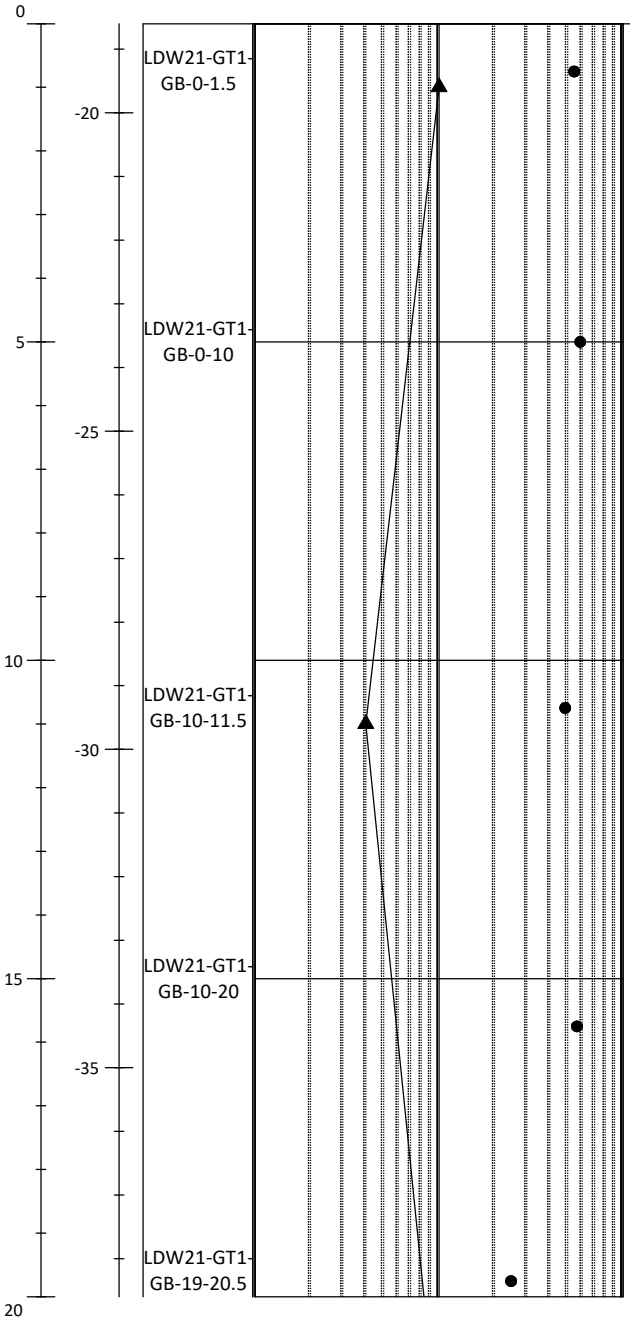
[DRAFT] Soil Boring Log

LDW21-GT1-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **197701.636** E/LONG: **1273353.682**	Total Depth (ft): **21.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **27.2**
Collection Date: **07.09.21**		Mudline Elevation (ft): **-18.6**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
		(0 to 0.7') Soft, wet, black, SILT (ML). Trace organics (fibers).	%M
		(0.7 to 7') Loose, moist, black, SILTY SAND (SM), fine grained sand, trace organics (wood debris).	%M, SG, ATT
		(7 to 8.3') Loose, moist, black, poorly graded SAND (SP).	
		(8.3 to 15.8') Loose, moist, black, SILTY SAND (SM), trace organics (wood debris).	%M; %M, SG, GSDH
		(15.8 to 16.7') Loose, moist, black, poorly graded SAND (SP), fine grained sand.	
		(16.7 to 18.9') Loose, moist, black, SILTY SAND (SM)	
		(18.9 to 21.5') Loose, moist, black, poorly graded SAND (SP).	%M

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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT1-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **197701.636** E/LONG: **1273353.682**	Total Depth (ft): **21.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **27.2**
Collection Date: **07.09.21**		Mudline Elevation (ft): **-18.6**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
20							
	-40	LDW21-GT1-GB-20-21.5				(18.9 to 21.5') Loose, moist, black, poorly graded SAND (SP).	%M
						End of Boring at 21.5 ft	
25							
	-45						
30							
	-50						
35							
	-55						
40							

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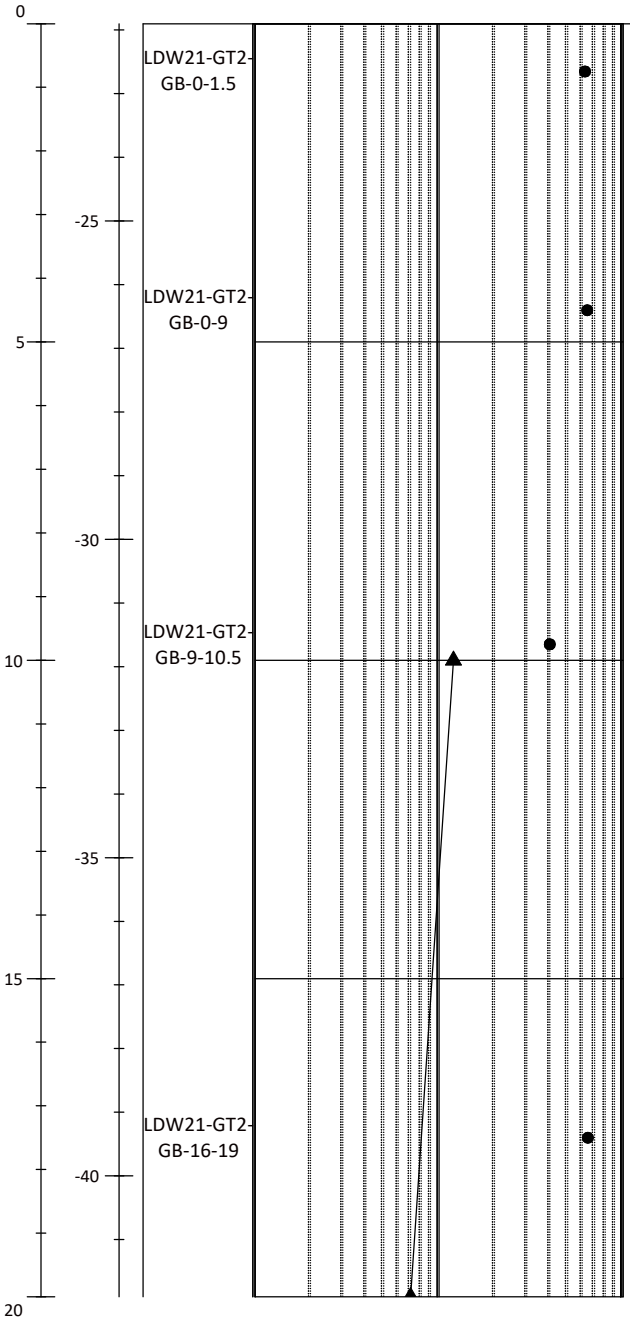
[DRAFT] Soil Boring Log

LDW21-GT2-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **197328.101** E/LONG: **1273794.399**	Total Depth (ft): **21.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **23.2**
Collection Date: **07.09.21**		Mudline Elevation (ft): **-21.9**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
WOR		(0 to 1.3') Very soft, wet, black, SILT (ML), trace organics (fibers)	%M
		@1.1: Substantial organics (wood debris)	
		(1.3 to 3.7') Loose, damp, black, SILTY SAND (SM)	
		(3.7 to 5.3') Very soft, wet, black, non-plastic, SILT (ML)	%M, ATT
		(5.3 to 6.8') Loose, moist, black, poorly graded SAND (SP) with silt, fine grained sand, trace organics.	
		(6.8 to 7.5') Medium stiff, moist, dark gray, SILT (ML) PP=0 TSF	
		(7.5 to 16') Soft, damp, dark gray, SANDY SILT (ML), non plastic. @7.5-7.6': Substantial organic debris	%M
		(16 to 18.5') Loose, moist, dark gray, SANDY SILT (ML), occasional organics (wood debris).	%M, ATT, GSDH, DS
		(18.5 to 21.5') Loose, moist, dark gray, poorly graded SAND (SP).	

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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT2-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **197328.101** E/LONG: **1273794.399**	Total Depth (ft): **21.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **23.2**
Collection Date: **07.09.21**		Mudline Elevation (ft): **-21.9**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) 1 2 5 10 20 50 100	Other	Lithology	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
20							
	-45					(18.5 to 21.5') Loose, moist, dark gray, poorly graded SAND (SP).	
25						End of Boring 21.5 ft.	
	-50						
30							
	-55						
35							
	-60						
40							

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Notes:
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[DRAFT] Soil Boring Log

LDW21-GT3-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **196838.0251** E/LONG: **1274303.5483**	Total Depth (ft): **19.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **18**
Collection Date: **07.14.21**		Mudline Elevation (ft): **-17.8**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0		LDW21-GT3-GB-0-1.5	WOR		(0 to 1.3') Very soft, wet, black, SILT (ML), trace organics (fibers), trace shells.	%M
	-20				(1.3 to 12.2') Very loose, wet, black, SILTY SAND (SM), contains silt, fine grained sand.	
		LDW21-GT3-GB-0-8				%M, ATT
5						
	-25					
		LDW21-GT3-GB-8-9.5				%M, GSD, DS
10						
	-30				(12.2 to 13.6') Soft, moist, black, SILT WITH SAND (ML)	
					(13.6 to 19.5') Loose to medium dense, moist, black, poorly graded SAND (SP), fine grained sand, trace organics (wood debris).	
15		LDW21-GT3-GB-13.6-18				%M, SG, GSD
	-35				@16.7: Pocket of medium stiff, moist, light gray, SILT (ML) @17 to 17.1': Substantial wood debris encountered @17.6': Pocket of medium stiff, moist, light gray, SILT (ML)	
		LDW21-GT3-GB-18-19.5				%M
20					End of Boring at 19.5 ft	

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Notes:
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[DRAFT] Soil Boring Log

LDW21-GT5-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **196515.647** E/LONG: **1274408.737**	Total Depth (ft): **29**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **8.5**
Collection Date: **07.19.21**		Mudline Elevation (ft): **0.1**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Other	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0	0	LDW21-GT5-GB-0-1.5	WOH	(0 to 2.1') Very soft, wet, brown to black, SILT to SANDY SILT (ML), trace organics (wood debris), occasional anthropogenic debris (glass), trace rainbow sheen.	%M
		LDW21-GT5-GB-0-7.5		(2.1 to 7.0') Loose, moist, black, SILTY SAND (SM).	%M, ATT
5	-5	LDW21-GT5-GB-7.5-9		(7.0 to 17.2') Loose to medium dense, moist, black, poorly graded SAND WITH SILT and GRAVEL (SW-SM), fine grained, trace gravel.	%M
10	-10	LDW21-GT5-GB-7.5-17.2		@11.8-12': Pocket of loose, moist, dark olive gray SILTY SAND (SM)	%M, SG, GSD, DS
15	-15	LDW21-GT5-GB-17.2-17.5		(17.2 to 29') Medium stiff, moist, olive gray, poorly graded SAND WITH SILT (SP-SM), non-plastic, high dilatancy. PP=0.5 TSF	%M, ATT
		LDW21-GT5-GB-17.5-19			%M,
20	-20				

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[DRAFT] Soil Boring Log

LDW21-GT5-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **196515.647** E/LONG: **1274408.737**	Total Depth (ft): **29**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **8.5**
Collection Date: **07.19.21**		Mudline Elevation (ft): **0.1**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
20	-20					(17.2 to 29') Medium stiff, moist, olive gray, poorly graded SAND WITH SILT (SP-SM), non-plastic, high dilatancy. PP=0.5 TSF	
		LDW21-GT5-GB-17.5-27.5	●				%M, SG, GSDH
25	-25					@25.2': Grades to slightly silty	
		LDW21-GT5-GB-27.5-29	●				%M
30	-30					End of Boring at 29 ft	
35	-35						
40							

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Notes:
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[DRAFT] Soil Boring Log

LDW21-GT7-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **196544.595** E/LONG: **1274698.428**	Total Depth (ft): **25**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **17.5**
Collection Date: **07.09.21**		Mudline Elevation (ft): **-18.7**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0							
	-20	LDW21-GT7-GB-0-1.5				(0 to 5.7') Loose, wet, dark brown to black, poorly graded SAND (SP), fine grained, occasional organics (wood debris).	%M
		LDW21-GT7-GB-0-5.7					%M, SG, GSD
5							
	-25	LDW21-GT7-GB-5.7-8.5				(5.7 to 8.1') Medium stiff, moist, black, SILT WITH SAND (ML), non-plastic, occasional organics. @6.6': Lamination of 100% wood debris @7.3-7.5': Substantial wood debris	%M, ATT
		LDW21-GT7-GB-8.5-10				(8.1 to 10'): Loose, damp, dark dray, SILTY SAND (SM), fine grained sand.	%M
10							
	-30	LDW21-GT7-GB-8.5-18.5				(10 to 25'): Medium dense, moist, dark gray, poorly graded SAND (SP), fine grained.	%M, GSD, DS
15							
	-35					@16-16.4': Layer of medium dense, damp, dark gray, SILTY SAND (SM) @18': Interbedded layers of SILTY SAND (SM) @19.2-19.9': Layer of medium dense, damp, dark gray, SILTY SAND (SM)	
20							

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Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT7-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **196544.595** E/LONG: **1274698.428**	Total Depth (ft): **25**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **17.5**
Collection Date: **07.09.21**		Mudline Elevation (ft): **-18.7**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
20							
	-40	LDW21-GT7-GB-18.5-23.5				(10 to 25'): Medium dense, moist, dark gray, poorly graded SAND (SP), fine grained. @21.1-22': Layer of medium dense, damp, dark gray, SILTY SAND (SM) @22.5-22.9': Substantial wood debri	%M, SG, GSD
		LDW21-GT7-GB-23.5-25					%M
25						End of Boring at 25 ft	
	-45						
30							
	-50						
35							
	-55						
40							

