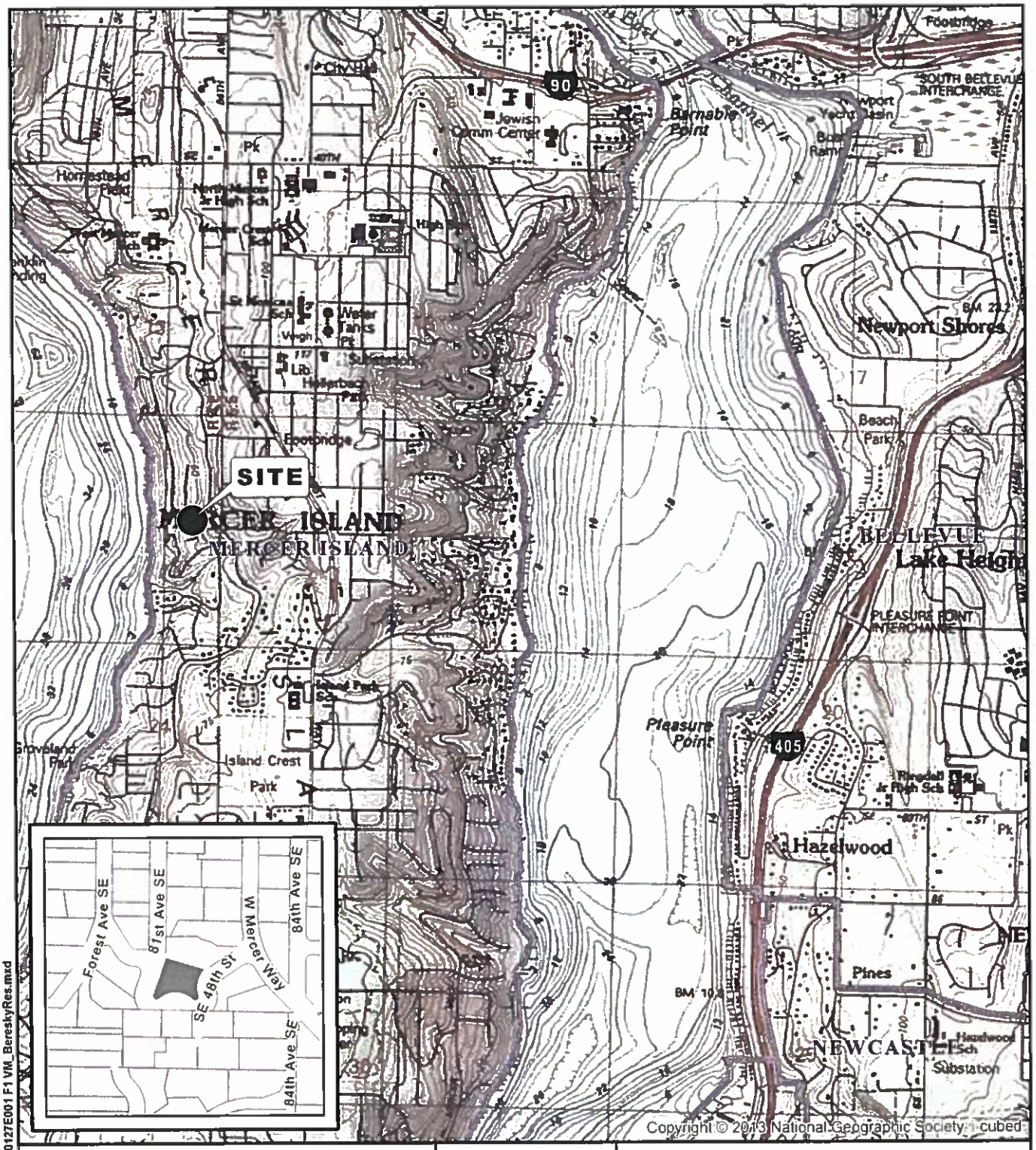


DATA SOURCES / REFERENCES:
USGS: 7.5' SERIES TOPOGRAPHIC MAPS, ESRI/I-CUBED/NGS 2013
KING CO: STREETS, PARCELS, CITY LIMITS 1/18

