City of Bellevue
Development Services Department
Land Use Staff Report

Proposal Name:	Fotoohi Deck Addition
Proposal Address:	5832 155th Avenue SE, Bellevue, WA 98006
Proposal Description:	Proposal to expand an existing 500 square-foot deck, attached to a single-family residence, by 191 square-feet within a 50-foot top-of-slope buffer from a steep slope critical area. The proposal includes mitigation and restoration planting within the steep slope.
File Number:	22-113538-LO
Applicant:	Mehran Fotoohi, Property Owner
Decisions Included:	Critical Areas Land Use Permit (Process II. LUC 20.30P)
Planner:	Jordan Borst, Associate Land Use Planner
State Environmental Policy Act Threshold Determination:	**Exempt per WAC 197-11-800 (1)**
Director's Decision:	**Approval with Conditions**

Reilly Pittman
Planning Manager
Elizabeth Stead, Interim Co-Director
Development Services Department

Application Date:	June 21, 2022
Notice of Application Publication Date:	August 11, 2022
Decision Publication Date:	March 30, 2023
Project Appeal Deadline:	April 13, 2023

For information on how to appeal a proposal, visit Development Services Center at City Hall or call (425) 452-6800. Appeal of the Decision must be received in the City's Clerk's Office by 5 PM on the date noted for appeal of the decision.

CONTENTS

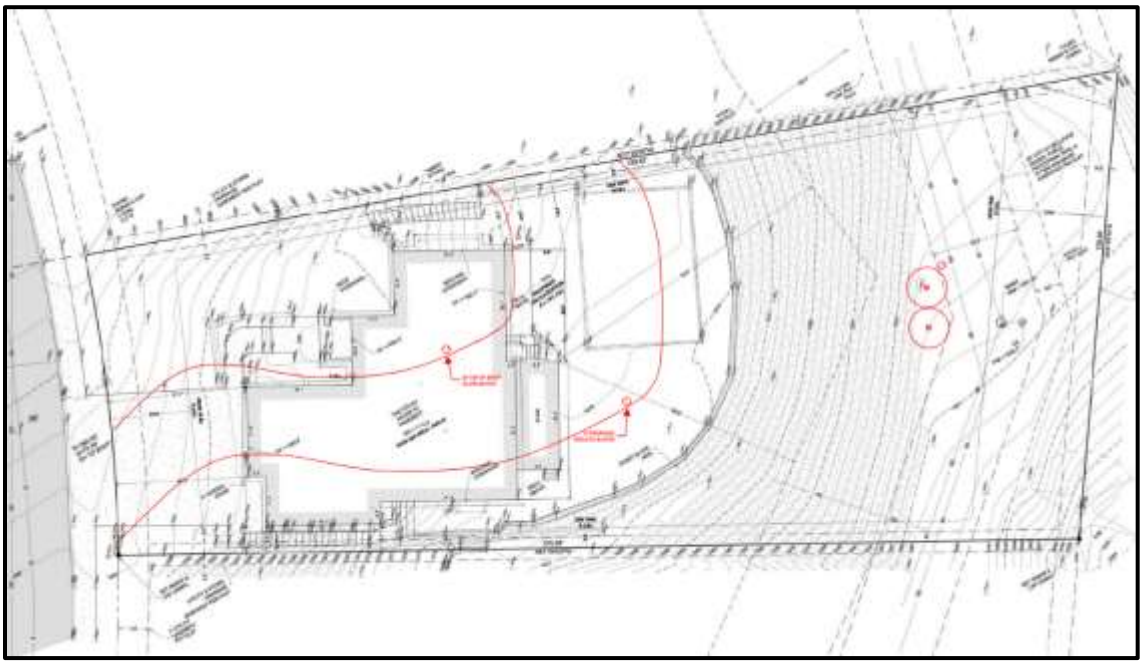
Attachments

1. Site Plan and Mitigation & Restoration Planting Plan
2. Geotechnical Report & Critical Areas Report – GEO Group Northwest, Inc. dated 10/14/2022 (in file)

I. Proposal Description

The applicant has requested a Critical Areas Land Use Permit to expand an existing 500-square-foot, attached deck by 191 square-feet within a 50-foot top-of-slope buffer from a steep slope critical area. This proposal also includes the planting of two (2) big-leaf maples (*Acer macrophyllum*) within the steep slope as mitigation planting. **See Figure 1 below for site layout.**

Figure 1



A Critical Areas Land Use permit is required to reduce a critical area or reduce critical area buffers, and critical area structure setbacks.

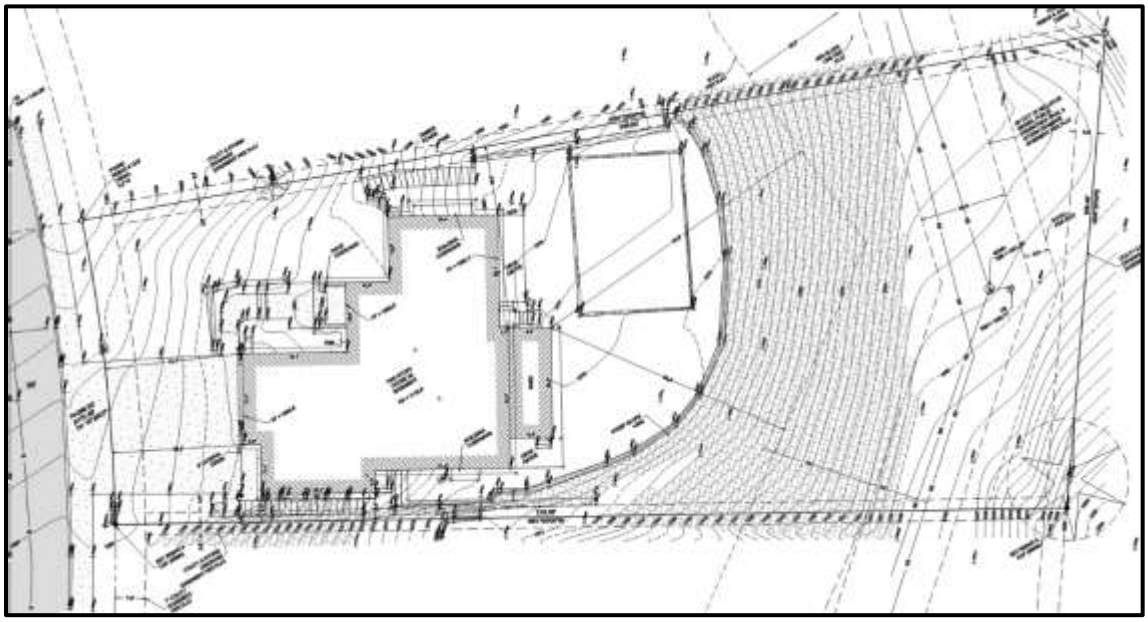
Land Use Code (LUC) 20.25H.120.B prescribes a 50-foot critical area buffer from the surveyed top-of-slope. The request is to permanently reduce a portion of the steep slope buffer to construct an addition of an attached deck. LUC 20.25H.120 allows for the reduction of a critical area buffer through a critical areas report. The critical areas report is a mechanism by which certain critical area requirements may be modified for a specific proposal. The critical areas report is intended to provide flexibility for sites where the expected critical areas functions and values are not present due to degraded conditions. Assuming degraded condition, the critical areas report must also demonstrate improvement of ecological function as part of the proposal. The steep slope critical area and buffer on the property are degraded in function and value because they lack the vegetative structural diversity found in higher-quality steep slope critical areas.

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

A. Site Description

The subject parcel is 20,282 square feet in size, abutting City Right-of-Way (ROW), 155th Avenue SE to the west. In 1999, the parcel was developed with a 7,905 square-foot single-family residence, attached garage and two (2) decks by City of Bellevue building permit, 97-005024-BS. A steep slope critical area with a east-facing aspect exists covering most of the eastern portion of the property and continues into the Lakemont Highlands Park and Open Space to the east. Lawn and some native and non-native vegetation can be found on-site, with the eastern portion of the site being heavily vegetated. **See Figure 2 for more information.**

Figure 2



B. Zoning and Land Use Context

The property is zoned R-3.5, single-family residential. The site has a Comprehensive Plan Land Use Designation of SF-M (Single-Family Medium Density). The site abuts public facility and open spaces to the east and single-family residential development to the south, north, and west.

C. Critical Areas Functions and Values

i. Geologic Hazard Areas

Geologic hazards pose a threat to the health and safety of citizens when commercial, residential, or industrial development is inappropriately sited in areas of significant hazard. Some geologic hazards can be reduced or mitigated by engineering, design, or modified construction practices. When technology cannot reduce risks to acceptable levels, building in geologically hazardous areas is best avoided (WAC 365-190).

