



City of Portland
Bureau of Development Services
Land Use Services Division

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Date: August 5, 2008
To: Interested Person
From: Kathy Harnden, Land Use Services
503-823-7834

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

The Bureau of Development Services has approved a proposal in your neighborhood. The reasons for the decision are included in this notice. If you disagree with the decision, you can appeal it to the Oregon Land Use Board of Appeals (LUBA) at 550 Capitol St. NE, Suite 235, Salem, OR 97301. The phone number for LUBA is 1-503-373-1265. Information on how to appeal this decision is listed at the end of this notice.

CASE FILE NUMBER: LU 08-119509 EN

GENERAL INFORMATION

Applicant: City of Portland
Bureau of Development Services
Attn: Darian Santner 503-823-5669
1120 SW 5th, #1000
Portland, OR 97204

Owner: State of Oregon
525 Trade St SE
Salem, OR 97301-3720

Site Address: High Creek near the confluence with Tryon Creek in Tryon Creek State Park and Natural Area

Legal Description: TL 200 158.16 ACRES, SECTION 34 1S 1E
Tax Account No.: R991340420
State ID No.: 1S1E34 00200
Quarter Section: 4029

Neighborhood: None
Business District: None
District Coalition: None
Plan District: None
Other Designations: Southwest Hills Resource Protection Plan, Site 123; Potential Landslide Area; 20 Percent or Greater Slope Area; Wildfire Hazard Area

Zoning: OSp – Open Space (OS) with the Environmental Protection (p) overlay
Case Type: EN – Environmental Review
Procedure: Type I, an administrative decision with appeal to the Oregon Land Use Board of Appeals (LUBA).

Proposal:

The Bureau of Environmental Services proposes to restore a 65-foot long segment of High Creek by replacing a culvert crossing over the Creek with a channel-spanning bridge and restructuring and enhancing the stream channel to a more natural state. The goals of the project are to improve fish and wildlife habitat, water quality, and channel stability. The Creek restoration will enhance the ecologically connected riparian confluence area of High Creek and Tryon Creek and their associated floodplains by providing high quality fish and wildlife habitat.

The culvert removal and stream restoration project will reclaim and restore 65 linear feet of fish bearing habitat in High Creek. This restoration of stream habitat will increase the amount of rearing and refuge habitat available to native steelhead, rainbow, and cutthroat trout and possibly Coho Salmon in the future. Bank restoration will both strengthen and stabilize stream banks, as well as provide enhanced riparian habitat for upland species. The new 6-foot wide by 15-foot long bridge will completely span the restored banks, above the creek's ordinary high water marks.

Wood, gravel and rock will be placed in the new channel to restore the streambed and banks once the culvert, and fill materials from around the culvert, are removed. Stream banks will be stabilized by placement of biodegradable coir material. During construction, the small summer stream will be diverted around the construction site by way of a hose (due to low volume summer flows). Wood and gravel will be strategically placed to provide fish habitat and bank stabilization. Two meander bends will be created and the new bed and banks will be lined with geotextile fabric, creating coir-wrapped soil "pillows," and revegetated with native species to enhance stability and habitat. Invasive species will be removed from the disturbance area and the entire disturbance area will be replanted with trees, shrubs and groundcovers.

Although this proposal meets the definition of a resource enhancement project, it does not meet some of the Resource Enhancement Project Standards that require no excavation, fill, or other construction activity in a water body and that do not include bridges in the types of allowed structures. Therefore, the proposal is subject to Environmental Review.

Relevant Approval Criteria:

To be approved, this proposal must comply with the approval criteria of Title 33. The relevant approval criteria are:

33.430.250.B Resource enhancement projects**PUBLIC REVIEW COMMENTS**

Agency Review: A Notice of Proposal in your Neighborhood was mailed on **July 2, 2008**. The following listed Bureaus have responded with no substantive issues or concerns about the proposal:

- Bureau of Environmental Services
- Bureau of Transportation Engineering
- Water Bureau
- Fire Bureau
- Bureau of Parks-Forestry Division

Site Development responded that a Site Development permit will not be required because the work will be approved by the BES Chief Engineer (24.10.070.A). However, BES is responsible for complying with any applicable flood zone regulations and, the project area meets the criteria specified in City Code 10.30.030 as a Special Site with additional requirements for erosion, sediment and pollution control. Please see Exhibit E.2 for additional details.

Neighborhood Review: A Notice of Proposal in Your Neighborhood was mailed on **July 2, 2008**. No written responses have been received from either the Neighborhood Association or notified property owners in response to the proposal.

SITE INFORMATION

Site and Vicinity: The High Creek bridge and enhancement site is located in Tryon Creek State Park near the High Creek confluence with Tryon Creek. Tryon Creek State Park is a 641-acre natural day-use park located between Portland and the City of Lake Oswego. Residential development surrounds the Park. SW Terwilliger Boulevard borders the Park to the east and numerous local streets and residential development border the site to the west. The Park is dominated by the V-shaped canyon of Tryon Creek, formed by the east slope of Mt. Sylvania and west slope of Palatine Hill. The canyon was logged in the 1880's and has regrown naturally into a mixed stand of red alder, Douglas fir, bigleaf maple and Western red cedar. The forest is comprised of approximately 70 percent conifers and less than 30 percent deciduous trees.