LOCATIONS AND DISTANCES SHOWN ARE APPROXIMATE

N

0 1000 2000

FEET

NOTE: BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION

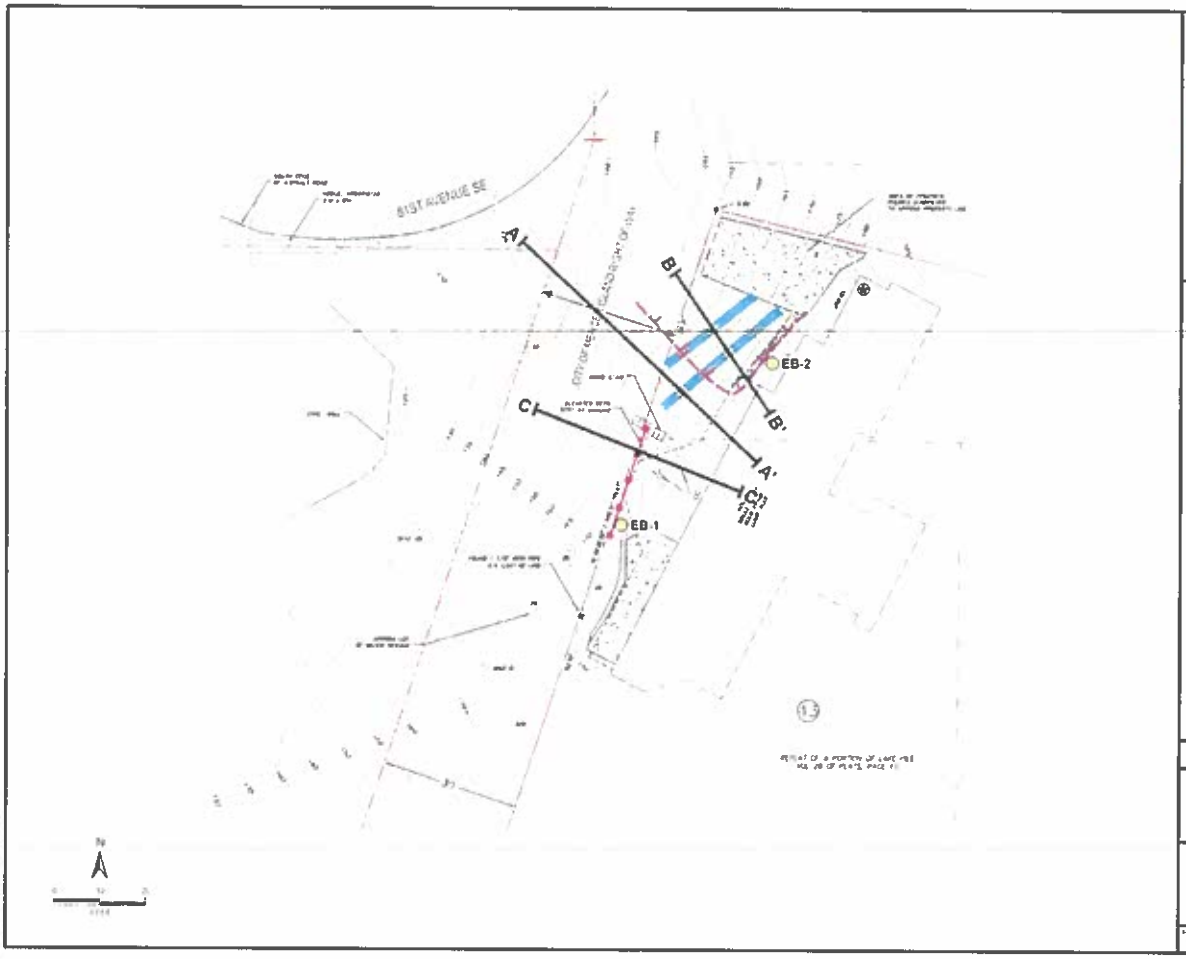
associated earth sciences incorporated

VICINITY MAP

BERESKY RESIDENCE RETAINING WALL
MERCER ISLAND, WASHINGTON

PROJ NO.	DATE:	FIGURE:
180127E001	6/18	1

Document Path: G:\GIS_Projects\aa\Y2018\VM\180127E001 F1 VM_BereskyRes.mxd



LEGEND:

- EXPLORATION BORING - 6-18
- EXPLORATION BORING BY OTHERS - 1991
- AREA OF PAST SHALLOW LANDSLIDES
