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

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

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

File No.	09-122918-LO
Project Name/Address:	Ellison Slope Reconstruction and Enhancement 853 97th Ave SE
Planner:	Kevin LeClair
Phone Number:	425-452-2928
Minimum Comment Period:	**October 8, 2009**

Materials included in this Notice:

- ☒ Blue Bulletin
- ☒ Checklist
- ☒ Vicinity Map
- ☒ Plans
- ☒ Other: Critical Areas Report, includes SEPA Checklist, Vicinity Map and Plans

MacPherson CONSTRUCTION & DESIGN

CRITICAL AREAS REPORT

FOR

Steep Slope Reconstruction & Enhancement

Ellison Residence

853 97th. Avenue S.E.
Bellevue, Washington 98004

August 24, 2009

MacPherson Construction & Design, LLC • 21626 S.E. 28th. Street • Sammamish, WA 98075

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INTRODUCTION AND SCOPE OF PROPOSAL

The work of this proposal is to stabilize an existing unstable steep slope through Reconstruction and Enhancement. While the slope has been maintained in the past as grass and fruit orchard, the continuing surface failures are a cause for concern as the new house is being built. The new house has been permitted to be built on the footprint of an existing non-conforming house at the crest of this slope. While the new house is firmly founded on stable sub-surface materials, the deteriorating slope below the house will continue to have surface failures and slough material over time unless something is done to correct the problems and provide access for monitoring and maintenance. In addition, the slope alteration will provide for more reasonable access around the new house for life safety and home maintenance. This proposal also offers significant restoration and mitigation measures that will not only improve the local habitat but will also significantly improve stormwater runoff volume and quality.

The scope of the work includes installing tiers of low, stepped retaining structures of small landscape retaining blocks or rockeries with intervening pathways and reasonably level planting areas. In addition, we propose to include some small, level areas for outdoor living and enjoying and maintaining the newly restored areas. All pathways and terraces will be constructed of pervious materials. The vast majority of the existing steep slope areas will be cleared of invasive and unwanted plants and will be restored and planted with new native and select plantings. The disrupted areas will be mitigated for by the significant restoration effort.

CRITICAL AREAS AFFECTED

The critical areas affected by this proposal consist of a steep slope area running westward from the house approximately 90 feet and extending to both north and south side property lines and beyond. In addition, there is the associated top-of-slope buffer (50 feet) and the bottom-of-slope structure setback (75 feet). The critical areas are depicted on the **STEEP SLOPE STABILIZATION SCOPE PLAN,** Page 6. The northern and western property boundaries abut other single family residences, the southern property boundary abuts an undeveloped portion of Chisum Park. See the **Site Photographs of Existing Conditions** Appendix H.

RELEVANT CODE SECTIONS

Relevant code sections include:

20.25H.055 Uses and development allowed within Critical Areas – Performance standards
20.25H.140 Critical areas report – Additional provisions for landslide hazards and steep slopes.
20.25H.145 Critical areas report – Approval of modification.
20.25H.255 Critical areas report – Decision criteria.
20.30P.140 Decision criteria for a Critical Areas Land Use Permit.

The criteria and requirements of these sections has been addressed and justifications given in detail in the following section.

LEGEND:

- STEEP SLOPES >40% AREA: 4,736 SF RISE: 52 FEET
- STEEP SLOPE BUFFERS
- EXISTING HOUSE (PERMIT 08-133068 BS)

NOTE:
SEE DETAILED SLOPE GRADING PLAN AND SLOPE RESTORATION/MITIGATION PLAN PREPARED BY ALTMANN OLIVER ASSOCIATES, LLC.

SITE PLAN

SCALE: 1" = 20'-0"

DATE	BY	DESCRIPTION

Ellison Residence

853 97th Avenue S.E.
Bellevue, WA 98004
Parcel #: 5491700100

STEEP SLOPE STABILIZATION SCOPE PLAN

MacPHERSON CONSTRUCTION & DESIGN
21626 SE 28th ST. SAMMAMISH WA 98075-7125
PH. 425.391.3333 FAX. 425.557.2841

DRAWING NUMBER:
Page 6 OF DRAWINGS

JUSTIFICATIONS & CODE RESPONSE

AVOIDANCE: It does not appear that avoidance is viable option. To do nothing and leave the existing slope as-is would maintain a serious hazard to both the residence and the environment. Continued slope degradation will only add to environmental deterioration over time and, as a worst case, could begin to compromise the primary structure and neighboring structures as well.

MINIMIZATION: This proposal represents the minimal amount of work necessary to stabilize the slope and provide a means for easily and readily monitoring and maintaining the slope. Other added benefits of this proposal are that the terracing will significantly slow the stormwater runoff, allowing the water to infiltrate naturally into the now stabilized slope, and it will provide incentive for additional, substantial habitat restoration on the remaining portions of the steep slope. Alternatives were considered such as only plantings and habitat restoration, but these did not adequately address the long term issues associated with the continuing slope failures. The existing maintained plantings have not demonstrated effectiveness in stabilizing the slope. The amount of structured tiering has been significantly reduced from that proposed in earlier submittals. See **Pre-Application Meeting Letter** from Michael Paine dated February 9, 2009, Appendix A.

MITIGATION: This proposal offers a substantial program of restoration and mitigation in exchange for permission to reconstruct and stabilize the compromised steep slope. This restoration and mitigation will significantly improve the natural habitat and habitat functions, will improve both the quality and volume of stormwater runoff, will provide for ease of monitoring and maintenance, and will allow the human occupants to observe and enjoy nature in this newly improved environment.

Further discussion and justifications for each of the applicable code sections in provided in interlineated format below:

20.25H.055 Uses and development allowed within Critical Areas – Performance standards

C.3.m. Stabilization Measures. See LUC 20.25E.080.E for standards regulating shoreline stabilization measures. Proposed stabilization measures within a critical area or critical area buffer to protect against streambank erosion or steep slopes or landslide hazards may be approved in accordance with this subsection.

i. 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.

The work of this proposal is needed to protect the residential development and environmental infrastructure from slope failure which, in extreme case, over time, could compromise the primary residence structure, but, in any event, would certainly be harmful to the environment. Avoidance measures have been in place and have not been effective in preventing further slope movement. To avoid doing anything more at this time would certainly be detrimental to the natural environment below the slope.

ii. 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 subsection C.3.m.iii.(D) of 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.

See below:

iii. Definitions.

a. Hard Stabilization Measures. As used in this part, “hard stabilization measures” include: rock revetments, gabions, concrete groins, retaining walls, bulkheads and similar measures which present a vertical or nearly vertical interface with the water.

b. Soft Stabilization Measures. As used in this part, “soft stabilization measures” include: biotechnical measures, bank enhancement, anchor trees, gravel placement, stepped back rockeries, vegetative plantings and similar measures that use natural materials engineered to provide stabilization while mimicking or preserving the functions and values of the critical area.

c. Avoidance Measures. As used in this part, “avoidance measures” refer to techniques used to minimize or prevent erosion or slope collapse that do not involve modification of the bank or slope. “Avoidance measures” include vegetation enhancement, upland drainage control, and protective walls or embankments placed outside of the critical area and critical area buffer.

d. Technically Feasible. 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;

The natural topography is unavoidable and the primary structure is located directly at the top of the steep slope. The new structure was permitted in 2009 because it is located on the footprint of the existing non-conforming house.

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

The work of this proposal will be done during the construction of the new primary residence. All public infrastructure is already in place. Due to the severity of the steep slope, much of the restoration work will be done by hand or with small power equipment thereby further respecting the environment.

(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;

While the primary structures foundation reaches deeply into stable material, any surface slippage would be detrimental to having reasonable access around the structure for maintenance and life safety activities. By stabilizing the slope, several goals are achieved:

- *Continued access around the house for fire & life safety will be assured.*
- *Further surfical slippage will be stemed thereby providing for a stable and safe environment.*
- *Stormwater runoff will be controlled to prevent contaminated water & materials from making their way into sensitive waterways.*
- *The restoration & mitigation measures will provide a far superior environment for native species than currently exists.*
- *Ready access to the stabilized slope will allow maintenance and monitoring for any future failures.*

(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

The work of this proposal is needed to protect the residential development and environmental infrastructure from slope failure which, in extreme case, could jeopardize the primary residence structure, but, in any event, would be harmful to the environment. To avoid doing anything more at this time would certainly be detrimental to the natural environment below the slope.
On the other hand, as noted above, the proposed restoration & mitigation measures will provide a far superior environment for native species than currently exists and will greatly enhance the local water quality.

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

As noted above and throughout this report, we are proposing substantial mitigation work in exchange for being granted permission to reconstruct and stabilize this slope. In addition, full temporary erosion & sedimentation control (TESC) measures will be in place during the work of this proposal. See ***STEEP SLOPE STABILIZATION SCOPE PLAN,*** *Page 6.*

20.25H.140 Critical areas report – Additional provisions for landslide hazards and steep slopes.

In addition to the provisions of LUC 20.25H.230, any proposal to modify a landslide hazard or steep slope or associated critical area buffer through a critical areas report shall comply with the requirements of this section.

A. Limitation on Modification.

The provisions for coal mine hazard areas in LUC 20.25H.130 may not be modified through a critical areas report.

Not applicable

B. Area Addressed in Critical Area Report.

In addition to the general requirements of LUC 20.25H.230, the following areas shall be addressed in a critical areas report for geologically hazardous areas:

1. Site and Construction Plans. The report shall include a copy of the site plans for the proposal and a topographic survey;

*See the **STEEP SLOPE STABILIZATION SCOPE PLAN,** Page 6 & the **Topographic Survey,** Appendix K.*

2. Assessment of Geological Characteristics. The report shall include an assessment of the geologic characteristics of the soils, sediments, and/or rock of the project area and potentially affected adjacent properties, and a review of the site history regarding landslides, erosion, and prior grading. Soils analysis shall be accomplished in accordance with accepted classification systems in use in the region;

*See the **Slope Reconnaissance Report,** Appendix C & the **Geotechnical Investigation,** Appendix D.*

3. Analysis of Proposal. The report shall contain a hazards analysis including a detailed description of the project, its relationship to the geologic hazard(s), and its potential impact upon the hazard area, the subject property, and affected adjacent properties; and

*See the **Critical Area Review letter,** Appendix E.*

4. Minimum Critical Area Buffer and Building Setback. The report shall make a recommendation for a minimum geologic hazard critical area buffer, if any, and minimum building setback, if any, from any geologic hazard based upon the geotechnical analysis.

*There is **NO** building associated with this proposal. The new structure at the top of the slope was permitted and founded per the recommendations of the **Geotechnical Investigation,** Appendix D.*

20.25H.145 Critical areas report – Approval of modification.

Modifications to geologic hazard critical areas and critical area buffers shall only be approved if the Director determines that the modification:

A. Will not increase the threat of the geological hazard to adjacent properties over conditions that would exist if the provisions of this part were not modified;
By stabilizing this failing slope we will be minimizing the potential hazards to adjacent properties. Reference the ***Geotechnical Investigation,*** *Appendix D.*

B. Will not adversely impact other critical areas;
By working within the Building Setback lines and keeping cuts & retaining structures low, we expect no adverse impacts to other critical areas. In addition, the restoration/mitigation of the environment will have a positive impact on the adjacent public park. Reference the ***Geotechnical Investigation****, Appendix D, the* ***Grading and Enhancement Plans,*** *Appendix G, and the* ***Habitat Assessment Report,*** *Appendix B.*

C. Is designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than would exist if the provisions of this part were not modified;
By stabilizing this failing slope we will be minimizing the potential hazards to this project. Reference the ***Geotechnical Investigation,*** *Appendix D.*

D. Is certified as safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the state of Washington;
See the ***Geotechnical Investigation,*** *Appendix D and* ***Critical Area Review letter,*** *Appendix E.*

E. The applicant provides a geotechnical report prepared by a qualified professional demonstrating that modification of the critical area or critical area buffer will have no adverse impacts on stability of any adjacent slopes, and will not impact stability of any existing structures. Geotechnical reporting standards shall comply with requirements developed by the Director in City of Bellevue Submittal Requirements Sheet 25, Geotechnical Report and Stability Analysis Requirements, now or as hereafter amended;
See the ***Geotechnical Investigation*** *Appendix D and* ***Critical Area Review letter,*** *Appendix E.*

F. Any modification complies with recommendations of the geotechnical support with respect to best management practices, construction techniques or other recommendations; and
All construction will be done in strict adherence with the recommendations, practices and techniques outlined in the ***Geotechnical Investigation,*** *Appendix D and subsequent communication with the Geotechnical Engineer. The Geotechnical Engineer will monitor the construction work in progress.*

G. The proposed modification to the critical area or critical area buffer with any associated mitigation does not significantly impact habitat associated with species of local importance, or such habitat that could reasonably be expected to exist during the anticipated life of the development proposal if the area were regulated under this part.
See the ***Habitat Assessment Report,*** *Appendix B.*

20.25H.255 Critical areas report – Decision criteria.

B. Decision Criteria – Proposals to Reduce Regulated Critical Area Buffer.

The Director may approve, or approve with modifications, a proposal to reduce the regulated critical area buffer on a site where the applicant demonstrates:

1. The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in overall critical area or critical area buffer functions;

*See the **Grading and Enhancement Plans,** Appendix G & **Habitat Assessment Report,** Appendix B.*

2. The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in the most important critical area or critical area buffer functions to the ecosystem in which they exist;

*See the **Grading and Enhancement Plans,** Appendix G & **Habitat Assessment Report,** Appendix B.*

3. The proposal includes a net gain in stormwater quality function by the critical area buffer or by elements of the development proposal outside of the reduced regulated critical area buffer;

This proposal will tier and stabilize the existing degraded slope resulting in a slowing of the stormwater runoff, allowing time for natural infiltration into a now stable slope. In addition, by stabilizing the slope we are preventing uncontrolled runoff and erosion debris from affecting the downslope neighbors. The restoration of the habitat areas at the lower portion of the site will further enhance the quality of the stormwater runoff.

4. Adequate resources to ensure completion of any required restoration, mitigation and monitoring efforts;

Bonding and/or assurances for completion and maintenance of the work will be provided as required.

5. The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and

The work of this proposal will enhance the functions and values of the critical areas and critical area buffers on and off site. By stabilizing the degraded slope we will prevent further erosion, land slippage and continued degradation of the critical areas. The construction activities will be carefully monitored to avoid collateral damage and any disturbed areas will be restored in order to maintain or improve the natural functions and values of the critical areas and associated buffers.

6. The resulting development is compatible with other uses and development in the same land use district.

The work of this proposal will serve to enhance the existing natural conditions and features of this residential neighborhood.

20.30P.140 Decision criteria.

The Director may approve or approve with modifications an application for a Critical Areas Land Use Permit if:

A. The proposal obtains all other permits required by the Land Use Code; and
Permits for the construction of the adjacent house have already been issued:
08-133068 BS, 08-133069 TG, 08-136688 UB

B. 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; and
We are proposing to utilize low, stepped retaining structures to stabilize the degraded slope area. By using small concrete retaining units rather than poured-in-place concrete walls, we can construct the improvements with a minimum of collateral disturbance. The blocks can be hand carried and hand placed thereby avoiding the need for heavy equipment traversing the critical area. The small retaining units also have a more natural appearance and readily adapt to the environmental restoration/mitigation proposed. Finally, the small units are more easily repaired should the need arise.

C. The proposal incorporates the performance standards of Part 20.25H LUC to the maximum extent applicable; and
See responses below.

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;
Only the minimum work necessary to protect the slope is being proposed. The tiering with retaining walls and intermittent pathways follow the natural contours to the extent possible to provide slope stabilization.

B. Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;
The most critical portion of the slope required significant stabilization measures. We opted to preserve the more stable portion of the site which will result in a natural buffer between the newly stabilized slope and the adjoining properties and will provide greater opportunities for habitat restoration.

C. The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;
The proposed development will reduce risk to neighboring properties by stabilizing an otherwise dangerous slope condition. See response to B. above.

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 uses stepped, low retaining structures to maintain the existing natural slope to the greatest extent possible.

E. Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer;
This proposal utilizes only pervious paving materials for areas intended for foot traffic. No vehicle traffic will occur in the proposal areas.

F. Where change in grade outside the building footprint is necessary, the site retention system should be stepped and regrading 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 uses stepped, low retaining structures in as natural a form as possible to achieve the necessary slope stabilization. The pathways between the retaining structures are minimal and are necessary to allow access for monitoring and maintenance of the slope and vegetated areas.

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;

There is no building as a part of this proposal. The building at the very top of the steep slope is founded on stable sub-surface materials to avoid loading the unstable slope. We have opted to use stepped, low retaining structures of retaining blocks for as natural a look and feel as possible.

