full width of the tributary on the project site is approximately 6 feet. Further, a 0.03-acre, slope wetland is also within the project area, northeast of the tributary and Wiregate Trail and directly adjacent to the bank repair and pipe maintenance activities.

Existing development in the vicinity of the project, other than the pipeline, includes NW Leif Erikson Drive, other gas/electrical utilities, and a network of recreational park trails, including the Wiregate and Wildwood Trail. Adjacent land uses include industrial development to the northwest along NW St. Helens Road; residences, pasture and cropland to the southwest along NW Skyline Boulevard; and the rest of Forest Park (open space) to the north and south.

Zoning: The site is within Portland's Open Space (OS) base zone, as well as the Environmental Conservation and Environmental Protection overlay zones, and the Northwest Hills Plan District. The site is also within Portland's *Forest Park Natural Resources Management Plan* area, which has specific environmental and open space regulations unique to Forest Park.

The Open Space base zone is intended to preserve public and private open and natural areas to provide opportunities for outdoor recreation and a contrast to the built environment, preserve scenic qualities and the capacity and water quality of the stormwater drainage system, and to protect sensitive or fragile environmental areas. No new uses are proposed within the OS base zone and the provisions of the zone do not apply to the proposal. The OS zone regulations are therefore not addressed through this Environmental Review.

Environmental overlay zones protect environmental resources and functional values that have been identified by the City as providing benefits to the public. The environmental regulations encourage flexibility and innovation in site planning and provide for development that is carefully designed to be sensitive to the site's protected resources. They protect the most important environmental features and resources while allowing environmentally sensitive urban development where resources are less sensitive. The purpose of this land use review is to ensure compliance with the regulations of the Environmental Zones.

The Northwest Hills Plan District protects sites with sensitive and highly valued resources and functional values. The portions of the plan district that include the Balch Creek Watershed and the Forest Park Subdistrict contain unique, high quality resources and functional values that require additional protection beyond that of the Environmental Zone. These regulations provide the higher level of protection necessary for the plan district area and are addressed in this land use review.

The *Forest Park Natural Resources Management Plan* presents a set of goals and actions designed to guide management of natural resources and recreational uses. With preservation of natural resources as a primary goal, the plan recognizes that Forest Park is threatened by overuse unless recreational activities are actively managed and directed. The plan is a multi-purpose plan designed to identify and assess Forest Park natural resources; identify impacts to Forest Park natural resources; prescribe how to protect and enhance Forest Park natural resources; identify appropriate forms and levels of recreation and education for Forest Park; monitor natural resources and provide day to day management and public information; and satisfy the City's criteria for Natural Resource Management Plans. The purpose of this land use review is to ensure compliance with the Plan.

Environmental Resources: The application of the environmental overlay zones is based on detailed studies that have been carried out within eight separate areas of the City. Environmental resources and functional values present in Environmental Zones are described in environmental inventory reports for these study areas.

The project site is mapped within the *Northwest Hills Natural Area Protection Plan*, Site 95. Resources identified within these sites include year-round creeks (Doane Creek), their headwaters, wildlife habitat, sensitive fauna, forest, open space, and groundwater resources. Identified habitat types include upland coniferous/broadleaf deciduous forest; riverine, intermittent streambed; and seasonally flooded.

The site forms the upper half of Doane Creek's 770-acre drainage basin. An approximately 20-acre portion of the site along Skyline Boulevard drains into the Tualatin River. Approximately 85 percent of the site is in forest cover. Doane Creek, its tributaries and adjacent forested upland areas are of high significance. Forest upland areas and major game trails are of high significance.

Applicant's Statement: The applicant offers the following information regarding the purpose and need of the project.

The purpose of the proposed project is to repair and stabilize a section of steep slope that is experiencing soil loss around Kinder Morgan's LS-14 pipeline. The overall goal of the project is to restore the long-term stability of the slope and structural integrity of the pipeline in this area with little need for cumulative slope repairs. The objectives associated with the project are identified below.

Objective 1: Stabilize slopes in area where sinkholes are present.

Objective 2: Slow and divert groundwater away from the pipeline to prevent future sinkhole development and damage to the pipeline.

Objective 3: Implement a long-term pipeline repair strategy that reduces the return interval for future pipeline repair and associated disturbance in this area.

Objective 4: Limit environmental encroachment to the maximum extent practicable during construction activities associated with pipeline repair.

Impact Analysis and Mitigation Plan: A description of the proposal was provided on page two of this report. The following discusses development alternatives other than the one proposed, that were considered by the applicant. The following additionally describes the proposed construction management plan and mitigation proposal.

Development Alternatives:

The applicant provided a detailed alternatives evaluation for the proposed repair and maintenance work, in Section 3.1 of the Type III Environmental Review Application (Exhibit A.1). The applicant evaluated the following pipeline repair and maintenance approaches including equipment access and considered the anticipated benefits and limitations associated with each alternative. The evaluation is summarized below.

Alternatives for Repair and Maintenance Work:**Alternative 1:**

Alternative 1 involves the placement of a GreenArmor system from the base of the slope up to the topmost sinkhole (shown as sinkhole 1 in Exhibit C.1) to provide biodegradable surface armoring and to stop erosion and stabilize the slope. A GreenArmor system consists of a turf reinforcement mat (TRM) that is hydraulically infilled with Flexterra high performance-flexible growth medium (HP-FGM) to bond soil and seeds. This alternative would result in approximately 0.32 acres of disturbance on the slope. However, it was determined that this option would not meet the objectives of the project because the current slope erosion and sinkhole creation is principally being caused by groundwater flowing underground along the pipeline. Therefore, surface armoring alone would likely not be enough to prevent continued erosion and sinkhole creation along the pipeline within the project site. Future, cumulative pipeline repair work would be likely without subsurface drainage management.

Alternative 2:

Alternative 2 involves trenching up from the base of the slope to the top of the slope near Wildwood Trail. Five trench plugs (trench breakers) and a drainpipe would be placed within the trench, the pipeline would be inspected and reburied, and waterbars would be placed on the slope to divert surface water over the pipeline. The drainpipe would outlet onto a small rip-rap apron. This alternative would result in approximately 0.62 acres of temporary disturbance on the slope and 16 square feet of permanent disturbance resulting from the proposed rip-rap apron. The use of trench plugs and a drainpipe is considered a more effective way to divert the water away from the pipeline than the use of surface armoring alone (as described in Alternative 1, above). However, to alleviate subsurface drainage impacts, it is necessary to address upslope groundwater along the pipeline that contributed to the development of sinkholes. As such, the limits of construction-related disturbance were increased upslope for Alternative 2. Although by managing upslope groundwater, this alternative would prevent the need for future pipeline repair.

Alternative 3 (Preferred Alternative):

Alternative 3 involves a design similar to Alternative 2, but the furthest trench plug from the base up the slope would end approximately 50 feet above the uppermost sinkhole rather than extending all the way up to Wildwood Trail. As an additional precaution, a GreenArmor system would be installed over all clearing/grubbing areas on the slope as biodegradable surface armoring that provides erosion control and supports vegetation establishment. This alternative would result in approximately 0.4 acres of temporary disturbance on the slope and 16 square feet of permanent disturbance resulting from proposed rip-rap apron. Alternative 3 minimizes the area of disturbance to the extent practicable while meeting all of the project objectives as noted above). This alternative would efficiently divert water around the pipeline and limit the potential for sinkhole creation such that the need for future pipeline repair is mitigated.

Alternatives for Equipment Anchoring:

Construction equipment is anticipated to require anchoring with a cable for safety on the steep slope. Two cable anchor point options were considered.

Alternative 1:

The first option is to climb the slope with an excavator, clear and grade a level platform, and set the excavator there to anchor smaller equipment. However, this would require substantial habitat disturbance and would increase the limits of disturbance above the excavation area.

Alternative 2 (Preferred Alternative):

The second anchor point option involves the use of trees as anchor points; two existing trees southwest of the Wildwood Trail were determined to be stable anchor points, including a 36-inch diameter Douglas fir and a multi-stem bigleaf maple clump having approximately eight tree trunks with an average diameter of 12 inches. The use of these two trees as anchor points was chosen as the preferred anchor point option due to the limited area of disturbance. Pads would be placed on the

trees to avoid tree harm and the cable would be placed on a mount on Wildwood Trail so that it does not scrape the ground as equipment moves up the slope. The two tree anchor point locations are shown in Exhibits C.3 and C.8.

To help demonstrate how the alternatives were analyzed and the preferred alternative selected, the applicant provided the following table that identifies the three alternatives, their estimated temporary and permanent disturbance areas, their ability to meet project objectives (listed above), and their anticipated impact on resources and functional values at the project site.

