HEIGHT CALCULATIONS

Point No.	EG	Point No.	EG
1	196.64	13	202.83
2	196.97	14	202.93
3	197.16	15	202.80
4	197.65	16	202.68
5	197.86	17	202.59
6	198.15	18	202.37
7	199.79	19	199.01
8	202.47	20	197.01
9	202.54	21	197.31
10	202.67	22	197.24
11	202.69	23	197.34
12	202.61	24	197.44

TOTAL= 4,798.75/24 = 199.95 AEG
ROOF AT RIDGE = 233.75
ALLOWABLE BUILDING HEIGHT = 199.95 + 35' = 234.95

FLOOR AREA RATIO

LOT:	12,632± SF
BASEMENT	1,366 SF
MAIN FLOOR (INCLUDING GARAGE)	1,958 SF
UPPER FLOOR	2,145 SF
TOTAL FLOOR	5,469 SF
TOTAL AREA RATIO	0.43

IMPERVIOUS CALCULATIONS

DEVELOPMENT STANDARD	AREA
LOT AREA	12,632
PROPOSED RESIDENCE WITH EAVES	3,249
DRIVEWAY/WALKWAY (BEYOND EAVES)	490
TRACT	1,934
TOTAL S.F. OF IMPERVIOUS SURFACE COVERAGE	5,673
PERCENTAGE OF GROSS LOT SF	44.9%
MAXIMUM IMPERVIOUS	45%

LOT COVERAGE BY STRUCTURE

HOUSE W/GARAGE	2,862 SF
COVERED PORCH	206 SF
COVERED PATIO	282 SF
TOTAL	3,350 SF
LOT	12,632
PERCENTAGE OF LOT	34.1%
MAXIMUM LOT COVERAGE	35%

SITE STATISTICS

ZONE:	R-3.5
SETBACKS:	
FRONT: A:	20'
REAR: B:	25'
SIDE: C:	5'/15'
SITE ADDRESS:	12625 NE 6TH STREET BELLEVUE, WA 98005
TAX PARCEL NUMBER:	332505-9152

FRANCHISE UTILITIES

PER BELLEVUE POLICIES, ALL UTILITIES MUST BE UNDERGROUND TO THE PROPERTY, AND THE OWNER OR CONTRACTOR WILL NEED TO CONTACT ALL UTILITY COMPANIES PRIOR TO NEEDING SERVICES.

PUGET SOUND ENERGY	CARLI BUNKELMAN 425-429-0227 CARLI.BUNKELMAN@PSE.COM
CENTURYLINK	AMY ALLISTON 253-797-4545 AMY.ALLISTON@CENTURYLINK.COM DANIEL SCHIERLING 425-677-0744 DANIEL.SCHIERLING@CENTURYLINK.COM
COMCAST	MICHELE MOORE 206-388-4316 MICHELE.MOORE@PRINCETELECOM.COM
FRONTIER/ZIPLY	JAY SCHWAB 425-263-4019 JAY.SCHWAB@ZIPLY.COM

TREE TABLE

TREE NUMBER	SPECIES	DIAMETER INCHES	SAVED
557	FLOWERING CHERRY	12	0
558	DEODAR CEDAR	24	0
560	DOUGLAS-FIR	30	30
561	DOUGLAS-FIR	25	0

TREE RETENTION CALCULATIONS

TOTAL DIAMETER INCHES OF VIABLE TREES ONSITE: 91
DIAMETER INCHES REQUIRED: 27 (30%)
DIAMETER INCHES SAVED: 30 (33%)

GREENSCAPE INFORMATION

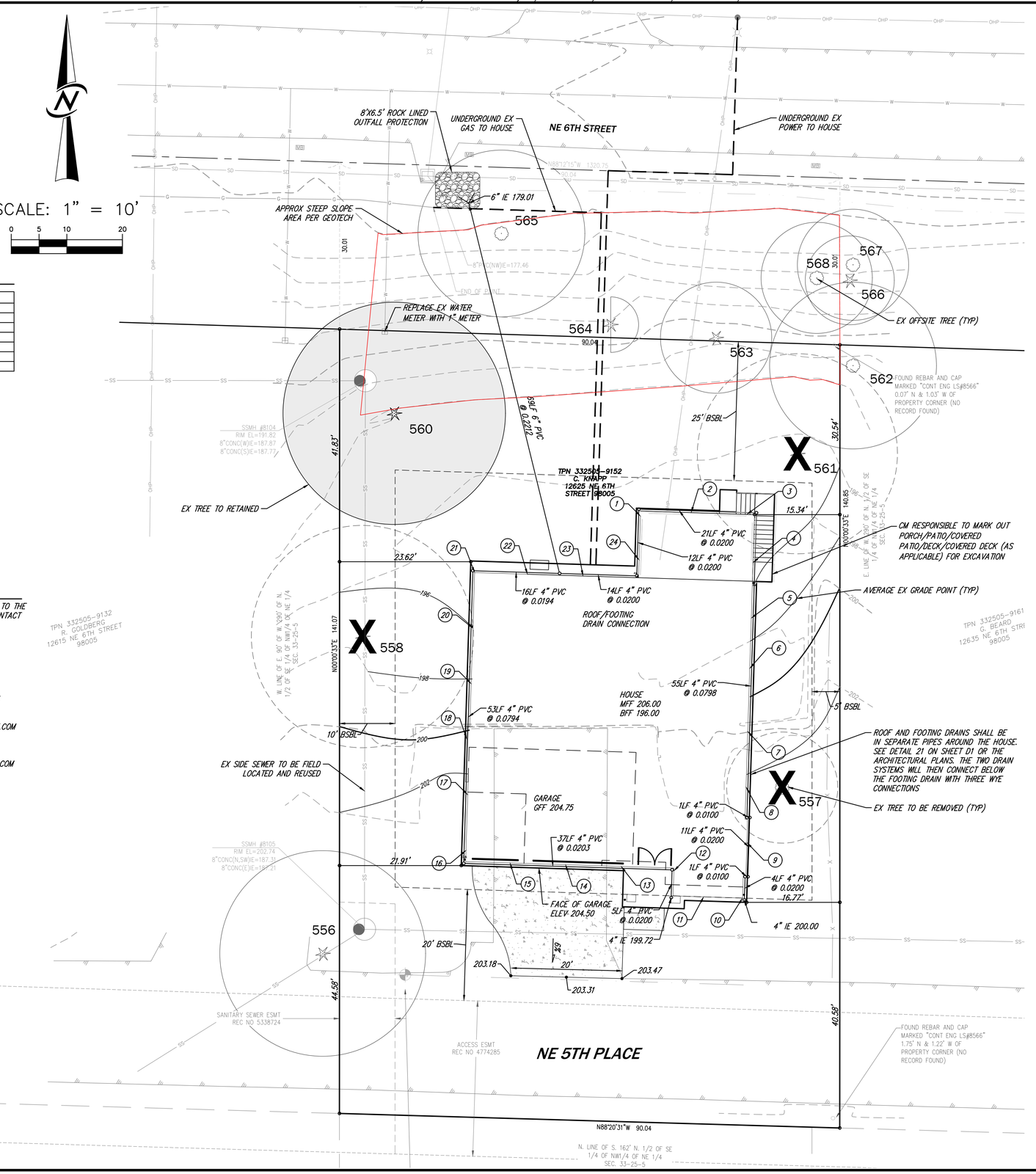
PER BELLEVUE LAND USE CODE 20.20.010, 50% OF FRONT YARD SETBACK SHALL BE COMPOSED OF "ALL LIVING PLANT, TREE, HEDGE, AND SHRUB MATERIAL."
TOTAL FRONT YARD SETBACK AREA = 1,800 SF
REQUIRED GREENSCAPE = 900 SF (50%)
PROVIDED GREENSCAPE = 1,387 SF (77%)

STORM DRIANAGE NOTES:

1) STORM PIPE SHALL BE PVC CONFORMING TO ASTM D-3034 SDR 35 (4"-15") OR ASTM F-679 (18"-27"). BEDDING AND BACKFILL SHALL BE AS SHOWN IN THE STANDARD DETAILS.

2) THE FOOTING DRAINAGE SYSTEM AND THE ROOF DOWNSPOUT SYSTEM SHALL NOT BE INTERCONNECTED AND SHALL SEPARATELY CONVEY COLLECTED FLOWS TO THE CONVEYANCE SYSTEM OR TO ON-SITE STORMWATER FACILITIES.

SCALE: 1" = 10'
0 5 10 20



VERTICAL DATUM

NAVD88 PER GNSS OBSERVATIONS

ORIGINATING BENCHMARK

GNSS DERIVED

PROJECT BENCHMARK

SET NAIL AND WASHER MARKED "CORE CONTROL" IN ASPHALT ELEVATION 203.18

BASIS OF BEARING

N87°55'35" BETWEEN THE FOUND SECTION CORNER AND THE NORTH QUARTER CORNER OF SECTION 33-25-5

REFERENCES

1. RECORD OF SURVEY RECORDED UNDER KING COUNTY RECORDING NUMBER 20180419900003. (USED FOR SECTION SUBDIVISION)
2. PLAT OF BELRIDGE RECORDED UNDER KING COUNTY RECORDING NUMBER 6284055.

LEGAL DESCRIPTION

EAST 90 FEET OF WEST 290 FEET OF NORTH HALF OF SOUTHEAST QUARTER OF NORTHWEST QUARTER OF NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON; EXCEPT SOUTH 162 FEET; AND EXCEPT NORTH 30 FEET FOR COUNTY ROAD;

TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS OVER THE NORTH HALF OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 33;

EXCEPT THE EAST 30 FEET AND WEST 30 FEET FOR ROADS; AND

EXCEPT THE SOUTH 155 FEET AND THE NORTH 150 FEET.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

EXCEPTIONS CONTAINED IN TITLE

1. THIS SITE IS SUBJECT TO THE RIGHT TO MAKE NECESSARY SLOPES FOR CUTS AND FILLS AS DISCLOSED BY INSTRUMENT RECORDED UNDER KING COUNTY RECORDING NUMBER 4769638. (NOTHING TO PLOT, EASEMENT FALLS IN NE 6TH STREET)
2. THIS SITE IS SUBJECT TO AN EASEMENT FOR INGRESS AND EGRESS AS DISCLOSED BY INSTRUMENT RECORDED UNDER KING COUNTY RECORDING NUMBER 4774285. (SHOWN HEREON)
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4. THIS SITE IS SUBJECT TO A ROAD MAINTENANCE AGREEMENT AS DISCLOSED BY INSTRUMENT RECORDED UNDER KING COUNTY RECORDING NUMBER 8706241159. (NOTHING TO PLOT, NOTED HERE)