- SOLDIER PILE WALL WITH TIEBACK ANCHORS OPTION - SEE APPENDIX B
- TIERED SEGMENTAL BLOCK WALL OPTION - SEE APPENDIX B

CONTOUR INTERVAL - 1'

NOTE: LOCATION AND DISTANCES SHOWN ARE APPROXIMATE

NOTES

1. BASE MAP REFERENCE: INVESTIGATIVE ASSOCIATES, INC. PLAN BERESKY 8120 SE 41TH STREET MERCER ISLAND WA 98040 TOPOGRAPHIC SURVEY SHEET S2 5 17 18

BLACK AND WHITE REPRODUCTIONS OF THIS COLOR ORIGINAL MAY RESULT IN LOSS OF IMPORTANT INFORMATION

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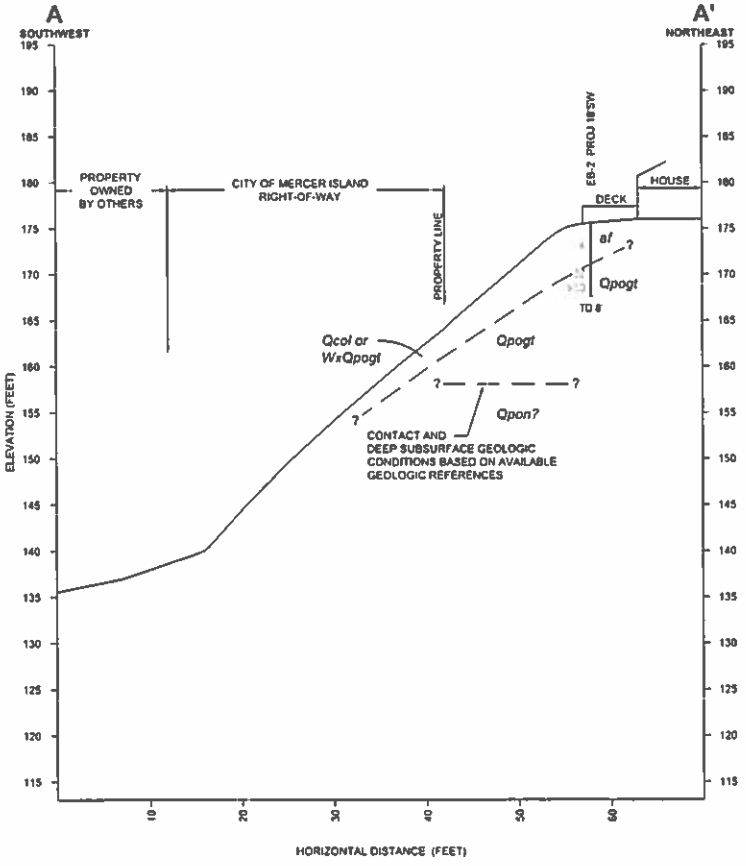
SITE AND EXPLORATION PLAN

