



City of Portland, Oregon
Bureau of Development Services
Land Use Services

1900 SW 4th Avenue, Suite 5000
Portland, Oregon 97201
503-823-7300
Fax 503-823-5630
TTY 503-823-6868
www.portlandonline.com/bds

Date: May 21, 2010
To: Interested Person
From: Stacey Castleberry, Land Use Services
503-823-7586 / scastleberry@ci.portland.or.us

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 10-123699 EN

GENERAL INFORMATION

Applicant/Owners: Portland Bureau of Environmental Services

Attention: Nancy Hendrickson,
1120 SW 5th Avenue, Rm 1000
Portland, OR 97204

David Helm
20575 SE High Ridge Court
Boring, OR 97009

Ardis G Ward
7300 NE 33rd Drive
Portland, OR 97211-2010

Site Address: 7300 NE 33RD DRIVE and 3101 NE ARGYLE STREET

Legal Description: LOT 15-18 TL 5400, AYERS ADD; TL 1200 LOT 27, SUNDERLAND
AC & PLAT 3

Tax Account No.: R049300150, R809204470

State ID No.: 1N1E13BA 05400, 1N1E13BA 01200

Quarter Section: 2333

Neighborhood: Sunderland, contact Ronda Johnson at 503-823-3156.

Business District: Columbia Corridor Association, contact Peter Livingston at 503-796-2892.

District Coalition: Central Northeast Neighbors, contact Alison Stoll at 503-823-3156.

Plan District: None

Other Designations: 100-year floodplain

Zoning: IG2, R10chs—General Industrial 2 and Residential 10,000 base zones with Environmental Conservation, Aircraft Landing Zone, and Scenic Resource overlay zones.

Case Type: EN –Environmental Review

Procedure: Type I, an administrative decision with appeal to the Oregon Land Use Board of Appeals (LUBA).

Proposal: This project is a culvert replacement project and is taking place where NE 33rd Drive crosses Buffalo Slough (the southern arm of the Columbia Slough in this area). The existing 4-foot diameter culvert will be replaced with a large 12-foot wide, open-bottom arched concrete culvert. The purpose of this project is to improve hydrology, water quality and habitat in the Columbia Slough.

Because this work includes the replacement of an existing culvert with a larger, open bottom culvert within the Columbia Slough, the entire project is within the Environmental Conservation overlay zone. Most of the project takes place within the right of way of NE 33rd Drive. The culvert and slough bank extend past the right of way on either side of the road. The banks on either side of the road will be re-graded to a lesser slope (1 foot of rise in elevation per every 2 feet of horizontal length--2h:1v) and planted with native trees and shrubs. The few trees that need to be removed will be placed on the bank above Base Flood Elevation (Elevation 16). Terrestrial passage will be provided through the culvert. Trash and invasive plants will be removed.

No new outfalls are proposed. Stormwater will continue to discharge to the Buffalo Slough through the existing outfall on the southwest bank. Stormwater will be treated via lined stormwater planters within the right of way. Treatment is being provided for 0.3 acres of impervious area. Sidewalks are being built on either side of the road and in the right of way, creating 0.06 acres of new impervious area. Not more than a maximum of 0.15 acres of roadway will be disturbed. Note that public street and sidewalk improvements within the NE 33rd Drive right of way are exempt from the environmental regulations in the Zoning Code (33.430.080 D.2).

This project will result in a net excavation of material from the 100 year floodplain associated with the Columbia Slough. Approximately 680 cubic yards will be removed from below the base flood elevation of 15.9 (City of Portland datum).

When completed, the project will provide resource enhancement to the Columbia Slough in the form of improved flow and water quality during the summer months, more robust riparian habitat along the east and west banks, and terrestrial passage under NE 33rd Drive.

The majority of the site is within the City's Environmental Conservation overlay zone. Certain standards must be met to allow the work to occur by right. If the standards are not met, an Environmental Review is required. In this case, the proposed resource enhancement project includes excavation and fill within the Columbia Slough, and 8 to 12 native trees (cottonwood) will need to be removed. **Standards 33.430.170 A and C** are not met by the proposal; therefore the work must be approved through an Environmental Review.

Relevant Approval Criteria:

To be approved, this proposal must comply with the criteria of Title 33. The applicable criteria for the proposed resource enhancement project within the Environmental Conservation overlay zone are found in:

Section 33.430.250 B Resource Enhancement Projects

FACTS

Description of the Site: The Buffalo Slough is the southern arm of the Columbia Slough. It flows towards the west for approximately one mile through open space and industrial areas before joining the mainstem of the Columbia Slough at approximately NE 27th Avenue.

Buffalo Slough is a fragmented and seasonally warm waterbody, with low water quality. A 4-foot culvert connects the upstream and downstream sections of Buffalo Slough under NE 33rd Drive. The culvert is small with a high invert elevation. The banks of the slough along

the roadway prism are steep, at a 1:1 slope (1 foot vertical rise for each 1 foot of horizontal distance).

Understory and groundcover vegetation are dominated by blackberry and herbaceous weeds, with some garbage. There are also a few black cottonwood trees. Some of these trees have eroded roots and are leaning into the water. Several have fallen in the past few seasons due to beaver activity, wind and decay.

Zoning: The site is zoned General Industrial 2 and Residential 10,000 with Environmental Conservation, Aircraft Landing Zone, and Scenic Resource overlay zones.

