DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
ENVIRONMENTAL COORDINATOR
P.O. BOX 90012
BELLEVUE, WA 98009-9012

DETERMINATION OF NON-SIGNIFICANCE

PROPONENT: Paul Heath, Property Owner

LOCATION OF PROPOSAL: 2019 Killarney Way

NAME & DESCRIPTION OF PROPOSAL: Heath Residence Retaining Wall Construction and Slope Stabilization

Application for Critical Areas Land Use Permit to install slope stabilization measures including re-vegetation, re-grading, wall construction, and drainage improvements. Work is to be located within a steep slope critical area. Allowed use per LUC 20.25H.055.

FILE NUMBER: 08-125900-LO

The Environmental Coordinator of the City of Bellevue has determined that this proposal does not have a probable significant adverse impact upon the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(C). This decision was made after the Bellevue Environmental Coordinator reviewed the completed environmental checklist and information filed with the Land Use Division of the Department of Planning & Community Development. This information is available to the public on request.

☐ There is no comment period for this DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's office by 5:00 p.m. on _____.

☒ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's Office by 5 p.m. on **11/13/2008**.

☐ This DNS is issued under WAC 197-11-340(2) and is subject to a 14-day comment period from the date below. Comments must be submitted by 5 p.m. on _____. This DNS is also subject to appeal. A written appeal must be filed in the City Clerk's Office by 5 p.m. on _____.

This DNS may be withdrawn at any time if the proposal is modified so that it is likely to have significant adverse environmental impacts; if there is significant new information indicating, or on, a proposals probable significant adverse environmental impacts (unless a non-exempt license has been issued if the proposal is a private project): or if the DNS was procured by misrepresentation or lack of material disclosure.

_____ 10/30/2008
Environmental Coordinator Date

OTHERS TO RECEIVE THIS DOCUMENT:
State Department of Fish and Wildlife
State Department of Ecology,
Army Corps of Engineers
Attorney General
Muckleshoot Indian Tribe

City of Bellevue
Development Services Department
Land Use Staff Report

Proposal Name:	**Heath Residence Retaining Wall Construction and Slope Stabilization**
Proposal Address:	**2019 Killarney Way**
Proposal Description:	Application for Critical Areas Land Use Permit to install slope stabilization measures including re-vegetation, re-grading, wall construction, and drainage improvements. Work is to be located within a steep slope critical area. Allowed use per LUC 20.25H.055.
File Number:	**08-125900-LO**
Applicant:	**Paul Heath, Property Owner**
Decisions Included:	Critical Areas Land Use Permit (Process II. LUC 20.30P)
Planner:	**David Pyle**, Land Use Planner
State Environmental Policy Act Threshold Determination:	**Determination of Non-Significance** Michael Paine, Environmental Coordinator Development Services Department
Director's Decision:	**Approval with Conditions** Mike Brennan, Director Development Services Department

Application Date:	July 11, 2008
Date Application Deemed Complete:	August 22, 2008
Notice of Application Publication Date:	September 11, 2008
Decision Publication Date:	October 30, 2008
Project/SEPA Appeal Deadline:	November 13, 2008

For information on how to appeal a proposal, visit Development Services Center at City Hall or call (425) 452-6800. Comments on State Environmental Policy Act (SEPA) Determinations can be made with or without appealing the proposal within the noted comment period for a SEPA Determination. Appeal of the Decision must be received in the City's Clerk's Office by 5 PM on the date noted for appeal of the decision.

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I. Proposal Description

This is a proposal to stabilize a steep slope on a single family residential property where subsidence and erosion has threatened the stability of the primary structure's foundation. Stabilization of the property is necessary to protect the existing single family structure and prevent further erosion and slope failure. The proposal includes the construction of a single rockery retaining wall (Hard Stabilization Measure), a restoration plan to re-vegetate a portion of the slope (Soft Stabilization Measure), the re-grading of the affected portion of the property, and the completion of drainage improvements. All work will be done within a geologic hazard steep slope critical area, the top of slope regulatory buffer, or the toe of slope structure setback as defined by the City's Land Use Code (LUC) section 20.25H.120.

The work proposed is categorized in the Land Use Code as an allowed use or activity under LUC 20.25H.055.B and may be permitted through the issuance of a critical areas land use permit (LUC 20.30P) if compliance with the applicable performance standards can be demonstrated through project design and mitigation measures. Performance standards applicable to this proposed action are outlined in LUC sections 20.25H.055.C.3.m and 20.25H.125. Decision criteria are identified in LUC 20.30P. Compliance with these sections is discussed in detail below.

The retaining wall proposed is between approximately eight to twelve feet in height depending on grade. Soft stabilization and Avoidance measures have been determined to be insufficient in this application due to the presence of soft and loose fill soils that are unstable in the present condition. Reconstruction of this outer fill slope would encroach and undermine the existing house foundations thereby requiring that a hard surface rockery wall be installed to restore permanent lateral support to the loose fill slope. The distance between the SW corner deck footing and the property line is approximately eleven feet. The distance between the deck footing and the house foundation is approximatley five feet. Creating a two level tiered wall to heights of five feet, with setback of five feet in between would require at least fifteen feet of linear space when only sixteen feet of space exists between the house foundation and the property line. Therefore, a single wall has been identified as the only suitable measure to stabilize the slope. Additionally, there is an existing rockery wall approximately ten feet in height located along the south property line (along the edge of the driveway) that is approximately 40 feet in length and runs along the neighbor's driveway. The proposed wall will connect to this wall and will continue along the southwest and west property boundaries. The wall solution proposed by the applicant replicates the existing wall and will provide aesthetic continuity around the property while enabling the structural support needed on this unstable slope. A site plan showing the location of the proposed wall is included below as **Figure 1**.

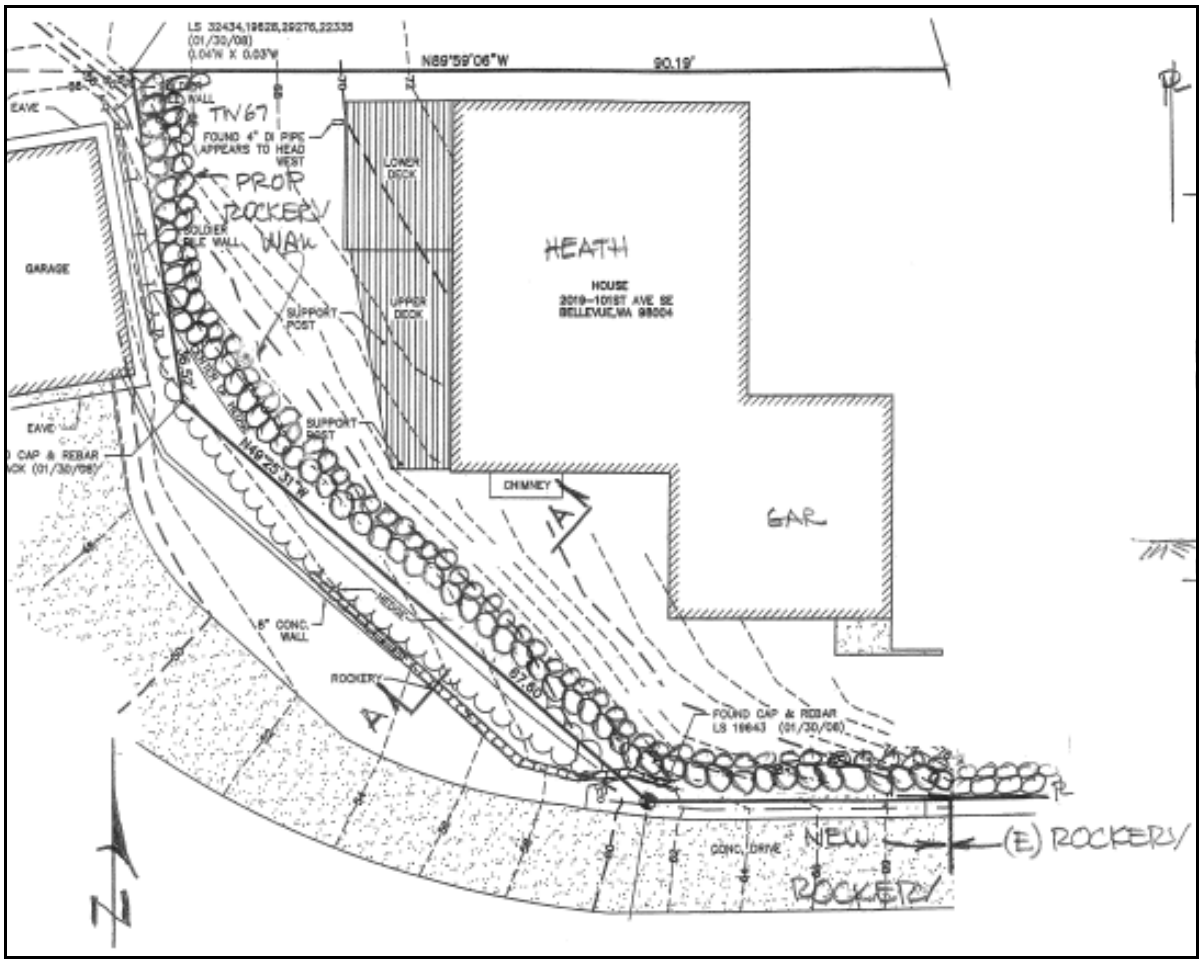


Figure 1: Project Site Plan

II. Site Description, Zoning, Land Use and Critical Areas

A. Site Description

The property is located at 2019 Killarney Way and is generally located on a regional slope that provides transition between the shoreline of Lake Washington and the plateau of West Bellevue. The property is specifically characterized by a large unstable steep slope area that encumbers the western portion of the site and slopes down from Killarney Way towards Lake Washington (east to west).