BERESKY RESIDENCE RETAINING WALL
MERCER ISLAND, WASHINGTON

PROJECT NO.	DATE	FIGURE
180127E001	7/18	2



LEGEND:

af	FILL
Qcol	QUATERNARY COLLUVIUM
WxQpogt	WEATHERED PRE-OLYMPIA GLACIAL TILL
Qpogt	PRE-OLYMPIA GLACIAL TILL
Qpon	PRE-OLYMPIA NONGLACIAL DEPOSITS
	BORING
TD	TOTAL DEPTH OF BORING
	GEOLOGIC CONTACT

VERTICAL EXAGGERATION = 1X

NOTE LOCATION AND DISTANCES SHOWN ARE APPROXIMATE

NOTES

1 THE SUBSURFACE CONDITIONS PRESENTED IN THIS GEOLOGIC CROSS-SECTION ARE BASED ON AN INTERPRETATION OF CONDITIONS ENCOUNTERED IN WIDELY SPACED EXPLORATIONS COMPLETED AT THE SUBJECT SITE AND RELEVANT SITE INFORMATION DEVELOPED AND PROVIDED BY OTHERS THE SUBSURFACE INTERPRETATIONS PRESENTED IN THIS GEOLOGIC CROSS-SECTION SHOULD NOT BE CONSTRUED AS A WARRANTY OF ACTUAL SUBSURFACE CONDITIONS AT THE SITE OUR EXPERIENCE HAS SHOWN THAT SOIL AND GROUNDWATER CONDITIONS CAN VARY SIGNIFICANTLY OVER SMALL DISTANCES

BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION

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GEOLOGIC CROSS-SECTION A - A'

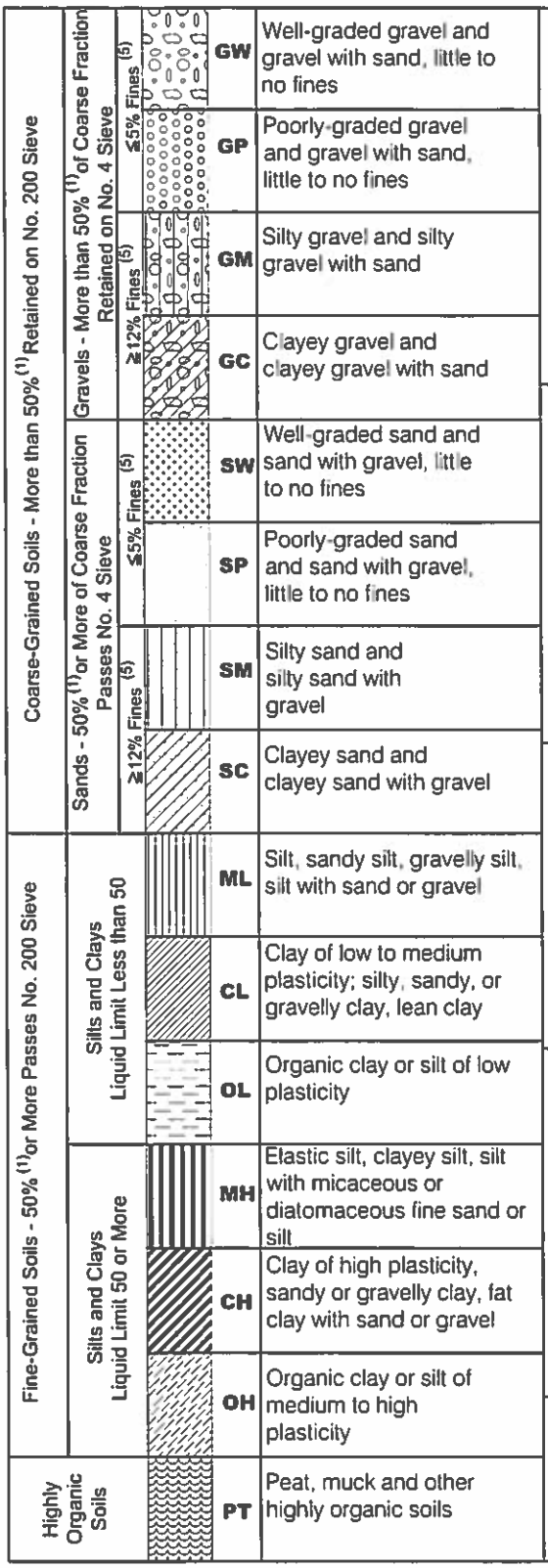
BERESKY RESIDENCE RETAINING WALL
MERCER ISLAND, WASHINGTON

