DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE., P.O. BOX 90012
BELLEVUE, WA 98009-9012

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No.	12-107982-LO
Project Name/Address:	Westad - Vasa Creek Critical Area and Buffer Disturbance 16721 NE 35th Street
Planner:	Kevin LeClair
Phone Number:	425-452-2928

Minimum Comment Period: **April 12, 2012**

Materials included in this Notice:

- ☒ Blue Bulletin
- ☒ Checklist
- ☒ Vicinity Map
- ☐ Plans
- ☒ Other: Critical Areas Narrative and Plans

City of Bellevue Submittal Requirements | **27a**

ENVIRONMENTAL CHECKLIST

2/27/2012

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call Development Services (425-452-6800) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Assistance for the hearing impaired: Dial 711 (Telecommunications Relay Service). .

BACKGROUND INFORMATION

Reviewed under Bellevue permit # 12-107982-LO. Reviewed on 3-26-2012 by Kevin LeClair.

Property Owner: Warren and Robin Westad

Proponent: Warren and Robin Westad

Contact Person: Kris Lepine, Herrera Environmental Consultants
(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: 2200 Sixth Avenue, Suite 1100, Seattle, Washington, 98121

Phone: (206) 787-8267

Proposal Title: Westad Residence Enforcement Action #11-120985-EA

Proposal Location: 16721 SE 35th Street, Bellevue, WA 98008

(Street address and nearest cross street or intersection) Provide a legal description if available.

Please attach an 8 ½" x 11" vicinity map that accurately locates the proposal site.

Give an accurate, brief description of the proposal's scope and nature:

1. General description: The project involves resolving an enforcement action issued by the City of Bellevue Development Services Department for work that was conducted in the riparian corridor of Vasa Creek without obtaining necessary permits. Proposed corrective mitigation measures include:

   - Adjust the footings of a foot bridge over the stream so that it is an additional 5.5 inches higher in elevation from the streambed.
   - At the downstream extents of the left (north) bank, reconstruct an 18-foot long segment of rock wall utilizing a soft stabilizatin approach by setting back the rock within the bank and planting native shrubs in soil between rocks. The toe of the bank will be set back to the previous location.
   - Install live stake cuttings between existing rocks along the entire remaining extents of left bank.
   - Revegetate the right (south) bank and adjancent buffer; and remove invasive ivy between the stream channel and west property boundary in areas lacking woody vegetation.

2. Acreage of site: 0.26 acres

3. Number of dwelling units/buildings to be demolished: None

4. Number of dwelling units/buildings to be constructed: None

5. Square footage of buildings to be demolished: N/A

6. Square footage of buildings to be constructed: N/A

7. Quantity of earth movement (in cubic yards): Less than one cubic yard of soil will be removed where the

bank is proposed to be set back.

8. Proposed land use: No change from current use

9. Design features, including building height, number of stories and proposed exterior materials:

No buildings are being constructed.

10. Other

Estimated date of completion of the proposal or timing of phasing:

Work involving setting back the bank and raising the elevation of he bridge will be implemented during the work window prescribed by the Washington Department of Fish and Wildlife (WDFW) when fish species are least likely to occur in Vasa Creek, which is anticipated to extend from July 1 to August 31. All planting will occur during the fall-winter dormant season (October through February). Most of the proposed work will be occur during 2012, with the possibility of planting extending through February 2013.

Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No.

List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Narrative Description and Mitigation Plan, February 2012.

Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. List dates applied for and file numbers, if known.

There are no known applications pending approval that would directly affect the property covered by this proposal.

List any government approvals or permits that will be needed for your proposal, if known. If permits have been applied for, list application date and file numbers, if known.

- City of Bellevue Critical Areas Land Use
- City of Bellevue Clearing and Grading
- Washington Department of Fish and Wildlife, Hydraulic Project Approval

Please provide one or more of the following exhibits, if applicable to your proposal.
(Please check appropriate box(es) for exhibits submitted with your proposal):

❑ **Land Use Reclassification (rezone) Map of existing and proposed zoning**

❑ **Preliminary Plat or Planned Unit Development**
Preliminary plat map

x **Clearing & Grading Permit**
Plan of existing and proposed grading
Development plans

❑ **Building Permit (or Design Review)**
Site plan
Clearing & grading plan

REVIEWED
By Kevin LeClair at 8:43 am, Mar 26, 2012

❑ **Shoreline Management Permit**
Site plan

A. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site: ❑ Flat X Rolling ❑ Hilly ❑ Steep slopes ❑ Mountains ❑ Other

b. What is the steepest slope on the site (approximate percent slope)? 33%

The stream bank is this steep.
The rest of the property is flat.

c. What general types of soil are found on the site (for example, clay, sand, gravel, peat, and muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Gravelly sandy loam.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

There are no surface indications or a history of unstable soils in the immediate project vicinity.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Soil will be removed and graded in support of laying back an 18-foot long section of bank. Approximately one cubic yard of soil will be temporarily removed and stockpiled on-site. Less than one cubic yard of soil will be backfilled and graded on the bank. Only native soils from onsite will be used.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No erosion is anticipated.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The project does not involve creating new impervious surface.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Proposed planting of containerized shrubs and live stake cuttings are intended to reduce and control erosion along the bank of the stream in the future.

A constructions stormwater pollution prevention plan is required for the clearing and grading permit per BCC 23.76.

2. AIR

a. What types of emissions to the air would result from the proposal (i.e. dust, automobile odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

No emissions to the air will occur. All work will be done with hand tools.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no known off-site sources of emissions or odors that may affect this proposed project.

c. Proposed measures to reduce or control emissions or other impacts to the air, if any:

Not applicable.

3. WATER

a. Surface

REVIEWED
By Kevin LeClair at 8:51 am, Mar 26, 2012

(1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Vasa Creek is on the site, which is a Type F Water. Vasa Creek flows year-round on the property. Vasa Creek flows into Lake Sammamish.

(2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If Yes, please describe and attach available plans.