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

ii. Habitat Associated with Species of Local Importance

The increase in human settlement density and associated intensification of land use known as urbanization has a profound and lasting effect on the natural environment and wildlife habitat (McKinney 2002, Blair 2004, Marzluff 2005, Munns 2006), is a major cause of native species local extinctions (Czech et al 2000), and is likely to become the primary cause of extinctions in the coming century (Marzluff et al. 2001a). Cities are typically located along rivers, on coastlines, or near large bodies of water. The associated floodplains and riparian systems make up a relatively small percentage of land cover in the western United States, yet they provide habitat for rich wildlife communities (Knopf et al. 1988), which in turn provide a source for urban habitat patches or reserves. Consequently, urban areas can support rich wildlife communities. In fact, species richness peaks for some groups, including songbirds, at an intermediate level of development (Blair 1999, Marzluff 2005).Protected wild areas alone cannot be depended on to conserve wildlife species. Impacts from catastrophic events, environmental changes, and evolutionary processes (genetic drift, inbreeding, colonization) can be magnified when a taxonomic group or unit is confined to a specific area, and no one area or group of areas is likely to support the biological processes necessary to maintain biodiversity over a range of geographic scales (Shaughnessy and O'Neil 2001). As well, typological approaches to taxonomy or the use of indicators present the risk that evolutionary potential will be lost when depending on reserves for preservation (Rojas 2007). Urban habitat is a vital link in the process of wildlife conservation in the U.S.

III. Consistency with Land Use Code Requirements:

A. Zoning District Dimensional Requirements:

The R-3.5 zoning dimensional requirements found in LUC 20.20.010 are generally met by the proposed expansion, but conformance will be verified during building permit review. All setbacks, height, lot coverage by structure, and impervious surface may be required to be verified by survey through the building permit inspection process. **See Conditions of Approval in Section X of this report.**

B. Consistency with Land Use Code Critical Areas Performance Standards:

The City of Bellevue Land Use Code Critical Area Overlay District (LUC 20.25H)

establishes performance standards and procedures that apply to development on any site which contains in whole or in part any portion designated as critical area, critical area buffer, or structure setback from a critical area buffer. This site contains a steep slope with a 50-foot buffer. The project is subject to the following performance standards which are reviewed below.

C. Consistency with Performance Standards for Steep Slopes 20.25H.125

Development within a landslide hazard, steep slope critical area, or the critical area buffers of such hazards shall incorporate the following additional performance standards in design of the development, as applicable. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function.

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

   The proposed deck expansion does not result in any alteration to the natural contour of the steep slope and has been designed to impact areas of lawn that are flat in elevation and solely within the steep slope buffer. No foundations are proposed within the steep slope nor the steep slope buffer. This standard is met.

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

   The deck expansion has been located in already disturbed areas and over degraded portions of the steep slope buffer to avoid impacts to the critical area steep slope. The deck addition and configuration do not result in the removal of any significant trees. This standard is met.

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

   The geotechnical review of the project found the proposed development "*based on our review of available geological information, visual reconnaissance, and subsurface investigation for the subject property, it is our opinion that the proposed development will not result in greater risk or a need for increased buffers on neighboring properties*." (Attachment 2, pg. 9). **See Section IX for conditions of approval associated with geotechnical documentation, inspections, and hold harmless agreement required for construction permit approval.**

4. **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 walls;**

   The proposed deck expansion is completely within the flat, lawned area of the property, and outside of the steep slope area. No impacts to the steep slopes are proposed. This standard is met.

5. **Development shall be designated to minimize impervious surfaces within the critical area and critical area buffer.**
   The proposed deck expansion will be an addition to the existing deck and will impact no more than 200 square feet of lawned area within the steep slope buffer. This standard is met.

6. **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 proposed deck addition will be located on a relatively flat area of the subject property. Any changes in grade outside of the foundation is not proposed nor is any yard area within the steep slope. This standard is met.

7. **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 foundations.**
   No foundation walls, rockeries, or retaining structures are proposed. This standard is not applicable.

8. **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;**
   The proposal is located outside of the steep slope critical area and the addition has been designed with pole-type footing with geotechnical recommendations (attachment 2, pg. 10). This standard is not applicable.

9. **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**
   The project proposal is located outside of the steep slope critical area with recommended pole-type footing. This standard is not applicable.

10. **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.**
    A mitigation and restoration plan (Attachment 1) containing two (2) big-leaf maples within the steep slope and meeting the requirements of LUC 20.25H.210 has been submitted within this request. **See Section IX for condition of approval associated with temporary restoration and mitigation plans required for construction permit approval.**

D. Consistency with Critical Areas Report LUC 20.25H.230

The applicant supplied a complete critical areas report (attachment 2, in file) prepared by GEO Northwest Group, Incorporated. The report met the minimum requirements in LUC 20.25H.250.

E. Consistency with Critical Areas Report LUC 20.25H.140 & 20.25H.145

Reduction of a steep slope and steep slope buffer requires a critical areas report as part of the application for a Critical Area Land Use Permit. The applicant has obtained the services of a qualified geotechnical engineering company to study the site and document the observed conditions. Staff has reviewed the following documents:

Geotechnical Report (October 14, 2022) prepared by Andrew Hoff, G.I.T. Staff Engineering Geologist and William Chang, P.E., Principal Engineer. (Attachment 2, in file)

The geotechnical analysis documented existing site conditions and documents there "*for the proposed deck addition, the steep slope critical area buffer can be reduced to 15 feet without adversely affecting the existing stability of the steep slopes.*" The geotechnical engineer also provided recommendations for foundation and foundation wall construction, seismic construction, and drainage, among other recommendations. **See Section IX for conditions of approval, and for information on requirements for geotechnical monitoring and hold harmless letter submittal.**

IV. Public Notice and Comment

Application Date:	June 22, 2022
Public Notice (500 feet):	August 11, 2022
Minimum Comment Period:	August 25, 2022

The Notice of Application for this project was published in the City of Bellevue weekly permit bulletin on August 11, 2022. It was mailed to property owners within 500 feet of the project site. No comments have been received from the public as of the writing of this staff report.

V. Summary of Technical Reviews

Clearing and Grading:

The Clearing and Grading Division of the Development Services Department has reviewed the proposed development for compliance with Clearing and Grading codes and standards. The Clearing and Grading staff found no issues with the proposed development. See Section IX for conditions of approval associated with construction permit requirements, inspection requirements, and rainy season restrictions.

Utilities:

The Utilities Division of the Development Services Department has reviewed the proposed

development for compliance with Utilities codes and standards. The Utilities staff found no issues with the proposed development.

VI. State Environmental Policy Act (SEPA)

The proposal is exempt from SEPA review, per WAC 197-11-800 and BCC 22.01.032. The construction of a single-family residence and its appurtenances outside a critical area is a categorical exemption.

VII. Decision Criteria

A. Critical Areas Report Decision Criteria-Proposals to Reduce Regulated Critical Area Buffer LUC 20.25H.255.B

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;

Finding: The proposal includes plans to restore a degraded steep slope buffer with added restoration to easternmost portion of the steep slope. Restoration activities will result in overall net gain in critical area and critical area buffer functions. The improvements will also provide future opportunity for habitat in the steep slope and the steep slope buffer from the Lakemont Highlands Park and Open Space. This criterion is met.

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;

Finding: The proposed restoration plan will result in overall net gain in critical area and critical area buffer functions to the ecosystem by increasing native species diversity and improving native species habitat for the steep slope and steep slope buffer. This criterion is met.

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;

Finding: The proposed deck addition will be constructed to allow water to pass through and into the ground and soil beneath within the steep slope and will provide a net gain in stormwater quality on site. This criterion is met.

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

Finding: This is a proposal to reduce a steep slope buffer. The applicant is proposing mitigation proportional to the anticipated impact and has included a mitigation and restoration plan with the proposal. To ensure installation and appropriate maintenance of the proposed and required mitigation the applicant is required to submit a financial security device meeting the requirements of LUC 20.40.490. Mitigation measures must be installed before occupancy is granted and maintenance of required plantings is required for a period of five years. **See Section IX for condition of approval associated with assurance device requirements.**

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

Finding: The proposed deck addition is the minimum necessary to achieve the intended functions of the expansion and is approximately 191 square feet in size. Additionally, the deck addition has been designed to utilize areas already impacted by development. The requested reduction has been mitigated by the planting of two (2) native trees, big-leaf maples (*Acer macrophyllum*). The planting of these trees will enhance the conditions of the steep slope and assist in mitigating stormwater runoff created by this project. This criterion is met.

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

Finding: The proposal is an addition to an existing single-family residential attached deck and maintains consistency with the surrounding residential land use district. This criterion is met.

B. Critical Areas Land Use Permit Decision Criteria 20.30P

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;

Finding: The applicant must obtain required development permits. **See Section IX for condition of approval associated with required permitting.**

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

Finding: The single-family residential deck addition utilizes the best available

construction, design, and development techniques. Mitigation and enhancement vegetation is proposed to increase the level of function of the steep slope critical area and steep slope buffer. This criterion is met.

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

Finding: As discussed in Section III of this report, the applicable performance standards of LUC Section 20.25H are being met.

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

Finding: The proposed activity will not impact public facilities and adequate services are available to serve the proposed project. This criterion is met.

