

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: B-2						
Barton Bridge #20 BHF 0286 (5) - TH-2 (VT-16) GeoDesign #888-04.9		Page No.: 1 of 3		Pin No.: 121172						
Checked By: JFW/DTH		Boring Crew: J.Leonhardt (QC/QA), J. Wimet (GeoDesign)		Casing Sampler						
Date Started: 2/11/14 Date Finished: 2/25/14		Type: AUGER SS		Groundwater Observations (3)						
VTSPG NAD83: N 819468.00 ft E 1723373.00 ft		I.D.: 4 in 1.38 in		Date Depth (ft) Notes						
Station: 13+07.1 Offset: 2.5 LT		Hammer Wt: 140 lb. 140 lb.		02/11/14 See Remark 2.						
Ground Elevation: 856 ft		Hammer Fall: 30 in. 30 in.								
		Hammer/Rod Type: Auto/NWJ								
		Rig: CME 550X ATV CE = 1.4								
Depth (ft)	Strat(1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. (ft)	Drill Rate (min/ft)	Blows/ft (N Value)(2)	Moisture Content %	Gravel %	Sand %	Fines %
0		6" Asphalt								
0		6" Concrete								
0		S1 (2' to 4'): Very dense, light brown with gray and dark brown fine to coarse SAND, some (+) Silt, trace fine Gravel, frozen to moist. (PID = 4.5 PPM) Rec. = 2.0 ft				25-53-36-24 (11)		9.0	46.0	45.0
5		S2 (4' to 6'): Medium dense, dark brown to brown fine to coarse SAND (grading to fine to medium Sand) and SILT, trace fine Gravel, slightly moist. (PID = 1.9 PPM) Rec. = 2.0 ft				4-5-4 (15)				
10		S3 (6' to 8'): Loose, S3A - Top 6": Dark brown fine to coarse SAND and SILT, little fine Gravel, wet. S3B - Bottom 2": Gray fine SAND and SILT, some fine to coarse Gravel, wet. (PID = 1.0 PPM) Rec. = 0.8 ft				50/3* (R)		64.0	24.0	12.0
10		S4 (8' to 10'): Refusal, piece of fractured coarse GRAVEL stuck in spoon tip. (INFERRED BOULDER FILL) Rec. = 0.1 ft				8-58-11 (10)				
15		S5 (10' to 12'): Very dense, dark brown fine to coarse SAND and fine to coarse GRAVEL, little Silt, trace Organics, wet. (PID = 0.6 PPM) Rec. = 0.7 ft				10-12-8 (20)				
20		S6 (12' to 14'): Medium dense, dark brown fine to coarse SAND and fine GRAVEL, little (-) Silt, wet. (PID = 0.5 PPM) Rec. = 0.4 ft				6-5-4 (10)				
20		S7 (14' to 16'): Dense, gray-brown fine to coarse SAND and fine GRAVEL, little Silt, wet. (PID = 0.9 PPM) Rec. = 0.4 ft				4-4-5 (9)				
25		S8 (16' to 18'): Medium dense, gray SILT, some fine Sand, wet. (PID = 0.8 PPM) Rec. = 0.8 ft				5-6-6 (12)		5.0	30.0	65.0
25		S9 (18' to 20'): Loose, gray SILT, some fine Sand, wet. (PID = 0.6 PPM) Rec. = 0.8 ft								
25		S10 (20' to 22'): Medium dense, gray SILT, some fine Sand, wet. (PID = 0.5 PPM) Rec. = 1.1 ft				5-5-4 (11)				
25		S11 (24' to 26'): Medium dense, gray SILT, some fine Sand, wet. (PID = 0.4 PPM) Rec. = 1.3 ft								
30		S12 (29' to 31'): Medium dense, gray SILT, little fine Sand, wet. (PID = 0.3 PPM) Rec. = 1.4 ft				6-5-4 (10)		5.0	10.0	85.0
35		S13 (34' to 36'): Medium dense, gray SILT, little fine Sand, wet. (PID = 0.3 PPM) Rec. = 1.3 ft				5-5-4 (10)				
40		S14 (39' to 41'): Loose, gray SILT, little fine Sand, wet. Rec. = 1.0 ft				5-5-4-3 (9)				
45		S15 (44' to 46'): Medium dense, gray SILT, little fine Sand, wet. Rec. = 1.3 ft				10-9-9-8 (18)		2.0	8.0	90.0
45		S16 (49' to 51'): Medium dense, gray SILT, little fine Sand, wet. Rec. = 1.3 ft				5-9-10-				