PROJ NO	DATE	FIGURE
180127E001	7/18	3

180127 Beresky \ 180127 Geotech.dwg LAYOUT: F3 Base Adj

APPENDIX A

Exploration Logs



Terms Describing Relative Density and Consistency

	Density	SPT[2] blows/foot
Coarse-Grained Soils	Very Loose	0 to 4
	Loose	4 to 10
	Medium Dense	10 to 30
	Dense	30 to 50
	Very Dense	>50
	Consistency	**SPT[2] blows/foot**
Fine-Grained Soils	Very Soft	0 to 2
	Soft	2 to 4
	Medium Stiff	4 to 8
	Stiff	8 to 15
	Very Stiff	15 to 30
	Hard	>30

Test Symbols

G = Grain Size
M = Moisture Content
A = Atterberg Limits
C = Chemical
DD = Dry Density
K = Permeability

Component Definitions

Descriptive Term	Size Range and Sieve Number
Boulders	Larger than 12"
Cobbles	3" to 12"
Gravel	3" to No. 4 (4.75 mm)
Coarse Gravel	3" to 3/4"
Fine Gravel	3/4" to No. 4 (4.75 mm)
Sand	No. 4 (4.75 mm) to No. 200 (0.075 mm)
Coarse Sand	No. 4 (4.75 mm) to No. 10 (2.00 mm)
Medium Sand	No. 10 (2.00 mm) to No. 40 (0.425 mm)
Fine Sand	No. 40 (0.425 mm) to No. 200 (0.075 mm)
Silt and Clay	Smaller than No. 200 (0.075 mm)

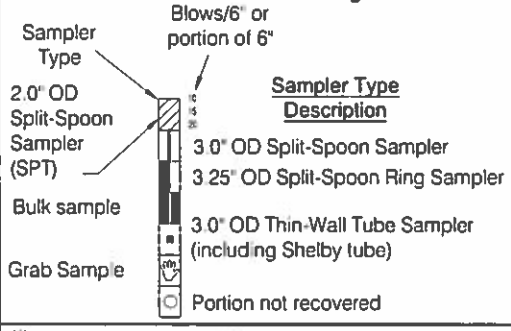
[3] Estimated Percentage

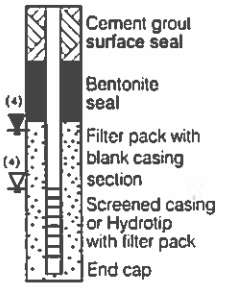
Component	Percentage by Weight
Trace	<5
Some	5 to <12
Modifier (silty, sandy, gravelly)	12 to <30
Very *modifier* (silty, sandy, gravelly)	30 to <50

Moisture Content

Dry - Absence of moisture, dusty, dry to the touch
Slightly Moist - Perceptible moisture
Moist - Damp but no visible water
Very Moist - Water visible but not free draining
Wet - Visible free water, usually from below water table

Symbols





(1) Percentage by dry weight
(2) (SPT) Standard Penetration Test (ASTM D-1586)
(3) In General Accordance with Standard Practice for Description and Identification of Soils (ASTM D-2488)
(4) Depth of ground water
▼ ATD = At time of drilling
▽ Static water level (date)
(5) Combined USCS symbols used for fines between 5% and 12%

Classifications of soils in this report are based on visual field and/or laboratory observations, which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field or laboratory testing unless presented herein. Visual-manual and/or laboratory classification methods of ASTM D-2487 and D-2488 were used as an identification guide for the Unified Soil Classification System.