No work will be required in the stream. The following work will occur on the banks of the stream and within the buffer:

- Adjust the footings of a foot bridge over the stream so that it is an additional 5.5 inches higher in elevation from the streambed.
- At the downstream extents of the left (north) bank, reconstruct an 18-foot long segment of rock wall utilizing a soft stabilizatin approach by setting back the rock within the bank and planting native shrubs in soil between rocks. The toe of the bank will be set back to the previous location.
- Install live stake cuttings between existing rocks along the entire remaining extents of left bank.
- Revegetate the right (south) bank and adjacent buffer; and remove invasive ivy between the stream channel and west property boundary in areas lacking woody vegetation.

(3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Any work below the top of bank is considered within the stream per LUC 20.25H. The water shall be protected from turbidity during the proposed work.

Not applicable.

(4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

(5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes. See attached flood insurance rate map.

(6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground

(1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description.

No.

(2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.) Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Not applicable.

c. Water Runoff (Including storm water)

(1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If

REVIEWED
By Kevin LeClair at 8:54 am, Mar 26, 2012

so, describe.

Not applicable.

(2) Could waste materials enter ground or surface waters? If so, generally describe.

Not applicable.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Not applicable.

4. Plants

a. Check or circle types of vegetation found on the site:

X deciduous tree: black cottonwood

X evergreen tree: Douglas fir, Western red cedar, weeping willow

X shrubs

X grass

❑ pasture

❑ crop or grain

X wet soil plants: buttercup

❑ water plants: water lily, eelgrass, milfoil, other

❑ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Ivy will be removed from within the buffer onsite.

c. List threatened or endangered species known to be on or near the site.

Not applicable.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

The right (south) bank and adjacent buffer will be enhanced by removing invasive ivy and planting native shrubs and trees. The left (north) bank will be enhanced by planting native shrubs.

5. ANIMALS

a. Check or circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

X Birds: great blue heron, hawk, eagle, and songbirds

X Mammals: deer, coyote

X Fish: cutthroat trout (observed), late run kokanee, coho salmon, and sockeye salmon

Salmon are not known to use this stream, however it does flow into Lake Sammamish which is known to support salmon and kokanee.

b. List any threatened or endangered species known to be on or near the site.

Not applicable.

c. Is the site part of a migration route? If so, explain.

The stream serves as a migration route for fish.

d. Proposed measures to preserve or enhance wildlife, if any:

The right (south) bank and adjacent buffer will be enhanced by removing invasive ivy and planting native shrubs and trees.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy need? Describe whether it will be used for heating, manufacturing, etc.

No energy will be needed for the completed project.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

This proposal will not affect the use of solar energy.

c. What kinds of energy conservation features are included in the plans of the proposal? List other proposed measures to reduce or control energy impacts, if any:

Not applicable.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

No.

(1) Describe special emergency services that might be required.

None.

(2) Proposed measures to reduce or control environmental health hazards, if any.

Not applicable.

b. Noise

(1) What types of noise exist in the area which may affect your project (for example, traffic, equipment, operation, other)?

No noise will affect the project.

(2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example, traffic, construction, operation, other)? Indicate what hours noise would come from the site.

No significant noise will be generated by the project. All project work will be conducted by hand.

(3) Proposed measures to reduce or control noise impacts, if any:

Not applicable.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

Single-family residential.

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

Structures include a house, hot tub, and storage shed.

d. Will any structures be demolished? If so, what?

No structures are being demolished under this proposal.

e. What is the current zoning classification of the site?

Single-family.

f. What is the current comprehensive plan designation of the site?

Single family – high density.

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Identified environmentally sensitive areas include streams and stream buffers.

I. Approximately how many people would reside or work in the completed project?

Not applicable.

j. Approximately how many people would the completed project displace?

Not applicable.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Not applicable.

i. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Not applicable.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Not applicable.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Not applicable.

c. Proposed measures to reduce or control housing impacts, if any:

Not applicable.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Not applicable.

b. What views in the immediate vicinity would be altered or obstructed?

Not applicable.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Not applicable.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Not applicable.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Not applicable.

c. What existing off-site sources of light or glare may affect your proposal?

Not applicable.

d. Proposed measures to reduce or control light or glare impacts, if any:

Not applicable.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

Vasa Creek park is located west of the site.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Not applicable.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No.

b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance

known to be on or next to the site.

Not applicable.

c. Proposed measures to reduce or control impacts, if any:

Not applicable.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

SE 35th Street.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No.

c. How many parking spaces would be completed project have? How many would the project eliminate?

Not applicable.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not Including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Not applicable.

g. Proposed measures to reduce or control transportation impacts, if any:

Not applicable.

15. Public Services

a. Would the project result in an increased need for the public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Not applicable.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

Electricity, natural gas, water, refuse service, telephone, sanitary sewer.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general

construction activities on the site or in the immediate vicinity which might be needed.

None.

Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature.....

Date Submitted.....2-28-12.....