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;

Not applicable in this case.

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

Not applicable in this case.

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.

By using low retaining structures utilizing small retaining units we avoid the necessity for heavy equipment on the affected area. All disturbed areas will be cleaned and restored according to the proposed restoration plan.

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

Streets, utilities and public services already exist in the area.

E. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC 20.25H.210; except that a proposal to modify or remove vegetation pursuant to an approved Vegetation Management Plan under LUC 20.25H.055.C.3.i shall not require a mitigation or restoration plan; and

*See the **Grading and Enhancement Plans,** Appendix G.*

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

We have addressed all other code related requirements to assure full compliance.

REFERENCE APPENDICIES

A **Pre-Application Meeting Letter**
from Michael Paine, dated February 9, 2009

B **Habitat Assessment Report**
by Altmann Oliver Associates, LLC, dated August 18, 2009

C **Slope Reconnaissance Report**
by GeoEngineers, dated January 15, 2007

D **Geotechnical Investigation**
by Yonemitsu Geological Services, dated May 28, 2008

E **Critical Area Review Letter**
by Yonemitsu Geological Services, dated August 14, 2009.

F **Slope Reconstruction & Enhancement Report**
by Altmann Oliver Associates, LLC, dated August 18, 2009

G **Grading and Enhancement Plans***
by Altmann Oliver Associates, LLC, dated August 18, 2009

H **Site Photographs of Existing Conditions**

I **Arborist Report**
by International Forestry Consultants, Inc. dated April 13, 2009

J **Environmental Checklist**
By MacPherson Construction & Design, LLC, dated 6/23/09

K **Topographic Survey***
By ESM Consulting Engineers, LLC, dated 4-28-2008

* FULL SIZE PLANS SUBMITTED SEPARATELY

Appendix A

Pre-Application Meeting Letter
from Michael Paine, dated February 9, 2009

City of Bellevue

Post Office Box 90012 ▪ Bellevue, Washington ▪ 98009 9012

February 9, 2009

Robert Sorenson
MacPherson Construction and Design
21626 SE 28th St
Sammamish, WA 98075

RE: Slope Reconstruction and Enhancement

Dear Bob:

This letter is in response to your request for a preapplication meeting and review. As I understand it, you propose to modify a steep slope at the rear of the Ellison residence at 853 97th Avenue SE to install a system of low-block retaining walls that step down the hillside to create useable backyard space and landscaping area. In addition you claim that installation of this retention system will improve overall surficial stability of the slope, while substantially reducing surface erosion.

While such a proposal is theoretically approvable under the inherent flexibility that exists in our critical areas code (LUC 20.25H), it is incumbent upon the applicant to demonstrate that expected critical areas functions and values are not present, or alternatively, that the proposal encompasses some unique design or protection of critical area functions not anticipated by these regulations. Generally, the applicant must demonstrate that requested modifications of prescriptive regulations leads to equivalent or better protection than otherwise would be the case under standard requirements and that they are the minimum necessary to achieve the proposed objective. In the case of slopes, the demonstration of increased stability may also be required.

In reviewing your proposal with staff, I am of the opinion that something resembling your proposal is supportable under our codes but with the following modifications aimed at reducing the overall disturbance and increasing the future habitat quality of the site:

- The number of walls and associated disturbance must be reduced so that roughly half the slope is revegetated and its habitat quality increased. Remember the result of the modification must provide genuine ecological lift.
- The tree, shrub and perennial densities and diversity in the native restoration area below the walls must meet, at a minimum, the planting template for sunny sites.

As you know, final approval requires that you submit an application for a *critical areas land use permit* and a *critical areas report*. Since the most important part of this effort is the critical area report, I have highlighted the major components below. To complete this work you will need to hire a qualified professional to assist with putting together a restoration plan. I recommend that you share this document with him.

Critical Areas Report

The full Critical Areas Report requirements are described in detail in the Land Use Code at **20.25H.230**. In your case, the report is required primarily to document the extent of the slope modification you are requesting and to outline the habitat improvement you are asking us to consider in exchange for the proposed modification. The following is an abbreviated list of the basic requirements in LUC 20.25H.230. Not all will apply given the particular focus of this request. Additional information may be requested, depending on the nature of your request and the complexity of the critical areas on the site.

LUC 20.25H.230
Critical Areas Report Submittal Requirements

1. Identify and classify of all critical areas and critical area buffers on the site (have a land surveyor create a base map so this information can be depicted on a site plan;
2. Identify and characterize all critical areas and critical area buffers on properties adjacent to the site with the help of a qualified professional, i.e. land surveyor, wetland scientist, hydrologist (show this information on the site plan)
3. Identify each regulation or standard of the Land Use Code proposed to be modified;
4. Have a qualified biologist assess the habitat consistent with LUC 20.25H.165 (This is likely not necessary, so focus primarily on the proposed habitat improvement or restoration plan, describing why particular design features were employed. I suggest you use the templates contain in the Critical Areas Handbook as a base from which to start);
5. Assess probable cumulative impacts to critical areas resulting from development of the site and the proposed development;
6. Compare and contrast the level of protection of critical areas functions and values provided by the proposal with the level of protection provided by the regulations of the Land Use Code.

a. Discuss the functions and values currently provided by the critical area and critical area buffer on the site and their relative importance to the ecosystem in which they exist;

b. Discuss the functions and values likely to be provided by the critical area and critical area buffer on the site through application of the regulations and standards of this Code over the anticipated life of the proposed development; and

c. Discuss the functions and values likely to be provided by the critical area and critical area buffer on the site through the modifications and performance standards included in the proposal over the anticipated life of the proposed development;

7. Respond to the specific requirements contained in the geohazards section at LUC 20.25.140 and the criteria at 20.25.145. If need recommend additional or modified performance standards, if any (Narrative that should be written or reviewed by a habitat biologist, if applicable);
8. Describe the required mitigation applicable to the proposal pursuant to LUC 20.25H.210, and recommend additional or modified mitigation, if any (Restoration meeting requirements in the Critical Areas Handbook will suffice so long as performance criteria is similar to above).

Decision Criteria

There are three sets of Decision Criteria that will be used to evaluate your proposal. They are enumerated at **LUC 20.25H.145**, **LUC 20.25H.255.B** and **LUC 20.30P.140**. These decision criteria should be addressed in a narrative format along with your application to build walls and landscaping features. Many may not apply to your proposal, but carefully consider the criteria and draft a response to each. If you have any questions as you proceed let me know. I have restated some of the most important decision criteria below and followed each one with brief description of the type of information that must be included somewhere in your proposal to address the criteria.

LUC 20.25H.255.B
Decision Criteria for Proposals to Reduce Regulated Critical Area Buffer.
The Director may approve, or approve with modifications, a proposal to reduce the regulated critical area buffer on a site where the applicant demonstrates:

1. The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in overall critical area or critical area buffer functions;

Show on your plans the areas of critical area and critical area buffer and describe in a narrative format how the critical area and critical area are degraded below what would exist in an ideal condition. Then on a second sheet of your plans draw up a restoration plan that describes what will be removed, planted and placed to improve the functions of the critical area and critical area buffer. Finally, in a narrative format describe how the elements of the illustrated restoration plan will improve the functions and values of the critical area and critical area buffer. For example, the removal of a mono-culture of invasive plant species and restoration of the area with the planting of a diverse mixture of native trees and shrubs will enhance the capacity of a site to intercept rainfall, as well as create valuable wildlife habitat niches.

2. The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in the most important critical area or critical area buffer functions to the ecosystem in which they exist;

In addition to the work done under point # 1 above, discuss in a narrative format how the restored critical area and critical area buffer fit into and contribute to the ecosystem functions in the region and/or watershed. For example, a stream corridor, in order to be considered healthy, should include large, mature trees that shade the waterway keeping it cool. This water eventually flows downstream to fish-bearing streams where cool water is essential for fish survival.

3. The proposal includes a net gain in stormwater quality function by the critical area buffer or by elements of the development proposal outside of the reduced regulated critical area buffer;

One key function of all critical areas and critical area buffers is the management of storm water. This decision criterion is asking that the proposal include some elements of low-impact development techniques that result in an improvement in storm water management by the site as a whole. This can include any combination of low-impact development the use of pervious pavements, green roofs, soil amendments and/or rain gardens. Also included is the planting of trees that have the capacity to reach a large mature size and intercept rainfall, which can be both inside and outside of the critical area and critical area buffer.

4. Adequate resources to ensure completion of any required restoration, mitigation and monitoring efforts;

In this point, we are asking that the applicant provide the City with a performance assurance device, in the form of either a bond or certificate of savings from a financial institution. This assurance device is then held by the City until the applicant satisfactorily completes the required restoration and meets or exceeds the success measures of the submitted restoration plan.

5. The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and

In a narrative format, describe the functions and values of the critical areas and critical area buffers on the adjacent properties and demonstrate how these functions and will not be negatively impacted by the proposed development.

6. The resulting development is compatible with other uses and development in the same land use district.

All that is needed here is a description of the land uses on the neighboring properties and quick review of whether or not the proposed development will be compatible with these other land uses. Most often the work is occurring in a residential setting and the surrounding uses are also residential. What needs careful scrutiny is when the proposed development is in a commercial district that could have detrimental impacts on a land use district of lesser intensity.

LUC 20.30P.140
Decision Criteria for a Critical Areas Land Use Permit.
The Director may approve or approve with modifications an application for a Critical Areas Land Use Permit if:

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

Describe all of the other minor permits that will be required for the development being considered under the Critical Areas Land Use Permit proposal. In the case of a single-family residential construction, this would be a single-family building permit (BS) with a right-of-way use permit (TD) and possibly some Utilities permits (UE or UD), depending what utilities are already available at the site and what still needs to be installed.. The Utility

permits required would be determined by the Utility Reviewers who can be reached at (425) 452-4187 or by coming into City Hall.

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; and

In this criterion we are relying on the expertise of the applicant's architects, engineers and/or biologists to describe how the proposed development is being designed and will be constructed in way that is considered to be the best known construction technique. If there are other options that were analyzed and rejected, they should be discussed so the reviewer understands that there are other techniques that could have been used, but would have been more detrimental to the critical area and critical area buffer.

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

Each of the critical areas designated by the code have a set of performance standards in addition to performance standards that sometimes apply depending on the type of work proposed. In the case of a steep slope critical area and critical area buffer modification, the performance standards that must be adhered to are LUC 20.25H.125 and

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

For most projects the fire and street facilities are obvious just by looking at the plans, but in the case water, electricity, natural gas these items should be shown on the plans to demonstrate that they are already existing at the site or that they are planned to be connected to site. For example, by including the copies of easement documents across a neighboring property, you demonstrate that these facilities are available.

5. The proposal includes a mitigation or restoration plan consistent with the requirements of **LUC 20.25H.210**;
When you read LUC 20.25H.210, you will see that it is rather self-explanatory of what is required, but be sure your plan is prepared by a qualified professional like a landscape architect with the consultation of a habitat

biologist, wetland ecologist and/or a hydrologist and that it contains the items listed below:

- ***Statement of goals and objectives for the restoration or compensation for disturbance***
- ***Set of criteria to be able to measure the success or failure of the restoration or mitigation efforts***
- ***Written specifications of the restoration that include (The following items should be shown on a scaled set of plans):***
  - ***i. Plant species***
  - ***ii. Plant sizes***
  - ***iii. Plant quantities***
  - ***iv. Grading plans showing existing and revised contours***
  - ***v. All trees that will be removed and preserved***
  - ***vi. Any other features that will be added, such as: large woody debris, snags, etc.***
  - ***vii. Temporary erosion and sedimentation control measures***
- ***Schedule of when the work will occur***
- ***Schedule of monitoring frequency (This is where the performance measures are applied to check for success or failure)***
- ***Contingency plan (What will happen if the restoration/mitigation is not meeting the performance measures?)***
- ***Assurance device (Assignment of Savings or Bond to cover cost of complete failure or abandonment of restoration/mitigation effort)***
- ***Plans for the restoration of all areas of temporary disturbance. This should be a scaled set of plans that covers all areas within some predefined clearing or work limits where temporary disturbance is allowed.***

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

Verify that the proposed development is allowable in terms of land use and there is nothing that would be prohibit the development from being approved during the subsequent development permits.

If you have questions, please call Kevin Leclair (452-2928). I will be out of the office until August 17.

Sincerely,

Michael N. Paine
Environmental Planning Manager
SENT VIA ELECTRONIC MAIL

Appendix B

Habitat Assessment Report
by Altmann Oliver Associates, LLC, dated June 18, 2009

Altmann Oliver Associates, LLC

PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

AOA
Environmental
Planning &
Landscape
Architecture

August 18, 2009

AOA-3751

Robert Sorenson
MacPherson Construction & Design
21626 SE 28th St.
Sammamish, WA 98075

SUBJECT: **Habitat Assessment for Ellison Residence, Bellevue**
853 - 97th Ave. SE (Parcel 549170-0100)

Dear Bob:

This report is intended to meet the requirements of the City of Bellevue's Land Use Code for Habitat Assessments (LUC 20.25H.165.A). Field investigations for the habitat assessment were conducted on September 3, 2008. Prior to the site visit, the Washington Department of Fish and Wildlife (WDFW) was contacted for their Nongame Heritage data and Priority Habitats and Species (PHS) data for the project site and on all adjacent sections.

The following site- and proposal-related information is required for the habitat assessment:

1. ***Detailed description of vegetation on and adjacent to the site.***

The eastern half of the project site is currently entirely developed with a single-family residence and associated small ornamental areas. The western half of the site consists primarily of a steep slope containing a maintained lawn with scattered small planted trees and shrubs. A nearly monotypic patch of Himalayan blackberry (*Rubus discolor*) occupied the far western portion of the site near the toe of the steep slope.

Significant trees on the site include two large (30" and 28" diameter at breast height) Douglas fir trees (*Pseudotsuga menziesii*) located along the east edge of the property adjacent to 97th Ave. SE and a row of four non-native deodar cedar located along the northeast property line (see arborist report dated April 13, 2009 prepared by International Forestry Consultants, Inc. for an assessment of all significant trees on the property).

Off-site areas to the north and west are developed with single family residences and the area to the east is developed with 97th Ave, SE. The area to the south of the property consists of the undeveloped Chism Park. That portion of the park located adjacent to the subject property contains a west facing slope vegetated with an open canopy, unevenly aged mixed forest with a dense understory.

Common plant species within the off-site park included Douglas fir, madrone (*Arbutus menziesii*), red alder (*Alnus rubra*), scouler willow (*Salix scouleriana*), hazelnut (*Corylus cornuta*), and Himalayan blackberry. Observed habitat features on the off-site slope included several large snags.

2. ***Identification of any species of local importance that have a primary association with habitat on or adjacent to the site, and assessment of potential impacts to the use of the site by the species;***

Twenty three (23) species have been designated by the City of Bellevue as species of local importance (LUC 20.25H.150). One of these species, the bald eagle (*Haliaeetus leucocephalus*) has been mapped by the WDFW as having a nest site located off-site to the southeast. This nest site is located greater than 400 feet from the subject property but within 800 feet of the property. For activities that are within 800 feet of an eagle nest, but not within 400 feet of the eagle nest, a *Standard Bald Eagle Management Plan* can be utilized (see #3 below).

No other species of local importance have been identified as having a primary association with the habitat on or immediately adjacent to the site. The potential of site utilization by each of the species of local importance is also briefly described below:

- Peregrine falcon (*Falco peregrinus*): generally associated with coastal cliffs and shorelines, but also use large buildings in city center. Falcon eyrie has been identified on PHS data for downtown Bellevue, but use of project site unlikely.

- Common Loon (*Gavia immer*): unlikely presence – highly aquatic species

- Pileated woodpecker (*Dryocopus pileatus*): may potentially occasionally utilize site and off-site areas for foraging, but nesting unlikely since generally requires large snags and undeveloped woodland tracts which are absent from site.

- Vaux's swift (*Chaetura vauxi*): some potential for foraging, but unlikely nesting due to lack of snags and large habitat block.

- Merlin (*Falco columbarius*): unlikely presence – generally require coastal or high elevation forests.

- Purple martin (*Progne subis*): unlikely presence – generally require cavities near water for nesting.

- Western grebe (*Aechmophorus occidentalis*): unlikely presence – highly aquatic species.

- Great blue heron (*Ardea herodias*): unlikely presence – primarily aquatic species. No roosts on or adjacent site.

- Osprey (*Pandion haliaetus*): although nest identified on PHS data for north side of bay, unlikely utilization of project site since perch availability not on water.