associated earth sciences incorporated

EXPLORATION LOG KEY

FIGURE A1

associated earth sciences incorporated

Exploration Log

Project Number	Exploration Number	Sheet
180127E001	EB-1	1 of 1

Project Name	Beresky Residence Retaining Wall	Ground Surface Elevation (ft)	~170
Location	Mercer Island, WA	Datum	N/A
Driller/Equipment	Geologic Drill / HSA with Acker	Date Start/Finish	6/12/18,6/12/18
Hammer Weight/Drop	140# / 30"	Hole Diameter (in)	6 inches

Depth (ft)	ST	Samples	Graphic Symbol	DESCRIPTION	Well Completion	Water Level	Blows/6"	Blows/Foot (10 20 30 40)	Other Tests
				Topsoil Very loose, moist, brown, silty, SAND, some gravel, some organics; nonstratified (SM).					
				Pre-Olympia Glacial Till					
				Moist, olive, sandy, SILT, some gravel; nonstratified (ML).					
		S-1					21 28 26	▲54	
		S-2		Moist, olive, sandy, SILT, some gravel and fine to medium SAND, some silt ranging to silty, trace fine gravel, crudely bedded; sandy silt is nonstratified (ML/SP-SM).			13 50/6"	▲50/6"	
5				Bottom of exploration boring at 5 feet No groundwater encountered					
				Note: Geologic unit assigned based on "Geologic Map of Mercer Island, Washington" by Troost and Wisher, October 2008.					
10									
15									

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample
- M - Moisture
- Water Level ()
- Water Level at time of drilling (ATD)

Logged by: FSM
Approved by: CJK

AESIBOR 180127.GPJ July 5, 2018

associated earth sciences incorporated

Exploration Log

Project Number	Exploration Number	Sheet
180127E001	EB-2	1 of 1

Project Name	Beresky Residence Retaining Wall	Ground Surface Elevation (ft)	~176
Location	Mercer Island, WA	Datum	N/A
Driller/Equipment	Geologic Drill / HSA with Acker	Date Start/Finish	6/12/18,6/12/18
Hammer Weight/Drop	140# / 30"	Hole Diameter (in)	6 inches

Depth (ft)	ST	Samples	Graphic Symbol	DESCRIPTION	Well Completion	Water Level	Blows/6"	Blows/Foot (10 20 30 40)	Other Tests
				Landscaping Topsoil					
				Crushed Rock with Plastic (Sandbags?) (GP).					
				Fill ?					
		S-1		Moist, olive and light brown, sandy, SILT, some gravel; nonstratified; mottled appearance suggesting fill (ML).			3 2 2	▲4	
				Pre-Olympia Glacial Till					
5		S-2		Moist, olive with slight iron oxide, very silty, fine to medium SAND ranging to very sandy, SILT, some fine to coarse rounded gravel throughout; nonstratified with occasional faint stratification in fine to medium SAND, parting planes in silt layers (SM/ML).			9 12 20	▲32	
		S-3		Moist, olive, silty, SAND, trace to some silt, fine to coarse gravel, nonstratified (SM).			13 20 50/6"	▲50/6"	
				Bottom of exploration boring at 8 feet No groundwater encountered.					
				Note: Geologic unit assigned based on "Geologic Map of Mercer Island, Washington" by Troost and Wisher, October 2008.					
10									
15									

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

Water Level ()

Water Level at time of drilling (ATD)