NOTES

1. ALL TITLE INFORMATION SHOWN ON THIS MAP HAS BEEN EXTRACTED FROM CHICAGO TITLE INSURANCE COMPANY COMMITMENT NUMBER 0203341-16 DATED FEBRUARY 4, 2021. IN PREPARING THIS MAP, CORE DESIGN, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS CORE DESIGN, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND DISCLOSED BY THE REFERENCED COMMITMENT NUMBER. CORE DESIGN, INC. HAS RELIED WHOLLY ON CHICAGO TITLE INSURANCE COMPANY'S REPRESENTATIONS OF THE TITLE'S CONDITION TO PREPARE THIS SURVEY AND THEREFORE CORE DESIGN, INC. QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.
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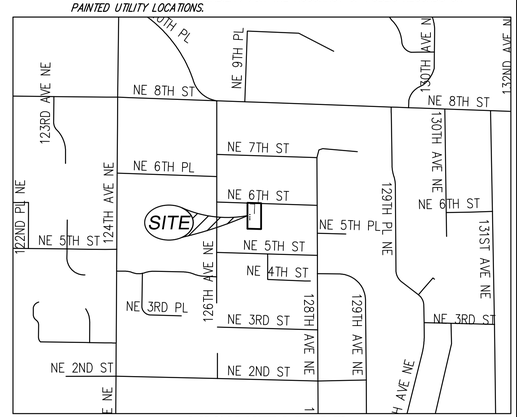


VICINITY MAP

1" = 500' SCALE

DATE | NO. | REVISIONS | DATE

7-19-21

CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING

CORE DESIGN

12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

SITE PLAN
KNAPP PROPERTY
MURRAY FRANKLYN HOMES, LLC
14410 BEL-RED ROAD
BELLEVUE, WA 98007

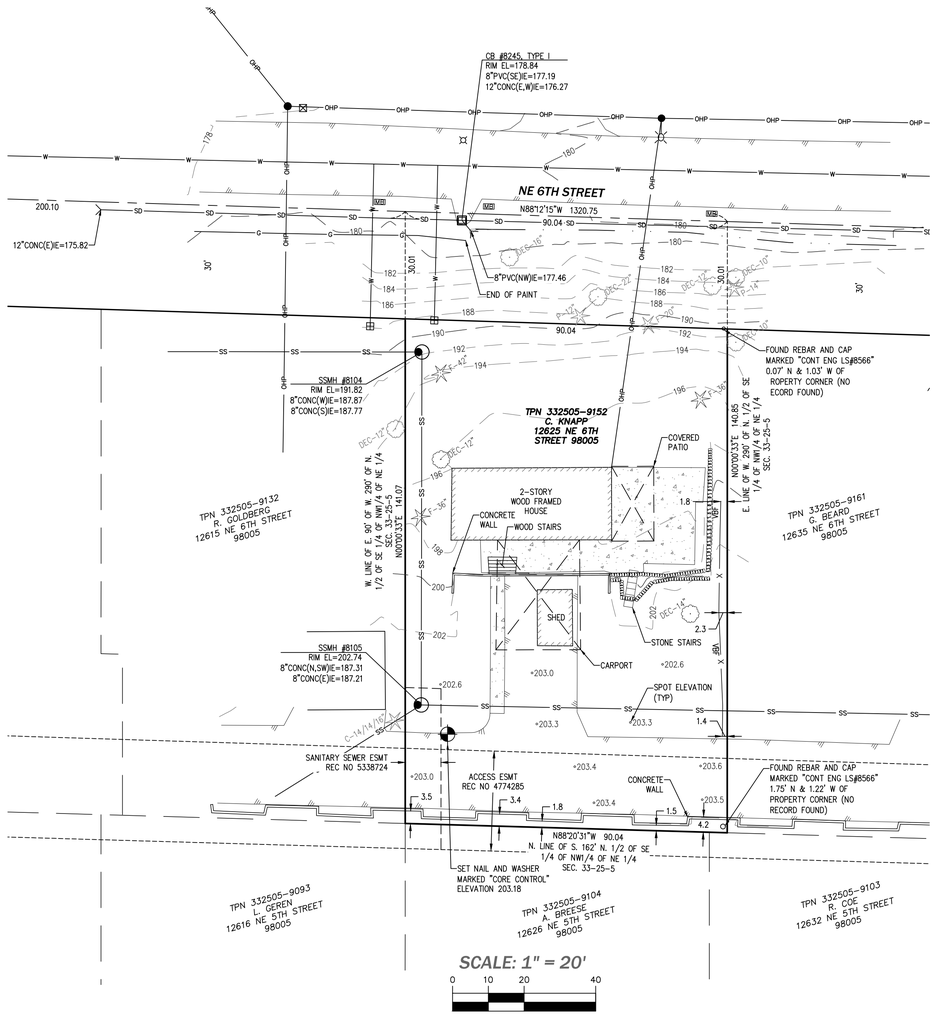
DATE	JULY 2021 (1ST SUBMITTAL)
DESIGNED	SHERI MURATA, P.E.
DRAWN	SAM D. SIMPSON-GORDON
APPROVED	SHERI MURATA, P.E.
	ROBERT WEST, P.L.S.
	PROJECT MANAGER

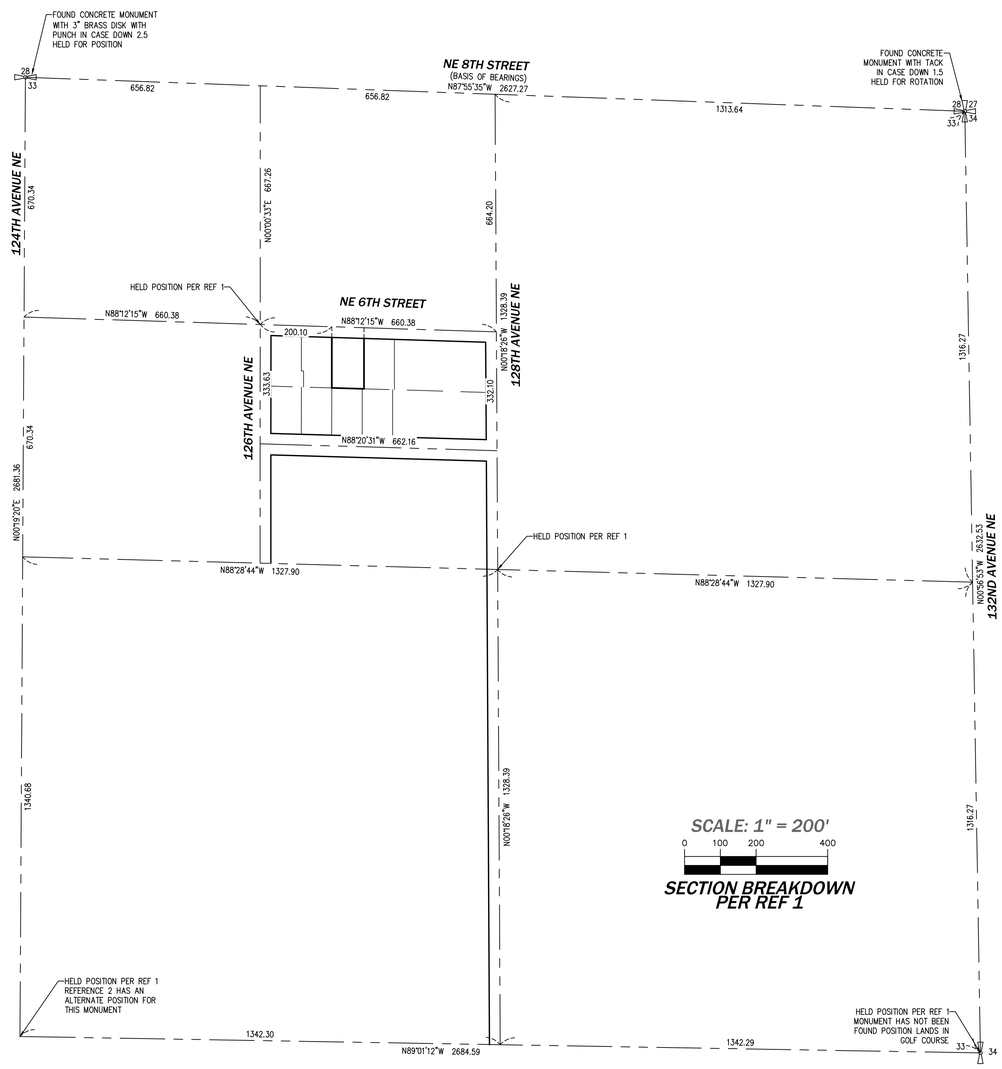
SHEET	OF
1	2

PROJECT NUMBER
21054

7/21/2021 3:28 PM J:\2021\21054\ENGINEERING\FINAL\SHEETS\21054 SP.DWG

NW1/4 OF THE NE1/4, SEC. 33, TWP. 25 N., RGE. 5 E., W.M.





LEGEND

- FOUND SECTION CORNER, AS NOTED
- FOUND QUARTER CORNER, AS NOTED
- FOUND SURVEY MONUMENT, AS NOTED
- FOUND SURVEY MARKER, AS NOTED
- BENCHMARK, AS NOTED
- SANITARY SEWER MANHOLE
- CATCH BASIN TYPE I
- CULVERT END
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- UTILITY POLE
- LIGHT POLE
- COMMUNICATIONS PEDESTAL
- MAILBOX
- ROCKERY
- CONIFEROUS TREE
- DECIDUOUS TREE
- FIR
- CEDAR
- PINE
- DECIDUOUS
- VBF VERTICAL BOARD FENCE
- SS SEWER LINE
- SD STORM DRAINAGE LINE
- W WATER LINE
- G GAS LINE
- OHP OVERHEAD POWER LINE
- X FENCE LINE
- EDGE OF ASPHALT
- CONCRETE

VERTICAL DATUM

NAVD88 PER GNSS OBSERVATIONS

PROJECT BENCHMARK

SET NAIL AND WASHER MARKED "CORE CONTROL" IN ASPHALT ELEVATION 203.18

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NO.	REVISIONS	DATE

DAVID W. WEST — REGISTERED PROFESSIONAL LAND SURVEYOR — STATE OF WASHINGTON — 18663 — 2-22-21

CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING
CORE DESIGN
12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

BOUNDARY/TOPOGRAPHIC SURVEY
KNAPP PROPERTY
MURRAY FRANKLYN HOMES, LLC
14410 BEL-RED ROAD
BELLEVUE, WA 98007

DATE FEBRUARY 23, 2021
DESIGNED
DRAWN JEREMY RECEFF
APPROVED
ROBERT D WEST, PLS
PROJECT MANAGER

SHEET 1 OF 1

PROJECT NUMBER 21054

CRITICAL AREA REPORT

Knapp Property
Bellevue, Washington

May 20, 2021

RAEDEKE ASSOCIATES, INC.

11439-001
5-25-21-NaP

Raedeke Associates, Inc.

Wetland & Aquatic Sciences
Wildlife Ecology
Landscape Architecture

Report To:	Mr. Trey Woodruff Murray Franklyn Homes LLC 14410 Bel-Red Road, Suite 200 Bellevue WA 98007
Title:	Critical Area Report Knapp Property, Bellevue, Washington
Project Number:	2021-045-001
Prepared by:	RAEDEKE ASSOCIATES, INC. 2111 N. Northgate Way Ste. 219 Seattle, Washington, 98133 (206) 525-8122
Date:	May 20, 2021

Raedeke Associates, Inc.