Property geometry is generally triangular with an east-west axis of approximately 90 feet. The site is currently developed with one single family residence that is located in the center of the property and at the top of the steep slope area and on a gentle slope that connects the property to Killarney Way. See **Figure 2** below for an aerial photograph of the property.

Figure 2: Site Aerial

B. Zoning

The site is zoned R-1.8 and is within the Critical Areas Overlay District due to the presence of steep slope critical areas. The proposed activity is allowed in this zone as it is part of a single family development.

C. Land Use Context

The property has a Comprehensive plan Land Use Designation of SF-L (Single Family Low Density). The proposed activity is allowed in this comprehensive plan land use designation as it is part of a single family development.

D. Critical Areas Functions and Values and Regulation

1) **Geologic Hazard Areas – Steep Slopes:** Review of information on file with the City and subsequent field visit identified the presence of a geologic hazard steep slope critical area as defined by LUC 20.25H.120. Geologic hazards pose a threat to the health and safety of citizens when commercial, residential, or industrial development is inappropriately sited in areas of significant hazard. Some geologic hazards can be reduced or mitigated by engineering, design, or modified construction practices. When technology cannot reduce risks to acceptable levels, building in geologically hazardous areas is best avoided (WAC 365-190).

   Steep slopes may serve several other functions and possess other values for

the City and its residents. Several of Bellevue's remaining large blocks of forest are located in steep slope areas, providing habitat for a variety of wildlife species and important linkages between habitat areas in the City. These steep slope areas also act as conduits for groundwater, which drains from hillsides to provides a water source for the City's wetlands and stream systems. Vegetated steep slopes also provide a visual amenity in the City, providing a "green" backdrop for urbanized areas enhancing property values and buffering urban development.

Steep slope geologic hazard critical areas are protected from development activity by the City of Bellevue Land Use Code under the Critical Areas Overlay District. Generally, steep slope critical areas are protected by a top of slope buffer of 50 feet and a toe of slope structure setback of 75 feet. Only allowed activities identified under LUC 20.25H.055.B may be undertaken in the protected area, protected area buffer, or the protected area structure setback. This is a proposal to stabilize an unstable slope where erosion and subsidence has damaged the integrity of the slope and has threatened the existing single family residence. The stabilization activities proposed are allowed subject to compliance with performance standards and the application of mitigation measures.

No other critical areas were found on-site during field investigations. No additional critical areas are known to occur on properties immediately adjacent to the project site. See **Figure 3** below for a generalized map of steep slope areas.

Figure 3: Map of Steep Slopes (Depicted in red)

III. Consistency with Land Use Code Requirements:

A. Zoning District Dimensional Requirements:

The site is located in the R-1.8 land use zoning district. General dimensional requirements from LUC 20.20 for development in this district are identified below. The scope of review completed under this application was limited to the stabilization of the steep slope area to allow for the protection of the existing single family residence. This proposal does not include any modification of the existing residence and no modification of the structure is allowed as part of this permit outside of repairs to the foundation of the existing residence. Any future proposal to modify or rebuild the existing single family residence must comply with the dimensional standards identified in LUC 20.20.010.

Front yard setback:	30 feet
Rear yard setback:	25 feet
Side yard setback:	5 feet
Two side yards combined:	15 feet
Maximum lot coverage by structures:	35%
Maximum coverage by impervious surface:	50%
Significant tree retention:	30% of diameter inches

B. Critical Areas Requirements LUC 20.25H

1) **Consideration of administrative approval of structure and/or buffer setbacks LUC 20.25H.040 to avoid impact to critical area or buffer.**
As discussed above, steep slope geologic hazard critical areas are protected by a top of slope 50 foot buffer and a toe of slope 75 foot structure setback. In this case, all proposed work will be done within the slope, buffer, or structure setback. Due to the location of the slope and the existing structure it is not possible to avoid impact to the steep slope geologic hazard critical area.

   Allowed modifications to the general dimensional chart (LUC 20.20.010) as allowed under LUC 20.25H.040.B were not considered as they are outside of the scope of the proposed activity (avoidance is not possible) and a reduction in setbacks are not appropriate for the type of work being done.

2) **Consistency With Land Use Code Critical Areas Performance Standards of LUC 20.25H.055.C.3.m.**
The following performance standards, when applicable, shall be incorporated in the design of development on sites with steep slope geologic hazard critical areas, buffers, or structure setbacks. The incorporation of performance standards is required to be documented prior to building permit or clearing and grading permit approval to install the proposed stabilization measures. See Section IX for related conditions of approval.

   a. **When Allowed. New or enlarged stabilization measures shall be**

allowed only to protect existing primary structures and infrastructure, or in connection with uses and development allowed pursuant to subsection B of this section. Stabilization measures shall be allowed only where avoidance measures are not technically feasible.

This is an application for approval to stabilize an unstable slope and protect an existing single family primary structure. Due to the location of the slope avoidance is not possible and stabilization is allowed.

b. Type of Stabilization Measure Used. Where a stabilization measure is allowed, soft stabilization measures shall be used, unless the applicant demonstrates that soft stabilization measures are not technically feasible. An applicant asserting that soft stabilization measures are not technically feasible shall provide the information relating to each of the factors set forth in this section for a determination of technical feasibility by the Director. Only after a determination that soft stabilization measures are not technically feasible shall hard stabilization measures be permitted. The determination of whether a technique or stabilization measure is "technically feasible" shall be made by the Director as part of the decision on the underlying permit after consideration of a report prepared by a qualified professional addressing the following factors:

(1) Site conditions, including topography and the location of the primary structure in relation to the critical area;

(2) The location of existing infrastructure necessary to support the proposed measure or technique;

(3) The level of risk to the primary structure or infrastructure presented by erosion or slope failure and ability of the proposed measure to mitigate that risk;

(4) Whether the cost of avoiding disturbance of the critical area or critical area buffer is substantially disproportionate as compared to the environmental impact of proposed disturbance, including any continued impacts on functions and values over time; and

(5) The ability of both permanent and temporary disturbance to be mitigated.

Stabilization measures are sought to protect the house foundation and deck footings for a deck attached to the back of the house. The lot, in total, is only 7,844 square feet with very small back (west) and side (south) yard areas containing steep slopes, uneven grade, and unstable soil. The west property line is approximately 16 feet from the house foundation making it difficult to

step back a series of retaining walls. A roof downspout is also located within 5 feet of the slope area and contributes to the erosion.

A single rockery retaining wall (Hard Stabilization Measure) is proposed between approx 8-12 feet in height depending on grade. Soft stabilization and avoidance measures have been determined to be insufficient in this application due to the presence of soft and loose fill soils that are unstable in the present condition. Reconstruction of this outer fill slope (soft stabilization) would encroach and undermine the existing house foundations thereby limiting the potential stabilization options to the construction of a single wall designed to restore permanent lateral support on this loose fill slope and the revegation of the re-graded slope face to limit erosion.

The site was analyzed in February of 2008 by Robert M. Pride, PE, and a geotechnical report was submitted as part of the permit application. Stabilization measures were designed by Mr. Pride. The type and feasibility of stabilization measures was reviewed by Mr. Pride and it was determined that generally due to the slope's proximity to the existing residence, the stability issues associated with the slope, and the existing grade (pitch) of the slope, avoidance was ruled out as neither the home nor the slope could be moved or the hazard abated without some form of stabilization.

In his report, Mr. Pride identifies the slope as unstable. Reports submitted by the applicant also identify the slope as too extreme to utilize only soft stabilization measures. After review of reports submitted, city staff concur that the use of only softened stabilization measures to stabilize the slope are not feasible due to existing site conditions and the extent of the stabilization required.