BOTTOM OF ABUT NO 2 EL 849.50

GEODESIGN BORING LOG BBS-04.7 BARTON BR. 20.GP.1 VERMONT AOT.GDT 5/12/14

Notes:  
 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.  
 2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.  
 3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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		Hammer/Rod Type: Auto/NWJ								
		Rig: CME 550X ATV CE = 1.4								
Depth (ft)	Strat(1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. (ft)	Drill Rate (min/ft)	Blows/ft (N Value)(2)	Moisture Content %	Gravel %	Sand %	Fines %
55		= 0.7 ft				10 (19)				
55		S17 (54' to 56'): Dense, gray SILT, little fine Sand, wet. Rec. = 0.6 ft				13-15-16-19 (NA)				
60		S18 (59' to 61'): Dense, gray SILT, little fine Sand, wet. Rec. = 0.8 ft				12-20-22-13 (NA)				
65		S19A (64' to 64.8'): Refusal, gray fine to coarse SAND, some Silt, little fine to coarse Gravel, wet. Rec. = 1.3 ft				7-48-50/5 (R)	23.0	40.0	37.0	96.0
65		S19B (64.8' to 65.4'): Refusal, gray SILT, little fine Sand, wet.								
70		S20 (69' to 71'): Very dense, gray SILT, little fine Sand wet. (PID = 4.7 PPM) Rec. = 1.7 ft				24-39-56-75 (95)		13.0	87.0	
75		C1A (72.5' to 74.5'): Phyllite & Limestone Boulder.	C1 (20-50)	77	2					
75		C1B (74.5' to 75'): Glacial Till.			2					
75		C2A (75' to 77.1'): Limestone Boulder.	C2 (20-60)	70	1					
75		C2B (77.1' to 78'): Inferred soil (no recovery).			1.8					
80		Hole stopped @ 78.0 ft			0.8					
85		ESTIMATED BOTTOM OF PILE AT ABUT NO 2 EL 769.5								

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105		Remarks: 1) First attempt ended in refusal at 6 inches deep on concrete. Note piece of rebar in drill cuttings. Move 4 feet north and auger through 6 inches of asphalt and 6 inches of concrete. Borehole advanced with 4.25" HSA to 4 feet deep prior to switching to 4" O.D. casing and wash-drive drilling methods. 2) Moisture observations below 6 feet deep may not accurately reflect in situ conditions due to continuously adding water during borehole advance. 3) Note frequent rig chatter from 8 to 10 feet deep through possible bouldery/cobbly soils. 4) Driller advanced casing to 20 feet deep. Borehole progressed open-hole with the roller bit below 20 feet deep. 5) Note approximately 8 inches of slough at the bottom of the borehole prior to sampling S17 at 54 feet deep. Pound sampler through slough with 6 blows of the hammer. SPT N-value not per ASTM Standard. 6) After sampling S17, drive 4-inch casing to 40 feet deep prior to continuing advancement of the borehole. 7) Driller notes roller bit appears to be bouncing on denser soils beginning at 59 feet deep. 8) Note approximately 18 inches of slough at the bottom of the borehole prior to sampling S18 at 59 feet deep. Pound sampler through slough with 10 blows of the hammer. SPT N-value not per ASTM Standard. 9) After sampling S18, drive 4-inch casing to 50 feet deep. Driller infers casing to have broken at 35 feet deep during advance. Driller telescopes through 4-inch casing with 3-inch casing and drives to 64 feet deep prior to continuing sampling. Pause drilling from 2/14 through 2/24 due to weather and equipment delays. 10) Inferred Bedrock or possible boulders with soil infilling of joints approximately 6 inches thick below 72.5 feet deep. 11) Borehole backfilled with grout, approximately 50gal water, 188 pounds type I/II portland cement, and 40 pounds bentonite powder. 12) Samples S1 through S13 screened in the field with an Ion Science PhocCheck 1000 model PID calibrated to a 100 PPM isobutylene standard. 13) All sample descriptions shown are per the Burmister classification system and are based on visual descriptions made in the field by GeoDesign personnel. Where applicable, laboratory testing results shown are from testing performed by GeoTesting Express, with the Gravel/Sand/Fines breakdown shown per AASHTO M145. 14) Weathering, casing, and ground surface elevation are estimated from an electronic site plan provided by TY Lin and taped measurements made from existing features in the field by GeoDesign personnel.								

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PROJECT NAME:	BARTON VILLAGE
PROJECT NUMBER:	BHF 0286(5)
FILE NAME:	z12j172blog2.dgn
PROJECT LEADER:	J. OLUND
DESIGNED BY:	J. OLUND
BORING LOG 4	
PLOT DATE:	7/26/2016
DRAWN BY:	S. MORGAN
CHECKED BY:	T. POULIN
SHEET	79 OF 110