Table-1

Alternative	Temporary Disturbance (Acres)	Permanent Disturbance (Sq. Ft.)	Objectives				Impact on Resources and Functional Values
			1:Slope Stabilization	2: Groundwater Diversion	3: Reduced Pipeline Repair Return Interval	4: Limit Environmental Encroachment to the Maximum Extent Practicable	
1: GreenArmor System only (Along Minimal Slope)	0.32	0	Not met	Not met	Not met	Met	As a result of soil disturbance and vegetation clearing during construction, this alternative would result in temporal impacts to some forest habitat-related functions. The removal of three trees is likely required. Therefore, impacts on resources and functional values would include reduced shade and an altered microclimate, less streamflow moderation and flood storage, decreased water quality, and reduced groundwater recharge capability. While the overall amount of habitat disturbance would be minimized during construction, future habitat disturbance associated with pipeline repair is likely to be more frequent. Therefore, cumulative impacts to habitat would likely occur.
2: Subsurface Drain (Along Most of Slope)	0.62	16	Met	Met	Partially Met	Not met	This alternative would result in a temporal loss of some forest habitat-related functions. The removal of greater than four trees is likely required. This alternative would in similar habitat impacts described for alternative 1, but these impacts would be of a greater magnitude during construction given the larger temporary disturbance area.
3: Subsurface Drain and GreenArmor System (Along Partial Slope)	0.4	16	Met	Met	Met	Met	This alternative would result in a temporal loss of some forest habitat-related functions. The removal of four trees is likely required. The overall amount of habitat disturbance would be minimized during construction while also reducing the cumulative habitat impacts associated with future pipeline repair.

Construction Management Plan (CMP):

The applicant proposes the following best management practices (BMPs) to reduce potential project-associated environmental impacts to natural resources during pipeline repair and maintenance actions:

Construction Timing

- ❖ Construction shall occur in summer to minimize sediment/erosion potential and avoid work during the rainy season (October 1–April 30).
- ❖ Construction shall occur in summer following the avian nesting season (April 15–July 31) to reduce potential impacts to nesting avian species.

Pipeline Repair Limits

- ❖ Pipeline repair shall be conducted within defined disturbance limits to minimize potential impacts to vegetation and ground surfaces.

Tree Protection

- ❖ The four trees designated for removal shall be clearly marked in the field to avoid inadvertent removal of additional trees.
- ❖ Trees shall be felled in a manner that would not adversely impact additional adjacent trees.
- ❖ Root zones of trees that would not be removed shall be avoided to the maximum extent possible through fencing of root zones. Root zone boundaries shall be calculated based on a formula of one foot for every one inch of stem diameter.

Sensitive Resource Protection

- ❖ High density polyethylene (HDPE) composite mats would be placed over wetland areas.
- ❖ Timber mats shall be temporarily installed to span the onsite tributary to allow construction access to the south side of the tributary without impacting the tributary channel flow or structure.
- ❖ Construction vehicles shall be refueled on NW Leif Erikson Drive to prevent potential fuel spills near the onsite wetland and tributary.
- ❖ Construction vehicles shall be stored in designated staging areas (along the widened Wiregate Trail) when not in use.
- ❖ Downed wood and slash generated from tree removal would be retained onsite. During site restoration, downed wood would be placed in slope disturbance areas at least 15 feet from either side of the pipeline. Slash resulting from tree removal would be placed along the toe of the slope during site restoration.
- ❖ Temporary vegetation disturbance and tree removals would be compensated for through onsite plantings to minimize impacts to resource functions and values. Areas of non-native blackberry will be replaced with native shrubs during demolition of the access road along Wiregate Trail.

Erosion and Sediment Control

- ❖ Disturbance boundaries shall be marked with flagging, temporary construction fencing, or other marking to avoid ground disturbance outside of the designated work areas.

- ❖ A wire-backed silt fence would be placed along the northwestern and northeastern corners of the slope disturbance area to hold back the weight of sediment and potential runoff.
- ❖ A regular silt fence would be placed along the southern edge of the access road.
- ❖ Seed-free straw wattles would be placed on the northern edge of the Wildwood Trail where the wooden berm is located.
- ❖ A compost berm would be laid across the toe of the slope at the end of each workday to help seal off the sediment barrier when construction work isn't going on.
- ❖ Timber mats would be installed to span the onsite tributary to protect the tributary from materials (including sediment) rolling down the slope from entering the tributary.
- ❖ In the event that soil piles would be generated (from hand digging), straw wattles would be evenly spaced apart up and down the slope, running parallel to the toe of the slope (but not extending the full width of the disturbance area) to allow space for movement up and down the slope) to help keep excavated soil piles in place.
- ❖ Slope tracking would be performed at the end of each day, which will leave a small break in the slope disturbance area, helping reduce runoff.
- ❖ Biobags in the shape of a check dam would be placed at the end of the access road where runoff will exit.
- ❖ A straw wattle would be placed at the edge of Leif Erikson Drive to keep runoff from spilling over into the tributary on the other side of Leif Erikson Drive.
- ❖ A 50-foot-long and 12-foot-wide rock stabilized construction entrance/exit comprised of large cobbles would be installed at the Wiregate Trail's intersection of NW Leif Erikson Drive.
- ❖ During site restoration, all slope soil disturbance areas would be hydroseeded with a native erosion control seed mix. Road and staging demolition areas would be seeded with a native wetland or upland herbaceous seed mix.

Construction Vehicles, Equipment, and Trail/Roadway Use

- ❖ Construction workers shall be dropped off/picked up each day via existing park access points (i.e., NW Leif Erickson Drive).
- ❖ Signage, coning, and/or fencing shall be used along NW Leif Erikson Drive, the Wiregate Trail, and the Wildwood Trail to keep people away from equipment and work areas and to warn park users of any hazards while the activities are taking place. Traffic control personnel shall be located on the impacted trail or road where appropriate.

Unavoidable Impacts:

A total of 4 native trees, totaling 48 inches diameter breast height (dbh) are to be removed in association with the pipeline repair and maintenance actions. Details regarding each of the trees and recommendations for maintenance treatment as downed wood and brush piles are presented in Exhibit A.1 (Section 6.1). Further, the applicant proposes 17,087 square feet of temporary and 16 square feet of permanent disturbance as part of this proposal. Elements of temporary disturbance include site access along the Wiregate Trail as well as bank disturbance for sinkhole repair and pipeline maintenance. Permanent disturbance includes the riprap outfall apron that will dissipate discharge from the subsurface outfall pipe.

Potential short-term impacts from the project include disturbance to wildlife habitat, sensitive fauna, nesting/brooding areas, vegetation, and soil stability on the slope around the pipeline repair area. Direct impacts include removal of vegetation, disturbance of ground surfaces, and increased noise. Impacts may also be indirect; degradation of surrounding wildlife habitat may occur due to increased noise and soil erosion. In addition, recreational uses within the project area will be temporarily

impacted by closing the Wiregate and Wildwood Trails. However, these potential short-term impacts would be minimized through the implementation of the BMPs detailed in the Construction Management Plan (described above).

Potential long-term impacts of pipeline repair resulting from vegetation clearing, tree removal, and ground disturbance include a reduction in tree canopy cover, shade, microclimate regulation, wildlife refuge, and nesting/brooding areas associated with deciduous forest cover. However, the disturbance area and clearing areas are relatively small (at 0.4 and 0.15 acres, respectively) and would continue to be surrounded with dense, contiguous forested area that provides considerable ecological functions (e.g., wildlife habitat). Nine trees will be planted around the site disturbance area, thereby restoring affected resource values onsite over time and addressing the temporal loss of habitat functions by compensating for the four trees that will be removed. Additionally, the trees installed will include a mix of deciduous and coniferous species for greater native forest cover diversity and longevity. Mitigation measures would establish coarse woody debris and brush to compensate for unavoidable impacts and provide more diverse forest structure and habitat value.

Although the proposed project will occur on a steep slope, the project is intended to increase slope stability and minimize the ongoing erosion that is occurring around the pipeline. Disturbed slope areas will be replanted with native vegetation following construction. Further, the proposed subsurface drainage system will improve slope stability by redirecting groundwater flow away from the pipeline and into an outfall with riprap for dissipation of surface flow energy. Use of GreenArmor system in addition to the subsurface drainage system would further improve slope stability. Therefore, no long-term detrimental impacts would occur as a result of this proposal.

Proposed Mitigation:

Proposed measures to mitigate for unavoidable long-term impacts include a combination of habitat enhancement and creation measures. The applicant proposes to retain downed wood debris onsite per Portland Parks and Recreation's July 2010 *Snag Creation and Downed Wood Retention Guidance* memorandum (Exhibit A.5). Large downed wood would be left in place onsite to benefit forest health and enhance existing wildlife habitat complexity for birds, animals, insects, etc. Placement of downed wood as large woody debris would be limited to areas on the slope 15 feet from either side of the pipeline location, as shown on Exhibit C.4.

Further, to compensate for the removal of native trees and to restore temporarily disturbed areas, the applicant proposes to plant nine native trees consisting of three different species. The applicant also proposes to plant 416 shrubs throughout the construction area as well as disperse a native seed mix.

Land Use History: City records indicate prior land use reviews on the subject site as follows:

- ❖ LU 03-120560 EN: Approval of a pedestrian trail, including bridges over intermittent streams;
- ❖ LU 10-135572 EN: Emergency culvert repair in Forest Park – application voided;
- ❖ LU 11-153630 EN: Approval for the removal of 27 trees for the maintenance and management of the Kinder Morgan pipeline in Forest Park; and
- ❖ LU 16-187824 EN: Approval for an emergency culvert repair which was completed in 2011 and 2012.

Past land use reviews have no effect on the current proposal.

Agency Review: A "Request for Response" was mailed May 14, 2020. The following Bureaus have responded with no issues or concerns:

- Bureau of Environmental Services
- Life Safety
- Fire Bureau

- Site Development Section of BDS

The Bureau of Transportation responded with the following comment. Please see Exhibit E.2 for additional details.

