



DEVELOPMENT SERVICES DEPARTMENT  
ENVIRONMENTAL COORDINATOR  
450 110<sup>th</sup> 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. 10-123168-WG, 10-123167-LO  
Project Name/Address: Valentine Slope Stabilization  
842 West Lake Sammamish Pkwy SE  
Planner: Kevin LeClair  
Phone Number: 425-452-2928

**Minimum Comment Period: November 4, 2010**

Materials included in this Notice:

- Blue Bulletin
- Checklist
- Vicinity Map
- Plans
- Other:

**ENVIRONMENTAL CHECKLIST**

4/18/02

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call the Permit Center (425-452-6864) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Our TTY number is 425-452-4636.

**BACKGROUND INFORMATION**

Property Owner: Brian Valentine

Proponent: Brian Valentine

Contact Person: Phaidra Campbell

(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: 1109 First Ave #501, Seattle, WA 98101, campbell@jacobssf.com

Phone: 206-588-8112

Proposal Title: Valentine Slope Stabilization Project

Proposal Location: 842 West Lake Sammamish Parkway SE, Bellevue, WA  
(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: Replace existing rockery with soil nail wall for slope stabilization on the west side of the property.
2. Acreage of site: Approximately 1600 square feet is the proposed wall.
3. Number of dwelling units/buildings to be demolished: 0
4. Number of dwelling units/buildings to be constructed: 0
5. Square footage of buildings to be demolished: 0
6. Square footage of buildings to be constructed: 0
7. Quantity of earth movement (in cubic yards): Approximately 17 cubic yards
8. Proposed land use: Construct a soil nail wall for slope stabilization
9. Design features, including building height, number of stories and proposed exterior materials: Wall will replace the existing rockery, approximately 100 feet long, with a height between 15' and 25', formed to the hillside.
10. Other  
Construction will begin from the top down, removing the rockery as soil nails are placed.

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

We approximate that the project shall be constructed between 2 to 3 weeks, weather permitting. Once the permits have been issued, construction should occur immediately.

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

There will be no future additions, expansions, or further activity connected with this proposal.

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

No environmental information has been prepared for this site. This site is however located on a critical slope.

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.

No.

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.

No.

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
- Clearing & Grading Permit  
Plan of existing and proposed grading  
Development plans
- Building Permit (or Design Review)  
Site plan  
Clearing & grading plan
- Shoreline Management Permit  
Site plan

## A. ENVIRONMENTAL ELEMENTS

### 1. Earth

- a. General description of the site:  Flat  Rolling  Hilly  Steep slopes  Mountains  Other
- b. What is the steepest slope on the site (approximate percent slope)?  
The steepest slope is nearly vertical, however we plan to place soil nails there. The steepest exposed slope is approximately 45%.
- 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.  
Native silty sand. Geologic Unit Qva = Advance Outwash Deposits.

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.  
There is a history of landslides within the area. It is located in a Critical Area because of the steep slope. The purpose of building a soil nail wall is to limit the potential for landslides.
- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.  
Once the rockery is removed, approximately 1000 ft<sup>2</sup> of soil will be removed to obtain the correct batter for the soil nail wall.
- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.  
Yes. Therefore, the contractor is required to replant the cleared slope after construction ceases.
- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?  
Approximately 200 ft<sup>2</sup> of asphalt will be added to the property, because the soil nail wall is thinner than the existing rockery.
- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:  
Use a silt fence at the top of the slope to limit debris and runoff during construction, cover any cleared land with plastic overnight during construction, reseed any cleared area above the slope after construction has been completed. Install straw waddles.

## 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.  
During construction: Dust from clearing the slope, dust from drilling the soil nails, automobile odors from the drill, and potential cement ash during shotcrete application.
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.  
Do not know.
- c. Proposed measures to reduce or control emissions or other impacts to the air, if any:  
The homes will be covered during drilling and shotcrete. The drill will be turned off when not in use and will be turned off when left onsite overnight. During drilling of the soil nails a plywood barrier will be placed around the discharge head to control and limit the dust exposure.

## 3. WATER

### a. Surface

- (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.

Lake Sammamish is east of the project site.

- (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.  
The project site is within 200 feet of Lake Sammamish. It is approximately 140 to 160 feet away, and will not affect the lake.
- (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.  
No fill or dredge material will be placed in or removed from surface water or wetlands.
- (4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.  
Surface water will be diverted on top of the slope during construction by use of berms or perimeter ditches. After construction a drain ditch above the soil nail wall to divert water away from face. Quantities unknown.
- (5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.  
Do not know, but do not think it does.
- (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 discharge of waste materials to surface waters.

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.  
None.

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 so, describe.

The source of runoff would include stormwater and drilling water. This water will flow from the slope above, down the face of the rockery, down the access road. Storm drains are located along the access road.

- (2) Could waste materials enter ground or surface waters? If so, generally describe.  
Grout from the soil nail grout and shotcrete could potentially enter surface waters.

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

Collect the water by berms, earthen dams, and/or sump pumps. water will flow into a collection basin (i.e. baker tank) to settle and then either discharge into storm drain or into a water truck to be recycled as dust control.

4. Plants

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

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- grass
- pasture
- crop or grain
- wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation Ivy and blackberry bushes

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

Ivy and blackberry bushes shall be removed at the location of the soil nail wall. One or two unknown bushes shall be removed as well.

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

Do not know.

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

Once the soil nail wall has been constructed, any location where vegetation was removed and is then exposed will be replanted with local vegetation

## 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:

- Birds: hawk, heron, eagle, songbirds, other: birds fly around Lake Sammamish but  
 Mammals: deer, bear, elk, beaver, other: will not be threatened by the project  
 Fish: bass, salmon, trout, herring, shellfish, other:

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

Do not know.

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

Do not know.

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

Prevent runoff from entering Lake Sammamish and collect shotcrete rebound

## 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.  
Electric energy from the owner's property and fuel will be used during construction.
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.  
No.
- 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:  
All equipment will be shut down when not in use.

## 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.  
None.

- (1) Describe special emergency services that might be required.  
Not applicable.

- (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)?

None.

- (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.

During construction, the drill, other equipment, and contractor traffic would be the only producers of noise. The hours of noise will be from 8am to 6pm.

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

Use equipment that will reduce noise impacts and limit the noise time limits from 8am to 6pm.

## 8. Land and Shoreline Use

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

Private access road-east of wall, wall-south & north, sloped yard-west

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

No.

- c. Describe any structures on the site.

No buildings will be affected by the construction of the wall. There is an existing rockery on the location of the soil nail wall, a single family home to the east of the wall, and a home is above the slope west of the wall.

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

The existing rockery will be demolished.

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

R-3.5 It is also on a Critical Area, Steep Slope, and Shoreline.

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

Place soil nails and remove existing rockery as soil nails are placed.

Top down construction.

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

Do not know.

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

Do not know. Only Critical Area Steep Slope and Shoreline because of the slope.

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

This is not a building.

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

None.

- 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?  
25 feet is the tallest, but it will be worked in with the hillside.
- b. What views in the immediate vicinity would be altered or obstructed?  
None.
- c. Proposed measures to reduce or control aesthetic impacts, if any:  
The soil nail wall will have a colored sculptured face that will mimic the existing rockery that is on the south and north side of the proposed soil nail wall.

## 11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?  
None.
- b. Could light or glare from the finished project be a safety hazard or interfere with views?  
No.

- c. What existing off-site sources of light or glare may affect your proposal?  
None.
- 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?  
None.
- 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.  
Do not know.
- 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.  
The project is located on a private street off of Lake Sammamish Parkway SE. The contractor must use Lake Sammamish Parkway to access the road.
- 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?  
There would be no delineated parking spaces.
- 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).  
Once the wall is completed, the owner will improve the existing road within his property. This is a private road.
- 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.  
The trips will be the same as before the project was completed. The peak volumes occur in the morning and evening.
- g. Proposed measures to reduce or control transportation impacts, if any:  
Not applicable. The road is only used by local residents who live on the private road.

**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, 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.  
No utilities are proposed for the project.

**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.....

**VALENTINE RESIDENCE**  
**SOIL NAIL WALL**

**PREPARED FOR:**

VALENTINE  
 842 W. LAKE SAMMAMISH PARKWAY SE  
 BELLEVUE, WA 98009

**PREPARED BY:**

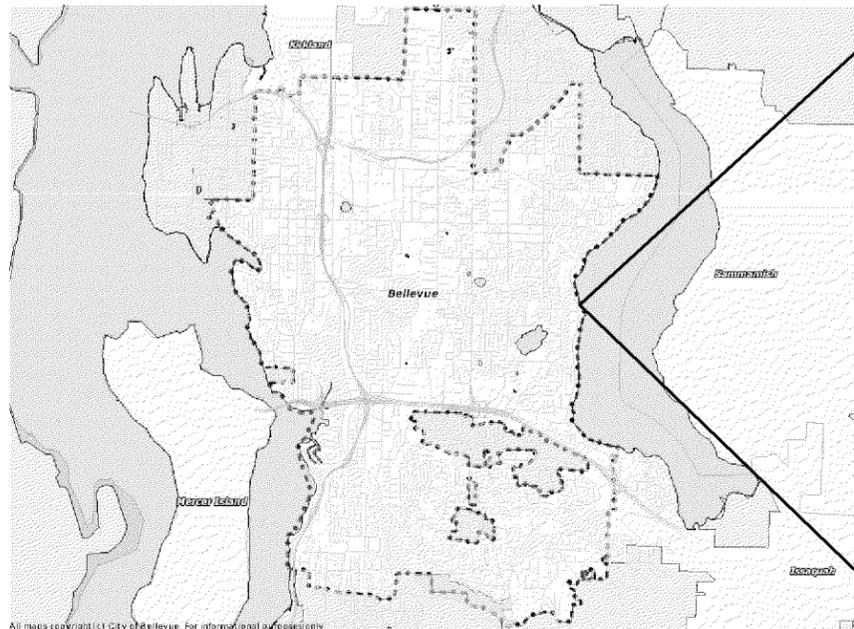
JACOBS ASSOCIATES  
 1109 FIRST AVENUE, SUITE 501  
 SEATTLE WASHINGTON, 98101-2963