REVIEWED
By Kevin LeClair at 8:57 am, Mar 26, 2012

mapquest

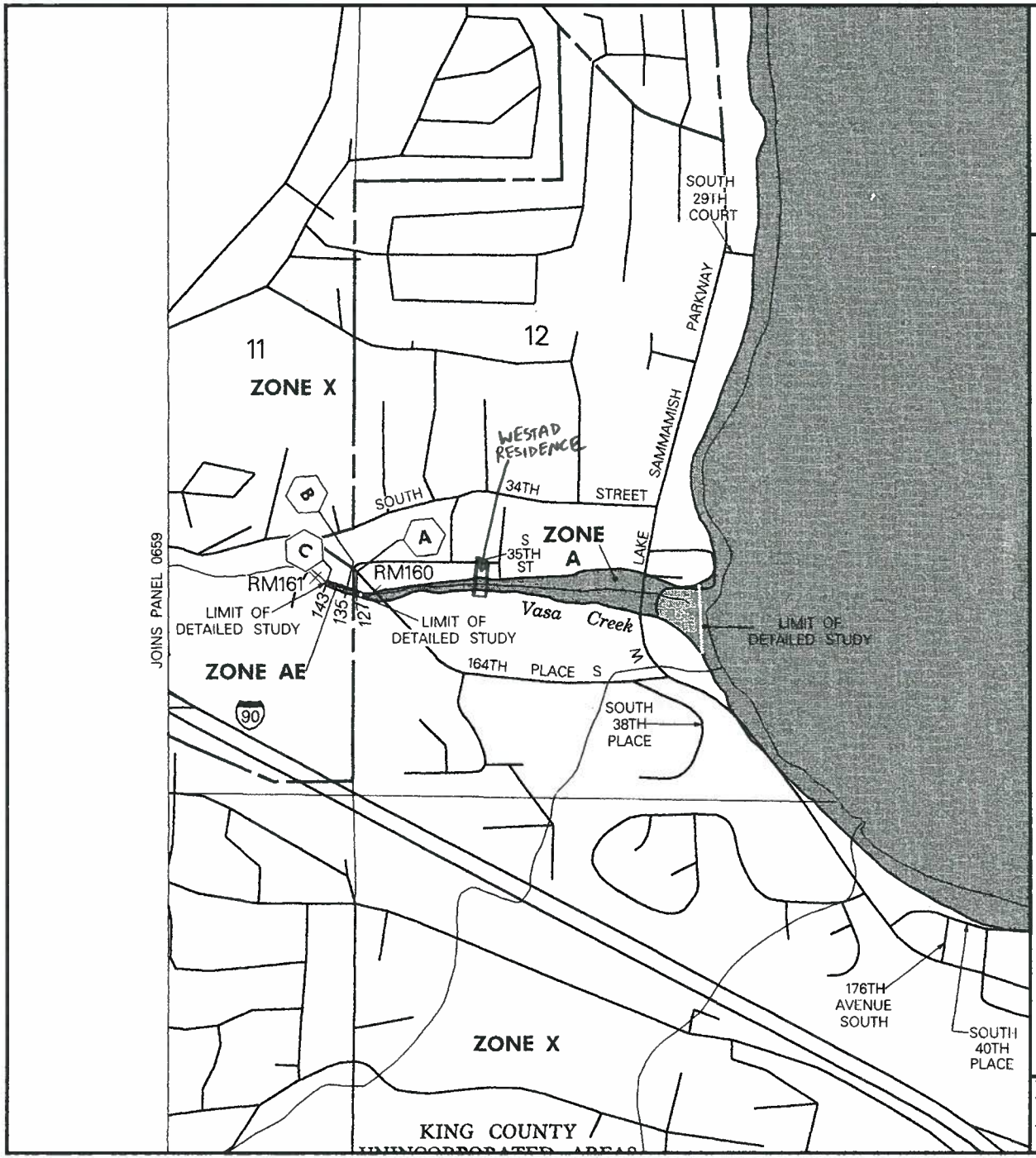
Map of:

16721 SE 35th St

Bellevue, WA 98008-5800

Notes

Westad Residence Vicinity Map



APPROXIMATE SCALE IN FEET

1000 0 1000

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

KING COUNTY, WASHINGTON AND INCORPORATED AREAS

PANEL 680 OF 1725

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS: COMMUNITY	NUMBER	PANEL	SUFFIX
BELLEVUE, CITY OF	530074	0680	F
KING COUNTY, UNINCORPORATED AREAS	530071	0680	F

MAP NUMBER 53033C0680 F

MAP REVISED: MAY 16, 1995

Federal Emergency Management Agency

HERRERA

February 28, 2012

Kevin LeClair
City of Bellevue Development Services Department
PO Box 90012
Bellevue, WA 98009-9012

Subject: Critical Areas Land Use Permit for Westad Residence Enforcement Action #11-120985-EA

Dear Kevin:

Please see attached Narrative Description and Mitigation Plan; and SEPA Environmental Checklist in support of a Critical Areas Land Use Permit required to resolve the enforcement action that applies to the riparian corridor of Vasa Creek on the Westad residence property in the City of Bellevue.

Let me know if you have any questions.

Sincerely,

Herrera Environmental Consultants, Inc.

Kris Lepine
Associate Ecologist

cc: Warren and Robin Westad

Enclosure: Narrative Description and Mitigation Plan, SEPA Environmental Checklist

NARRATIVE DESCRIPTION AND MITIGATION PLAN

Westad Residence Enforcement Action #11-120985-EA

Prepared for
City of Bellevue
Development Services Department
PO Box 900012
Bellevue, Washington 98009-9012

Prepared by
Herrera Environmental Consultants, Inc.
2200 Sixth Avenue, Suite 1100
Seattle, Washington 98121
Telephone: 206/441-9080

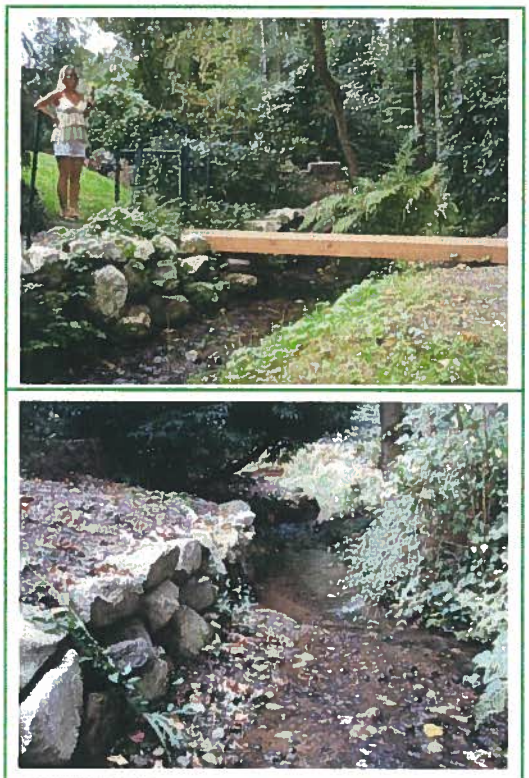
February 28, 2012

CONTENTS

TABLES

Introduction

This Narrative Description and Mitigation Plan are in support of a Critical Areas Land Use Permit, which is required to resolve the enforcement action that applies to the riparian corridor of Vasa Creek on the Westad residence property at 16721 SE 35th Street in the City of Bellevue. During 2011, the Westads had work done to their property within a portion of Vasa Creek and the stream bank without first obtaining necessary permits. The work involved replacing a foot bridge and stabilizing portions of the left (north) bank of the stream with new rock. A Critical Areas Land Use Permit from the City of Bellevue is necessary to authorize work that was previously conducted without a permit as well as corrective mitigation actions that are proposed for implementation during 2012.