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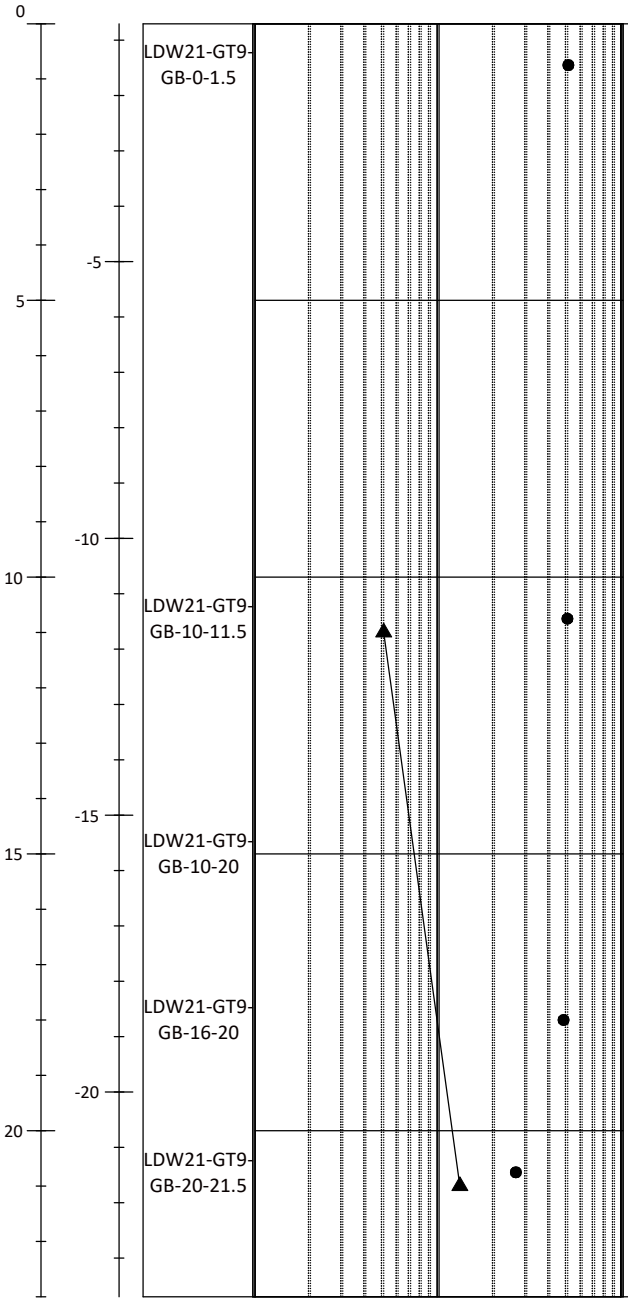
[DRAFT] Soil Boring Log

LDW21-GT9-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **195927.181** E/LONG: **1275283.558**	Total Depth (ft): **21.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **11.2**
Collection Date: **07.08.21**		Mudline Elevation (ft): **-0.7**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
WOH		(0 to 1.5') Very soft, moist, black, SILT (ML), non-plastic, with fine grained sand, trace organics (wood debris).	%M, SG, ATT
		(1.5 to 10') No Recovery.	
		(10 to 19.8') Soft, moist, black, SILT to SILT WITH SAND (ML), trace organics (wood debris).	%M
		@16': Grades to medium stiff, occasional organics (fibers)	
		@16.6 to 17.2': Substantial organic matter (wood)	
		@18.8': Striations of olive gray SANDY SILT (ML)	%M, ATT
		(19.8 to 21.5'): Medium stiff, moist, gray, SILTY SAND (ML), low plasticity.	%M, GSDH, DS
		End of Boring at 21.5 ft.	

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● Moisture Content (%)

Notes:
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[DRAFT] Soil Boring Log

LDW21-GT10-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **195631.266** E/LONG: **1275691.841**	Total Depth (ft): **25.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **18.2**
Collection Date: **07.07.21**		Mudline Elevation (ft): **-18.1**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0		LDW21-GT10-GB-0-1.5		WOH		(0 to 20') Very soft, wet, black, SILT (ML), non-plastic, trace organics (wood debris).	%M
	-20					@2-7': Trace silvery sheen, non-brittle, trace H2S odor.	
5		LDW21-GT10-GB-0-9					%M, SG, ATT
	-25					@7': Grades to soft to medium stiff, moist, no odor, no sheen.	
						@8.5-9.0': Grades sandier, sandy silt (ML)	
10							
	-30	LDW21-GT10-GB-9-14					%M, ATT
						@14': Grades to medium stiff to stiff, damp, black, SANDY SILT (ML), medium plasticity. PP=0-0.25 TSF.	
15							
	-35	LDW21-GT10-GB-14-19					%M, GSDH, DS
20							

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● Moisture Content (%)

Notes:
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[DRAFT] Soil Boring Log

LDW21-GT10-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **195631.266** E/LONG: **1275691.841**	Total Depth (ft): **25.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **18.2**
Collection Date: **07.07.21**		Mudline Elevation (ft): **-18.1**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
20							
	-40	LDW21-GT10-GB-19-24	●			(20 to 25.5') Medium dense, damp to moist, black, SILTY SAND (SM), trace silt, fine grained sand, laminations of silty sand and silt throughout.	%M, SG, GSD
25		LDW21-GT10-GB-24.5-25.5	▲ ●				%M
	-45					End of Boring at 25.5 ft.	
30							
	-50						
35							
	-55						
40							

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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT11-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **195423.544** E/LONG: **1275688.731**	Total Depth (ft): **20**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **18.7**
Collection Date: **07.08.21**		Mudline Elevation (ft): **-12.3**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Other	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0		LDW21-GT11-GB-0-1.5	WOR	(0 to 16.7') Very soft to soft, wet to moist, black, SANDY SILT (ML), non-plastic, occasional organics (wood debris), trace biota (shells).	%M
	-15	LDW21-GT11-GB-0-8.5			%M, ATT, GSDH, DS
5					
	-20	LDW21-GT11-GB-8.5-10	WOH		%M
10					
	-25	LDW21-GT11-GB-8.5-16.7		@14': Grades to medium stiff. PP=0.125 TSF.	%M, ATT
15					
	-30	LDW21-GT11-GB-16.7-18.5		(16.7 to 20'): Medium dense, moist, black, SILTY SAND (SM), fine grained sand.	%M, GSD
		LDW21-GT11-GB-18.5-20			%M
20				End of Boring at 20 ft	

Lithology: Sand

Penetration Resistance (blows per foot) and Moisture Content (%): 1, 2, 5, 10, 20, 50, 100

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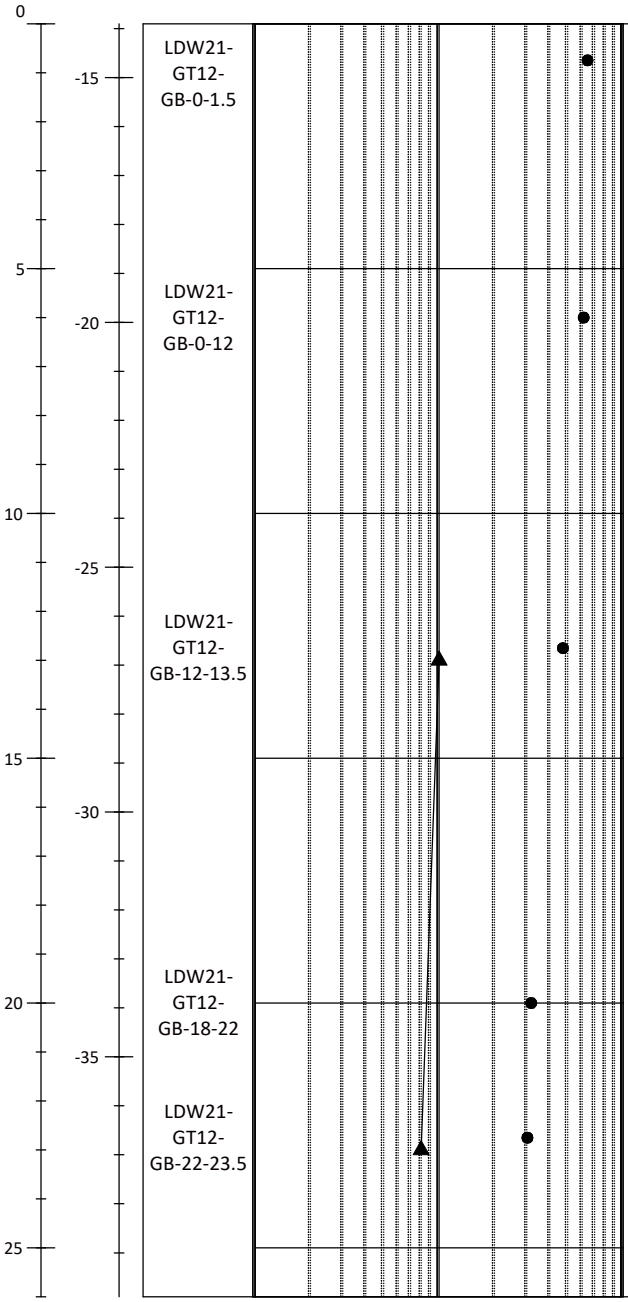
▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT12-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **195269.116** E/LONG: **1275845.395**	Total Depth (ft): **23.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **15.2**
Collection Date: **07.08.21**		Mudline Elevation (ft): **-13.9**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Depth (ft)	Elevation (ft)	Sample ID	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
		LDW21-GT12-GB-0-1.5	WOR		(0 to 1.5') Very soft, moist to wet, black, SILT (ML), non-plastic.	%M
					No sonic core recovery from 0 to 9 ft	
		LDW21-GT12-GB-0-12				%M, SG, ATT
					@9-10.9': Soft, moist, black, SILT (ML), low plasticity	
		LDW21-GT12-GB-12-13.5			(10.9 to 22.5') Medium dense, moist, dark gray, SILTY SAND (SM), interbedded lithology.	%M
		LDW21-GT12-GB-18-22				%M, SG, GSDH, DS
					(10.9 to 22.5') Medium dense, moist, dark gray, SILTY SAND (SM), interbedded lithology.	
					@20.3-20.8': Pocket of medium stiff, moist, black, SILT (ML)	
		LDW21-GT12-GB-22-23.5				%M
					(22.5 to 23.5') Medium dense, dark gray, moist, SILTY SAND (SM), fine grained sand.	
					End of Boring at 23.5 ft.	

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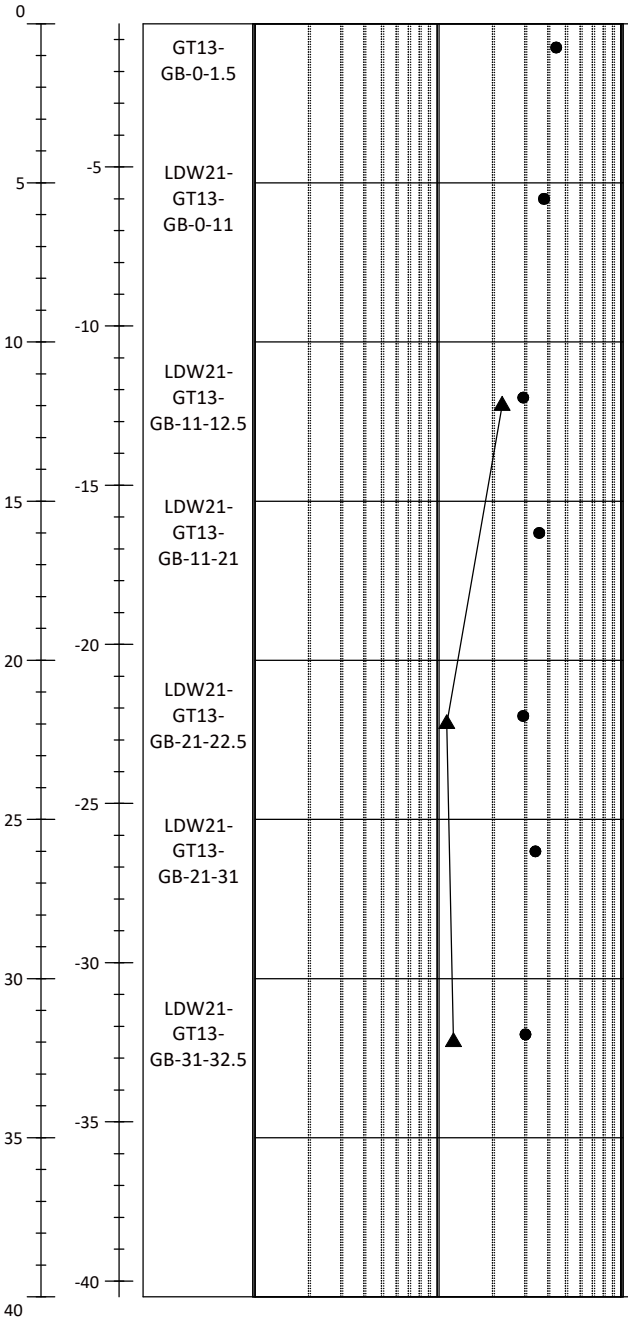
▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT13-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **195063.55** E/LONG: **1276022.385**	Total Depth (ft): **32.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **5.0**
Collection Date: **07.12.21**		Mudline Elevation (ft): **-0.5**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
WOH		(0 to 0.9') Very soft, moist, black, SILT (ML).	%M
		(0.9 to 32.5') Loose to medium dense, moist, black, SILTY SAND (SM), fine grained sand.	%M, SG, GSDH, DS
		@10.4-10.9': Pocket of medium stiff, damp, dark gray, SANDY SILT (ML), non plastic	%M
			%M, GSD
		(0.9 to 32.5') Loose to medium dense, moist, black, SAND (SP), fine grained sand.	%M
			%M, SG, GSD
			%M
		End of boring at 32.5 ft	