- Green heron (*Butorides striatus*): unlikely presence – primarily aquatic species.

- Red-tailed hawk (*Buteo jamaicensis*): potential utilization of large trees on site for occasional perching. No nests observed and not near significant open expanse for hunting.

- Western big-eared bat (*Plecotus townsendii*): unlikely presence - no known nearby hibernacula or caves.

- Keen's myotis (*Myotis keenii*): unlikely presence – generally associated with larger coniferous forests not moderate density residential.

- Long-legged myotis (*Myotis volans*): unlikely presence – generally associated with larger coniferous forests not moderate density residential.

- Long-eared myotis (*Myotis evotis*): unlikely presence – generally associated with larger coniferous forests not moderate density residential.

- Oregon spotted frog (*Rana pretiosa*): unlikely presence – aquatic species.

- Western toad (*Bufo boreas*): unlikely presence – no nearby breeding opportunity.

- Western pond turtle (*Clemmys marmorata*): unlikely presence – highly aquatic species.

- Chinook presence (*Oncorhynchus tshawytscha*): no presence – entirely aquatic. Site not within buffer zone.

- Bull trout (*Salvelinus confluentus*): no presence – entirely aquatic. Site not within buffer zone.

- Coho salmon (*Oncorhynchus kisutch*): no presence – entirely aquatic. Site not within buffer zone.

- River lamprey (*Lampetra ayresi*): no presence – entirely aquatic. Site not within buffer zone.

Under the proposed project all of the native trees on the site will be retained and it is unlikely that the project would significantly reduce the potential that the site is occasionally utilized by bald eagles, pileated woodpeckers, or red-tailed hawks.

3. A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the site.

Standard Bald Eagle Management Plan
The standard bald eagle management plan allows for a set of four basic conditions that if met do not require any further review from the WDFW. These conditions include:

- *Retain all known perch trees and all conifers greater than or equal to 24 inches diameter at breast height (24" dbh, measured at 4 ½ ft above the ground).*

  All conifers greater than or equal to 24 inches dbh will be retained as part of the proposed project and this section of the bald eagle management plan will be met.

- *Retain all cottonwoods greater than or equal to 20" dbh, in counties where cottonwood nests occur.*

  No cottonwood trees will be removed as part of the project and this section of the bald eagle management plan will be met.

- *Retain at least 50% of pre-clearing or pre-construction conifer stand with diameter distributions representative of the original stand (>6 feet tall).*

  Since the only trees proposed for removal are non-native Deodar cedars and Portuguese laurels, this section of the bald eagle management plan will be met.

- *Windowing and low limbing of trees is acceptable provided no more than 30% of the live crown is removed. Topping of trees is not allowed.*

Since no windowing or tree topping is proposed, this section of the bald eagle management plan will be met.

4. ***A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts to water quality.***

The proposed slope stabilization area currently consists primarily of maintained lawn that provides very minimal habitat. Since a habitat enhancement plan will be implemented as part of the slope stabilization, it is anticipated that the habitat on the site will increase following construction. In addition, all applicable erosion control methods would be utilized during construction to minimize potential water quality impacts on off-site areas during construction.

5. ***A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed use or activity and to be conducted in accordance with the mitigation sequence set forth in LUC 20.25H.215.***

All native significant trees on the site will be retained as part of the project. The only habitat areas where work would be conducted consists of maintained lawn and yard. To increase the value of the habitat area following slope stabilization, a habitat enhancement plan has been prepared (see **Drawing L-2** and enhancement report).

The habitat enhancement plan will consist primarily of the removal of blackberry and lawn and the re-planting of the area with a variety of native trees and shrubs. Re-planting this area should significantly increase the habitat value of the area by increasing the plant species and structural diversity.

6. ***A discussion of ongoing management practices that will protect habitat after the site has been developed, including proposed monitoring and maintenance programs.***

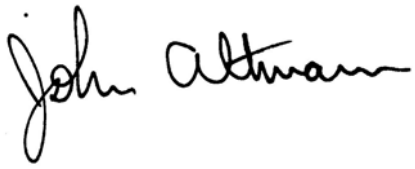
Following construction, it is anticipated that all planted areas on the slope will be maintained in a well-vegetated condition. In addition, a monitoring and maintenance plan has been developed for the habitat enhancement area to ensure that the goals, objectives, and performance standards of the proposed enhancement plan are met.

Conclusion
The proposed project should not have an impact on the primary habitat of any endangered, threatened, or wildlife species of local importance. Since no impact to the habitat of these species is proposed, no additional or modified performance standards pursuant to LUC 20.25H.160 are required. Furthermore, implementation of the proposed habitat enhancement plan should replace and exceed the value of the habitat on the site over time.

If you have any questions regarding the Habitat Assessment, please give me a call.

Sincerely,

ALTMANN OLIVER ASSOCIATES, LLC



John Altmann
Ecologist

Appendix C

Slope Reconnaissance Report
by GeoEngineers, dated January 15, 2007

DRAFT

January 15, 2007

Marty Ellison
853 – 97th Ave SE
Bellevue, Washington 98004

Subject: Memorrandum
Slope Reconnaissance and Foundation Evaluation
Ellison Residence
Bellevue, Washington
File No. 16143-001-00

INTRODUCTION

We are pleased to present this summary letter of our engineering geologic and geotechnical consultation services relative to the slope located west-southwest of your residence and relative to the existing foundation of your house located at 853 – 97th Ave SE in Bellevue, Washington. You requested our services during an on-site meeting with Bo McFadden of GeoEngineers and Bill Lippens of Michael Canatsey Associates Architects. A steep slope is located along the western portion of the property, overlooking Lake Washington. The property consists of a single family residence and landscaped yard.

We understand that you are planning either a significant remodel of the house using the existing foundation or to tear down the existing house and foundation and rebuild the house completely. We further understand that the existing foundation is located at the top of a steep slope and that building on or over the steep slope requires compliance with the stipulations of the King County Critical Areas Ordinance. The purpose of our services was to complete a reconnaissance of the steep slope area adjacent to the west side of the house and an evaluation of the condition of the existing foundation along the west side of the house to assist you and the architects in evaluating the options for your planned construction project.

1968
CONST.

SITE CONDITIONS

The property is located along a west-facing slope on the west side of Lake Washington in Bellevue, Washington. The house is situated on the top of the slope and is set back less than 10 feet from the top of the slope. The yard consists of a mowed lawn and a few ornamental trees along the slope. West of the yard, there is a section of the slope that is covered with dense blackberry bushes. South and southwest of the yard the slopes are vegetated with alders, ferns, and blackberry. There are a few fir trees near the top of the slope, south of the property. There is a neighboring residence to the north, while the area to the south is undeveloped.

According to our discussions with Marty Ellison, he bought the house in 1988. The house was remodeled between 1989 and 1990, during which a deck was added to the west side of the house supported on columns embedded to a depth of approximately 6 feet. I observed a 4-inch corrugated plastic pipe which extended from the west side of the house and was buried along the slope. Marty indicated that drain pipe

captures all the stormwater from the roof spouts and transmits the water to the bottom of the slope. He indicated that any other water is drained towards the front (east) side of the house, away from the slope.

Marty indicated that the slumping and crack features, as shown on the Site Plan, that were observed in the yard area had not occurred instantaneously but had occurred over the last several years. He also indicated that the very steep scarp feature located immediately south of the southwest corner of the house has always been there since he moved in.

SUBSURFACE CONDITIONS

REGIONAL GEOLOGY

We reviewed geologic maps of the project area titled "Geological Map of Surficial Deposits in the Seattle 30' x 60' Quadrangle, Washington" by the United States Geological Survey dated 1993. Based on the geologic map and our explorations, the project area is underlain by at least two surficial geologic units. The units were deposited during two or more glacial and interglacial episodes, the most recent of which occurred roughly 13,000 to 15,000 years ago and are referred to as the Vashon glaciation. The geologic units within the vicinity consist of Vashon advance outwash, and transitional or interglacial deposits.

The uppermost (youngest) unit is the advance outwash, which is typically composed of dense to very dense, stratified sand with occasional gravel. Meltwater streams flowing from the advancing glacier deposited the advance outwash. The advance outwash unit was encountered in our explorations at depths between 2.5 to 4 feet below ground surface.

The transitional beds were encountered below the advance outwash unit in our explorations and consisted of stiff to hard laminated elastic silt and clay with interbeds of dense to very dense sand. The unit was primarily deposited in quiet lake water and then overridden by the advancing glacier. Clay layers referred to as the Lawton Clay may be locally present in the upper portions of this unit. This unit was encountered at depths between approximately 4 to 5 feet below ground surface in our hand explorations.

Near-surface soil at the top of the slope and along the slopes consisted of loose/soft silt to silty fine sand with organics and charcoal. These soils were likely placed as fill, particularly in the areas adjacent to the house and in the yard area. The near surface soils downslope of the yard area also appeared to be fill soils based on the presence of charcoal. It is possible that fill was pushed down the slope to create the yard area and that some of the fill soils have been transported down the slope by water or gravity since that time. It is also likely that logging has occurred in this area prior to development, based on the relatively young vegetation in this area including alders, ferns, and blackberry. It is also possible that near-surface soils in this area were disturbed during logging activities by equipment and/or uprooting of trees. The abundant coal particles encountered in the near surface soils may have originated from logging activities as well, such as burning slash piles on site.

HAND AUGER EXPLORATIONS

I completed 3 hand augers at the locations shown on the field sketch to depths ranging from about 5 to 6 feet. Hand auger HA-1 was located south of the southwest corner of the house, at the top of the slope. Hand auger HA-2 was located at the west (downslope) edge of the yard area, and hand auger HA-3 was located about 25 feet in vertical elevation downslope from the yard in the brush (unmaintained area). The soils encountered in our hand augers consisted of soft/loose silt to silty fine sand with charcoal and organics, likely representative of fill soils or otherwise disturbed soils, to depths of 4 feet, 3 feet, and 2.5 feet in hand augers HA-1, HA-2, and HA-3, respectively. Native soils were encountered below the fill

soils and consisted of a thin layer of glacial advance outwash soils consisting of dense silty fine sand to depths of 5 feet, 4 feet, and 4 feet below ground surface in hand augers HA-1, HA-2, and HA-3 respectively. Glacial transitional deposits consisting of very stiff/hard plastic silts and clays were encountered below the advance outwash sand in each of the hand augers.

Static ground water was encountered in hand auger HA-3, near the bottom of the slope at 1 to 2 feet below ground surface. The fill soils and outwash sands were very moist in each of the other hand explorations. The ground water on site is likely present in perched conditions on the transitional beds of lower-permeability silt or clay. It is likely that this condition may be punctuated due to the recent periods of extended wet weather.

SURFACE RECONNAISSANCE

I traversed along the backyard and slope area west of the yard on the property to evaluate slope conditions. I observed evidence of cracking, slumping, and slope movement within the yard area. I observed a very steep scarp feature immediately south of the house near the top of the slope, which appears to be an old failure. I also observed several arcuate cracks indicative of downsetting or soil creep along the slope. Exposed soils were observed in each of the crack features and scarp feature. No evidence of groundwater seepage was observed along the slope. Sketches of these features are shown on the plan attached.

South of the yard, I observed that the slopes inclined at up to 70 to 80 percent and vegetated with fir trees, alders, ferns, and blackberry bushes. I observed no signs of slumping, cracking, tilted trees, or other signs of slope instability. West of the yard (downslope), I observed that the slope becomes more moderate (approximately 25 to 40 percent). This portion of the slope is vegetated with alders, ferns, and blackberries. This portion of the slope appears to be generally stable. No evidence of seepage was observed along the slopes south or west of the residence.

FOUNDATION EVALUATION

I completed a preliminary evaluation of the existing foundation by closely examining the outside of the foundations around the west side of the house. I also examined the condition of the foundation walls from the inside of the crawl space under the west portion of the house.

I observed no sign of cracking in the foundation walls. However, I observed about ½-inch of settlement in the soils below the footings at the southwest portion of the house, indicating that soil creep is likely occurring along the slope.

LIMITATIONS

We have prepared this report for use by Marty Ellison for his residential property at 853 – 97th Ave SE, in Bellevue, Washington. Our services were provided to assist in the assessment of the bluff area on the property. Our recommendations are intended to provide general guidance as to risks regarding the overall stability of the site and to reduce the potential for future damage related to earth movements, drainage, or erosion. Physical properties of soil can change in time and space. In addition, glacial soils can vary significantly in short distances, considerably affecting the performance of slopes. Therefore, slope stability in a glacial terrain such is an inexact science. It is not practical or possible to thoroughly depict and model the existing slope and soil conditions; therefore there is always some uncertainty to the present and future performance of a project. A favorable performance of existing or proposed structures in the

near term does not imply a certainty of long term performance, especially under conditions of adverse weather or seismic activity.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted practices in the field of engineering geology in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

REFERENCES

Yount, J. C., et. al., "Geologic Map of Surficial Deposits in Seattle, 30' X 60' Quad, Washington," 1993.

Sincerely,

GeoEngineers, Inc.

A. Brooke Asbury, LG
Staff Geologist

J.J. Bo McFadden, PE, LG
Prinicpal

Doc Id: Sea \16\16143001\00\working\1614300100M.doc
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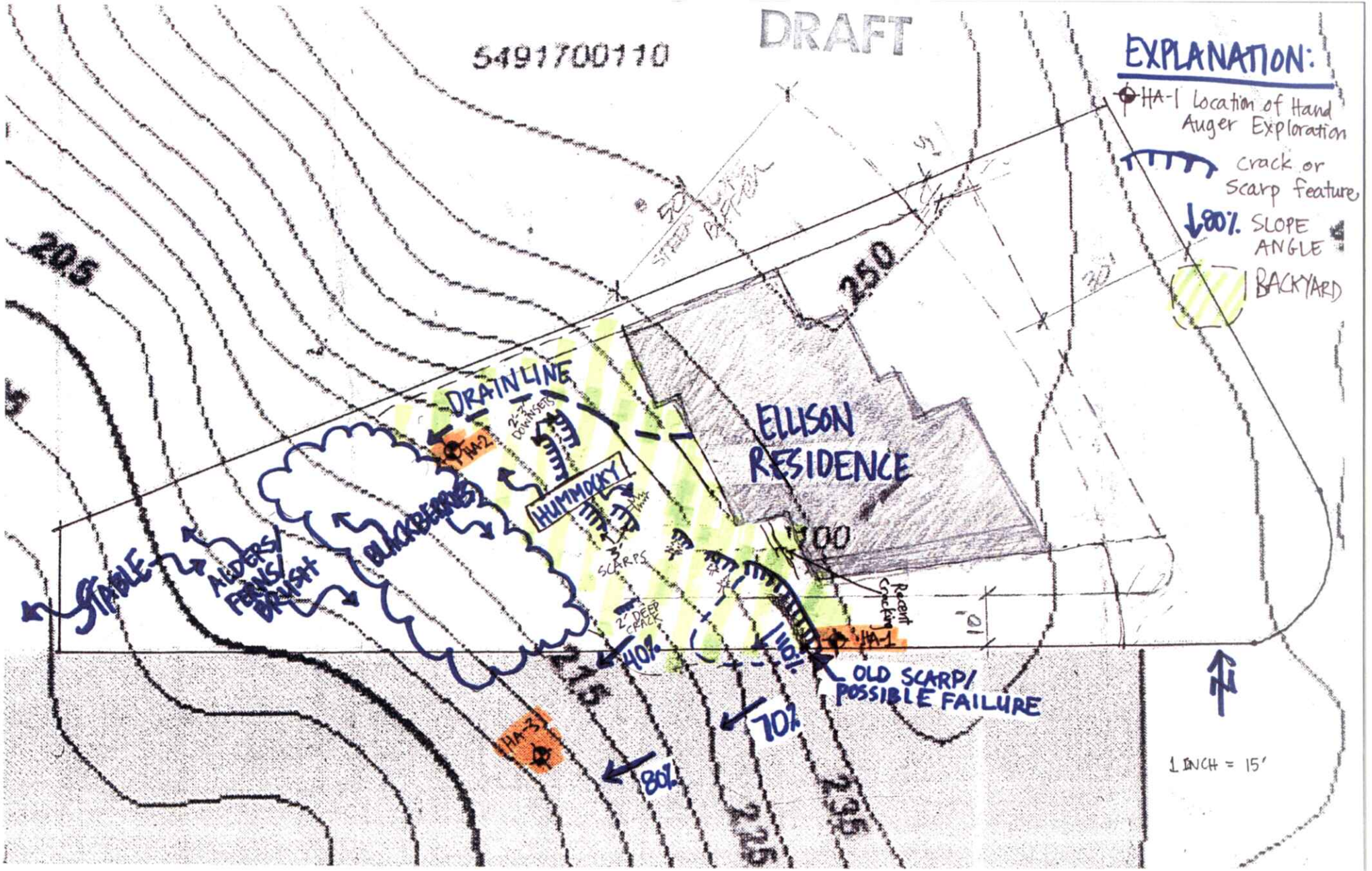
Attachments


DRAFT
5491700110
EXPLANATION:
HA-1 Location of Hand Auger Exploration
crack or scarp feature
80% SLOPE ANGLE
BACKYARD
205
250
ELLISON RESIDENCE
DRAIN LINE
HA-2
HUMMOCKY
BLACKBERRIES
STABLE
ALDERS/ FERNS/ BRUSH
SCARPS
2' DEEP CRACK
Recent Cracking
HA-1
40%
60%
OLD SCARP/ POSSIBLE FAILURE
215
HA-3
70%
80%
225
235
1 INCH = 15'

LOG OF TEST PIT HA-1 (South of SW corner of house)

Project Ellison Residence

Location Bellevue, WA

Hour 1:30

Date 1/8/07

Job No. 16143-001-00

Observer ABA

Sample	Water Content %	Other Tests	Depth (feet)	SOIL INTERPRETATION
			0	Approximate ground surface elevation: 240 feet
			1	ML Dark brn silty f sand w/ occasional gvl and charcoal (SOFT, moist) (FILL)
			2	SM-ML Tan silty fine sand to silt with fine sand, (LOOSE/SOFT, WET) with trace charcoal
			3	
			4	
			5	SM Tan silty fine sand (MDNS, MOIST) (NATIVE)
			6	MH-CH Gray high plasticity silt to fat clay. (HARD, moist)
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Test pit completed at 5.5' feet on 1/7/07.