Based on the information in the record, it appears the proposal will stay within the allowances of 17.42.025- Maintenance Restrictions. As such, there is no need for a public works permit.

The proposal does include a temporary construction access (gravel driveway) which will need to be connected to NW Leif Erickson Dr. at Wiregate Trail. Construction of this access point will require a minor improvement permit associated with the site development permit for the proposal.

In most cases, work which will result in a public right-of-way being closed to the public requires the issuance of a Temporary Street Use Permit (TSUP). Staff confirmed with Temporary Street Use Permitting staff that no TSUP permit is needed for rights-of-way within the boundaries of Forest Park. There is a formal agreement in place which gives authority for access management to the Parks Bureau. The Parks Bureau non-park use permit will be the mechanism for permitting the temporary closures of these rights-of-way for maintenance and construction staging.

The Bureau of Parks-Forestry Division responded with the following comment. Please see Exhibit E.6 for additional details.

Urban Forestry has no objections to the proposal subject to the following conditions of approval:

- 1. The tree protection plan is updated to include trees along the entry path, near the staging area, and near the area where trees are proposed for anchor points.*
- 2. All Urban Forestry conditions as detailed in NPUP 2020-31 are followed.*

Planner Note: The applicant has provided updated Tree Protection Plans per Urban Forestry's request (Exhibit C.3).

The Bureau of Parks and Recreation responded with the following comment. Please see Exhibit E.7 for additional details.

PP&R is in the process of reviewing the NPUP [Non-Park Use Permit] application for Kinder Morgan's proposed repair work to their gas line in Forest Park. We are working swiftly to provide comment, receive clarification from Kinder Morgan on their methodologies for this repair and come to alignment on this work. Please add a condition in the BDS Land Use permit approval that Kinder Morgan must comply with and obtain a fully executed NPUP from PP&R prior to the applicant and their contractor accessing PP&R owned and/or managed property in Forest Park to perform work.

Planner Note: Prior to issuance of permit(s) for construction, the applicant will be required to show documentation they have received approval of the Portland Parks & Recreation Non-Park Use Permit (NPUP).

Neighborhood Review: A Notice of Public Hearing on a Proposal in Your Neighborhood was mailed on May 26, 2020. One written response has been received from either the Neighborhood Association or notified property owners in response to the proposal.

The following comment was received on May 28, 2020:

I do not object to the project scope as proposed. But I request a condition of approval be added to the final approval:

“The contractor and Portland Parks Department shall bear responsibility for replacement of any mitigation vegetation and/ or trees that are no longer healthy and alive based on a site inspection 12-months after substantial completion of the work. Any such vegetation or trees in poor health or no longer alive shall be replaced by the Parks Department within 30 days of the 12-month inspection.

Planner Note: As a condition of approval of this land use review, the applicant will be required to obtain a permit for the initial installation of mitigation plantings in addition to a second permit two years later to ensure survival of said plantings. Any plants that did not survive the two-year establishment period will be required to be replaced.

ZONING CODE APPROVAL CRITERIA

The relevant approval criteria are listed in the Forest Park NRMP Chapter 8 and in Zoning Code chapter 33.563.

I. Forest Park NRMP “Approval Criteria for Exceptions”

A. The proposal meets all the criteria for minor amendments.

Approval Criteria for Minor Amendments:

A. There is a demonstrated need for the proposal.

Findings: The proposal is described on page 2 of this report, and more thoroughly by the applicant in Exhibit A.1. The applicant clearly demonstrates a need for the proposal as an existing underground pipeline is currently exposed due to slope failure. Further, the applicant states the purpose and objective of the project is to repair and stabilize a section of steep slope that is experiencing soil loss around Kinder Morgan’s LS-14 pipeline. The overall goal of the project is to restore the long-term stability of the slope and structural integrity of the pipeline in this area with little need for cumulative slope repairs. The objectives associated with the project are identified below.

Objective 1: Stabilize slopes in area where sinkholes are present.

Objective 2: Slow and divert groundwater away from the pipeline to prevent future sinkhole development and damage to the pipeline.

Objective 3: Implement a long-term pipeline repair strategy that reduces the return interval for future pipeline repair and associated disturbance in this area.

Objective 4: Limit environmental encroachment to the maximum extent practicable during construction activities associated with pipeline repair.

The applicant has demonstrated the need to repair and stabilize the failing bank as well as perform maintenance measures on the existing pipe, *and this criterion is met.*

B. The proposed action is consistent with Forest Park Natural Resources Management Plan Goals and Strategies.

Findings: The *Forest Park Natural Resource Management Plan* identifies four goals and ten strategies. There are two Conservation Goals and two Recreational and Educational Goals.

Conservation Goals

1. Protect Forest Park’s native plant and animal communities, its soil and its water resources while managing the forest ecosystem in order to grow a self-sustaining ancient forest for the enjoyment and benefit of future generations.

Findings: The project will stabilize a section of steep hillslope that is currently eroding due to concentrated subsurface drainage along the existing pipeline. Implementation of pipeline repair will involve site restoration actions that protect native plants, animals, soils and water resources

to the extent practicable by minimizing long-term ecosystem functions and habitat quality, providing soil stability, and replacing non-native vegetation along Wiregate Trail with native species.

2. Design management and restoration efforts to:
 - Maintain and enhance regional biodiversity

Findings: The proposed pipeline repair and maintenance activities are intended to support the long-term integrity of the pipeline itself while continuing to maintain, enhance, and create habitat features (e.g. native plantings and coarse woody debris) that support regional biodiversity.

- Provide wildlife habitat and migration opportunities

Findings: As discussed on page 9, mitigation measures will incorporate a combination of ecological/wildlife habitat enhancement and creation measures, including downed wood retention, brush pile creation, and planting of native shrubs and trees.

- Improve water quality and aquatic habitat

Findings: The proposed pipeline repair activities will reduce current soil erosion associated with the three sink holes. Rilling is evident on the slope above the tributary, which will be addressed through groundwater management, soil cover, and vegetation installation.

- Repair damaged and fragmented natural systems.

Findings: Compensatory mitigation for unavoidable impacts in the disturbance area will include implementation of a combination of the habitat enhancement and creation measures stated above.

Recreational and Educational Goals

1. Protect and enhance the value of Forest Park as a regionally-significant recreational resource – a place that can accommodate recreational and educational use at appropriate seasons of the year without environmental damage.

Findings: Not applicable. The maintenance and repair proposal will not affect the ability to accommodate long-term recreational and educational use of the park.

2. Enhance the value of Forest Park as a regionally-significant educational resource – an urban laboratory for environmental research and resource enhancement and restoration.

Findings: Not applicable. The proposal to repair and maintain the pipeline and associated bank is unrelated to the use of Forest Park for educational purposes and does not affect the Park's educational functions one way or another.

The *Forest Park Natural Resource Management Plan* identifies 10 strategies to help reach the goals. They are:

1. Implement Sustainable Resources Program
2. Divide Forest Park into Management Units
3. Acquire and Protect Additional Land
4. Manage Recreation to Protect Natural Resources
5. Improve interpretive, educational and research opportunities
6. Improve Public Access
7. Improve Park Safety
8. Develop Recreational Opportunities at Other Sites
9. Improve Park Staffing and Funding
10. Continue Public Involvement

Only strategies 1, 6, 7, and 10 apply to the proposal, as the remaining strategies speak to recreational goals, or park administration, and are not related to the pipeline repair and maintenance activities.

Strategy 1 Implement Sustainable Resources Program

Findings: Pages 6 through 8 of this report describe the construction management techniques proposed by the applicant to reduce impacts on environmental resources, and the mitigation proposed to enhance resources, including:

- Implementation of robust BMPs – installation of erosion control and tree protection measures to ensure protection of resources to be left undisturbed;
- Enhancement of resources – creation of coarse woody debris and replacement of invasive species with native species;
- Mitigation for impacts – installation of nine trees and 416 shrubs.

Strategy 6 Improve Public Access

Findings: The proposed pipeline repair would require the temporary closure of Wiregate and Wildwood Trail during the construction timeframe. However, notices will be posted at trailheads regarding the temporary closure of these trails and the applicant will provide regular updates to Portland Parks & Recreation (PP&R) for use in posting information to the public via Forest Park website updates. Further, the project proposes to restore the Wiregate Trail to its original width and replant disturbance areas with native plants as part of site restoration. No impacts to the Wildwood Trail are anticipated. Therefore, the project would not alter accessibility, directions, transit access, or trailheads associated with these trails such that public access to Forest Park would be affected.

Strategy 7 Improve Park Safety

Findings: The project does not specifically implement the identified elements of Strategy 7 as they are not directly applicable. However, the overall purpose of pipeline repair activities is to ensure the existing pipeline is continuing to operate in a safe and secure manner. Therefore, it is anticipated that pipeline repair will serve to maintain the safety of park users and wildlife.

Strategy 10 Continue Public Involvement

Findings: The applicant plans to conduct the following public outreach and involvement measures to inform the public of proposed project:

- ❖ An outreach mailing will be prepared by Kinder Morgan to be distributed by the City one month before any scheduled work to the neighborhood association of NW/NW, Forest Park, and the district neighborhood coalition of Neighbors West/Northwest.
- ❖ The applicant will work with PP&R to coordinate review of any written materials to be included in the outreach mailing at least one week prior to it being mailed or posted.
- ❖ Signage about the project will be posted at major entrances to the area at least two weeks prior to the first day of work. The applicant will coordinate with PP&R to identify entrances where signs will be posted.
- ❖ The applicant contact will be available to address all public and media inquiries. The contact person will also coordinate with PP&R's Media and Events Officer as needed/requested.
- ❖ Once the precise project timeline is established, the dates will be communicated to PP&R's Customer Service Center to avoid potential conflicts with scheduled events.