2011 project site work without permit included foot bridge replacement (top) and landscaping maintencance/bank stabilization with rock (bottom).

The following sections describe project site conditions including previous work that resulted in the enforcement action, proposed corrective mitigation measures, and compliance with the Bellevue Land Use Code (LUC).

Project Site

The following sections describe current conditions of the project site including critical areas, landscape conditions, and previous development.

Vasa Creek

Vasa Creek flows through the southern portion of the Westad property in the easterly direction. Vasa Creek flows into Lake Sammamish approximately 1,300 feet downstream of the Westad property. Vasa Creek is a critical area regulated as a Type F Water by the City of Bellevue because it contains fish and fish habitat. In addition, the 100-year floodplain associated with Vasa Creek is also a critical area classified as an Area of Special Flood Hazard.

The segment of Vasa Creek on the property is perennial and based on previous surveys, potentially supports cutthroat trout (observed on February 26, 2012), late run kokanee, coho salmon, and sockeye salmon (Bellevue 2009). Based on existing information, Vasa Creek does not support fish species listed as threatened or endangered under the Endangered Species Act.

A high flow bypass was installed near the Interstate 90 crossing upstream of the Westad property, which removes much of the peak flows from the open stream and conveys them directly to Lake Sammamish in a piped system.

On the Westad property, the average width of Vasa Creek is 4.7 feet, as measured between ordinary high water marks on September 24, 2011 -- at this time, the stream channel had moderate flow with an average wetted depth of 0.2 feet (2.4 inches). Ordinary high water flows are primarily contained within the active channel and do not appear to exceed 0.5 feet (6 inches) in height above the streambed substrate based on field indicators (e.g., scour, flattened vegetation). Dominant stream habitat on the Westad property is low-gradient riffle. Dominant substrate consists of gravels with subdominant sand and cobbles.

Vasa Creek Buffer

The regulated buffer width for Vasa Creek is 100 feet measured from the top of bank, which corresponds to a Type F Water. The south side of the stream on the property has low-lying banks and the buffer is in a largely undeveloped, forested condition with the exception of a storage shed. The north side of the stream on the property has a steeper bank that slopes away from the stream up toward the house. According to the City of Bellevue's definitions (LUC 20.50.048 T), the top of bank is located at the grass lawn at the back of the Westad residence where the slope of the land flattens out to less than 3:1. A large portion of the property is located within regulated buffers on the north side of the stream including most of the previous development associated with the residence including house, patio, driveway, hot tub, lawns, and ornamental landscaping. Housing development on the property took place prior to implementation of the critical areas ordinance by the City of Bellevue.

Vegetation growing on the banks and within the buffer of Vasa Creek on the Westad property includes a mix of mown lawn, native shrubs and trees, and ornamental shrubs. Plants observed include black cottonwood (*Populus balsamifera*), red alder (*Alnus rubra*), salmonberry (*Rubus spectabilis*), sword fern (*Polystichum munitum*), lady fern (*Athyrium filix-femina*), trailing blackberry, (*Rubus ursinus*), stinging nettle (*Urtica dioica*), creeping buttercup (*Ranunculus repens*), European holly (*Ilex aquifolium*), weeping willow (*Salix babylonica*), laurel (*Laurus* spp.), rhododendron (*Rhododendron* ssp.), and Japanese maple (*Acer palmatum*). Just west of the Westad property, additional trees species include Douglas fir (*Pseudotsuga menziesii*) and Western red cedar (*Thuja plicata*).

2011 Work Conducted

During 2011, the Westads had work done to their property within a portion of Vasa Creek and the stream bank without first obtaining necessary permits. The work involved replacing a foot bridge and stabilizing the left (north) bank of the stream with new rock. A low-lying bridge approximately 6 inches higher than the streambed made of wood timbers was replaced in the same location with a new, longer bridge that was installed at a higher elevation to prevent contact with ordinarily high stream flows. The new bridge is 12.1 feet long and constructed of five, 6x6 (5.5"x5.5" true dimension) cedar posts that are bolted together for a total bridge width of 2.3 feet. The bottom of the bridge is approximately 1.5 to 1.7 feet higher than the streambed.

An approximate 8-foot long segment of low-lying retaining wall constructed of creosote-treated timbers (railroad ties) was replaced with an approximate 2.5-foot high rock retaining wall constructed of 2-man sized boulders. The creosote timbers were installed when the left (north) bank of the stream was originally landscaped when the house was built. It is presumed

that the timbers were installed to stabilize the bank and support landscaping features on the bank including a bench and patio. The section of replaced retaining wall is east of the foot bridge along the left bank at the downstream extents of the property. Approximately the last 3 linear feet of the new wall at the downstream extents appears to protrude approximately 6 inches further into the stream channel than the previous extent of the wall.

Other portions of the rock wall along the left bank of the stream on the Westad property were pre-existing; however, during 2011 this wall was supplemented in a few places by adding some 2-man rocks on top of the previous wall including both sides of the replaced foot bridge and upstream of the bridge.

2012 Proposed Corrective Mitigation

The following additional work is proposed within the riparian corridor of Vasa Creek on the Westad property during 2012 to correct and mitigate for the work conducted in 2011:

- Adjust the footings of the replaced foot bridge so that it is an additional 0.5 feet (6 inches) higher in elevation from the streambed.
- At the downstream extents of the left (north) bank, reconstruct an 18-foot long segment of rock wall utilizing a soft stabilization approach by setting back the rock within the bank and planting native shrubs in soil between the rocks. The toe of the bank will be set back to the previous location.
- Install live stake cuttings between existing rocks along the entire remaining extents of the left bank.
- Remove invasive ivy and revegetate the right (south) bank and adjacent buffer between the stream channel and west property boundary in areas lacking woody vegetation.