Following this determination, the applicant's engineer prepared a recommendation on methods of stabilization that could be used to stabilize the slope. During the feasibility study made by the applicant, various methods of stabilization were considered. A stabilization proposal was submitted with the permit application and includes the construction of a retaining wall, the installation of drainage improvements (gutter downspout), and the revegetation and restoration of the impacted areas or re-graded slope.

The stabilization measures proposed are consistent with Land Use Code requirements to stabilize the slope using both hardened and softened stabilization (LUC 20.25H.055). All evaluations and recommendations submitted as part of the permit package and used in the city's evaluation of the proposal were competed by a licensed qualified professional (P.E.). Any design or documentation submitted to the city as part of future permit applications related to this project must be prepared by a licensed qualified professional. See associated condition of approval in Section IX of this report.

3) **Consistency With Land Use Code Critical Areas Performance Standards LUC 20.25H.125.**
Development within a landslide hazard or steep slope critical area or the critical area buffers of such hazards shall incorporate the following additional

performance standards in design of the development, as applicable. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function.

a. **Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;**

The proposed stabilization measures will not artificially alter the natural contour of the slope. When conditions require the use of a wall system to stabilize the slope the walls have been designed to be tiered to match the natural topography as much as technically feasible. No artificial slopes will be created and when necessary walls will be used to allow for the required grade corrections.

b. **Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;**

Slope stabilization and restoration has been designed to use a wall at the bottom of the slope. The grade of the slope will be restored above the wall. Without the proposed wall, restoration of the slope would not be possible due to existing conditions and grade changes. Vegetation within the work area will be restored pursuant to an approve restoration plan. <u>See associated conditions of approval in Section IX of this report.</u>

c. **The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;**

The proposed wall construction will generally improve slope stability. It is not expected that the stabilization work will cause a need for increased slope buffers or structure setbacks on adjacent properties.

d. **The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes where graded slopes would result in increased disturbance as compared to use of retaining wall;**

This proposal includes the use of a retaining wall, installation of improved drainage, and vegetation restoration to improve stability and reduce the potential for future slope failure. The construction of the proposed retaining wall is not expected to cause increased disturbance as compared to allowing the slope to continue to erode and subside. Due to the extreme pitch of the slope it has been determined that stabilizing the slope through artificial grading measures is not possible without combining the grading with wall construction.

e. **Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer;**

The proposal does not include an increase in impervious surface.

f. **Where change in grade outside the building footprint is necessary, the site retention system should be stepped and re-grading should be designed to minimize topographic modification. On slopes in excess of 40 percent, grading for yard area may be disallowed where inconsistent with this criteria;**

The proposal does not include re-grading outside of the existing building footprint. No topographic modification is expected outside of what is necessary through the installation of retaining walls. Grading for yard area is disallowed. See related conditions of approval in Section IX of this report.

g. **Building foundation walls shall be utilized as retaining walls rather than rockeries or retaining structures built separately and away from the building wherever feasible. Freestanding retaining devices are only permitted when they cannot be designed as structural elements of the building foundation;**

This proposal does not include the modification of a building footprint. The construction of a rockery retaining wall is necessary due to the site characteristics and is not meant to expand or modify the foundation of the home. No expansion of the useable site area or to the existing residence is allowed as part of this permit. See related conditions of approval in Section IX of this report.

h. **On slopes in excess of 40 percent, use of pole-type construction which conforms to the existing topography is required where feasible. If pole-type construction is not technically feasible, the structure must be tiered to conform to the existing topography and to minimize topographic modification;**

This proposal does not include a request to construct or expand a residence or other structure.

i. **On slopes in excess of 40 percent, piled deck support structures are required where technically feasible for parking or garages over fill-based construction types; and**

This proposal does not include a request to construct or expand a residence or other structure.

j. **Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.**

The applicant is required to submit a restoration plan in accordance with LUC 20.25H.220.H. See related conditions of approval in Section IX of this report.

IV. Public Notice and Comment

Application Date:	June 17, 2008
Public Notice (500 feet):	September 11, 2008
Minimum Comment Period:	September 25, 2008

The Notice of Application for this project was published in the City of Bellevue Weekly Permit Bulletin on September 11, 2008. It was mailed to property owners within 500 feet of the project site. No comments were received on the proposal.

V. Summary of Technical Reviews

A. Clearing and Grading:

The Clearing and Grading Division of the Development Services Department has reviewed the proposed site development for compliance with Clearing and Grading codes and standards. The Clearing and Grading staff found no issues with the proposed development and approved the project subject to compliance with conditions. Any proposal for building permit or clearing and grading permit must conform to all applicable city code requirements and meet applicable conditions of approval. See related conditions of approval in Section IX of this report.

VI. State Environmental Policy Act (SEPA)

The environmental review indicates no probability of significant adverse environmental impacts occurring as a result of the proposal. The Environmental Checklist submitted with the application adequately discloses expected environmental impacts associated with the project. The City codes and requirements, including the Clear and Grade Code, Utility Code, Land Use Code, Noise Ordinance, Building Code and other construction codes are expected to mitigate potential environmental impacts. Therefore, issuance of a Determination of Non-Significance (DNS) is the appropriate threshold determination under the State Environmental Policy Act (SEPA) requirements.

A. Earth and Water

The proposed project will require the construction of a retaining wall, the re-grading of the slope area upslope of the proposed wall, the planting of the restored/impacted area with native vegetation, and the installation of drainage improvements designed to correct the drainage problems on the site (downspout). All stabilization work is required to be designed by a licensed civil engineer. No fill material aside from that required to stabilize the slope is proposed. No modification to the regulated top of slope buffer is proposed. Disturbance of existing vegetation will be minimized during construction and the remaining protected slope area will be restored once construction is complete. The proposed retaining wall will allow the greatest amount of existing natural slope area to be left undisturbed as possible as compared to grading an artificial fill slope that would impact a large area of land. A Temporary Erosion Sedimentation Control Plan will be required as part of the building permit application and must addresses all requirements of erosion and sedimentation bmp's. See Conditions of Approval in Section IX of this report.

B. Animals

No threatened or endangered species are expected to be present in the immediate project vicinity and the area is fully developed with residential uses. There are two known Bald Eagle nests within half of a mile of the project site. As a condition of project approval, the applicant is required to contact the Washington State Department of Fish and Wildlife to obtain appropriate applicable permits related to Bald Eagle habitat management. See Conditions of Approval in Section IX of this report.

C. Plants

Existing vegetation found within the limits of construction primarily consists of blackberry. No impact to the site's ability and potential to provide upland habitat is expected, as the area lacks significant trees and is currently vegetated with invasive colonizing plant species that provide limited habitat value to the site. To enhance the areas plant communities and potential to provide habitat, the applicant is required to remove the invasive species and replant the upslope portion of the critical area with native plants. Prior to building permit issuance the applicant will be required to submit an assignment of savings financial security device to ensure the restoration is installed and maintenance is completed as required. See Conditions of Approval in Section IX of this report.

D. Noise

The site is adjacent to single-family residences and within proximity to Lake Washington. Disturbance to adjacent residents from noise is most impacting during the evening, late night and weekend hours when residents are likely to be at home. Noise impacts from the construction on the natural environment of Lake Washington are expected to be minimal and within the range expected from the construction of a single family home. Construction noise will be limited by the City's Noise Ordinance (Chapter 9.18 BCC) which regulates construction hours and noise levels. See Conditions of Approval in Section IX of this report.

VII. Decision Criteria

A. Critical Areas Land Use Permit Decision Criteria 20.30P

The proposal, as conditioned below, meets the applicable regulations and decision criteria for a Critical Areas Land Use Permit pursuant to LUC Section 20.30P.

1. The proposal obtains all other permits required by the Land Use Code;

Finding: The project applicant has applied for a Building Permit to construct the proposed stabilization measures.

2. The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer;

Finding: The proposed project involves the installation of stabilization measures to restore stability to an unstable slope area. The proposed activity is an allowed use and is necessary to protect the primary structure located at 2019 Killarney Way. The applicant has used the best available design and development techniques to conceptually design the stabilization measures. The design includes the use of a retaining wall, the restoration of vegetation in the restored slope area, and the installation of a drainage system designed to collect abd divert gutter downspout water that may impact the stability of the slope. The combination of the wall design, drainage improvements, and replanting of the slope will allow for the stabilization of this currently unstable site.

3. The proposal incorporates the performance standards of Part 20.25H to the maximum extent applicable, and ;

Finding: The proposal incorporates the applicable performance standards of LUC 20.25H.055.C.3.m and LUC 20.25H.125. See discussion in Section III above.

4. The proposal will be served by adequate public facilities including street, fire protection, and utilities; and;

Finding: The proposed project will be served by adequate public facilities. The site is already built out with an existing single family residence. No new streets or utility connections will be needed to serve the site. Additionally, fire and police protection are currently available at the site.

5. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC Section 20.25H.210; and

Finding: A mitigation and restoration plan must be prepared as required by LUC 20.25H.220.H. See related conditions of approval in Section IX of this report.

6. The proposal complies with other applicable requirements of this code.

Finding: As discussed in Section III of this report, the proposal complies with all other applicable requirements of the Land Use Code.

VIII. Conclusion and Decision

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, SEPA, City Code and Standard compliance reviews, the Development Services Director does hereby **approve with conditions** this proposal to stabilize the slope along the western property boundary at 2019 Killarney Way through the installation of a retaining wall.

Note- Expiration of Approval: In accordance with LUC 20.30P.150 a Critical Areas Land Use Permit automatically expires and is void if the applicant fails to file for a Clearing and Grading Permit or other necessary development permits within one year of the effective date of the approval.

IX. Conditions of Approval

The applicant shall comply with all applicable Bellevue City Codes and Ordinances including but not limited to:

Applicable City Code Sections	Contact Person
Clearing and Grading Code- BCC 23.76	Tom McFarlane, 425-452-5207
Land Use Code- BCC 20.25H	David Pyle, 425-452-2928

The following conditions are imposed under the Bellevue City Code or SEPA authority referenced:

1. Building Permit or Clearing and Grading Permit Required: Approval of this critical areas land use permit does not constitute an approval of a building or clearing and grading permit. Application for building or clearing and grading permit must be submitted and approved prior to the commencement of construction. Plans submitted as part of the building or clearing and grading permit application must be consistent with the activity permitted under this critical areas land use permit.

Authority: Land Use Code 20.30P.140
Reviewer: David Pyle, Development Services Department

2. Special Inspection Required: Special inspection of the rockery during construction must be provided by the geotechnical engineer.

Authority: Bellevue City Code 23.76.160
Reviewer: Tom McFarlane, Development Services Department

3. Storm Connection Permit Required: A storm connection permit is required for the CB and 4" PVC line installation (PVC pipe may require iron pipe casing where it passes beneath the rockery).

Authority: Bellevue City Code 24.06.120
Reviewer: Tom McFarlane, Development Services Department

4. Clearing Limits for Permanent and Temporary Disturbance: Prior to commencement of construction, clearing limits must be delineated in preparation for preconstruction inspection by clearing and grading and land use staff and certified in the field to be in conformity with this approval.

Authority: Bellevue City Code 23.76.160
Reviewer: Tom McFarlane, Development Services Department

5. Restoration for Areas of Temporary Disturbance: In order to mitigate for the permitted disturbance inside the regulated critical area, a restoration plan for all areas of temporary disturbance shall be submitted for review and approval by the City of Bellevue prior to the issuance of the Building Permit or Clearing and Grading Permit. The plan shall include documentation of existing site conditions, proposed restoration measures to return the site to its existing conditions per LUC 20.25H.220.H, prescribed maintenance activities to ensure plant survival, and monitoring requirements (including reporting) to document success/failure.

Authority: Land Use Code 20.25H.220.H
Reviewer: David Pyle, Development Services Department

6. Restoration Plan: To assist in the re-establishment of vegetation on the slope, the property owner or applicant shall prepare a plan for and install vegetation restoration. The restoration plan shall be submitted for review and approval by the City of Bellevue prior to issuance of building permit or clearing and grading permit. The plan shall include proposed restoration measures to restore those areas impacted by construction, prescribed maintenance activities to ensure plant survival, and monitoring requirements (including reporting) to document success/failure.

Authority: Land Use Code 20.25H.210
Reviewer: David Pyle, Development Services Department

7. Rainy Season restrictions: Activity undertaken within a steep slope critical area is restricted during the rainy season, which is defined as November 1 through April 30 without written authorization of the Department of Planning and Community Development. Should approval be granted for work during the rainy season, increased erosion and sedimentation measures, representing the best available technology must be implemented prior to beginning or resuming site work.

Authority: Bellevue City Code 23.76.093.A,
Reviewer: Tom McFarlane, Development Services Department

8. Noise Control: The proposal will be subject to normal construction hours of 7 am to 6 pm Monday through Friday and 9 am to 6 pm on Saturdays, except for Federal holidays and as further defined by the Bellevue City Code. Upon written request to PCD, work hours may be extended to 10 pm if the criteria for extension of work hours as stated in BCC 9.18 can be met.

Authority: Bellevue City Code 9.18
Reviewer: David Pyle, Development Services Department

9. Hold Harmless Agreement: Prior to building permit or clearing and grading permit approval, the applicant or property owner shall submit a hold harmless agreement releasing the City of Bellevue from any and all liability associated with the installation of slope stabilization measures. The agreement must meet city requirements and must be reviewed by the City Attorney's Office for formal approval.

Authority: Land Use Code 20.30P.170
Reviewer: David Pyle, Development Services Department

10. Installation Device: To ensure the required slope vegetation restoration and restoration of areas of temporary disturbance is completed, the applicant shall post an Installation Assurance Device prior to the building permit or clearing and grading permit issuance. The device will be released when the applicant demonstrates the restoration has successfully been installed.

Authority: Land Use Code 20.25H.125.J and 20.25H.220
Reviewer: David Pyle, Development Services Department

11. Maintenance Device: Prior to the issuance of the building permit or clearing and grading permit, the applicant shall submit a restoration / replanting maintenance plan cost estimate to be used in determining the amount of the assignment of the maintenance and monitoring financial security device that will be required prior to permit issuance. A complete assignment of savings financial security device in the amount determined by the project planner must be submitted prior to building permit or clearing and grading permit issuance. For the purpose of this permit, maintenance and monitoring shall be completed for a period of one growing season.

Authority: Land Use Code 20.25H.125.J and 20.25H.220
Reviewer: David Pyle, Development Services Department

12. Engineered Wall Design Requirement: A detailed plan for the engineered wall design that has been recommended in the geotechnical engineer of record is required to be submitted for review and approval by the City of Bellevue Building Department prior to the issuance of any building permit for construction at this site. The wall must be designed and approved by an engineer licensed in Washington State.

Authority: Land Use Code 20.25H.125
Reviewer: David Pyle, Development Services Department

13. Wall Height: Retaining wall height shall be the minimum necessary to stabilize the slope. The scope or work allowed under this permit is limited to slope stabilization. No expansion of useable property or modification to the existing single family residence or associated appurtenances is allowed as part of this permit approval.

Authority: Land Use Code 20.25H.055
Reviewer: David Pyle, Development Services Department

14. Geotechnical Recommendations: All stabilization design and installation must comply with the recommendations identified in the geotechnical report prepared by Robert M. Pride, LLC dated February 16, 2008 and addendum dated June 18, 2008 including erosion hazard mitigation bmp's intended to limit the potential for erosion during construction.

Authority: Bellevue City Code 23.76
Reviewer: Tom McFarlane, Development Services Department

15. Field Locate Sanitary Sewer Main: Review of City Utilities documents indicates the presence of a sanitary sewer main on the adjacent property to the north. Prior to the commencement of construction the sanitary sewer main must be field located to ensure no damage will occur during construction.

Authority: Land Use Code 20.30P
Reviewer: David Pyle, Development Services Department

16. Bald Eagle Management Plan: Prior to the issuance of a building permit or clearing and grading permit evidence of communication with WDFW must be submitted. If a Bald Eagle Management Plan is required, the approved plan must be submitted prior to building permit or clearing and grading permit.

Authority: Land Use Code 20.30P
Reviewer: David Pyle, Development Services Department

Attachments

1. Vicinity Map - In file
2. SEPA Checklist - In file
3. Slope Stabilization Plans - In file
4. Geotechnical Report - In file

City of Bellevue File Number 08-125900-LO
09/11/2008
Heath Residence Retaining Wall Construction and Slope Stabilization
Project SEPA Checklist
2019 Killarney Way

SEPA Checklist Reviewed By:
David Pyle, Land Use Planner
425-452-2973 - dpyle@bellevuewa.gov

City of Bellevue Submittal Requirements

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

RECEIVED
AUG 18 2008
PERMIT PROCESSING

Property Owner: PAUL & SHIRLEY HEATH

Proponent: PAUL & SHIRLEY HEATH

Contact Person: PAUL HEATH
(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: 2019 KILLARNEY WAY, BELLEVUE WA 98004

Phone: 425-223-5101

Proposal Title: ROCKERY RETAINING WALL.