Logged by: FSM

Approved by: CJK

AESIBOR 180127.GPJ July 5, 2018

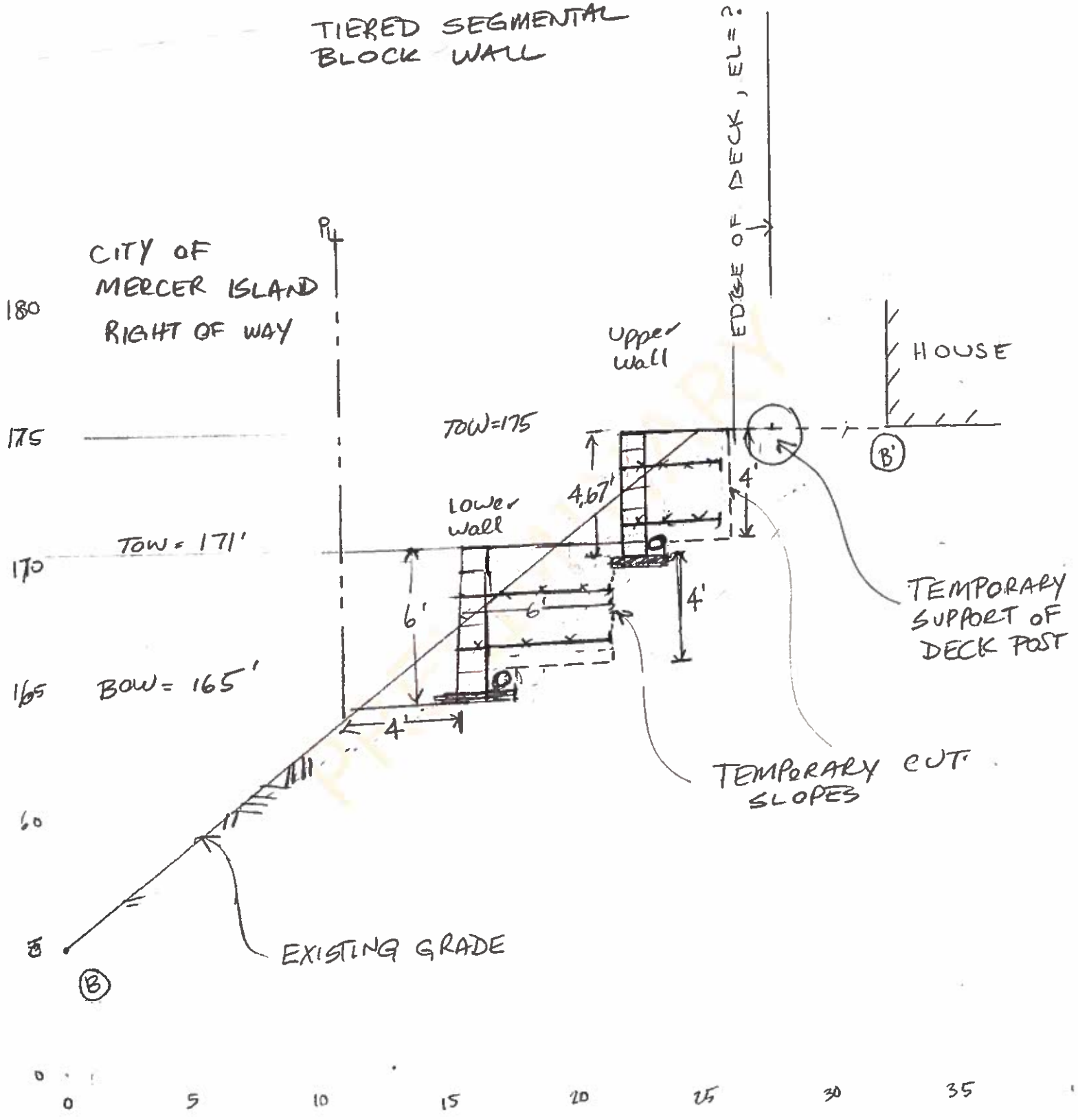
APPENDIX B

Retaining Wall
Conceptual Sketches

BERESKY
180127E001

B - B'

TIERED SEGMENTAL BLOCK WALL



X: 1" = 5'