The IG2 zone is one of the three zones that implement the Industrial Sanctuary map designation of the Comprehensive Plan. The zone provides areas where most industrial uses may locate, while other uses are restricted to prevent potential conflicts and to preserve land for industry. IG2 areas generally have larger lots and an irregular or large block pattern. The area is less developed, with sites having medium and low building coverages and buildings which are usually set back from the street. The culvert replacement work does not constitute a specific use and the IG2 provisions are not specifically addressed through this Environmental Review.

The R10 zone is intended to foster the development of single-dwelling residences on lots having a minimum area of 6,000 square feet. Newly created lots must have a minimum density of 1 lot per 10,000 square feet of site area. The culvert replacement work does not constitute a specific use and the R10 provisions are not specifically addressed through this Environmental Review.

The “h” overlay limits the height of structures and vegetation in the vicinity of the Portland International Airport; a height contour map is available for review in the Development Services Center. These regulations do not apply to the culvert replacement project.

The “s” overlay zone is intended to protect Portland’s significant scenic resources. The purposes of the Scenic Resource zone, to enhance the city’s appearance and protect scenic views, are achieved by establishing height limits, establishing landscaping and screening requirements, and requiring preservation of identified scenic resources. These regulations do not apply to the culvert replacement project.

Environmental 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. The environmental regulations also carry out Comprehensive Plan policies and objectives. Both Environmental Conservation and Protection overlay zones are present on the campus. The purpose of this Environmental Review is to address Zoning Code regulations in the Environmental zones.

Environmental Resources: Application of the environmental zones is based on detailed studies that have been carried out in separate areas throughout the City. The City’s policy objectives for these study areas are described in these reports. Each study report identifies the resources and describes the functional values of the resource sites. Functional values are the benefits provided by resources. The values for each resource site are described in the inventory section of these reports.

Natural resources which have been identified by the City for protection in the environmental zones are listed in *The Industrial/Environmental Mapping Project for the Columbia Corridor* within Inventoried Water Features #27 and 28—the North and South Sloughs. Significant resource values have been identified as: forested riparian strip for wildlife habitat, visual amenity, erosion control, drainageway functions including fish habitat, drainage, flood storage, desynchronization, pollution and nutrient retention and removal, and sediment trapping.

Land Use History: City records indicate one land use review—LUR 01-00505 EN, for this site. This proposal will not affect the project approved in LUR 01-00505 EN.

Agency and Neighborhood Review: A Notice of Proposal in your Neighborhood was mailed on April 1, 2010.

1. Agency Review: Several Bureaus and agencies have responded to this proposal. Please see Exhibits E.1 through E.3 for details. The comments provided either support the project or do not relate to the approval criteria for resource enhancement.

2. Neighborhood Review: No written responses were received from either the Neighborhood Association or notified property owners in response to the proposal.

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: The approval criteria which apply to the proposed creek enhancements are found in Section 33.430.250 B. Resource Enhancement Projects. The applicant has provided findings for these approval criteria and BDS Land Use Services staff members have revised these findings or added conditions, where necessary to meet the approval criteria.

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;

Findings: This is an environmental enhancement project that will result in better hydrology and water quality within the Columbia Slough. The project consists of replacing an existing culvert with a larger, lower, open-bottom culvert to allow improved water flow and terrestrial habitat movement. The bank is being re-graded and planted with native trees and shrubs. There will be no net loss of total natural resource area. The quality of the resource area will be improved significantly, and this criterion is met.

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

Findings: The construction management practices to be employed by the applicant are described in detail in Exhibit A.1 in the application case file. This narrative identifies access and staging, in water work isolation and dewatering during culvert replacement, tree protection and erosion control.

With implementation of the construction management practices as detailed in Exhibit A.1, along with inspections that may be required by BDS during construction there will be no significant detrimental impacts to identified functions. Conversely, several functions will be improved and this criterion will be met.

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

Findings: As described in the applicant's narrative (Exhibit A.1, application case file), water quality and wildlife habitat will be improved by the project.

The banks of the slough will be re-graded to a shallower slope and planted with trees and shrubs. Although 8-12 trees will need to be removed for this work, approximately 130 trees and 220 shrubs are being planted to provide improved function. Native herbaceous seed will be applied to the grounds.

The improved vegetation along the east and west banks will provide better erosion control. The forested strip provides connectivity for wildlife. The new culvert includes a shelf above ordinary high water to facilitate wildlife passage and connect the east and west sides of Buffalo Slough.

Several drainageway functions are being improved. The proposed culvert will improve drainage and flow while simultaneously reducing water temperature and eutrophication. The resulting improved water quality will benefit native aquatic and terrestrial species. Once the culvert replacement is complete, BES' Watershed Revegetation Program (WRP) will revegetate the NE 33rd Drive project area, as well as maintain enhancement plantings for 5 years.

Maintenance will include follow-up treatment and control of non-native invasive and competing vegetation, as well as additional plant installation (interplanting) as necessary to achieve successful establishment of desired native tree and shrub density. It is expected that after the first five years, native trees and shrubs will be well established. . Monitoring will occur at least once annually in years one through five. This criterion will be met.

DEVELOPMENT STANDARDS

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

CONCLUSIONS

The existing 4-foot CMP culvert below NE 33rd Drive at the Buffalo Slough will be replaced with a large 12-foot wide open-bottom arched concrete culvert. The purpose of this project is to improve hydrology, water quality and habitat in the Columbia Slough.