Wetland & Aquatic Sciences
Wildlife Ecology
Landscape Architecture

Project Manager:	Kolten T. Kosters, M.S., PWS Wetland Scientist
Project Personnel:	Richard W. Lundquist, M.S. Vice President/ Wildlife Biologist
	Andrew Rossi, B.S Wildlife Biologist

Submitted by:

Signature

Kolten T. Kosters
Printed Name

May 20, 2021
Date

TABLE OF CONTENTS

Page

LIST OF FIGURES

Figure **Page**

1.0 INTRODUCTION

1.1 PURPOSE

Raedeke Associates, Inc. was retained by Murray Franklyn Homes LLC to provide a critical area evaluation for the Knapp Bellevue project site. As part of this assessment, we conducted a site visit to identify and delineated any wetlands and streams that may be present within the project site or within the immediate vicinity, in addition to providing a characterization of wildlife habitat and use that may occur on the project site per City of Bellevue (2021) code requirements. During our site visit, we did not identify any wetlands or streams on or in immediate vicinity of the project site.

This report presents the findings of our background information review and our May 4, 2021 site investigation of the project site. The report follows the City of Bellevue (2021) critical areas reporting requirements. The investigation also includes an evaluation of the site habitat conditions using the Bellevue Urban Wildlife Habitat Functional Assessment Model (TWC 2010).

1.2 PROJECT LOCATION

The Knapp Bellevue project site consists of an approximately 0.29-acre parcel located at 12625 NE 6th Street in the City of Bellevue, Washington (Figure 1). The property is identified as King County Tax Parcel No. 3325059152. This puts the project site in a portion of Section 33, Township 25 North, Range 5 East, W.M. Parcel maps retrieved on-line from King County (2021) iMap depict the property boundaries.

The project site is bordered by single-family residential homes to the north, east, south, and west. The project site is accessed from a private driveway accessed from NE 5th Place.

2.0 METHODS

2.1 DEFINITIONS AND METHODOLOGIES

Wetlands and streams are protected by federal law as well as by state and local regulations. Federal law (Section 404 of the Clean Water Act) prohibits the discharge of dredged or fill material into "Waters of the United States", including certain wetlands, without a permit from the U.S. Army Corps of Engineers (COE 2021). The COE makes the final determination as to whether an area meets the definition of a wetland and whether the wetland is under their jurisdiction.

The COE wetland definition was used to determine if any portions of the project area could be classified as wetland. A wetland is defined as an area "inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Federal Register 1986:41251).

We based our investigation upon the guidelines of the U. S. Army Corps of Engineers (COE) Wetlands Delineation Manual (Environmental Laboratory 1987) and subsequent amendments and clarifications provided by the COE (1991a, 1991b, 1992, 1994), as updated for this area by the regional supplement to the COE wetland delineation manual for the Western Mountains, Valleys, and Coast Region (COE 2010). The COE wetlands manual is required by state law (WAC 173-22-035, as revised) for all local jurisdictions.

Hydrophytic vegetation is defined as "macrophytic plant life growing in water, soil or substrate that is at least periodically deficient in oxygen as a result of excessive water content" (Environmental Laboratory 1987). The U.S. Army Corps of Engineers National Wetland Plant List wetland indicator status (WIS) ratings were used to make this determination (Lichvar et.al 2016). The WIS ratings "reflect the range of estimated probabilities (expressed as a frequency of occurrence) of a species occurring in wetland versus non-wetland across the entire distribution of the species" (Reed 1988:8). Plants are rated, from highest to lowest probability of occurrence in wetlands, as obligate (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and upland (UPL), respectively. In general, hydrophytic vegetation is present when the majority of the dominant species are rated OBL, FACW, and FAC.

A hydric soil is defined as "a soil that is formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (Federal Register 1995: 35681). The morphological characteristics of the soils in the study area were examined to determine whether any could be classified as hydric.

According to the 1987 methodology, wetland hydrology could be present if the soils were saturated (sufficient to produce anaerobic conditions) within the majority of the rooting zone (usually the upper 12 inches) for at least 5% of the growing season, which in this

area is usually at least 2 weeks (COE 1991a). It should be noted, however, that areas having saturation to the surface between 5% and 12% of the growing season may or may not be wetland (COE 1991b). Depending on soil type and drainage characteristics, saturation to the surface would occur if water tables were shallower than about 12 inches below the soil surface during this time period. Positive indicators of wetland hydrology include direct observation of inundation or soil saturation, as well as indirect evidence such as driftlines, watermarks, surface encrustations, and drainage patterns (Environmental Laboratory 1987). Hydrology was further investigated by noting drainage patterns and surface water connections between wetlands and streams within and adjacent to the project area.

2.2 BACKGROUND RESEARCH

Prior to conducting our site visit, we reviewed existing background maps and information for the project site from the U.S.D.A. Natural Resource Conservation Service (NRCS 2021) Web Soil Survey, the U.S. Fish and Wildlife (USFWS 2021) National Wetland Inventory (NWI), and King County (2021) iMap to assist in our determination of whether wetlands were present within the property or its vicinity. We also reviewed current and historical aerial photographs (Google Earth 2021) to assist in the definition of existing plant communities, drainage patterns, and land use, and reviewed the Washington Department of Fish and Wildlife (WDFW 2021) Priority Habitats and Species (PHS) database for potential occurrence of listed or other priority fish and wildlife habitats on the site or vicinity.

2.3 FIELD SAMPLING PROCEDURES

We conducted a site visit on May 4, 2021 to identify and delineate any wetland or stream on or within the immediate vicinity of the project site, and to collect data to characterize and rate them. Our site visit also focused on collection of data and other information for a City of Bellevue Urban Wildlife Habitat Functional Assessment. Our study was designed to meet criteria outlined by The Watershed Company (2010). During our site visit, we also collected information sufficient to describe the general site conditions.

Vegetation, soils, and hydrology were examined in representative portions of the study area according to the procedures described in the Regional Supplement (COE 2010). Plant communities were inventoried, classified, and described during our field investigation. We estimated the percent coverage of each species. Plant identifications were made according to standard taxonomic procedures described in Hitchcock and Cronquist (1976), with nomenclature as updated by the U.S. Army Corps of Engineers National Wetland Plant List (Lichvar et al. 2016). Wetland classification follows the USFWS wetland classification system (Cowardin et al. 1992). We determined the presence of a hydrophytic vegetation community using the procedure described in the Regional Supplement (COE 2010), which requires the use of the dominance test, unless positive indicators of hydric soils and wetland hydrology are also present, in which case

the prevalence index or the use of other indicators of a hydrophytic vegetation community as described in the Regional Supplement (COE 2010) may also be required.

We excavated pits to at least 18 inches below the soil surface, where possible, in order to describe the soil and hydrologic conditions throughout the study area. We sampled soil at locations that corresponded with vegetation sampling areas and potential wetland areas. Soil colors were determined using the Munsell Soil Color Chart (Munsell Color 2009). We used the indicators described in the Regional Supplement (COE 2010) to determine the presence of hydric soils and wetland hydrology.

Our May 4, 2021 wildlife/habitat reconnaissance included searching for the presence of snags, hollow trees, large trees, tree cavities, large stick-type nests, mature forest, large, downed logs, eagle use, pileated woodpecker foraging sign, and any other significant wildlife habitat features. Large stick nests are built and used by several protected or other species of concern, including bald eagles and great blue herons. Tree cavities are created and used by woodpeckers, including species of concern such as the pileated woodpecker, and can be used secondarily by a host of bird and mammal species, including species of concern such as western purple martins, various cavity-nesting duck species, and various bats. Hollow trees may be used as daytime roosts for priority species including several bat species, as well as Vaux's swifts.

We collected data at five regularly spaced sample plots to sample representative parts of the property. Within each sample plot, we recorded the cover by conifers, the percent cover by each vegetative stratum, percent cover by invasive plants, the number of snags ≥4 inches diameter at breast height (dbh), and the number of logs ≥6 inches at the largest end. In addition, we recorded the diameter of the largest tree observed on-site, and the number of plant species that covered at least 10 square feet. Also, we conducted an off-site analysis of habitat connectivity to surrounding forested areas. The Functional Assessment worksheet, data, analyses, and an associated figure are provided in Appendix B.

We investigated animal use of the project site and vicinity through direct field observations. During our field reconnaissance, animal sign was noted while describing plant communities and habitats. Information regarding reproduction, habitat use, and activities of wildlife species observed was also recorded. Field investigations were also used to confirm the presence (or lack thereof) of species and habitats indicated on the PHS, Salmonscape, and appropriate city maps.

3.0 EXISTING CONDITIONS

3.1 RESULTS OF BACKGROUND INVESTIGATION

The USDA NRCS (2021) Web Soil Survey (Figure 2) identifies Alderwood gravely sandy loam soil series in the study area. Alderwood soils are not listed as a hydric soil on either the state or national hydric soils list, but may contain potential hydric soils inclusions of Mckenna, Shalcar, and Norma soils (U.S.D.A. NRCS 2021; U.S.D.A. Soil Conservation Service 1991, Federal Register 1995). Soil series boundaries or mapping units are mapped from aerial photographs with limited field verification. Thus, the location and extent of boundaries between mapping units may not be accurate for a given parcel of land within the survey area.

The USFWS (2021) NWI (Figure 3) shows no wetlands or streams on or within the immediate vicinity of the project site. Wetlands shown on the NWI are general in terms of location and extent, as they are determined primarily from aerial photograph interpretation. Thus, the number and extent of existing wetlands located within the project area may differ from those marked on the NWI map.

The King County (2021) iMap does not show any wetlands on or in the immediate vicinity of the Knapp Bellevue project site (Figure 4). Wetlands and streams shown on the King County iMap are general in terms of location and extent, as they are primarily determined from aerial photograph interpretation. The number and extent of existing wetlands with the project site may differ from those shown on the King County (2021) iMap.

The WDFW (2021) PHS database shows no other records of priority habitats or species on site or immediate vicinity. The Knapp property comprises approximately 0.1 acres of the approximate 16 acres of habitat patches found throughout the area of investigation that is required for the Bellevue Urban Wildlife Habitat Functional Assessment. This area investigation encompasses a 1,178 ft radius (or 100-acre area) around the parcel.

3.2 RESULTS OF FIELD INVESTIGATIONS

3.2.1 Site Description

During our May 4, 2021 site investigation, we did not identify any wetlands or streams on the Knapp Bellevue project site. The project site is currently developed and contains a single-family residence, a paved driveway, outbuilding, and a landscaped yard in the south half of the site.

Vegetation on the site contain a mixture Douglas-fir (*Pseudotsuga menziesii*, FACU) and other ornamental fir trees, along with ornamental rhododendron (*Rhododendron sp.*), common dandelion (*Taraxacum officinale*, FACU), and Kentucky bluegrass (*Poa pratensis*, FAC) (See Sample Plots 1 and 2). The largest tree observed on-site was a 33-inch diameter at breast height (dbh) Douglas-fir tree located in the northwest corner of

the parcel. The stand of trees on the property does not meet the WDFW (2008) definition of mature forest.