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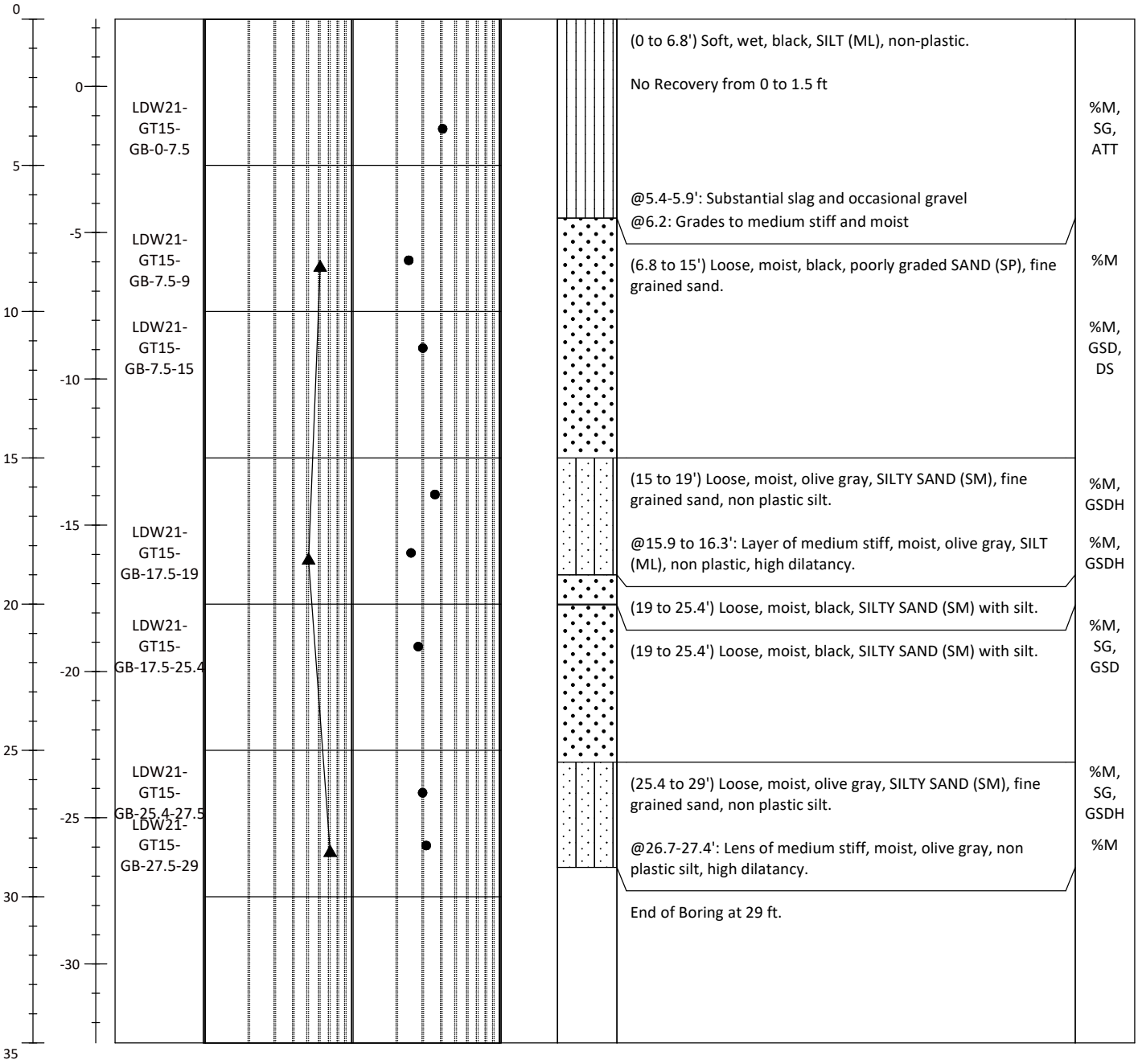
▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT15-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **194770.977** E/LONG: **1276096.292**	Total Depth (ft): **29**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **7.5**
Collection Date: **07.12.21**		Mudline Elevation (ft): **2.3**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



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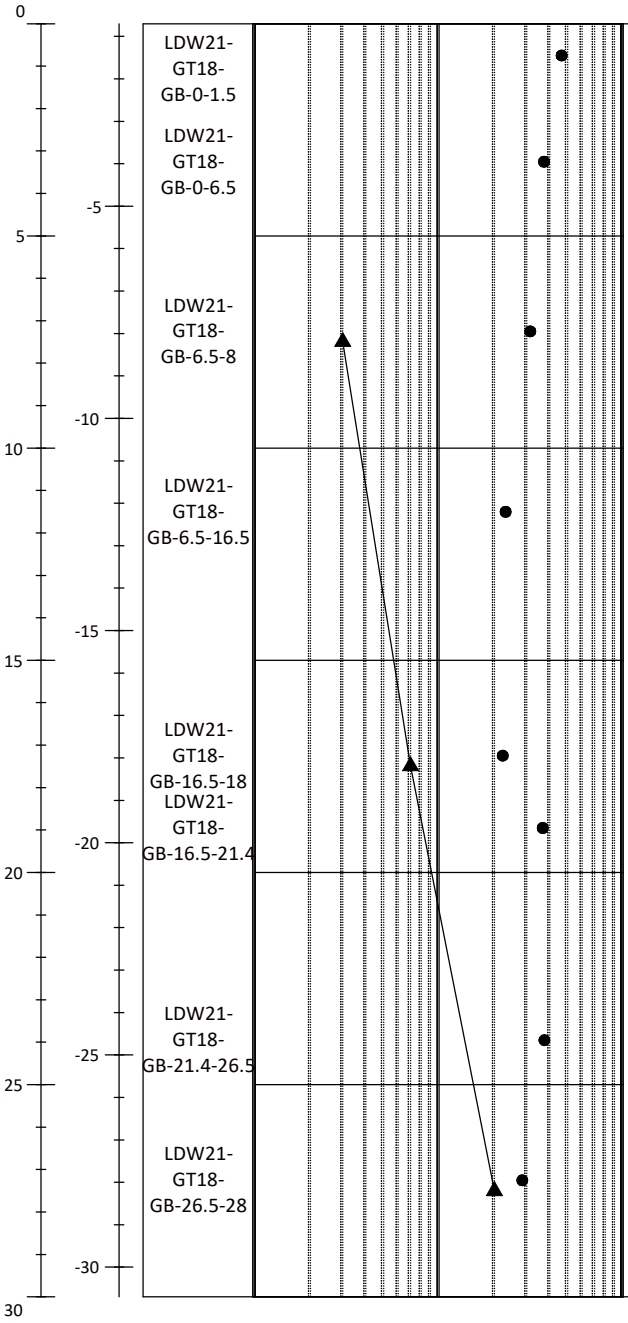
▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT18-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **194509.577** E/LONG: **1276175.936**	Total Depth (ft): **28**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **9.5**
Collection Date: **07.13.21**		Mudline Elevation (ft): **-0.7**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Depth (ft)	Elevation (ft)	Sample ID	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0		LDW21-GT18-GB-0-1.5	WOH		(0 to 1.5') Soft, wet, black, SILT (ML) with trace organics (wood debris, fibers).	%M
		LDW21-GT18-GB-0-6.5			(1.5 to 2.2') Loose, wet, black, well sorted SAND (SW), fine to coarse grained sand. (Fill).	%M, SG, ATT
5	-5				(2.2 to 6.5') No Recovery between 2.2 and 6.5 ft.	
		LDW21-GT18-GB-6.5-8			(6.5 to 21.4') Loose, moist, black, poorly graded SAND (SP), fine grained sand.	%M
10	-10	LDW21-GT18-GB-6.5-16.5			@13-13.4': Contains trace medium to coarse grained sand	%M, SG, GSD
15	-15	LDW21-GT18-GB-16.5-18			@16.5': Grades to SILTY SAND (SM)	%M
20	-20	LDW21-GT18-GB-16.5-21.4			@17.7-18': Medium stiff, moist, dark olive gray, SANDY SILT (ML), non plastic. @19.3': Grades to fine to medium grained sand	%M, GSDH, DS
					(6.5 to 21.4') Loose, moist, black, poorly graded SAND (SP), fine grained sand.	
25	-25	LDW21-GT18-GB-21.4-26.5			(21.4 to 28') Loose, moist, black, SILTY SAND (SM), fine grained sand, trace silt. @22-22.8': Soft, moist, dark olive gray, SANDY SILT (ML), non plastic, high dilatancy. PP=0.25 TSF	%M, SG, GSD
		LDW21-GT18-GB-26.5-28				%M
30	-30				End of Boring at 28 ft.	

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▲ SPT N-Value
● Moisture Content (%)

Notes:
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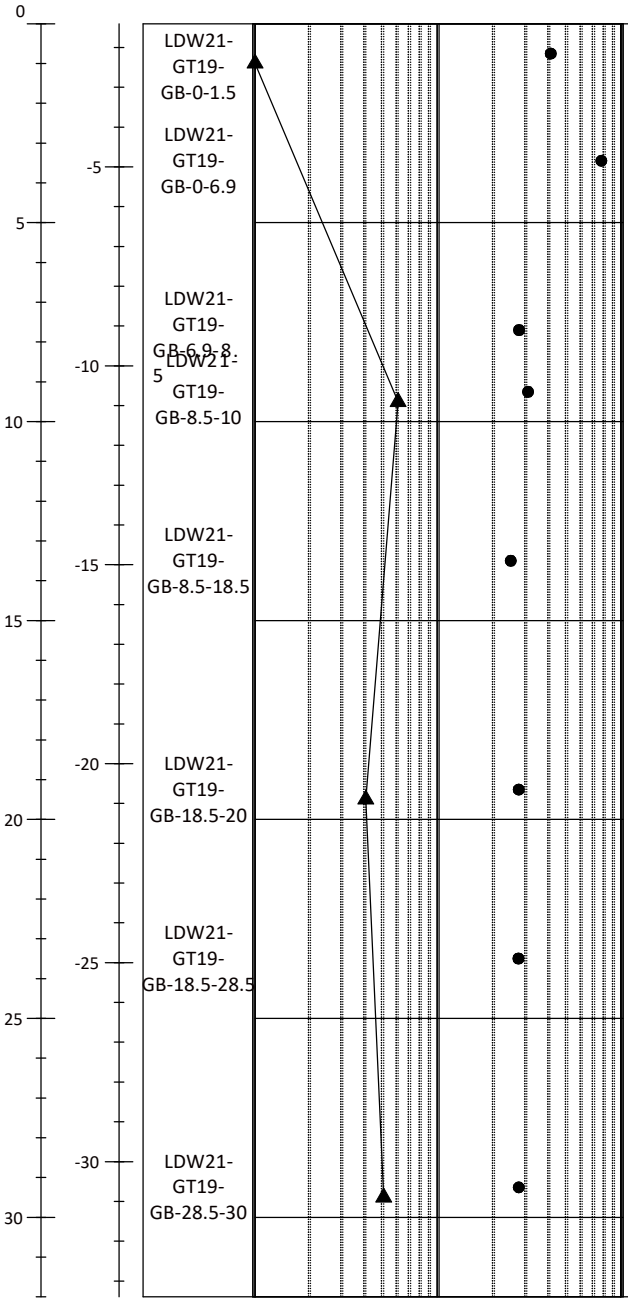
[DRAFT] Soil Boring Log

LDW21-GT19-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **194619.686** E/LONG: **1275815.459**	Total Depth (ft): **30**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **7.5**
Collection Date: **07.13.21**		Mudline Elevation (ft): **-1.4**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
		(0 to 1.2') Soft, wet, black, SANDY SILT (ML).	%M
		(1.2 to 6.9') Soft, moist, black, SANDY SILT (ML), non-plastic.	%M, SG, ATT, GSDH
		(6.9 to 30') Loose, moist, black, poorly graded SAND (SP), fine grained sand.	%M, GSD
			%M
			%M, SG, GSD, DS
			%M
			%M, GSD
			%M
		End of Boring at 30 ft.	

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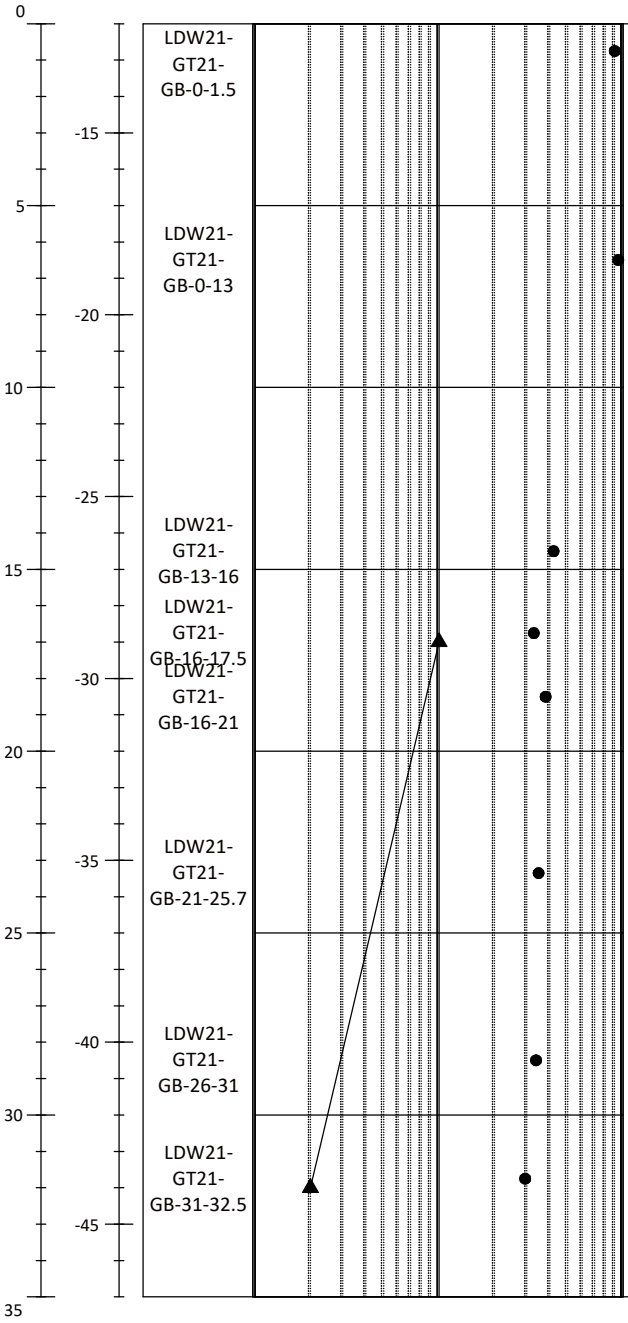
▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT21-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **194223.416** E/LONG: **1276127.19**	Total Depth (ft): **32.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **11.2**
Collection Date: **07.08.21**		Mudline Elevation (ft): **-12.0**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Depth (ft)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0–13	WOR		(0 to 13'): Very soft, wet, black, SILT (ML), non-plastic, trace organics (fibers), trace biota (shells).	%M
				%M, ATT
13–26			(13 to 21'): Loose, moist, black, SILTY SAND (SM), fine grained.	%M, SG, GSD
			@14.2 to 15.6': Layer of medium dense, moist, gray, SILTY SAND (SM)	%M
				%M, GSD, DS
			@20.4 to 20.8': Pocket of medium stiff, moist, gray, SILT (ML), low plasticity	
			(21 to 26') Medium dense, moist, olive gray, SILTY SAND (SM), highly silty, low plasticity, high dilatancy.	%M, SG, GSDH
			@25.7': Lens of poorly graded SAND (SP)	
26–32			(26 to 32'): Loose moist, black, SILTY SAND (SM)	%M, GSD
			@30.3 to 31.6': Layer of poorly graded SAND (SP)	%M
			End of Boring at 32 ft.	