Most of this resource enhancement project takes place within the developed right of way of NE 33rd Drive, and is exempted from the environmental regulations of the Zoning Code by Code Section 33.430.080 D.2. The existing culvert extends beyond the right of way on either side of NE 33rd Drive. The banks on either side of the road will be re-graded to a lesser slope (2h:1v) and planted with native trees and shrubs. The few trees that need to be removed will be placed on the bank above Base Flood Elevation. Terrestrial passage will be provided through the culvert. Trash and invasive plants will be removed.

The preceding findings show how the project meets the approval criteria for Resource Enhancement projects in the environmental zones, and this project should be approved.

ADMINISTRATIVE DECISION

Approval of an Environmental Review for:

- Replacement of the existing 4-foot culvert below NE 33rd Drive at the Buffalo Slough with a 12-foot wide open bottomed arched culvert, along with all associated grading and replanting;

all within the Environmental Conservation overlay zone, and in substantial conformance with Exhibits C.1 through C. 8 as signed and dated by the City of Portland Bureau of Development Services on **May 18, 2010**. Approval is subject to the following conditions:

- A. All permits:** Note that work shown on public works permits signed by the BES Chief Engineer does not require such a BDS permit, per Portland City Code 24.10.070.A. **For portions of this project that are not included in the Public Works Permit approved by the City Engineer:** Copies of the stamped Exhibits C.1 through C.8 from LU 10-110619 EN AD and Conditions of Approval listed below, shall be included within all plan sets submitted for permits (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.8."***

B. Preconstruction Erosion Control inspection (IVR 200) by Bureau of Development Services is required prior to any ground disturbing activity, for any work not covered by the Public Works Permit and approved by the City Engineer. The following conditions shall be shown on required permit plans:

1. No mechanized construction vehicles are permitted beyond the Limits of Disturbance line shown on Exhibit C.4 All planting work, invasive vegetation removal, and other work to be done beyond this line, shall be conducted using hand held equipment.

C. Native trees, shrubs and groundcovers shall be planted, in substantial conformance with Exhibits C.6 and C.8 Planting Plan/Planting Lists.

1. Plantings shall be installed between October 1 and March 31 (the planting season).
2. Prior to installing required mitigation plantings, non-native invasive plants shall be removed from all areas within 10 feet of proposed native plantings, using handheld equipment.
3. If required plantings are not included in the Public Works Permit, after installing the required enhancement plantings, the applicant shall request inspection of Permanent Erosion Control Measures (IVR 210) by the Bureau of Development Services, who will confirm that all required plantings have been installed.

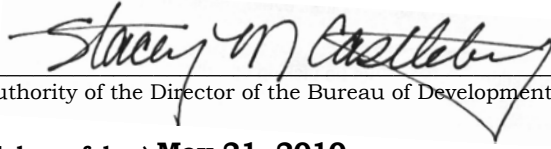
D. Failure to comply with any of these conditions may result in the City's reconsideration of this land use approval pursuant to Portland Zoning Code Section 33.700.040 and /or enforcement of these conditions in any manner authorized by law.

Note: portions of the new culvert, roadway, stormwater facilities, utilities and sidewalk that are entirely within the public right of way, are exempt from Environmental Review according to Zoning Code section 33.430.080 D.2.

Note: In addition to the requirements of the Zoning Code, all uses and development must comply with other applicable City, regional, state and federal regulations.

This decision applies to only the City's environmental regulations. Activities which the City regulates through PCC 33.430 may also be regulated by other agencies. In cases of overlapping City, Special District, Regional, State, or Federal regulations, the more stringent regulations will control. City approval does not imply approval by other agencies.

Staff Planner: Stacey M Castleberry

Decision rendered by:  **on May 18, 2010**
By authority of the Director of the Bureau of Development Services

Decision mailed (within 5 days of dec.) May 21, 2010.

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

Procedural Information. The application for this land use review was submitted on April 1, 2010, and was determined to be complete on April 13, 2010.

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, 2010.

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. Unless extended by the applicant, **the 120 days will expire on: August 11, 2010.**

Some of the information contained in this report was provided by the applicant.

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

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

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

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 only. Please call the Request Line at our office, 1900 SW Fourth Avenue, Suite 5000, phone 503-823-7617, to schedule an appointment. I can provide some information over the phone. Copies of all information in the file can be obtained for a fee equal to the cost of services. Additional information about the City of Portland, city bureaus, and a digital copy of the Portland Zoning Code is available 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 **May 24, 2010**. 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 503-823-7967.