Soils were consistent with the mapped Alderwood gravely sandy loam soil series. The soil profile consisted of up to between 2 and 4 inches of very dark grayish brown (10YR 3/2) to dark brown sandy loam soils over dark grayish brown (2.5Y 4/2) to grayish brown (2.5Y 5/2) sandy loam soils with up to 25% dark yellowish brown (10YR 4/4 to 10YR 4/6) redoximorphic concentrations within the soil matrix. We did not observe a water table within the upper 18 inches of the soil profile, or any other indicators of wetland hydrology during our field investigations (See Sample Plot 1).

A steep slope, approximately 25-to-30% gradient is located along the north property boundary line and slopes to a ditch along NE 6th Street. A ditch is located at the toe of the slope along NE 6th Street. We did not observe any indicators of wetland characteristics associated with the ditch. The slope and ditch are vegetated with a dense cover of ivy, creeping buttercup (*Ranunculus repens*, FAC), and field horsetail (*Equisetum arvens*, FAC).

Soils on the slope consisted of up to between 2 and 4 inches of very dark grayish brown (10YR 3/2) to dark brown sandy loam soils over dark grayish brown (2.5Y 4/2) to grayish brown (2.5Y 5/2) sandy loam soils with up to 25% dark yellowish brown (10YR 4/4 to 10YR 4/6) redoximorphic concentrations within the soil matrix. We did not observe a water table within the upper 18 inches of the soil profile, or any other indicators of wetland hydrology during our field investigations (See Sample Plot 2).

3.2.2 Wildlife

We observed relatively few wildlife species or their sign during our field reconnaissance. No apparent bird nests or appropriate habitat snags were observed. In total, 10 wildlife species were observed during the field investigation. These species include dark-eyed junco, black-capped chickadee, chestnut-backed chickadee, chipmunk, Anna's hummingbird, American crow, song sparrow, American robin, bald eagle, and merlin. A pair of bald eagles were observed soaring very high over the project site and did not appear to be directly associated with the site.

No raptor nests were found on any of the trees within the site. All the trees had intact tops and lacked appropriate branching structures to support large raptor nests such as bald eagles. A merlin was observed that flew into the large 33-inch dbh Douglas-fir tree in the northwest corner of the site. This bird perched near the top of the Douglas-fir and remained there while preening itself for approximately 20 minutes. It made some vocalizations during this period but did not appear to be accompanied by a mate. The bird then flew off-site to the east. We did not observe any signs of nesting or regular use of the tree by the merlin or other raptors.

We did not observe any pileated woodpeckers on the project site during our site investigation, including evidence of pileated woodpecker use such as foraging excavations on snags or large trees. The pileated woodpecker is listed by the city of Bellevue as a Species of Local Importance and by Washington Department of Fish and Wildlife (2008) as a state candidate species and a Priority Species because of their susceptibility to removal of large trees and snags as well as their importance as a keystone habitat modifier (Larsen et al. 2004).

Chipmunks were the only mammals observed during our field visits. Several species of small and medium-sized mammals could likely use the site, though many are secretive and/or nocturnal and are therefore unlikely to be observed during a general site reconnaissance. In addition, on-site trees provide potential cover and breeding locations for medium-sized mammals such as raccoons and squirrels.

We did not observe any reptiles, amphibians, or their sign during our field visits, but some species adapted to urban environments could be present.

Snags (standing dead trees) provide important foraging habitat, as well as breeding and cover sites for a variety of vertebrate wildlife species (including pileated woodpeckers), as well as invertebrates. We did not observe any snags on-site during our field investigation. Similarly, we did not observe any large downed woody debris during our field investigation.

The merlin is listed in the City of Bellevue (2021) code as a species of local importance. It is not listed on the WDFW (2008) priority habitats and species list, nor is it listed on Washington State's list of threatened, endangered, or candidate species. We found no evidence of use of the site by any other priority wildlife species, such as herons, eagles, or bats.

The Knapp property scored a total of 25 points on the Bellevue Urban Wildlife Habitat Functional Assessment Model (Appendix B). The Bellevue Urban Wildlife Habitat Functional Assessment Model classifies a score of 25 as an area where wildlife habitat is present, but potential use by wildlife is low (The Watershed Company 2010).

4.0 REGULATORY CONSIDERATIONS

Wetlands are protected by Section 404 of the Federal Clean Water Act and other state and local policies and ordinances including City of Bellevue (2021) code. Additional information may be obtained from agencies with jurisdictional responsibility for, or interest in, the site.

As stated above, no wetlands were found to occur within the property or immediate vicinity, therefore no further discussion of wetland regulations is provided here.

The City of Bellevue (2021) regulates wildlife through protection of habitat associated with "Species of Local Importance", which include state and federal listed species. As stated above in Section 3.2.2, the only regulated species observed during our field investigation was the single merlin that perched in the NW corner of the site; however, no evidence of a nest site or nesting activity was observed anywhere on the property or vicinity. The City of Bellevue (2021) code states the land uses allowed in the underlying land use district are allowed within habitat associated with species of local importance, so long as the development complies with all performance standards outlined in the city's critical area code.

5.0 IMPACTS AND MITIGATION

The applicant proposes to redevelop the existing single-family home as part of the overall renovation of the project site (See Figure 5). As part of the site development application, the existing access driveway, landscaped areas, and lawn would be maintained as part of the project. No additional development would occur on the steep slope area located along the north end of the project site. As noted above, no wetlands or streams were identified during our site investigation. During our wildlife evaluation we noted a single merlin perched in an onsite tree for approximately 20 minutes. There was no indication that the onsite trees supported nesting habitat for the merlin or any other raptor species. Thus, we do not expect that the proposed redevelopment of the project site will result in adverse impacts to any critical areas or sensitive wildlife species or associated habitat.

6.0 LIMITATIONS

We have prepared this report for the exclusive use of Murray Franklyn Homes LLC and their consultants. No other person or agency may rely upon the information, analysis, or conclusions contained herein without permission from Murray Franklyn Homes LLC.

The determination of ecological system classifications, functions, values, and boundaries is an inexact science, and different individuals and agencies may reach different conclusions. With regard to wetlands, the final determination of their boundaries for regulatory purposes is the responsibility of the various agencies that regulate development activities in wetlands. We cannot guarantee the outcome of such determinations. Therefore, the conclusions of this report should be reviewed by the appropriate regulatory agencies.

We warrant that the work performed conforms to standards generally accepted in our field, and prepared substantially in accordance with then-current technical guidelines and criteria. The conclusions of this report represent the results of our analysis of the information provided by the project proponent and their consultants, together with information gathered in the course of the study. No other warranty, expressed or implied, is made.

8.0 LITERATURE CITED

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FIGURES

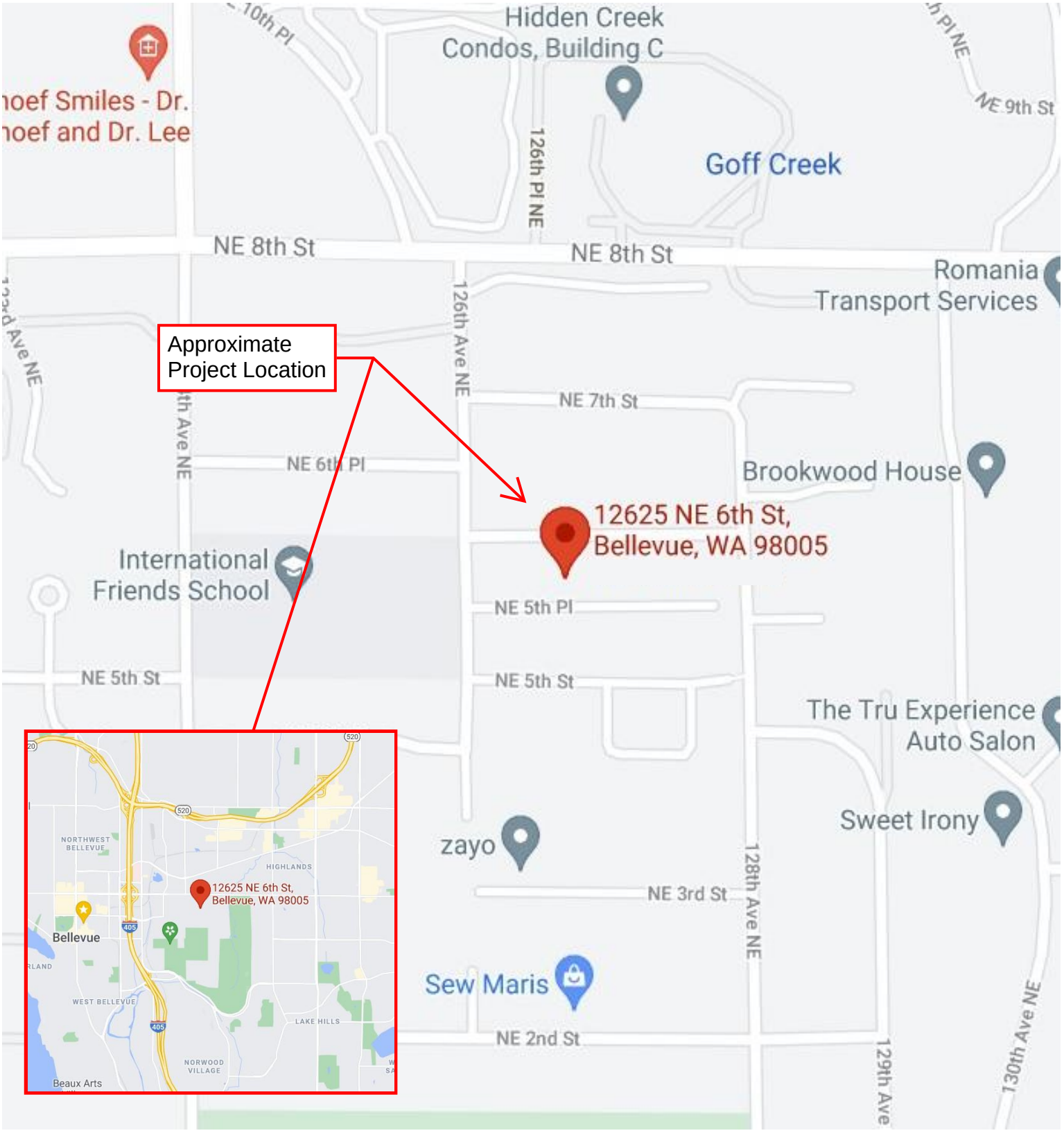

FIGURE 1 - Vicinity Map

Knapp Bellevue

12625 NE 6th St, Bellevue, WA

RAI PROJECT: 2021-054-001

PREPARED: 05/06/2021

BY: WR

Image source: https://maps.google.com

Raedeke Associates, Inc.

2111 N. Northgate Way, Suite 219

Seattle, Washington 98133

Map Unit Symbol	Map Unit Name
AgC	Alderwood gravelly sandy loam, 8 to 15 percent slopes

FIGURE 2 - NRCS Soil Map

Knapp Bellevue

12625 NE 6th St, Bellevue, WA

RAI PROJECT: 2021-054-001

PREPARED: 05/06/2021

BY: WR

Image source: NRCS Web Soil Survey https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Raedeke Associates, Inc.