The objectives of these corrective mitigation measures are to:

- Provide additional clearance underneath the foot bridge to convey 100-year flood flows.
- Incorporate soft stabilization measures by setting back a portion of the left (north) bank and improving vegetation conditions by planting native plants.
- Enhance and restore habitat conditions for fish, wildlife, and insects by planting native vegetation capable of providing cover and shading over the stream channel; and providing input of nutrients (e.g., leaf litter) and food sources (e.g., insects) to the stream system.

Bellevue Allowed Uses and Performance Standards

Work conducted by the Westads within the riparian corridor of Vasa Creek is allowed according to LUC 20.25H.055 under three classifications including *Existing Landscape Maintenance, Stabilization Measures, and New or Expanded Bridges.*

Existing Landscape Maintenance

According to LUC 20.25H.055, maintenance to the preexisting creosote timber retaining wall at the left (north) bank of the stream represents an allowed use within critical areas under the classification of *Existing Landscape Maintenance* if the activity complies with applicable performance standards. The following sections demonstrate how performance standards related to existing landscape maintenance on the stream bank are achieved.

Performance Standard for Existing Landscape Maintenance

According to LUC 20.25H.055.C.3.h., work conducted by the Westads involving replacement of rotting creosote timbers with a boulder wall classifies as existing landscape maintenance. Maintenance conducted in 2011 and proposed mitigation in 2012 complies with this performance standard because the work is being carried out by hand, no trees are being removed, and work does not involve use of fertilizers, insecticides, or pesticides.

Performance Standards for Streams

Performance standards for streams listed under LUC 20.25H.080.A. largely do not apply to the recently bridge replacement and proposed modifications because construction nor operation of the bridge involves lighting, noise generation, toxic runoff, discharge of treated water, or use of pesticides, insecticides, and fertilizers. Compliance with LUC 20.25H.080.A.5. requiring planting of the outer buffer is not feasible because the outer buffer is either occupied by the residence or is located beyond the property limits. However, proposed mitigation involves dense planting along both sides of the stream on the banks and inner buffer.

Stabilization Measures

According to LUC 20.25H.055, modifications to the stream bank represent an allowed use within critical areas under the classification of *Stabilization Measures* if the activity complies with applicable performance standards. The following sections demonstrate how performance standards related to the stream bank stabilization are achieved. Applicable performance standards for streams are discussed above.

Performance Standards for Stabilization Measures

In accordance with LUC 20.25H.055.C.3.m., stabilization measures are allowed in connection with other uses and development allowed pursuant to LUC 20.25H.055.B, which includes *Existing Landscape Maintenance* (see above). Furthermore, in compliance with performance standards, proposed corrective mitigation involves reconstructing the 8-foot long segment of rock wall at the downstream extents of the left (north) bank utilizing a soft stabilization approach by stepping back the rock within the bank and planting native shrubs in soil between the rocks.

Performance Standards for Areas of Special Flood Hazards

In accordance with LUC 20.25H.180.C.1., proposed corrective mitigation measures involving stepping back the rock within the bank will not involve further intrusion into the Area of Special Flood Hazard along the left (north) bank.

Other components of LUC 20.25H.180.C. do not apply to the proposed corrective mitigation measures.

New or Expanded Bridges

According to LUC 20.25H.055, due to the expanded size of the replaced foot bridge, previous installation and proposed modification of the bridge represents an allowed use within critical areas under the classification of *New or Expanded Bridges or Culverts* if the activity complies with applicable performance standards. The following sections demonstrate how performance standards related to the foot bridge are achieved. Applicable performance standards for streams are discussed above.

New or Expanded Uses or Development

According to LUC 20.25H.055.C.2., expanded facilities are allowed within a critical area or critical area buffer only where no technically feasible alternative with less impact on the critical area or critical area buffer exists, which is demonstrated by the following:

- The objective of the foot bridge is to provide access to and from the storage shed and the residence. The width of the bridge is the minimum necessary to transport a motorized push lawn mower. In addition, the bridge design minimizes impact because it is orientated perpendicular to the stream and approximately within the same footprint as the previous bridge.
- Within property limits, the location of the foot bridge represents the least impact on the stream and buffer because it is located within the same alignment of the previous bridge where previously established trails lead to the bridge from both sides of the stream. By raising and lengthening the bridge, only pre-existing gravel/lawn trails are affected. Moving the bridge of similar size to a different location would result in more disturbances to the stream banks and buffer including grading and vegetation clearing impacts.
- The cost of avoiding disturbance is substantially disproportionate from the recently replaced and proposed modification of the bridge because it would require a substantially longer bridge to span the stream buffer or stream banks.
- Permanent and temporary impacts will be mitigated by improving fish and wildlife habitat conditions upstream and downstream of the bridge by means of revegetation with native plants. A mitigation and restoration plan is provided within this narrative description.
- The recently replaced bridge and proposed modifications involve placing the footings of the bridge on the left (north) bank and on top of the right (south) bank landward of the ordinary high water marks, thereby avoiding impact to fish habitat.
- Proposed modifications to the bridge will additionally raise the elevation of the bridge to provide greater assurance that the bridge will not interfere with conveyance of 100-year peak flows.

New or Expanded Bridges and Culverts

The performance standard for new or expanded bridges and culverts in accordance with LUC 20.25H.055 C 3.e. is not applicable to the project because the project does not propose new or expanded culverts.

Performance Standards for Areas of Special Flood Hazards

In accordance with LUC 20.25H.180.C.1., through coordination with Kevin LeClair and Brian Ward at the City of Bellevue, the proposed modification to the previously replaced foot bridge will locate the bridge at a grade that will not result in alterations to the configuration of the Area of Special Flood Hazard. Orientation of the bridge within the preexisting alignment will maintain existing vegetation conditions. The raised bridge will allow more light to penetrate underneath promoting additional vegetation growth. In addition, proposed mitigation will result in an increase in vegetated conditions.