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

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

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

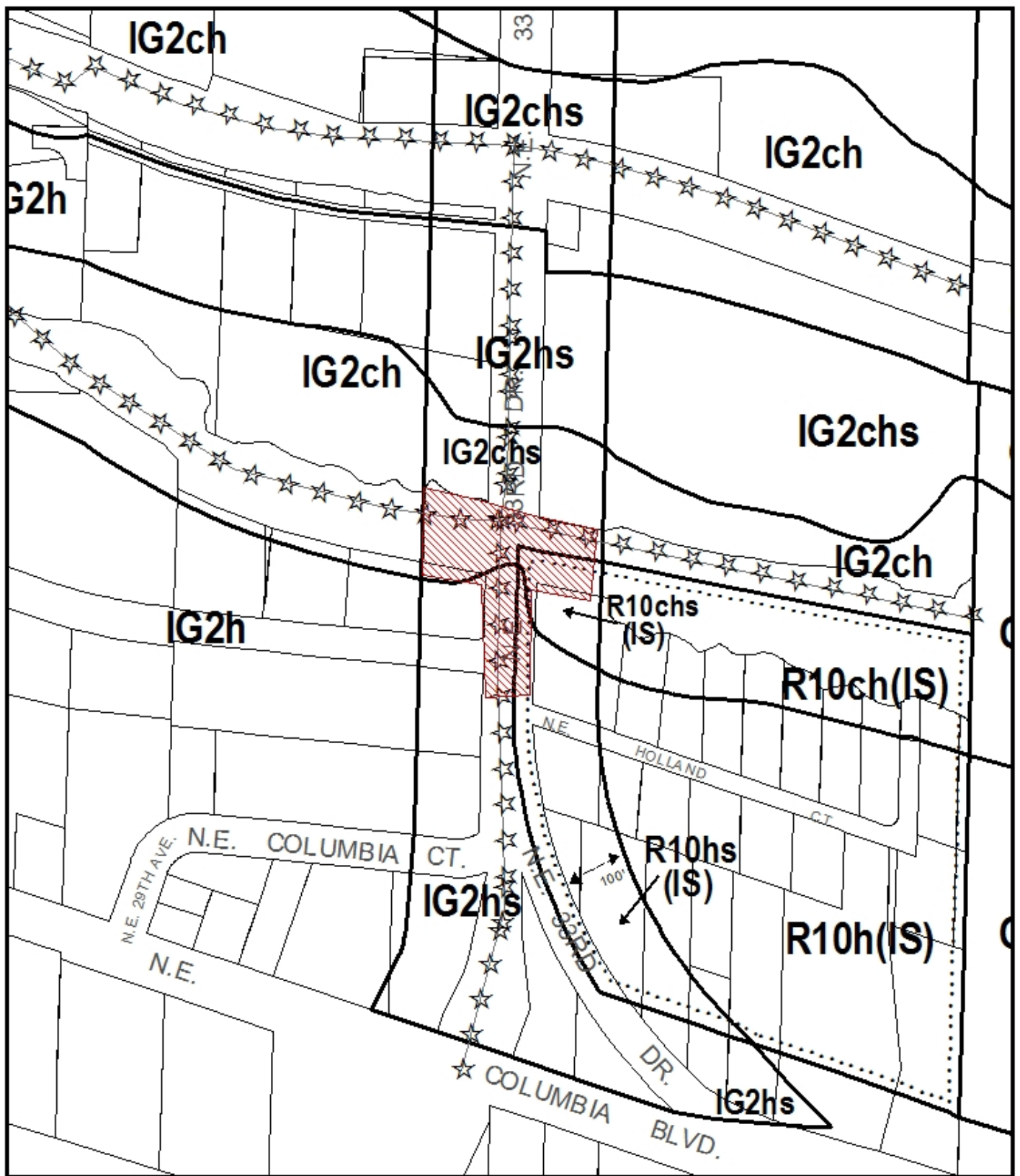
- All conditions imposed herein;
- All applicable development standards, unless specifically exempted as part of this land use review;
- All requirements of the building code; and
- All provisions of the Municipal Code for the City of Portland, and all other applicable ordinances, provisions and regulations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

EXHIBITS

NOT ATTACHED UNLESS INDICATED

- A. Applicant's Statement
- B. Zoning Map (attached)
- C. Plans/Drawings:
 - 1. Vicinity Map
 - 2. Existing Conditions
 - 3. Construction Management
 - 4. Construction Management (attached)
 - 5. Construction Management
 - 6. Resource Enhancement planting (attached)
 - 7. Replacement Culvert section details (attached)
 - 8. Plant lists (attached)
- D. Notification information:
 - 1. Mailing list
 - 2. Mailed notice
- E. Agency Responses:
 - 1. Bureau of Environmental Services
 - 2. Water Bureau
 - 3. Multnomah County Drainage District No. 1
- 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. 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



Site



NORTH

File No.	LU 10-123699 EN
1/4 Section	2333
Scale	1 inch = 200 feet
State_Id	Right of Way
Exhibit	B (Apr 01,2010)

GENERAL NOTES:

THE PROVIDED FLOW DIVERSION PLAN REPRESENTS A POSSIBLE COURSE OF ACTION AND AS SUCH IS NOT A GUARANTEE OF RESULTS. ANY CHANGES TO THE FLOW DIVERSION PLAN MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL SUBMIT A FLOW DIVERSION PLAN FOR APPROVAL PRIOR TO MOBILIZATION. THE FLOW DIVERSION PLAN SHALL BE FOR THE INSTALLATION AND INTEGRATION OF TEMPORARY STREAM DIVERSION AND DEWATERING STRUCTURES AND SITE EROSION CONTROL.

DEWATERING NOTES:

INITIAL DEWATERING OF SLOUGH WATER WILL BE DISCHARGED TO THE SLOUGH. SUBSEQUENT DEWATERING OF EXCAVATION SITE WILL BE DISCHARGED TO GRAVITY SEWER. SEWAGE EXCEEDS THE CAPACITY OF THE GRAVITY SEWER, EXCESS FLOW WILL BE DISCHARGED TO THE DOWNSTREAM SIDE OF THE EXCAVATION. AFTER TREATMENT TO MEET <10% TURBIDITY OVER BACKGROUND.