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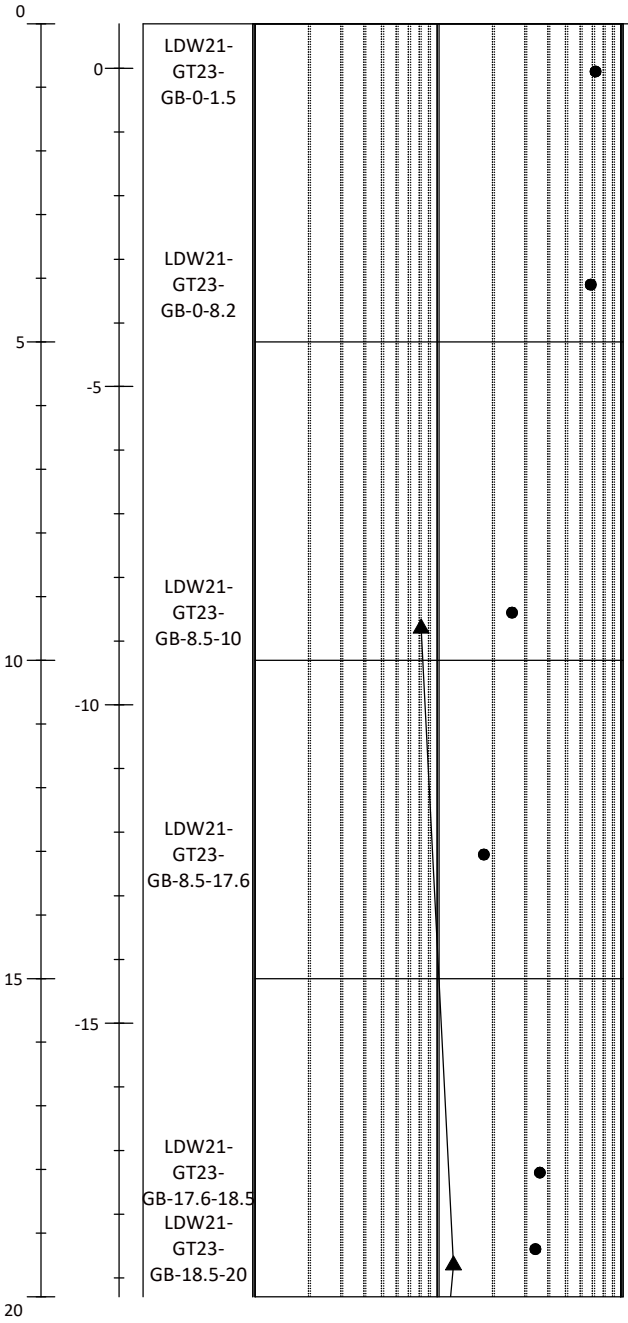
▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT23-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **194225.679** E/LONG: **1276262.681**	Total Depth (ft): **32**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **7.5**
Collection Date: **07.16.21**		Mudline Elevation (ft): **0.7**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
WOH		(0 to 8.2') Very soft, wet, black, SILT (ML). @0.2 to 0.4': Olive gray mottling @1.6 to 2.8': Moderate petroleum odor, occasional rainbow sheen, occasional organic matter (fibers) PP=0-0.125 TSF	%M %M, SG, ATT
		(8.2 to 17.6') Loose, moist, black, poorly graded SAND (SP), fine grained. @16.5 to 16.7': Pocket of medium stiff, moist, olive gray SILT (ML)	%M %M, GSD, DS
		(17.6 to 21.1') Medium dense, moist, dark gray, SILTY SAND (SM), very fine grained sand.	%M, GSDH %M

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▲ SPT N-Value
● Moisture Content (%)

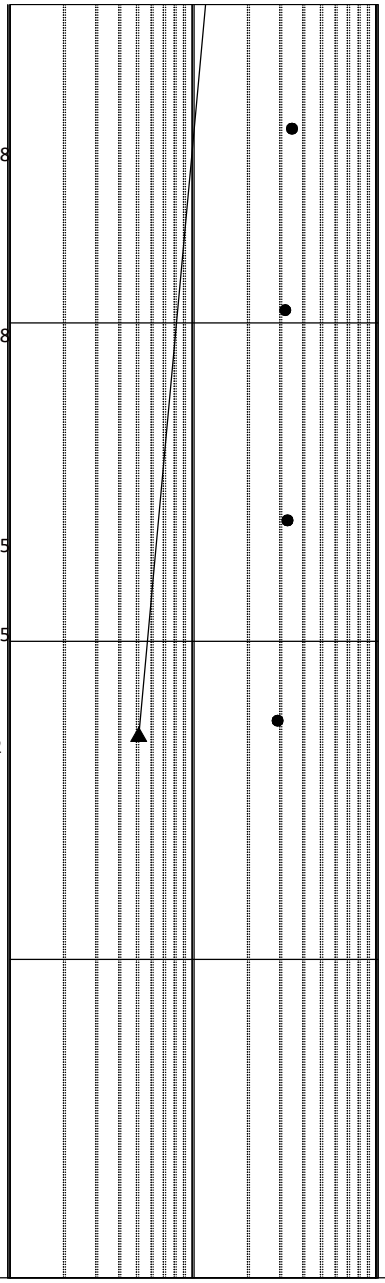
Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT23-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **194225.679** E/LONG: **1276262.681**	Total Depth (ft): **32**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **7.5**
Collection Date: **07.16.21**		Mudline Elevation (ft): **0.7**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
20	-20	LDW21-GT23-GB-21.1-22.8				(17.6 to 21.1') Medium dense, moist, dark gray, SILTY SAND (SM), very fine grained sand.	
						(21.1 to 22.7') Medium stiff, moist, olive gray, SILT (ML)	%M, ATT
25	-25	LDW21-GT23-GB-22.8-26.8				(22.7 to 27.7') Medium dense, moist, dark gray, SILTY SAND (SM), fine grained sand.	%M, GSDH
30	-30	LDW21-GT23-GB-27.7-28.5				(27.7 to 32') Medium stiff, moist, olive gray, SILT (ML)	%M
		LDW21-GT23-GB-28.5-30.5					%M, SG, ATT, 1-D, CU
		LDW21-GT23-GB-30.5-32					%M
35	-35					End of Boring at 32 ft	
40							



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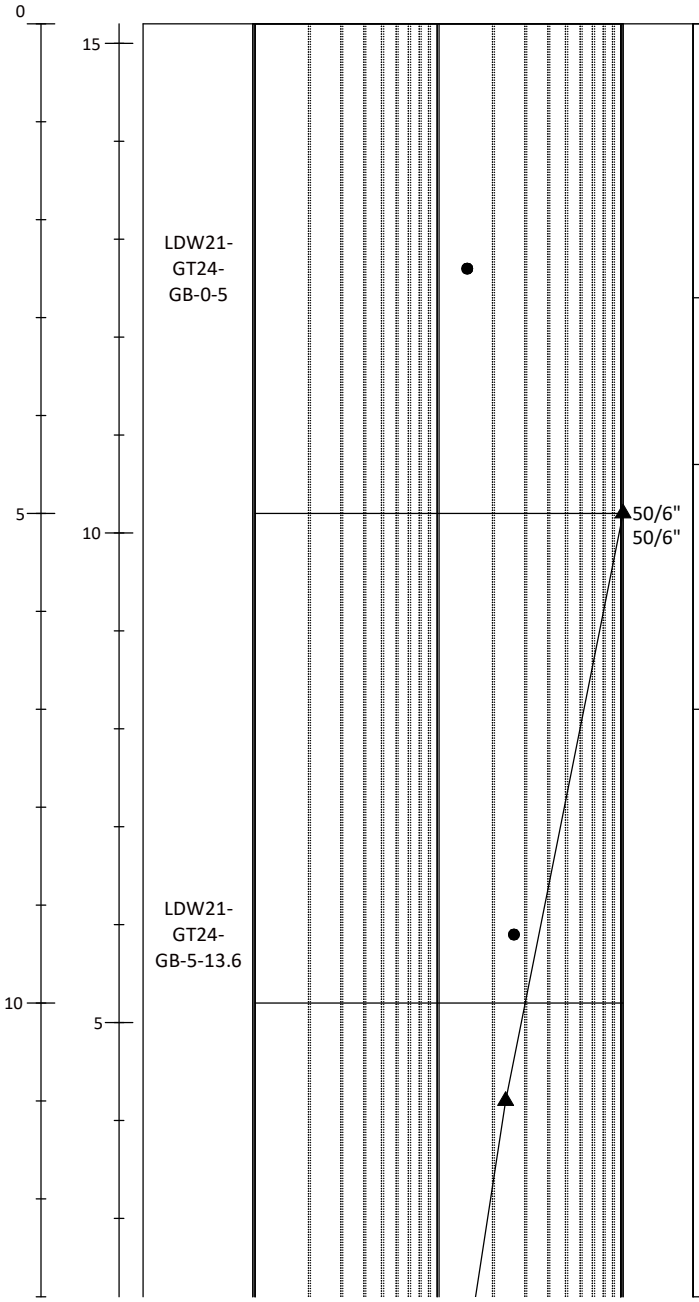
▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT24-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **193910.921** E/LONG: **1276412.765**	Total Depth (ft): **61.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **NA**
Collection Date: **7.26.21**		Surface Elevation (ft): **15.2**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Sam Giannakos**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
(0 to 2.8') Concrete surface.	%M
(2.8-4.5') Medium stiff, damp, brown, SILTY SAND (SM), fine grained sand, occasional gravel (up to 1-in), occasional organics (wood fibers)	
(4.5-7') Dense, dry, white, concrete dust, large gravel, up to 2-in.	
(7 to 13.6') Loose, moist, brown, poorly graded SAND (SP). @8': Grades to dark brown @9.1-9.6': Lens of tan, very silty sand. @11': Grades to orangish brown	%M, GSD, DS

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▲ SPT N-Value
● Moisture Content (%)

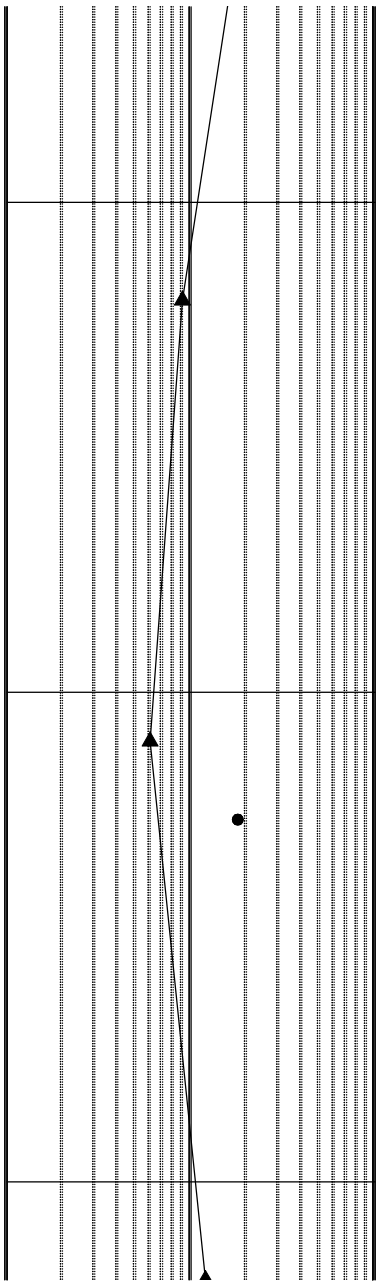
Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp.
Elevation estimated using proposed location base map, no depth to mudline reported

[DRAFT] Soil Boring Log

LDW21-GT24-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **193910.921** E/LONG: **1276412.765**	Total Depth (ft): **61.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **N/A**
Collection Date: **7.26.21**		Surface Elevation (ft): **15.2**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Sam Giannakos**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%)	Other	Lithology	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
15	0					(7 to 13.6') Loose, moist, brown, poorly graded SAND (SP).	
20	-5	LDW21-GT24-GB-13.6-29				(13.6 to 41') Loose, wet, black/red/white, SAND (SP).	%M, SG, GSD
25	-10					@26-26.3': Wood piece, brittle, branch-like, gray	



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▲ SPT N-Value
● Moisture Content (%)

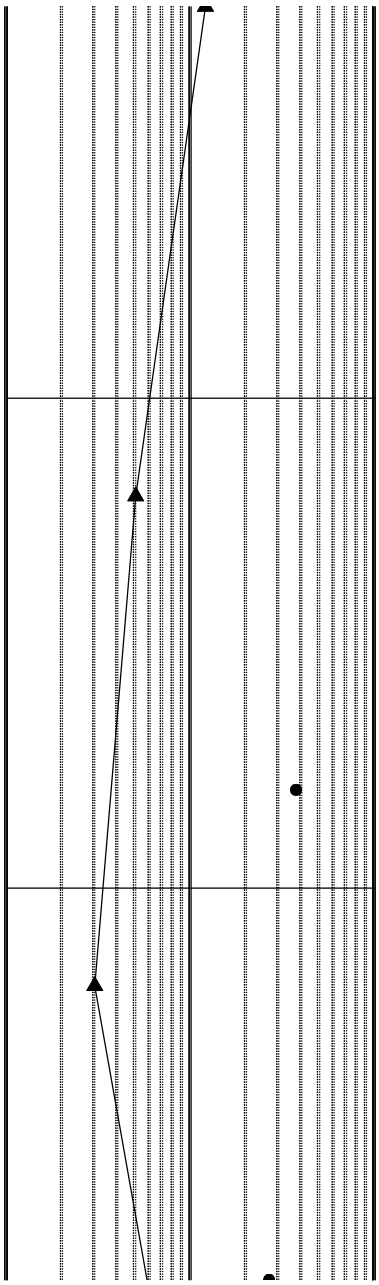
Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp.
Elevation estimated using proposed location base map, no depth to mudline reported

[DRAFT] Soil Boring Log

LDW21-GT24-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **193910.921** E/LONG: **1276412.765**	Total Depth (ft): **61.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **N/A**
Collection Date: **7.26.21**		Surface Elevation (ft): **15.2**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Sam Giannakos**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) 1 2 5 10 20 50 100	Other	Lithology	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
30	-15					(13.6 to 41') Loose, wet, black/red/white, SAND (SP). @29.2': Large tree knot (4-inch) @29.2-29.8': Pocket of clayey silt, interbedded	
		LDW21-GT24-GB-33-35				@33': Grades to moist to wet, olive gray, more fine grained sand	%M, ATT
35	-20						
		LDW21-GT24-					%M,