Other components of LUC 20.25H.180.C do not apply to construction and operation of a foot bridge.

Critical Areas Land Use Permit Decision Criteria

In accordance with LUC 20.30P.140., application for a Critical Areas Land Use Permit is subject to applicable decision criteria as justified below.

- The proposal to permit previous work conducted by the Westads and proposed corrective mitigation measures will involve obtaining all permits required by the Land Use Code.
- As demonstrated within the Narrative Description above and Mitigation Plan below, the proposal involves techniques and measures that result in the least impact on the stream and buffer utilizing best available construction, design, and development techniques.
- As demonstrated above within the Narrative Description, the proposal incorporates performance standards of Part 20.25H LUC to the maximum extent applicable.
- As provided below, the proposal includes a Mitigation Plan consistent with the requirements of LUC 20.25H.210.

Mitigation Plan

This section presents a mitigation plan in accordance with LUC 20.25H.210 that includes details on implementing and monitoring proposed corrective mitigation actions as outlined above.

Mitigation Sequencing

In accordance with LUC 20.25H.215, proposed corrective mitigation actions comply with mitigation sequencing requirements as outlined below.

- Implementation of stream bank corrective actions will result in temporary impacts to the stream bank. Previous work associated with installing a new foot bridge and corrective actions associated with raising the elevation of the bridge result in minor permanent impacts to the stream bank where the bridge footings are located. Complete **avoidance** of temporary and permanent impacts are not possible due to the requirement to implement corrective mitigation measures.

- Proposed corrective mitigation measures are designed in a manner that **minimize** impacts to the stream banks and buffer. The location of the foot bridge minimizes impact because it is located within the same alignment of the previous bridge where previously established trails lead to the bridge from both sides of the stream. By raising and lengthening the bridge, only pre-existing gravel/lawn trails are affected. Work involving setting back the bank and installation of the bridge will be implemented during work windows prescribed by the Washington Department of Fish and Wildlife (WDFW) when fish species are least likely to occur in Vasa Creek. Best management practices (BMPs) including placement of sand bags at the toe of the stream will be implemented to ensure that sediment is not released into the stream resulting in turbid conditions.

- Proposed corrective mitigation measures aim to **rectify** impacts caused by previous work in the riparian corridor of Vasa Creek on the Westad property by repairing the left (north) stream bank using soft stabilization techniques. In addition, previous work will be rectified by restoring both banks with native vegetation.

- Proposed corrective mitigation measures will **reduce and eliminate the impact** caused by previous work by preserving the existing riparian corridor in a vegetated condition, which will be monitored and maintained as necessary for a minimum of 5 years.

- Proposed corrective mitigation measures will **compensate** for installation of a longer foot bridge by enhancing stream bank and buffer conditions with native vegetation.

Goals and Objectives

The goal of the mitigation plan is to enhance the riparian corridor of Vasa Creek on the Westad property. Objectives include the following.

- Provide additional clearance underneath the foot bridge to convey 100-year flood flows

- Incorporate soft stabilization measures by setting back a portion of the left (north) bank and improving vegetation conditions by planting native plants.

- Enhance and restore habitat conditions for fish, wildlife, and insects by planting native vegetation capable of providing cover and shading over the stream channel; and providing input of nutrients (e.g., leaf litter) and food sources (e.g., insects) to the stream system.

Success Criteria

The following success criteria will be monitored over a 5 year period and will apply to areas that are planted with native vegetation according to the site plan (Appendix A).

Year 1

- 100 percent survival of planted vegetation.
- 0 percent invasive plant cover within areas of planted vegetation.

Year 2

- Minimum 90 percent survival of planted vegetation.
- Less than 10 percent invasive plant cover within areas of planted vegetation.

Year 3

- Minimum 85 percent survival of planted vegetation.
- Greater than 35 percent cover of native vegetation within areas of planted vegetation.
- Less than 10 percent invasive plant cover within areas of planted vegetation.

Year 4

- Greater than 50 percent cover of native vegetation within areas of planted vegetation.
- Less than 15 percent invasive plant cover within areas of planted vegetation.

Year 5

- Greater than 70 percent cover of native vegetation within areas of planted vegetation.
- Less than 15 percent invasive plant cover within areas of planted vegetation.

Site Plan

A site plan for corrective mitigation measures is provided in Appendix A which shows how the existing bridge will be raised in elevation on modified footings, how the left (north) bank will be set back, and areas of native planting along the stream banks. The site plan includes the following components. See Table 1 for the proposed plant schedule, which presents a list of suitable native plants for site. Substitutions or modifications to this schedule will be approved by a qualified ecologist.

- The footings of the replaced foot bridge will be adjusted so that it is an additional 6 inches (0.5 feet) higher in elevation from the streambed. This will involve placing pre-fabricated, concrete retaining wall blocks at the footings.
- An 88-foot long segment of rock wall (installed in 2011) along the downstream extents of the left (north) bank will be reconstructed utilizing a soft stabilization approach by setting back the rock within the bank and planting native shrubs in soil between the rocks. The toe of the bank will be set back to the previous location. A row of rock will

be placed at the toe of the stream and backfilled with native soil behind. Behind this row of rock enough room will be provided to plant native shrubs. Behind these plantings, a second row of rocks will be setback into the bank and backfilled with native soil behind. Behind this final row of rock, additional native plants will be installed.

- Approximately one cubic yard of soil will be temporarily removed from the bank and stockpiled onsite. Less than one cubic yard of soil will be backfilled on the bank.
- Native shrubs will be planted in soil between the rocks including potted plants (5 feet on center) and live stake cuttings (3 feet on center) extending from the edge of the channel and upward to the existing patio.
- Live stake cuttings will be installed between existing rocks along the entire remaining extents of the left (north) bank at a minimum of 3 feet on center. As necessary, rocks will be repositioned or removed to facilitate installation of the live stake cuttings.
- The right (south) bank and adjacent buffer on the Westad property will be revegetated in areas lacking woody vegetation (see photo) and invasive ivy will be removed. Revegetation measures will involve planting native shrubs including potted plants (5 feet on center) and live stake cuttings (3 feet on center).