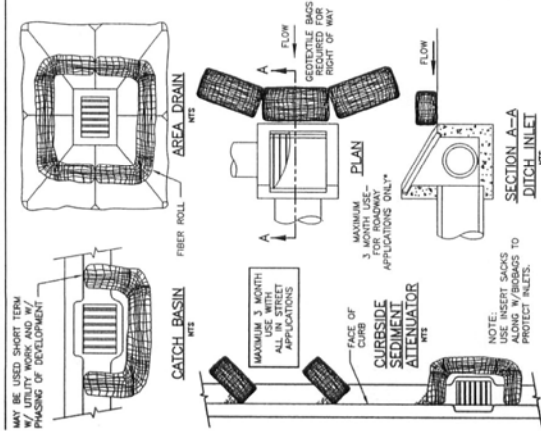
FLOW DIVERSION NOTES:

1. INSTALL GRAVITY FLOW DIVERSION DOWNSTREAM OF THE PORTABLE DAM AS SHOWN. THE OUTLET WALL DISCHARGE BELOW THE PORTABLE DAM - REMOVE ALL TEMPORARY DIVERSION MEASURES FOLLOWING CONSTRUCTION.
2. THE DESIGN DISCHARGE FOR THE GRAVITY FLOW DIVERSION IS 2 CFS. AVERAGE FLOW VELOCITY IN THE 8" CSP IS APPROXIMATELY 5.6 FEET PER SECOND.

CONSTRUCTION NOTES:

1. INSTALL PUMP IN EXCAVATION AREA IF NECESSARY TO CONTROL SEWAGE AND DISCHARGE TO SANITARY SEWER.

*BIOBAGS MUST BE REMOVED AT END OF JOB



EROSION CONTROL MANUAL

SEE EROSION CONTROL MANUAL FOR MORE INFORMATION

DESIGNER	DATE	REVISION	BY
PROJECT NO.	DATE	REVISION	BY
PROJECT NAME	DATE	REVISION	BY
PROJECT LOCATION	DATE	REVISION	BY
PROJECT OWNER	DATE	REVISION	BY
PROJECT ENGINEER	DATE	REVISION	BY
PROJECT CHECKER	DATE	REVISION	BY
PROJECT APPROVER	DATE	REVISION	BY
PROJECT DATE	DATE	REVISION	BY
PROJECT SCALE	DATE	REVISION	BY
PROJECT SHEET	DATE	REVISION	BY
PROJECT TOTAL	DATE	REVISION	BY