The project, together with proposed construction management and mitigation activities, as well as public outreach, is consistent with the *Forest Park Natural Resources Management Plan* goals and strategies, to the extent that they apply, and *this criterion is met*.

C. Alternative locations and design modifications were evaluated to show that the proposal has the least significant detrimental environmental impacts of the practicable alternatives.

Findings: The applicant provided an alternatives analysis for the proposed maintenance and repair activities as well as construction access in Exhibit A.1 that are summarized above in this

report (pages 4 through 6) and shown graphically in Exhibit C.7. The method of bank repair and pipeline maintenance with the least environmental impact whilst meeting all project objectives (purpose), is the combination of groundwater management and slope armoring, as shown in Table-1 on page 6 of this report.

While the applicant's Preferred Alternative requires permanent disturbance (16 square feet) and tree removal (four native trees) within the Environmental Protection overlay zone, it also allows for the mitigation and restoration of the project area and vicinity. As shown on Exhibit C.5, 10,931 square feet of site area will be restored by planting native vegetation including the creation of coarse woody debris piles to be placed adjacent to the riparian corridor. The Preferred Alternative not only satisfies the project purpose, it minimizes impact, to the greatest extent practicable, to identified resources and functional values and *this criterion is met*.

D. A construction management plan and a mitigation plan will minimize impacts on resources and restore adjacent disturbed areas.

Findings: The applicant provided a detailed description of proposed construction practices to minimize environmental impacts on Exhibit A.1. Construction management practices proposed are summarized in this report on pages 7 and 8 and shown on Exhibit C.3. The Construction Management Plan will be effective because it provides realistic limits to disturbance while containing the necessary elements (e.g. sediment fencing, drainageway and wetland protection, tree protection fencing) to effectively protect resources and functional values outside of designated disturbance areas. Further, upon construction completion, the applicant's onsite stormwater will be managed in conformance with City of Portland Stormwater Management Manual standards, preventing impacts to the drainageway and to water resources downstream.

The proposed mitigation plan is described in detail in Exhibit A.1, as well as summarized in this report on page 9. It will offset 16 square feet of permanent disturbance area and mitigate the removal of 4 native trees. The mitigation plan will compensate for both temporary and permanent impacts at the site for the following reasons:

- ❖ Mitigation plantings will be installed in temporary disturbance areas covering 10,931 square feet.
- ❖ The mitigation plantings will increase species diversity to improve wildlife habitat in areas that currently have invasive and monoculture species.
- ❖ The plantings will aid with pollution and nutrient retention and removal, sediment trapping and erosion control.
- ❖ Invasive species will be replaced with native species along the Wiregate Trail.

To confirm installation of the required plantings, the applicant will be required to have the plantings inspected upon installation. Then, to confirm maintenance of the required plantings for the initial establishment period, the applicant will be required to have the plantings inspected two years after plantings are installed.

With conditions to ensure that Best Management Practices are installed per the Erosion Control Plan (Exhibit C.3) and that plantings required for this Environmental Review are installed, maintained, and inspected, *this criterion can be met*

B. The proposal is a park-related development, or no alternative locations exist outside of Forest Park for the proposal.

Findings: The proposal is to conduct repair and maintenance activities associated with an existing pipeline easement that crosses through Forest Park. Therefore, the proposal cannot be conducted in an alternative location outside of Forest Park. *This criterion is met*.

C. There are no practicable alternative locations within Forest Park suitable for the use in which the development will have less adverse impact on resource values.

Findings: The proposed maintenance and repair activities are associated with an existing pipeline easement. Therefore, the proposal cannot be conducted in an alternative location within Forest Park. *This criterion is met.*

D. Any long-term adverse impacts of the proposed action on resource values are fully mitigated within the Management Unit.

Findings: The short and long-term impacts of the project were analyzed by the applicant and included as part of this report on pages 8 and 9. Short-term impacts include disturbance to wildlife habitat, sensitive fauna, nesting/brooding areas, vegetation, and soil stability on the slope around the pipeline repair area. Potential long-term impacts of pipeline repair resulting from vegetation clearing, tree removal, and ground disturbance include a reduction in tree canopy cover, shade, microclimate regulation, wildlife refuge, and nesting/brooding areas associated with deciduous forest cover.

However, the disturbance area and clearing areas are relatively small (at 0.4 and 0.15 acres, respectively) and will continue to be surrounded with dense, contiguous forested area that provides considerable ecological functions (e.g., wildlife habitat). Mitigation and restoration in the form of invasive species removal, native plantings, and coarse woody debris installation are proposed to offset any impacts to onsite resource.

Further, the proposed subsurface drainage system will improve slope stability by redirecting groundwater flow away from the pipeline and into an outfall with riprap for dissipation of surface flow energy. Use of GreenArmor system in addition to the subsurface drainage system would further improve slope stability. Therefore, no long-term detrimental impacts would occur as a result of this proposal.

With conditions to ensure that the mitigation required for this Environmental Review is installed, maintained, and inspected, *this criterion will be met.*

E. The proposal is consistent with the purpose of the Environmental Zones

Findings: 33.430.015 Purpose of the Environmental Protection Zone

The Environmental Protection zone provides the highest level of protection to the most important resources and functional values. These resources and functional values are identified and assigned value in the inventory and economic, social, environmental, and energy (ESEE) analysis for each specific study area. Development will be approved in the environmental protection zone only in rare and unusual circumstances.

33.430.015 Purpose of the Environmental Conservation Zone

The Environmental Conservation zone conserves important resources and functional values in areas where the resources and functional values can be protected while allowing environmentally sensitive urban development.

The preferred pipeline repair and maintenance approach has been determined to be the most environmentally sensitive of the practicable alternatives that provides the greatest protection of existing resource functions and values while conducting necessary repair of the failing bank and maintenance of the existing pipeline. Specifically, the purpose of the Environmental Protection overlay zone along the tributary is intended to protect existing riparian resource functions and values. The site restoration has been designed specifically to protect and enhance these functions and values over time, and *this criterion is met.*

II. Additional criteria required by Plan Districts**Section 33.563 Northwest Hills Plan District**

According to the Northwest Hills Plan District Map 563-1, the subject site is located in the Forest Park Subdistrict of the Northwest Hills Plan District.

Forest Park Subdistrict

33.563.210 Additional Approval Criterion. In addition to the applicable approval criteria of Section 33.430.250, an environmental review application will be approved if the review body finds that the all of the following approval criteria are met:

A. Wildlife. The location, quantity and structural characteristics of forest vegetation will be sufficient to provide habitat and maintain travel corridors for the following indicator species: pileated woodpecker, sharp-shinned hawk, Roosevelt elk, white-footed vole, and red-legged frog. Standards to meet this criterion are in the applicable Habitat Evaluation Procedure developed by the US Fish and Wildlife Service.

Findings: The proposed project will result in unavoidable impacts including ground disturbance, vegetation clearing, and the removal of four native trees, which would result in unavoidable impacts to existing riparian habitat, which is commonly used as a travel corridor by wildlife. However, as described in this report on page 9, mitigation measures would be implemented to compensate for these unavoidable impacts and provide more diverse forest structure and habitat value over time. Additionally, a large existing cottonwood snag near the stream crossing that has notable woodpecker use will be avoided. Through these actions the travel corridor characteristics and functions will be maintained for the indicator species.

The proposed maintenance activities will not obstruct travel corridors or significantly change the overall structural characteristics of the forest vegetation, and *this criterion is met.*

B. Parks and Open Space. Overall scenic, recreational, educational and open space values of Forest Park will not be diminished as a result of development activities; and

Findings: Construction activities and construction equipment within and adjacent to the Wiregate Trail and Wildwood Trail would reduce the scenic quality of the area in the short-term as these scenic impacts would be temporary. During construction, the proposed project would require the temporary closure of Wiregate Trail and Wildwood Trail. However, the closures would be temporary and would not extend longer than the estimated duration of construction (approximately 4 to 6 weeks). Therefore, the temporary closures are not expected to diminish recreational and educational values within Forest Park. Further, the project will not decrease the area or general character of the site, *and this criterion is met.*

C. Miller Creek Subarea.

Findings: The site does not include the Miller Creek Subarea and *this criterion does not apply.*

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, Kinder Morgan, and its subsidiary SFPP, L.P., proposes to repair a failing bank and maintain an existing pipeline for the continued safety and protection of the public and surrounding

natural resources. The applicant considered alternative bank repair and stabilization methods as well as equipment access approaches to determine that the proposed repair and maintenance activities were practicable and would minimize impacts to the resource area of the Environmental Zone. Although it was unavoidable to remove four native trees within the pipeline right-of-way, the applicant proposes extensive mitigation plantings, as well as coarse woody debris creation, as mitigation for impacts to resources and functional values. The applicant and the above findings have shown that the proposal meets the applicable approval criteria with conditions. Therefore, this proposal should be approved, subject to the following conditions.