Proposal Location: 2019 KILLARNEY WAY, BELLEVUE, WA 98004
(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: CONSTRUCTION OF ROCKERY RETAINING WALL, 8-~~10~~ TWELVE feet in height.
2. Acreage of site: 1/5 ACRE
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: N/A
6. Square footage of buildings to be constructed: RETAINING WALL WILL BE CONSTRUCTED TO STABILIZE SOIL
7. Quantity of earth movement (in cubic yards): 100
8. Proposed land use: RESIDENTIAL BACK YARD w/ RETAINING WALL.
9. Design features, including building height, number of stories and proposed exterior materials:
   RETAINING WALL DIMENSIONS: 110 feet length X 10 feet high.
   2-5 MAN BOULDERS
10. Other

This is an application for Critical Areas Land Use Permit to authorize the construction of a retaining wall within a steep slope critical area to stabilize an unstable slope and repair the foundation of the residence located at the top of the slope. The proposal will utilize hardened stabilization measures including wall construction and drainage improvements.

Reviewed By: D.P.

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

END SEPTEMBER, 2008

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.

ENGINEERING STUDY PREPARED BY ROBERT PRIDE

See engineering report in project file.

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.

CRITICAL AREAS LAND USE PERMIT & CLEARING & GRADING PERMIT

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)? 40%

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.

SILTY SAND & GRAVEL

Reviewed By: DB

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

YES, NEIGHBOR BUILT SOLDIER PILE WALL ON PROPERTY LINE TO PROTECT THEIR GARAGE

See existing site conditions documentation in project file.

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

100 YARDS OF FILL

Yes, erosion could occur during construction. Erosion control BMP's must be applied during construction.

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

EROSION ALREADY EXISTS - THE WALL WILL STABILIZE THE LOT

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

SAME AS TODAY

No expansion of impervious surface is proposed or allowed as part of this project.

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

RUN DOWNSPOUTS INTO DRAIN, FILL STEEP SLOPES ADJACENT TO PROPOSED WALL. REPLANTING & RESTORATION OF SITE FOLLOWING WALL CONSTRUCTION, TESC PLAN TO BE IN PLACE DURING CONSTRUCTION.

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.

EMISSIONS ASSOCIATED W/ SMALL CONSTRUCTION EQUIPMENT DURING CONSTRUCTION.

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

NO

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

STATE EMISSIONS CONTROL LAWS FOR SMALL CONSTRUCTION EQUIPMENT

Vehicle and small equipment emissions are controlled by the State.

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

LAKE WASHINGTON WITHIN 250 ~~FEET~~ FEET

Reviewed By: DP

appropriate, state what stream or river it flows into.

The subject site is situated within 250 feet of Lake Washington. The proposed work is not located within the Shoreline Management Act Shoreline Regulatory District. There is a drainage system directly down slope of the project site that presumably flow into Lake Washington. No streams or rivers are located within the project limits or vicinity.

(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.

BACKHOE IS LARGEST EQUIPMENT TO BE USED ON NEIGHBOR'S DRIVEWAY, BUT NOT W/IN 200 FEET

(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.

N/A

No work within water is proposed.

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

1 DOWNSPOUT WILL BE DIVERTED INTO NEW DRAINAGE LINES TO STORM DRAIN.

All site drainage will be diverted to a City approved system.

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

NO

The subject site is not within a FEMA regulatory floodplain.

(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.

N/A

No discharge is expected as part of this proposal.

Reviewed By: D.R.

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.

CONNECTOR OF ROOF DRAIN TO CATCH BASIN

All site storm drainage will be connected to a City approved drainage system.

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

POTENTIAL FOR EROSION DURING CONSTRUCTION.

Erosion will be controlled by construction and site BMPs. BMPs are identified as part of the Clearing and Grading Permit review by the City's Building Department.

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

INSTALLATION OF NEW CATCH BASIN AT TOP OF ROCKERY TO COLLECT SURFACE WATER RUNOFF. TESC PLAN TO BE IN PLACE DURING CONSTRUCTION. SITE RESTORATION POST CONSTRUCTION.

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 BLACKBERRIES

The site is currently vegetated with Himalayan Blackberry. This proposal includes the removal of blackberry to allow for the construction of a new retaining wall.

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

BLACKBERRIES
1 TREE

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

POTENTIAL BALD EAGLE NEST (IN NEIGHBORHOOD)

Review of the WDFW PHS Database indicates there are two documented Bald Eagle nests within 2,750 feet of the subject property.

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

GRASSES, FERNS, GROUNDCOVER, NANDINA, LIRIOPE, HOSTA, BERGENIA.

Reviewed By: D.P.

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:

☐ Mammals: deer, bear, elk, beaver, other:

☐ Fish: bass, salmon, trout, herring, shellfish, other:

b. List any threatened or endangered species known to be on or near the site.
(POTENTIAL (BAZ) EAGLE NEST IN NEIGHBORHOOD)

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

d. Proposed measures to preserve or enhance wildlife, if any:
SITE RESTORATION POST CONSTRUCTION.

6. Energy and Natural Resources

A restoration plan for all areas of disturbance must be included as part of the proposal.

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.
N/A

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

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: N/A.

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.
N/A.

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

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

Reviewed By: D.P.

b. Noise

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

(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.
TRUCKS, OPERATION OF BACK HOE

Noise is regulated by City of Bellevue Code Section 9.18.

(3) Proposed measures to reduce or control noise impacts, if any:
COMPLIANCE W/ CITY OF BELLEVUE NOISE ORDINANCE.

8. Land and Shoreline Use

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

b. Has the site been used for agriculture? If so, describe.
NO

c. Describe any structures on the site.
OLD HOUSE

d. Will any structures be demolished? If so, what? NO

e. What is the current zoning classification of the site? R3.5

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

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

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

i. Approximately how many people would reside or work in the completed project?
N/A

The existing single family residence is located at the top of a steep slope critical area.

j. Approximately how many people would the completed project displace?
NONE

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

Reviewed By: DP

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

N/A

No change in land use is proposed.

9. Housing

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

N/A

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

N/A

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

N/A.

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? WALL TO RAISE SEWER 8-16 FEET.

b. What views in the immediate vicinity would be altered or obstructed? NONE

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

SITE ~~[illegible]~~ RESTORATION UPON WALL CONSTRUCTION.
CONTINUATION OF EXISTING ROCKERY WALL ON SOUTH OF PROPERTY.

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?

NONE

Reviewed By: D.P.

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: N/A.

12. Recreation

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

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

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

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.
N/A

b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on or next to the site.
N/A

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

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.
N/A

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

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

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).
N/A

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

Reviewed By: D.P.

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

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

N/A

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.

N/A.

16. Utilities

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

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.

ELECTRICITY

Signature

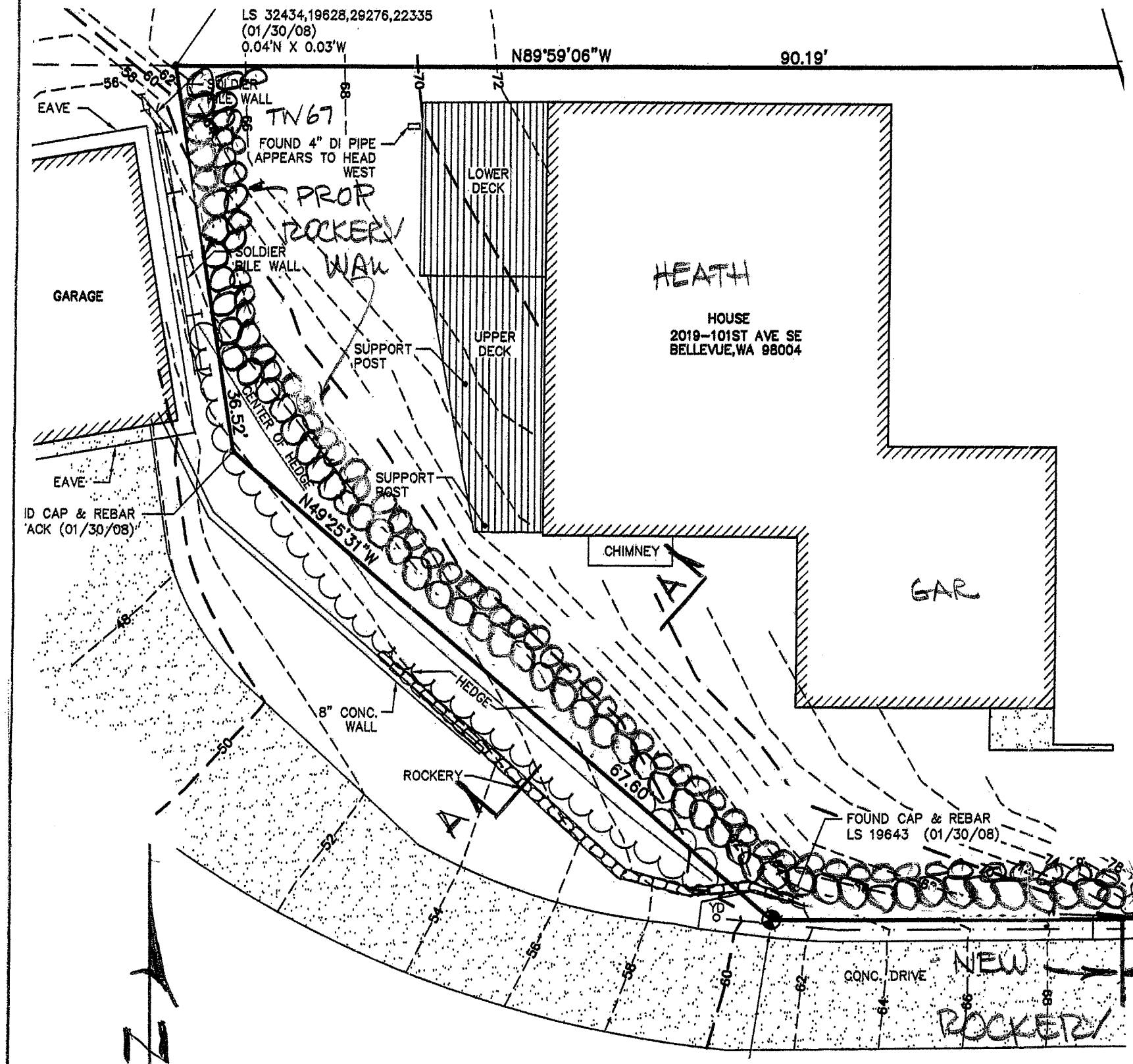
The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