NO Ground water seepage observed at _____ feet.

NO Caving observed at _____ feet.

Disturbed soil samples obtained at _____ feet.

Remarks

DRAFT

LOG OF TEST PIT HA-2 (west edge of yard)

Project Ellison Residence
Location Bellevue, WA

Hour 1:00
Date 1/7/07

Job No. 16143-001-00
Observer ABA

Sample	Water Content %	Other Tests	Depth (feet)	SOIL INTERPRETATION
			0	Approximate ground surface elevation: 226 feet
			1	ML Dark brown silt with trace organics and charcoal. (soft, moist) (FILL)
			2	↳ Grades to tan with orange mottling.
			3	ML/CL Gray (with orange mottling) silt to clay with trace charcoal (MStiff, moist)
			4	SM Gray (with orange oxidation staining) silty fine sand (MDNS, MOIST) (Recessional outwash)
			5	MH/CH gray high plasticity silt to fat clay. (HARD, moist)
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Test pit completed at 5 feet on 1/7/07.

No Ground water seepage observed at _____ feet.

No Caving observed at _____ feet.

Disturbed soil samples obtained at _____ feet.

Remarks

LOG OF TEST PIT HA-3 (~30

Project Ellicon Residence

Location Bellevue, WA

Hour 2:00

Date 1/7/07

Job No. 16143-001-00

Observer ABA

Sample	Water Content %	Other Tests	Depth (feet)	SOIL INTERPRETATION
			0	Approximate ground surface elevation: 200 feet
			1	ML Dark brown silt with f-m sand w/ occasional organics and charcoal (soft, MOIST)
			2	SM Grayish-tan (with orange mottling) silty f-m sand (MDNS, WET)
			3	Gray silty f-c sa with f-c gravel (DNS, MOIST) (WEATHERED TILL)
			4	
			5	MH Gray (with orange oxidation staining) high plasticity silt (VSTF, MOIST)
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Test pit completed at 5 feet on 1/7/07.

MODERATE Ground water seepage observed at 1.5 feet.

NO Caving observed at _____ feet.

Disturbed soil samples obtained at _____ feet.

Remarks

_____

_____

_____

_____

_____

Appendix D

Geotechnical Investigation
by Yonemitsu Geological Services, dated May 28, 2008

Yonemitsu Geological Services
10321 SE 192nd Street Renton, Washington 98055
206-390-0635

May 28, 2008

Mr. Robert Sorenson
MacPherson Design and Construction
21626 SE 28th Street
Sammamish, WA 98075-7125

Re: **Report on Geotechnical Investigation**
Proposed Ellison Residence
853 97th Avenue SE
Bellevue, Washington

Dear Mr. Sorenson,

This report presents the results of our field exploration and geologic site evaluation of the Ellison residential property located on the southwesterly side of 97th Avenue SE in the Meydenbauer Heights area of Bellevue. It is understood that the existing residence will be demolished for the proposed new three story structure that will occupy approximately the same building footprint.

The purpose of this report is to describe the geologic subsoil conditions on the property, and to provide geotechnical recommendations for the development of this new residence. USGS geologic mapping for this area of Bellevue and prior site studies performed in this area were used as references for our investigation. A Site Plan and boundary survey prepared by your office shows existing site and topographic conditions.

Site Conditions

The existing residence is situated on a level building pad that extends out to the top of a steep slope that has an overall gradient of about 3H:2V. The lower portion of the slope flattens out to about 3H:1V near the westerly property line. Access to the residence is via a driveway from 97th Avenue. There is an existing residence to the north and a park is located on the south side of the property.

Geologic Conditions

According to the USGS geologic mapping for this area of Bellevue this property is underlain by glacially consolidated Advance Outwash (Qva) and glacial till (Qvt). These soils consist primarily of very dense to hard silty sands and gravel with clayey silt interbeds that provide support for the residence foundations on this site. Fill soils exist on the upper portion of the westerly facing slope, and these soils show evidence of surficial slope creep and previous downslope movement.

Depth of the fill soils and loose topsoil on this slope range from 2 to 4 feet, while a majority of the building pad area exposes the dense to hard glacial deposits. No deep-seated failures were observed on this steep descending slope, and there were no signs of excessive groundwater seepage on this slope. Refer to the test borings that are attached in Appendix A.

Slope Stability

A preliminary analysis was made to determine present stability of the property using assigned soil values to the dense glacial deposits that underlie the building pad and the steep slope area. Previous experience with these dense soils has shown that they have values in the following range:

Internal friction = 40° to 42°, cohesion = 0 psf, and density = 125 to 135 pcf.

Using these strength parameters the results of the stability analysis shows that the site is grossly stable (FS ≥ 1.5 for static conditions and ≥ 1.15 for seismic conditions. In our opinion the proposed residence construction will not adversely impact the stability of this site, and the construction of the new residence will meet or exceed current seismic design standards.

The slope is covered with native shrubs and vines along with mowed grass and garden areas that reduces excessive erosion from normal rainfall. Drainage from the house and yard areas is directed to the street at the front of the property as well as through a tightline that leads down to the bottom of the slope. Removal of the upper ten feet of the existing ground over the building pad area will enhance overall slope stability due to the reduced weight and driving force acting at the top of the slope.

Conclusions and Recommendations

Our field investigation indicates that the subject site is suitable for residential development provided the recommendations contained herein are incorporated into the plans and specifications. Suitable bearing soils were encountered at relatively shallow depths throughout the building pad area. It is understood that the site will be excavated down approximately 8 to 10 feet below existing grade for the full basement level. Two stories will be constructed over the basement that will be situated at least ten feet from the top of the slope.

Site Grading

Prior to any excavation on the site, erosion and surface water control should be established around the perimeter of the excavation to satisfy city of Bellevue grading requirements. Following demolition of the existing house, all grass, topsoil, fill, and any other deleterious materials should be removed if they are

located below the planned building areas.

In our opinion temporary construction slopes should be the responsibility of the contractor and should be determined during construction. For estimating purposes we anticipate that temporary cut slopes in the existing dense glacial soils should not exceed a maximum slope of ¾H:1V (Horizontal:Vertical). These dense glacial sediments can be safely excavated, on a temporary basis, vertical for a maximum height of 4 feet and then at a maximum slope of ¾H:1V, if closely monitored.

Our recommended slope angles are for areas where there is no groundwater seepage and surface water is not allowed to flow over the slope. Where ground or surface water is present the slope gradients may need to be reduced. As is typical with earthwork operations, some sloughing and raveling may occur and cut slopes may have to be adjusted in the field. WISHA/OSHA regulations should be followed at all times.

The on-site soils consist of granular sands and gravel that are suitable for excavation and backfilling. Construction should be timed for the drier portions of the year. The contractor must use care during site preparation and excavation operations so that the underlying soils are not disturbed or become saturated from heavy rainfall. If disturbance occurs, the softened/disturbed soils should be removed down to competent soil. Normal TESC measures should be used to protect this property during construction. No imported soils are anticipated for this project.

Foundation Recommendations

Foundation bearing soils will have an allowable bearing value of 3000 to 4000 psf for conventional footings. Pier footings may be required for support of the westerly basement wall and for the deck enclosure area that will extend out to the top of the slope. A soldier pile wall may be required for support of the west-facing deck structure that will require drilled piers and lagging with compacted backfill under the deck area.

Anticipated settlement of footings founded on undisturbed native soils should be on the order of ½ inch or less with differential settlements of approximately one-half that amount between comparably loaded footings. However, disturbed soil not removed from footing excavations prior to concrete placement could result in increased settlements. All footing areas should be observed by a representative of this firm prior to pouring concrete to verify that the design bearing capacity of the soils has been attained.

Lateral loads can be resisted by friction between the foundation and the supporting soils, and/or by passive earth pressure acting on the buried portions

of the foundations. An allowable passive earth pressure of 300 pcf and a coefficient of friction of 0.45 may be used at the base of the concrete foundations. These values include a factor of safety of at least 1.5.

Where footing depths exceed 5 feet below the basement subgrade, it is recommended that drilled piers be used for foundation support. These piers should be designed for an active earth pressure of 30 pcf and a passive value of 400 pcf at a depth of 5 feet below the top of the slope. Where these piers are used for support of deck loads, they will have a capacity of at least 20 tons for an 18 inch diameter pier.

Floor Support Recommendations

A slab-on-grade floor may be poured directly over undisturbed natural sediments that have been proof-rolled prior to pouring concrete. We recommend that there be a minimum 10-mil plastic sheeting underlying the slab for moisture vapor protection. The plastic sheeting must be lapped and sealed around any projections through the floor slab. All concrete floor slabs should be reinforced and be poured in accordance with applicable ACI guidelines.

Site Drainage

All perimeter footing walls should be provided with a perforated PVC pipe surrounded by washed rock that is protected with a geofilter cloth. The level of the subdrain should have sufficient gradient to allow gravity discharge away from the building. Roof and other impermeable surface runoff should not discharge into the footing drain system, but should be handled by a separate, rigid, tightline drain that discharges into an approved storm water conveyance system. In planning, exterior grades adjacent to walls should be sloped downward away from the structure to achieve surface drainage.

Due to the presence of the steep slope on the westerly side of the site, no uncontrolled surface water drainage should be allowed to flow over the top of this slope. Footing, roof and area drains should be collected for discharge into a suitable catch basin for ultimate discharge to an existing storm drain system.

Retaining Walls

Retaining walls that are free to rotate should be designed for an active equivalent fluid pressure of 30 pcf with level backfill. If the wall will be a full height retaining wall, and will be fixed and unable to rotate, it should be designed for an at rest equivalent fluid pressure of 50 pcf with level backfill. Lateral restraint and soil bearing parameters were discussed in the *Foundation* section of this report. No surcharge loading is expected for the existing or final site conditions.

Retaining walls taller than 3 feet must be lined with a minimum of 12 inches of washed rock to within 1 foot of finish grade or with an engineered drain mat such as Mira Drain. The drainage layer must tie into the footing drain for the wall footing.

Erosion Protection

The soils that will be exposed on the site will have a moderate erosion potential during wet weather conditions. Therefore the contractor must take all necessary caution to protect exposed soils during construction. This would include silt fencing along the top of the slope extending around the south side of the property. Soil stockpiles should be covered and away from the top of the steep slope areas.

Summary

Based on our site investigation, geologic research and subsurface exploration the site is suitable for the proposed residential development. We recommend that we be retained to review those portions of the plans and specifications that pertain to grading, drainage, foundation and shoring installations to determine that they are consistent with the recommendations of this report.

Field inspection and consultation services should also be provided to verify that subsurface conditions are as expected. Should conditions be revealed during construction that differs from the anticipated subsurface profile, we will evaluate those conditions and provide alternative recommendations where appropriate.

Our findings and recommendations provided in this report were prepared in accordance with generally accepted principles of engineering geology and geotechnical engineering as practiced in the Puget Sound area at the time this report was submitted. We make no other warranty, either express or implied.

Please call if there are any questions concerning this report.

State of Washington
Engineering Geologist
139
Licensed Geologist

David A. Yonemitsu
Principal Engineering Geologist

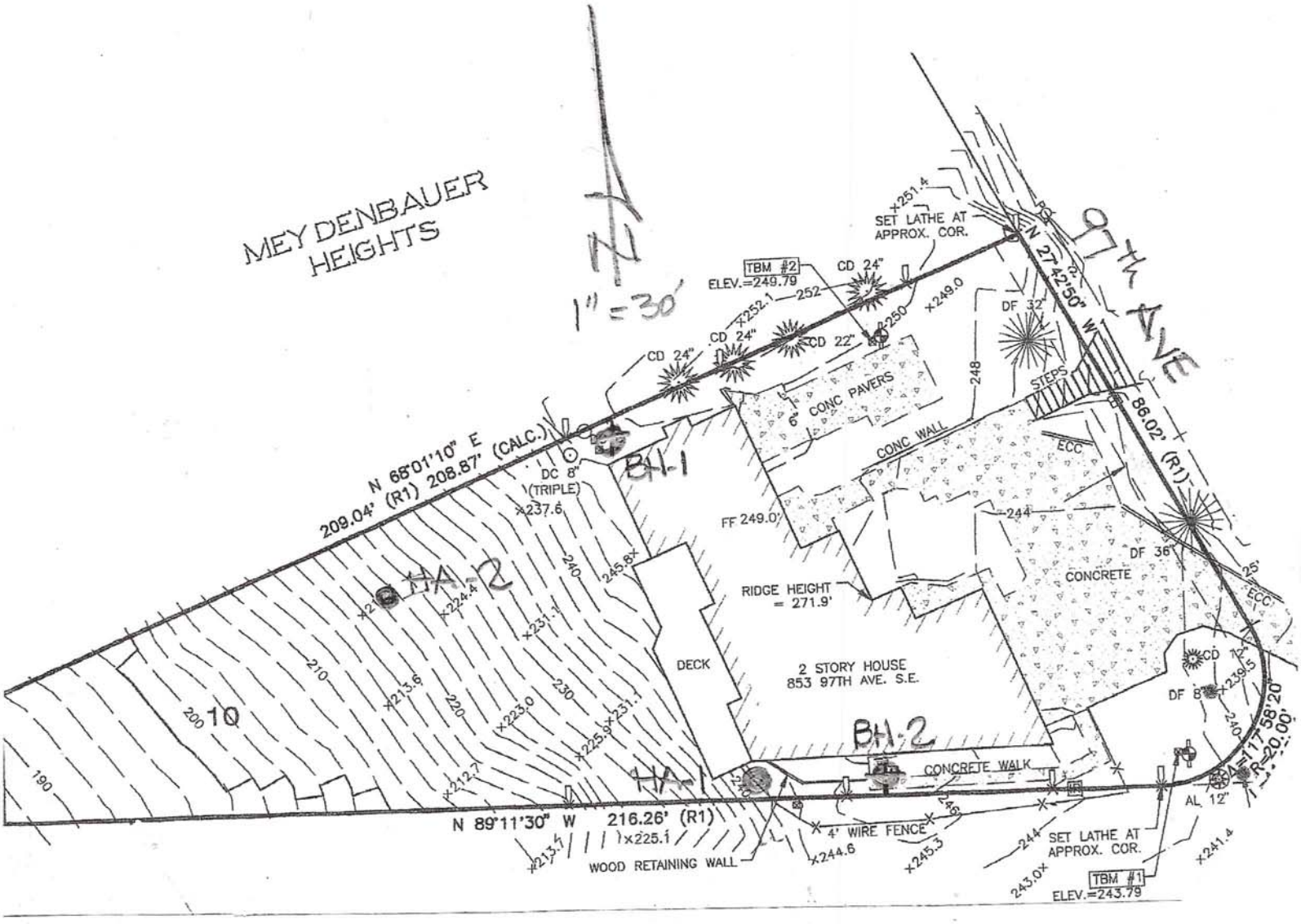
dist: (3) Addressee

David A. Yonemitsu

ROBERT M. PRIDE
STATE OF WASHINGTON
16271
REGISTERED
PROFESSIONAL ENGINEER

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

EXPIRES 9-20-08



Site Plan and Topographic Survey prepared by MacPherson Design

SITE PLAN	
Proposed Ellison Residence 853 97th Avenue SE Bellevue, Washington	Project No. **08-128-01** Drawing No. **1**
Robert M. Pride, LLC	Consulting Engineer

HAND HOLE LOG

Number EH-1

0

FILL SOIL

Loose to medium dense, dry, light grey-brown, silty fine sand with some roots.