High Creek flows from the upper northeast side of the Park near Terwilliger Boulevard, to the southwest, where it joins Tryon Creek near the west border of the Park. Neither High Creek nor Tryon Creek has a FEMA-designated 100-year floodplain.

The High Creek culvert to be removed is located approximately 50 feet east the creek's confluence with Tryon Creek. The culvert provides a creek crossing for the Middle Creek recreation trail through the area.

Zoning: 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. Because no new uses are proposed within the OS zone, the provisions of the zone do not apply to this 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 preserve the site's protected resources. They protect the most important environmental features and resources while allowing environmentally sensitive urban development where resources are less significant. The purpose of this land use review is to ensure compliance with the regulations of the environmental zones.

Land Use History: City records indicate that prior land use reviews include the following:

LU_02-135752 EN to construct a 900 square-foot, general-purpose/classroom addition to the existing Tryon Creek Nature Center building and review an unauthorized removal of two native trees.

LU_07-109481 EN to improve approximately two miles of native trout and lamprey habitat by placing fifteen brush check-dams in several Tryon Creek tributaries to improve water quality and decrease source sediment.

Environmental Resources: The application of the environmental overlay zones is based on detailed studies that have been carried out within ten 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 site is located in the *Southwest Hills Resource Protection Plan* as Resource Site 123, Tryon Creek State Park. Resource Site 123 received a wildlife habitat score of 86, the highest score in the planning area. Tryon Creek, the principle drainage, its tributaries and

adjacent forest cover are of high significance. Listed resources and functional values include fish and wildlife, fish and wildlife habitat, open space, forests, groundwater recharge, perennial creeks, wetlands, scenic and aesthetic views, education and recreation.

Wildlife, plant, animal and fish habitat inventories have been conducted for Tryon Creek State Park since 1987. Over 80 species of birds and small mammals including beaver live in the Park. The sensitive pileated woodpecker also inhabits the area. Uncommon native plant species include the Western wahoo and Pacific yew.

PROJECT ANALYSIS

Existing Site Condition: High Creek flows down the hill toward Tryon Creek, unrestrained until it encounters the 20-foot long culvert that channels the stream under the Middle Creek Recreation Trail. The area around the culvert is backfilled with soil to create the trail. The culvert is long enough to curtail fish passage from Tryon Creek. The trail widens and splits just north of the culvert, with one path turning south to cross High Creek, and a second path continuing down to a bridge crossing of Tryon Creek to the southwest. The culvert is located approximately 45 feet northeast of High Creek's confluence with Tryon Creek. The stream gradient is gentle in this area, averaging about 0.7 percent, and functions as a depositional area for fine-grained substrate. The Tryon Creek valley widens through this reach, so that Tryon Creek meanders through its floodplain, which includes the subject site.

The youth of the surrounding forest due to past logging practices precludes a natural supply of woody debris to Tryon Creek and its tributaries. Removal of in-stream wood for culvert maintenance also helped deplete creeks of natural wood sources. Wood, in the form of logs, root wads, as well as small branches, is needed to provide complex fish habitat and maintain aquatic and land interactions. Large woody debris jams or clusters of wood piles in creeks are known to provide rearing and protective habitat for young smolts. The lack of wood is believed to be a critical factor contributing to low fish productivity in this creek system. The loss of accumulated large woody debris in creek channels has also resulted in channel erosion that further impairs fish habitat.

Project Proposal: Culvert removal is necessary to allow fish to traverse the upper reaches of High Creek and potentially find new spawning areas. A new, 65-foot long stream channel will be constructed that will widen the bed to match the creek width up and down stream of the culvert area. The banks will be laid back to a more gentle slope.

The bed will be covered with a geotextile fabric overlaid by gravel, rock and wood. Logs and tree stumps will be anchored into the bed and banks to create the needed fish rearing and resting habitat. The banks and surrounding upland area will be planted with native trees, shrubs and groundcovers. For about 35 feet downstream of the new channel, additional rock, gravel and wood will be placed to stabilize the existing splash pool and associated area. Root wads will be placed in two existing downstream creek meanders to further reduce erosion in the area.

Wood will be immobilized in the bank and bed by partially burying it in the new channel bed and banks. Artificial anchoring devices will not be required. Project activities will not change the stream alignment or length. All activities will occur within the existing channel alignment and their principal purpose is to restore natural stream and riparian functions and add stability to the channel.

Approximately 12 cubic yards of soil will be removed from the project area and 15 cubic yards of material will be placed there, primarily as coir-wrapped soil pillows. Soil removed from the creek channel will be spread out over the upland area. This area is not designated as 100-year floodplain on FEMA maps.