2111 N. Northgate Way, Suite 219

Seattle, Washington 98133

FIGURE 3 - National Wetland Inventory map

Knapp Bellevue

12625 NE 6th St, Bellevue, WA

RAI PROJECT: 2021-054-001

PREPARED: 05/06/2021

BY: WR

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Image source: https://www.fws.gov/wetlands/data/mapper.html#

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2111 N. Northgate Way, Suite 219
Seattle, Washington 98133

LEGEND

Wetland (1990 SAO)

Sensitive area notice on title

Hydrography and Hydrology

Streams

FIGURE 4 - King County iMap

Knapp Bellevue

12625 NE 6th St, Bellevue, WA

RAI PROJECT: 2021-054-001

PREPARED: 05/06/2021

BY: WR

Source information: King County iMap: https://gismaps.kingcounty.gov/iMap/

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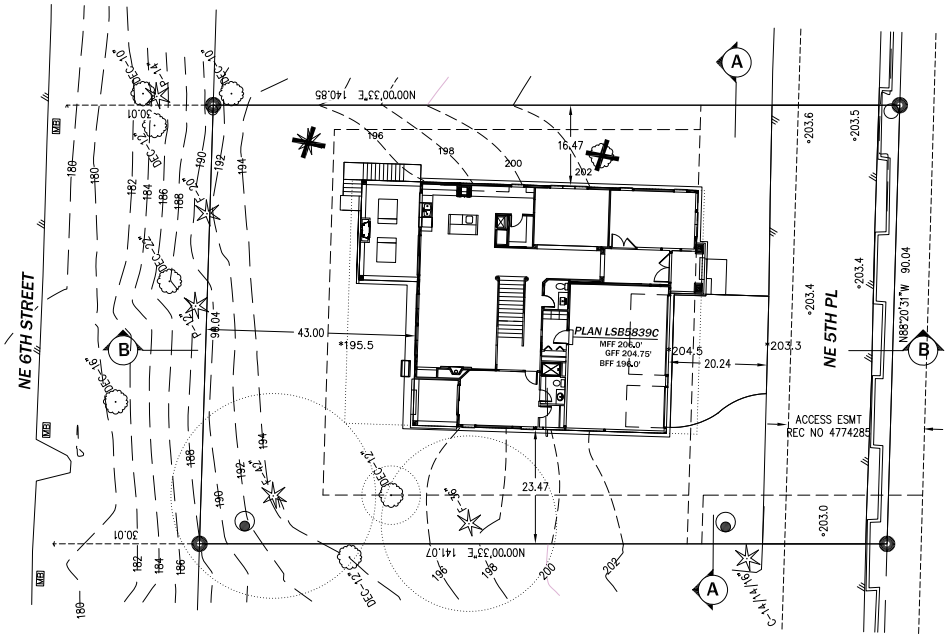
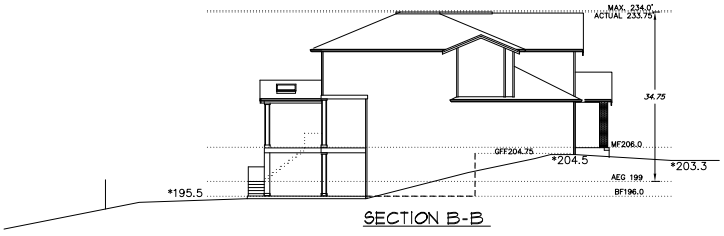
Seattle, Washington 98133



SECTION A-A



SECTION B-B

NORTH

KNAPP

SCALE: 1" =20'

DATE: 02/26/21

0 10 20 40

ADDRESS: 12625 NE 6TH ST, BELLEVUE
ZONING: R-3.5

Lot Area: = 12,632 S.F.
Max. Impervious Coverage Allowed: 5,684 S.F. (45%)
House Area/Cov. Deck(Roof O/H): 3,249 S.F.
Driveway/Walkway: 490 S.F.
Tract; 1,934 S.F.
Actual Impervious Coverage: 5,673 S.F. (44.9%)

Max. Lot Coverage By Structures: 4,421 S.F (35%)
Actual Lot Coverage: 2,981 S.F (23.6%)

FAR:
Max. FAR Allowed; 6,316 S.F. (50%)
Bsmt/Main/Upper 6,120 S.F (48.5%)

AEG: 199.0'
Max. Ridge Height Allowed: 199.0' +35' = 234.0'
Actual Ridge Height: 199.0'+34.75'=233.75'

GREENSCAPE % IN FRONT SETBACK
TOTAL SETBACK SF: 1,800 S.F
MIN. REQ.: 900 S.F (50%)
ACTUAL =1,387 S.F (77%)

TOTAL DIA. TREES EXISTING(5-TOTAL): 140 SQ. IN
SAVED TRESSES 90 S.I (3-SAVED) =64.3% >30%

FIGURE 5 - Existing conditions

Knapp Bellevue

12625 NE 6th St, Bellevue, WA

RAI PROJECT: 2021-054-001

PREPARED: 05/06/2021

BY: WR

Source information: Survey

Raedeke Associates, Inc.
2111 N. Northgate Way, Suite 219
Seattle, Washington 98133

APPENDIX A

Field Survey Data

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Knapp Property City/County: Bellevue Sampling Date: 5/4/2021

Applicant/Owner: Murray Franklyn State: WA Sampling Point: SP 1

Investigator(s): Kolten Kosters Section, Township, Range: S33, T25N, R5E, W.M.

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): convex Slope (%): 3-5%

Subregion (LRR): Northwest forest Lat: 47.615185° Long: -122.171232° Datum: WGS84

Soil Map Unit Name: Alderwood Gravelly Sandy Loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: SP south of house in lowest portion of the site

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5 m)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 3m)			
1. Rhododendron sp (Rhododendron)	10	yes	FACU
2. Hedra helix (Ivy)	10	yes	FACU
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 1m)			
1. Poa pratensis (Kentucky bluegrass)	60	yes	FAC
2. Musci spp (moss)	30	n/a	NI
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: 3 m)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	60	x 3 =	180
FACU species	20	x 4 =	80
UPL species		x 5 =	
Column Totals:	80 (A)		260 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks:

SOIL

Sampling Point: SP 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 4/2	80	10YR 4/6	20	C	M	S.L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks: Soils were likley manipulated when the site was leveled and originally developed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: no indicators of hydrology observed

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Knapp Property City/County: Bellevue Sampling Date: 5/4/2021

Applicant/Owner: Murray Franklyn State: WA Sampling Point: SP 2

Investigator(s): Kolten Kosters Section, Township, Range: S33, T25N, R5E, W.M.

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): convex Slope (%): 3-5%

Subregion (LRR): Northwest forest Lat: 47.615185° Long: -122.171232° Datum: WGS84

Soil Map Unit Name: Alderwood Gravelly Sandy Loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: SP south of house in lowest portion of the site

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5 m)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 3m)			
1. Alnus rubra (red alder)	10	yes	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 1m)			
1. Ranunculus repens (creeping buttercup)	60	yes	FAC
2. Equisetum arvens (field horsetail)	30	yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: 3 m)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks:

SOIL

Sampling Point: SP 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 4/2	80	10YR 4/6	20	C	M	S.L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks: Soils were likley manipulated when the site was leveled and originally developed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: no indicators of hydrology observed

Knapp Bellevue

Data collected for Bellevue Urban Wildlife Habitat Functional Assessment Model

Legend

- 12625 NE 6th St
- 33" dbh PSME (observed merlin)
- Approximate Project Boundaries (0.29 ac)
- Impervious Surface on the Property (0.12 ac)
- Sample Plot Locations

33" dbh PSME (observed merlin)

SP1

SP2

SP3

12625 NE 6th St

SP4

SP5

NE 5th Pl

Google Earth

N

60 ft

Knapp Bellevue

Habitat Patches Present within Area of Evaluation for Bellevue Functional Wildlife Habitat Assessment Model

Legend

- 12625 NE 6th St
- Approximate Project Boundaries (0.29 ac)
- Area of Evaluation (100 ac or 1,178-foot radius)
- Habitat Patches (16 ac)

NE 8th St
NE 9th St
NE 10th Pl
126th Pl NE
NE 9th Pl
122nd Ave NE
123rd Ave NE
NE 7th Pl
NE 7th St
NE 6th Pl
NE 6th St
124th Pl NE
12625 NE 6th St
NE 5th St
NE 5th Pl
126th Ave NE
NE 4th St
NE 4th Pl
129th Pl NE
122nd Pl NE
NE 3rd Pl
NE 3rd St
124th Ave NE
128th Ave NE
129th Ave NE
130th Ave NE
130th Pl NE
131st Ave NE
NE 2nd St

Google Earth
©2021 Google

N

900 ft

City of Bellevue

FUNCTIONAL ASSESSMENT TOOL

for Upland Habitat

Property address 12625 NE 6th St, Bellevue, WA 98005 Project name Knapp Bellevue

Location Township Range Section Project contact Kolten Kosters

Parcel number 3325059152 Telephone number(206) 525 - 8122

Property owner Murray Franklin Homes, LLC Address 2111 N. Northgate Way Ste 219 Seattle WA 98133

Telephone number (425) 644 - 2323

Staff Andrew Rossi Date(s) of site visit(s) 4th May, 2021

Washington Department of Fish and Wildlife Priority Habitat and Species (PHS) data obtained? Y/N Y

1.0	PROPERTY DESIGNATION	Zone A	Zone B	Zone C	Zone D		Zone
1.1	**Existing impervious surface**	>90%	50-90%	20-50%	0-20%		**C**
2.0	**LANDSCAPE PARAMETERS**	**No points**	**1 point**	**2 points**	**3 points**	**Additional points**	**Total**
2.1	**Land use/development density**	Zone A	Zone B	Zone C	Zone D		2
2.2	***Occurrence (number) of habitat types**	0	1	2	3+		1
2.3	****Proximity of known critical areas (distance to edge)**	>2,500 ft	<2,500 ft	<1,200 ft	<100 ft	+1 point if contiguous with critical area	2
2.4	**Habitat connectivity and corridors**	No connection to other habitat areas	≥25-foot-wide connection to vegetated areas of at least 1 acre	≥50-foot-wide connection to vegetated areas of at least 50 acres but not listed parks***	≥50-foot-wide connection King County wildlife network or listed parks***	+1 point for ≥150-foot-wide connection King County wildlife network or listed parks***	1

City of Bellevue

FUNCTIONAL ASSESSMENT TOOL

for upland habitat

2.5	**Patch size**	<0.-1.0 ac	1.0-5.0 ac	>5-10 ac	10-42 acres	>42 acres = 4 points	0
2.0	**LANDSCAPE PARAMETERS**	**No points**	**1 point**	**2 points**	**3 points**	**Additional points**	**Total**
2.6	***Interspersion of habitat patches (excluding patches <1 ac in area)**	No or isolated patch (no others within 0.5-ac circle)	Low	Moderate	High	+1 point if wildlife network or listed park is included	2
3.0	**LOCAL PARAMETERS**	**No points**	**1 point**	**2 points**	**3 points**	**Additional points**	**Total**
3.1	**Size of native trees on site**	No significant trees on site	6-12” dbh tree(s) present	12-20” dbh tree(s) present	>20” dbh tree(s) present	+1 point if tree(s) >30” dbh are present	4
3.2	**Coniferous component**	No conifers on site	Conifers very sparse or present in understory only	Conifers co- or sub-dominant in overstory	Conifers dominant	+1 point if conifers >30” dbh are present	2
3.3	**Percent cover (sample vegetated areas only)**						
	Ground layer (0-2.3 ft) (5-ft radius)	0%	0-25%	25-50%	50%+	+1 point for cover >75%; +1 point if mowed grass is >50%	2
	Shrub layer (2.3-25 ft) (10-ft radius)	0%	0-25%	25-50%	50%+	+1 point for cover >75%	1
	Canopy (>25 ft) (30-ft radius)	0%	0-25%	25-50%	50%+	+1 point for cover >75%	2
3.4	**Vegetative vertical structural diversity (foliage height diversity)**	FHD = 0	FHD < 0.70	FHD = 0.70-0.90	FHD > 0.90		1