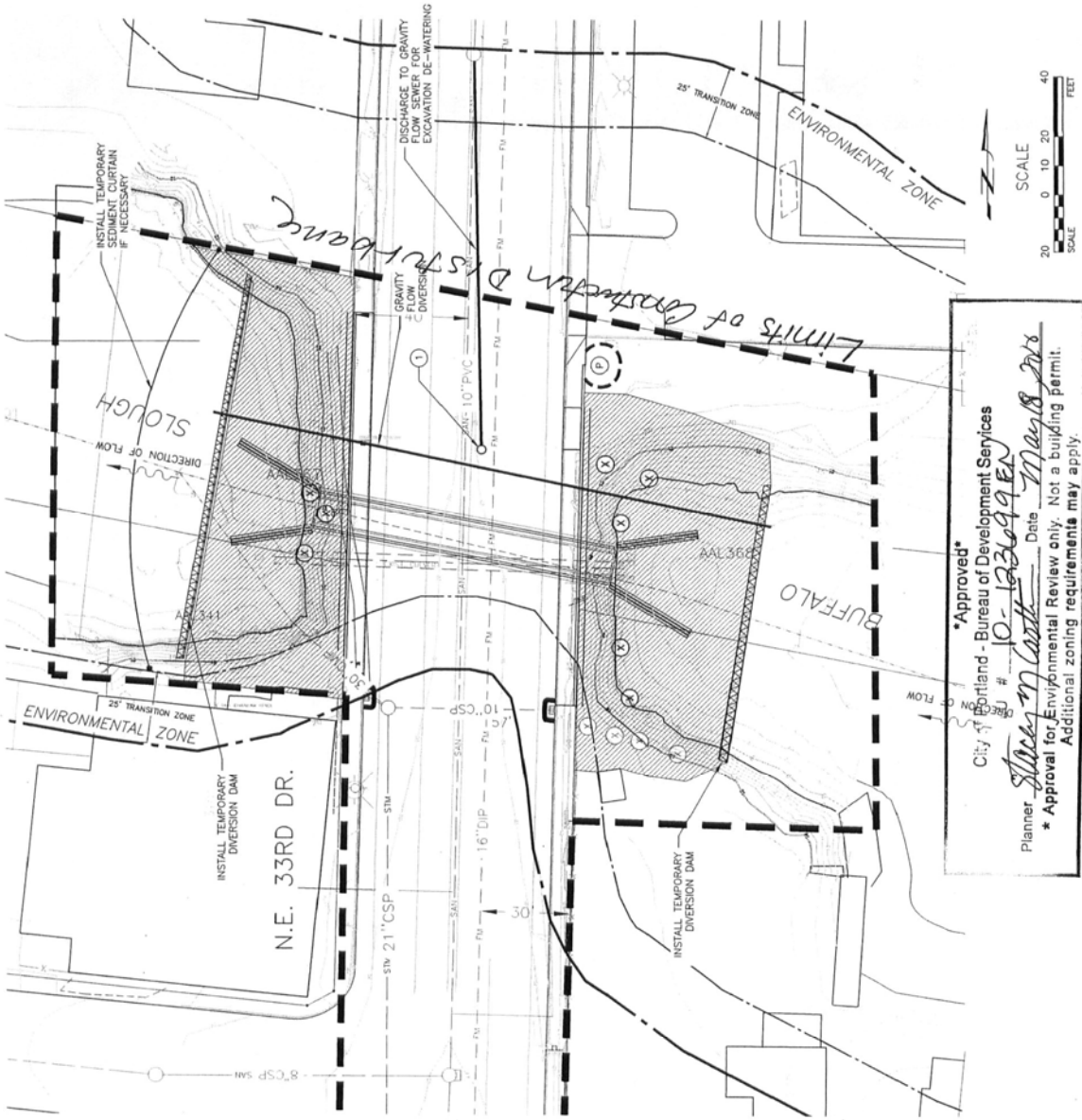
CITY OF PORTLAND ENVIRONMENTAL SERVICES



CITY OF PORTLAND
ZONING PERMIT SET
NOT FOR
CONSTRUCTION
PURPOSES

ECOSYSTEM RESTORATION
NE 33RD DRIVE CULVERT
CONSTRUCTION MANAGEMENT PLAN:
EROSION CONTROL, FLOW DIVERSIONS AND DEWATERING PLAN
E07154_001.DWG

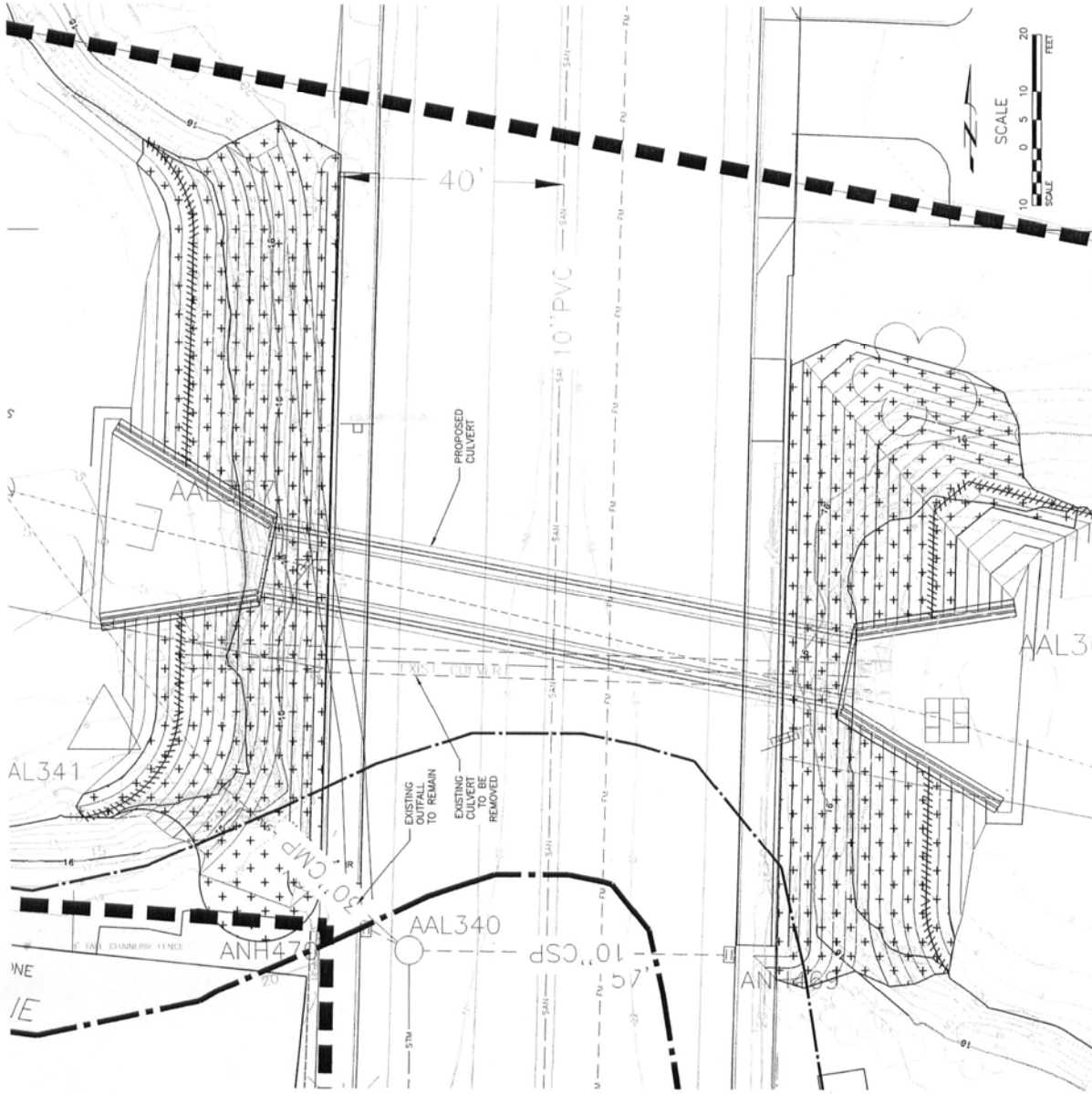
EXHIBIT C-4



Approved
City of Portland - Bureau of Development Services
Planner *Sharon M. Lath* # *10-123699EN* Date *May 18, 2018*
* Approval for Environmental Review only. Not a building permit.
Additional zoning requirements may apply.