Two 12-inch alders must be removed to re-create the stream channel. These trees will be left on-site to increase upland habitat. Large wood, live native trees and weed free soils that are removed for the project will be stockpiled for re-use during site restoration.

The applicant states that native plants and trees outside of the construction area will be undisturbed to the maximum extent practicable. A condition of approval will require that disturbance will not be allowed outside the applicant's disturbance limits shown on the approved site plans.

Construction Management. The project will be constructed during the drier summer months when stream flow in High Creek is at a minimum. A 2-inch diversion pump will be used to direct the flow into a diversion hose. The hose will be located east of the work area, around the project site, and re-introduced to the stream below the work area. The downstream end of the hose will be placed in a "dirt bag," a large, woven burlap bag that will function to capture sediments that wash down through the hose. The dirt bag will be removed prior to release of the stream back into the new channel. A "sedimat," a large square of burlap that is staked to the bed of the creek below the dirt bag (see Ex. C.6). It will function to remove sediments after the dirt bag is removed and stream water flows through the new channel.

The bed of the new channel will be lined with coir fabric, overlain by gravels, boulders, and wood (see Ex. C.3). The new banks will be lined with coir-wrapped soil pillows (See Ex. C.4). Because the newly constructed bed and banks will be lined with coir fabric, very little sedimentation is expected when the water is released.

Construction fencing will be placed around the perimeter of the work area at approximately 50 feet from the stream work area (See Ex. C.5). This area will contain the stream channel, the flow by-pass area, the soil deposition area and the staging area. No work activity may occur outside this limit of disturbance. Construction equipment and materials will be brought to the site on existing paths. Silt fencing will be placed around the materials staging area. The soil deposition area is to be covered with erosion control fabric.

Reconstruction/Planting Plan. All exposed soils will be seeded with a native grass seed mix composed of five different native grass species. A 0.3-acre area surrounding the site will be planted with a mix of 8 native tree species at a rate of 600/acre and 9 native shrub species at a density of 1,000/acre (See Exhibit C.7). In general, wetland/riparian species will be planted in the construction area and the upland area will be planted with conifer forest related species.

The applicant intends to monitor the site for a period of 5 years and maintain plant materials to ensure full revegetation within 10 years. Cutting, mowing and spraying with herbicides will be used to maintain the revegetated site until planted trees and shrubs are established. The applicant will provide monitoring reports for each of the five-year monitoring period.

ZONING CODE APPROVAL CRITERIA

33.430.250 Approval Criteria for Environmental Review

An environmental review application will be approved if the review body finds that the applicant has shown that all of the applicable approval criteria are met. When environmental review is required because a proposal does not meet one or more of the development standards of Section 33.430.140 through .190, then the approval criteria will only be applied to the aspect of the proposal that does not meet the development standard or standards.

Findings: This resource enhancement project does not meet the standards that 1) exclude excavation or fill within a water body; 2) require no net fill; and 3) require no removal of native vegetation. The approval criteria that apply to the proposed resource enhancement project are found in Section 33.430.250.B.

33.430.250.B Resource enhancement projects. In resource areas of environmental zones, resource enhancement projects will be approved if the applicant's impact evaluation demonstrates that all of the following are met:

1. There will be no loss of total resource area; and

Findings: *This criterion is met* since the project will enhance an existing resource area consisting of a creek and its surrounding upland area. No resource area will be "lost" or changed from its current functions. As described above, a culvert and associated fill will be removed from an existing stream channel and the stream bed and banks will be restored to a natural condition using gravel, woody debris and native vegetation.

2. There will be no significant detrimental impact on any resources and functional values; and

Findings: *This criterion will be met* by requiring a condition to ensure that no construction vehicles or work activity will occur outside the limits of disturbance as shown on the site plans.

3. There will be a significant improvement of at least one functional value.

Findings: *This criterion is met*, as completing the project will restore complex fish habitat by removing a culvert, which is a fish barrier, and increasing the amount and quality of rearing and refuge habitat available to existing native steelhead, rainbow and cutthroat trout populations.

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 proposes to restore historic native trout populations by removing a fish barrier in High Creek, a tributary of Tryon Creek. The barrier is a culvert that culvert will be replaced with a bridge to support a Park trail crossing over the creek. The stream channel will be restored using gravel, rocks, large wood pieces, and revegetation of the creek banks. The proposal meets the Resource Enhancement Approval Criteria with conditions to keep all disturbance activities located within the proposed disturbance boundaries and to comply with Site Plans C.2 – C.7 approved through this review. The applicant has either met, or will meet with conditions, the Resource Enhancement approval criteria, and this proposal should be approved.