**DRAWING INDEX**

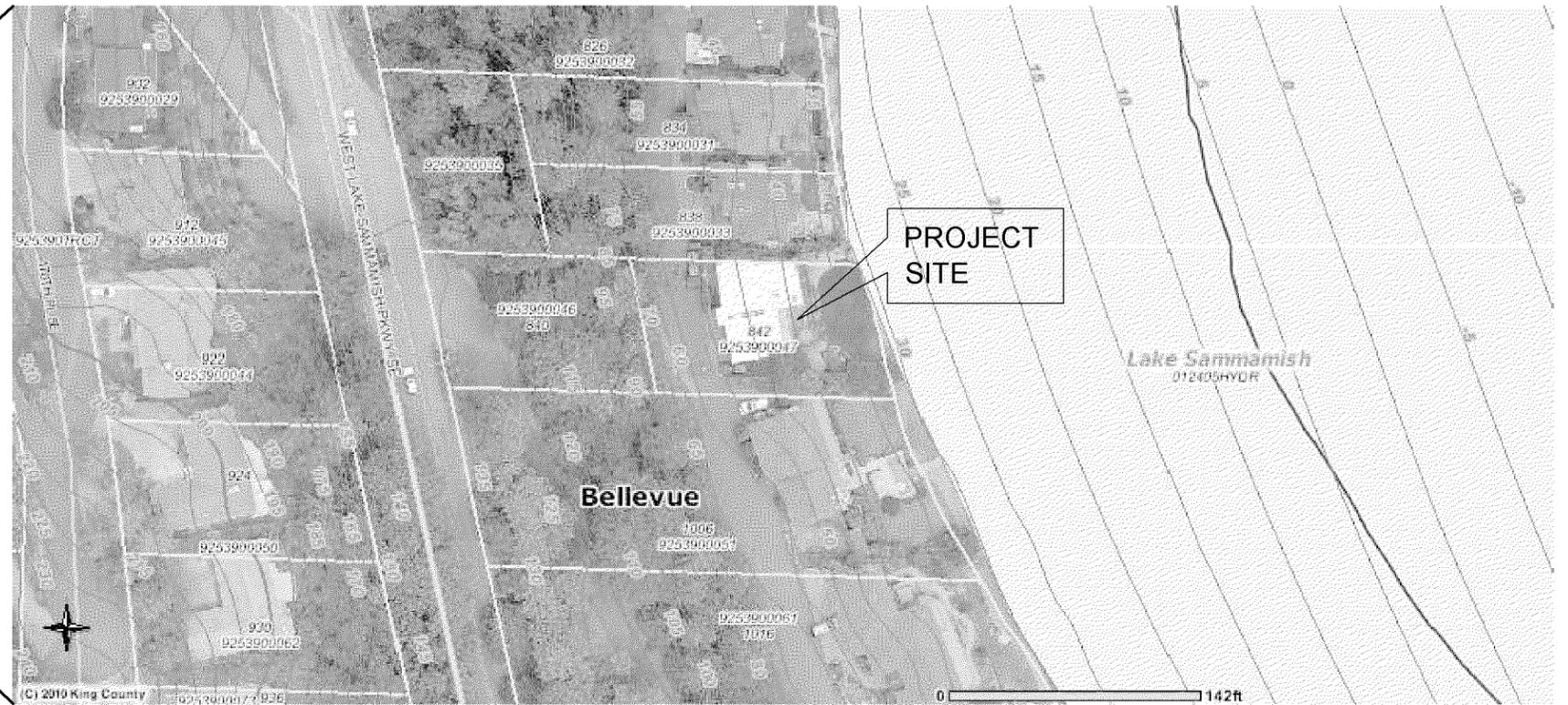
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|-----------------------|---------------------|--|
| COB-U01               | 1                   | COVER SHEET                            |
| COB-U02               | 2                   | VICINITY MAP                           |
| COB-U03               | 3                   | SITE MAP                               |
| COB-U04               | 4                   | SOIL NAIL WALL - PROFILES AND SECTIONS |
| COB-U05               | 5                   | DETAILS                                |
| COB-U06               | 6                   | TESC                                   |
| COB-U07               | 7                   | NOTES                                  |
| COB-U08               | 8                   | ASPHALT PLAN                           |

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|     |          |    |      |  |  | DESIGNED: PDC       | CHECKED: FP | <b>VALENTINE RESIDENCE SOIL NAIL WALL</b><br>842 W. LAKE SAMMAMISH PARKWAY SE<br>BELLEVUE, WASHINGTON<br><br>COVER | DATE: AUGUST-2010 |
|     |          |    |      |   |  | DRAWN: DJL          | SCALE: NTS  |  | JOB NO: 4211.0    |
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| No. | REVISION | BY | APPD |   |  | SHEET NO: 1 OF 7    |             |  |                   |



# BELLEVUE



PROJECT SITE

## PROJECT VICINITY

NTS



SITE MAPS PROVIDED BY CITY OF BELLEVUE GIS BROWSER  
<http://www.nwmaps.net/bellevue/MapDirect.aspx?CMD=ZOOMPARCEL&CITY=BELLEVUE&PARCEL=9253900047>

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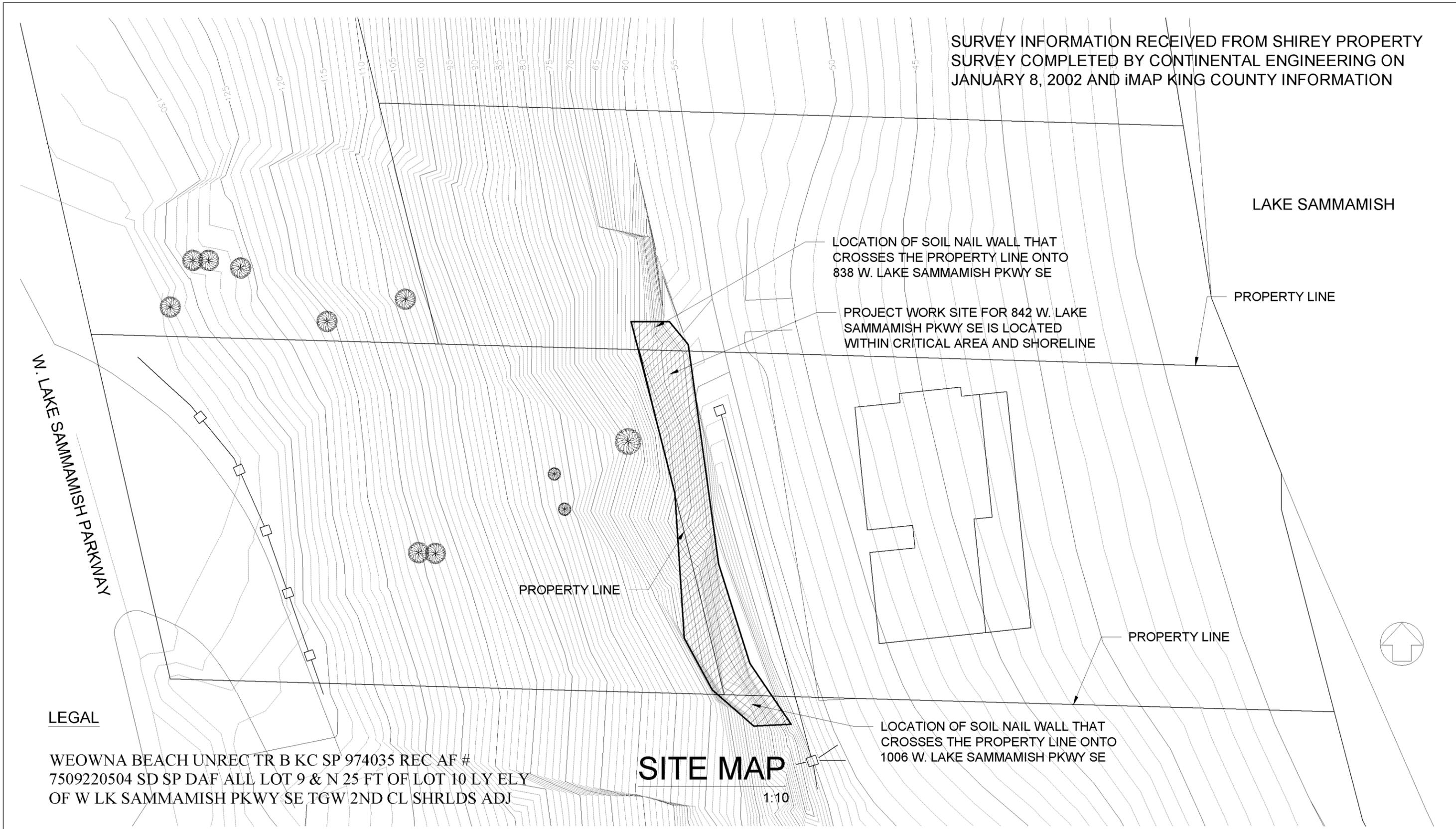
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| DRAWN:<br>PDC    | SCALE:<br>NTS  |
| APPROVED:<br>FP  |                |

**VALENTINE RESIDENCE SOIL NAIL WALL**  
 842 W. LAKE SAMMAMISH PARKWAY SE  
 BELLEVUE, WASHINGTON

VICINITY MAP

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| DATE        | AUGUST-2010 |
| JOB NO.     | 4211.0      |
| DRAWING NO. | COB-U02     |
| SHEET NO.   | 2 OF 7      |

SURVEY INFORMATION RECEIVED FROM SHIREY PROPERTY SURVEY COMPLETED BY CONTINENTAL ENGINEERING ON JANUARY 8, 2002 AND I MAP KING COUNTY INFORMATION



N. LAKE SAMMAMISH PARKWAY

LEGAL

WEOWNA BEACH UNREC TR B KC SP 974035 REC AF #  
7509220504 SD SP DAF ALL LOT 9 & N 25 FT OF LOT 10 LY ELY  
OF W LK SAMMAMISH PKWY SE TGW 2ND CL SHRLDS ADJ

**SITE MAP**

1:10

Path: I:\211 Valentine residence\CADISH File name: 03 SITE MAP Plot date: Aug 13, 2010 02:15:22pm CAD User: jacobshuk  
Xref File name: | ID FRAME | ES-from-SHIREY |

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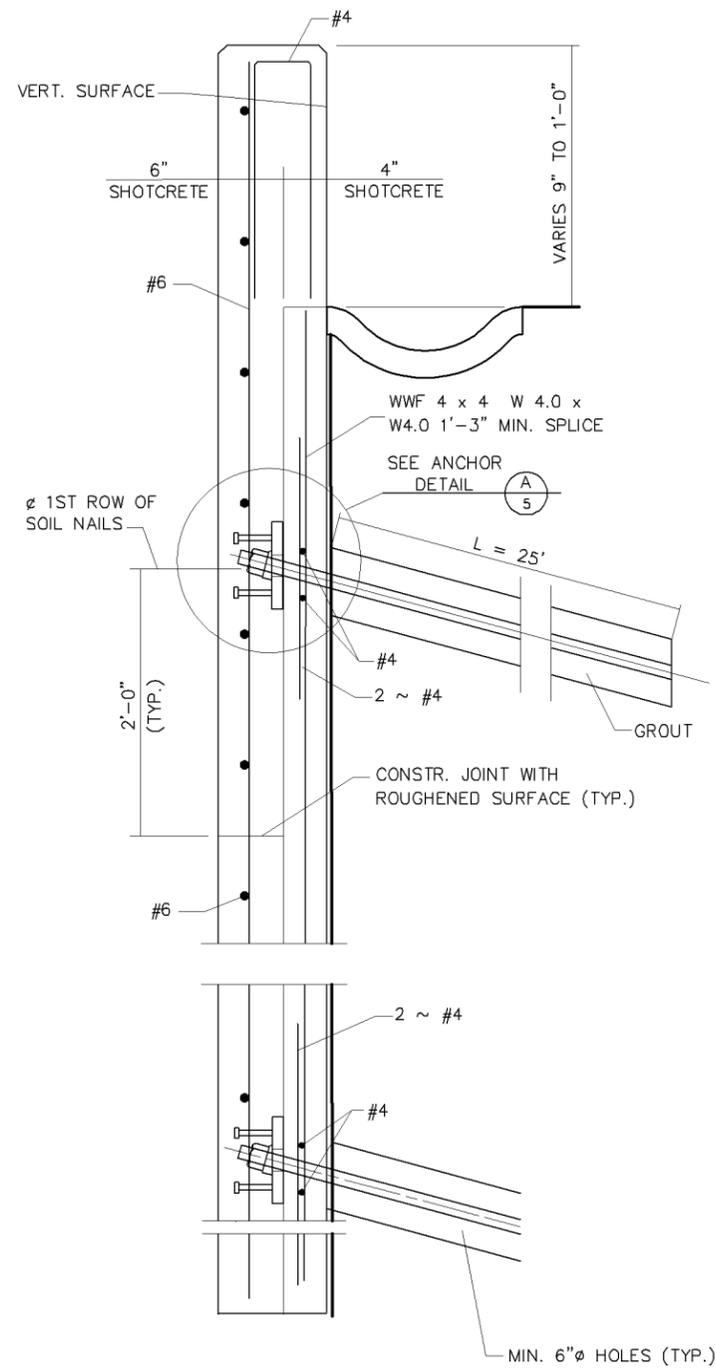