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

Finding: As stated in previous sections, the proposal seeks reduction of the steep slope buffer to facilitate the addition of existing attached residential deck. Included with this proposal is a mitigation plan which includes the planting of two (2) native tree to enhance the steep slope and steep slope buffer. The applicant is required to follow the recommendation included in the project geotechnical report, which shall be verified by an inspection made by a qualified engineer. **See Section IX for conditions of approval associated with temporary restoration and mitigation plan requirements.**

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

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

VIII. Conclusion and Decision

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, City Code and Standard compliance reviews, the Director of the Development Services Department does hereby **approve with conditions** the proposal to reduce the steep slope buffer at 5832 155th AVE SE.

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

IX. Conditions of Approval

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

Applicable Ordinances	Contact Person
Clearing and Grading Code - BCC 23.76	Savina Uzunow, 425-452-7860
Utilities Code - BCC 24	James Henderson, 425-452-7889
Land Use Code - BCC 20.25H	Jordan Borst, 425-452-6997

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

1. Building Permit: Approval of this Critical Areas Land Use Permit does not constitute an approval of a development permit. A Building Permit for the deck addition is required. All dimensional standards will be confirmed at the time of building permit review. Building Permit must include Clearing and Grading review. Plans submitted as part of any permit application shall be consistent with the activity permitted under this approval.

Authority: Land Use Code 20.30P.140; Clearing and Grading Code 23.76.035
Reviewer: Jordan Borst, Land Use; Savina Uzunow, Clearing & Grading

2. Approved Reduction: The critical area steep slope buffer reduction approved is for a deck addition only as depicted in the project site plan (Attachment 1) and does not authorize additional site changes outside of this project scope. The reduction does not allow future structures or improvements to be located in the steep slope critical area or the steep slope buffer without approval of a Critical Areas Land Use Permit and geotechnical evaluation.

Authority: Land Use Code 20.30P.140
Reviewer: Jordan Borst, Land Use

3. Geotechnical Review: The project geotechnical engineer must review the final plans, including all foundation, retaining wall, shoring, and vault designs. A letter from the geotechnical stating that the plans conform to the recommendations in the geotechnical report and any addendums and supplements must be submitted to the clearing and grading section prior to issuance of the construction permit.

Authority: Land Use Code 20.30P.140, Clearing & Grading Code 23.76.050
Reviewer: Jordan Borst, Land Use; Savina Uzunow, Clearing & Grading

4. Mitigation and Enhancement Planting: Plans submitted for the building permit must provide two (2) native trees of enhancement planting that adheres to the minimum standards found in the City of Bellevue's Critical Areas Handbook.

Authority: Land Use Code, 20.30P.140
Reviewer: Jordan Borst, Land Use

5. Rainy Season restrictions: No clearing and grading activity may occur during the rainy season, which is defined as October 1 through April 30 without written authorization of the Development Services Department. Should approval be granted for work during the rainy season, increased erosion and sedimentation measures, representing the best available technology must be implemented prior to beginning or resuming site work.

Authority: Bellevue City Code 23.76.093.
Reviewer: Savina Uzunow, Clearing & Grading

6. Maintenance and Monitoring: The planting area shall be maintained and monitored for 5 years as required by LUC 20.25H.220. An annual monitoring report is to be submitted to Development Services, Land Use Division in each of the five consecutive years following installation. The monitoring report shall include detailed information regarding the goals and standards outlined in the approved management plan. Photos from selected photo points shall be included in the monitoring reports to document the planting and ongoing success. As stated in the submitted maintenance and monitoring plan.

Annual monitoring reports are to be submitted to Land Use each of the five years. The reports, along with a copy of the planting plan, can be sent to Jordan Borst at jborst@bellevuewa.gov or to the address below:

Environmental Planning Manager
Development Services Department
City of Bellevue
PO Box 90012
Bellevue, WA 98009-9012

Authority: Land Use Code 20.30P.140; 20.25H.220
Reviewer: Jordan Borst, Land Use

7. Planting Cost Estimate: A cost estimate for the proposed mitigation and restoration plant installation must be submitted prior to Building Permit issuance.

Authority: Land Use Code 20.30P.160
Reviewer: Jordan Borst, Land Use

8. Maintenance and Monitoring Assurance Device: A maintenance assurance device in an amount equal to 100% of the cost of plants and for five years of maintenance labor and materials is required to ensure the plants are maintained and monitored. Release of this assurance device is contingent upon receipt of documentation reporting successful establishment in compliance with the approved management plan. Land Use inspection of the planting after 5-years is required to release the surety. The maintenance surety is required to be submitted prior to building permit issuance.

Authority: Land Use Code 20.25H.220
Reviewer: Jordan Borst, Land Use

9. Land Use Inspection: Following installation of the mitigation planting the applicant shall call the inspection line and request a Land Use inspection of the planting area prior to final building inspection. Staff will need to find that the plants are in a healthy and growing condition. Land Use inspection is also required to release the maintenance surety at the end of the 5-year monitoring period. Release of the maintenance surety is contingent upon successful monitoring and maintenance and submittal of the annual monitoring reports.

Authority: Land Use Code 20.30P.140
Reviewer: Jordan Borst, Land Use

10. Hold Harmless Agreement: The applicant shall submit a hold harmless agreement in a form approved by the City Attorney which releases the City from liability for any damage arising from the location of improvements within a critical area, critical area buffer, and critical area structure setback in accordance with LUC 20.30P.170. The hold harmless agreement is required to be recorded with King County prior to clearing and grading permit issuance. Staff will provide the applicant with the hold harmless form.

Authority: Land Use Code 20.30P.170
Reviewer: Jordan Borst, Land Use

11. Clearing Limits and Temporary Erosion: Prior to the initiation of any clearing or grading activities, clearing limits and the location of all temporary erosion and

sedimentation control measures shall be field staked for approval by the on-site clearing and grading inspector.

Authority: Clearing & Grading Code 23.76.060 and 23.76.090
Reviewer: Savina Uzunow, Clearing & Grading

Vicinity Map

0 72 145

Scale 1: 870 Feet

Map Generated on: 03/22/2023

LEGAL DESCRIPTION

LOT 23 OF THE SUMMIT DIVISION NO. 4, AS PER PLAT THEREOF RECORDED IN VOLUME 138 OF PLATS, PAGES 96 THROUGH 101, RECORDS OF KING COUNTY AUDITOR;

SITUATE IN THE CITY OF BELLEVUE, COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

THE PLAT OF SUMMIT DIVISION NO. 4, AS PER PLAT THEREOF RECORDED IN VOLUME 138 OF PLATS, PAGES 96 THROUGH 101, RECORDS OF KING COUNTY AUDITOR.

PROJECT INFORMATION

PROPERTY OWNER:	MEHRAN & RIMA FOTOOHI 5832 155TH AVENUE SE BELLEVUE, WA 98006
TAX PARCEL NUMBER:	808103-0230
PROJECT ADDRESS:	5832 155TH AVENUE SE BELLEVUE, WA 98006
ZONING:	R-3.5
JURISDICTION:	CITY OF BELLEVUE
PARCEL ACREAGE:	20,282 S.F. (0.466 ACRES) AS SURVEYED

GENERAL NOTES

1. THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.

2. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND SPECTRAPRECISION FOCUS 35 TOTAL STATION AND AN EMLID REACH RS2 GPS RECEIVER. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.

3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN APRIL 2022 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

4. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.

5. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

VERTICAL DATUM & CONTOUR INTERVAL

DATUM

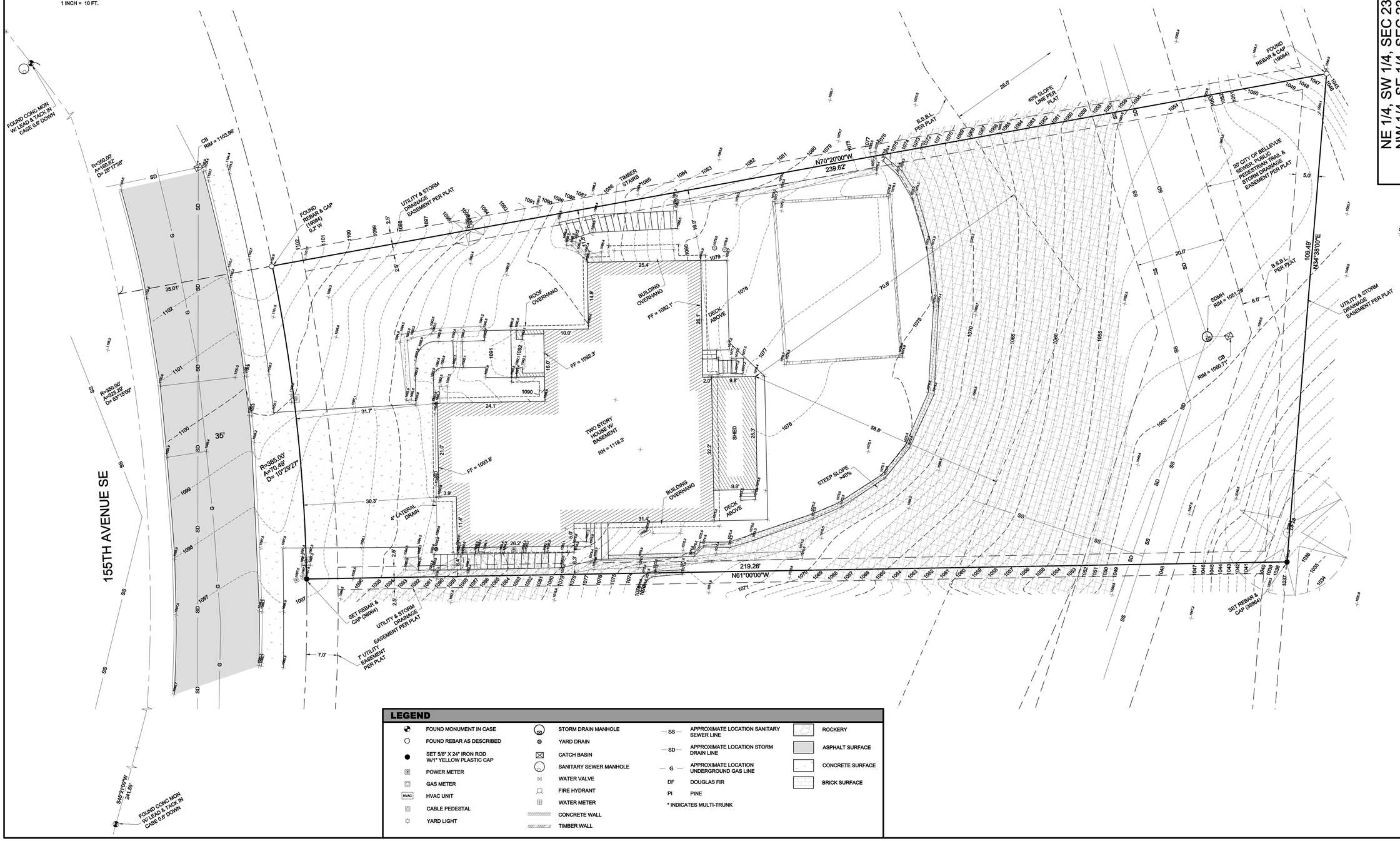
ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY THE CITY OF BELLEVUE.