ADMINISTRATIVE DECISION

Approval of an Environmental Review for:

- A resource enhancement project to create fish habitat by removing an existing culvert and its associated fill;
- recreating a new streambed and banks using gravel, large wood and native plants; and
- installing a bridge over the new streambed

All within the Environmental Conservation overlay zone, and in substantial conformance with Exhibits C.1 through C.7, as signed and dated by the City of Portland Bureau of Development Services on July 31, 2008. Approval is subject to the following conditions:

- A. All permits:** Copies of the stamped Exhibits C.2 – C.7 from LU 08-110509 EN and Conditions of Approval listed below, shall be included within all plan sets submitted for permits (building, grading, Site Development, erosion control, etc.). These exhibits shall be included on a sheet that is the same size as the plans submitted for the permit and shall include the following statement, **"Any field changes shall be in substantial conformance with approved Exhibits C.1 through C.5."**

B. A Zoning Permit is required to ensure:

1. No mechanized construction vehicles, construction activities of any kind or any soil disturbance are allowed outside the limits of disturbance.
2. All construction activities, staging areas, soil deposition areas and vegetation planting for this project shall occur as shown on Site Plan Exhibits C.2 through C.7.

Decision rendered by: Michael Nayak **on August 4, 2008**

By authority of the Director of the Bureau of Development Services

Decision mailed August 5, 2008

Staff Planner: Kathy Harnden

About this Decision. This land use decision is **not a permit** for development. A Final Plat must be completed and recorded before the proposed lots can be sold or developed. Permits may be required prior to any work. Contact the Development Services Center at 503-823-7310 for information about permits.

Procedural Information. The application for this land use review was submitted on April 1, 2008, and was determined to be complete on June 30, 2008.

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 1, 2008.

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 did not waive or extend the 120-day review period.

The applicant provided some of the information contained in this report.

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

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

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

This decision, and any conditions associated with it, is final. It may be appealed to the Oregon Land Use Board of Appeals (LUBA), within 21 days of the date the decision is mailed, as specified in the Oregon Revised Statute (ORS) 197.830. Among other things, ORS 197.830 requires that a petitioner at LUBA must have submitted written testimony during

the comment period for this land use review. You may call LUBA at 1-503-373-1265 for further information on filing an appeal.

The file and all evidence on this case are available for your review by appointment. Please contact the receptionist at 503-823-7967 to schedule an appointment. Copies of all information in the file can be obtained for a fee equal to the cost for such services. You may also find additional information about the City of Portland and City Bureaus, as well as a digital copy of the Portland Zoning Code, by visiting the City's homepage on the Internet at www.portlandonline.com.

Recording the final decision.

If this Land Use Review is approved, the final decision must be recorded with the Multnomah County Recorder. A building or zoning permit will be issued only after the final decision is recorded. The final decision may be recorded on or after **August 6, 2008 – (the first weekday following issuance of this decision)**.

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.

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

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

Zone Change and Comprehensive Plan Map Amendment approvals do not expire.

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.