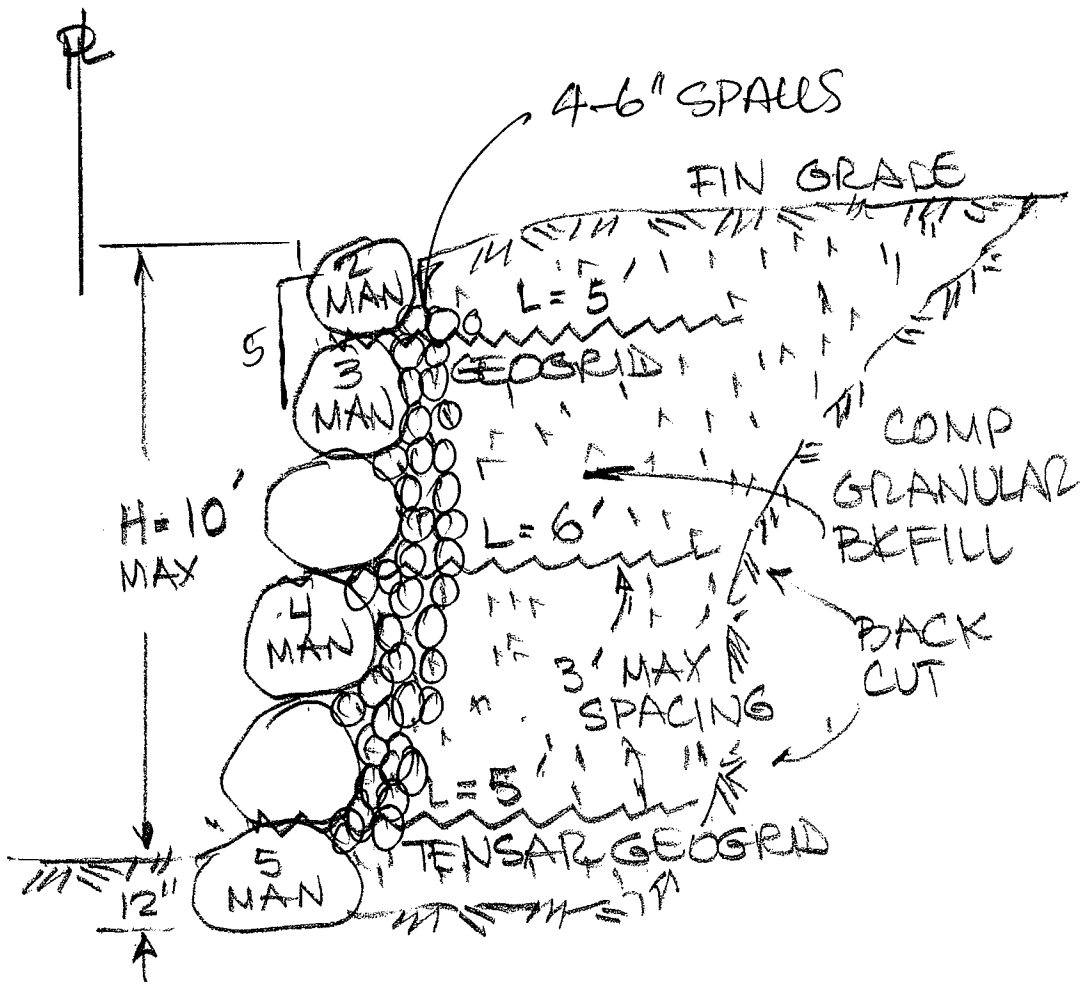
Signature.....

Date Submitted.....8/15/08

Reviewed By: P.P.

Heath Residence Retaining Wall – Vicinity Map
City of Bellevue File No. 08-125900-LO
2019 Killarney Way





SECTION A-A

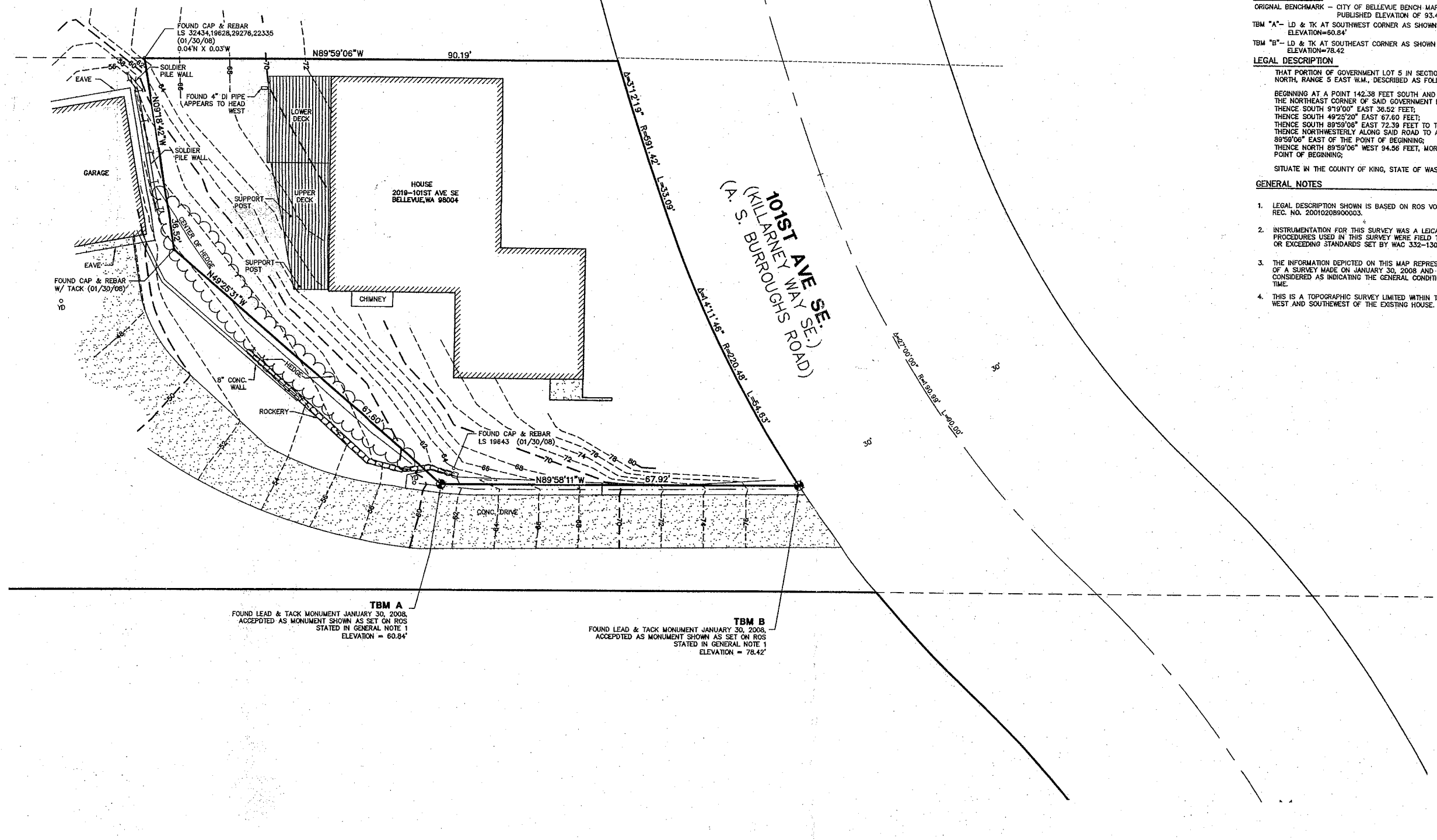
RECEIVED
JUL 11 2008
PERMIT PROCESSING

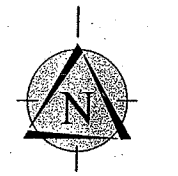
SITE PLAN

Proposed Rockery Wall
2019 101st Avenue SE
Bellevue, Washington

Project No. 07-232-01

Drawing No. 1





SCALE: 1" = 10'

0 5 10 20

BASIS OF BEARING

HELD BEARING OF NORTH 00°54'11" EAST ALONG THE EAST LONE OF SECTION 6, T. 24 N. R. 5 E., WM. AS SHOWN ON A UNRECORDED SURVEY BY CHARLES P. MOWRY FOR A.L. PLOYART DATED OCTOBER 5, 1938.