THE MARK IS A BRASS CAP SET IN TOP OF CURB ON EAST SIDE OF 155TH AVENUE SE ±100' NORTH OF SE 63RD STREET.

POINT ID NO. 47;
ELEVATION: 850.184 FEET (259.137 METERS) NAVD 88

1.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 0.5' FOR THIS PROJECT.

GRAPHIC SCALE
5 0 5 10 20
1 INCH = 10 FT.



LEGEND

- FOUND MONUMENT IN CASE
- FOUND REBAR AS DESCRIBED
- SET 5/8" X 24" IRON ROD W/1" YELLOW PLASTIC CAP
- POWER METER
- GAS METER
- HVAC UNIT
- CABLE PEDESTAL
- YARD LIGHT
- STORM DRAIN MANHOLE
- YARD DRAIN
- CATCH BASIN
- SANITARY SEWER MANHOLE
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- CONCRETE WALL
- TIMBER WALL
- SS — APPROXIMATE LOCATION SANITARY SEWER LINE
- SD — APPROXIMATE LOCATION STORM DRAIN LINE
- G — APPROXIMATE LOCATION UNDERGROUND GAS LINE
- DF DOUGLAS FIR
- PI PINE
- * INDICATES MULTI-TRUNK
- ROCKERY
- ASPHALT SURFACE
- CONCRETE SURFACE
- BRICK SURFACE

NE 1/4, SW 1/4, SEC 23, TWP 24N, RNG 5E, W.M.
NW 1/4, SE 1/4, SEC 23, TWP 24N, RNG 5E, W.M.

Site Surveying, Inc.
Phone: 425.298.4412
21923 NE 11th Street Sammamish, WA 98074
www.allsurveymapping.com

WOLDENDORP WASHINGTON 39584 REGISTERED LAND SURVEYOR N. S. SWOHL PROFESSIONAL

DATE	REVISION	DRN

TOPOGRAPHIC SURVEY

MEHRAN FOTOOHI
5832 155TH AVENUE SE
BELLEVUE, WA 98006

PROJECT NO. 22-080

DRAWN BY: MTS
CHECKED BY: TNW
DATE: 4/26/2022

SHEET 1 OF 1

LEGAL DESCRIPTION

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ZONING:	R-3.5
JURISDICTION:	CITY OF BELLEVUE
PARCEL ACREAGE:	20,282 S.F. (0.466 ACRES) AS SURVEYED
TOTAL IMPERVIOUS AREA:	4435 S.F. (22% LOT COVERAGE)
PROPOSED DECK ADD. AREA:	191.3 S.F.

GENERAL NOTES

1. THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.
2. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND SPECTRAPRECISION FOCUS 35 TOTAL STATION AND AN EMLID REACH RS2 GPS RECEIVER. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.
3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN APRIL 2022 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
4. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.
5. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

VERTICAL DATUM & CONTOUR INTERVAL

DATUM

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY THE CITY OF BELLEVUE.

THE MARK IS A BRASS CAP SET IN TOP OF CURB ON EAST SIDE OF 155TH AVENUE SE ±100' NORTH OF SE 63RD STREET.

POINT ID NO. 47;
ELEVATION: 850.184 FEET (259.137 METERS) NAVD 88

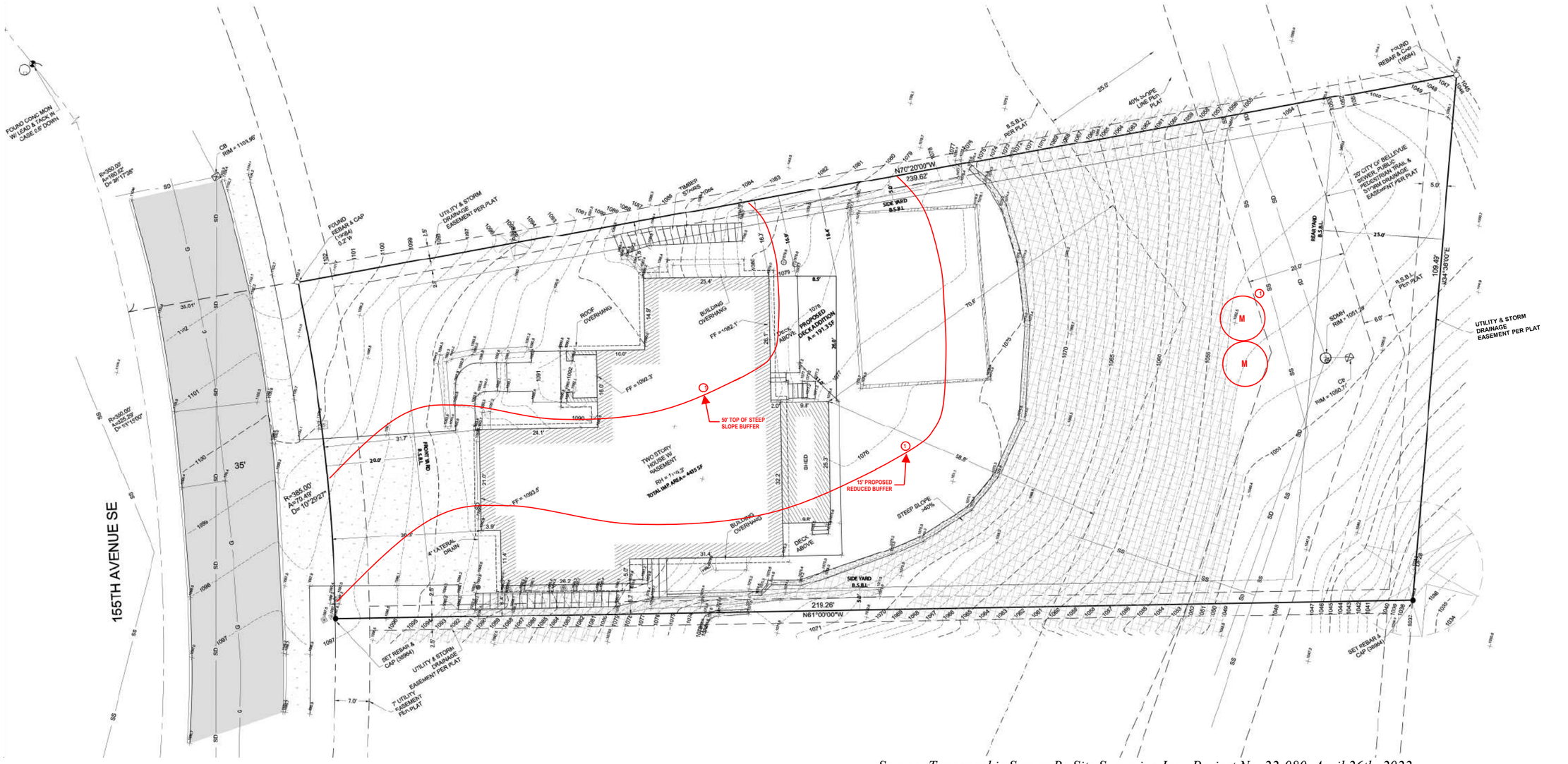
1.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 0.5' FOR THIS PROJECT.