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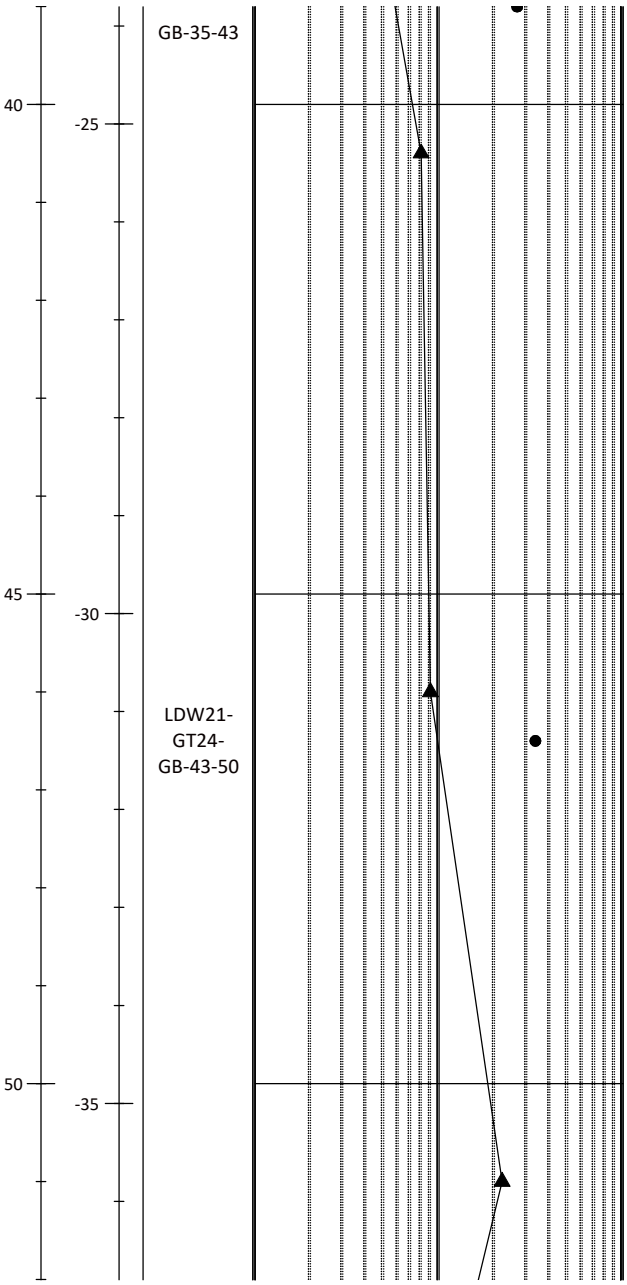
▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp.
Elevation estimated using proposed location base map, no depth to mudline reported

[DRAFT] Soil Boring Log

LDW21-GT24-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **193910.921** E/LONG: **1276412.765**	Total Depth (ft): **61.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **N/A**
Collection Date: **7.26.21**		Surface Elevation (ft): **15.2**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Sam Giannakos**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
		(13.6 to 41') Loose, wet, black/red/white, SAND (SP).	GSD
		(41 to 43') Loose, moist, brown, SILTY SAND (SM).	
		(46 to 53.3') Stiff, damp to wet, gray to brown, SANDY SILT (ML), pockets of coarse silt.	%M, SG, ATT

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▲ SPT N-Value
● Moisture Content (%)

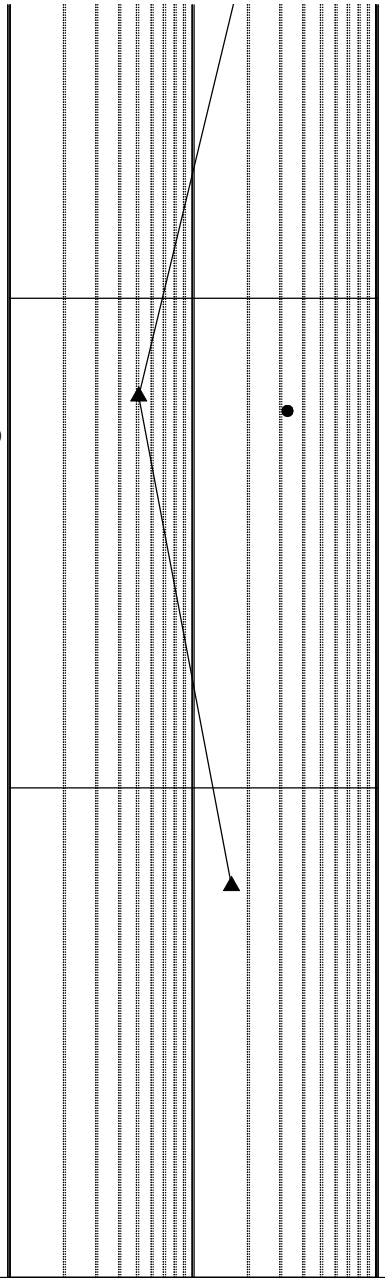
Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp.
Elevation estimated using proposed location base map, no depth to mudline reported

[DRAFT] Soil Boring Log

LDW21-GT24-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **193910.921** E/LONG: **1276412.765**	Total Depth (ft): **61.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **N/A**
Collection Date: **7.26.21**		Surface Elevation (ft): **15.2**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Sam Giannakos**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
55	-40	LDW21-GT24-GB-53.3-59				(46 to 53.3') Stiff, damp to wet, gray to brown, SANDY SILT (ML), pockets of coarse silt.	
						(53.3 to 59') Loose, damp, olive gray to black, medium dense, poorly graded, SILTY SAND (SM), fine grained sand.	%M, GSD
60	-45					(59 to 60.5') Medium dense, damp, olive gray, SANDY SILT (ML).	
						(60.5 to 61.5') Medium dense, damp, SILTY SAND (SM).	
65						End of Boring at 61.5 ft	



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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp.
Elevation estimated using proposed location base map, no depth to mudline reported

[DRAFT] Soil Boring Log

LDW21-GT25-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **193902.768** E/LONG: **1276326.832**	Total Depth (ft): **30**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **7.5**
Collection Date: **07.15.21**		Mudline Elevation (ft): **0.5**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0	0	LDW21-GT25-GB-0-1.5				(0 to 5.2') Very soft, wet, dark brown to black, SILT (ML), medium plasticty, trace organics.	%M
		LDW21-GT25-GB-0-8.5					%M, SG, ATT
5	-5					(5.2 to 8.5') Medium stiff, moist, black, CLAYEY SILT (CL-ML), medium plasticity, trace organics (wood fibers)	
		LDW21-GT25-GB-8.5-10				(8.5 to 14.2') Loose, moist, black, poorly graded SAND (SP), fine grained, trace organics (wood debris)	%M
10	-10						
		LDW21-GT25-GB-8.5-16.2					%M, GSD, DS
15	-15					@14.2': Occasional wood debris encountered	
		LDW21-GT25-GB-16.2-18.5				(16.2 to 24.4') Medium stiff, moist, olive gray, SANDY SILT (ML).	%M, ATT
20		LDW21-GT25-GB-18.5-20					%M

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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT25-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **193902.768** E/LONG: **1276326.832**	Total Depth (ft): **30**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **7.5**
Collection Date: **07.15.21**		Mudline Elevation (ft): **0.5**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
20							
	-20	LDW21-GT25-GB-18.5-24.4				(16.2 to 24.4') Medium stiff, moist, olive gray, SANDY SILT (ML). @23.5': Lamination of shell hash and occasional organics (wood debris)	%M, ATT
25	-25	LDW21-GT25-GB-24.4-26				(24.4 to 30') Loose, moist, dark gray, SANDY SILT (ML), fine grained sand.	%M
		LDW21-GT25-GB-26-28.5				@26 to 30': Becomes olive gray and siltier	%M, GSD, GSDH
		LDW21-GT25-GB-28.5-30					%M
30	-30					End of Boring at 30 ft	
35	-35						
40							

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▲ SPT N-Value
● Moisture Content (%)

Notes:
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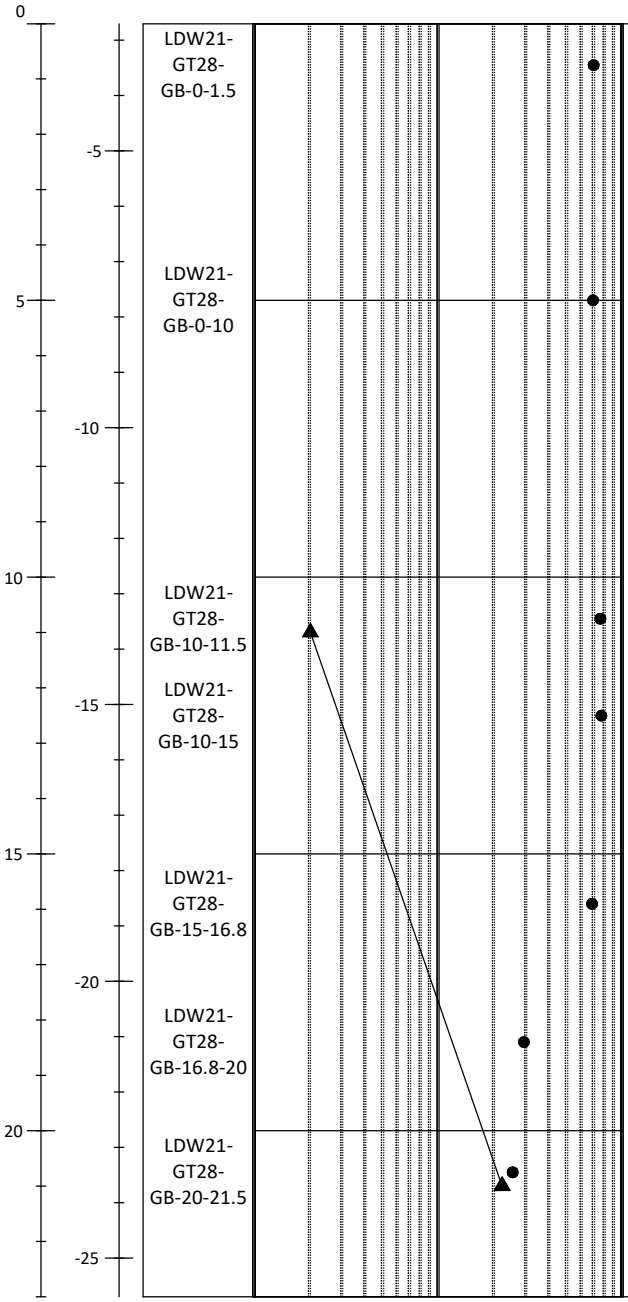
[DRAFT] Soil Boring Log

LDW21-GT28-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **193703.693** E/LONG: **1275982.714**	Total Depth (ft): **21.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **12.2**
Collection Date: **07.07.21**		Mudline Elevation (ft): **-2.7**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
WOH		(0 to 16.8'): Very soft, moist to wet, black, SILT (ML), non-plastic, trace organics (wood debris).	%M
			%M, ATT
		@10': Grades to soft and moist	%M
			%M, ATT
		@16 to 16.8': Layer of medium stiff, damp, brown, SILT (ML), medium plasticity.	%M, ATT
		(16.8 to 21.5'): Medium dense, moist, black, poorly graded SAND (SP), fine grained, trace organics (twigs). @16.8 to 17.4': Trace fine grained gravel encountered	%M, GSD, DS
			%M
		End of Boring at 21.5 ft.	

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▲ SPT N-Value
● Moisture Content (%)

Notes:
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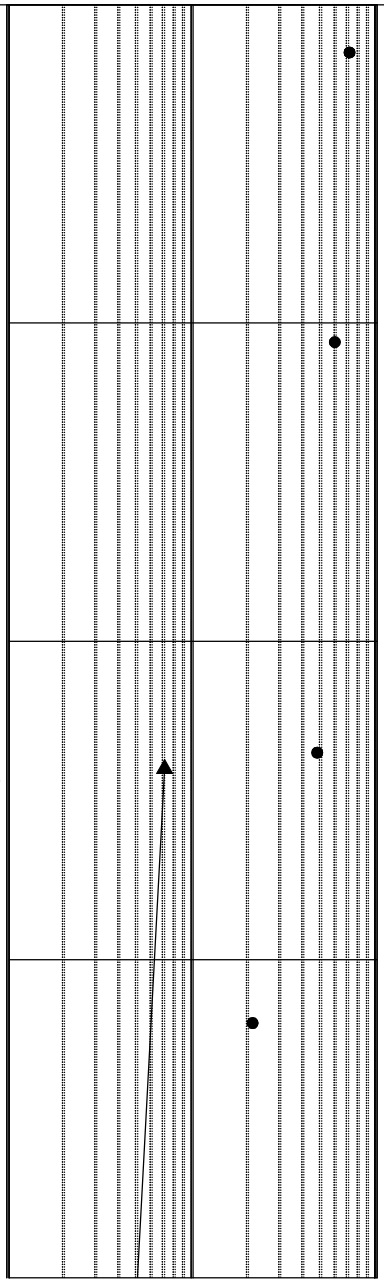
[DRAFT] Soil Boring Log

LDW21-GT29-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **193401.625** E/LONG: **1276568.528**	Total Depth (ft): **32.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **5.0**
Collection Date: **07.14.21**		Mudline Elevation (ft): **4.3**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Other	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0		LDW21-GT29-GB-0-1.5	WOH	(0 to 6.1') Very soft, wet, black, SILT (ML), non-plastic, trace organics.	%M
5	0	LDW21-GT29-GB-0-10.6			%M, GSD, ATT
				(6.1 to 10.6') Medium stiff, moist, black, SILT (ML), trace fine grained sand. @7.4 to 7.6': Lamination of loose, moist, black, fine grained sand with silt. @8.3 to 8.8': Substantial organics debris (wood)	
10	-5	LDW21-GT29-GB-11-12.5		(10.6 to 26') Loose, moist, black, poorly graded SAND (SP), fine grained sand.	%M
15	-10				
20	-15				

Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%)



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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT29-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **193401.625** E/LONG: **1276568.528**	Total Depth (ft): **32.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **5.0**
Collection Date: **07.14.21**		Mudline Elevation (ft): **4.3**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Other	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
		LDW21-GT29-GB-21-22.5	WOH	(10.6 to 26') Loose, moist, black, SAND (SP), fine grained sand.	%M, SG
		LDW21-GT29-GB-21-26			%M, GSD
		LDW21-GT29-GB-26-28.9		(26 to 32.5') Loose, moist, black, SILTY SAND (SM), fine grained sand.	%M, GSD, DS
		LDW21-GT29-GB-28.9-31			%M, GSD
		LDW21-GT29-GB-31-32.5			%M
				End of Boring at 32.5 ft	

Depth (ft): 20, 25, 30, 35, 40

Elevation (ft): -20, -25, -30, -35

Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%): 1, 2, 5, 10, 20, 50, 100

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▲ SPT N-Value
● Moisture Content (%)