DATUM:

NAVD 1988

BENCH MARK

ORIGNAL BENCHMARK – CITY OF BELLEVUE BENCH MARK 227 WITH A PUBLISHED ELEVATION OF 93.424'

TBM "A"– LD & TK AT SOUTHWEST CORNER AS SHOWN ON THIS MAP ELEVATION=60.84'

TBM "B"– LD & TK AT SOUTHEAST CORNER AS SHOWN ON THIS MAP ELEVATION=78.42

LEGAL DESCRIPTION

THAT PORTION OF GOVERNMENT LOT 5 IN SECTION 6, TOWNSHIP 24 NORTH, RANGE 5 EAST W.M., DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT 142.38 FEET SOUTH AND 251.51 FEET WEST OF THE NORTHEAST CORNER OF SAID GOVERNMENT LOT 5;
THENCE SOUTH 9°19'00" EAST 36.52 FEET;
THENCE SOUTH 49°25'20" EAST 67.60 FEET;
THENCE SOUTH 89°59'06" EAST 72.39 FEET TO THE COUNTY ROAD;
THENCE NORTHWESTERLY ALONG SAID ROAD TO A POINT SOUTH 89°59'06" EAST OF THE POINT OF BEGINNING;
THENCE NORTH 89°59'06" WEST 94.56 FEET, MORE OR LESS, TO THE POINT OF BEGINNING;

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

GENERAL NOTES

1. LEGAL DESCRIPTION SHOWN IS BASED ON ROS VOL 143 PG 056, REC. NO. 20010208900003.
2. INSTRUMENTATION FOR THIS SURVEY WAS A LEICA TOTAL STATION. PROCEDURES USED IN THIS SURVEY WERE FIELD TRAVERSE, MEETING OR EXCEEDING STANDARDS SET BY WAC 332-130-090.
3. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON JANUARY 30, 2008 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME.
4. THIS IS A TOPOGRAPHIC SURVEY LIMITED WITHIN THE PROPERTY TO THE WEST AND SOUTHWEST OF THE EXISTING HOUSE.

TRIAD ASSOCIATES
12112 115th Ave. NE
Kirkland, WA 98034-5929
425.821.8448
425.821.3481 fax
800.488.0756 toll free
www.triadassociates.net
Land Development Consultants

TOPOGRAPHIC SURVEY

PAUL HEATH

2019 101ST AVE SE
BELLEVUE, WA 98004

KING COUNTY, WASHINGTON

NO.	DATE	REVISION	BY	CK

GREGORY T. JUNEAU, PLS
PROJECT MANAGER

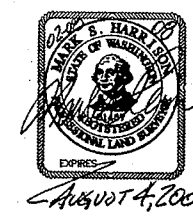
MARK S. HARRISON, PLS
PROJECT SURVEYOR

PROJECT ENGINEER

PROJECT LANDSCAPE ARCHITECT

FIRST SUBMITTAL DATE: 02/08/08

SCALE: HORZ.: 1"=10' VERT.:



AUGUST 4, 2008

STAMP NOT VALID UNLESS SIGNED AND DATED

JOB NO. 08-009

SHEET NO. 1 OF 1

drozier, Feb 08, 2008 - 1:32pm
S:\PROJECTS\08009\DWGFILES\08009.dwg, TOPO, ,

Robert M. Pride, LLC Consulting Engineer

February 16, 2008

Mr. and Mrs. Paul Heath
2019 101st Avenue SE
Bellevue, WA 98004

Re: **Geotechnical Recommendations**
Proposed Rockery Wall
2019 101st Avenue SE
Bellevue, Washington
RMP Project No. 07-232-01

Dear Mr. and Mrs. Heath,

This report provides recommendations for construction of a rockery wall along the side and rear yard of your property in Bellevue. Development of this property resulted in a steep fill slope on the west and south sides of the residence that requires stabilization for protection of the house and deck foundations.

The purpose of this report is to summarize the site and subsoil conditions in the area of the proposed rockery wall, and to provide recommendations for the construction of this 8 to 10 foot high wall. USGS geologic mapping and a previous investigation across the street were used as references for this study. Triad Associates performed a boundary and topographic survey of the property in February 2008 and was used as a basis for siting the rockery wall.

Site Conditions

Exposed soils on the upper building pad for the residence and garage confirm the presence of Outwash silty sands and gravels. Excavation for the building pad resulted in some of these granular soils being pushed out to create the southwest facing fill slope as shown on Drawing No. 1. Corner house and garage foundations are close to the top of this fill slope that ranges in height from 8 to 10 feet. No failures have occurred on this slope that has an average slope gradient of 1H:1V to 3H:2V.

At the base of the fill slope is a tall hedge that extends from the neighbor's garage up to a catch basin located at the property corner adjacent to the driveway. This driveway will serve as equipment access for construction of the rockery wall, and it is intended to maintain the tall hedge at the request of the neighbor to the west of your property.

Test holes and probes confirmed that the existing fill soils range from 2 to 8 feet in depth, and they are similar to the Outwash soils exposed on the upper portion of the property. No groundwater seepage was observed on or at the base of the fill slope.

13203 Holmes Point Drive NE Kirkland, WA 98034
Phone: 425-814-3970 Fax: 425-814-5672

Geotechnical Recommendations

Installation of the 8 to 10 foot high rockery wall as shown on drawing No.1 will require excavation of a level bench at the base of the new wall to establish adequate support for the lower rocks and to allow installation of the Tensar geogrid sheets. Five man base rocks should be placed at a depth of 12 inches below the excavated bench, and the first layer of geogrid should then be installed back into the slope on top of the bench.

We recommend that imported Type 17 sandy gravel (or equivalent granular fill material) be used as backfill up to the top of the slope. The anticipated small quantity of onsite excavated soils may be reused as backfill. An intermediate vertical section of 4 to 6 inch quarry spalls should be placed immediately behind the rockery wall to provide for blockage of the spaces between the individual rocks. The wall should have a 5V:1H batter from the base to top of the exposed rocks. Compacted gravel backfill will perform as a drainage medium and a subdrain system will not be required.

Geogrid sheets should extend 5 to 6 feet behind the rockery wall as shown on Drawing 1 for additional lateral stability of the wall. Maximum vertical spacing of the geogrid should not exceed 3 feet, but will depend on the size and placement of the individual rocks. Placement of the granular backfill should be in 6 to 8 inch lifts at near optimum moisture, and then each lift compacted with a vibratory roller or large plate compactor. Construction of this rockery wall and the placement of the backfill should be accomplished under periodic supervision of the geotechnical engineer.

Construction of the rockery wall will require trimming of the existing tall hedge to provide access for the backhoe equipment. Particular care must be given to protect the individual hedge bushes that are located along the common property line at the base of the new rockery wall. A written statement from the adjoining neighbor will be required to allow equipment and personnel to use their driveway during construction of this wall.

Please call me if there are any questions.

Respectfully submitted,

Robert M. Pride, P. E.
Principal Geotechnical Engineer

ROBERT M. PRIDE
STATE OF WASHINGTON
16271
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 9-20-08

RECEIVED
JUL 11 2008
PERMIT PROCESSING

dist: (3) addressee
encl: Drawing No. 1

rmp: HeathRockery1

13203 Holmes Point Drive NE Kirkland, WA 98034
Phone: 425-814-3970 Fax: 425-814-5672

Robert M. Pride, LLC Consulting Engineer

June 18, 2008

Mr. and Mrs. Paul Heath
2019 101st Avenue SE
Bellevue, WA 98004

Re: **Geotechnical Responses**
Proposed Rockery Wall
2019 101st Avenue SE
Bellevue, Washington
RMP Project No. 07-232-01

Dear Mr. and Mrs. Heath,

As requested by the City of Bellevue plan reviewer, this letter provides additional details for the proposed drainage and erosion control measures to be included in this rockery project. Drawing No. 2 shows the connection of the roof down drain at the southwest corner of the house to an existing catch basin at the toe of your slope below the garage.