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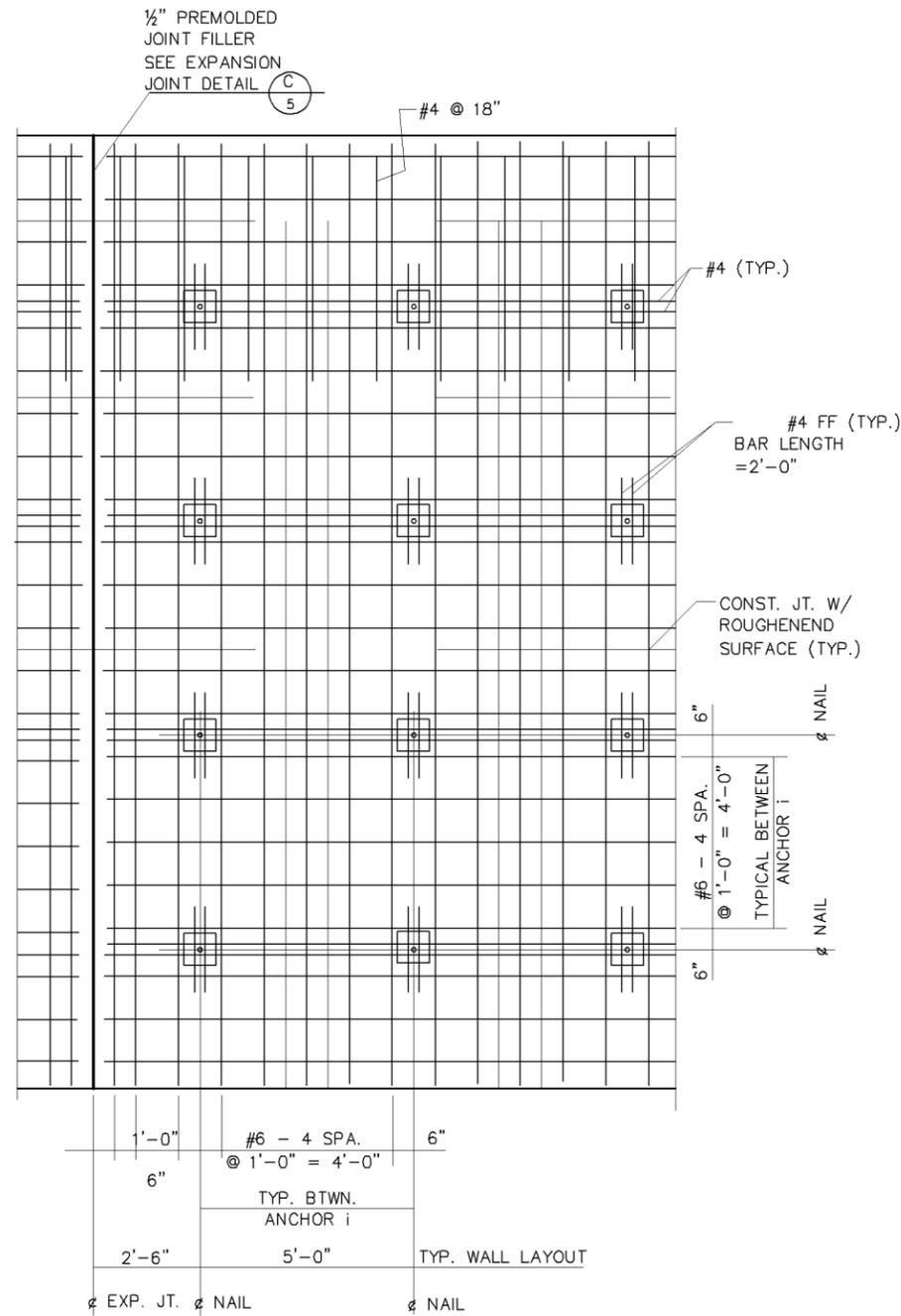
**VALENTINE RESIDENCE SOIL NAIL WALL**  
842 W. LAKE SAMMAMISH PARKWAY SE  
BELLEVUE, WASHINGTON  
  
SITE MAP

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| SHEET NO.:   | 3 OF 7      |

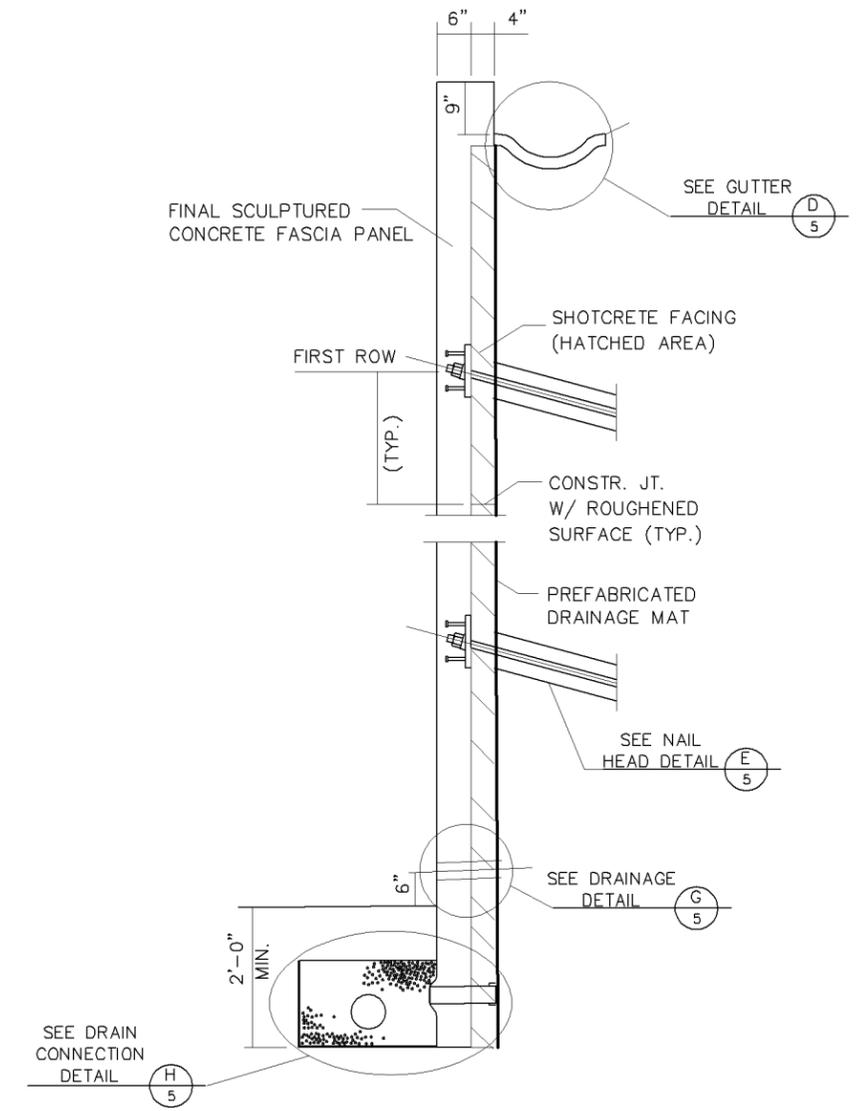
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1 PROFILE OF SOIL NAIL WALL Scale: NTS



2 FACIA WALL REINFORCEMENT Scale: NTS



3 TYPICAL SECTION OF SOIL NAIL WALL Scale: NTS

| No. | REVISION | BY | APPD |
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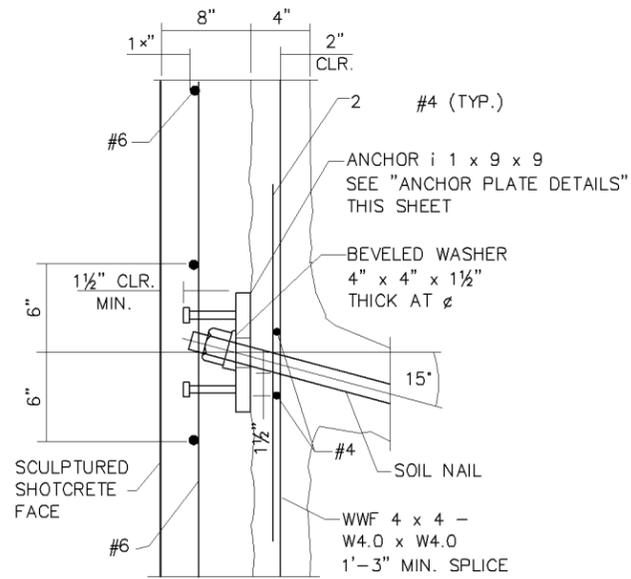


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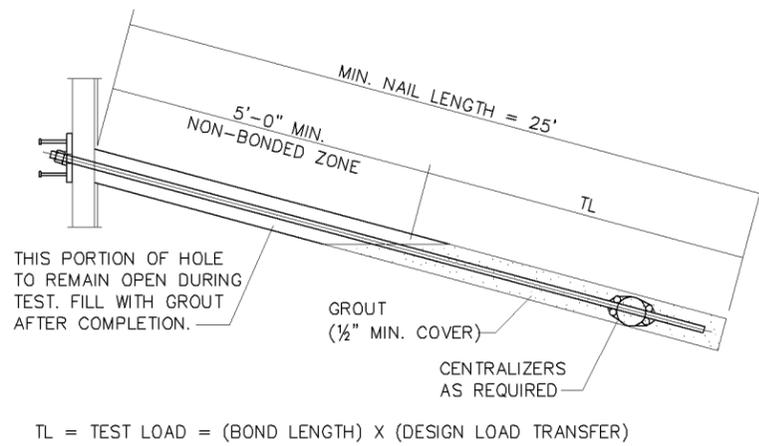
**VALENTINE RESIDENCE SOIL NAIL WALL**  
 842 W. LAKE SAMMAMISH PARKWAY SE  
 BELLEVUE, WASHINGTON

**SOIL NAIL WALL  
 PROFILES AND SECTIONS**

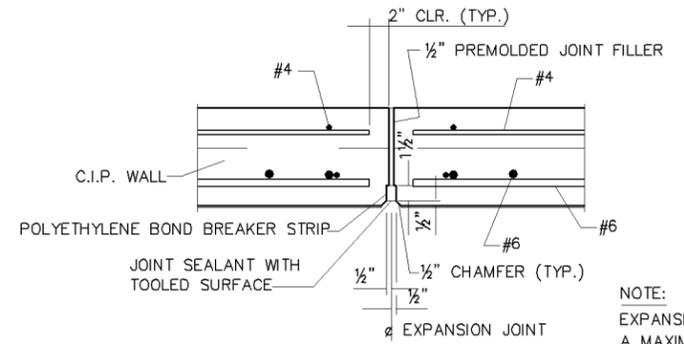
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| SHEET NO.:   | 4 OF 7      |