PLAN REVISION HISTORY:

REVISION #1: 10/14/22 BY AH

REVISION NOTES:

1. INSTALLED TREES ARE TO BE MAINTAINED AND MONITORED TO ENSURE HEALTH AND SURVIVAL.
2. INSTALLED TREES TO BE 2-INCH CALIPER, 6-FEET TALL, AND STAKED.



Source: Topographic Survey By Site Surveying Inc., Project No. 22-080, April 26th, 2022.

0 20' 40'

Scale: 1 inch = 20 feet

N E S W

NE 1/4, SW 1/4, SEC 23, TWP 24N, RNG 5E, W.M.
NW 1/4, SE 1/4, SEC 23, TWP 24N, RNG 5E, W.M.

LEGEND

- FOUND MONUMENT IN CASE
- FOUND REBAR AS DESCRIBED
- SET 5/8" X 24" IRON ROD W/1" YELLOW PLASTIC CAP
- POWER METER
- GAS METER
- HVAC UNIT
- CABLE PEDESTAL
- YARD LIGHT
- STORM DRAIN MANHOLE
- YARD DRAIN
- CATCH BASIN
- SANITARY SEWER MANHOLE
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- CONCRETE WALL
- TIMBER WALL
- SS — APPROXIMATE LOCATION SANITARY SEWER LINE
- SD — APPROXIMATE LOCATION STORM DRAIN LINE
- G — APPROXIMATE LOCATION UNDERGROUND GAS LINE
- DF DOUGLAS FIR
- PI PINE
- * INDICATES MULTI-TRUNK
- 1 M BIG-LEAF MAPLE
- ROCKERY
- ASPHALT SURFACE
- CONCRETE SURFACE
- BRICK SURFACE

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists
13705 Bel-Red Road, Bellevue, WA 98005 Phone: 425.649.8757

SITE PLAN B
PROPOSED DECK ADDITION
5832 155TH AVE SE
BELLEVUE, WA 98006

SCALE	DATE	MADE	CHKD	JOB NO.	PLATE
As Shown	6/7/22	AH	WC	G-5591	1

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists,
& Environmental Scientists

October 14th, 2022 G-5591

Mehran Fotoohi
5832 155th Ave SE
Bellevue, WA 98006

Subject: **RESPONSE TO BELLEVUE CORRECTIONS COMMENTS**
Proposed New Deck Addition
5832 – 155th Avenue Southeast
Bellevue, Washington 98006

Ref: "Critical Areas Report, Proposed Deck Addition, 5832 155th Avenue Southeast, Bellevue, Washington 98006, Project No. G-5591, GEO Group Northwest, Inc., January 6 2022."

"Site Plan B, Proposed Deck Addition, 5832 155th Ave SE, Bellevue, WA 98006, GEO Group Northwest, Inc., June 7 2022."

"Important Revision Submittal Information, Permit #22-113538 LO, City of Bellevue Land Use Division, September 9 2022"

Dear Mr. Fotoohi,

GEO Group Northwest, Inc. has reviewed the above referenced comments addressed to you by the City of Bellevue's Land Use Division for the proposed deck addition at the above subject property. Our response to the geotechnical items presented in the correction comment summary is provided below and on the following pages

Correction Item #1:

Please show the following on the site plan:
- steep slope top-of-slope buffer (50')
- proposed reduced buffer (15')

- mitigation: potential mitigation includes installing trees, planting plan, removal of invasive species (i.e. blackberry or ivy), etc.

Response:

The above referenced Site Plan B has been updated to include the requested information. Updates to the Site Plan are noted in red ink, and include a circled number to identify the revision submittal they were for (i.e. circled 1 for the first revision submittal).

Correction Item #2:

Mitigation & Impacts
Based on the GeoTech Report there is existing grass where the proposed buffer reduction is located. Please note how the proposed deck project will improve habitat functions. Adding a 200sf mitigation area (2 native trees or 200sf planting are will improve functions, as the current area is degraded (just lawn and retaining wall). Trees: 2-inch caliper, 6' tall, staked. Trees and plantings should be located within the steep slope or buffer.

Please refer to the attached Steep Slope Mitigation Planting Template – this is from the City's Critical Areas Handbook. The planting area would be considered shady, as the slope/buffer is to the east.

Need to have a net increase in the habitat functions [LUC.20.20.230]
Need to note on the plan that the trees/planting area will be maintained and monitored to ensure health and survival.

LUC 20.25H.255.B.2 reduced buffer requires the following:
The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net grain in the most important critical area buffer functions to the ecosystem in which they exist.

Response:

Based on our discussions with the property owner, the proposed deck project will result in a net increase in habitat functions [LUC 20.20.230] by including installation of two (2) native trees. Acceptable species of trees include: big-leaf maple, red alder, and western red cedar, per Bellevue's Critical Areas Handbook. The trees are to be installed within the steep slope area, and are illustrated on the revised version of the referenced Site Plan B. Included in the revised

version of the site plan is the requested note expressing that the trees will be maintained and monitored to ensure health and survival.

Per LUC 20.25H.255.B.2, the proposal includes recommendations to minimize the potential for decreased critical area buffer functions as a result of the proposed construction, and restoration of degraded critical area restoration buffer functions resulting from the proposed construction. Proposed installation of native trees will result in a net increase in habitat functions of the steep slope buffer area, and post-construction stabilization of disturbed soils located within the steep slope buffer area will minimize the potential for erosion occurring within the steep slope buffer area.

Correction Item #3:

> Please revise the project description to reduce only the steep slope top of slope buffer. The toe of slope structure setback does not need to be reduced for the proposed deck addition.

Response:

The Identification of Critical Areas Standards to be Modified section of the above referenced Critical Areas Report has been revised to not include reduction of the toe of slope structure setback for the project. Reference to the toe of slope structure setback previously included in the Assessment of Probable Cumulative Impact to Critical Areas section of the referenced Critical Areas Report was also removed in the revised Critical Areas Report.

Sincerely,

GEO GROUP NORTHWEST, INC

WILLIAM CHANG
STATE OF WASHINGTON
20114
REGISTERED
PROFESSIONAL ENGINEER

Andrew Hoff, G.I.T.
Staff Engineering Geologist

Dated: 10/14/22
William Chang, P.E.
Principal Engineer

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists
& Environmental Specialists

January 6th, 2022 G-5591

Mr. Mehran Fotoohi
5832 155th Ave SE
Bellevue, Washington 98006
Email: mehranfotoohi@gmail.com
Phone: (206) 604-4702

Subject: **Critical Areas Report**
Proposed Deck Addition
5832 – 155th Avenue Southeast
Bellevue, Washington 98006

Ref: "City of Bellevue, Land Use Code Chapter 20.25H Critical Areas Overlay District: Ordinance 6589, July 19th 2021, City of Bellevue."

Dear Mr. Fotoohi,

In accordance with your contract dated November 29th, 2021, GEO Group Northwest, Inc. has prepared a Critical Areas Report regarding the proposed construction of a deck addition near a steep slope critical area at the above subject property in Bellevue, Washington. The purpose of this report is to determine if the requirements set forth in the City of Bellevue's Land Use Code

SITE DESCRIPTION

The subject property is located in the Hilltop neighborhood of Bellevue, Washington, as shown on the attached *Plate 1 – Vicinity Map*. The subject property is accessible from 155th Ave SE and is approximately rectangular in shape. The subject property is approximately 20,282 square feet (0.47 acres) in size. The current conditions of the subject property consist of a three story single-family residence, attached garage, driveway, and two wooden decks. The subject property's limits are bounded by developed residential lots to the north and south, 155th Ave SE to the west, and Lakemont Highlands Park & Open Space to the east. The maximum elevation at the subject property is approximately 1103 feet, and is located near the subject property's northwest corner. The minimum elevation at the subject property is approximately 1038 feet, and is located near the subject property's southeast corner. Non-landscaped areas at the subject property consist of undisturbed dense forest with eastward sloping topography that rises approximately 30 feet in

elevation away from the subject property's eastern limit. The eastward sloping topography extends beyond the subject property's eastern limit, approximately rising an additional 100 feet in elevation.

PROPOSED DECK ADDITION

We understand that the proposed development of the subject property is to include addition to the existing deck located along the eastern extent of the residence. The existing deck is approximately 500 square feet in size, and accessible from the second floor of the residence. The proposed deck addition would add approximately 125 square feet in size to the existing deck, and is to be built above the previously landscaped, relatively flat area adjacent to the existing residence. Location of the proposed deck addition is shown on *Plate 2 – Site Plan*. It is our understanding that the proposed deck addition would partially be developed within an established 50-feet buffer for a steep slope critical area near the north and eastern boundaries of the subject property.

GEOLOGIC OVERVIEW

The USGS geologic map for the site vicinity indicates the subject property overlies Quaternary age Vashon till (Qvt) deposits. Till deposits were compacted by the overriding Puget glacial lobe when deposited during the last glaciation period which ended approximately 13,000 years ago. Till deposits typically consist of dense to very dense, unsorted sands, gravels, and silts. Recent residential development of Cougar Mountain and the Lakemont area may have resulted in changes to the underlying geology of the project site, including potential for the presence of artificial fill (af) deposits. Artificial fill deposits typically consist of varying density or hardness and unpredictable grain size distribution.