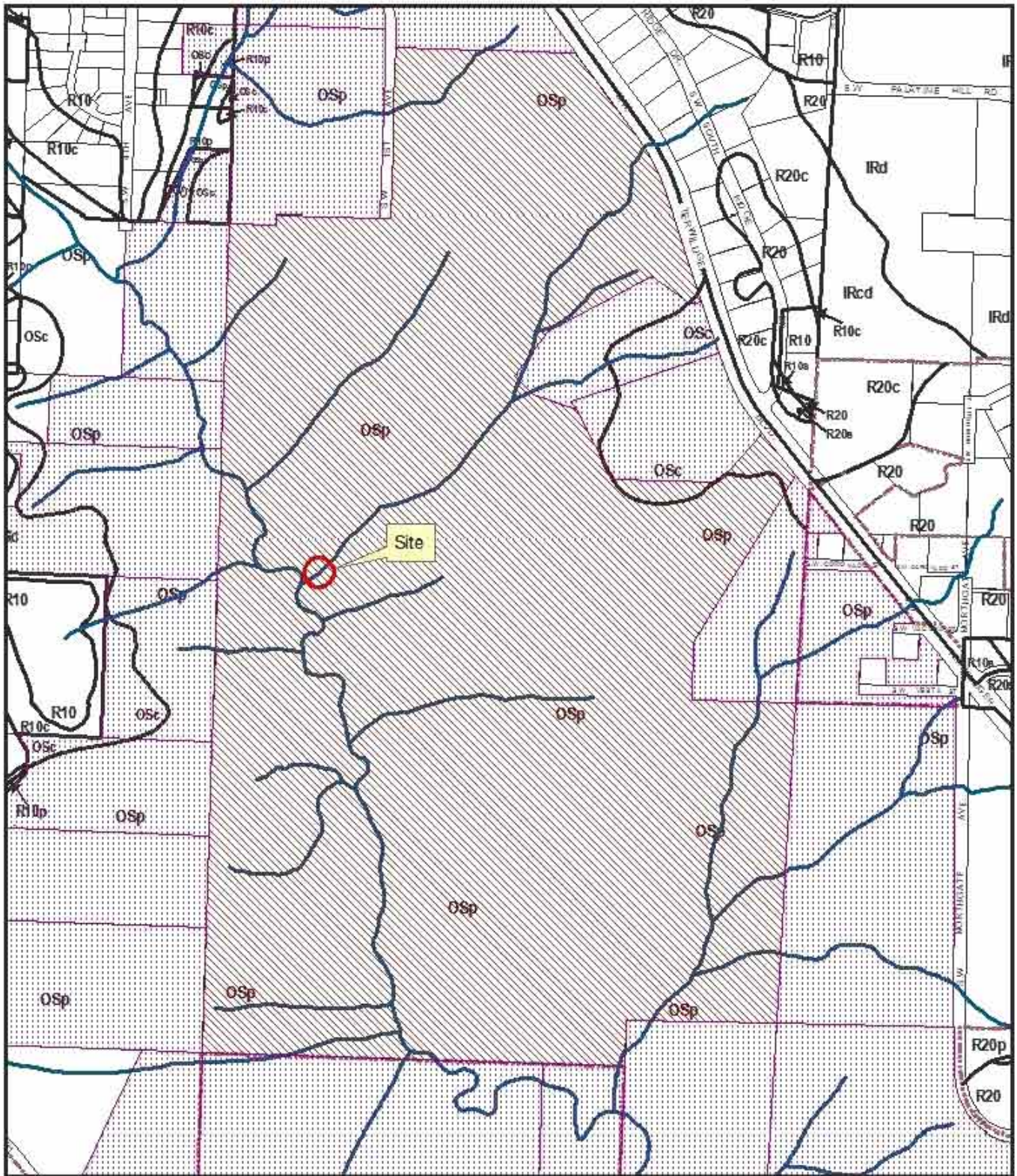
EXHIBITS

NOT ATTACHED UNLESS INDICATED

- A. Applicant's Statement
1. Applicant's submittal dated April 1, 2008
 2. Applicant's submittal dated June 13, 2008

- B. Zoning Map (attached)
- C. Plans/Drawings:
 - 1. Existing Conditions Site Plan
 - 2. Proposed Bridge and Stream Channel Site Plan (attached)
 - 3. Proposed New Creek Channel Details Site Plan (attached)
 - 4. Proposed Bed and Banks Detail (attached)
 - 5. Construction Management Site Plan (attached)
 - 6. Erosion Control Plan (attached)
 - 7. Restoration Plantings Site Plan (attached)
- D. Notification information:
 - 1. Mailing list
 - 2. Mailed notice
- E. Agency Responses:
 - 1. Bureau of Environmental Services
 - 2. Site Development Review Section of BDS
 - 3. Bureau "No Comments" List
- G. Other:
 - 1. Original LU Application
 - 2. Site History Research

The Bureau of Development Services is committed to providing equal access to information and hearings. If you need special accommodations, please call 503-823-0625 (TTY 503-823-6868).