**A ANCHOR DETAIL**  
Scale: NTS

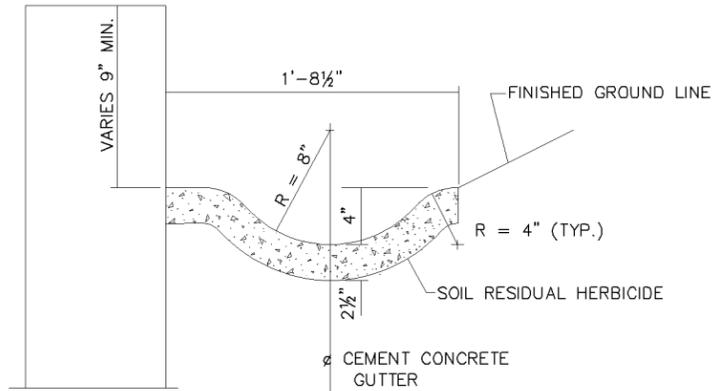


**B TEST NAIL DETAIL**  
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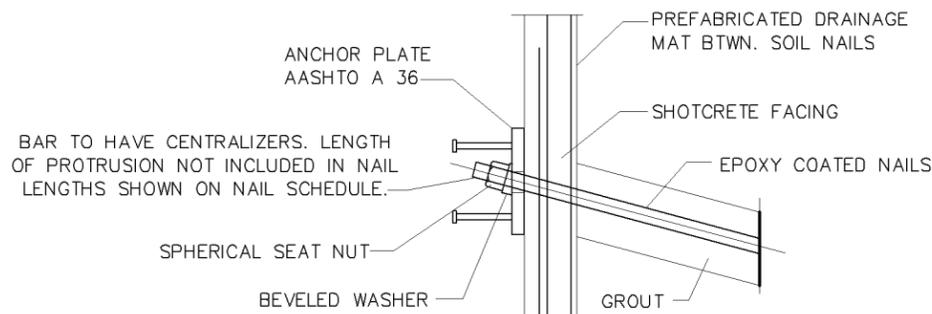


NOTE:  
EXPANSION JOINTS TO BE LOCATED AT  
A MAXIMUM SPACING OF 24'-0" C. TO C.,  
CENTERED BETWEEN NAILS, EXCEPT IF  
THE JOINT IS WITHIN 1'-6" OF A STEP AT  
THE TOP OF WALL, THE JOINT IS TO BE  
LOCATED AT THAT STEP.

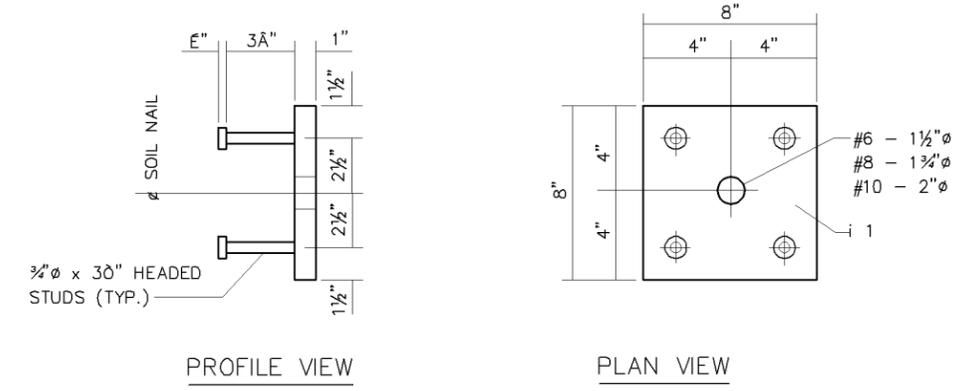
**C EXPANSION JOINT DETAIL**  
Scale: NTS



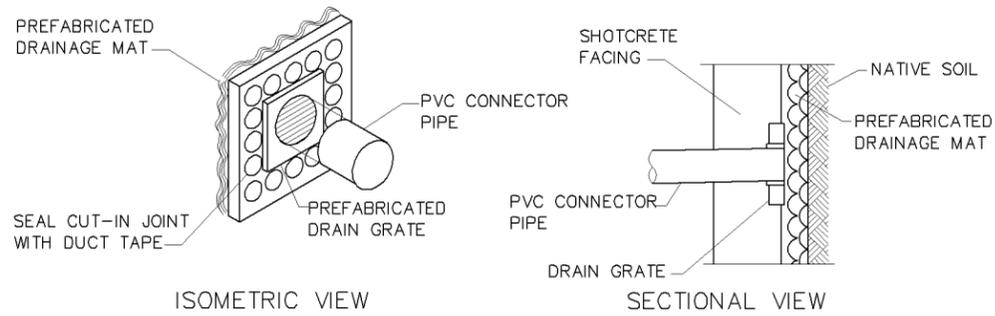
**D GUTTER DETAIL**  
Scale: NTS



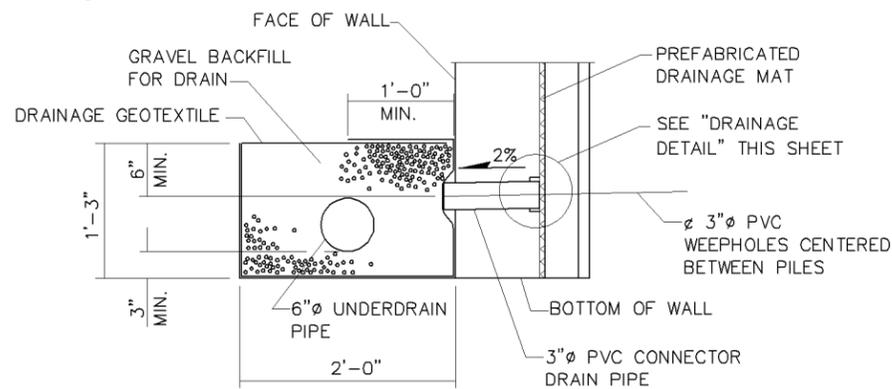
**E NAIL HEAD DETAIL**  
Scale: NTS



**F ANCHOR PLATE DETAILS**  
Scale: NTS



**G DRAINAGE DETAIL**  
Scale: NTS



**H DRAIN CONNECTION DETAIL**  
Scale: NTS

Path: I:\1211 Valentine residence\ACADISH File name: 05 DETAILS Plot date: Aug 13, 2010-02:15:43pm CAD User: jacobchuk  
Xref File name: | ID FRAME |

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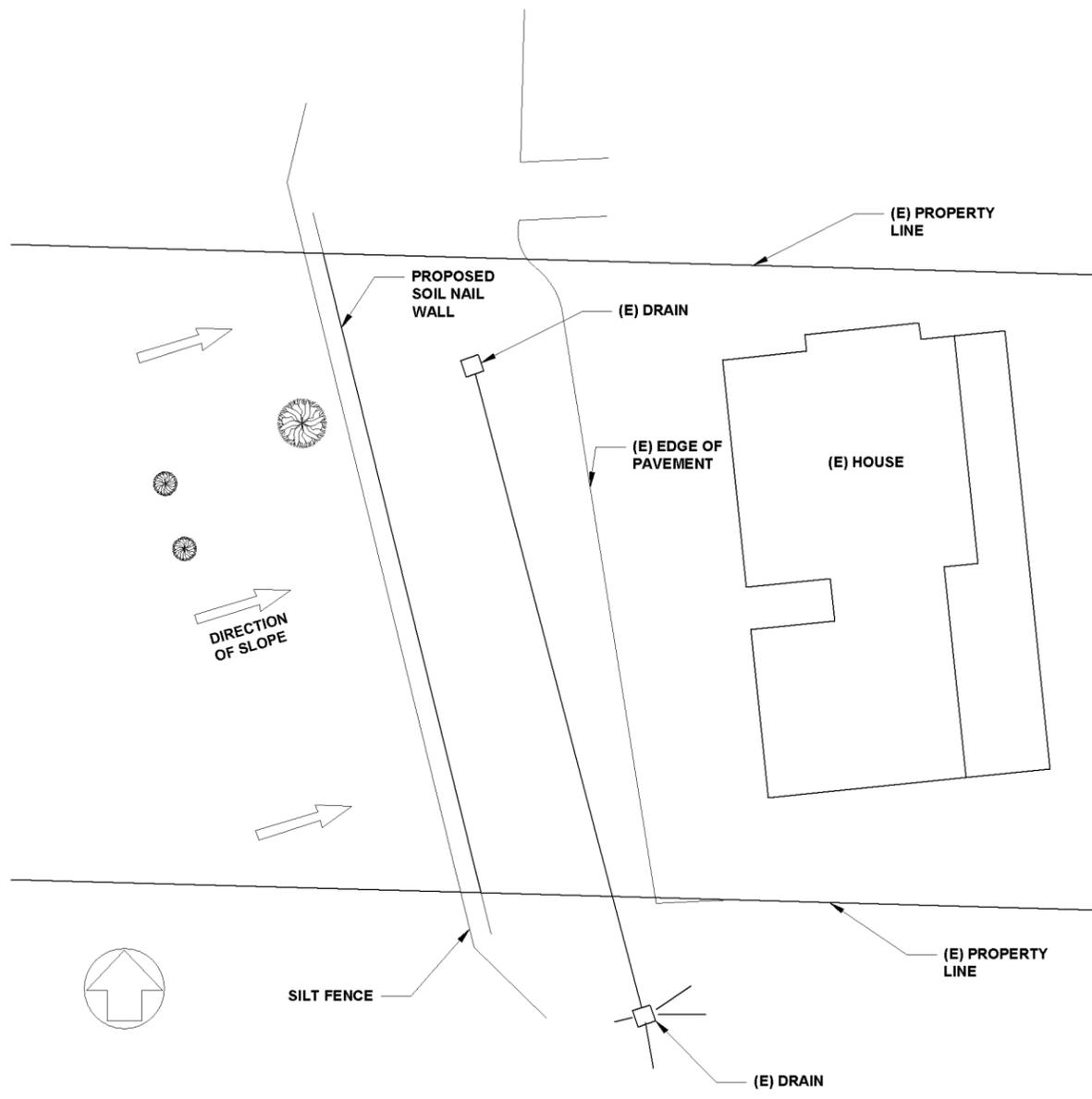
**JACOBS ASSOCIATES**  
Engineers/Consultants

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**VALENTINE RESIDENCE SOIL NAIL WALL**  
BELLEVUE, WASHINGTON  
842 W. LAKE SAMMAMISH PARKWAY SE  
**DETAILS**