CITY OF PORTLAND DATUM AND NAD 1983-91

2233 232	232
E07154	E07154
C03	C03
4 of 7	4 of 7



REVEGETATION NOTES		
SPECIES	COMMON NAME	PLANT DENSITY
BARE-ROOT TREES/LARGE SHRUBS		
Fraxinus latifolia	Oregon Ash	600 ACRE
Alnus rubra	Red Alder	600 ACRE
BARE-ROOT SHRUBS		
Salix fluviatilis	Columbia River willow	1000 ACRE
Ribes sanguineum	Red Flowering Currant	1000 ACRE
Sambucus racemosa	Red Elderberry	1000 ACRE
Spirea douglasii	Spirea	1000 ACRE
Mahonia aquifolium	Oregon Grape	1000 ACRE
Rosa nutkana	Nooka Rose	1000 ACRE
Cornus sericea	Red Osier Dogwood	1000 ACRE
Physocarpus capitatus	Pacific Ninebark	1000 ACRE
Symphocarpus alba	Snowberry	1000 ACRE

- ACTUAL NUMBERS OF PLANTS MAY BE ADJUSTED SLIGHTLY AND SPECIES SUBSTITUTIONS MAY BE MADE DEPENDING ON AVAILABILITY OF PLANT STOCK AT THE TIME OF PLANTING.
- PLANT STOCK WILL BE 1-3 YEAR OLD BARE ROOT SEEDLINGS, MAXIMUM 1" DIAMETER, OR LIVE CUTTINGS.
- TREES WILL BE PLANTED ON APPROXIMATELY 8 FOOT SPACING, AND EACH TREE WILL BE PROTECTED WITH A VEZAR MESH TUBE TO REDUCE MORTALITY DUE TO HERBIVORE DAMAGE. SHRUBS WILL BE PLANTED IN CLUSTERS OF THREE TO FIVE AND STAKED WITH BAMBOO, APPROXIMATELY 15 FOOT SPACING BETWEEN CLUSTERS.
- IN GENERAL, SPECIES MORE TOLERANT OF INUNDATION (RED OSIER DOGWOOD, NINEBARK, CORNUS) WILL BE PLANTED CLOSE TO OR ON THE BANKS OF THE CULVERT, WHILE MORE UPLAND SPECIES (RED ALDER, RED FLOWERING CURRANT, SNOWBERRY) WILL BE PLANTED FURTHER UP THE BANKS.

LEGEND:

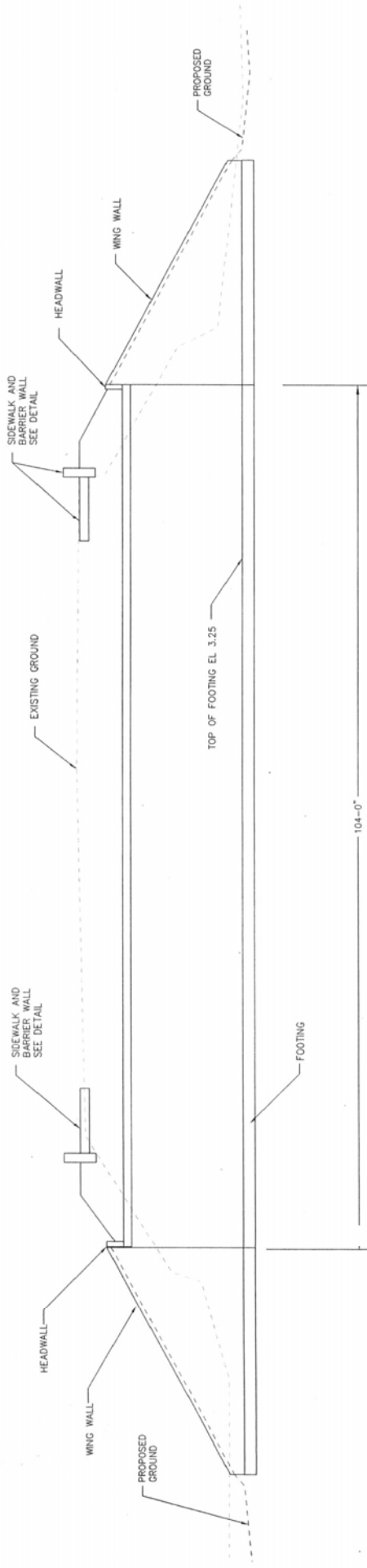
- PROJECT LIMITS
- ENVIRONMENTAL ZONE
- 25' TRANSITION ZONE
- PROPOSED OHW MEASURED AT 10' CITY OF PORTLAND DATUM
- EXISTING OHW MEASURED AT 10' CITY OF PORTLAND DATUM
- REVEGETATION AREA

City of Portland - Bureau of Development Services
 LU # 10-23699 EN
 Planner *Stacy Mack* Date *May 18, 2020*
 * Approval for Environmental Review only. Not a building permit.
 Additional zoning requirements may apply. NAD 1983-91

CITY OF PORTLAND ENVIRONMENTAL SERVICES ZONING PERMIT SET NOT FOR CONSTRUCTION PURPOSES		ECOSYSTEM RESTORATION NE 33RD DRIVE CULVERT RESOURCE ENHANCEMENT PLAN <i>Exhibit C.6</i>
		1/4 SECTION 22X3 23X 20X10 E07154 SHEET NO. C05 6 OF 7