TENTATIVE STAFF RECOMMENDATION

(May be revised upon receipt of new information at any time prior to the Hearings Officer decision)

Approval of an Environmental Review for:

- Removal of four native trees over 6 inches dbh;
- Installation of biodegradable slope armor (GreenArmor System), five trench plugs, one subsurface porous drainpipe, and one riprap apron; and
- 17,087 square feet of temporary and 16 square feet of permanent disturbance;

all within the Environmental Conservation and Environmental Protection overlay zones, and in substantial conformance with Exhibits C.1 through C.9. Approval is subject to the following conditions:

NOTE: Activities which expose soil to direct contact with stormwater between October 1 and April 30 are prohibited.

- A. A BDS construction permit is required for development.** The Conditions of Approval listed below, shall be noted on appropriate plan sheets submitted for permits (building, Zoning, grading, Site Development, erosion control, etc.). Plans shall include the following statement, ***"Any field changes shall be in substantial conformance with approved LU 20-136055 EN Exhibits C.1 through C.9."***
- B.** Prior to issuance of permit(s) for construction, the applicant must show documentation they have received approval of the Portland Parks & Recreation Non-Park Use Permit (NPUP).
- C.** Temporary, 4-foot high, bright orange construction fencing, or tree protection fencing, shall be placed along the Limits of Construction Disturbance line, as depicted on Exhibit C.3, to separate approved construction areas from areas to remain undisturbed.
 1. No mechanized construction vehicles are permitted outside of the approved "Limits of Construction Disturbance" delineated by the temporary construction fence. All planting work, invasive vegetation removal, and other work to be done outside the Limits of Construction Disturbance, shall be conducted using handheld equipment.
- D.** The BDS Construction permit shall include inspection and approval of a mitigation plan for a total of nine trees, 416 shrubs, and coarse woody debris placement in substantial conformance with Exhibits C.4 and C.5, Mitigation and Restoration site plan. Any plant substitutions shall be selected from the *Portland Plant List* and shall be substantially equivalent in size to the original plant. Conifers must be replaced with conifers.
 1. Permit plans shall show:
 - a. Permit plans shall show the general location of the trees, shrubs and ground covers required by this condition to be planted in the mitigation area and labeled as "new required landscaping". The plans shall include a "typical," scalable planting layout for each planting zone, and shall illustrate a naturalistic arrangement of plants and should include a planting table listing the species, quantity, spacing and sizes of plants to be planted.

- b. The applicant shall indicate on the plans selection of either tagging plants for identification or accompanying the BDS inspector for an on-site inspection.
2. Plantings shall be installed between October 1 and March 31 (the planting season).
3. Prior to installing required mitigation plantings, non-native invasive plants shall be removed from all areas within 10 feet of mitigation plantings, using handheld equipment.
4. If plantings are installed prior to completion of construction, a temporary orange, 4-foot high construction fence shall be placed to protect plantings from construction activities.
5. All mitigation and restoration shrubs and trees shall be marked in the field by a tag attached to the top of the plant for easy identification by the City Inspector; or the applicant shall arrange to accompany the BDS inspector to the site to locate mitigation plantings for inspection. If tape is used it shall be a contrasting color that is easily seen and identified.
6. After installing the required mitigation plantings, the applicant shall request inspection of mitigation plantings and final the BDS Zoning Permit.

E. The landowner shall maintain the required plantings to ensure survival and replacement. The landowner is responsible for ongoing survival of required plantings during and beyond the designated two-year monitoring period. After the 2-year initial establishment period, the landowner shall:

1. Obtain a Zoning Permit for a final inspection at the end of the 2-year maintenance and monitoring period. The applicant shall arrange to accompany the BDS inspector to the site to locate mitigation plantings for inspection. The permit must be finalized no later than 2 years from the final inspection for the installation of mitigation planting, for the purpose of ensuring that the required plantings remain. Any required plantings that have not survived must be replaced.
2. All required landscaping shall be continuously maintained, by the landowner in a healthy manner, with no more than 15% cover by invasive species. Required plants that die shall be replaced in kind.

F. Failure to comply with any of these conditions may result in the City's reconsideration of this land use approval pursuant to Portland Zoning Code Section 33.700.040 and/or enforcement of these conditions in any manner authorized by law.

Procedural Information. The application for this land use review was submitted on April 7, 2020, and was determined to be complete on May 8, 2020.

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 April 7, 2020.

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 14 days as stated with (Exhibit A.6). Unless further extended by the applicant, **the 120 days will expire on: September 19, 2020**

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 recommendation 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.

This report is not a decision. The review body for this proposal is the Hearings Officer who will make the decision on this case. This report is a recommendation to the Hearings Officer by the Bureau of Development Services. The review body may adopt, modify, or reject this recommendation. The Hearings Officer will make a decision about this proposal within 17 days of the close of the record. Your comments to the Hearings Officer can be mailed c/o the Hearings Officer, 1900 SW Fourth Ave., Suite 3100, Portland, OR 97201, faxed to 503-823-4347 or e-mailed to HearingsOfficeClerks@portlandoregon.gov, or testify during the hearing. Please see link to instructions on how to testify at the top of this staff report or contact the Hearings Office at 503-823-7307 or the email listed above.

You will receive mailed notice of the decision if you write a letter received before the hearing or testify at the hearing, or if you are the property owner or applicant. This Staff Report will be posted on the Bureau of Development Services website. Look at www.portlandonline.com. On the left side of the page use the search box to find Development Services, then click on the Zoning/Land Use section, select Notices and Hearings. Land use review notices are listed by the District Coalition shown at the beginning of this document. If you are interested in viewing information in the file, please contact the planner listed on the front of this staff report. The planner can provide information over the phone or via email. Please note that due to COVID-19 and limited accessibility to files, only digital copies of material in the file are available. A digital copy of the Portland Zoning Code is available on the internet at <http://www.portlandonline.com/auditor/index.cfm?c=28197>

Appeal of the decision. The decision of the Hearings Officer may be appealed to City Council, who will hold a public hearing. If you or anyone else appeals the decision of the Hearings Officer, only evidence previously presented to the Hearings Officer will be considered by the City Council.

Who can appeal: You may appeal the decision only if you write a letter which is received before the close of the record for the hearing, if you testify at the hearing, or if you are the property owner/applicant. Appeals must be filed within 14 days of the decision. **Appeals must be filed within 14 days of the decision. An appeal fee of \$.00 will be charged (one-half of the BDS LUS application fee, up to a maximum of \$5,000).**

Appeal Fee Waivers: Neighborhood associations recognized by the Office of Neighborhood Involvement may qualify for a waiver of the appeal fee provided that the association has standing to appeal. The appeal must contain the signature of the Chairperson or other person authorized by the association, confirming the vote to appeal was done in accordance with the organization’s bylaws.

Neighborhood associations, who wish to qualify for a fee waiver, must complete the Type III Appeal Fee Waiver Request for Organizations Form and submit it prior to the appeal deadline. The Type III

Appeal Fee Waiver Request for Organizations Form contains instructions on how to apply for a fee waiver, including the required vote to appeal.

Recording the final decision.

If this Land Use Review is approved, the final decision must be recorded with the Multnomah County Recorder.

A few days prior to the last day to appeal, the City will mail instructions to the applicant for recording the documents associated with their final land use decision.

- *Unless appealed*, the final decision may be recorded on the day following the last day to appeal. The mailed instructions will state that date.
- A building or zoning permit will be issued only after the final decision is recorded.

The applicant, builder, or a representative may record the final decision as follows:

- **By Mail:** Send the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to: Multnomah County Recorder, P.O. Box 5007, Portland OR 97208. The recording fee is identified on the recording sheet. Please include a self-addressed, stamped envelope.
- **In Person:** Bring the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to the County Recorder's office located at 501 SE Hawthorne Boulevard, #158, Portland OR 97214. The recording fee is identified on the recording sheet.

For further information on recording, please call the County Recorder at 503-988-3034.

For further information on your recording documents please call the Bureau of Development Services Land Use Services Division at 503-823-0625. All land use reviews, except those for **only** a Subdivision and/or Planned Unit Development (PUD), must be recorded in this manner. Building or development permits will be issued only after this decision is recorded.

Expiration of the approval. Recorded approvals (except Comprehensive Plans and Zoning Map Amendments) expire three years from the date of the final decision unless:

- A building permit has been issued, or
- The approved activity has begun, or
- In situations involving only the creation of lots, the land division has been recorded.

Recording the land division. The final land division plat **must** be submitted to the City **within three years** of the date of the City's final approval of the preliminary plan. This final plat must be recorded with the County Recorder and Assessors Office after it is signed by the City Planning Director, the City Engineer, and the City Land Use Hearings Officer, and approved by the County Surveyor. **The approved preliminary plan will expire unless a final plat is submitted within three years of the date of the City's approval of the preliminary plan.**

Recording other land use decisions. If the preliminary land division approval also contains approval of other land use decisions (examples include adjustments, conditional uses, and environmental reviews), these other approvals must be recorded by the Multnomah County Recorder before any building or zoning permits can be issued.

The applicant, builder, or their representative may record the final decisions on these other land use decisions as follows:

- **By Mail:** Send the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to: Multnomah County

Recorder, P.O. Box 5007, Portland OR 97208. The recording fee is identified on the recording sheet. Please include a self-addressed, stamped envelope.

- In Person: Bring the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to the County Recorder's office located at 501 SE Hawthorne Boulevard, #158, Portland OR 97214. The recording fee is identified on the recording sheet.