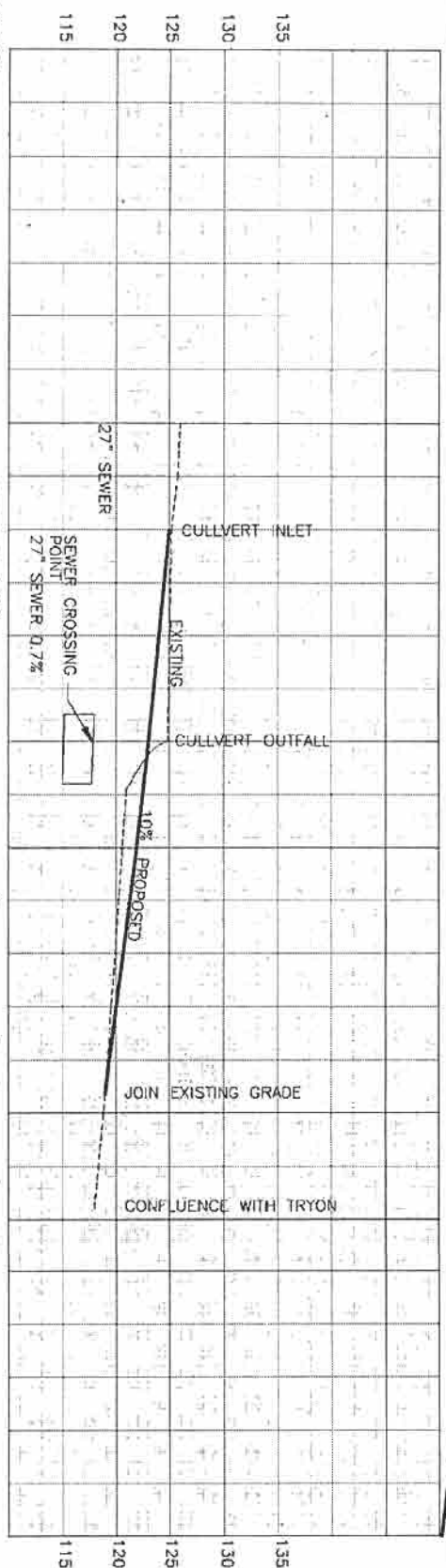


ZONING

-  Site
-  Also Owned



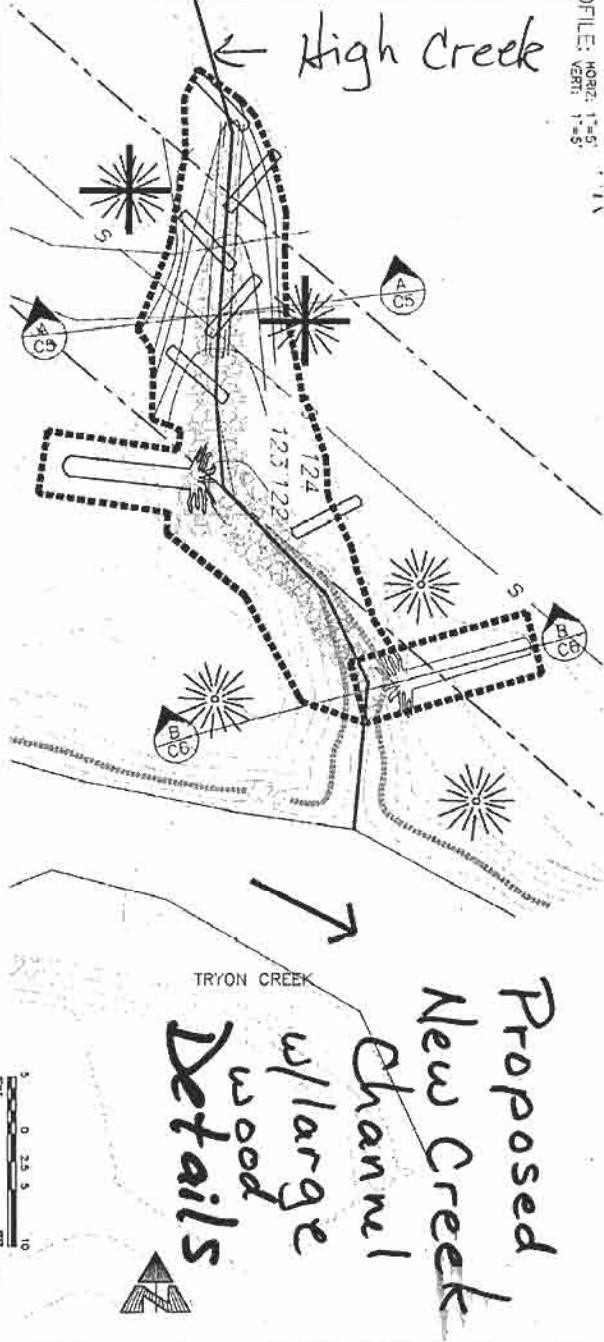
File No.	LU 08-119509 EN
1/4 Section	4029.4129.4229
Scale	1 inch = 500 feet
State_Id	1S1E34 200
Exhibit	B (Apr 21, 2008)



LEGEND

- EXISTING THALWEG _____
- EXISTING SEWER _____
- EXISTING MINOR CONTOUR _____
- EXISTING MAJOR CONTOUR _____
- BOUNDARY SEWER EASEMENT _____
- ROOTWAD/LOC _____
- STREAM CHANNEL ROCK _____
- LIMITS OF GRADING _____
- NEW CONTOUR _____