SUBSURFACE INVESTIGATION

On December 22nd, 2020, Andrew Hoff, Staff Engineering Geologist from our firm, visited the site to perform a visual reconnaissance of the subject property and investigate the subsurface soil conditions. We drilled two exploratory soil borings (HA-1 and HA-2) using a hand operated auger during our site visit. Locations of borings are shown on the attached *Plate 2 – Site Plan.* We collected samples of the encountered soils during our site visit, and transported the soil samples to our office for further analysis.

Soils encountered in Boring HA-1 consisted of sandy topsoil to depths of approximately 2 to 4 inches, underlain by silty fine to medium grained sand with gravel to a depth of approximately 1.5 feet. Soil encountered below a depth of 1.5 feet consisted of sandy silt with gravel. Boring was terminated at a depth of 3.0 feet due to equipment refusal. Minor groundwater seepage was encountered at a depth of 2.2 feet.

Soils encountered in Boring HA-2 consisted of sandy topsoil to depths of approximately 3 to 4 inches, underlain by silty fine to coarse grained sand with gravel to a depth of approximately 2.3 feet. Soil encountered below a depth of 2.3 feet consisted of sandy silt with gravel. Boring was terminated at a depth of 3.75 feet due to equipment refusal. Moderate groundwater seepage was encountered at a depth of 2.5 feet.

For a more detailed description of the soils encountered during our subsurface investigation, please refer to the hand auger boring logs on the attached *Appendix A – USCS Soil Classification & Soil Boring Logs.*

CRITICAL AREAS EVALUATION

Identification and Classification of Geologic Hazard Areas and Buffers

Geologic hazard areas are areas susceptible to erosion, sliding, earthquake, or other geological events due to their topography or subsurface conditions. King County and the City of Bellevue regulate development within geologic hazard areas to minimize the long-term impact development may have on the functionality of geologic hazard areas. Definitions for each geologic hazard area can be found in the *City of Bellevue's Land Use Code Chapter 20.25H.120 Article VII. Geologic Hazard Areas.*

Landslide Hazards

According to City of Bellevue's critical hazard map, no potential landscape hazard areas are identified on the subject property, however, areas of slopes of 15 percent or more with more than 10 feet of rise do exist at the subject property. The City of Bellevue's Land Use Code (LUC) critical areas regulations include a 50-foot buffer around potential landslide hazard areas.

During our visual reconnaissance and subsurface investigation of the subject property, we did not observe any indication of slope instability or historic failures, including no observations of geomorphological features indicative of previous failures. Although groundwater was encountered at depths of 2 to 2.5 feet during our subsurface investigation, seepage of groundwater was not observed at or adjacent to slopes at the subject property. Slopes were observed to be mantled with trees, shrubs, and other ground cover, which provides protection against soil movement or erosion.

Based on the subject property's topography, soil, and groundwater conditions encountered during our investigation, it is our opinion that the subject property do not meet the criteria to be identified as a potential landslide hazard critical area per LUC 20.25H.120.A.1.

Steep Slope

According to the City of Bellevue's critical hazard maps, three (3) steep slope critical areas are identified on the subject property. Based on our interpretation of the topographic site plan data, steep slope critical areas consist of approximately 5,100 square feet in cumulative area at the subject property, with each steep slope critical area being larger than 1,000 square feet. During our investigation of the site, we did not observe portions of the steep slope critical area near the northern limit of the subject property to have an inclination greater than 40 percent grade over 10 feet in vertical rise. Our observation of the site topography indicate that the grade of the northern slope ranges from approximately 30 to 35 percent, and between 6 to 8 feet of vertical rise. Steep slope critical areas established by the City of Bellevue at the subject property are shown on *Plate 3 – Geologic Hazard Areas Map*. Critical area regulations in the City of Bellevue's Land Use Code (20.25H.120) include a top-of-slope 50-foot buffer for steep slope critical areas.

Based on the topography conditions observed during our reconnaissance of the subject property, it is our opinion that the slopes near the subject property's eastern and southern limits do meet the criteria to be identified as steep slope critical areas, however, the slope near the northern limit of the subject property does not meet the criteria to be classified as a steep slope critical area per LUC 20.25H.120.A.2.

Coal Mine Hazard

No coal mine hazard areas are documented to be present at the subject property by the City of Bellevue.

Liquefaction and Seismic Hazard

No liquefaction hazard areas are documented to be present at the subject property by the City of Bellevue.

Identification and Classification of Geologic Critical Areas and Buffers on Adjacent Sites

Each of the three steep slope critical areas identified at the subject property extend into and beyond adjacent properties, including the residential properties located to the north and south, as well as Lakemont Highlands Park & Open Space located east of the subject property.

Identification of Critical Areas Standards to be Modified

The proposed development seeks to obtain modifications to the following critical area standards and regulations:

- Reduction to top-of-slope buffer established in LUC 20.25H.120.B.1.b.

Habitat Assessment

Habitat Assessment was not included in this report, as it is our understanding that the proposed development will not occur within any of the critical areas identified on the City of Bellevue's critical hazard map, only within the buffer zones of those critical areas. These areas were previously landscaped during the subject property's development, and now consist of a thin layer of grass ground cover. It is our understanding that the proposed development does not include removal of existing vegetation including trees or shrubs.

Assessment of Probable Cumulative Impact to Critical Areas

It is our opinion that reduction to the top-of-slope buffer would have no foreseeable negative long-term impacts on the steep slope critical areas identified by the City of Bellevue's critical hazards map at the subject property. It is our understanding that the proposed development does not include removal of existing vegetation on or adjacent to the steep slopes, and does not increase the area of impermeable surfaces on the subject property, which are both mitigating factors regarding potential impact to the site's geologic hazard areas.

Analysis of the Level of Protection of Critical Area Functions

Critical Area Performance Standards

LUC 20.25H.125 provides performance standards that must be adhered to for development occurring within steep slope critical area buffers established by the City of Bellevue. These standards and our evaluation of the conformance of the proposed development with these standards are presented 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.

It is our understanding that the proposed deck addition is to be constructed on relatively low grade areas located within the critical area buffer zone established

at the subject property. Alterations to the natural contour of the established steep slope critical areas are not expected for this development.

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

It is our understanding that the proposed development will be located above previously graded and landscaped areas at the project site. Alterations to natural landforms and vegetation on undeveloped areas at the project site are not expected for this development.

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

Based on our review of available geologic information, visual reconnaissance, and subsurface investigation for the subject property, it is our opinion that the proposed development will not result in greater risk or a need for increased buffers on neighboring properties.

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

It is our understanding that the proposed development does not include development of any graded artificial slopes or retaining walls.

E. Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer.

It is our understanding that the proposed development will be designed to minimize impervious surfaces within the established steep slope critical area buffer, and the surface of the proposed deck addition is not expected to consist of an impervious surface, such as concrete. Slatted wooden, metal or composite

boards may be suitable for the surface of the proposed deck addition to allow water to pass through and into the ground beneath the proposed deck addition.

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 slope in excess of 40 percent, grading for yard area may be disallowed where inconsistent with this criteria.

It is our understanding that change in grade outside the building footprint is not expected for the proposed development. Modification to the existing topography at the subject property is not necessary for the proposed development to be completed.

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

It is our understanding that the proposed deck addition does not include design of, or development of any new retaining structures or devices.

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.

It is our understanding that the proposed development is not to occur on slopes in excess of 40 percent grade existing at the project site, however, pole-type construction which conforms to the existing, low grade topography located at the proposed portion of the established steep slope critical buffer to be developed is expected to be utilized during construction of the proposed deck addition.

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.

It is our understanding that the proposed development is not to occur on slopes in excess of 40 percent grade existing at the project site. The proposed development does not include construction of parking or garages over fill-based construction types.

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

In our opinion, permanent landscaping, including replanting of ground cover is recommended for all areas disturbed during construction. As a result, it is likely that some degree of landscaping improvements within the established steep slope critical area buffer will be needed. We recommend that a landscaping or revegetation plan for such disturbance should be prepared and reviewed by the geotechnical engineer.

Critical Area Mitigation

We do not anticipate adverse impact to critical areas identified by the City of Bellevue's critical hazards map as a result of the proposed development, however, our recommended measures to mitigate the potential for slope movement or erosion associated with the project include the following:

- Retention of vegetation and ground cover on the sloped areas;
- Avoid unnecessary disturbance to sloped areas that have inclinations greater than 15 percent grade;
- Use appropriate BMPs to control and direct surface water in disturbed areas to minimize soil erosion and sedimentation;
- Re-establish soil-stabilizing vegetation in disturbed areas for permanent erosion control.

Reduction in Regulated Critical Area Buffer

In our opinion, for the proposed deck addition, the steep slope critical area buffer can be reduced to 15 feet, and the steep slope critical area development setback can be reduced to 40 feet

without adversely affecting the existing stability of the steep slopes, provided the design and construction recommendations provided in the Geotechnical Report are properly implemented.