For further information on recording, please call the County Recorder at 503-988-3034.

Expiration of the approval. Recorded approvals (except Comprehensive Plans and Zoning Map Amendments) expire three years from the date of the final decision unless:

- A building permit has been issued, or
- The approved activity has begun, or
- In situations involving only the creation of lots, the land division has been recorded.

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.

Planner's Name: Morgan Steele

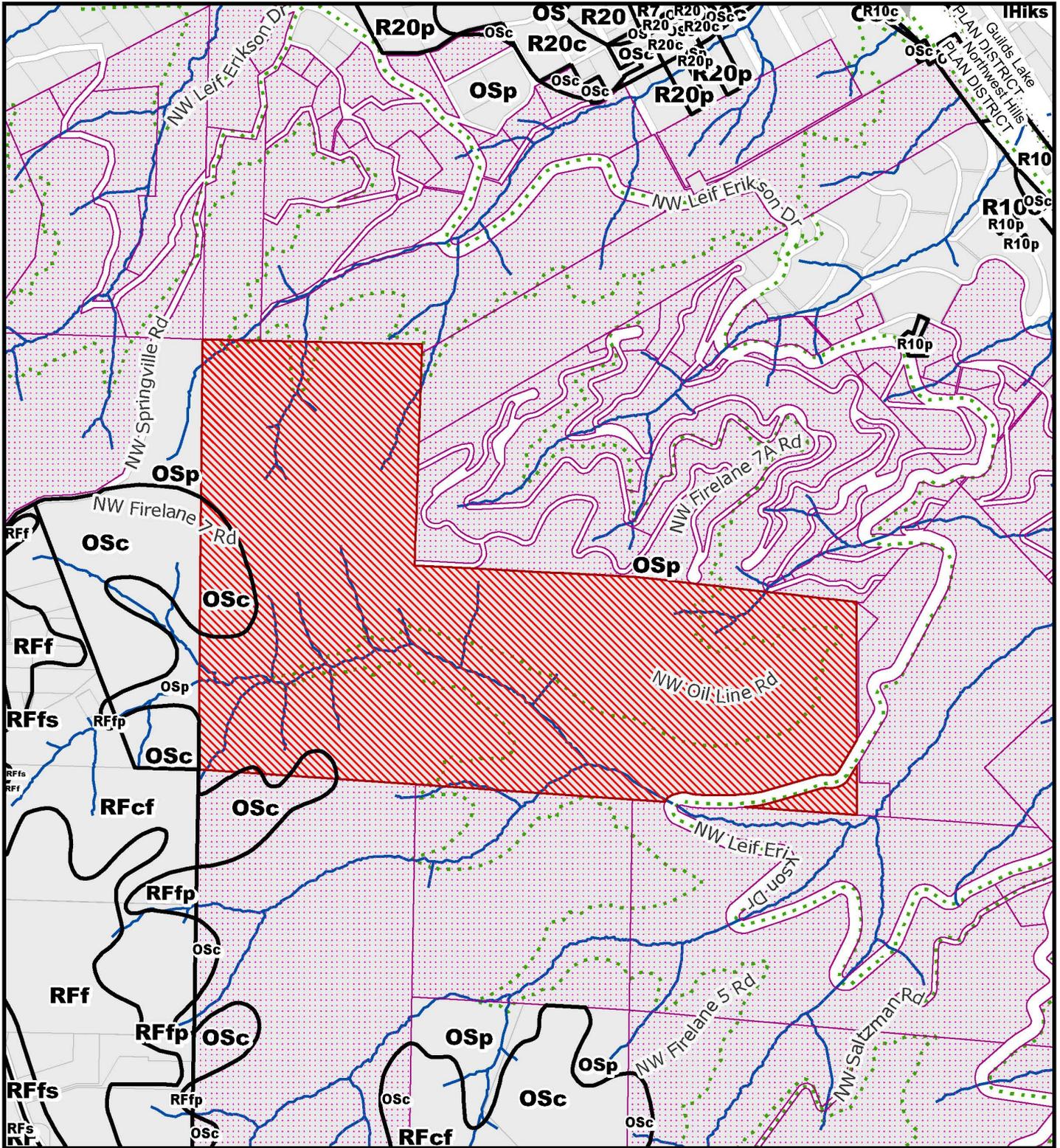
Date: June 12, 2020

EXHIBITS

NOT ATTACHED UNLESS INDICATED

- A. Applicant's Statement:
 - 1. Applicant's Narrative, April 2020
 - 2. Deed & Easement Documentation
 - 3. Geotechnical Report
 - 4. Wetland Delineation Report
 - 5. Snag Creation & Downed Wood Retention Guidance Memorandum
 - 6. Extension to the 120-Day Timeline
- B. Zoning Map (attached)
- C. Plans & Drawings:
 - 1. Existing Conditions Site Plan
 - 2. Proposed Development Site Plan
 - 3. Construction Management and Erosion Control Site Plan (attached)
 - 4. Mitigation/Tree Plan (attached)
 - 5. Mitigation and Restoration Site Plan (attached)
 - 6. Project Site Vicinity
 - 7. Analysis of Project Alternatives
 - 8. Tree Survey Map
 - 9. Site Access & Trail Closure Map
- D. Notification information:
 - 1. Request for response
 - 2. Posting letter sent to applicant
 - 3. Notice to be posted
 - 4. Applicant's statement certifying posting
 - 5. Mailing list
 - 6. Mailed notice
- E. Agency Responses:
 - 1. Bureau of Environmental Services
 - 2. Bureau of Transportation
 - 3. Life Safety
 - 4. Fire Bureau
 - 5. Site Development Review Section of Bureau of Development Services
 - 6. Bureau of Parks & Recreation, Forestry Division
 - 7. Bureau of Parks & Recreation
 - 8. Oregon Department of State Lands
- F. Letters:
 - 1. Erik Goodfriend, May 28, 2020
- G. Other:
 - 1. Original LUR Application
 - 2. ODSL WLUN
- H.

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).



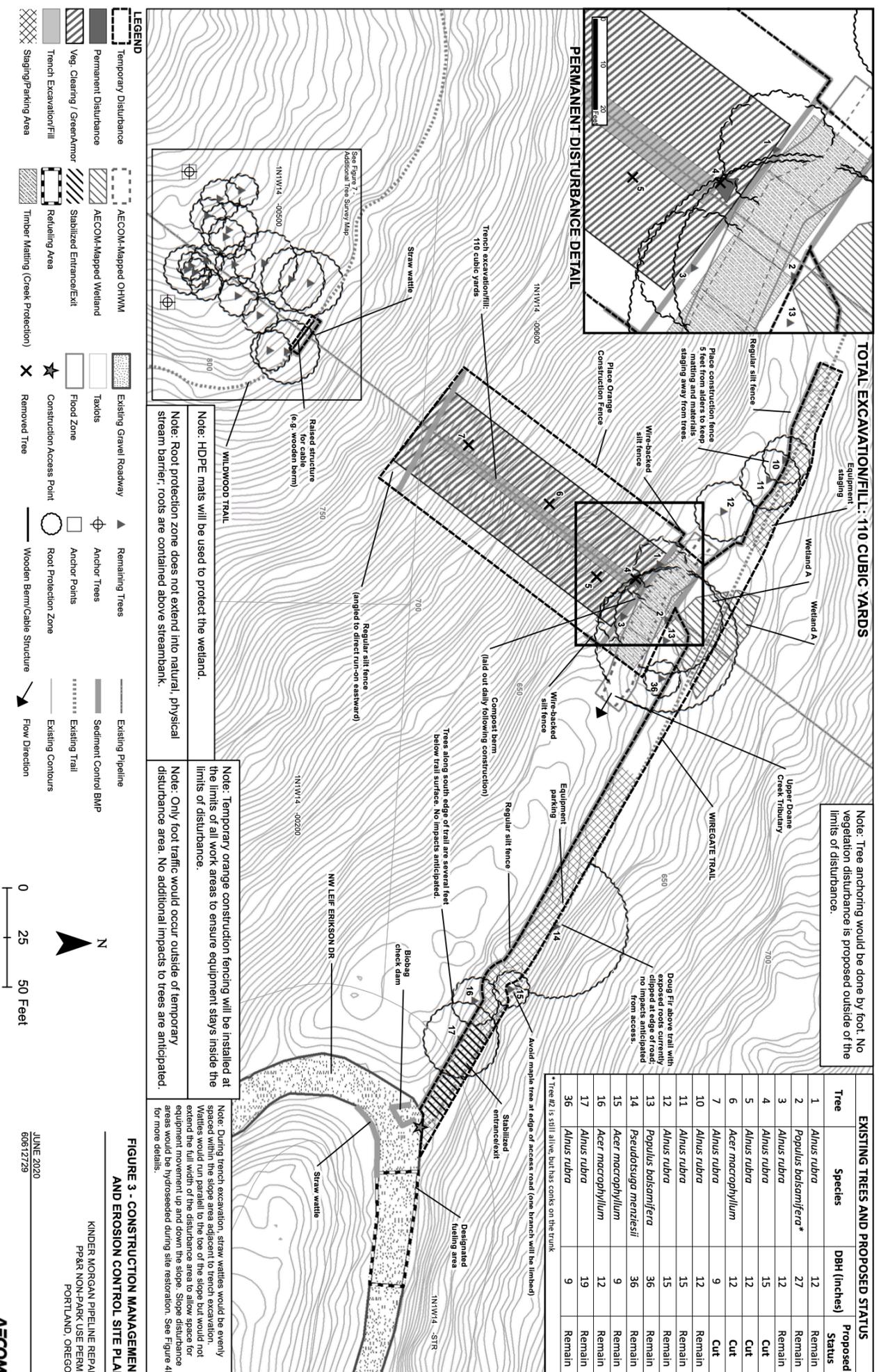
ZONING



NW HILLS PLAN DISTRICT
 FOREST PARK SUB DISTRICT
 2219, 2318-20, 2418-19

-  Site
-  Also Owned Parcels
-  Stream
-  Bridge
-  Recreational Trails

File No.	LU 20 - 136055 EN
1/4 Section	see lower left
Scale	1 inch = 800 feet
State ID	1N1W14 600
Exhibit	B Apr 16, 2020



TOTAL EXCAVATION/FILL: 110 CUBIC YARDS

Note: Tree anchoring would be done by foot. No vegetation disturbance is proposed outside of the limits of disturbance.