Notes:
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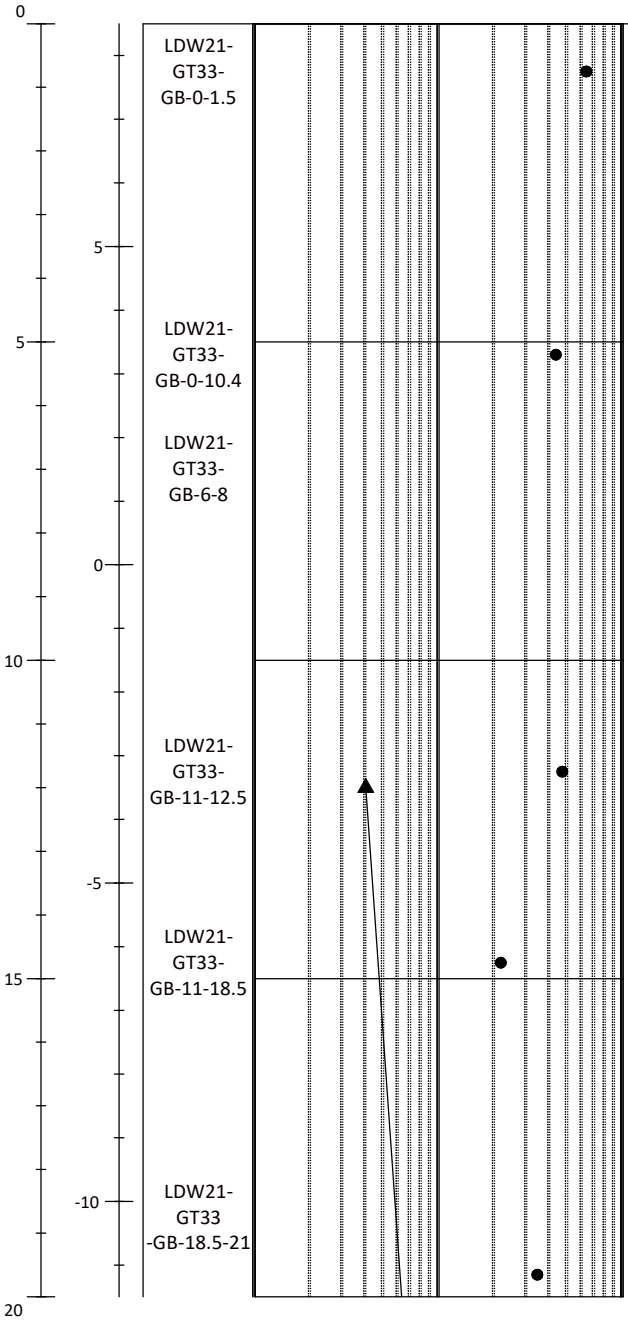
[DRAFT] Soil Boring Log

LDW21-GT33-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **193093.668** E/LONG: **1276612.259**	Total Depth (ft): **32.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **0.1**
Collection Date: **07.15.21**		Mudline Elevation (ft): **8.5**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
(0 to 4.7') Very soft, wet, black to dark brown, SILT (ML), trace petroleum-like odor, trace rainbow sheen, non-brittle.	%M
(4.7 to 9.5') Medium stiff, moist, olive gray with black mottling, CLAYEY SILT (CL-ML), low-plasticity, trace organics (wood debris, 2"x1.5"). PP	%M, ATT %M, SG, ATT, 1-D, CU
(9.5 to 10.4') Loose, moist to wet, dark olive gray with black mottling, SILTY SAND (SM)	
(10.4 to 18.3') Loose, moist, black, SILTY SAND (SM), fine grained.	%M %M, SG, GSD, DS
(18.3 to 22') Medium stiff, moist, dark olive gray, SILT WITH SAND (SM), low plasticity. PP=0.25-0.5 TSF	%M, ATT

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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp.
Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT33-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **193093.668** E/LONG: **1276612.259**	Total Depth (ft): **32.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **0.1**
Collection Date: **07.15.21**		Mudline Elevation (ft): **8.5**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
20							
		LDW21-GT33-GB-21-22.5				(18.3 to 22') Medium stiff, moist, dark olive gray, SILT WITH SAND (SM). PP=0.25-0.5 TSF	%M
		LDW21-GT33-GB-21-23				(22 to 28.8') Soft, moist, dark gray, SILT to SANDY SILT (ML), no plasticity.	%M, GSD, ATT, 1-D, CU
	-15	LDW21-GT33-GB-21-26.8				@24': Becomes medium stiff and grades to SANDY SILT (ML)	%M, ATT, GSDH
25							
		LDW21-GT33-GB-26.8-28.8				@27 to 29': Large wood chunks encountered	%M, ATT
	-20	LDW21-GT33-GB-28.8-29.5				(28.8 to 32.5') Very loose, moist, dark gray, SILTY SAND (SM).	%M, GSDH
30		LDW21-GT33-GB-29.5-31					%M, ATT
		LDW21-GT33-GB-31-32.5					%M
	-25					End of Boring at 32.5 ft	
35							
	-30						
40							

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▲ SPT N-Value
● Moisture Content (%)

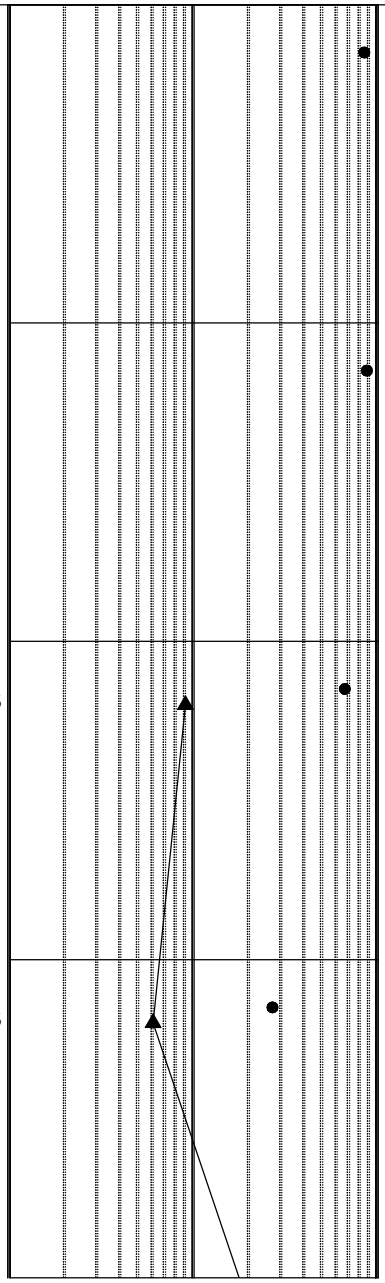
Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW-GT35-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **192818.4** E/LONG: **1277387**	Total Depth (ft): **31.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **11.3**
Collection Date: **07.20.21**		Mudline Elevation (ft): **-3.9**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0							
	-5	LDW21-GB-0-1.5				(0 to 11') Very soft, wet, black, SILT (ML), high plasticity, with trace organics.	%M
5	-10	LDW21-GB-5-6.5					%M, ATT
10	-15	LDW21-GB-10-11.5					%M
						(11.1 to 25') Loose, moist, dark brown, SILTY SAND (SM).	
15	-20	LDW21-GB-15-16.5					%M, SG, GSDH, DS
20							



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▲ SPT N-Value
● Moisture Content (%)

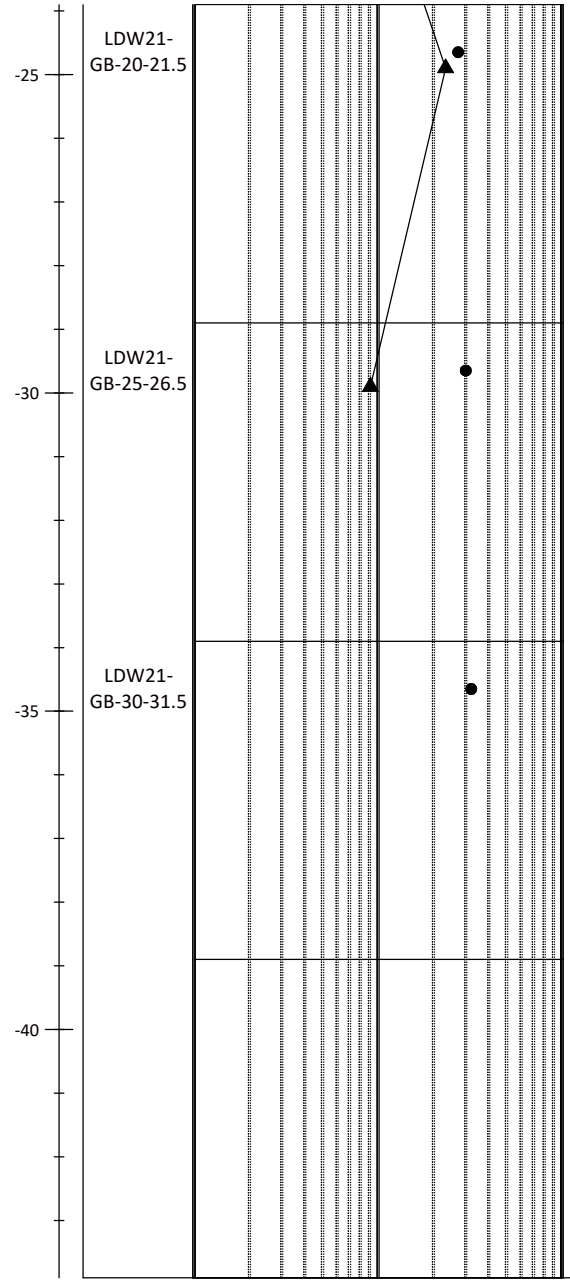
Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW-GT35-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **192818.4** E/LONG: **1277387**	Total Depth (ft): **31.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **11.3**
Collection Date: **07.20.21**		Mudline Elevation (ft): **-3.9**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%)	Other	Lithology	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
20							
	-25	LDW21-GB-20-21.5				(11.1 to 25') Loose, moist, dark brown, SILTY SAND (SM). @21': Grades to slightly silty, poorly graded sand (SP).	%M, GSD
25							
	-30	LDW21-GB-25-26.5				(25 to 31.5') Medium stiff, moist, olive gray SILT WITH SAND (ML). PP=0.5 TSF	%M
30							
	-35	LDW21-GB-30-31.5				@30.7 to 31.2': Lens of CLAYEY SILT (CL-ML), medium plasticity, low dilatancy.	%M, ATT
						End of Boring at 31.5 ft	
35							
	-40						
40							



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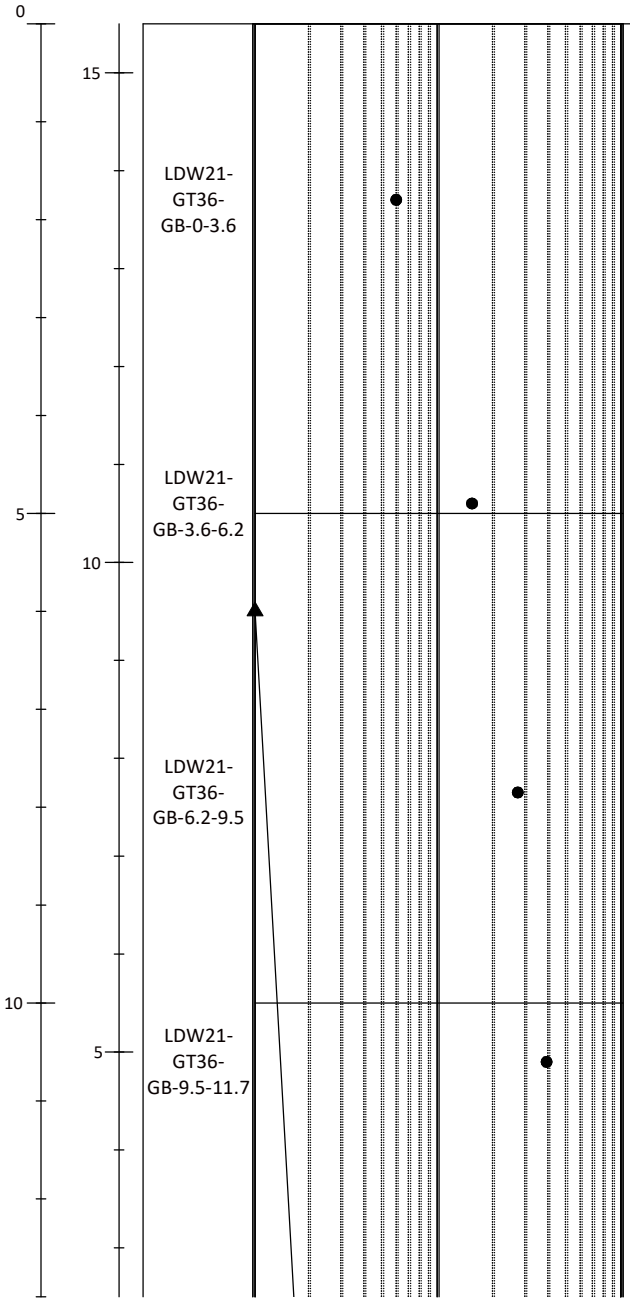
▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT36-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **192741.238** E/LONG: **1277403.821**	Total Depth (ft): **61.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **NE**
Collection Date: **07.27.21**		Surface Elevation (ft): **15.5**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Sam Giannakos**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**



Depth (ft)	Elevation (ft)	Sample ID	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
		LDW21-GT36-GB-0-3.6			(0 to 3.6') Loose, dry, brown, SILTY GRAVEL WITH SAND (GM) @1.5': 2-in angular gravel piece	%M
		LDW21-GT36-GB-3.6-6.2			(3.6 to 6.2') Loose, damp, brown, SILTY SAND (SM), trace gravel. @4.1': Grades to no gravel	%M, GSDH, DS
		LDW21-GT36-GB-6.2-9.5			(6.2 to 9.5') Very lose, damp, dark brown, poorly graded SAND (SP) @8.1-8.3': Lens of siltier sand	%M, GSD
		LDW21-GT36-GB-9.5-11.7			(9.5 to 11.7') Loose, moist to wet, dark gray, SILTY SAND (SM), fine to medium grained sand.	%M
					(11.7 to 61.5') Very loose to loose, moist to wet, black/white/red, poorly graded SAND (SP), fine to medium grained sand, trace silt.	