LIMITATIONS

The findings and recommendations stated herein are based on field observations, our experience on similar projects and our professional judgment. The recommendations presented herein are our professional opinions derived in a manner consistent with the level of care and skill ordinarily exercised by other members of the profession currently practicing under similar conditions in this area and within the project schedule and budget constraints. No warranty is expressed or implied. In the event that site conditions are found to differ from those described in this report, we should be notified so that the relevant recommendations in this report can be reevaluated and modified if appropriate.

CLOSING

We appreciate the opportunity to provide you with geotechnical engineering services for this project. Please do not hesitate to contact us if you have any questions regarding this report.

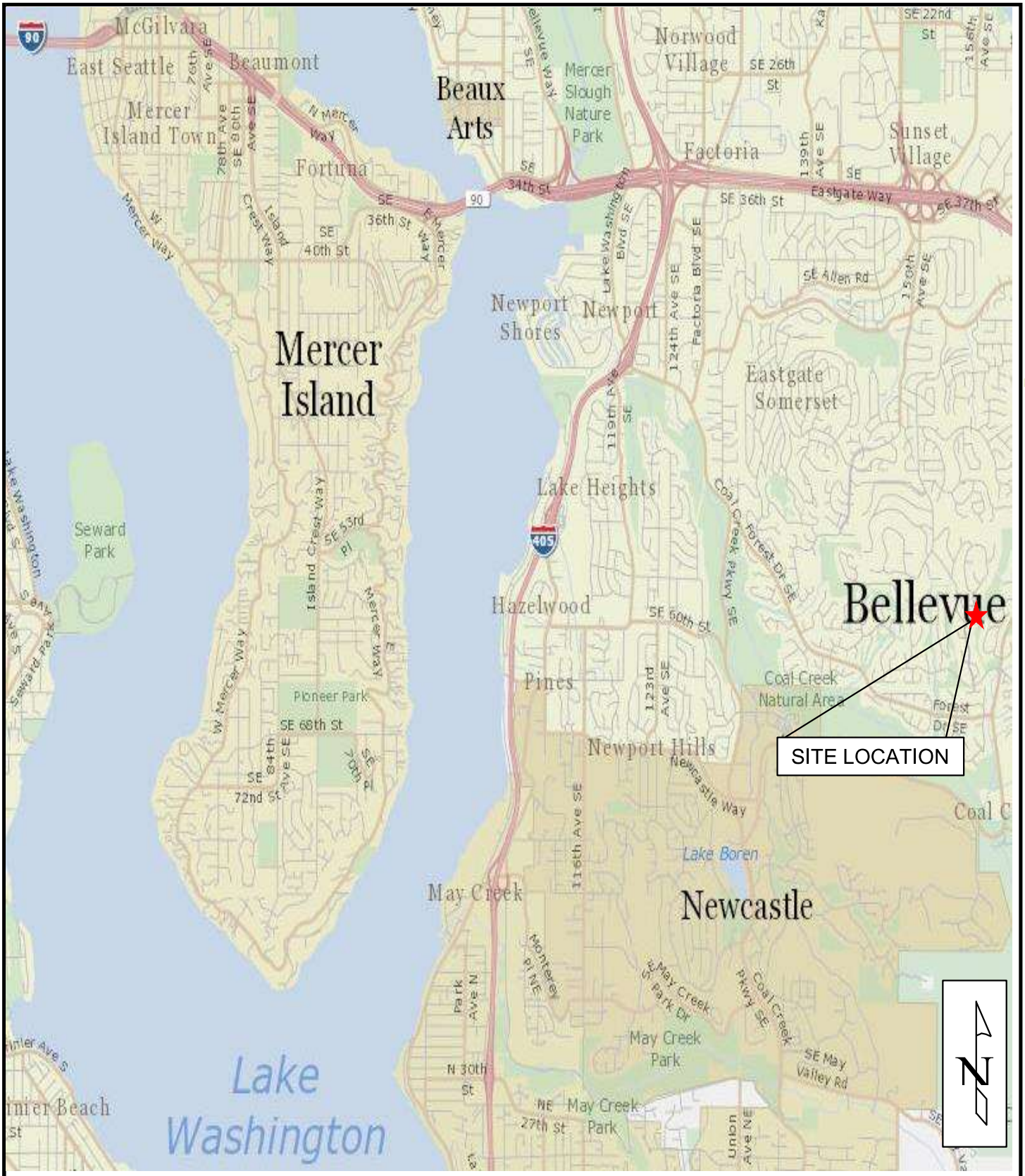
Sincerely,

GEO Group Northwest, Inc.

Andrew Hoff, G.I.T.
Staff Engineering Geologist

William Chang, P.E.
Principal Engineer

Attachments
Plate 1- Vicinity Map
Plate 2 – Site Plan
Plate 3 – Geologic Hazard Areas Map
Appendix A - USCS Soil Classification & Soil Boring Logs



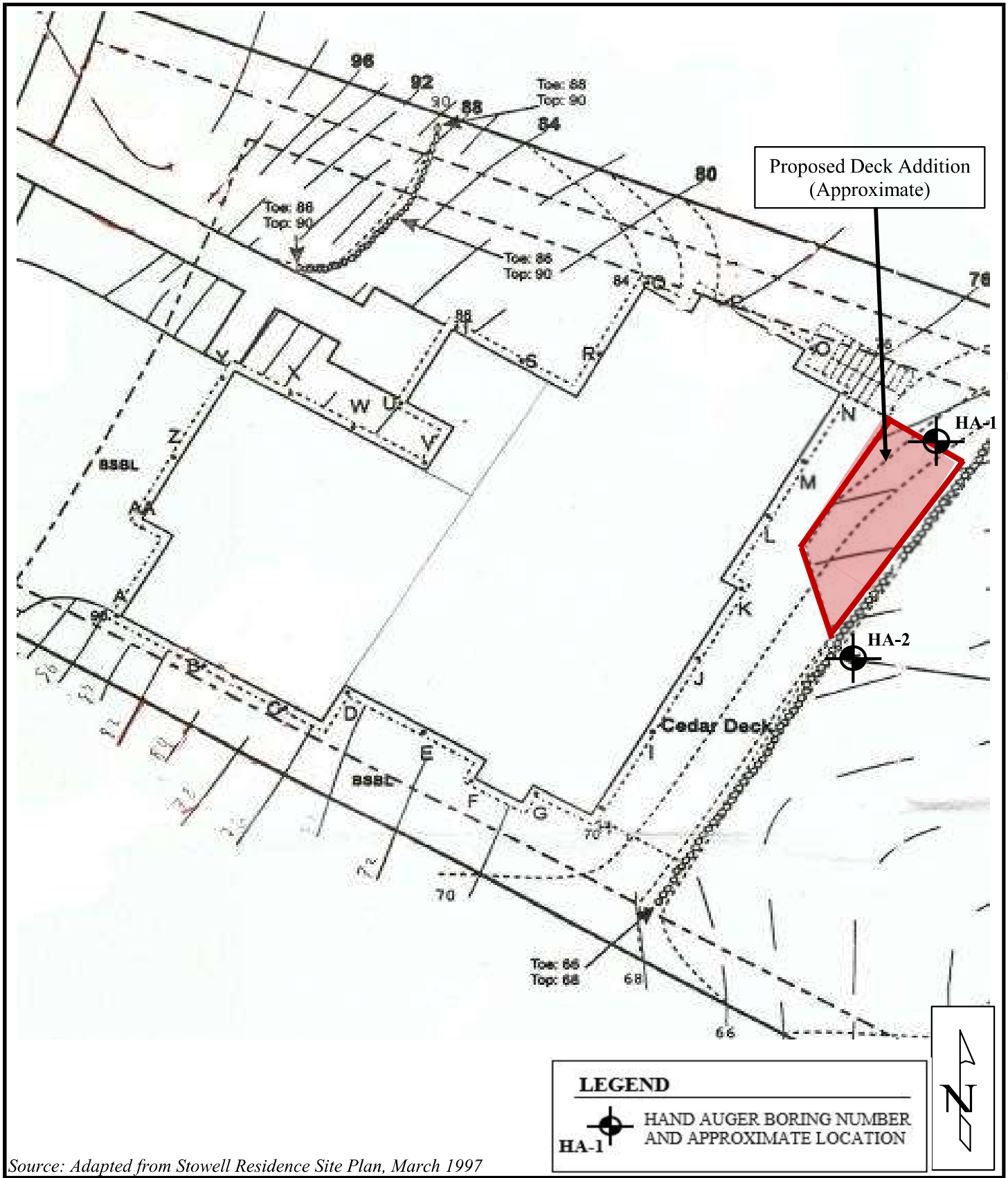
Source: King County iMap, 2021

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists

VICINITY MAP

PROPOSED DECK ADDITION
5832 155TH AVE SE
BELLEVUE, WASHINGTON 98006

SCALE	DATE	MADE	CHKD	JOB NO.	PLATE
NONE	1/6/2022	AH	WC	G-5591	1



Source: Adapted from Stowell Residence Site Plan, March 1997

Group Northwest, Inc.
Geotechnical Engineers, Geologists, &
Environmental Scientists