EXISTING TREES AND PROPOSED STATUS			
Tree	Species	DBH (inches)	Proposed Status
1	<i>Alnus rubra</i>	12	Remain
2	<i>Populus balsamifera*</i>	27	Remain
3	<i>Alnus rubra</i>	12	Remain
4	<i>Alnus rubra</i>	15	Cut
5	<i>Alnus rubra</i>	12	Cut
6	<i>Acer macrophyllum</i>	12	Cut
7	<i>Alnus rubra</i>	9	Cut
10	<i>Alnus rubra</i>	12	Remain
11	<i>Alnus rubra</i>	15	Remain
12	<i>Alnus rubra</i>	15	Remain
13	<i>Populus balsamifera</i>	36	Remain
14	<i>Pseudotsuga menziesii</i>	36	Remain
15	<i>Acer macrophyllum</i>	9	Remain
16	<i>Acer macrophyllum</i>	12	Remain
17	<i>Alnus rubra</i>	19	Remain
36	<i>Alnus rubra</i>	9	Remain

* Tree #2 is still alive, but has conks on the trunk

Note: HDPE mats will be used to protect the wetland.
Note: Root protection zone does not extend into natural, physical stream barrier, roots are contained above streambank.

Note: Temporary orange construction fencing will be installed at the limits of all work areas to ensure equipment stays inside the limits of disturbance.
Note: Only foot traffic would occur outside of temporary disturbance area. No additional impacts to trees are anticipated.

Note: During trench excavation, straw wattles would be evenly spaced within the slope area adjacent to trench excavation. Wattles would run parallel to the toe of the slope but would not extend the full width of the disturbance area to allow space for equipment movement up and down the slope. Slope disturbance areas would be hydrosessed during site restoration. See Figure 4B for more details.

LEGEND

- Temporary Disturbance
- Permanent Disturbance
- Veg. Clearing / GreenArmor
- Trench Excavation/Fill
- Staging/Parking Area
- AECOM-Mapped OHWM
- AECOM-Mapped Wetland
- Stabilized Entrance/Exit
- Returfing Area
- Timber Matting (Creek Protection)
- Existing Gravel Roadway
- Tankals
- Flood Zone
- Construction Access Point
- Removed Tree
- Remaining Trees
- Anchor Trees
- Anchor Points
- Root Protection Zone
- Wooden Berm/Cable Structure
- Existing Pipeline
- Sediment Control BMP
- Existing Trail
- Existing Contours
- Flow Direction

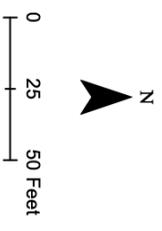


FIGURE 3 - CONSTRUCTION MANAGEMENT AND EROSION CONTROL SITE PLAN

KINDER MORGAN PIPELINE REPAIR
PP&R NON-PARK USE PERMIT
PORTLAND, OREGON

JUNE 2020
60612729

AECOM

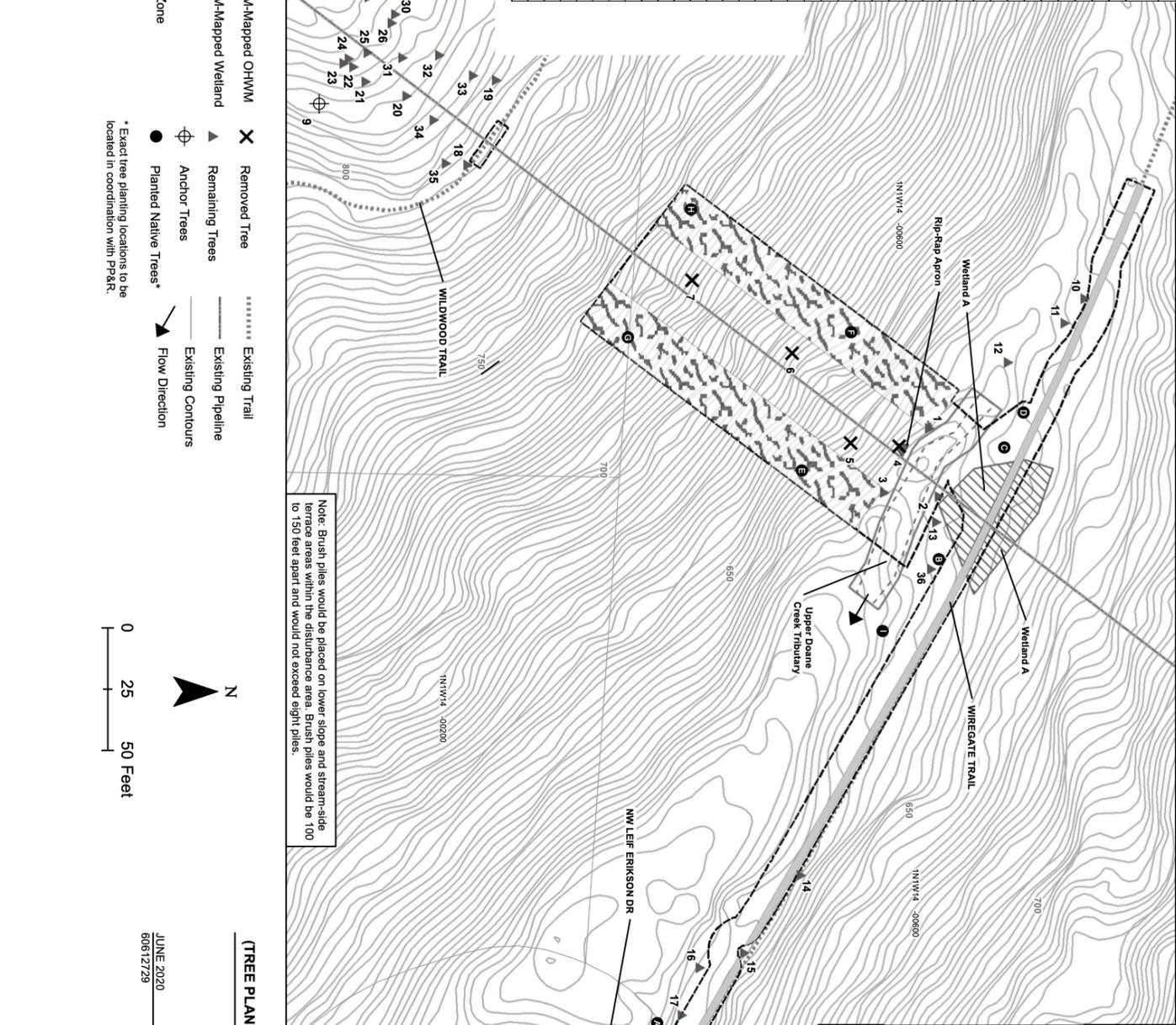
EXISTING TREES AND PROPOSED STATUS

Tree	Species	DBH (Inches)	Proposed Status
1	<i>Alnus rubra</i>	12	Remain
2	<i>Populus balsamifera</i> *	27	Remain
3	<i>Alnus rubra</i>	12	Remain
4	<i>Alnus rubra</i>	15	Remain
5	<i>Alnus rubra</i>	12	Cut
6	<i>Acer macrophyllum</i>	12	Cut
7	<i>Alnus rubra</i>	9	Cut
8	<i>Acer macrophyllum</i> **	12	Remain
9	<i>Pseudotsuga menziesii</i>	36	Remain
10	<i>Alnus rubra</i>	12	Remain
11	<i>Alnus rubra</i>	15	Remain
12	<i>Alnus rubra</i>	15	Remain
13	<i>Populus balsamifera</i>	36	Remain
14	<i>Pseudotsuga menziesii</i>	36	Remain
15	<i>Acer macrophyllum</i>	9	Remain
16	<i>Acer macrophyllum</i>	12	Remain
17	<i>Acer macrophyllum</i>	19	Remain
18	<i>Alnus rubra</i>	16	Remain
19	<i>Alnus rubra</i>	10	Remain
20	<i>Alnus rubra</i>	8	Remain
21	<i>Alnus rubra</i>	7	Remain
22	<i>Acer macrophyllum</i>	12	Remain
23	<i>Acer macrophyllum</i>	7	Remain
24	<i>Snag</i>	8	Remain
25	<i>Alnus rubra</i>	9	Remain
26	<i>Alnus rubra</i>	9	Remain
27	<i>Alnus rubra</i>	10	Remain
28	<i>Snag</i>	8	Remain
29	<i>Alnus rubra</i>	14	Remain
30	<i>Alnus rubra</i>	10	Remain
31	<i>Alnus rubra</i>	16	Remain
32	<i>Alnus rubra</i>	16	Remain
33	<i>Alnus rubra</i>	9	Remain
34	<i>Alnus rubra</i>	9	Remain
35	<i>Alnus rubra</i>	10	Remain
36	<i>Alnus rubra</i>	9	Remain

*Tree 2 is still alive but has cork on the trunk. **Multi-stem (8 stems)

LEGEND

- Temporary Disturbance
- Permanent Disturbance
- Woody Debris Placement
- Restored Trail Width
- Existing Gravel Roadway
- AECOM-Mapped OHWM
- AECOM-Mapped Wetland
- Taxlots
- Flood Zone
- Removed Tree
- Remaining Trees
- Anchor Trees
- Planted Native Trees*
- Existing Trail
- Existing Pipeline
- Existing Contours
- Flow Direction



Note: Brush piles would be placed on lower slope and stream-side terrace areas within the disturbance area. Brush piles would be 100 to 150 feet apart and would not exceed eight piles.