12"

24"

VASHON LODGEMENT TILL, Qvt

36"

Stiff to very stiff with depth, dry, light grey-brown with some orange mottling, silt with trace to some fine sand, very occasional gravel.

48"

60"

72"

BOH @ 72"
No ground water seepage

84"

Subsurface conditions depicted represent our observation at the time and location of this exploratory hole, modified by geologic interpretation, engineering analysis, and judgment. They are not necessarily representative of other times and location. We will not accept responsibility for the use or interpretation by others of information presented on this log.

Battermann Geotechnical Consulting PLLC

BGC, pllc
14267 209th Avenue NE
Woodinville, WA 98077
(425) 273-5062

ELLISON RESIDENCE
853 97th AVENUE SE
BELLEVUE, WASHINGTON
MAY 21, 2008
PROJECT No: 08037

HAND HOLE LOG

Number EH-2

0

FILL SOIL

Loose, damp, dark brown, silty fine to medium sand with some gravel and roots.

12"

24"

VASHON LODGEMENT TILL, Qvt

36"

Medium dense to dense, damp, light brown, silty fine to medium sand with some gravel.

48"

BOH @ 48"
No ground water seepage

60"

72"

84"

Subsurface conditions depicted represent our observation at the time and location of this exploratory hole, modified by geologic interpretation, engineering analysis, and judgment. They are not necessarily representative of other times and location. We will not accept responsibility for the use or interpretation by others of information presented on this log.

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14267 209th Avenue NE
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(425) 273-5062

ELLISON RESIDENCE
853 97th AVENUE SE
BELLEVUE, WASHINGTON
MAY 21, 2008
PROJECT No: 08037

SUMMARY LOGS OF HAND AUGER BORINGS

HA-1 – Elev 242 located at SW corner of house

0.0 – 0.5 ft FILL: Silty sand with gravel; soft, moist;
0.5 – 4.0 ft FILL: Silty sand with gravel; loose, moist to wet;
4.0 – 5.0 ft TOPSOIL: Silty fine sand; moist, loose;
5.0 – 5.5 ft NATIVE: Sandy silt; very stiff, moist;
End of boring; no groundwater seepage;

HA-2 – Elev 221 located at mid slope

0.0 – 3.0 ft FILL: Sandy silt; soft to medium stiff, moist with charcoal;
3.0 – 5.0 ft NATIVE: Silty fine sand; medium stiff, moist (Outwash deposits);
End of boring; no groundwater seepage

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

Appendix E

Critical Area Review Letter
by Yonemitsu Geological Services, dated August 14, 2009.

Yonemitsu Geological Services
10321 SE 192nd Street Renton, Washington 98055
206-390-0635

August 14, 2009

Mr. Robert Sorenson
MacPherson Design and Construction
21626 SE 28th Street
Sammamish, WA 98075-7125

Re: **Critical Area Review**
Proposed Ellison Residence
853 97th Avenue SE
Bellevue, Washington

Dear Mr. Sorenson,

This report summarizes the results of our slope stability analysis for the rear descending slope below the existing Ellison residence located on 97th Avenue SE in Bellevue. Plans for the slope improvements and the rear yard retaining wall system were prepared by Altmann Oliver & Associates (AOA) as shown on the attached Drawing No. 1.

The retaining walls are to be located on a steep slope that is designated an ECA area by the City of Bellevue. Previous site exploration and geologic research shows that the property is underlain by very dense Outwash soils and Transitional beds consisting of interlayers of hard silt and very dense sand-gravel exist under the Outwash soils. Previous shallow slope failures have occurred in the surficial fill and colluvial soils that exist on this steep slope.

Uncompacted fill soils were encountered at the top of the slope that represented onsite material from the original building pad excavation. Overall slope gradient from the top to bottom is about 2H:1V based on the most recent survey. The steepest portion of this slope is located at the southwesterly corner of the building pad where surficial sliding has occurred in the past. This slope has a gradient ranging from 1H:1V to 1½ H:1v and exposes the upper fill soil profile along with the underlying dense native glacial deposits.

Critical Slope Evaluation

From a gross stability standpoint this entire slope has a safety factor well over 1.5 as determined from previous analyses as described in our May 28, 2008 report. Surficial colluvial soils cover a majority of this slope, and they are subject to creep movement particularly during heavy rain events. Control of storm water runoff on this slope will be an important factor in minimizing future debris flows and surficial slides that could affect adjacent properties.

Placement of the proposed 3 to 4 foot high block retaining walls will provide for improved lateral stability of these surficial soils, and will increase the overall factor of safety within the colluvial soils to at least 1.5 or better. Existing old fill

will also be removed as part of the retaining wall construction to eliminate potential slides in those loose materials on the upper portion of this steep slope.

Construction of the block retaining walls will require excavation for the base blocks at least two feet to establish proper foundation bearing for these walls. Compacted crushed gravel can then be placed is the excavation for support of the lower base blocks. All backfill should be compacted behind these walls as the walls are raised to final grade. Drain gravel should be used immediately behind the wall to provide for hydrostatic relief and to allow for slow percolation of irrigation or rain water into the underlying granular soils.

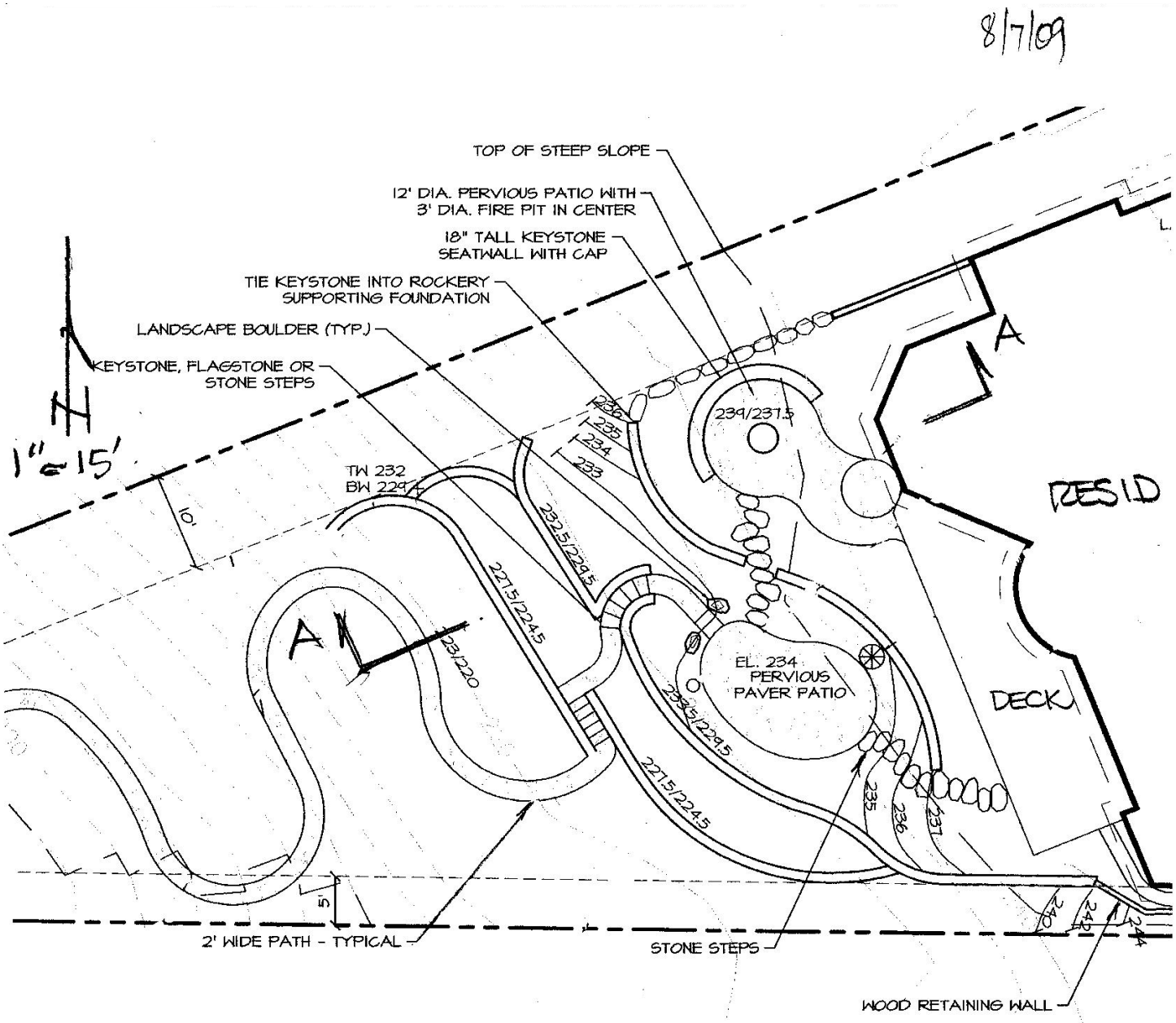
Cross Section A-A shows the overall slope profile along with the proposed block retaining walls and patio area at the top of the slope. Most of the existing fill will be removed by excavation for the upper patio areas. These onsite soils may be reused as compacted backfill behind the walls and for support of the paver patio on the west-center side of the house after removal of the existing fill.

It is understood that a landscape planting program will be prepared for environmental protection of the exposed slope areas. In additional to improving the appearance of the slope, the plant materials will also establish root penetration into the surficial soils. This will reduce the potential for surficial soil creep and sliding in the absence of any landscape cover where no site improvements are planned.

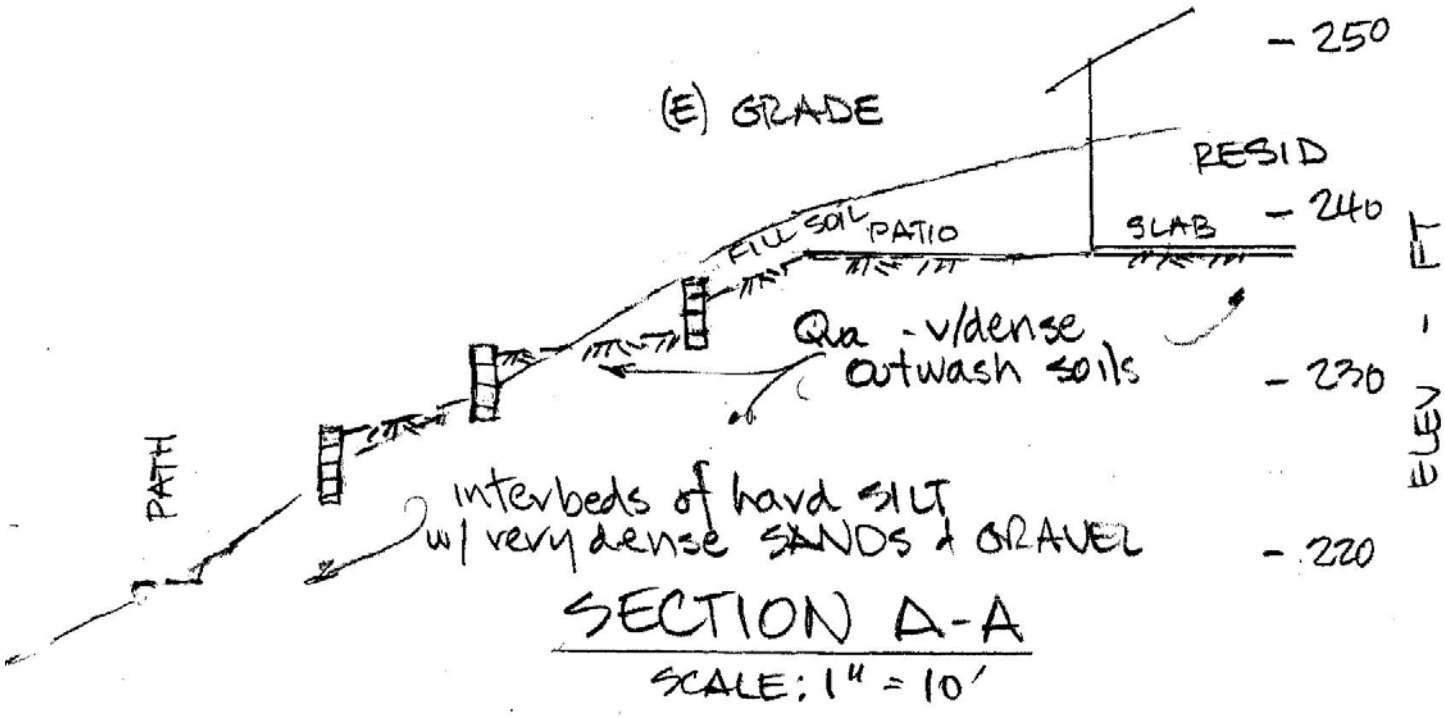
On the basis of the proposed Grading Plan by AOA it is our opinion that retaining wall installations will provide improved lateral support to the existing surficial soils that are unstable in the upper areas of the site. These installations along with the proposed landscape planting program are considered appropriate for environmental approval by the City of Bellevue,

Respectfully,

Robert M. Pride, P. E.
Principal Geotechnical Engineer
dist: (1) addressee
(1) J. Altman



SITE PLAN	
Proposed Ellison Residence 853 97th Avenue SE Bellevue, Washington	Project No. **08-128-01** Drawing No. **1**
Robert M. Pride, LLC	Consulting Engineer



SECTION A-A

SCALE: 1" = 10'

CROSS SECTION	
Proposed Ellison Residence 853 97th Avenue SE Bellevue, Washington	Project No. **08-128-01** Drawing No. **2**
Robert M. Pride, LLC	Consulting Engineer

Appendix F

Slope Reconstruction & Enhancement Report
by Altmann Oliver Associates, LLC, dated June 18, 2009

Altmann Oliver Associates, LLC
AOA
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509
Environmental Planning & Landscape Architecture

August 18, 2009

AOA-3751

Robert Sorenson
MacPherson Construction & Design
21626 SE 28th St.
Sammamish, WA 98075

SUBJECT: **Slope Reconstruction & Enhancement for Ellison Residence, 853 - 97th Ave. SE, Bellevue (Parcel 549170-0100)**

Dear Bob:

This report is intended to meet the requirements of the City of Bellevue's Land Use Code for critical area enhancement plans (LUC 20.25H.220).

1.0 PROPOSED PROJECT

The proposed project is being conducted to stabilize the degraded steep slope located immediately behind the existing residence on the subject property. As indicated by the project geotechnical engineer, "previous shallow slope failures have occurred in the surficial fill and colluvial soils that exist on this steep slope" (**Attachment A**). According to the geotechnical critical area review, controlling stormwater runoff and replanting exposed slopes will be important factors in minimizing future debris flows and surficial slides that could also affect adjacent properties.

The project includes the installation of low block retaining walls and associated landscape planting within the rear yard of the residence. As part of the slope modification, a habitat enhancement plan has been prepared (**Drawing L-2**).

Functions and Values Analysis

The steep slope area proposed for modification currently consists of mowed lawn and maintained landscape plantings that provide very little habitat or other critical area function. The low plant species and structural diversity on the slope limits wildlife utilization and does not provide a significant benefit to adjacent habitat areas. In addition, the steepness of the slope and general lack of root penetration increases the potential for surficial soil creep and sliding, particularly during heavy precipitation events.

The proposed project should significantly increase the habitat value of the critical area over current conditions by increasing the plant species and structural diversity over time. Placement of the proposed retaining walls will provide for improved lateral stability of the surficial soils. These retaining walls in conjunction with the proposed plantings should reduce the potential for surficial soil creep and sliding, as well as increase the ability of the slope to control stormwater runoff, thereby improving downstream water quality

2.0 SLOPE RECONSTRUCTION & ENHANCEMENT PLAN

The slope enhancement plan will include the removal of blackberry and lawn in the western portion of the site and re-planting the area with a variety of native trees and shrubs.