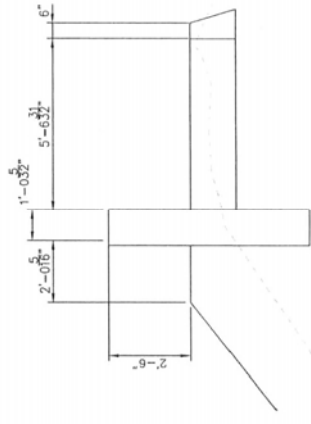
SHEET USED: REVISION MADE: CONTRACTED BY: PROJECT CONSULTANT: MAP PREPARED BY: CHECKED BY: DATE:	DATE: 2/10/20 PROJECT MAP: SHEET NO.: CHECKED BY: SECTION NO.:
--	--

E07154_001.DWG

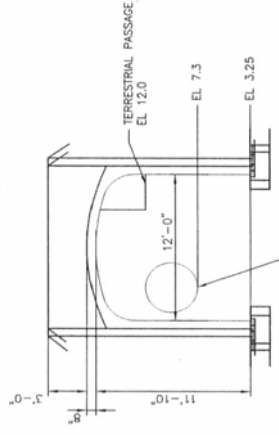


ROAD SURFACE

EL. 21.55



SIDEVIEW DETAIL



Approved
 City of Portland - Bureau of Development Services
 LU # 10-123699 EP
 Planner Stanley Date May 18, 2010
 * Approval for Environmental Review only. Not a building permit.
 Additional zoning requirements may apply.

REPLACEMENT CULVERT $\frac{1}{1}$
 NOT TO SCALE

CITY OF PORTLAND ENVIRONMENTAL SERVICES				CITY OF PORTLAND ZONING PERMIT SET NOT FOR CONSTRUCTION PURPOSES		ECOSYSTEM RESTORATION NE 33RD DRIVE CULVERT REPLACEMENT CULVERT <i>Exhibit 1.7</i>		1/4 SECTION 2233 233 E07154 C06 7 of 7
DESIGNED BY: _____ CHECKED BY: _____ DATE: _____	DRAWN BY: _____ CHECKED BY: _____ DATE: _____	PROJECT NO.: _____ PROJECT NAME: _____ PROJECT LOCATION: _____	PROJECT DESCRIPTION: _____ PROJECT STATUS: _____ PROJECT DATE: _____	PROJECT OWNER: _____ PROJECT CONTACT: _____ PROJECT PHONE: _____	PROJECT EMAIL: _____ PROJECT FAX: _____ PROJECT WEBSITE: _____	PROJECT BUDGET: _____ PROJECT COST: _____ PROJECT FUNDING: _____	PROJECT PHASE: _____ PROJECT NEXT STEPS: _____ PROJECT COMPLETION: _____	

Table 1: Native Herbaceous Seed List

Native Grasses	Common Name	Lbs/Acre
Bromus sitchensis	Sitka Brome	15
Elymus glaucus	Blue Wild Rye	10
Agrostis exarata	Spike Bent Grass	1
Deschampsia elongata	Slender Hair Grass	1
Hordeum brachyantherum	Meadow Barley	2
	Total Lbs/Acre	29

Native woody plant materials will consist of native trees and shrubs in the form of bare-root seedlings and live cuttings. All plant materials are collected and/or propagated from a Portland metro area wild population/seed source. Installation of these materials shall occur during the first planting season following construction.

Table 2: Riparian Native Woody Plant List

Species	Common Name	Plant Density
Bare-root Trees/Large Shrubs		600/acre
Fraxinus latifolia	Oregon Ash	
Alnus rubra	Red Alder	
Bare-Root Shrubs		1000/acre
Salix fluviatilis	Columbia River willow	
Ribes sanguineum	Red Flowering Currant	
Sambucus racemosa	Red Elderberry	
Spirea douglasii	Spirea	
Mahonia aquifolium	Oregon Grape	
Rosa nutkana	Nootka Rose	
Cornus sericea	Red Osier Dogwood	
Physocarpus capitatus	Pacific Ninebark	
Symphocarpus alba	Snowberry	

Actual numbers of plants may be adjusted and native species substitutions may be made depending on availability of plant stock at the time of planting. 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 five and staked with bamboo, at approximately 15-foot spacing between clusters.

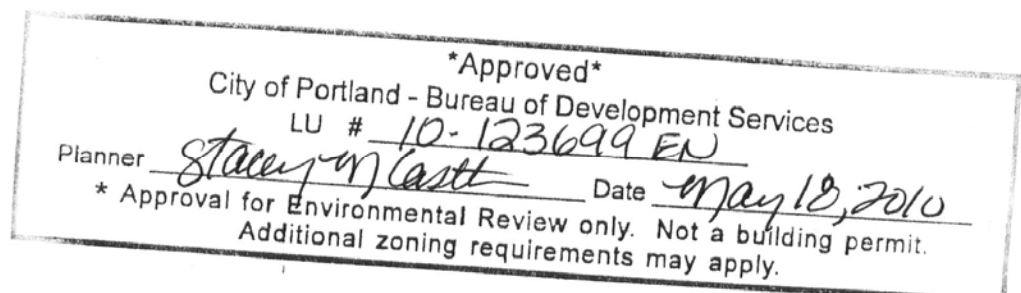


Exhibit C8