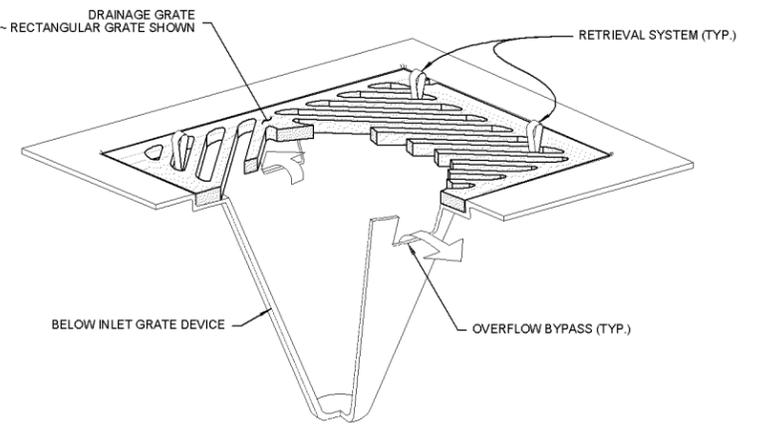
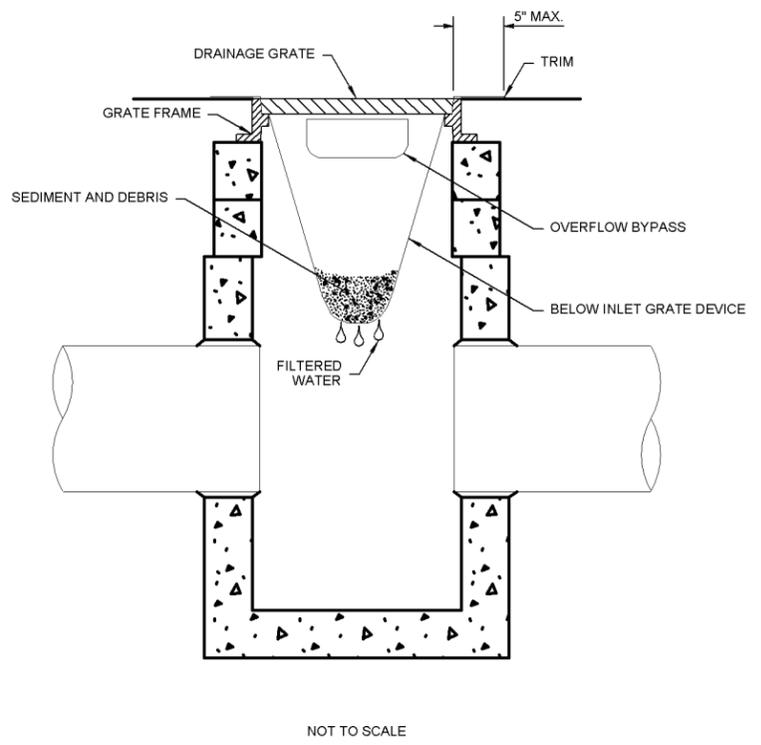
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| JOB NO.:     | 4211.0      |
| DRAWING NO.: | COB-U05     |
| SHEET NO.:   | 5 OF 8      |

**SITE PLAN WITH TESC ELEMENTS**



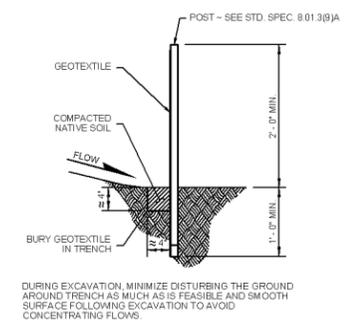
1 SITE PLAN WITH TESC Scale: NTS

**STORM DRAIN INLET PROTECTION**

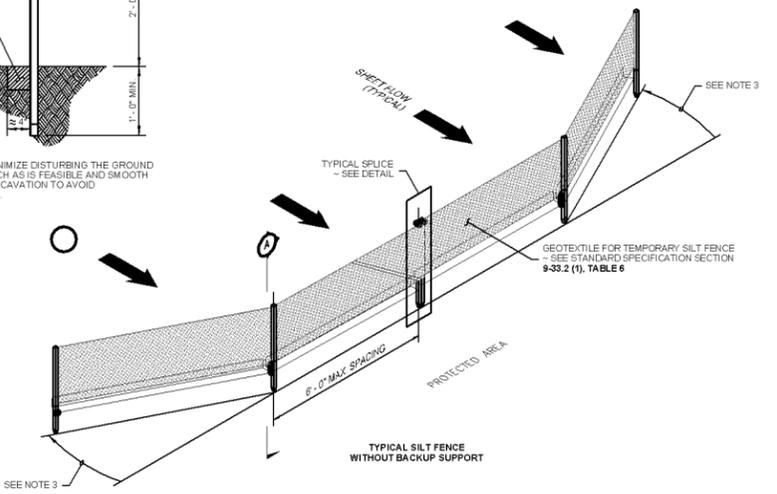


- NOTES:
1. SIZE THE BELOW INLET GRATE DEVICE (BIGD) FOR THE STORM WATER STRUCTURE IT WILL SERVICE.
  2. THE BIGD SHALL HAVE A BUILT-IN HIGH-FLOW RELIEF SYSTEM (OVERFLOW BYPASS).
  3. THE RETRIEVAL SYSTEM MUST ALLOW REMOVAL OF THE BIGD WITHOUT SPILLING THE COLLECTED MATERIAL.
  4. PERFORM MAINTENANCE IN ACCORDANCE WITH STANDARD SPECIFICATION 8-01.3(15)

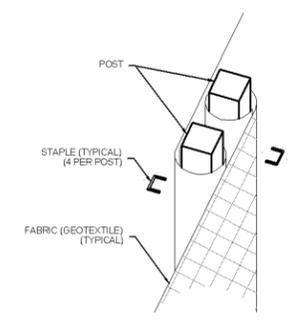
**SILT FENCE**



DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE AND SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENTRATING FLOWS.



1. Maximize detention of stormwater by placing fence as far away from toe of slope as possible without encroaching on sensitive areas or outside of the clearing boundaries.
2. Install silt fencing along contours.
3. Install the ends of the silt fence to point slightly up-slope to prevent sediment from flowing around the ends of the fence.
4. Perform maintenance in accordance with Standard Specifications 8.01.3(9)A and 8.01.3(15).



SPLICED FENCE SECTIONS SHALL BE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP. JOINING SECTIONS SHALL NOT BE PLACED IN LOW SPOTS OR IN SUMP LOCATIONS.

Path: I:\4211 Valentine residence\ACAD\ISH File name: 06 TESC Plot date: Aug 13, 2010 02:16:03pm CAD User: jacobdhuk Xref File name: 1.D FRAME | ES-from-SHREY |

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**JACOBS ASSOCIATES**  
Engineers/Consultants

|           |     |          |          |
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| DESIGNED: | PDC | CHECKED: | FP       |
| DRAWN:    | DJL | SCALE:   | AS NOTED |
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**VALENTINE RESIDENCE SOIL NAIL WALL**  
842 W. LAKE SAMMAMISH PARKWAY SE  
BELLEVUE, WASHINGTON

TESC

|              |             |
|--------------|-------------|
| DATE:        | AUGUST-2010 |
| JOB NO.:     | 4211.0      |
| DRAWING NO.: | COB-U06     |
| SHEET NO.:   | 6 OF 7      |

DRAWN BY: LISA CYFORD

SHOTCRETE NOTES

1. THE WORK COVERED BY THIS SECTION CONSISTS OF FURNISHING ALL LABOR, PLANT, EQUIPMENT, MATERIALS, AND PERFORMING ALL WORK REQUIRED TO PLACE SHOTCRETE AS SLOPE STABILIZATION AS PART OF THE SOIL NAIL WALL CONSTRUCTION OPERATIONS. SHOTCRETE MIX PREPARED BY AN OFF-SITE BATCH PLANT (BAGGED OR TRANSIT MIX) SHALL BE ACCOMPANIED BY A BATCH CERTIFICATE STATING WEIGHTS OF THE MATERIALS PRESENT IN THE MIX. FIBER REINFORCED MICROSILICA SHOTCRETE (FRMS) BATCHED AND APPLIED BY THE WET MIX METHOD SHALL BE USED FOR THE FIRST 8 INCHES AND SHOTCRETE BATCHED FOR SCULPTURING THE FACE OF THE SOIL NAIL WALL SHALL BE USED FOR THE LAST 4 INCHES.
2. FINE AGGREGATE SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN ASTM C33 AND ASTM C289, AND IS FROM A WSDOT APPROVED SOURCE. THE COMBINED GRADATION OF THE FINE AND COARSE AGGREGATE SHALL MEET THE FOLLOWING GRADING REQUIREMENTS:  