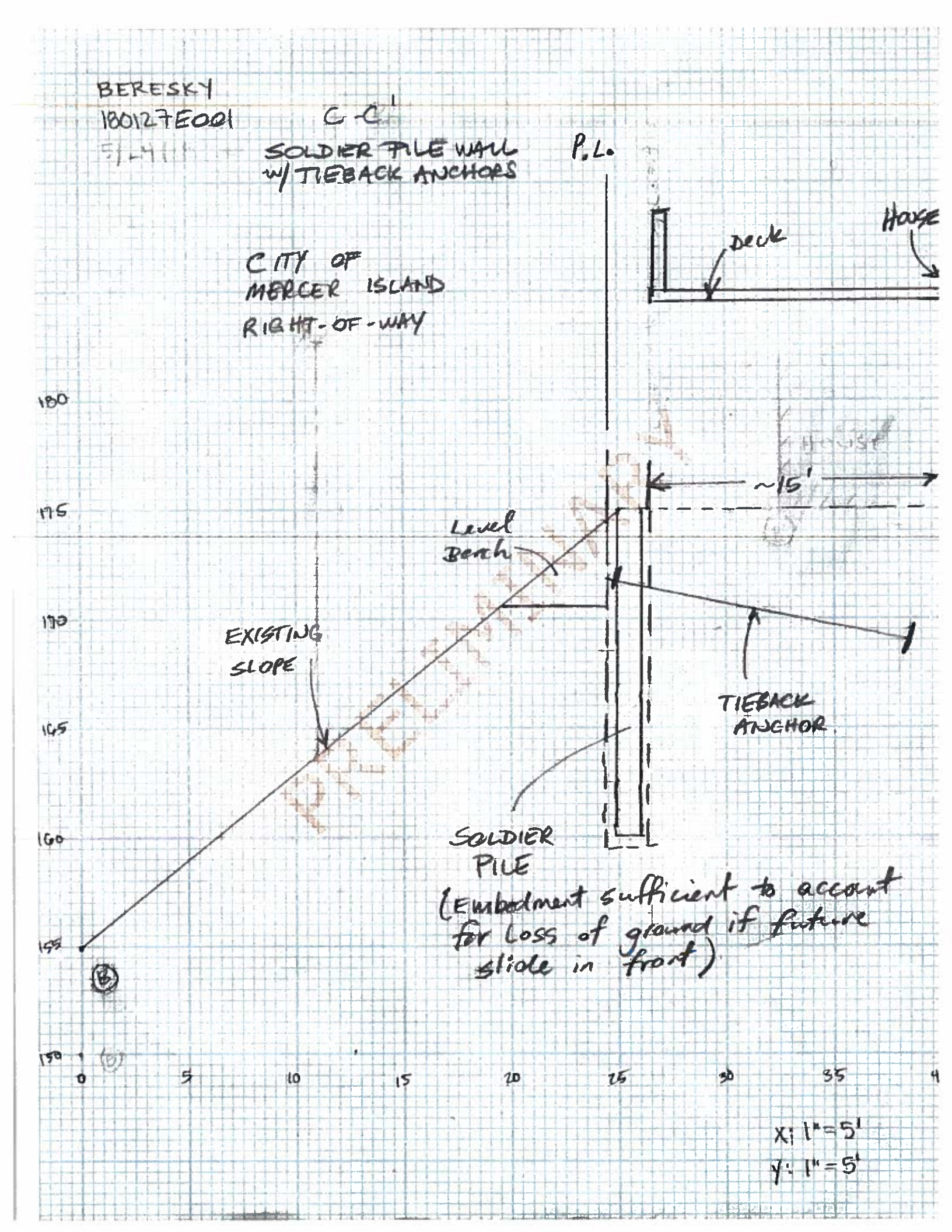
Y: 1" = 5'

BERESKY
180127E001
5/4/18

C-C'

SOLDIER PILE WALL
W/ TIEBACK ANCHORS

CITY OF
MERCER ISLAND
RIGHT-OF-WAY



(Embedment sufficient to account for loss of ground if future slide in front)

X: 1" = 5'
Y: 1" = 5'