Note: The entire project site and surrounding area is located within a City of Portland Preservation E-Zone. The project site is forested and includes a mixed overstory dominated by red alder, Douglas fir, and bigleaf maple. The mixed overstory is dominated by Western sword fern but contains some invasive species including Himalayan blackberry and reed canarygrass.

REPLACEMENT TREE INFORMATION

Tree	Scientific Name	Common Name	Caliper Size/Height
A	<i>Alnus rubra</i>	red alder	1.5 inches
B	<i>Acer macrophyllum</i>	bigleaf maple	1.5 inches
C	<i>Thuja blicata</i>	Western red cedar	5 feet
D	<i>Alnus rubra</i>	red alder	1.5 inches
E	<i>Acer macrophyllum</i>	bigleaf maple	1.5 inches
F	<i>Thuja blicata</i>	Western red cedar	5 feet
G	<i>Alnus rubra</i>	red alder	1.5 inches
H	<i>Acer macrophyllum</i>	bigleaf maple	1.5 inches
I	<i>Thuja blicata</i>	Western red cedar	5 feet

Note: Tree anchoring would be done by foot. No vegetation disturbance is proposed outside of the limits of disturbance.

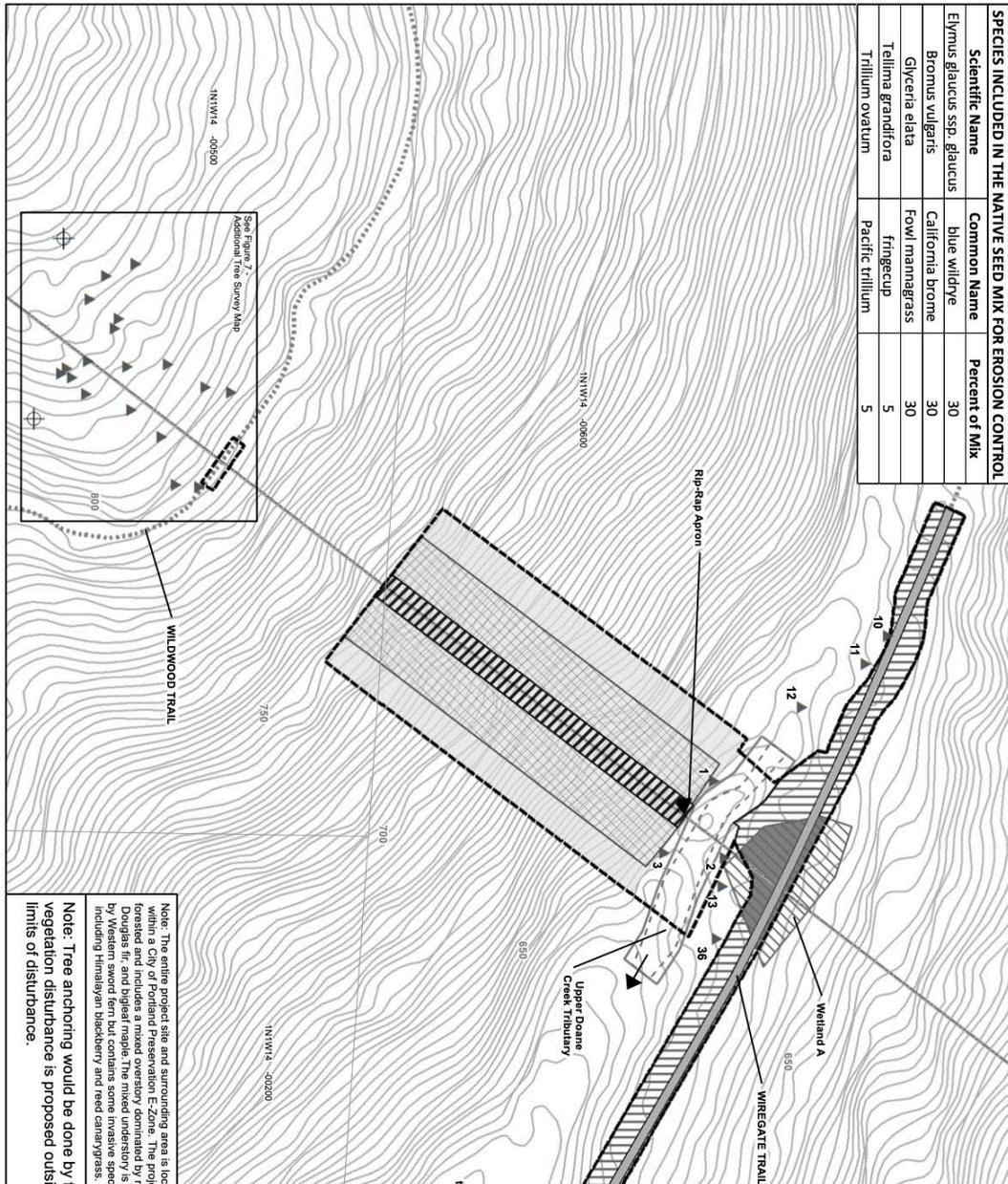
FIGURE 4A - SITE MITIGATION PLAN/TREE PLAN (TREE PLANTING AND DOWNED WOODY DEBRIS/BRUSH PILES)

KINDER MORGAN PIPELINE REPAIR
PP&R NON-PARK USE PERMIT
PORTLAND, OREGON

JUNE 2020
60612729



Scientific Name	Common Name	Percent of Mix
<i>Elymus glaucus</i> ssp. <i>glaucus</i>	blue wildrye	30
<i>Bromus vulgaris</i>	California brome	30
<i>Glyceria elata</i>	Fowl mangrass	30
<i>Tellina grandiflora</i>	fringedcup	5
<i>Tritillum ovatum</i>	Pacific trillium	5



Note: The entire project site and surrounding area is located within a riparian forest habitat. The riparian forest is forested and includes riparian vegetation dominated by red alder, Douglas fir, and bigleaf maple. The mixed understory is dominated by Western sword fern but contains some invasive species including Himalayan blackberry and reed canarygrass.

Note: Tree anchoring would be done by foot. No vegetation disturbance is proposed outside of the limits of disturbance.

Zone	Description	Plant Type	Square Feet	No. Plants Installed	Scientific Name	Common Name	Quantity
1	Slope (Within Pipeline Buffer) ¹	Upland	1,375	38	<i>Muhlenbergia</i>	field	13
2	Slope (Outside of Pipeline Buffer) ¹	Upland	4,979	277	<i>Rubus spectabilis</i>	salmonberry	13
3	Trailside	Upland	3,984	83 ¹	<i>Muhlenbergia</i>	field	92
4	Trailside	Wetland	953	14	<i>Gaultheria</i>	Oregon grape	29

¹Planting Zone 1 would constitute a buffer of 5 feet on either side of the pipeline in the lower slope disturbance area and most of the riparian forest disturbance area. Individual *Muhlenbergia* plants within the slope disturbance areas surrounding the pipeline removed prior to excavation would also be transplanted back into Planting Zone 2 during site restoration.

²Two plants per 6 square feet (rather than one plant per 6 square feet) would be planted in Planting Zone 2.

- LEGEND**
- Temporary Disturbance
 - Hydroseed Area
 - Planting Zone 1
 - Planting Zone 2
 - Planting Zone 3
 - Planting Zone 4
 - Permanent Disturbance
 - Restored Trail Width
 - AECOM-Mapped OHWM
 - AECOM-Mapped Wetland
 - Existing Gravel Roadway
 - Taxlots
 - Flood Zone
 - Remaining Trees
 - Anchor Trees
 - Existing Trail
 - Existing Pipeline
 - Existing Contours
 - Flow Direction

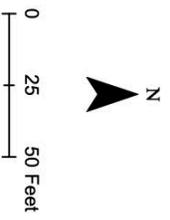


FIGURE 4B - MITIGATION AND RESTORATION SITE PLAN (NATIVE SHRUB AND HERB PLANTING)

KINDER MORGAN PIPELINE REPAIR
 PPAR NON-PARK USE PERMIT
 PORTLAND, OREGON

JUNE 2020
 60612729

AECOM