| sieve size | % PASSING BY WEIGHT |
|------------|---------------------|
| 3/8"       | 100                 |
| NO. 4      | 95-100              |
| NO. 8      | 68-86               |
| NO. 16     | 47-65               |
| NO. 30     | 27-42               |
| NO. 50     | 9-20                |
| NO. 100    | 0-7                 |
| NO. 200    | 0-2.5               |
3. TYPE I OR II, CONFORMING TO ASTM C150 AND ASTM C1116, PREPACKAGED CEMENT MAY BE USED FOR SHOTCRETE. CEMENT CERTIFICATES SHALL BE FURNISHED FOR PREPACKAGED CEMENT AND APPROVED BY THE ENGINEER PRIOR TO ITS USE. CEMENT SHALL BE STORED IN A DRY PLACE AND USED WITHIN 6 MONTHS OF ITS MANUFACTURE. BROKEN PACKAGES AND PACKAGES SUBJECT TO MOISTURE SHALL NOT BE USED IN THE PRODUCTION OF SHOTCRETE.
4. WATER USED IN MIXING SHOTCRETE SHALL BE FREE OF DELETERIOUS SUBSTANCE. IF POTABLE WATER IS NOT USED, THE CONTRACTOR SHALL FURNISH TEST ON THE WATER SUPPLY INDICATING ITS COMPATIBILITY WITH THE REQUIREMENTS OF THE SHOTCRETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH THE WATER USED IN THE SHOTCRETE OPERATIONS, INCLUDING BATCHING, CLEANING, AND CURING ACTIVITIES.
5. ADMIXTURES SUCH AS ACCELERATORS, PLASTICIZERS, AND MICROSILICA SHALL REQUIRE MANUFACTURER'S CERTIFICATES PRIOR TO THEIR USE ON THE PROJECT. COMPATIBILITY OF THE ADMIXTURES WITH THE CEMENT SHALL BE DEMONSTRATED TO THE ENGINEER BY THE CONTRACTORS. ACCELERATOR SHALL BE IN LIQUID FORM AND ONLY AIR DRYING (NON CAUSTIC) TYPE MAY BE USED.
6. FIBERS SHALL BE STEEL WITH A TENSILE YIELD STRENGTH OF AT LEAST 150,000 PSI, A LENGTH OF 1-INCH OR GREATER, AN ASPECT RATIO GREATER THAN 40, AND CONFORM TO ASTM A820 TYPE 1. FIBERS SHALL BE OF THE DEFORMED-END TYPE, NOVOCON "NOVOTEX" OR EQUIVALENT. STRAIGHT FIBERS SHALL NOT BE USED.
7. SHOTCRETE MIX SHALL CONTAIN AT LEAST 7.5 BAGS OF CEMENT/FLYASH, 100 POUNDS OF FIBER, AND BETWEEN 10% AND 15% BY CEMENT WEIGHT OF MICROSILICA PER CUBIC YARD OF BATCHED MATERIAL.
8. ALL SHOTCRETE SHALL BE PLACED IN THE PRESENCE OF THE ENGINEER.
9. THE MAXIMUM THICKNESS OF ANY LAYER SHALL BE 4 INCHES. LESSER THICKNESS MAY BE REQUIRED TO AVOID FALLOUTS AND EXCESSIVE REBOUND. SUCCESSIVE LAYERS USED TO BUILD UP THE REQUIRED THICKNESS SHALL BE APPLIED NO SOONER THAN 15 MINUTES AFTER THE PREVIOUS LAYER. MINIMUM TOTAL THICKNESS OF THE WALL IS 12 INCHES. GREATER THICKNESS MAY BE REQUIRED BY THE ENGINEER IN AREAS OF UNSTABLE GROUND OR UNEVEN SLOPE SURFACE.
10. SUFFICIENT AIR PRESSURE AT THE NOZZLE IS REQUIRED TO COMPACT THE SHOTCRETE ONTO THE WALL OR CUT SLOPE SURFACE.
11. SHOTCRETE NOZZLE SHALL BE POSITIONED BETWEEN 5 AND 8 FEET FROM THE SURFACE TO BE COVERED.
12. THE TEMPERATURE OF THE SURFACE TO RECEIVE THE SHOTCRETE SHALL NOT BE LESS THAN 40 DEGREES.
13. SHOTCRETE PLACEMENT SHALL PROCEED FROM THE BOTTOM OF THE EXPOSED SLOPE UPWARD IN ORDER TO AVOID ENCASING REBOUND.
14. DEFECTIVE AREAS OF SHOTCRETE SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
15. ALL SURFACES, INCLUDED PREVIOUS SHOTCRETE LAYERS, SHALL BE CLEANED WITH HIGH-PRESSURE AIR OR WATER PRIOR TO THE APPLICATION OF SHOTCRETE IF THE SURFACES HAVE ACCUMULATIONS OF MUD, LOOSE, OR OTHER DELETERIOUS MATERIAL.
16. THE REQUIRED COMPRESSIVE STRENGTH DEVELOPMENT SHALL BE 3000 PSI IN SEVEN (7) DAYS AND 4000 PSI MINIMUM IN TWENTY-EIGHT (28) DAYS UNLESS OTHERWISE INDICATED IN THE PLANS.
17. CAUSTICITY OF CEMENT AND ACCELERATING ADMIXTURE MAY CAUSE SKIN AND RESPIRATORY IRRITATION UNLESS SAFETY MEASURES ARE TAKEN IN ADDITION TO PROVIDING ADEQUATE VENTILATION. ALL PERSONNEL IN THE AREA OF THE SHOTCRETE PLACEMENT SHALL WEAR APPROVED SAFETY GLASSES WITH SIDE SHIELDS, RESPIRATORS, GLOVES, HARD HATS, SAFETY BOOTS, AND PROTECTIVE CLOTHING.
18. CONTRACTOR QUALIFICATION
  - a. SHOTCRETE SHALL BE PLACED BY PERSONNEL EXPERIENCED IN THE APPLICATION OF SHOTCRETE ON STEEP SLOPES, AND OF THE TYPE OF SHOTCRETE ACTUALLY USED ON THE PROJECT (FRMS APPLIED AS WET MIX).
  - b. THE SHOTCRETE FOREMAN SHALL HAVE AT LEAST 5 YEARS OF DEMONSTRABLE EXPERIENCE IN THE PLACEMENT OF WET MIX SHOTCRETE.
  - c. THE NOZZLEMAN SHALL HAVE AT LEAST 2 YEARS OF DEMONSTRABLE EXPERIENCE IN THE PLACEMENT OF WET MIX SHOTCRETE.
  - d. THE SHOTCRETE CREW SHALL DEMONSTRATE PROFICIENCY IN THE PLACEMENT OF SHOTCRETE TO THE SATISFACTION OF THE ENGINEER.

19. TESTING

- a. PRE-PRODUCTION CORES SHALL BE TAKEN FROM SHOTCRETE PLACED AGAINST WOOD TESTING PANELS USING THE PRODUCTION MIX. TESTS SHALL BE PERFORMED AT 3 AND 28 DAYS BY AN APPROVED LABORATORY FOR SUCH TESTING. CORES SHALL BE MINIMUM 2-INCH DIAMETER AND A LENGTH/DIAMETER RATIO OF 2 OR GREATER, AND TAKEN NO SOONER THAN 3 DAYS AFTER PLACEMENT OF THE SHOTCRETE. CORES SHALL BE TESTED IN ACCORDANCE WITH ASTM C42 AND C39.
  - b. THE CONTRACTOR SHALL OBTAIN STRENGTH TESTS (ONE TEST CONSISTING OF 2 CORES PER 20 CUBIC YARDS) OF SHOTCRETE CORED FROM THE PRODUCTION WORK, USING THE SAME METHODS AND TESTING LABORATORY AS IN THE PRE-PRODUCTION TESTING.
20. SHOTCRETE COLOR AND SCULPTURING: MATCH EXISTING ROCKERY WALL ON EITHER SIDE OF THE SOIL NAIL WALL.

SOIL NAIL ANCHOR "DOWEL" NOTES

1. THE WORK SHALL CONSIST OF CONSTRUCTING PERMANENT ANCHORS, AND INSULATION AS SPECIFIED HEREIN AND SHOWN ON THE PLANS.
2. THE TERM "ANCHOR" AS USED IN THESE SPECIFICATIONS IS INTENDED AS A GENERIC TERM AND REFERS TO A REINFORCING BAR GROUTED INTO A DRILLED HOLE INSTALLED IN ANY TYPE OF GROUND. BAR SHALL BE AN EPOXY COATED, #11 GRADE 75 THREAD BAR (2") PLACED IN A DRILLED HOLE USING CENTERING ELEMENTS EVERY 10 FEET.
3. GROUT SHALL BE A NEAT OR SAND/CEMENT MIXTURE WITH A MINIMUM TWENTY-EIGHT (28) DAY COMPRESSIVE STRENGTH OF AT LEAST 3000 PSI IN ACCORDANCE WITH ASTM C-109. ANCHOR DOWEL GROUT SHALL BE TESTED BY THE CONTRACTOR IN ACCORDANCE WITH ASTM C109/AASHTO T106 AT A FREQUENCY OF NO LESS THAN ONE TEST FOR EVERY 10 CUBIC YARD OR GROUT PLACED OR ONCE PER WEEK, WHICHEVER RESULTS IN THE GREATER NUMBER OF TESTS.
4. CEMENT SHALL BE ASTM C150, TYPE I OR II.
5. FINE AGGREGATE SHALL BE CLEAN, NATURAL SAND, ASTM C33. ARTIFICIAL OR MANUFACTURED SAND IN ACCEPTABLE PROVIDED IT IS SUITABLE FOR PUMPING IN ACCORDANCE WITH ACI 304.4.2.
6. BAR COUPLERS SHALL DEVELOP THE FULL ULTIMATE TENSILE STRENGTH OF THE BAR AS CERTIFIED BY THE MANUFACTURER.
7. SOLID BARS SHALL BE ASTM A615, FOR GRADE 60 OR 75, ASTM A722 FOR GRADE 150 CONTINUOUS, WITHOUT SPICES OR WELDS, DEFORMED CONTINUOUS THREADBAR OR THREADED AT LEAST 6 INCHES ON ONE END, NEW STRAIGHT, UNDAMAGED, EPOXY COATED OR ENCAPSULATED (UNLESS ALTERED BY THE ENGINEER) AS SHOWN ON THE PLANS. IF THREADS ARE CUT INTO A REINFORCING BAR, THE NEXT LARGER BAR NUMBER DESIGNATION FROM THAT SHOWN ON THE PLANS SHALL BE USED AT NO ADDITIONAL COST TO THE OWNER.
8. BEARING PLATES SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A36.
9. NUTS SHALL MEET AASHTO M291, GRADE B, HEXAGONAL FITTED WITH BEVELED WASHER OR SPHERICAL SEAT TO PROVIDE UNIFORM BEARING.
10. ANCHORS SHALL BE INSTALLED PRIOR TO THE APPLICATION OF SHOTCRETE AT THE LOCATIONS AND TO THE LENGTHS INDICATED ON THE PLANS. THE ENGINEER MAY ADD, ELIMINATE, OR RELOCATE ANCHOR DOWELS TO ACCOMMODATE ACTUAL FIELD CONDITIONS. MODIFICATIONS TO THE DESIGN RESULTING FROM ACTIONS OF THE CONTRACTOR SHALL BE DETERMINED BY THE ENGINEER.
11. THE CONTRACTOR SHALL IMMEDIATELY SUSPEND DRILLING OPERATIONS IF GROUND SUBSIDENCE IS OBSERVED. IF THE ANCHOR WALL IS ADVERSELY AFFECTED, OR IF ADJACENT STRUCTURES ARE DAMAGED AS A RESULT OF THE DRILLING OPERATION. THE ADVERSE CONDITIONS SHALL BE STABILIZED IMMEDIATELY AND THE ENGINEER SHALL BE NOTIFIED OF SUCH CONDITIONS WITHIN 24 HOURS.
12. GROUT EQUIPMENT SHALL PRODUCE A UNIFORMLY MIXED GROUT, FREE OF LUMPY AND UNDISPERSED CEMENT. A POSITIVE DISPLACEMENT GROUT PUMP SHALL BE USED.
13. THREE (3) PERCENT OF THE NUMBER OF PRODUCTION NAILS SHALL BE VERIFICATION TESTED. THEY SHALL BE PERFORMED AT THE LOCATIONS SELECTED BY THE CONTRACTOR AND APPROVED BY THE OWNER'S REPRESENTATIVE. FIVE (5) PERCENT OF THE NUMBER OF PRODUCTION NAILS SHALL BE PROOF TESTED. THEY SHALL BE PERFORMED AT LOCATED SELECTED BY THE OWNER'S REPRESENTATIVE. ALL RECORDED TEST DATA SHALL BE RECORDED BY THE OWNER'S REPRESENTATIVE, UNLESS APPROVED OTHERWISE. PULLOUT TESTING OF ANCHOR DOWELS SHALL NOT BE PERFORMED UNTIL THE ANCHOR DOWEL GROUT HAS ATTAINED AT LEAST 33 PERCENT OF THEIR SPECIFIED 28-DAY COMPRESSIVE STRENGTHS.
14. TESTING EQUIPMENT SHALL INCLUDE TWO DIAL GAUGES, A DIAL GAUGE SUPPORT, JACK AND PRESSURE GAUGE, A PUMP, AND A REACTION FRAME.
  - a. A MINIMUM OF TWO DIAL GAUGES CAPABLE OF MEASURING 0.001-INCH SHALL BE AVAILABLE AT THE SITE TO MEASURE THE ANCHOR DOWEL MOVEMENT, THE DIAL GAUGES SHALL HAVE A MINIMUM TRAVEL SUFFICIENT TO ALLOW THE TEST TO BE PERFORMED WITHOUT RE-SETTING THE DIAL GAUGE. THE DIAL GAUGES SHALL BE ALIGNED WITHIN 5 DEGREES OF THE AXIS OF THE ANCHOR DOWEL AND SHALL BE SUPPORTED INDEPENDENT OF THE JACKING SET-UP AND THE WALL. A HYDRAULIC JACK, PRESSURE GAUGE, AND PUMP SHALL BE USED TO APPLY AND MEASURE THE TEST LOAD. THE CONTRACTOR SHALL PROVIDE RECENT CALIBRATION CURVES IN ACCORDANCE WITH THE SUBMITTALS SECTION.
  - b. THE JACK AND PRESSURE GAUGE SHALL BE CALIBRATED BY AN INDEPENDENT TESTING LABORATORY AS A UNIT. THE PRESSURE GAUGE SHALL BE GRADUATED IN 100 PSI. INCREMENTS OR LESS AND SHALL HAVE A RANGE NOT EXCEEDING TWICE THE ANTICIPATED MAXIMUM PRESSURE DURING TESTING UNLESS APPROVED OTHERWISE BY THE ENGINEER. THE RAM TRAVEL OF THE JACK SHALL BE SUFFICIENT TO ENABLE THE TEST TO BE

PERFORMED WITHOUT RE-SETTING THE JACK. THE JACK SHALL BE CAPABLE OF APPLYING EACH TEST LOAD INCREMENT IN LESS THAN 1 MINUTE.