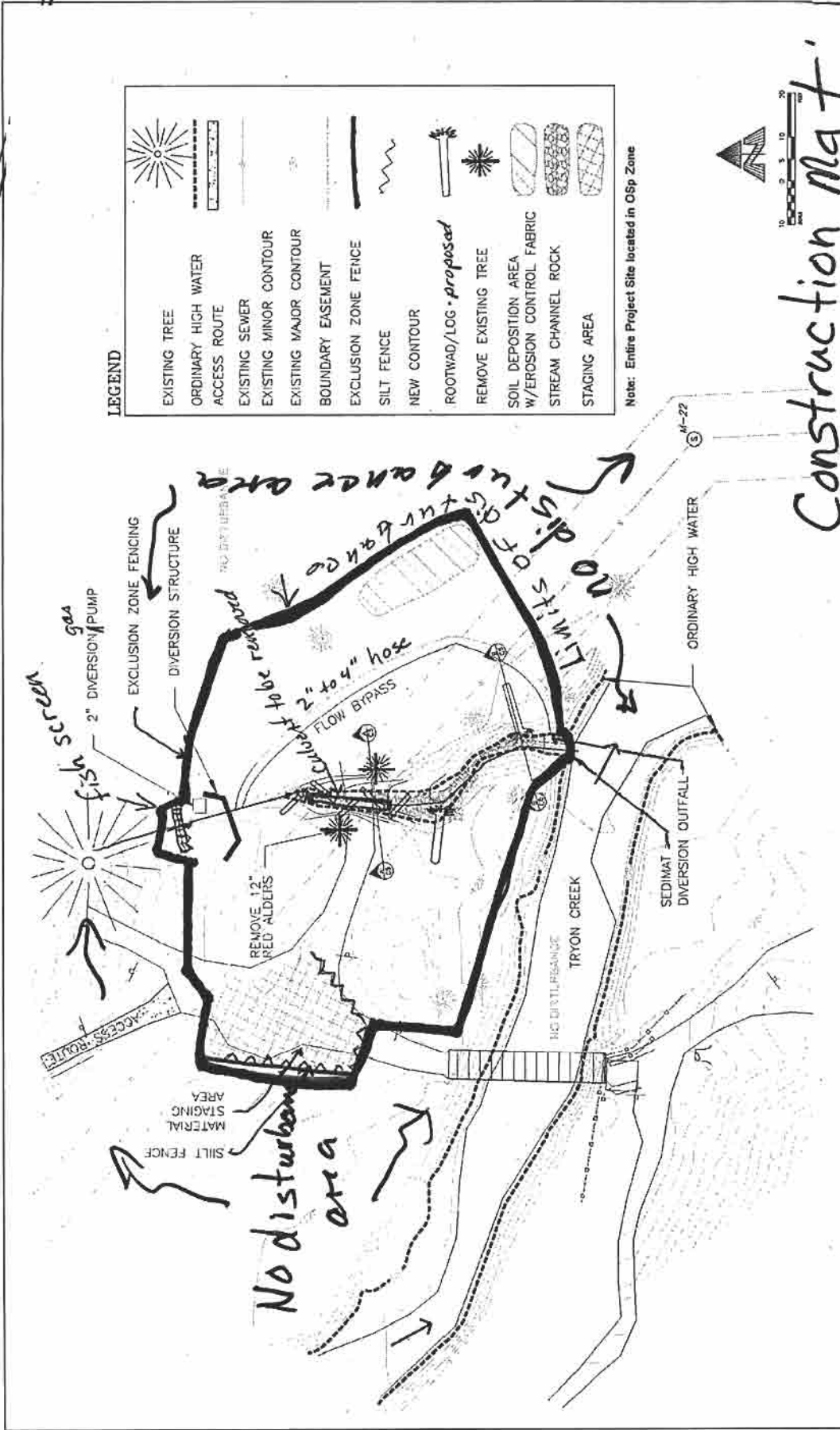
Note: Entire Project Site located in Osp Zone



CITY OF PORTLAND ENVIRONMENTAL SERVICES				PERMIT SET		HIGH CREEK BRIDGE NEW CHANNEL AND PROFILE	
PROJECT NO.: SHEET NO.: DATE:	DRAWN BY: CHECKED BY: PROJECT ENGINEER:	SCALE:	PROJECT NO.: SHEET NO.: DATE:	SCALE:	PROJECT NO.: SHEET NO.: DATE:	SCALE:	PROJECT NO.: SHEET NO.: DATE:

CASE NO. LU-08-119509 EN
 EXHIBIT C-3

Ex. C-3



LEGEND

	EXISTING TREE
	ORDINARY HIGH WATER
	ACCESS ROUTE
	EXISTING SEWER
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	BOUNDARY EASEMENT
	EXCLUSION ZONE FENCE
	SILT FENCE
	NEW CONTOUR
	ROOTWAD/LOG - proposed
	REMOVE EXISTING TREE
	SOIL DEPOSITION AREA
	W/EROSION CONTROL FABRIC
	STREAM CHANNEL ROCK
	STAGING AREA

Note: Entire Project Site located in OSp Zone



0 10 20
feet

Construction Mgt. Plan

		PERMIT SET		Plan HIGH CREEK BRIDGE CONSTRUCTION/EROSION CONTROL PLAN	
UNITED INFO. NUMBER INFO. CONTRACTED BY PROJECT COMPLETE DATE COMPLETED TOTAL MAP DATE	LICENSE # EXPIRES COUNTY # COUNTY # COUNTY #	SHEET NO. 8429 C3	SHEET NO. 3	OF 12	