SITE PLAN

PROPOSED DECK ADDITION
5832 155TH AVE SE
BELLEVUE, WASHINGTON 98006

SCALE	DATE	MADE	CHKD	JOB NO.	PLATE
NONE	1/6/2022	AH	WC	G-5591	2

LEGEND

- Steep Slope Critical Area
- Outline of Proposed Deck
- Parcel Boundaries
- 1100 Contour (2' Intervals)

N

Source: City of Bellevue Map Viewer, 2021

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists

GEOLOGIC HAZARDS MAP

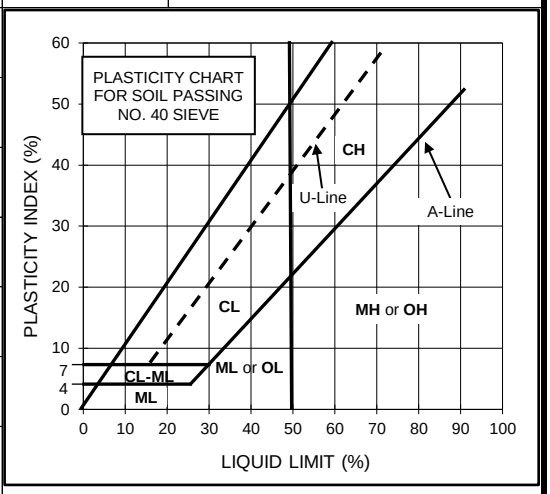
PROPOSED DECK ADDITION
5832 155TH AVE SE
BELLEVUE, WASHINGTON 98006

SCALE	DATE	MADE	CHKD	JOB NO.	PLATE
NONE	1/6/2022	AH	WC	G-5591	3

SOIL CLASSIFICATION & PENETRATION TEST DATA EXPLANATION

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISION			GROUP SYMBOL	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA	
COARSE-GRAINED SOILS	GRAVELS (More Than Half Coarse Fraction is Larger Than No. 4 Sieve)	CLEAN GRAVELS (little or no fines)	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURE, LITTLE OR NO FINES	CONTENT OF FINES BELOW 5%	Cu = (D60 / D10) greater than 4 Cc = $(D30)^2$ / (D10 * D60) between 1 and 3
			GP	POORLY GRADED GRAVELS, AND GRAVEL-SAND MIXTURES LITTLE OR NO FINES		CLEAN GRAVELS NOT MEETING ABOVE REQUIREMENTS
		DIRTY GRAVELS (with some fines)	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%	GM: ATTERBERG LIMITS BELOW "A" LINE. or P.I. LESS THAN 4
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES		GC: ATTERBERG LIMITS ABOVE "A" LINE. or P.I. MORE THAN 7
More Than Half by Weight Larger Than No. 200 Sieve	SANDS (More Than Half Coarse Fraction is Smaller Than No. 4 Sieve)	CLEAN SANDS (little or no fines)	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	CONTENT OF FINES BELOW 5%	Cu = (D60 / D10) greater than 6 Cc = $(D30)^2$ / (D10 * D60) between 1 and 3
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES		CLEAN SANDS NOT MEETING ABOVE REQUIREMENTS
		DIRTY SANDS (with some fines)	SM	SILTY SANDS, SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%	ATTERBERG LIMITS BELOW "A" LINE with P.I. LESS THAN 4
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES		ATTERBERG LIMITS ABOVE "A" LINE with P.I. MORE THAN 7
FINE-GRAINED SOILS	SILTS (Below A-Line on Plasticity Chart, Negligible Organics)	Liquid Limit < 50%	ML	INORGANIC SILTS, ROCK FLOUR, SANDY SILTS OF SLIGHT PLASTICITY		
		Liquid Limit > 50%	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOIL		
	CLAYS (Above A-Line on Plasticity Chart, Negligible Organics)	Liquid Limit < 50%	CL	INORGANIC CLAYS OF LOW PLASTICITY, GRAVELLY, SANDY, OR SILTY CLAYS, CLEAN CLAYS		
		Liquid Limit > 50%	CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS		
Less Than Half by Weight Larger Than No. 200 Sieve	ORGANIC SILTS & CLAYS (Below A-Line on Plasticity Chart)	Liquid Limit < 50%	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY		
		Liquid Limit > 50%	OH	ORGANIC CLAYS OF HIGH PLASTICITY		
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS		



SOIL PARTICLE SIZE

FRACTION	U.S. STANDARD SIEVE			
	Passing		Retained	
	Sieve	Size (mm)	Sieve	Size (mm)
SILT / CLAY	#200	0.075		
SAND				
FINE	#40	0.425	#200	0.075
MEDIUM	#10	2.00	#40	0.425
COARSE	#4	4.75	#10	2.00
GRAVEL				
FINE	0.75"	19	#4	4.75
COARSE	3"	76	0.75"	19
COBBLES	76 mm to 203 mm			
BOULDERS	> 203 mm			
ROCK FRAGMENTS	> 76 mm			
ROCK	>0.76 cubic meter in volume			

GENERAL GUIDANCE FOR ENGINEERING PROPERTIES OF SOILS, BASED ON STANDARD PENETRATION TEST (SPT) DATA

SANDY SOILS				SILTY & CLAYEY SOILS		
Blow Counts N	Relative Density, %	Friction Angle ϕ, degrees	Description	Blow Counts N	Unconfined Strength q_u, tsf	Description
0 - 4	0 -15		Very Loose	< 2	< 0.25	Very soft
4 - 10	15 - 35	26 - 30	Loose	2 - 4	0.25 - 0.50	Soft
10 - 30	35 - 65	28 - 35	Medium Dense	4 - 8	0.50 - 1.00	Medium Stiff
30 - 50	65 - 85	35 - 42	Dense	8 - 15	1.00 - 2.00	Stiff
> 50	85 - 100	38 - 46	Very Dense	15 - 30	2.00 - 4.00	Very Stiff
				> 30	> 4.00	Hard

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PLATE A1

BORING NO. HA-1

Completed By: AH Date Drilled: 12/22/2021 Surface Elev. Approx 1078 ft

Depth ft.	Elevation	USCS Code	Description	Sample Loc.	Sample No.	Probing Rod Penet. (in.)	Water Content %	Other Tests/ Comments
			- ground cover consisting of thick grass, dark brown sandy topsoil to depth of 2 to 4 inches, very loose, some fine subrounded gravel; with abundant roots, some organics.			9"		
		SM	- dark brown to brown silty SAND with gravel, sand is fine to medium grained, occasional fine to coarse subrounded gravel, rare cobbles, medium dense to dense, moist; with trace roots.	I	S1	7"	21.9	
1			- same as above, increased fines content, sand is mostly fine grained, becomes dense.			4.5"		
		ML	- grayish brown to brown sandy SILT with gravel, sand is fine to medium grained, occasional fine to coarse subrounded gravel, stiff to very stiff, moist; with some mottling.	I	S2	2.5"	28.1	
2						1.5"		
▽			- same as above, minor groundwater seepage at NW corner of boring, color changes to brownish gray to gray, sand is mostly fine grained, trace fine to coarse subrounded gravel; mottled.			1.0"		
3						0.5"		
			Total Depth = 36.0", equipment refusal. Groundwater encountered at depth of 26.0"					
4								
5								

LEGEND: I Sample depth (approximate)

▽ Water Level noted during boring

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BORING LOG

PROPOSED DECK ADDITION
5832 155TH AVE SE
BELLEVUE, WASHINGTON 98006

JOB NO. G-5591 **DATE** 1/6/2022 **PLATE** A2

BORING NO. HA-2

Completed By: AH Date Drilled: 12/22/2021 Surface Elev. Approx 1077 ft

Depth ft.	Elevation	USCS Code	Description	Sample Loc.	Sample No.	Probing Rod Penet. (in.)	Water Content %	Other Tests/ Comments
			- Thick grass ground cover, dark brown sandy topsoil to depth of 3 to 4 inches, very loose, some fine to coarse subrounded gravel, trace cobbles, moist; with abundant roots and organics.			7"		
						5"		
		SM	- Dark brown to brown silty SAND with gravel, sand is mostly fine to coarse grained, few coarse subrounded gravel, occasional cobbles, loose to medium dense, moist; with some roots.					
1						5"		
			- same as above, color changes to grayish brown, gravel content decreasing, trace cobbles, minor roots, becomes medium dense to dense.			4.5"		
					S1		22.6	
2			- same as above, sand is mostly fine to medium grained, trace fine to coarse subrouned gravel.			3.5"		
▽		**ML**	- grayish brown to dark gray sandy SILT with gravel, sand is fine to medium grained, trace mostly fine to coarse subrounded gravel, stiff to hard, moist, weathered; mottled, with moderate groundwater seepage at SW corner of boring.			3"		
3					S2	2"	27.6	
			- as above, color changes to dark gray to gray, decreasing sand content, becomes very stiff to hard.			0.5"		
4			Total Depth = 45.0", equipment refusal. Groundwater encountered at depth of 30.0"					
5								

LEGEND: ⌶ Sample depth (approximate)
▽ Water Level noted during boring

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BORING LOG

PROPOSED DECK ADDITION
5832 155TH AVE SE
BELLEVUE, WASHINGTON 98006

JOB NO. G-5591 **DATE** 1/6/2022 **PLATE** A3