- c. THE JACK SHALL BE INDEPENDENTLY SUPPORTED AND CENTERED OVER THE ANCHOR DOWEL SO THAT THE ANCHOR DOWEL DOES NOT CARRY THE WEIGHT OF THE JACK. THE STRESSING EQUIPMENT SHALL BE PLACED OVER THE ANCHOR DOWEL IN SUCH A MANNER THAT THE JACK, BEARING PLATES, AND STRESSING ANCHORAGE ARE IN ALIGNMENT. THE JACK SHALL BE POSITIONED AT THE BEGINNING OF THE TEST SUCH THAT UNLOADING AND REPOSITIONING OF THE JACK DURING THE TEST WILL NOT BE REQUIRED.
- d. THE REACTION FRAME SHALL BE SUFFICIENTLY RIGID AND OF ADEQUATE DIMENSION SUCH THAT EXCESSIVE DEFORMATION OF THE TEST APPARATUS DURING REPOSITIONING OF ANY COMPONENTS DOES NOT OCCUR DURING TESTING. WHERE THE REACTION FRAME BEARS DIRECTLY ON THE SHOTCRETE FACING, THE REACTION FRAME SHALL BE DESIGNED TO PREVENT FRACTURE OF THE SHOTCRETE.

15. THE ALLOWABLE BAR LOAD DURING TESTING SHALL NOT EXCEED 80 PERCENT OF THE STEEL ULTIMATE STRENGTH FOR GRADE 150 BARS OR 90 PERCENT OF THE YIELD STRENGTH FOR GRADE 60 AND 75 BARS.

16. VERIFICATION TEST ANCHOR DOWELS SHALL BE INCREMENTALLY LOADED AND UNLOADED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE. VTL (POUNDS) IS THE ASSUMED ALLOWABLE BOND STRESS (PSI) X HOLE DIAMETER (INCHES) X  $\pi$  X VERIFICATION TEST BOND LENGTH (FEET) X 12.

| LOAD            | HOLD TIME |        |
|-----------------|-----------|--------|
|                 | AL        | 1 MIN  |
| 0.25VTL         |           | 10 MIN |
| 0.50VTL         |           | 10 MIN |
| 0.75VTL         |           | 10 MIN |
| 1.00VTL         |           | 10 MIN |
| 1.25VTL         |           | 10 MIN |
| 1.50VTL (CREEP) |           | 60 MIN |
| 1.75VTL         |           | 10 MIN |
| 2.00VTL (MAX)   |           | 10 MIN |

17. EACH LOAD INCREMENT SHALL BE HELD FOR AT LEAST 10 MINUTES. THE VERIFICATION TEST ANCHOR DOWEL SHALL BE MONITORED FOR CREEP FOR 60 MINUTES AT THE 1.50 DTL LOAD INCREMENT. ANCHOR DOWEL MOVEMENTS DURING THE CREEP PORTION OF THE TEST SHALL BE MEASURED AND RECORDED AT 1, 2, 3, 4, 5, 6, 10, 20, 30, 50, AND 60 MINUTES.

18. THE ENGINEER SHALL EVALUATE THE RESULTS OF EACH VERIFICATION TEST, INSTALLATION METHODS THAT DO NOT SATISFY THE ANCHOR DOWEL TESTING REQUIREMENTS SHALL BE CONSIDERED INADEQUATE. THE CONTRACTOR SHALL PROPOSE ALTERNATIVE METHODS AND INSTALL REPLACEMENT VERIFICATION TEST ANCHOR DOWELS. REPLACEMENT TEST ANCHOR DOWELS SHALL BE INSTALLED AND TESTED AT NO ADDITIONAL COST TO THE OWNER.

19. PROOF TEST ANCHOR DOWELS SHALL BE INCREMENTALLY LOADED AND UNLOADED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE. PTL (POUNDS) IS THE ASSUMED ALLOWABLE BOND STRESS (PSI) X HOLE DIAMETER (INCHES) X  $\pi$  X PROOF TEST BOND LENGTH (FEET) X 12.

| LOAD    | HOLD TIME |                     |
|---------|-----------|---------------------|
|         | AL        | UNTIL STABLE        |
| 0.25VTL |           | UNTIL STABLE        |
| 0.50VTL |           | UNTIL STABLE        |
| 0.75VTL |           | UNTIL STABLE        |
| 1.00VTL |           | UNTIL STABLE        |
| 1.25VTL |           | UNTIL STABLE        |
| 1.50VTL |           | HOLD FOR CREEP TEST |

GENERAL NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF BELLEVUE STANDARDS AND THE CURRENT EDITION OF WSDOT STANDARD SPECIFICATIONS.
2. TEMPORARY EROSION/WATER POLLUTION MEASURES ARE REQUIRED AND SHALL COMPLY WITH THE CITY CLEARING AND GRADING ORDINANCE AND WSDOT.
3. EXISTING STORM WATER DRAINAGE SYSTEMS SHALL BE PROTECTED FROM CONSTRUCTION SITE RUNOFF.
4. HOMES WITHIN THE AREA SHALL BE COVERED WITH PLASTIC WHILE DRILLING AND PLACING SHOTCRETE TO LIMIT REBOUND FROM HITTING THE HOUSE.
5. A PRECONSTRUCTION MEETING SHALL BE HELD BEFORE WORK COMMENCES.
6. BUILDING PERMITS SHALL BE OBTAINED BY JACOBS ASSOCIATES; OTHER PERMITS SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
7. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING UNDERGROUND LOCATE A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION WORK.
8. THE CONTRACTOR SHALL HAVE A COPY OF THE APPROVED PLANS AT THE CONSTRUCTION SITE AT ALL TIMES.
9. SINCE THE SITE AREA IS LOCATED ON A PRIVATE ROAD, THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN(S) AND STAGING AREAS FOR REVIEW AND APPROVAL BY JACOBS ASSOCIATES.
10. SPECIAL STRUCTURES SHALL BE INSTALLED PER PLANS AND MANUFACTURER'S RECOMMENDATIONS.
11. CONSTRUCTION WORK HOURS SHALL BE RESTRICTED TO 8 A.M. TO 6 P.M., UNLESS OTHERWISE APPROVED IN WRITING BY CITY ENGINEER.
12. GENERAL CONTRACTOR OR WALL SUB-CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCY BETWEEN THESE WALL PLANS AND ACTUAL FIELD CONDITIONS IMMEDIATELY, CONFIRMED LATER IN WRITING SO THE PROPER DESIGN ADJUSTMENTS ARE MADE TIMELY.
13. GENERAL CONTRACTOR OR WALL SUB-CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF FINISHED WORK.

CONSTRUCTION NOTES

1. SUMMARY OF WORK (THE CONTRACTOR MAY PROPOSE A DIFFERENT SCHEDULE FOR CONSTRUCTION):
  - a. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE BEFORE WORK COMMENCES.
  - b. THE SOIL NAIL WALL WILL BE CONSTRUCTED USING TOP-DOWN TECHNIQUES. THE EXISTING ROCKERY WILL BE USED AS A STAGING AREA FOR THE FIRST PART OF CONSTRUCTION OF THE SOIL NAILS.
  - c. VEGETATION AND DEBRIS SHALL BE REMOVED FROM THE AREA AT THE TOP OF THE SOIL NAIL WALL BEFORE DRILLING BEGINS. DRILL SOIL NAILS 5 FEET ON CENTER, AT 15 DEGREES FROM THE HORIZONTAL, WITH AN EMBEDMENT LENGTH OF 25 FEET.
  - d. IT IS RECOMMENDED TO HAVE A FLASH COAT OF SHOTCRETE ON THE FIRST ROWS OF SOIL NAILS TO LIMIT ATTRITION OF SOIL.
  - e. REMOVE ROCKERY AND CLEAR VEGETATION AND DEBRIS AND ACCESSORY SOIL TO HAVE A SMOOTH WALL. DRILL EXISTING SOIL NAILS AS PER SHOWN ON THE PLANS. PERFORM VERIFICATION AND PROOF TESTS.
  - f. PLACE WELDED WIRE MESH AND REBAR WITH FACING FOR SOIL NAILS AND DRAINAGE BOARDS. PLACE TWO LAYERS (EACH 4") OF SHOTCRETE.
  - g. PLACE LAST LAYER OF SHOTCRETE AND SCULPTURE TO RESEMBLE THE EXISTING ROCKERY ON THE NORTH AND SOUTH PROPERTIES.
  - h. BREAK UP THE EXISTING ASPHALTIC ROADWAY AND REPAVE TO THE EXISTING GRADE AS PER SHOWN ON THE PLANS.
2. TRAFFIC EXPERIENCED ON THIS ROAD COMES FROM THE HOUSES DIRECTLY NORTH OF THE SITE AREA. ENSURE THAT THE NEIGHBORS HAVE BEEN INFORMED ON THE WORK THAT IS TO BE COMPLETED AND TO WORK WITH THEM ON RIGHT-OF-WAY ACCESS.
3. STORE STEEL REINFORCEMENTS ON SUPPORTS TO KEEP THE STEEL FROM CONTACTING THE GROUND. PROTECT NAIL STEEL FROM DIRT, RUST, AND OTHER DELETERIOUS SUBSTANCES PRIOR TO INSTALLATION. HEAVY CORROSION OR PITTING OF NAILS SHALL BE CAUSE FOR REJECTION. LIST RUST THAT HAS NOT RESULTED IN PITTING IS ACCEPTABLE. HANDLE AND STORE EPOXY COATED BARS IN A WAY THAT WILL PREVENT THEM FROM BEING DAMAGED BEYOND WHAT IS PERMITTED BY ASTM 3963. REPAIR DAMAGED EPOXY COATING IN ACCORDANCE WITH ASTM A775 AND THE COATER'S RECOMMENDATIONS.
4. GEOCOMPOSITE DRAIN STRIPS
  - a. PROVIDE AS REQUIRED AND SHOWN ON THE PLANS, PREFABRICATED, PREFORMED GEOCOMPOSITE DRAIN STRIPS. THE CORE, NOT LESS THAN 0.25 INCHES THICK OR MORE THAN 0.50 INCHES THICK, SHALL BE EITHER A PREFORMED GRID OF EMBOSSED PLASTIC OR A SYSTEM OF PLASTIC PILLARS AND INTERCONNECTIONS FORMING A SEMI-RIGID MAT. THE CORE MATERIAL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 15,000PSF AND SHOULD BE COVERED WITH FILTER FABRIC SHALL CAPABLE OF MAINTAINING A DRAINAGE VOID FOR THE ENTIRE HEIGHT OF PERMEABLE LINER. PREFORMED DRAINS SHALL BE NO WIDER THAN 24 INCHES UNLESS SPECIAL METHODS ARE USED TO INSURE ADHERENCE OF THE SHOTCRETE TO THE FABRIC AND TO PRECLUDE THE FABRIC FROM SAGGING UNDER WEIGHT OF THE SHOTCRETE. THEY SHALL BE SUITABLY OUTLETTED WITH WEEP HOLES OR CONNECTED TO A LONGITUDINAL DRAIN AT THE BOTTOM OF THE STRUCTURE. THE SHOTCRETE SHALL BE OF FULL THICKNESS OVER THE DRAIN.
5. PVC CONNECTOR AND DRAIN PIPE
  - a. PIPE: ASTM D1785 SCHEDULE 40 PVC, SOLID AND PERFORATED WALL, CELL CLASSIFICATION 12454-B OR 12354-C, WALL THICKNESS SDR 35, WITH SOLVENT WELD OR ELASTOMERIC GASKET JOINTS.
  - b. FITTINGS: ASTM D3034, CELL CLASSIFICATION 12454-B OR 12454-C, WALL THICKNESS SDR35, WITH SOLVENT WELD OR ELASTOMERIC GASKET JOINTS.
- c. SOLVENT CEMENT: ASTM D2564
- d. PRIMER: ASTM F656
- e. WALL FOOTING DRAINAGE AGGREGATE: ASTM C33 NO. 67 WITH NO MORE THAN TWO PERCENT PASSING THE 0.075 MM SIEVE.