City of Bellevue

FUNCTIONAL ASSESSMENT TOOL

for Upland Habitat

3.5	**Vegetative species richness**	0-1 species	2-5 species	6-19 species	20+ species		1
3.6	**Invasive species component**	>75% cover	25-75% cover	10-25%cover	<10% cover		3
3.0	**LOCAL PARAMETERS**	**No points**	**1 point**	**2 points**	**3 points**	**Additional points**	**Total**
3.7	**Proximity to year-round water**	>1.0 mi or artificial feature with maintained /invasive buffer present within 0.3-1 mi	0.3-1.0 mi or artificial feature with maintained/ invasive buffer present within <0.3 mi	<0.3 mi or artificial feature with maintained/ invasive buffer present within patch	Natural water feature present within patch with native buffer		1
3.8	**Snags (≥4 in dbh)**	No snags on site	1/ac or fewer	2-6/ac	>7/ac	Add 0.5 point for each >20 in dbh and 1 point for each >30 in dbh	0
3.9	**Other habitat features**	None	1	2-4	5 or more		0
Landscape parameters points							8
Local parameters points							17
TOTAL POINTS							**25**

* Use circle of the appropriate size for the property's zone:

Zone A – 0.5 ac
Zone B – 5.0 ac
Zone C – 100 ac
Zone D – 250 ac

** PHS data required for sites in Zone D

***Parks: Mercer Slough, Phantom Lake wetland complex, Larson Lake wetland complex, Cougar Mountain Regional Wildland Park, Weowna Park; King County wildlife network

Knapp Bellevue Property Habitat Assessment
Raedeke Associates, Inc.
RAI No. 2021-054-001

	30' rad.	5' rad.	10' rad.	30' rad.		30' rad.	30' rad.	30' rad.	
Plot #	**% Conifer in Canopy**	**% Cover 0-2.3 ft.**	**% Cover 2.3-25 ft.**	**% Cover >25 ft.**	**Veg. Structural Diversity**	**% Invasive Cover**	**# Snags >4" dbh**	**# Downed Wood >6"**	**lawn**
1	70%	100%	10%	70%	0.85	10%	0	0	90
2	20%	100%	30%	20%	0.59	20%	0	0	80
3	80%	60%	10%	80%	0.88	10%	0	0	60
4	40%	100%	25%	40%	0.59	0%	0	0	90
5	0%	100%	10%	15%	0.38	0%	0	0	90
Avg.	42%	92%	17%	45%	0.66	7%	0.0	0.0	82
						# Per Acre	0.0	0.0	

Native Plant Species >10 s.f.	**Non-Native Plant Species >10 s.f.**
Rhododendron macrophyllum	Hedera helix
Pseudotsuga menzeiseii	Prunus laurocerasus
Pinus contorta	

Largest Tree Seen Onsite: 33" PSME in NW corner of site

Total = __3__ native spp >10 s.f.

Priority Habitats and Species on the Web

Buffer radius: 1000 Feet

Report Date: 05/10/2021, Parcel ID: 3325059152

The Priority Habitats and Species (PHS) datasets do not contain information for your project area. This does not mean that species and habitats do not occur in your project area. PHS data, points, lines and polygons are mapped only when occurrences of these species or habitats have been observed in the field. Unfortunately, we have not been able to comprehensively survey all sections in the state and therefore, it is important to note that priority species and habitats may occur in areas not currently known to the Department.

TERRA ASSOCIATES, Inc.

Consultants in Geotechnical Engineering, Geology
and
Environmental Earth Sciences

May 26, 2021
Project No. T-8500

Mr. Napoleon Esperanza
Murray Franklyn Homes, LLC
14410 Bel-Red Road
Bellevue, Washington 98007

Subject: Critical Area Report
Knapp Property
12625 NE 6th Street
Bellevue, Washington

Reference: Geotechnical Report, Knapp Property, 12625 NE 6th Street, Bellevue, Washington, Project No. T-8500, prepared by Terra Associates, Inc., dated April 6, 2021

Dear Mr. Esperanza:

As requested, we have conducted a critical area report for the subject project. As we understand, the City of Bellevue is requiring a 50-foot buffer from the crest of a slope that extends to the north of the project site. The slope is off the subject property and therefore was not addressed in the referenced geotechnical report.

Based on our review of the survey completed by CORE Design, dated February 26, 2021, the slope north of the subject property descends from the property to NE 6th Street with an overall relief of approximately 14 feet. The slope is between 40 and 50 percent, therefore, meets the City of Bellevue's definition of a steep slope and would be classified as a geologic hazard/critical area.

GEOLOGIC HAZARDS/CRITICAL AREAS

The critical area report requirements outlined in Section 20.25H.250, predominately refer to wetland or shoreline critical areas and many of the requirements are outside of a geotechnical engineer's expertise. We have addressed the requirements that apply to a geological critical area (in this case steep slopes are the only geologic hazard onsite).

12220 113th Avenue NE, Ste. 130, Kirkland, Washington 98034
Phone (425) 821-7777 • Fax (425) 821-4334

1. "Identification and classification of all critical areas and critical areas buffers on the site."

The geologic critical area is a steep slope located in the western portion of the site. The area has been outlined on attached Figure 1.

2. "Identification and characterization of all critical areas and critical areas buffers on those properties immediately adjacent to the site."

The steep slope on the property extends east and west of the subject property. The adjacent properties have been developed with single-family homes and we assume these homes have taken the steep slope into consideration.

3. "Identification of each regulation or standard of this code proposed to be modified."

One regulation is to be modified; the steep slope buffer is to be reduced to allow for the construction of a new single-family home.

3. "A habitat assessment consistent with the requirements of LUC 20.25H.165."

A habitat assessment has been completed by the project's wetland biologist.

4. "An assessment of the probable cumulative impacts to critical areas resulting from development of the site and the proposed development."

We have completed a slope stability analysis for the steep slope. The results of our analysis and conclusions regarding the project construction are outlined below.

5. "An analysis of the level of protection of critical area functions and values provided by the regulations or standards of this code, compared with the level of protection provided by the proposal. The analysis shall include:

a. A discussion of 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. A discussion of the function 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.

c. A discussion of 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."

The current steep slope buffers and building setbacks hold little to no value as the buffers and setbacks are currently covered with grass.

a. In our opinion, this has no impact on a steep slope or steep slope buffer.

b. The code required steep slope buffers will offer protection to the proposed structures and infrastructure improvements.

c. The modified steep slope buffer will offer the same protection as the code required steep slope buffers to the proposed development.

6. "A discussion of the performance standards applicable to the critical area and proposed activity pursuant to LUC 20.25H.160, and recommendation for additional or modified performance standards, if any."

In our opinion, this is not applicable to this project.

7. "A discussion of the mitigation requirements applicable to the proposal pursuant to LUC 20.25H.120, and a recommendation for additional or modified mitigation, if any."

None are required.

8. "Any additional information required for the specific critical area as specified in the sections of this part addressing that critical area."

It is our opinion, that no additional information is required to allow for the modification of the steep slope buffers as we demonstrate the steep slope is stable, post construction. Please see the analysis below.

Section 20.25H.145

In addition to the requirements outlined in Section 20.25H.250, we have also addressed the requirements outlined in Section 20.25H.145.

A. Will not increase the threat of the geological hazard to adjacent properties over conditions that would existing if the provision of this part were not modified.

Based on the slope stability analyses and slope reconnaissance completed below, the proposed steep slope buffer modification will not increase the threat of the hazard to the adjacent properties over conditions that currently exist.

B. Will not adversely impact other critical areas.

The proposed modification does not impact other critical areas.

C. Is designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than would existing if the provisions of this part were not modified.

We have completed the slope stability analyses below, showing that the proposed modification provides the same protection to the project as it would if the modification did not occur.

D. Is certified as safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the State of Washington.

The slope stability analysis completed above indicates the proposed project is safe as designed and under anticipated conditions.

Section 20.25H.125 – Performance Standards – Landslide Hazards and Steep Slopes

It is our opinion, that the proposed project meets the requirements outline in this section of the Bellevue Land Use Code. The primary geotechnical consideration within this section is part C "The proposed development shall not result in grater risk or a need for increased buffers on neighboring properties". As demonstrated below, the proposed project maintains the current factors of safety for the slope and does not result in any additional risk for the adjacent properties.

Section 20.25H.255.B – Critical Areas Report – Decision Criteria

As requested by the City of Bellevue, we are addressing Section 20.25H.255 of the City of Bellevue Land Use Code. This section of the codes lists the criteria that will be used by the director to approve a proposal to reduce the regulated critical area buffer. Based on the information contained in this letter, all elements pertaining to the geotechnical portion of the project have been appropriately addressed and there is sufficient information to allow the proposed project to be constructed as intended, in our opinion.

Seismic

The competent nature of the site soils indicates the risk of seismically induced soil movements is low. In addition, as discussed in following sections, analysis indicates that the safety factor for the case of deep-seated slope failure exceeds the minimum considered acceptable by local geotechnical engineering practice for the modeled seismic event.

Liquefaction is a phenomenon where there is a reduction or complete loss of soil strength due to an increase in pore water pressure induced by vibrations from a seismic event. Liquefaction mainly affects geologically recent deposits of fine-grained sands that are below the groundwater table. Due to the lack of significant groundwater at the site and the medium-dense to very dense nature of the underlying native soils, it is our opinion that the risk for soil liquefaction to occur at this site and its associated impacts is negligible.

Based on the soil conditions encountered and the local geology, the 2018 International Building Code (IBC) indicates that seismic Site Class "D" should be used in structural design.

SLOPE STABILITY ANALYSIS RESULTS

We have completed a slope stability analysis for the project at a location designated as Cross-Section A-A' using the computer program Slide 2018. The approximate cross-section locations and test pit locations are shown on attached Figure 1.

Our analysis considered both static and pseudostatic (seismic) conditions. A horizontal acceleration of 0.3g was used in the pseudostatic analysis to simulate slope performance under earthquake loading. This acceleration is equal to one-half of the peak horizontal ground acceleration with 2 percent in a 50-year probability of exceedance as defined by the 2018 International Building Code.