Area proposed for vegetation enhancement south of Vasa Creek.

Table 1. Plant Schedule.

Stratum	Scientific Name	Common Name	Material Type	Spacing	Quantity
Tree	Thuja plicata	Western red cedar	Container	5'	2
Shrub	Acer circinatum	Vine maple	Container	5'	6
	Cornus sericea	Red osier dogwood	Container	5'	6
	Cornus sericea	Red osier dogwood	Live stake	3'	25
	Lonicera involucrata	Black twinberry	Container	5'	8
	Rosa nutkana	Nootka rose	Container	5'	8
	Rubus spectabilis	Salmonberry	Container	5'	5
	Salix sitchensis	Sitka willow	Live stake	3'	25
	Symphoricarpos albus	Snowberry	Container	5'	10
Groundcover	Polystichum munitum	Sword fern	Container	3'	20

Timing of Work

Work involving setting back the bank and raising the elevation of the bridge will be implemented during the work window prescribed by WDFW when fish species are least likely to occur in Vasa Creek, which is anticipated to extend from July 1 to August 31. All planting will occur during the fall-winter dormant season (October through February) Most of the proposed work will occur during 2012, with the possibility of planting extending through February of 2013.

Monitoring and Contingency Plan

All planting areas will be monitored to evaluate success criteria. During construction, a qualified ecologist will monitor the site to ensure that BMPs are implemented such that there are no unanticipated impacts on the stream or buffers.

The Westads will arrange to have the planting areas monitored by a qualified ecologist for a minimum of 5 years. Monitoring visits to the site will begin during the first growing season after plants have been installed. During the first year, two visits will take place including one visit in April to assess leaf emergence and shoot growth of the installed plants; and then again at the end of the growing season (September-October). In subsequent years, monitoring will take place between September and October.

During each monitoring site visit, representative photographs will be taken from established photo points. In addition, plant survival and plant cover will be measured. Upon completion of the late growing season monitoring visits, a report presenting the results of the site inspection will be submitted to the City of Bellevue Development Services Department.

Within the monitoring report, the ecologist responsible for monitoring will present detailed monitoring methods, results, and make recommendations for annual maintenance of the planting areas such as replanting, watering, and weeding. If plants are not succeeding, the biologist will make recommendations for contingency actions, which could include suitable plant substitutions based on site conditions.

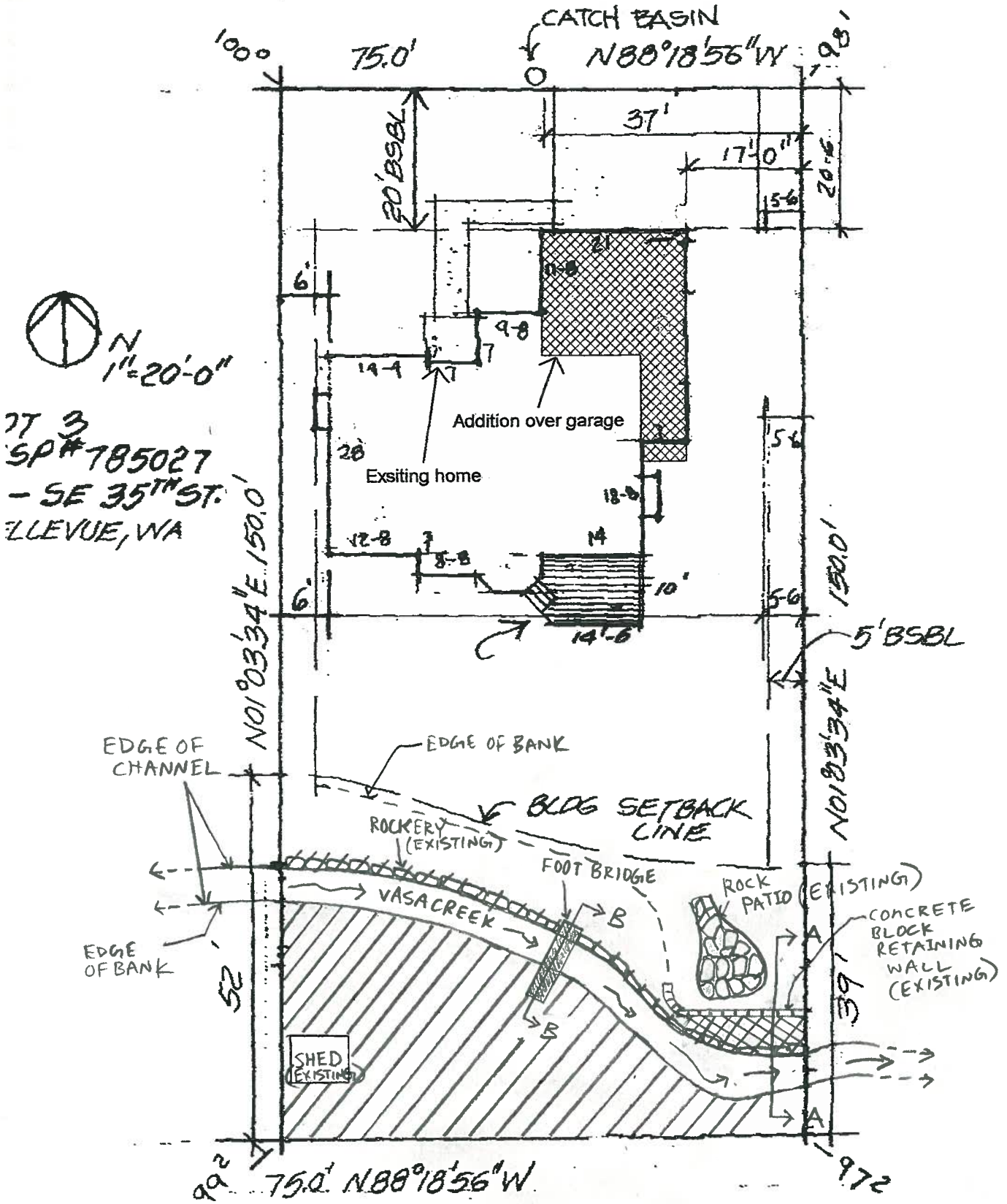
References

Bellevue. 2009. Fish Use of Stream Drainage Basins in the City of Bellevue. Prepared by the City of Bellevue. April 2009.