2.1 Goal, Objectives, and Performance Standards for Enhancement Area

The primary goal of the enhancement plan is to increase the habitat of the degraded slope on the site. To meet this goal, the following objectives and performance standards have been incorporated into the design of the plan:

Objective A: Increase the structural and plant species diversity within the enhancement area.
Performance Standard: Following every monitoring event for a period of at least five years, the enhancement area will contain at least 15 native plant species. In addition, there will be 100% survival of all woody planted species throughout the enhancement area at the end of the first year of planting. Following Year 1, success will be based on an 85% survival rate or areal cover of planted or recolonized native species of 15% after Year 1, 25% after Year 2, 40% after Year 3, and 50% after Year 5.

Objective B: Limit the amount of invasive and exotic species within the enhancement area.
Performance Standard: After construction and following every monitoring event for a period of at least five years, exotic and invasive plant species will be maintained at levels below 20% total cover in all planted areas. These species include, but are not limited to, Himalayan and evergreen blackberry, reed canarygrass, Scot's broom, morning glory, Japanese knotweed, English ivy, thistle, and creeping nightshade.

2.2 Construction Management

Prior to commencement of any work in the enhancement area, the clearing limits will be staked and all existing vegetation to be saved will be clearly marked. A pre-construction meeting will be held at the site to review and discuss all aspects of the project with the landscape contractor and/or owner.

A consultant will supervise plan implementation during construction to ensure that objectives and specifications of the enhancement plan are met. Any necessary significant modifications to the design that occur as a result of unforeseen site conditions will be jointly approved by the City of Bellevue and the consultant prior to their implementation.

2.3 Monitoring Methodology

The monitoring program will be conducted for a period of five years, with annual reports submitted to the City of Bellevue.

The entire enhancement area will be reviewed for plant mortality and weedy plant infestations. Vegetation will be recorded on the basis of relative percent cover of the dominant species within the vegetative strata.

Photo-points will be established from which photographs will be taken throughout the monitoring period. These photographs will document general appearance and progress in plant community establishment in the enhancement area. Review of the photos over time will provide a visual representation of success of the plan.

3.0 MAINTENANCE PLAN

Maintenance will be conducted on a routine, year round basis. Contingency measures and remedial action on the site shall be implemented on an as-needed basis at the direction of the consultant or the owner.

3.1 Weed Control

Routine removal and control of non-native and other invasive plants (e.g., Himalayan and evergreen blackberry, Japanese knotweed, Scot's broom, English ivy, morning glory, thistle and creeping nightshade) shall be performed by manual means whenever possible. Chemical means (Rodeo or Roundup) will only be used if necessary. Undesirable and weedy exotic plant species shall be maintained at levels below 20% total cover within any given stratum at any time during the five-year monitoring period.

Himalayan and Evergreen Blackberry Control

Small patches (areas <3’ x 3’) need to be grubbed out, large areas (>3’ x 3’) need to be cut down. New shoots (approx. 6" in height) which reappear should be spot-sprayed with Round-up concentrate.

3.2 General Maintenance Items

Routine maintenance of planted trees shall be performed. Measures include resetting plants to proper grades and upright positions. Tall grasses and weeds shall be removed at the base of plants to prevent engulfment. Weed control should be performed by; hand removal, installation of weed barrier cloth with mulch rings, or selective weed-whacking. If weed-whacking is performed, great care shall be taken to prevent damage to desired native species either planted or re-colonized.

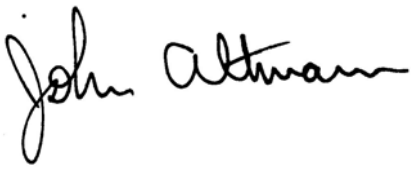
4.0 CONTINGENCY PLAN
All dead plants will be replaced with the same species or an approved substitute species that meets the goal of the enhancement plan. Plant material shall meet the same specifications as originally-installed material. Replanting will not occur until after reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.). Replanting shall be completed under the direction of the consultant, City of Bellevue, or the owner.

5.0 AS-BUILT PLAN
Following completion of construction activities, an as-built plan for the enhancement area will be provided to the City of Bellevue. The plan will identify and describe any changes in relation to the original approved plan.

If you have any questions regarding the proposed enhancement plan, please give me a call.

Sincerely,

ALTMANN OLIVER ASSOCIATES, LLC



John Altmann
Ecologist

Attachments

ATTACHMENT A

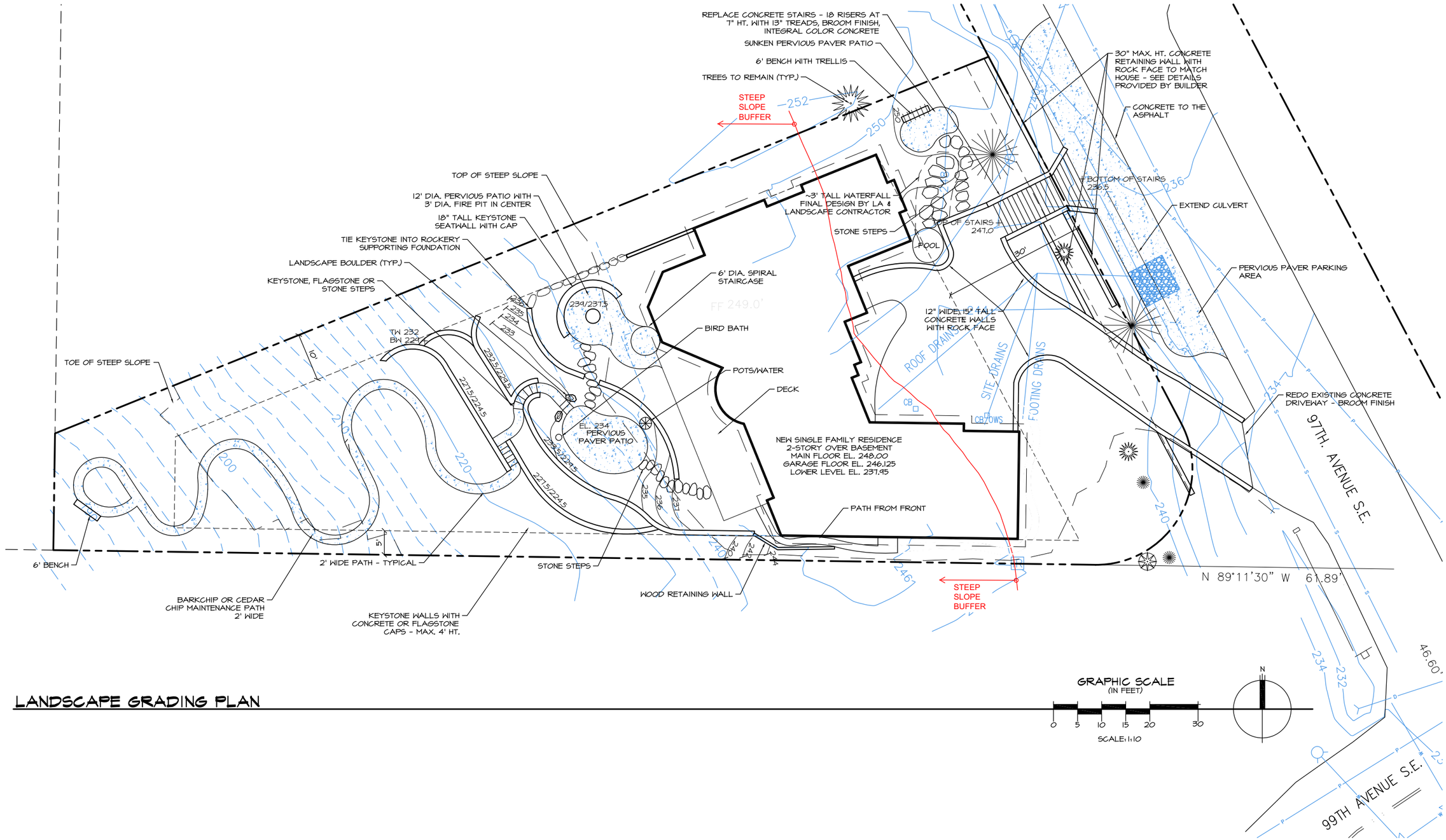
GEOTECH LETTER

(See Appendix E preceding)

Appendix G

Grading and Enhancement Plans
by Altmann Oliver Associates, LLC, dated June 18, 2009

FULL SIZE PLANS SUBMITTED SEPARATELY



LANDSCAPE GRADING PLAN

SHEET INDEX

SHEET NUMBER	SHEET TITLE
L-1	LANDSCAPE GRADING PLAN
L-2	MITIGATION PLANTING PLAN

NOTES

1. BASE INFORMATION PROVIDED BY GEODATUM, 1505 NW MALL ST., ISSAQUAH, WA 98027, (425) 837-8083.

Altmann Oliver Associates, LLC
AOA
Environmental Planning & Landscape Architecture
PO Box 576 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT

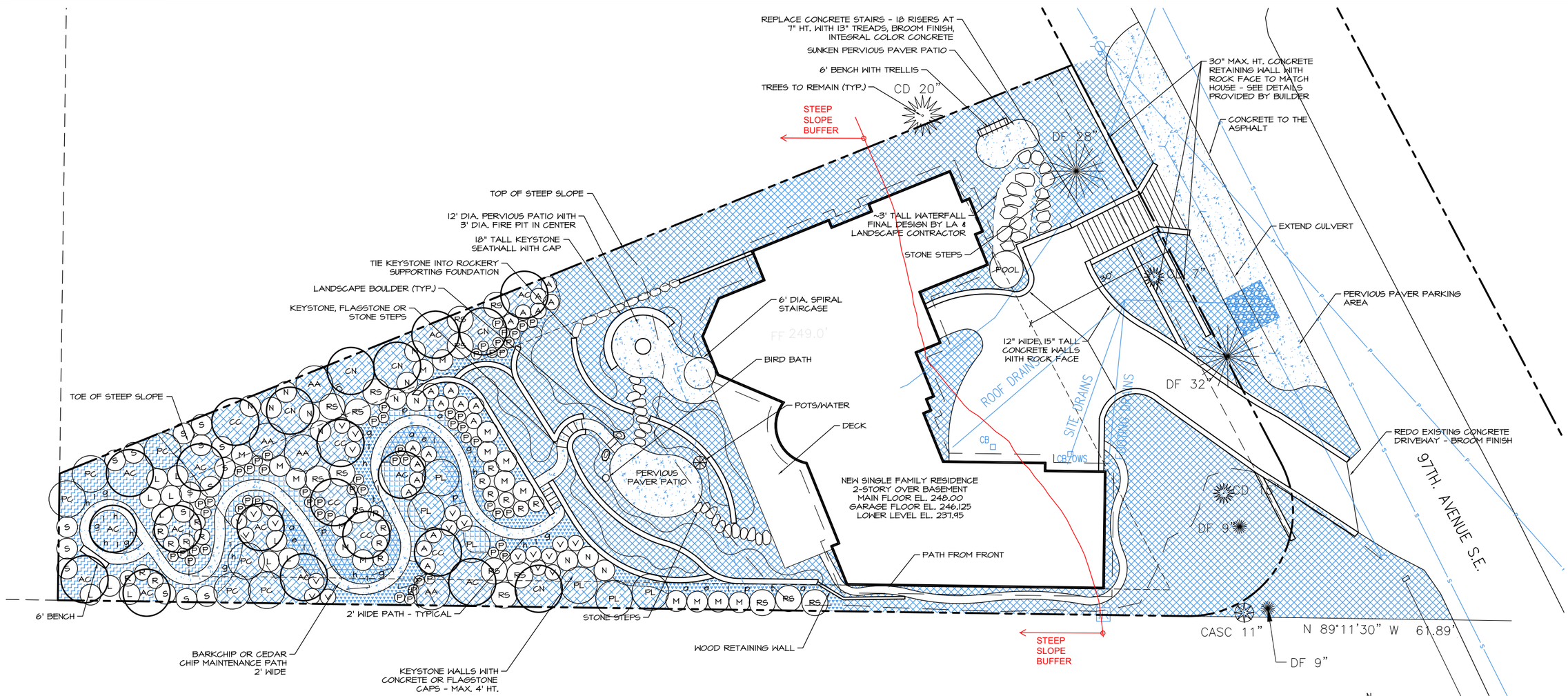
SIMONE CATHERINE OLIVER
CERIFICATE NO. 744
EXPIRES 6/25/09

ELLISON RESIDENCE
LANDSCAPE GRADING PLAN
853 97TH AVE. SE
BELLEVUE, WA 98004
PARCEL #5491700100

Revisions	Date	By

Date 08-21-09
Scale AS NOTED
Project# 3751

Sheet # L-1



MITIGATION PLANTING PLAN

GRAPHIC SCALE (IN FEET)
0 5 10 15 20 30
SCALE: 1:10

N

LANDSCAPE PLANT LEGEND

KEY	LANDSCAPE TYPE
	MAINTAINED ORNAMENTAL LANDSCAPE AREA

MITIGATION PLANT LEGEND

SMALL MULTI-STEM TREES (NATIVE)

KEY	SCIENTIFIC NAME	COMMON NAME	QTY.	SPACING	SIZE (MIN.)
AC	ACER CIRCINATUM	VINE MAPLE	12	AS SHOWN	5 GAL.
CN	CORNUS NUTTALLII	PACIFIC DOGWOOD	5	AS SHOWN	5 GAL.
CC	CORYLUS CORNUTA	WESTERN HAZELNUT	5	AS SHOWN	5 GAL.

LARGE SHRUBS (NATIVE)

KEY	SCIENTIFIC NAME	COMMON NAME	QTY.	SPACING	SIZE (MIN.)
AA	AMELANCHIER ALNIFOLIA	SERVICEBERRY	4	7' O.C.	2 GAL.
L	LONICERA INVOLUCRATA	BLACK TWIN-BERRY	11	4' O.C.	2 GAL.
M	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	18	4' O.C.	2 GAL.
PL	PHILADELPHUS LEWISII	MOCK ORANGE	6	7' O.C.	2 GAL.
PC	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	6	7' O.C.	2 GAL.
RS	RIBES SANGUINEUM	RED CURRENT	15	5' O.C.	2 GAL.
S	SPIRAEA DOUGLASII	WESTERN SPIRAEA	16	4' O.C.	2 GAL.

SMALL SHRUBS (NATIVE)

KEY	SCIENTIFIC NAME	COMMON NAME	QTY.	SPACING	SIZE (MIN.)
P	PAXISTIMA MYRTIFOLIA	OREGON BOXWOOD	58	2" O.C.	1 GAL.
R	ROSA GYMNOCARPA	BALDHIP ROSE	18	3' O.C.	1 GAL.
N	ROSA NUTKANA	NOOTKA ROSE	11	4' O.C.	1 GAL.
A	SYMPHORICARPOS ALBUS	SNOWBERRY	20	3' O.C.	1 GAL.
V	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	21	3' O.C.	1 GAL.

GROUNDCOVER (NATIVE)

KEY	SCIENTIFIC NAME	COMMON NAME	QTY.	SPACING	SIZE (MIN.)
	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK	81	24" O.C.	4" POT
	FRAGARIA CHILOENSIS	COAST STRAWBERRY	87	18" O.C.	4" POT
	GALIUM ODORATUM	SWEET WOODRUFF	196	18" O.C.	4" POT
	MAHONIA NERVOSA	DULL OREGON GRAPE	105	18" O.C.	4" POT
	POLYSTICHUM MUNITUM	SWORD FERN	117	3' O.C.	1 GAL.

PERENNIALS (NATIVE) - to be planted among groundcover

KEY	SCIENTIFIC NAME	COMMON NAME	QTY.	SPACING	SIZE (MIN.)
a	AQUILEGIA FORMOSA	WESTERN COLUMBINE	5	AS SHOWN	1 GAL.
e	EPILOBIUM ANGUSTIFOLIUM	FIREWEED	3	AS SHOWN	1 GAL.
h	HEUCHERA SP.	CORAL BELLS	8	AS SHOWN	1 GAL.
i	IRIS	OREGON IRIS	8	AS SHOWN	1 GAL.
l	LILY	TIGER LILY	3	AS SHOWN	1 GAL.
p	LUPINUS POLYPHYLLUS	LARGE-LEAVED LUPINE	4	AS SHOWN	1 GAL.
g	TELLIMA GRANDIFLORA	FRINGECUP	8	AS SHOWN	1 GAL.
t	TRILLIUM	TRILLIUM	3	AS SHOWN	1 GAL.