Based on our field exploration, laboratory testing, and previous experience with similar soil types, we chose the following parameters for our analysis:

Table 1 – Slope Stability Analysis Soil Parameters

Soil Type	Unit Weight (pcf)	Friction Angle (degrees)	Cohesion (psf)
New Structural Fill	125	32	0
Stiff (ML)	110	28	250

The results of our slope stability analysis, as shown by the lowest safety factors for each condition, are presented in the following table:

Table 2 – Slope Stability Analysis Results

Cross Section	*Minimum Safety Factors*	
	Existing Conditions	***Post Construction***
A-A'	2.72 *(Seismic 1.54)*	2.72 *(Seismic 1.54)*

Results of the analysis show the proposed project has no impact on the existing steep slope in both the static and pseudostatic condition. Therefore, it is our opinion, that the project can be constructed as shown. Results of the Slide analysis are attached for review.

We trust the information presented is sufficient for your current needs. If you have any questions or require additional information, please call.

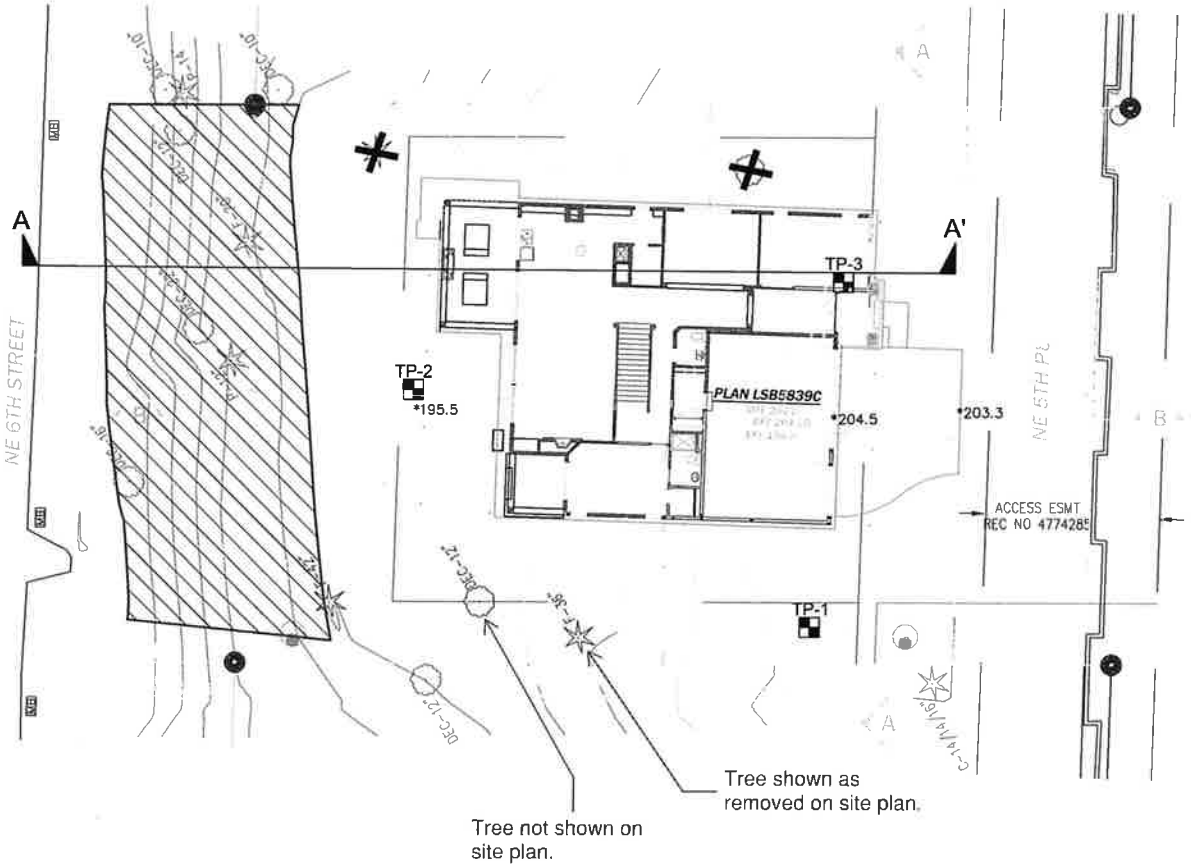
Sincerely yours,
TERRA ASSOCIATES, INC.

CAROLYN S. DECKER — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

5-26-2021

Carolyn S. Decker, P.E.
Project Engineer

Encl: Figure 1 – Exploration Location Plan
Appendix A – Slope Stability Analysis Graphical Output



NOTE:

THIS SITE PLAN IS SCHEMATIC. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE. IT IS INTENDED FOR REFERENCE ONLY AND SHOULD NOT BE USED FOR DESIGN OR CONSTRUCTION PURPOSES.

REFERENCE: SITE PLAN PROVIDED BY CLIENT.

LEGEND:

APPROXIMATE TEST PIT LOCATION

APPROXIMATE CROSS SECTION LOCATION

APPROXIMATE STEEP SLOPE LOCATION

0 20 40

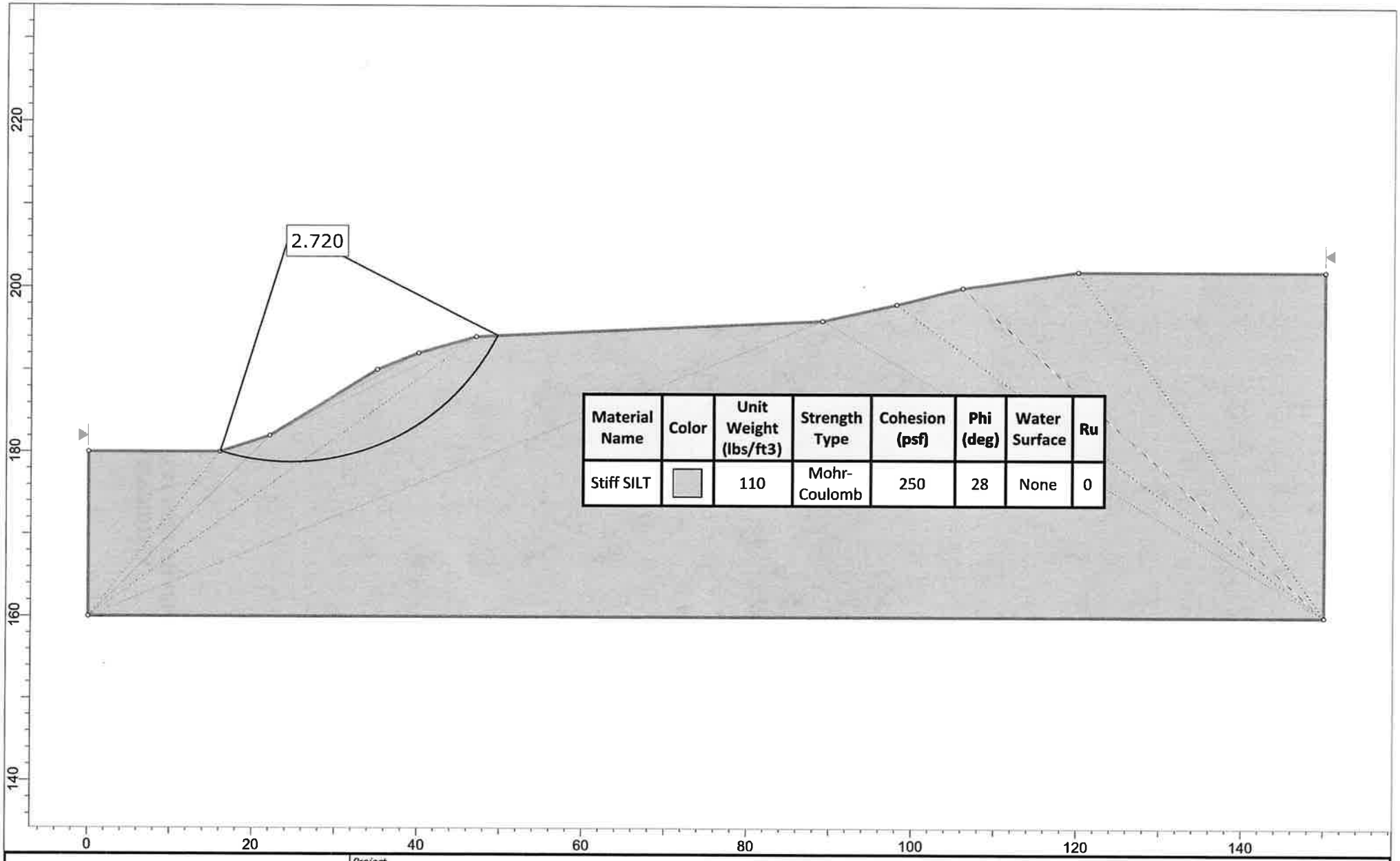
APPROXIMATE SCALE IN FEET

Terra Associates, Inc.
Consultants in Geotechnical Engineering Geology and Environmental Earth Sciences