APPENDIX A

Site Plan

E SE 35TH ST.



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1"=20'-0"

T 3
SP#785027
- SE 35TH ST.
LLEVUE, WA

PROPOSED VEGETATION ENHANCEMENT AREA

PROPOSED BANK SETBACK AND VEGETATION ENHANCEMENT

SITE PLAN / DETAI

Robin and Warren Westad

THE MARANT COMPANY
13860-177TH AVE SE
RENTON, WA 98059
(425) 255-9860

Sheet
1

HERRERA ENVIRONMENTAL CONSULTANTS

www.herrerainc.com

PROJECT: WESTAD RESIDENCE ENFORCEMENT ACTION
CLIENT: WESTAD, WARREN AND ROBIN
SUBJECT: SET-BANK BANK PROPOSED
NOTES:

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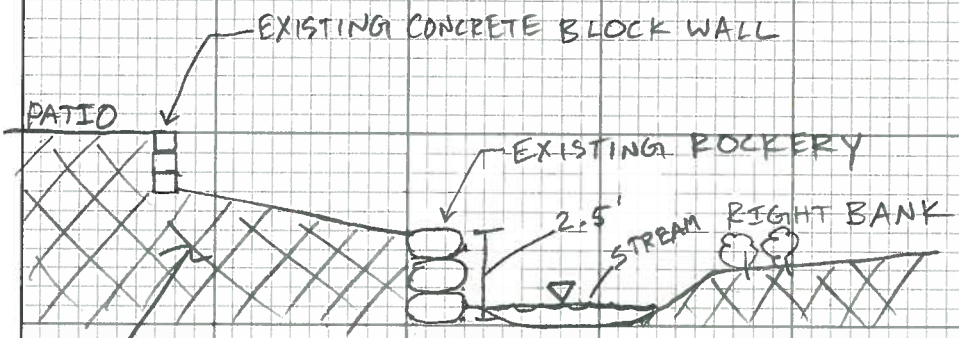
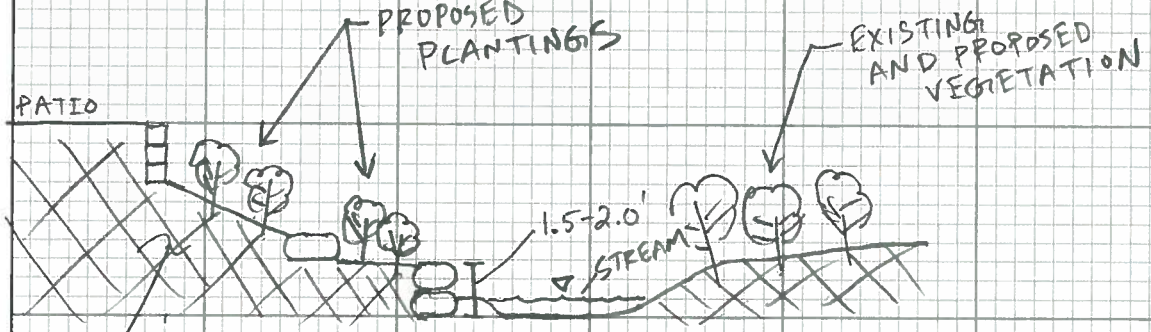
CHECKED BY: _____ DATE: _____
PAGE _____ OF _____
PROJECT NO. _____
TASK NO. _____



CROSS-SECTION – EXISTING (A/1)



CROSS-SECTION – PROPOSED SET-BACK BANK (A/1)

HERRERA ENVIRONMENTAL CONSULTANTS

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PROJECT: WESTAD RESIDENCE ENFORCEMENT ACTION
CLIENT: WESTAD, WARREN AND ROBIN
SUBJECT: FOOTBRIDGE MODIFICATION PROPOSED
NOTES:

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CHECKED BY: DATE:
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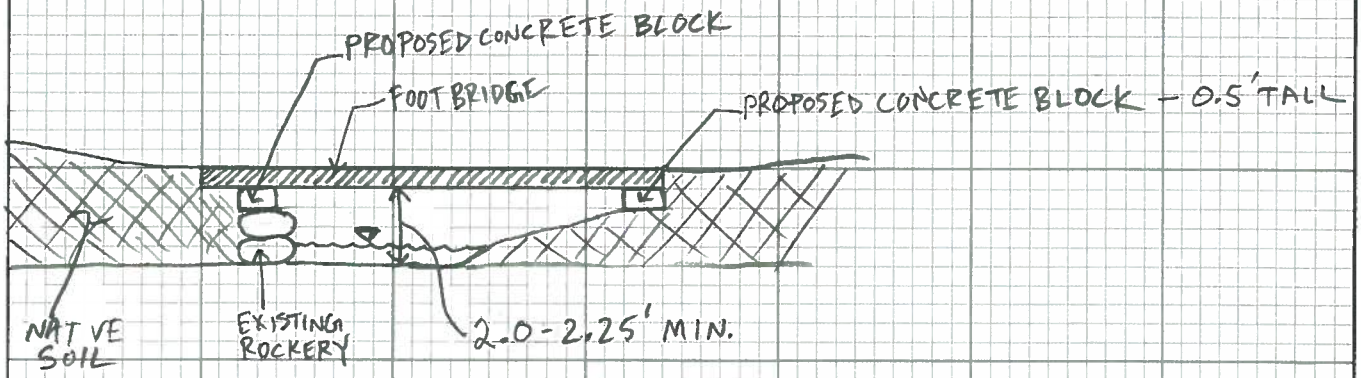
PROJECT NO.
TASK NO.



CROSS-SECTION – PROPOSED FOOTBRIDGE MODIFICATION (B/1)

NOTE: FOOTBRIDGE WILL BE RAISED 0.5'

DO NOT WRITE IN THIS SPAC