NOTES

1. BASE INFORMATION PROVIDED BY GEODATUM, 1505 NW MALL ST., ISSAQUAH, WA 98027, (425) 837-8083.

AOA
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Environmental Planning & Landscape Architecture
PO Box 576 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT

SIMONE CATHERINE OLIVER CERIFICATE NO. 744 EXPIRES 6/25/09

ELLISON RESIDENCE
MITIGATION PLANTING PLAN
853 97TH AVE. SE
BELLEVUE, WA 98004
PARCEL #5491700100

Revisions	Date	By

Date 08-21-09
Scale AS NOTED
Project# 3751

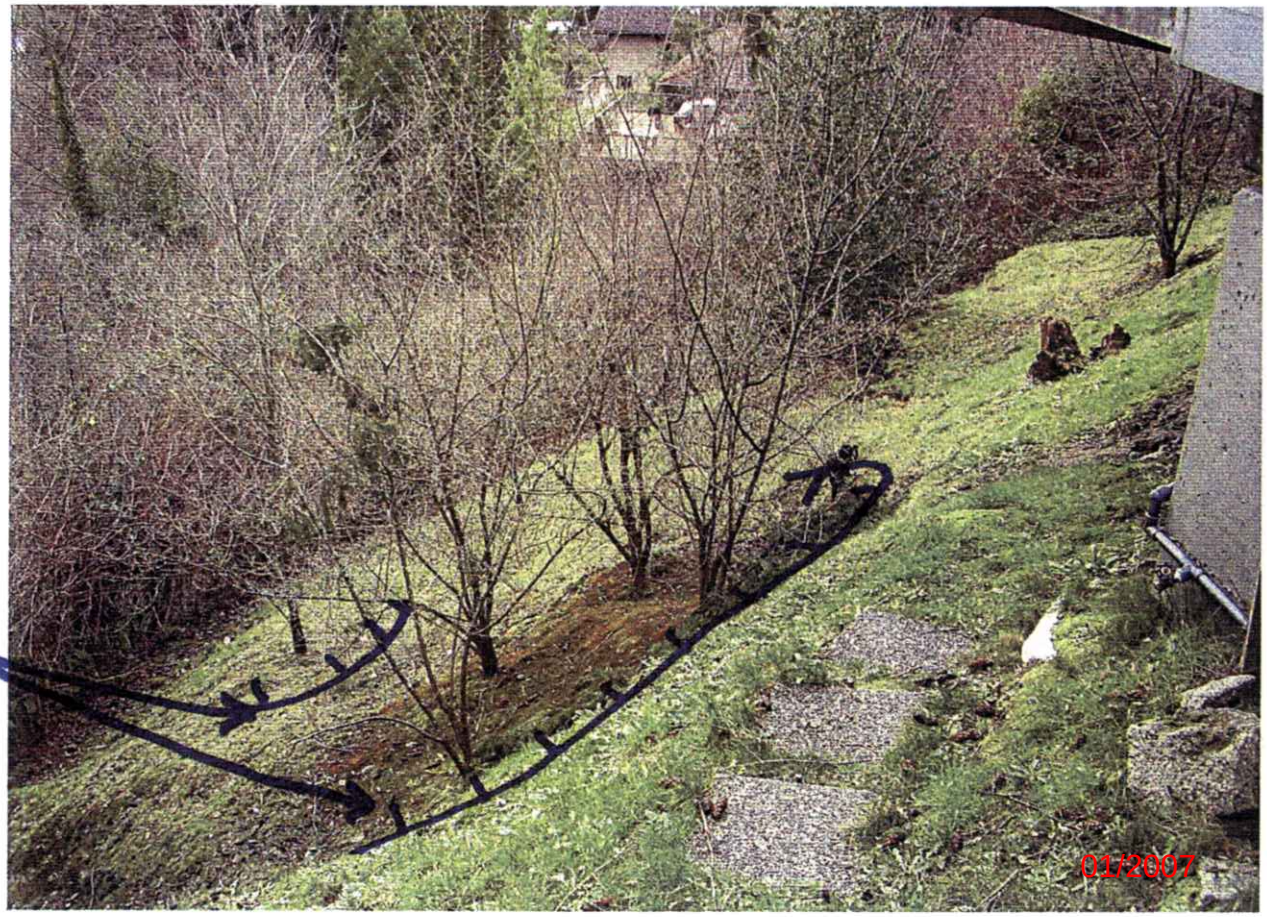
Sheet # L-2

Appendix H

Site Photographs of Existing Conditions

Looking North from South end of house

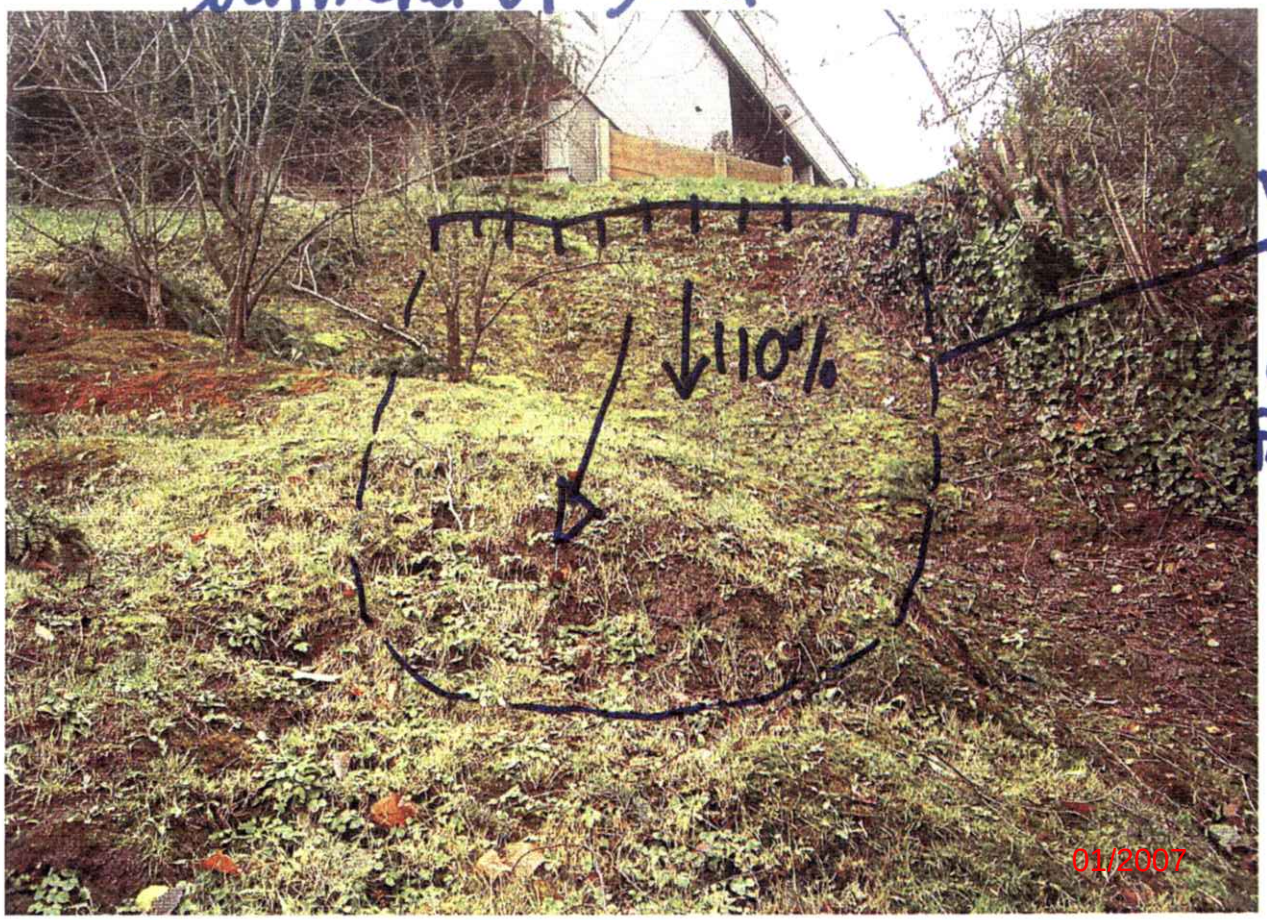
Recent Cracks



Downsets

Looking East from bottom of yard

South end of yard



Southwest portion of yard

View to Northeast from bottom of yard


07/2008


07/2008


07/2008


07/2008


07/2008


07/2008


07/2008


07/2008

Appendix I

Arborist Report
by International Forestry Consultants, Inc. dated April 13, 2009

International Forestry
CONSULTANTS, INC.
11415 NE 128th Street, Suite 110, Kirkland, WA 98034

April 13, 2009

Mr. and Mrs. Marty Ellison
853 – 97th Ave. SE
Bellevue, WA 98004

Dear Mr. and Mrs. Ellison:

On April 10th, I visited your residence in Bellevue to inspect the significant trees on your property. My assignment is to evaluate the condition and health of these trees so as to determine the feasibility of retaining them during the demolition and reconstruction of your new residence.

For the most part, the significant trees around your residence are in good condition and warrant retention. Three of the four large deodar cedars along the north property line were topped at approximately 25' above ground many years ago. As you are aware, the one farthest to the west failed this past winter, and two of the three regenerated tops broke out and fell onto your neighbor's property. Unfortunately, all three that were topped have a high potential for failing in the near future. Removing them to abate hazardous conditions is acceptable at this time.

The Portuguese laurel situated near the back corner of the house has also been compromised by past toppings. Failure risk is high, although damage potential is low due to size. Reducing the crowns to lower risk or removing and replacing them is reasonable.

Description

The subject trees are comprised of a mix of native and ornamental species. The majority of trees are located on the site perimeter. All significant trees on the property were identified with a numbered aluminum tag. These numbers correspond with the tree condition summary sheet which is attached. They have also been plotted on a copy of the site plan, which is also attached and part of this report.

A significant tree as defined in City of Bellevue Development Services Handout L-27 Tree Preservation is a healthy tree, 8" or greater in diameter measured at 4' above existing grade.

Findings

No evidence of root disease, foliar pathogens or insect infestations was identified. The subject trees are healthy. The most

significant defects are man-caused, related to poor pruning practices. The subject trees are described as follows:

Tree #101 is a semi-mature cascara, a native deciduous tree, estimated at 20 to 25 years of age. No evidence of decline was observed. This is a short-lived species and normally does not exceed 30 to 40 years.

Trees #102 and #103 are young Douglas-firs. Both are in good condition. Foliage color and density are good. No concerning conditions were observed.

Tree #104 is a young western red cedar. Foliage color and density is good. No concerning conditions were observed.

Tree #105 is a mature Douglas-fir. Foliage color and density is very good. It has developed good trunk taper. It appears this tree may have been topped, or the top may have broken out during a storm event many years ago. The lower trunk appears sound. A cambial rupture was observed on the east side of the trunk. This is a typical defect for this species and not concerning. It occurs when the tree is loaded by wind, causing the cambium to split. Overall failure risk is low.

Tree #106 is a young 7" western red cedar in excellent condition.

Tree #107 is a mature Douglas-fir in good condition. Vigor, foliage color and foliage density are good. No evidence of internal stem decay was identified. Like tree #105, it also has a deformed top. Trunk taper is very good. Failure risk is low.

Trees #108 through #111 are semi-mature deodar cedars, estimated at 35 to 40 years of age. Trees #108 and #111 appear to be situated on the neighboring property.

All of these are healthy; unfortunately three of them have been compromised due to poor pruning practices that occurred many years ago. The main trunks of trees #109, #110 and #111 were all topped at approximately 25' above ground. Regenerated tops have now grown to total heights of 70'. Tree #111 failed this past winter. Two of the three tops in this tree broke out at the topping point, falling onto the neighbor's property. All three of these have a high potential for failure. Risk will increase as regenerated tops grow larger.

Tree #108 was not topped and is in good condition.

Tree #112 and #113 are clusters of Portuguese laurel. Both of these clusters have also been topped in the past. Significant decay was observed below the old topping cuts. Stems have sprouted multiple new tops which are poorly attached. Failure potential is high, although damage associated with failure is low due to size. Overall condition is fair to poor.

The trees within the greenbelt on City property to the south of your residence vary in condition. Many of the alder is declining at an unusually early stage. The pacific madrone is diseased and also in gradual decline. The cluster of Douglas-fir trees southwest of your residence is in good condition. Foliage color and density is good. The trunks are sound.

The declining trees on park property do not appear to be a threat to your property. When failures occur, they are likely to fall downhill away from your residence. There is one dying red alder tree adjacent to 97th Ave. SE that should be removed to abate the hazard.

Discussion

Trees #109 through #113 are considered non-viable. Past poor pruning practice (topping) has compromised structural stability. All of these have a high potential for top failure. Trees #109, #110 and #111 are large and have the potential to cause considerable damage if top failure occurred. Trees #112 and #113 have a low potential of causing significant damage to improvements. Tree #112 is situated too close to the proposal to be successfully retained. Crown reduction is needed on tree #113 if this tree is to be retained.

Trees #101 through #108 are viable and feasible to retain on the property. Efforts should be made to minimize impacts to the trees. Please refer to the guidelines below for properly retaining trees on construction sites.

Tree Summary – On-Site Trees – Recommended Action

Tree #	Species	DBH	Recommended Action	
			Retain	Remove
101	cascara	11	11	
102	Douglas-fir	9	9	
103	Douglas-fir	9	9	
104	western red cedar	15	15	
105	Douglas-fir	32	32	
106	western red cedar	7	7	
107	Douglas-fir	28	28	
109	Deodar cedar	19		19
110	Deodar cedar	22		22
112	Portuguese laurel	11		11
113	Portuguese laurel	12		12
			111	64

Retention of a minimum of 30% of diameter inches of significant trees existing within the site area is required - BCC 20.20.900 F

Off-Site Trees

Tree #	Species	DBH	Condition	Risk	Recommendation
108	Deodar cedar	20	Good	Low	Retain
111	Deodar cedar	22	Poor	High	Remove

Recommendations for Tree Retention & Preservation during Construction

One of the most important steps in successful tree retention during development is to allow adequate growing space for trees to remain healthy and vigorous. The following guidelines are recommended to ensure that the designated space set aside for the preserved trees is protected and construction impacts are kept to a minimum.

1. Tree protection guidelines should be incorporated into work contracts and monetary penalties should be imposed when they are not complied with. This will make workers aware of the importance of preserving tree health.

2. Necessary clearance pruning should be completed prior to demolition/construction. This will provide clearance for equipment and decrease the risk of branches becoming damaged and injured. Minimal if any clearance pruning will be necessary.

3. A tree protection barrier at least 4' high should be erected around the trees to be retained to define tree protection zones. This will help to minimize injury to preserved roots and to avoid the risk of soils becoming compacted by large equipment. All materials, equipment and spoils should be kept outside of the fenced areas.

4. Work that is to take place within the tree protection areas should be supervised by a qualified professional so necessary precaution to protect the tree can be taken. Work can be successfully performed within the dripline if done carefully and correctly. Driveway and patio sections removed near trees should be performed by hand.

5. To establish sub grade for foundations, curbs and pavement sections near the trees, soil should be removed parallel to the roots and not at 90 degree angles to avoid breaking and tearing roots that lead back to the trunk within the CRZ. Any roots damaged during these excavations should be exposed to sound tissue and cut cleanly with a saw. Cutting tools should be sterilized with alcohol.

6. If unexpected injuries occur to trees during construction, they should be evaluated as soon as possible so that appropriate treatments can be applied.

7. Fences should remain onsite until completion of construction and the Planning Official authorizes their removal.

Monitoring

As your trees mature, you should be aware of the following conditions that may be indicators of declining tree health.

- ✓ Appearance of fungal fruiting bodies which will appear as small "shelves" on the bole and branches or mushroom-like growths near the base of the tree.

- ✓ Dead or soft flaky wood in cavities or under the bark.

- ✓ Thinning crowns.
- ✓ The appearance of yellow or orange needles other than near the stem. (Cedar trees may exhibit orange needles in the fall; called "flagging" that is a normal response to drought and not a symptom of long term decline.)
- ✓ Leaning stems, extraordinary bark flaking, stem swelling or any other abnormalities on the bole.
- ✓ Extraordinary cone production.
- ✓ Insect entry holes. These are about the size of a pencil lead and probably are accompanied by "sawdust".
- ✓ Premature leaf-fall or the appearance of dead limb tips. Droopy top or thinning crown. Dying tree top.

There is no warranty suggested for any of the trees subject to this report. Weather, latent tree conditions, and future man-caused activities could cause physiologic changes and deteriorating tree condition. Over time, deteriorating tree conditions may appear and there may be conditions, which are not now visible which, could cause tree failure. This report or the verbal comments made at the site in no way warrant the structural stability or long term condition of any tree, but represent my opinion based on the observations made.

Nearly all trees in any condition standing within reach of improvements or human use areas represent hazards that could lead to damage or injury.

Please call if I can be of further assistance.