EXPLORATION LOCATION PLAN
KNAPP PROPERTY
BELLEVUE, WASHINGTON

Proj.No. T-8500 | Date: MAY 2021 | Figure 1

APPENDIX A
SLOPE STABILITY ANALYSIS GRAPHICAL OUTPUT

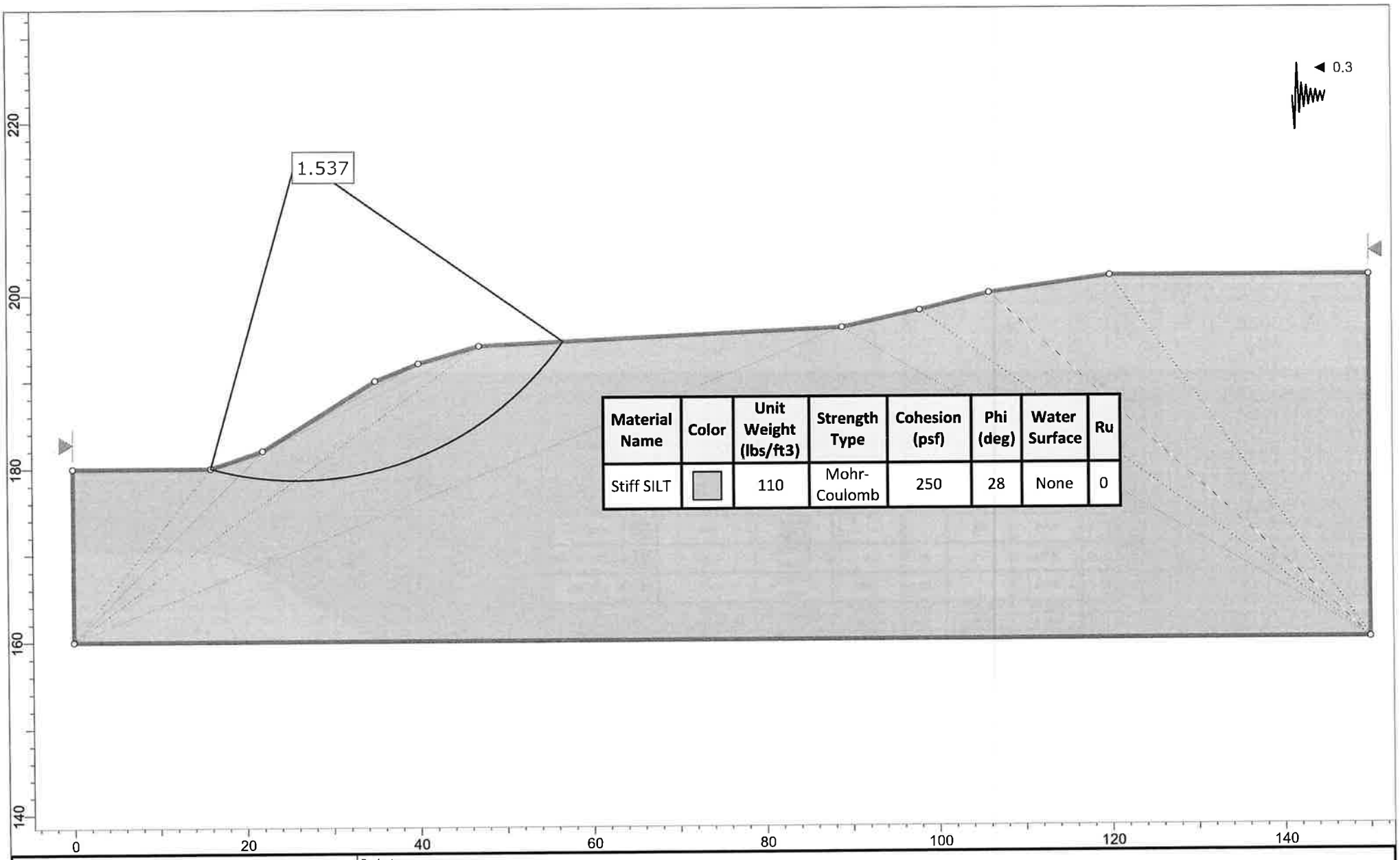


Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
Stiff SILT		110	Mohr-Coulomb	250	28	None	0

rocscience

SLIDEINTERPRET 9.008

Project	Knapp Property		
Group	Existing Conditions	Scenario	Master Scenario
Drawn By	C. Decker	Company	Terra Associates, Inc.
Date	April 26, 2021	File Name	Cross Section A-A'.slmd

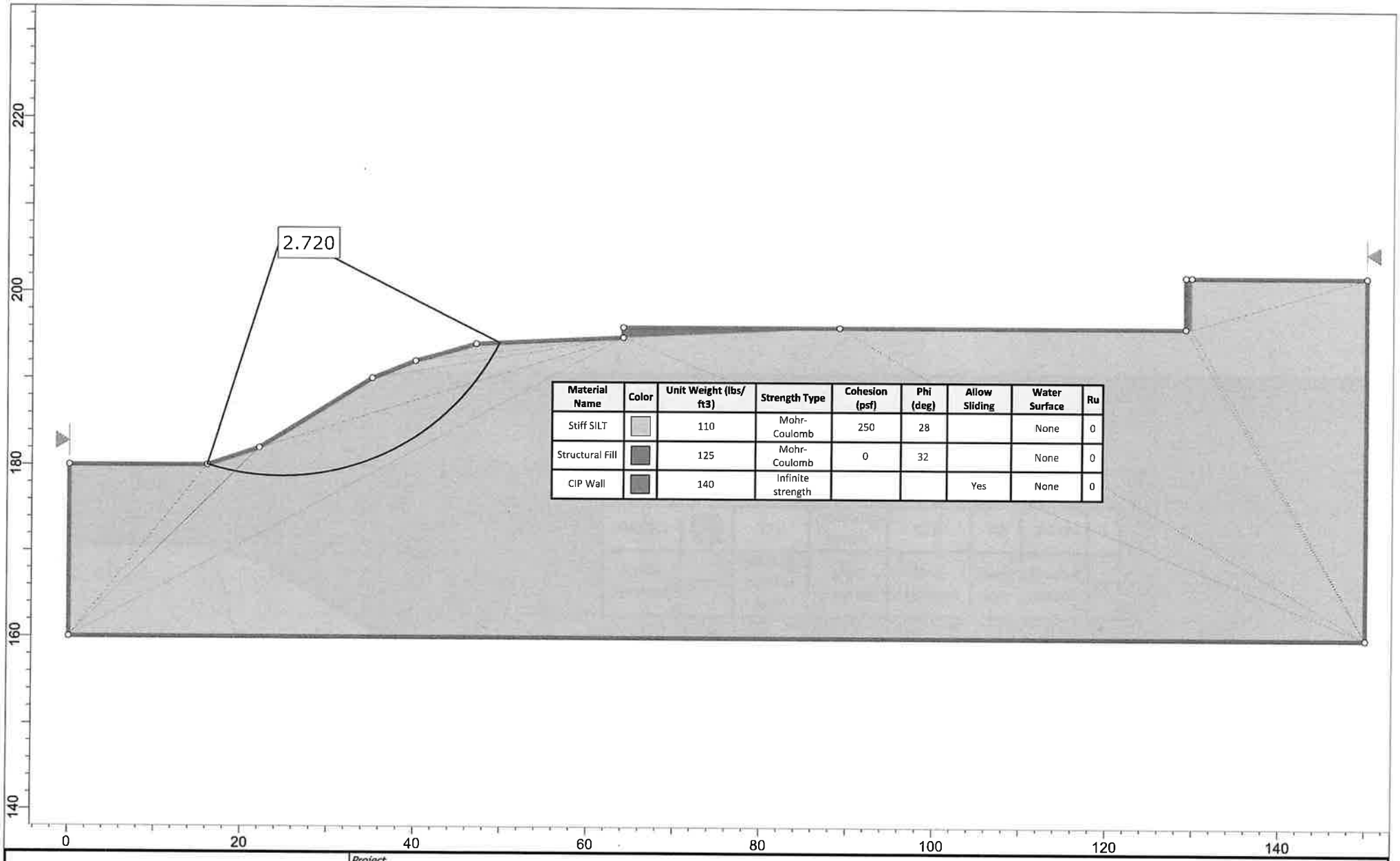


Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
Stiff SILT		110	Mohr-Coulomb	250	28	None	0

rocscience

SLIDEINTERPRET 9.008

Project	Knapp Property		
Group	Existing Conditions	Scenario	Seismic
Drawn By	C. Decker	Company	Terra Associates, Inc.
Date	April 26, 2021	File Name	Cross Section A-A'.slmd

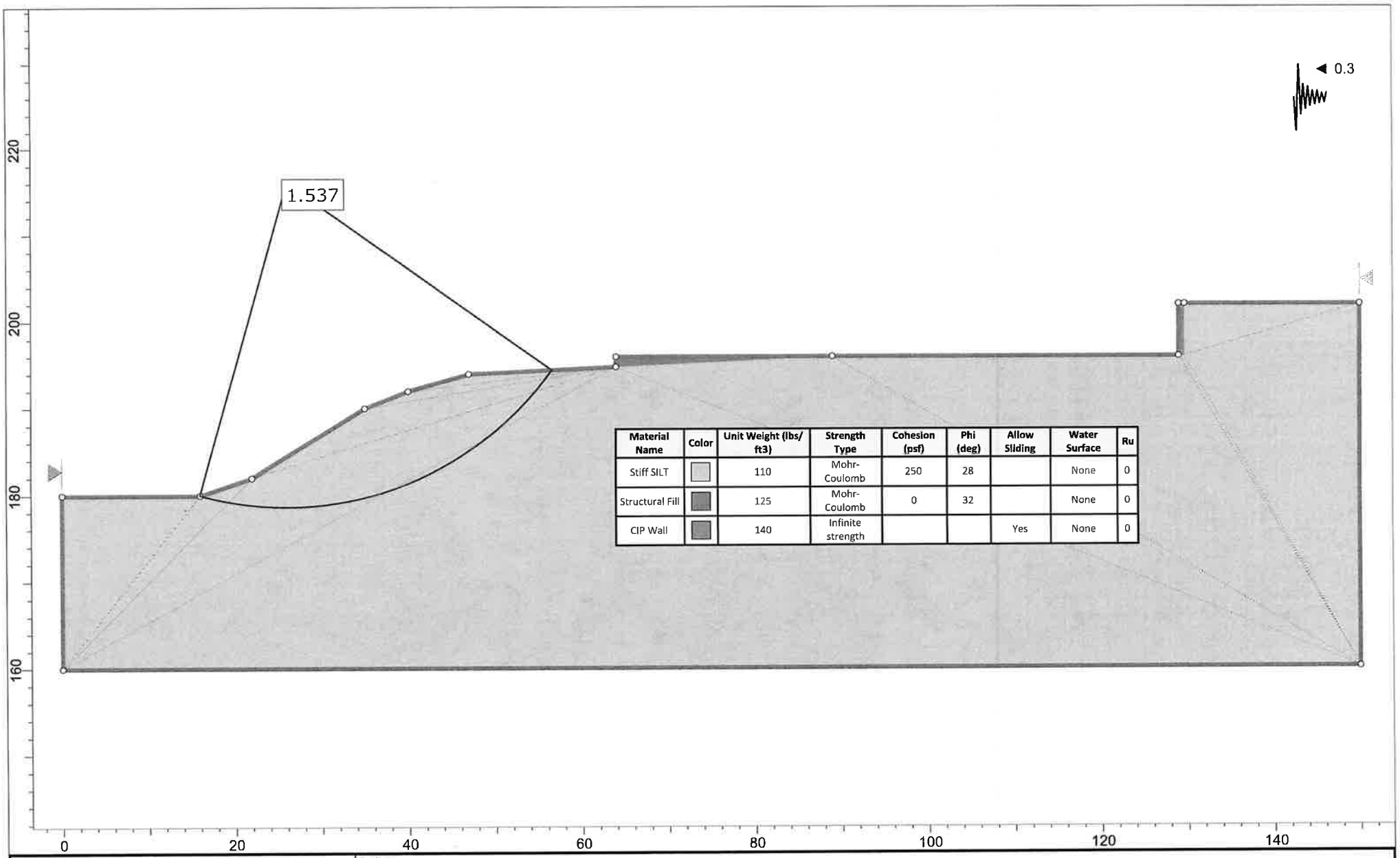


Material Name	Color	Unit Weight (lbs/ ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Allow Sliding	Water Surface	Ru
Stiff SILT		110	Mohr-Coulomb	250	28		None	0
Structural Fill		125	Mohr-Coulomb	0	32		None	0
CIP Wall		140	Infinite strength			Yes	None	0

rocscience

SLIDEINTERPRET 9.008

Project	Knapp Property		
Group	Post Construction	*Scenario*	Master Scenario
Drawn By	C. Decker	*Company*	Terra Associates, Inc.
Date	April 26, 2021	*File Name*	Cross Section A-A'.slmd



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Allow Sliding	Water Surface	Ru
Stiff SILT		110	Mohr-Coulomb	250	28		None	0
Structural Fill		125	Mohr-Coulomb	0	32		None	0
CIP Wall		140	Infinite strength			Yes	None	0

rocscience

SLIDEINTERPRET 9.008

Project	Knapp Property		
Group	Post Construction	Scenario	Seismic
Drawn By	C. Decker	Company	Terra Associates, Inc.
Date	April 26, 2021	File Name	Cross Section A-A'.slmd