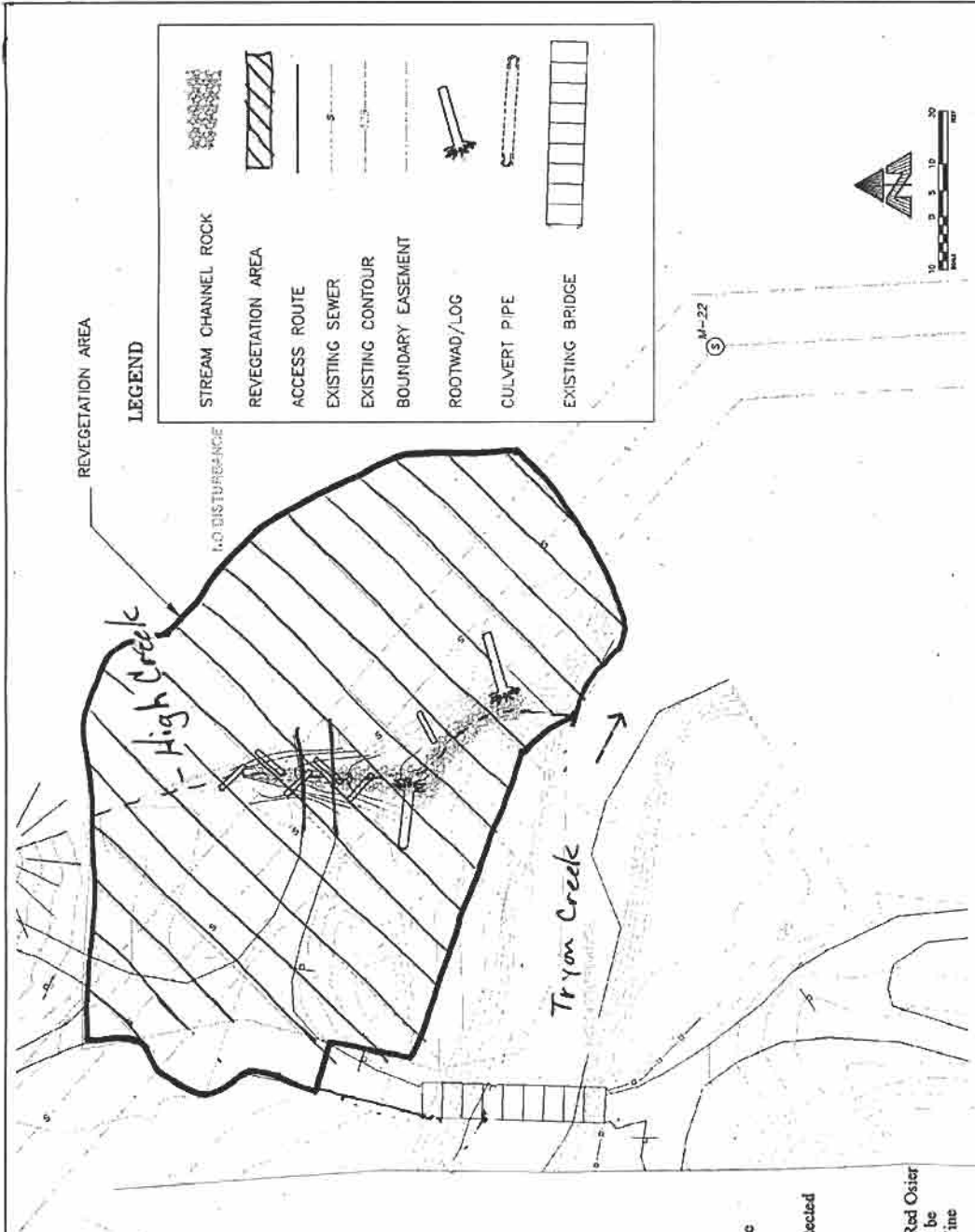
CASE NO. LU08-119509 EN
EXHIBIT C.5

ex C.5

High Creek Revegetation Notes

Species to be Planted in Revegetation Area	Common Name	Plant Density
Bare-root-Trees/Large Shrubs		
Abies grandis	Grand Fir	
Fraxinus latifolia	Oregon Ash	
Populus trichocarpa	Black Cottonwood	600/acre
Acer macrophyllum	Bigleaf Maple	
Rhamnus purshiana	Cascara	
Alnus rubra	Red Alder	
Thuja plicata	Western Red Cedar	
Salix lasiandra	Pacific Willow	
Bare-Root Shrubs		
Acer circinatum	Vine Maple	
Ribes sanguineum	Red Flowering Currant	
Sambucus racemosa	Red Elderberry	
Spiraea douglasii	Spiraea	
Ostrya cerasiformis	Indian Plum	1000/acre
Cornus sericea	Red Osier Dogwood	
Physocarpus capitatus	Pacific Ninebark	
Rubus spectabilis	Salmonberry	
Symphocarpus alba	Snowberry	

- Actual numbers of plants may be adjusted and species substitutions may be made depending on availability of plant stock.
- Trees will be planted on approximately 8 foot spacing, and each tree will be protected with a vexar mesh tube to reduce mortality due to herbivore damage.
- Shrubs will be planted in clusters of three and staked with bamboo.
- In general, riparian/wetland species such as Red Alder, Oregon Ash, Ninebark, Red Osier Dogwood, etc. will be planted in the stream banks, while more upland areas will be planted with conifer forest-associated species (such as Grand fir, Indian Plum, Vine Maple, etc) at a somewhat lower density.



PERMIT SET

ENVIRONMENTAL SERVICES

CITY OF PORTLAND

REVEGETATION PLAN

HIGH CREEK BRIDGE

REVEGETATION PLAN

PERMITS

NO. 8429

REV. 07

DATE 8/12

Notes: Entire Project Site located in OSP Zone

Revegetation Plan

CASE NO. 11-08-119509
EXHIBIT C.7