Sincerely,

Bob Layton
ISA Certified Arborist #PN-2714A
Certified tree Risk Assessor #233

Top failure of tree #111

Tree #110

Tree #109

Tree #113 Extensive decay below topping cut

Tree #105 Cambial rupture on lower trunk – not concerning at this time

Tree #107

TREE CONDITION SUMMARY

International Forestry Consultants

For: Ellison Property
853 - 97th Ave. SE
Bellevue

Date: 4/10/2009

Inspector: Layton

Tree #	Recommendation	Priority	Condition	Species	Native/Planted	DIA	Height	H/D	Dripline N	Dripline S	Dripline E	Dripline W	Crown: Green %	Crown: Limb Tips	Crown: Asymmetric	Crown: Color	Bole: Decay	Bole: Included Bark	Bole: Seams-Pitching	Bole: Broken - Topped - Sprouts	Bole: Crook-Fork-Sweep	Bole: Lean	Roots: Decay	Roots: Exposed	Roots: Severed	Comments
101	0		4	cascara	N	11	46	50	6	na	na	7					1				2	1				good vigor, no evidence of decline
102	0		2	Douglas-fir	N	9	48	64	10	na	na	7	1									1				young, sound, no concerns
103	0		2	Douglas-fir	N	9	52	69	6	6	na	4	1								1					young, sound, no concerns
104	0		0	western red cedar	N	15	51	41	8	8	na	8	0													young, sound, no concerns
105	0		5	Douglas-fir	N	32	84	32	15	18	16	18	0				2		2	1						topped in past, good taper, low risk
106	0		0	western red cedar	N	7	25	43	6	6	6	6	0													young, sound, no concerns
107	0		4	Douglas-fir	N	28	94	40	18	18	20	18	0				1			1	2					good taper, sound, good color/vigor
108	0		0	Deodar cedar	P	20	71	43	13	14	11	na	0													good condition
109	X	2	7	Deodar cedar	P	19	70	44	15	15	19	na	0				2			1	4					topped in past at 24', poor structure
110	X	2	7	Deodar cedar	P	22	72	39	15	16	14	na	0				2			1	4					topped in past at 24', poor structure
111	X	2	10	Deodar cedar	P	22	72	39	16	12	15	na	0				2			4	4					topped, recent failure of 2 regenerated tops
112	X	3	6	Portuguese laurel	P	11	32	35	na	na	na	na					3			3						cluster-2 stems
113	CR/X	3	7	Portuguese laurel	P	12	30	30	na	na	na	na					4			3						cluster-3 stems-reduce crown or remove
								####																		
								####																		
								####																		
								####																		
								####																		
								####																		
								####																		

Priority

1	Immediate
2	Six Months
3	1 year +

Condition Code

8 - +	Poor
4 - 7	Fair-Monitor
0 - 3	Good

Recommendation

X	Remove	**0**	No Action
RD	Remove Defect	**CC**	Crown Clean
DW	Remove Dead wood	**RC**	Raise Canopy
EW	Remove End Weight	**CR**	Reduce Canopy
M	Monitor-Re-evaluate in 1-2 years		

H/D = height/diameter ratio > 50 considered hazardous

Green % for evergreen species only

Crown %

5	0%
4	10-20%
3	20-40%
2	40-60%
1	60-70%
0	70%+

Condition Score

5	severe
4	poor
3	moderate
2	fair
1	noted

Appendix J

Environmental Checklist
By MacPherson Construction & Design, LLC, dated 6/23/09

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

ENVIRONMENTAL CHECKLIST

6/23/09

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: **Marty & Linda Ellison**

Proponent: **MacPherson Construction & Design**

Contact Person: **Robert H. Sorensen AIA**
(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: **21626 S.E. 28th Street Sammamish, WA 98075**

Phone: **(425) 391-3333**

Proposal Title: **Ellison Residence**

Proposal Location: **853 97th. Avenue S.E. (at 97th. Place S.E. / 99th Avenue S.E.)**
(Street address and nearest cross street or intersection) Provide a legal description if available.
See attached
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: **Slope stabilization and landscaping for a Single Family Residence**
2. Acreage of site: **.35A**
3. Number of dwelling units/buildings to be demolished: **N/A**
4. Number of dwelling units/buildings to be constructed: **N/A**
5. Square footage of buildings to be demolished: **N/A**
6. Square footage of buildings to be constructed: **N/A**
7. Quantity of earth movement (in cubic yards): **+/-600 CY**
8. Proposed land use: **Single Family Residential**
9. Design features, including building height, number of stories and proposed exterior materials:
   Two story house with daylight basement, <30 overall height, stone, stucco & concrete tile roofing.
10. Other

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

Completion fall 2010 to early spring 2011.

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

No future plans

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

Critical Areas Report & Land Use actions; SEPA checklist

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.

None known

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 approval

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

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

Preliminary Plat or Planned Unit Development
Preliminary plat map

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.

See attached Geotechnical Investigation Report (GIR).

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

Yes, some surfical failures as indicated in the GIR.

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

Normal excavation cut & fill for terracing the slope; balanced excavation, no export or import other than drainage materials and landscape materials.

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

Erosion is always a possibility with clearing and excavating in the Pacific Northwest.

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

Less than 50% per COB LUC.

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

All normal measures will be taken to protect against erosion; TESC program will be in place and monitored.

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.

Normal emissions from construction equipment during construction; emissions from completed project will be normal for Single Family Residence.

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

None that we are aware of.

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

None other than use of low-emission equipment where applicable and available.

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.

No

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

No

(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.

None

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

No

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

No

(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.

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.

Storm water runoff will be collected into a tight-line system utilizing oil-water separator catch basins where appropriate; and discharged into the City Storm System.

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

Oil-water separator catch basins will be used where appropriate.

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

Pervious paving materials and concepts will be used to minimize runoff. Storm water runoff will be collected into a tight-line system and dispersed below the steep slope area.

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

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

Non-native invasive plants will be removed from Critical Areas.

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

None noted

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

Restoration of Critical Areas per the attached Slope Enhancement Plan.

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.

None per the attached Habitat Assessment Report

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

Not per the attached Habitat Assessment Report

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

Critical Areas clean-up and restoration. See Critical Areas Report (CAR).

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.

Electricity and Natural Gas will be used to heat & light the home.

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

No

b. 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:

Natural daylighting is provided through generous use of glazing and skylights. Energy efficient appliances and controls will be used.

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.

Unlikely, only as might occur on any construction site.

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

Only normal fire & rescue services in the event of an incident.

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

Construction site safety programs in place and aggressively administerd.

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.

Normal construction noises during construction. Contractors will abide by COB construction noise ordinances. No long term noise.

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

Normal measures to control & limit noise during construction.

8. Land and Shoreline Use

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

Single Family Residential

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

No

c. Describe any structures on the site.

Existing SFR.

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

Yes (this work is already permitted).

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

R1.8

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

Single Family, Medium Density SF-M

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 slopes. See attached reports.

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

Three to five (3 - 5)

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

None

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

N/A

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

Normal Land Use Permit processes.

9. Housing

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

One middle/high income residence.

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

One middle income residence.

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

None

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?

<35 feet high, wood siding, stone and metal.

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

No views will be obstructed.

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

Tastefully designed house by respected local Architect.

11. Light and Glare

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

Some normal outdoor lighting will be in place on the new house and driveway; used mainly during the early evening hours. Possibly some 24 hour security lighting.

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

Highly unlikely.

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

None that we are aware of.

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

Use of shielded (dark-sky) fixtures where appropriate and applicable.

12. Recreation

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

Chisum Park (public park)

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:

None

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.

None

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

None necessary

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.

Existing driveway off 97th. Avenue S.E.; 97th. Place S.E. and 99th Avenue S.E.

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

Unknown

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

3 to 4 new spaces, replaces the existing 3 to 4 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).

No

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

No

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

Generally 2 to 5 daily trips.

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

None

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, house will have fire sprinkler system.

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

None

16. Utilities

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

Cable TV

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.

Existing Utilities will be used for new house.

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.....

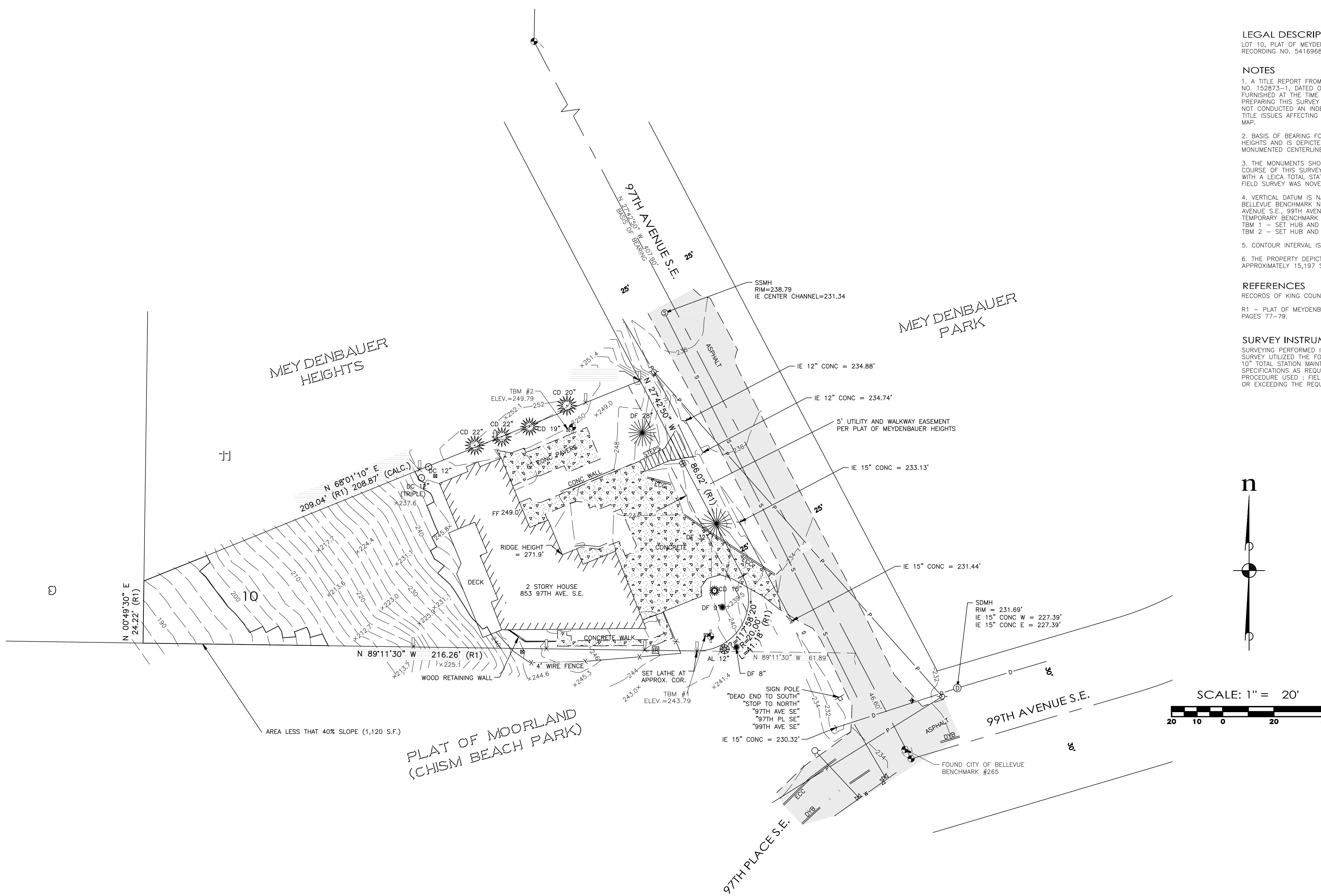
Date Submitted.....

Appendix K

Topographic Survey
By ESM Consulting Engineers, LLC, dated 4-28-2008

FULL SIZE PLANS SUBMITTED SEPARATELY

A PORTION OF THE NE 1/4 OF THE NE 1/4 OF SECTION 6, TWP 24 N. RGE 5 E., W.M. CITY OF BELLEVUE, KING COUNTY, WASHINGTON



LEGAL DESCRIPTION

LOT 10, PLAT OF MEYDENBAUER HEIGHTS AS RECORDED UNDER KING COUNTY RECORDING NO. 5416968, VOLUME 69 OF PLATS, PAGES 77–79.

NOTES

1. A TITLE REPORT FROM FIRST AMERICAN TITLE INSURANCE COMPANY (POLICY NO. 152873–1, DATED OCTOBER 28, 1988) FOR THIS PROPERTY WAS FURNISHED AT THE TIME OF THIS SURVEY. IT SHOULD BE NOTED THAT IN PREPARING THIS SURVEY MAP, ESM CONSULTING ENGINEERS, L.L.C. (ESM) HAS NOT CONDUCTED AN INDEPENDENT TITLE SEARCH NOR IS ESM AWARE OF ANY TITLE ISSUES AFFECTING THE PROPERTY OTHER THAN THOSE SHOWN ON THIS MAP.

2. BASIS OF BEARING FOR THIS SURVEY IS THE PLAT OF MEYDENBAUER HEIGHTS AND IS DEPICTED ON THIS MAP AS N 27°42'50" W, ALONG THE MONUMENTED CENTERLINE OF 97TH AVENUE S.E.

3. THE MONUMENTS SHOWN HEREON WERE VISITED IN THE FIELD DURING THE COURSE OF THIS SURVEY. ANGULAR AND LINEAR MEASUREMENTS WERE MADE WITH A LEICA TOTAL STATION CALIBRATED WITHIN THE LAST YEAR. DATE OF FIELD SURVEY WAS NOVEMBER, 2007.

4. VERTICAL DATUM IS NAVD 1988. PROJECT BENCHMARK IS THE CITY OF BELLEVUE BENCHMARK NO. 265 LOCATED IN THE INTERSECTION OF 97TH AVENUE S.E., 99TH AVENUE S.E., AND 97TH PLACE S.E. SEE MAP FOR TEMPORARY BENCHMARK INFORMATION LOCATIONS,
TBM 1 – SET HUB AND TACK, ELEVATION 243.79 FEET
TBM 2 – SET HUB AND TACK, ELEVATION 249.79 FEET

5. CONTOUR INTERVAL IS 2 FOOT.

6. THE PROPERTY DEPICTED AND DESCRIBED HEREON ENCLOSES AN AREA OF APPROXIMATELY 15,197 SQUARE FEET.

REFERENCES

RECORDS OF KING COUNTY,

R1 – PLAT OF MEYDENBAUER HEIGHTS RECORDING NO. 5416968, VOLUME. 69, PAGES 77–79.

SURVEY INSTRUMENTATION

SURVEYING PERFORMED IN CONJUNCTION WITH THIS RECORD OF SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES: 10" TOTAL STATION MAINTAINED TO MANUFACTURER'S SPECIFICATIONS AS REQUIRED BY WAC–332–130–100 PROCEDURE USED : FIELD TRAVERSE WITH ACCURACY MEETING OR EXCEEDING THE REQUIREMENTS OF WAC–332–130–090

LEGEND

- MAILBOX
- INFORMATION SIGN
- SANITARY SEWER MANHOLE
- STORM PIPE INLET/OUTLET
- STORM DRAIN MANHOLE
- POWER POLE
- POWER POLE W/TRANSFORMER
- FIRE HYDRANT
- IRRIGATION CONTROL VALVE
- WATER METER
- WATER VALVE
- ALDER (AL)
- CEDAR (CD)
- DECIDUOUS (DC)
- DOUGLAS FIR (DF)
- FOUND CASED MONUMENT
- FOUND TEMPORARY BENCH MARK
- SET HUB & TACK
- SET LINE STAKE
- ECC — EXTRUDED CONCRETE CURB
- DYB — DOUBLE YELLOW BUTTON
- ×123.4 — SPOT ELEVATION
- BOUNDARY LINE
- —536— EXISTING GROUND CONTOURS
- —X— FENCE, WIRE
- —P— POWER, OVERHEAD
- —D— STORM
- —S— SEWER
- —W— WATER
- ASPHALT
- CONCRETE (CONC.)

REVISIONS		
NO.	DESCRIPTION/DATE	BY
0	ORIGINAL SURVEY 11–08–2007	JDC
1	ADD LOWER CONTOURS 4–28–2008	GSL

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Public Works | Project Management | Landscape Architecture

MACPHERSON CONSTRUCTION

853 97TH AVE. SE

BOUNDARY & TOPOGRAPHIC SURVEY

CITY OF BELLEVUE WASHINGTON

JOB NO.:	1334-013-007
DWG. NAME:	TOPO-01
DESIGNED BY:	TLK
DRAWN BY:	TLK/JDC
CHECKED BY:	GSL
DATE:	4-28-2008
DATE OF PRINT:	4–28–2008