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▲ SPT N-Value
● Moisture Content (%)

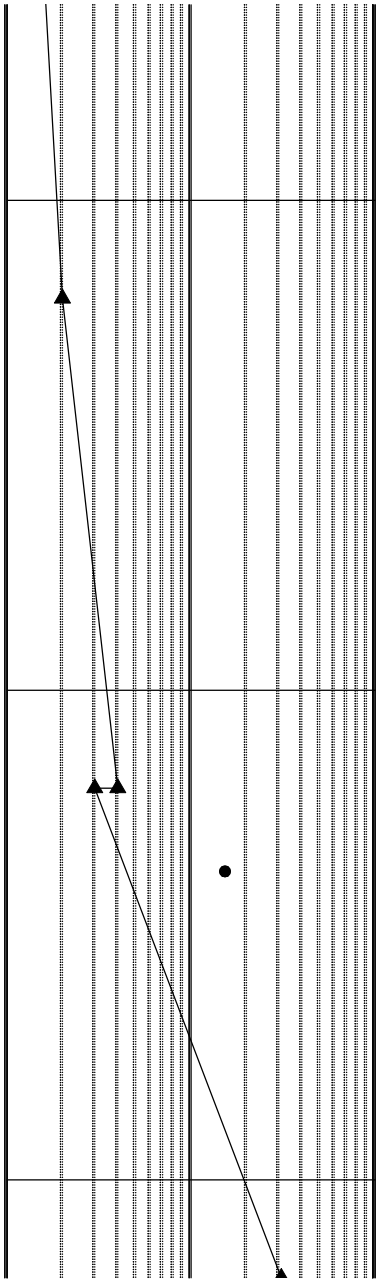
Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp.
Elevation estimated using proposed location base map, no depth to mudline reported

[DRAFT] Soil Boring Log

LDW21-GT36-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **192741.238** E/LONG: **1277403.821**	Total Depth (ft): **61.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **NE**
Collection Date: **07.27.21**		Surface Elevation (ft): **15.5**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Sam Giannakos**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%)	Other	Lithology	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
15	0					(11.7 to 61.5') Very loose to loose, moist to wet, black/white/red, poorly graded SAND (SP), fine to medium grained sand, trace silt.	
20	-5	LDW21-GT36-GB-11.7-32				@20.7': Frequent pockets of silty sand	%M, SG, GSD
25	-10					@25': Grades to medium dense	



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▲ SPT N-Value
● Moisture Content (%)

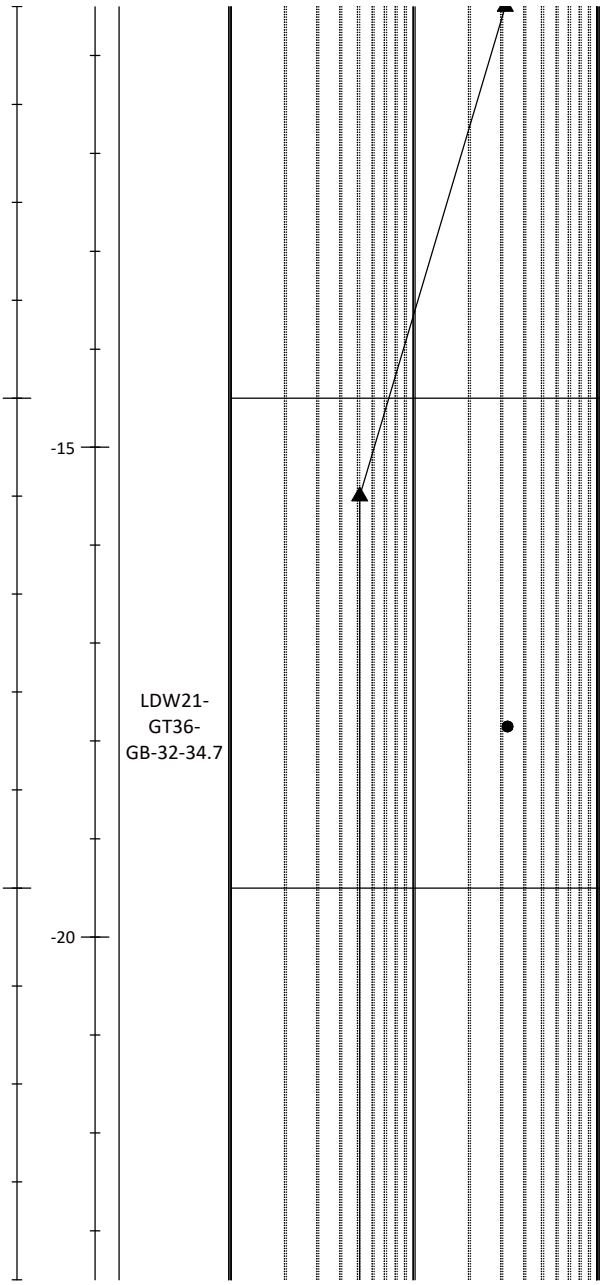
Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp.
Elevation estimated using proposed location base map, no depth to mudline reported

[DRAFT] Soil Boring Log

LDW21-GT36-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **192741.238** E/LONG: **1277403.821**	Total Depth (ft): **61.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **NE**
Collection Date: **07.27.21**		Surface Elevation (ft): **15.5**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Sam Giannakos**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) 1 2 5 10 20 50 100	Other	Lithology	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
30	-15	LDW21-GT36-GB-32-34.7				(11.7 to 61.5') Very loose to loose, moist to wet, black/white/red, poorly graded SAND (SP), fine to medium grained sand. @30.8-31.3': Lens of siltier sand (SP-SM) @32.1': Soft, moist to wet, olive gray, SILT (ML), coarse grained sand, non-plastic.	%M, ATT
35	-20					@34.7': Loose, damp, dark gray, poorly graded SAND (SP), trace silt. @37.7-38.5': Lens of silty sand (SM)	



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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp.
Elevation estimated using proposed location base map, no depth to mudline reported

[DRAFT] Soil Boring Log

LDW21-GT36-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **192741.238** E/LONG: **1277403.821**	Total Depth (ft): **61.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **NE**
Collection Date: **07.27.21**		Surface Elevation (ft): **15.5**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Sam Giannakos**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
40	-25	LDW21-GT36-GB-34.7-50				(11.7 to 50') Very loose to loose, moist to wet, black/white/red, poorly graded SAND (SP), fine to medium grained sand. @39.4-39.7': Pocket of silt (ML) @41.5': Lens of silt @48.2-49.2': Layer of wet, dark gray, silty sand (SM), fine grained sand.	%M, GSD
45	-30						
50	-35					No recovery from 50 to 60 ft. @50.5': Layer of soft, moist, olive gray with black mottling, CLAYEY SILT (CL-ML), non plastic.	%M, SG, ATT

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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp.
Elevation estimated using proposed location base map, no depth to mudline reported

[DRAFT] Soil Boring Log

LDW21-GT36-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **192741.238** E/LONG: **1277403.821**	Total Depth (ft): **61.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **NE**
Collection Date: **07.27.21**		Surface Elevation (ft): **15.5**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Sam Giannakos**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
55	-40	LDW21-GT36-GB-50.5-61.5				No recovery from 50 to 60 ft.	
60	-45	LDW21-GT36-GB-60-61.5		WOH			
						End of Boring 61.5 ft. SPT Samples from 50 to 51.5' and 60 to 61.5' were combined for tesing, which is displayed as being located between 50 and 61.5'.	
65							

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▲ SPT N-Value
● Moisture Content (%)

Notes:
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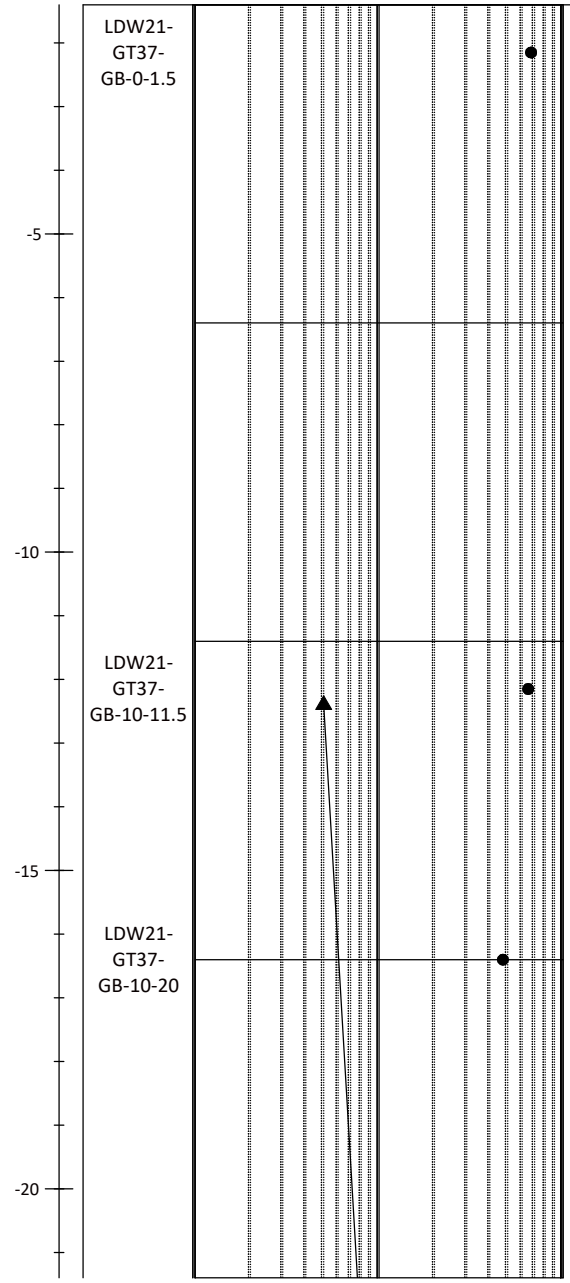
Elevation estimated using proposed location base map, no depth to mudline reported

[DRAFT] Soil Boring Log

LDW21-GT37-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **192182.064** E/LONG: **1276436.379**	Total Depth (ft): **31.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **6.0**
Collection Date: **07.14.21**		Mudline Elevation (ft): **-1.4**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0		LDW21-GT37-GB-0-1.5				(0 to 1.5') Very soft, wet, black, SILT (ML), trace organics (sea wood). @1.2': Grades to SANDY SILT (ML)	%M
	-5					(1.5 to 10') No Recovery.	
5							
	-10						
10		LDW21-GT37-GB-10-11.5				(10 to 20.6') Medium stiff, moist, black, SANDY SILT (ML), none to low plasticity, moderate dilatancy.	%M
	-15						
15		LDW21-GT37-GB-10-20					%M, SG, GDSH, DS
	-20						
20							



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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT37-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **192182.064** E/LONG: **1276436.379**	Total Depth (ft): **31.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **6.0**
Collection Date: **07.14.21**		Mudline Elevation (ft): **-1.4**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
20							
		LDW21-GT37-GB-20-21.5				(10 to 20.6') Medium stiff, moist, black, SANDY SILT (ML), none to low plasticity, moderate dilatancy.	%M
	-25					(20.6 to 21.2') Medium stiff, moist, black, SILT (ML) @20.8': Grades to olive brown, odor @21.2- 21.3': Lamination of SILTY SAND (SM). @21.3': Wood debris encountered	
25		LDW21-GT37-GB-20-30				(21.3 to 26.9') Loose, moist, black, SILTY SAND (SM), trace organics (wood debris).	%M, SG, ATT, GSD
	-30					(26.9 to 31.5') Medium stiff, moist, dark olive gray, SILT (ML) with occasional lenses of loose, moist, SILTY SAND (SM).	
30		LDW21-GT37-GB-30-31.5					%M
	-35					End of Boring at 31.5 ft	
35							
	-40						
40							

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▲ SPT N-Value
● Moisture Content (%)

Notes:
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[DRAFT] Soil Boring Log

LDW21-GT39-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **190600.557** E/LONG: **1277362.3**	Total Depth (ft): **32**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **5.5**
Collection Date: **07.16.21**		Mudline Elevation (ft): **1.3**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0	0	LDW21-GT39-GB-0-1.5				(0 to 7.6') Very soft, wet, dark olive gray to black, SILT (ML), occasional sand and gravel.	%M
		LDW21-GT39-GB-0-8.8				@3 to 7.6': Grades to soft, and to sandy and gravelly SILT (ML)	%M, ATT
5	-5						
		LDW21-GT39-GB-8.8-10.5				(7.6 to 8.5') Soft, moist, olive gray with light gray mottling, CLAYEY SILT (CL-ML). @8.1 to 8.5': Substantial gravel encountered @8.4': Grades to SANDY SILT (ML)	%M, GSD
10						(8.8 to 32') Loose, moist, black, poorly graded SAND WITH SILT (SP-SM), fine grained.	
	-10	LDW21-GT39-GB-10.5-12				@10.5': Grades to poorly graded SAND (SP)	%M
15	-15	LDW21-GT39-GB-10.5-20.5					%M, SG, GSD, DS
20							

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▲ SPT N-Value
● Moisture Content (%)

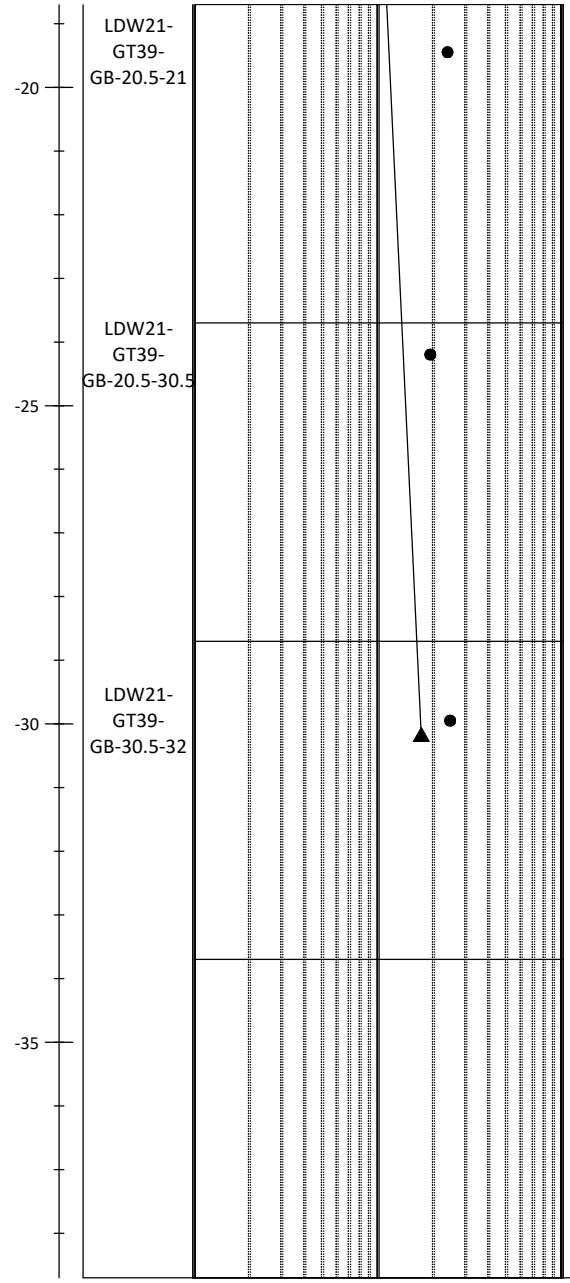
Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT39-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **190600.557** E/LONG: **1277362.3**	Total Depth (ft): **32**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **5.5**
Collection Date: **07.16.21**		Mudline Elevation (ft): **1.3**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Casey Janisch**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
20							
	-20	LDW21-GT39-GB-20.5-21				(8.8 to 32') Loose, moist, black, poorly graded SAND WITH SILT (SP-SM), fine grained.	%M
25		LDW21-GT39-GB-20.5-30.5					%M, GSD
	-25						
30							
	-30	LDW21-GT39-GB-30.5-32				@31.8': Grades to SILTY SAND (SM)	%M
						End of Boring at 32 ft	
35							
	-35						
40							



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1201 Third Avenue
Suite 2600 Seattle, WA 98101

▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

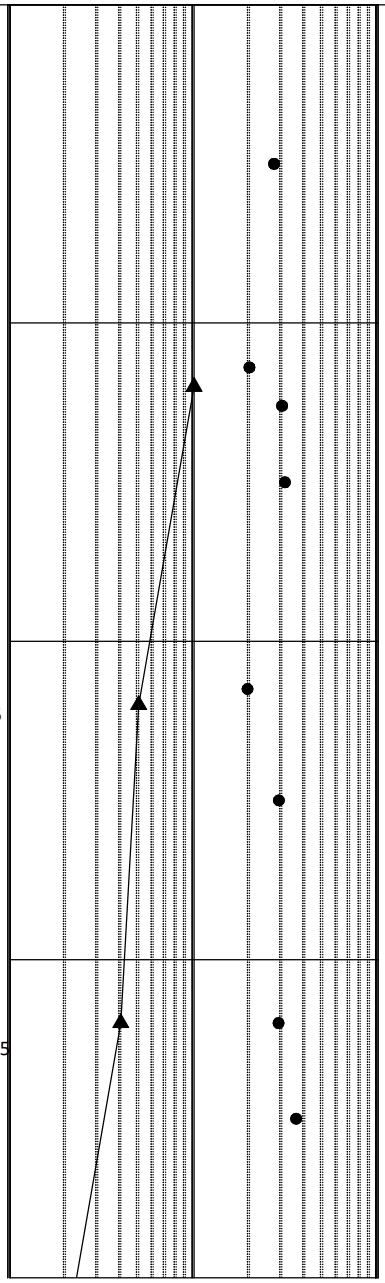
[DRAFT] Soil Boring Log

LDW21-GT44-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **190379.661** E/LONG: **1278233.2**	Total Depth (ft): **31.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **18.5**
Collection Date: **08.04.21**		Mudline Elevation (ft): **-10.1**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Garrett Timm**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0		LDW21-GT44-GB-0-5			(0 to 6.1') Very loose, wet, dark gray to black, poorly graded SAND WITH SILT (SP-SM), some silt, large wood chunks, brick pieces, occasional gravel, medium to coarse grained gravel.	%M, GSD, DS
5	-15	LDW21-GT44-GB-5-6.1				%M
		LDW21-GT44-GB-6.1-6.5			@5.9 to 6.1': Grades coarser	%M
		LDW21-GT44-GB-5-10			(6.1 to 10'): Loose to medium dense, wet, dark gray to black, poorly graded SAND with silt (SP-SM), occasional organics (wood debris), sulfur-like odor.	%M, GSD
10	-20	LDW21-GT44-GB-10-11.5			(10 to 15.5') Loose, wet, dark gray, black, red, white, poorly graded SAND WITH SILT (SP-SM), medium to coarse grained.	%M
		LDW21-GT44-GB-10-15				%M, SG, GSD
15	-25	LDW21-GT44-GB-15.5-16.5			(15.5 to 25'): Very loose to loose, wet, light gray, SANDY SILT (ML), fine grained.	%M
		LDW21-GT44-GB-15-20				%M, GSD
20	-30				@20': Grades to occasional pockets of silt	

Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%)



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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp. Mudline elevations determined from leadline measurements and Site tide gage levels

[DRAFT] Soil Boring Log

LDW21-GT44-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **190379.661** E/LONG: **1278233.2**	Total Depth (ft): **31.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **18.5**
Collection Date: **08.04.21**		Mudline Elevation (ft): **-10.1**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Garrett Timm**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
20	-30	LDW21-GT44-GB-20-21.5				(15.5 to 25'): Very loose to loose, wet, light gray, SANDY SILT (ML), fine grained.	%M
		LDW21-GT44-GB-20-25				@23 to 25': Grades to siltier	%M, GSDH
25	-35					(25 to 26.5'): No Recovery.	
		LDW21-GT44-GB-25-28.7				(26.5 to 28.7') Very loose, wet, white, red, black, poorly graded SAND (SP), coarse grained, occasional well rounded coarse gravel pieces.	%M, GSD
		LDW21-GT44-GB-28.7-30				(28.7 to 31.5') Very loose, wet, gray, SILT WITH SAND (ML), very fine grained.	%M, GSD
30	-40	LDW21-GT44-GB-30-31.5					%M
						End of Boring at 31.5 ft	
35	-45						
40	-50						

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[DRAFT] Soil Boring Log

LDW21-GT48A-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **190317.6** E/LONG: **1278379.433**	Total Depth (ft): **35**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **12**
Collection Date: **08.05.21**		Mudline Elevation (ft): **-5.9**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Garrett Timm**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description Samples and descriptions are in recovered depths. Classification scheme: USCS	Lab Test
0						(0 to 2'): Concrete or wood debris.	
		LDW21-GT48GB-GB-0-5				(2 to 3.5'): No Recovery.	%M, GSD
	-10					(3.5 to 7'): Very loose, wet, red, white, black, poorly graded coarse grained SAND (SP). @4.5 to 5': Significant cedar wood chunk and rock piece encountered	
5		LDW21-GT48GB-GB-5-10				(7 to 15') Very loose, wet, gray, SILTY SAND (SM), occasional organics, fine to medium grained. @8.7 to 9': Significant organics	%M, GSD, DS
	-15						
10		LDW21-GT48GB-GB-10-15				@12.7 to 12.9': Grades to siltier @14 to 15': Organic odor	%M, SG, GSDH
	-20						
15		LDW21-GT48GB-GB-15-18.2				(15 to 18.2') Very loose, wet, gray, poorly graded SAND (SP), occasional organics, fine to medium grained.	%M, GSD
	-25	LDW21-GT48GB-GB-18.2-19.5				(18.2 to 19.5') Very soft, wet, light gray, SANDY SILT (ML).	%M, GSD
20						(19.5 to 21.6') Very loose, wet, white, black, red, poorly	

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[DRAFT] Soil Boring Log

LDW21-GT48A-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **190317.6** E/LONG: **1278379.433**	Total Depth (ft): **35**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **12**
Collection Date: **08.05.21**		Mudline Elevation (ft): **-5.9**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Garrett Timm**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
20							
		LDW21-GT48GB-GB-20-21.6				graded SAND (SP), fine grained.	%M, GSD
						(19.5 to 21.6') Very loose, wet, white, black, red, poorly graded SAND (SP), fine grained.	
		LDW21-GT48GB-GB-21.6-25				(21.6 to 35') Very soft, wet, light gray, SILT (ML), non-plastic.	%M, SG, ATT, GSDH
	-30						
25							
		LDW21-GT48GB-GB-25-30					%M, ATT
	-35						
30							
		LDW21-GT48GB-GB-30-35				@32 to 33': Black mottling, grades to stiffer	%M, ATT
	-40						
35						End of Boring at 35 ft	
	-45						
40							

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[DRAFT] Soil Boring Log

LDW21-GT48B-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **190313.244** E/LONG: **1278382.172**	Total Depth (ft): **36.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **14.0**
Collection Date: **08.05.21**		Mudline Elevation (ft): **-5.2**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Garrett Timm**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0		LDW21-GT48SPT-GB-0-1.5		WOH		(0 to 0.7') Loose, wet, poorly graded SAND (SP), coarse grained.	%M
						(0.7 to 1.5') Loose, wet, SAND WITH SILT (ML), medium grained, glass debris.	%M
5	-10	LDW21-GT48GB-GB-5-6.5				(5 to 6.5') Medium dense, wet, red, black, white, poorly graded SAND WITH SILT (SM), medium grained.	%M
10	-15	LDW21-GT48SPT-GB-10-11.5				(10 to 11.5') Medium dense, wet, light to dark gray, poorly graded SAND (SP), slight organic odor, occasional organics (sticks)	%M
						@10.4': Lens of coarse grained sand	
15	-20	LDW21-GT48SPT-GB-15-16.5				(15 to 16.5') Medium dense, wet, dark gray, poorly graded SAND (SP), little silt.	%M
20	-25	LDW21-GT48SPT-GB-20-20.6					%M

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[DRAFT] Soil Boring Log

LDW21-GT48B-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **190313.244** E/LONG: **1278382.172**	Total Depth (ft): **36.5**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **14.0**
Collection Date: **08.05.21**		Mudline Elevation (ft): **-5.2**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Garrett Timm**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Other	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
20					
		LDW21-GT48SPT-GB-20.6-21.5		(20 to 20.6') Medium stiff, wet, gray, SILT (ML).	%M
				(20.6 to 21.5') Medium dense, wet, dark gray, SAND WITH SILT (SM), fine to medium grained.	
25	-30	LDW21-GT48SPT-GB-25-26.5	WOR	(25 to 26.5') Very loose, wet, dark gray, SILTY SAND (SM) to SANDY SILT (ML).	%M
30	-35	LDW21-GT48SPT-GB-30-31.5	WOR	(30 to 31.5') Very loose, wet, dark gray, SILTY SAND (SM) to SANDY SILT (ML).	%M
35	-40	LDW21-GT48GB-GB-35-36.5	WOH	(35 to 36.5') Very stiff, wet, gray with black mottling, SILT (ML).	%M
				End of Boring at 36.5 ft.	
40	-45				

Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%): 1 2 5 10 20 50 100

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[DRAFT] Soil Boring Log

LDW21-GT53A-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **190178.63** E/LONG: **1278593.074**	Total Depth (ft): **30**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **8.5**
Collection Date: **08.05.21**		Surface Elevation (ft): **2.5**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Garrett Timm**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0		LDW21-GT53A-GB-0-1.5		WOH		(0 to 5') Very soft, wet, black, SILTY SAND (SM) to SANDY SILT (ML).	%M
	0	LDW21-GT53A-GB-0-5					%M, SG, ATT
5		LDW21-GT53A-GB-5-6.5				(5 to 10') Medium dense, wet, black, white, red, SILTY SAND (SM), fine grained, with organics (wood chunks). @5.8 to 6': Significant wood debris @6.2 to 6.3': Orange mottling	%M
	-5	LDW21-GT53A-GB-5-10				@8': Grades to sandier	%M, GSDH, DS
10						(10 to 15') Very loose, wet, dark gray, SILTY SAND (SM), fine grained.	
	-10	LDW21-GT53A-GB-10-15				@14 to 15': Significant wood chunks	%M, GSD
15						(15 to 23.5') Very loose, wet, dark gray, poorly graded SAND (SP). @16 to 16.3': Significant wood chunks @17': Brick pieces debris	
	-15	LDW21-GT53A-GB-15-20				@20': Grades siltier	%M, SG, GSD
20							

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▲ SPT N-Value
● Moisture Content (%)

Notes:
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Elevation estimated using proposed location base map, no depth to mudline reported

[DRAFT] Soil Boring Log

LDW21-GT53A-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **190178.63** E/LONG: **1278593.074**	Total Depth (ft): **30**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **0.0**
Collection Date: **08.05.21**		Surface Elevation (ft): **2.5**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Garrett Timm**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
20							
		LDW21-GT53A-GB-20-23.5				(15 to 23.5') Very loose, wet, dark gray, poorly graded SAND (SP). @21.5 to 22': Significant wood piece	%M, GSD
	-20	LDW21-GT53A-GB-23.5-25				@23.5': Grades to siltier and gray	%M, GSD
25						@24.8': Brick pieces debris (3-inch diam.)	
		LDW21-GT53A-GB-25-28.6				@27.5 to 28.5': Grades to siltier	%M, SG, GSDH
	-25	LDW21-GT53A-GB-28.6-30				(28.6 to 30') Loose, wet, black, white, red, poorly graded SAND (SP), fine grained.	%M, GSD
30						End of Boring at 30 ft. Pivot barge to acquire SPT samples as 10, 15, 20, 25, 30, 35 ft.	
	-30						
35							
	-35						
40							

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● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp.
Elevation estimated using proposed location base map, no depth to mudline reported

[DRAFT] Soil Boring Log

LDW21-GT53B-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **190175.401** E/LONG: **1278593.916**	Total Depth (ft): **32**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **9.2**
Collection Date: **08.05.21**		Mudline Elevation (ft): **2.8**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Garrett Timm**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
0						(0 to 10') Not sampled. See GT-53-A boring log.	
10		LDW21-GT53B-GB-10-11.5				(10 to 11.5') Loose to medium dense, wet, red, white, black, poorly graded SAND (SP), little silt. @11.4': Wood chunk within SPT shoe	%M
15		LDW21-GT53B-GB-15-16.5				(15 to 16.5') Loose to medium dense, wet, red, white, black, poorly graded SAND (SP), little silt.	%M
20							

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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp
Mudline elevations determined from leadline measurements and Site tide gage levels
Depth to mudline at this location determined using reading at LDW21-GT53-A & tide stage difference

[DRAFT] Soil Boring Log

LDW21-GT53B-GB

Project #: **180067-02.03**	Project: **LDW Upper Reach Phase II Investigation**	Method: **Rotary Sonic**
Location: **Seattle, WA**	N/LAT: **190175.401** E/LONG: **1278593.916**	Total Depth (ft): **32**
Client: **Lower Duwamish Waterway Group**	Horiz. Datum: **Washington State Plane Coordinate North North American Datum of 1983, U.S. Feet**	Observed Depth to Mudline (ft): **9.2**
Collection Date: **08.05.21**		Mudline Elevation (ft): **2.8**
Contractor: **Holocene Drilling, Inc**	Vert. Datum: **Mean Lower Low Water (MLLW)**	Hammer: **140-lb, 30-in drop, Auto**
Logged By: **Garrett Timm**	Sampler(s): **Split Spoon & Shelby Tube Sampler**	Hammer Efficiency (%): **99**

Depth (ft)	Elevation (ft)	Sample ID	Uncorrected Standard Penetration Resistance (blows per foot) and Moisture Content (%) (1 2 5 10 20 50 100)	Other	Lithology	Soil Description (Samples and descriptions are in recovered depths. Classification scheme: USCS)	Lab Test
20		LDW21-GT53B-GB-20-21.5				(20 to 21.5') Loose, wet, red, white, black, poorly graded SAND (SP), little silt, occasional organics (wood pieces)	%M
	-20						
25		LDW21-GT53B-GB-25-26.5				(25 to 26.5': Loose, wet, red, white, black, SILTY SAND (SM).	%M
	-25						
30		LDW21-GT53B-GB-30-32				(30 to 32') Shelby tube sample. Sample allowed to set for 15 minutes at depth prior to extraction. Highly Plastic SILTY WITH SAND (ML).	%M, SG, ATT, 1-D, CU
	-30					End of Boring at 32 ft	
35							
	-35						
40							

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▲ SPT N-Value
● Moisture Content (%)

Notes:
%M=Percent Moisture Content,SG=Specific Gravity,ATT=Atterberg Limits,GSD=Grainsize Distribution, GSDH=Grainsize Distribution+Hydrometer,1-D: One-densional Consolidation,CU=Unconsolidated Comp.
Mudline elevations determined from leadline measurements and Site tide gage levels
Depth to mudline at this location determined using reading at LDW21-GT53-A & tide stage difference