An additional catch basin has been added at the top of the rockery opposite the upper deck to collect surface water runoff from the rear yard. Final grades at the top of the rockery in the rear yard will be graded to slope toward this catch basin. No subdrain was considered necessary behind the rockery since the large quarry spalls will collect any subsurface water and allow it to migrate down into the granular native Outwash soils.

An erosion and sedimentation silt fencing will be installed along the base of the new rockery wall as shown on Drawing No. 3. At the completion of this wall the silt fencing will be removed and existing vegetation along the property line restored. Please call me if there are any questions.

Respectfully submitted,

Robert M. Pride, P. E.
Principal Geotechnical Engineer

ROBERT M. PRIDE
STATE OF WASHINGTON
16271
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 7-20-08

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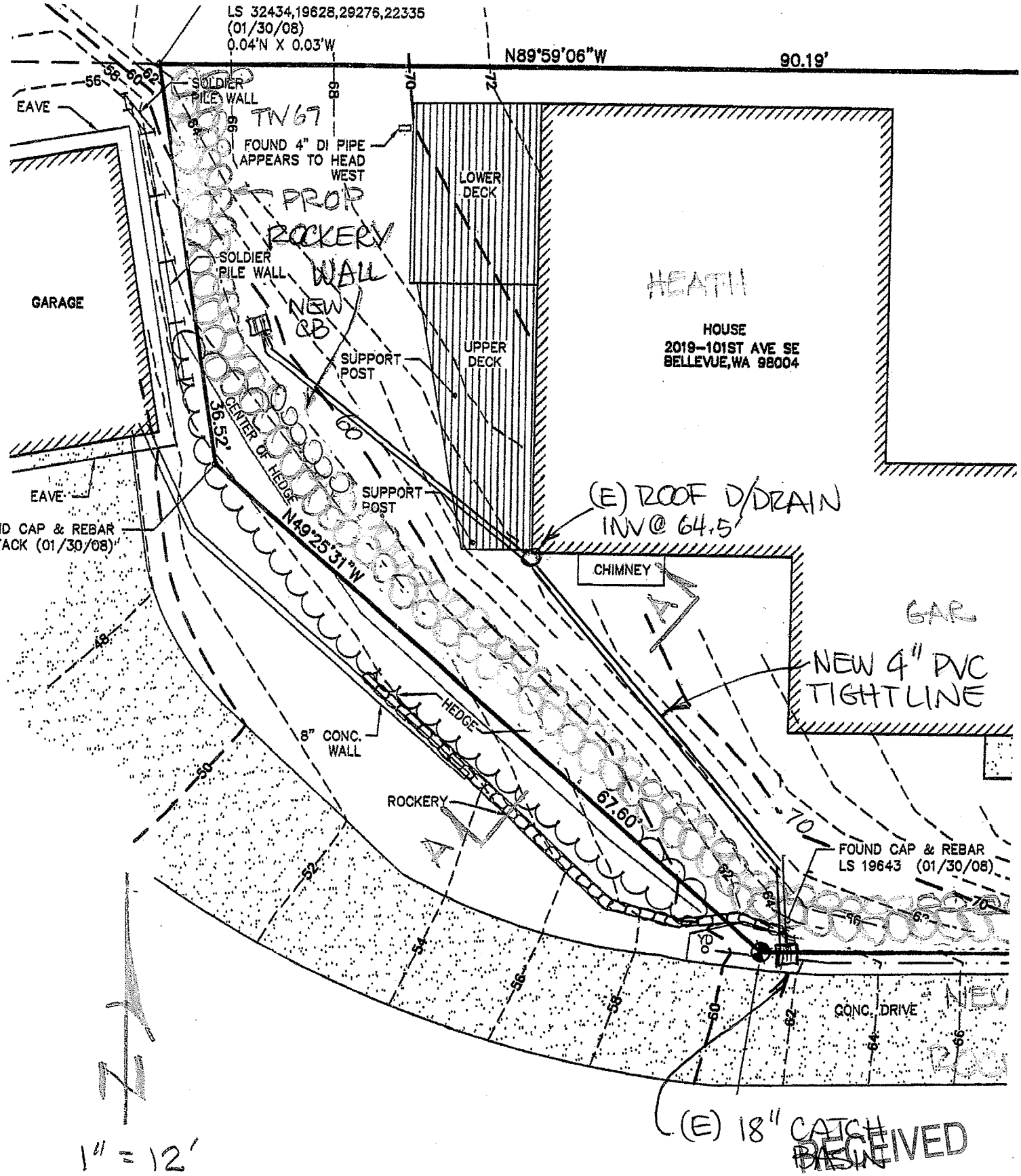
dist: (3) addressee
encl: Drawing Nos. 2 and 3

rmp: HeathRockery2

13203 Holmes Point Drive NE Kirkland, WA 98034
Phone: 425-814-3970 Fax: 425-814-5672



DRAIN INSTALLATIONS

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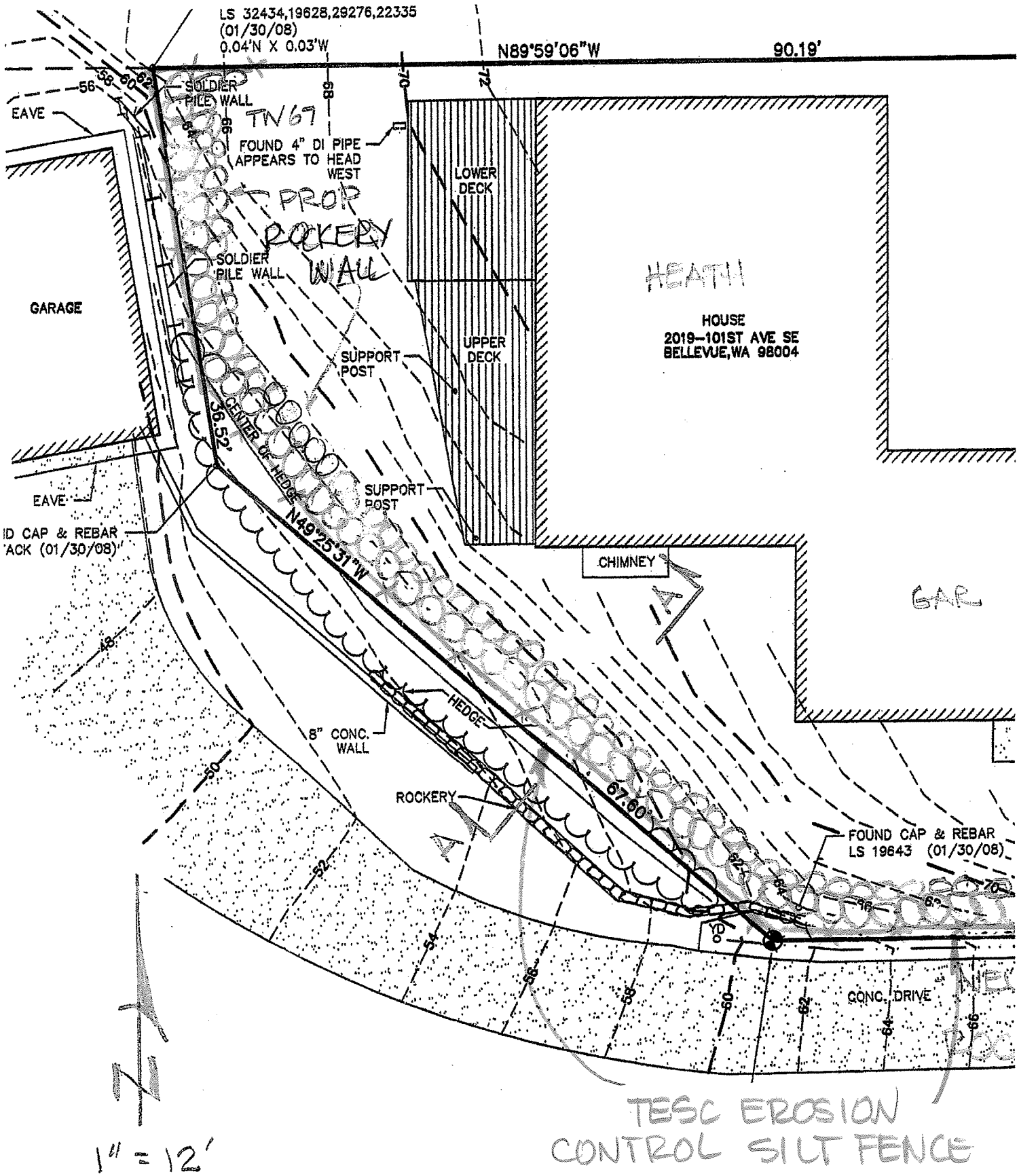
DWG 2



EROSION CONTROL

DWG 3