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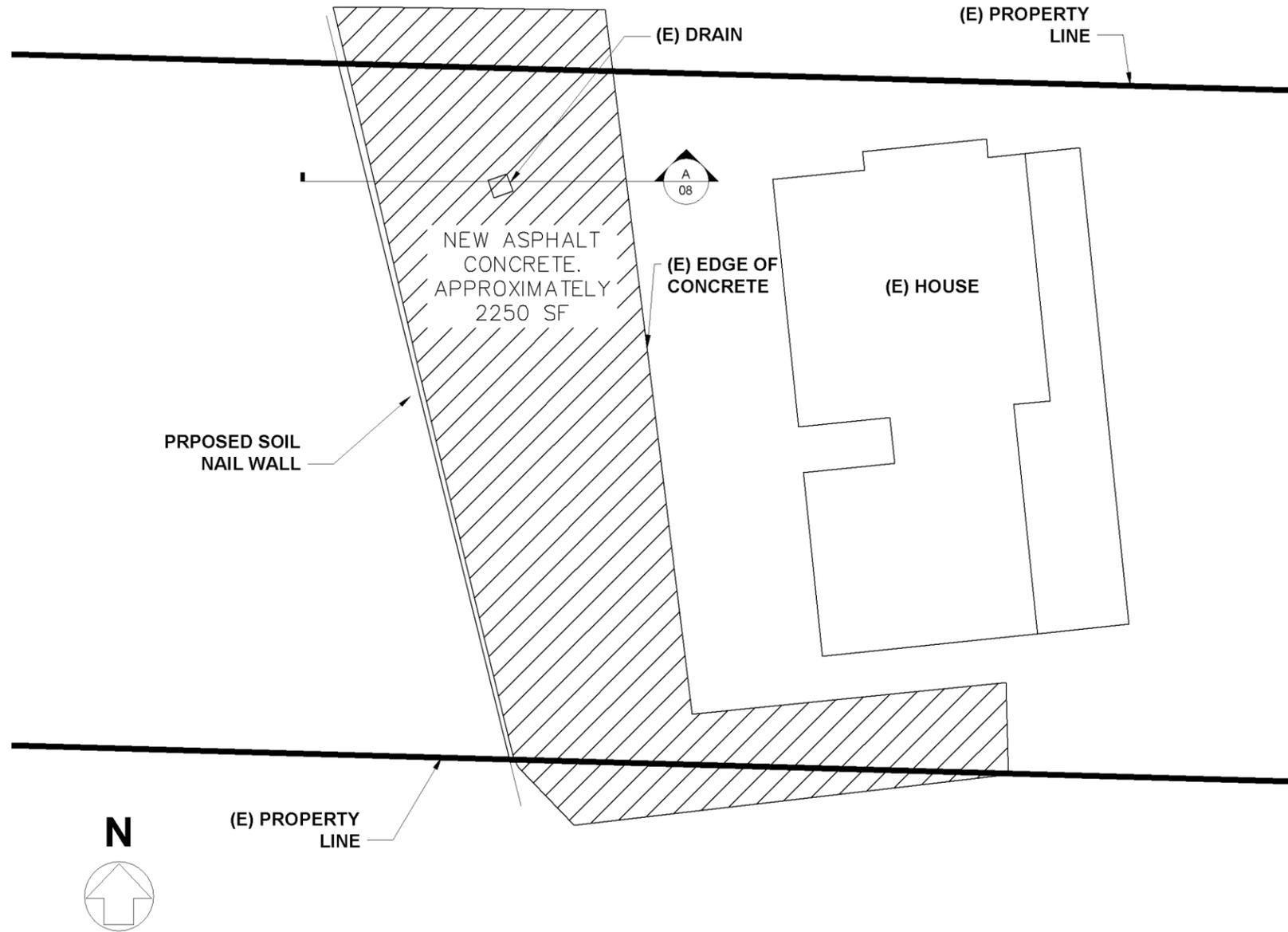
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**VALENTINE RESIDENCE SOIL NAIL WALL**  
 842 W. LAKE SAMMAMISH PARKWAY SE  
 BELLEVUE, WASHINGTON

NOTES

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| DATE        | AUGUST-2010 |
| JOB NO:     | 4211.0      |
| DRAWING NO: | COB U07     |
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# SITE PLAN WITH PROPOSED NEW ASPHALT



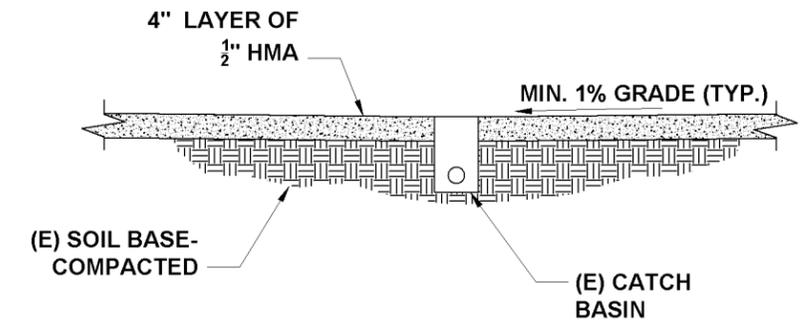
## NOTES:

1. THE EXISTING ASPHALT PAVEMENT SHALL BE EXCAVATED BY FIRST SAWCUTTING OR GRINDING A BOUNDARY AND THEN REMOVING THE ASPHALT WITHIN. THE UNDERLYING SOIL SHALL BE GRADED AND ROLLED WITH A VIBRATORY DRUM ROLLER TO ACHIEVE MAXIMUM COMPACTION. THE PROJECT ENGINEER SHALL DETERMINE IF THE BASE COURSE IS SUITABLE BEFORE THE HMA INSTALLATION CAN PROCEED. ANY EXISTING SOILS DEEMED NOT SUITABLE FOR USE AS BASE COURSE SHALL BE EXCAVATED TO A DEPTH OF 9" AND REPLACED WITH GRAVEL BORROW MEETING WSDOT STANDARD SPECIFICATION 9-03.14(1).
2. EXCAVATED MATERIALS WILL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED IN A CONTRACTOR-PROVIDED SITE OFF THE RIGHT OF WAY OR USED IN ACCORDANCE WITH SECTIONS 2-02.3(3) OR 9-03.21 OF THE WSDOT SPECIFICATIONS 2008.
3. THE CONTRACTOR SHALL CONDUCT THE EXCAVATION OPERATIONS IN A MANNER THAT WILL PROTECT THE PAVEMENT THAT IS TO REMAIN. PAVEMENT NOT DESIGNATED TO BE REMOVED THAT IS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE PROJECT ENGINEER AT NO COST TO THE CONTRACTING AGENCY.
4. HMA PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE WSDOT STANDARD SPECIFICATIONS 2010 SECTION 5-04 AND CITY OF BELLEVUE STANDARDS.
5. HMA CLASS B (1/2-INCH) PG 64-22 SHALL BE USED IN COMPLIANCE WITH WSDOT STANDARD SPECIFICATIONS 2010, SECTION 9-03.8(6) HMA PROPORTIONS OF MATERIALS, WHICH HAS THE FOLLOWING AGGREGATE GRADATION CRITERIA.
6. HMA ASPHALT THICKNESS SHALL BE A MINIMUM OF 4", INSTALLED IN TWO- 2" LIFTS.
7. A TACK COAT OF ASPHALT SHALL BE APPLIED TO ALL PAVED SURFACES ON WHICH ANY COURSE OF HMA IS TO BE PLACED OR ABUTTED. TACK COAT SHALL BE UNIFORMLY APPLIED TO COVER THE EXISTING PAVEMENT WITH A THIN FILM OF RESIDUAL ASPHALT, FREE OF STREAKS AND BARE SPOTS.
8. EQUIPMENT SHALL NOT OPERATE ON TACKED SURFACES UNTIL THE TACK HAS BROKEN AND CURED. IF THE CONTRACTOR'S OPERATION DAMAGES THE TACK COAT IT SHALL BE REPAIRED PRIOR TO PLACEMENT OF HMA.
9. THE TACK COAT SHALL BE CSS-1, CSS-1H, OR STE-1 EMULSIFIED ASPHALT.
10. THE AREA OF NEW HMA REQUIRED IS APPROXIMATELY 2550 SQUARE FEET.

## EQUIPMENT

1. ROLLERS SHALL BE IN COMPLIANCE WITH WSDOT STANDARD SPECIFICATIONS 2010, SECTION 5-04.3(4) ROLLERS.
2. HMA MIXING PLANT SHALL BE IN COMPLIANCE WITH WSDOT STANDARD SPECIFICATIONS 2010, SECTION 5-04.3(1) HMA MIXING PLANT.
3. HAULING EQUIPMENT SHALL BE IN COMPLIANCE WITH WSDOT STANDARD SPECIFICATIONS 2010, SECTION 5-04.3(2) HAULING EQUIPMENT.
4. HOT MIX ASPHALT PAVERS SHALL BE IN COMPLIANCE WITH WSDOT STANDARD SPECIFICATIONS 2010, SECTION 04.3(3) HOT MIX ASPHALT PAVERS.

## ASPHALT SECTION A-A



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| <b>VALENTINE RESIDENCE SOIL NAIL WALL</b> |  | DATE        | AUGUST-2010 |
| 842 W. LAKE SAMMAMISH PARKWAY SE          |  | JOB NO:     | 4211.0      |
| BELLEVUE, WASHINGTON                      |  | DRAWING NO: | 08          |
| ASPHALT PLAN                              |  | SHEET NO:   | 8 OF 8      |