



STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG
Brattleboro Bridge #9 Replacement
IM 091-1(65) BR 9

Boring No.: 8-205
Page No.: 1 of 2
Pin No.: 12a026
Checked By: JAG

Boring Crew: T. Farrell (SJB), J. Wimet (GeoDesign)
Date Started: 3/20/12 Date Finished: 3/20/12
VTSPG NAD83: N 136310.00 ft E 1621311.00 ft
Station: 564+47 Offset: 35' R
Ground Elevation: 235 ft

Casing Sampler
Type: H.S.A. SS
I.D.: 4.25 in 1.38 in
Hammer Wt: N.A. 140 lb.
Hammer Fall: N.A. 30 in.
Hammer/Rod Type: Auto/AWJ
Rig: CME 550X ATV CE = 1.5

Groundwater Observations (3)		
Date	Depth (ft)	Notes
03/20/12	12.5	Wet sample.
03/20/12	14.7	In augers.

Depth (ft)	Strat(1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. (ROD %)	Drill Rate (min/ft)	Blows/6" (N Value)(2)	Moisture Content %	Gravel %	Sand %	Fines %
5	XXXX	Asphalt Rec. = 1.5 ft				13-11-20-20 (31)	4.1	56.7	33.5	9.8
		S1 Dense, brown fine to coarse SAND and fine to coarse GRAVEL (occasionally fractured and pulverized), little (-) Silt, moist. (FILL) (AASHTO M145 Classification: A-1-a) (AASHTO M145 Classification: Visual Description (Burmister).)				21-22-24-20 (46)	5.0	59.9	29.1	11.0
		S2 Dense, brown with gray fine to coarse SAND, some fine to coarse Gravel (pulverized and fractured), little Silt, moist. (FILL) Rec. = 1.2 ft (AASHTO M145 Classification: A-1-a) (AASHTO M145 Classification: Visual Description (Burmister).)								
		Inferred transition to natural Silty Sand between 7.5' and 10'. (AASHTO M145 Classification: Field Note.)								
		S3 Very loose, brown to light brown fine SAND and SILT, moist. (SILTY SAND) Rec. = 0.2 ft (AASHTO M145 Classification: A-2-4) (AASHTO M145 Classification: Visual Description (Burmister).)								
10	XXXX	S4 Very loose, brown fine SAND, some Silt, moist (Top 18" to wet (Bottom 6"). (SILTY SAND) Rec. = 2.0 ft (AASHTO M145 Classification: A-4) (AASHTO M145 Classification: Visual Description (Burmister).)				4-2-2-2 (4)	14.0	21.6	50.7	27.7
		S5 Very loose, brown fine SAND, little Silt, wet. (SILTY SAND) Rec. = 1.6 ft (AASHTO M145 Classification: A-2-4) (AASHTO M145 Classification: Visual Description (Burmister).)				2-1-1-2 (2)	27.6	64.3	35.7	
15	XXXX	S5 Very loose, brown fine SAND, little Silt, wet. (SILTY SAND) Rec. = 1.6 ft (AASHTO M145 Classification: A-2-4) (AASHTO M145 Classification: Visual Description (Burmister).)				1-2-2-2 (4)	30.7	79.1	20.9	
		Inferred transition to Weathered Rock between 19.5' and 20'. (AASHTO M145 Classification: Field Note.)								
25	XXXX	S6 Refusal, gray-brown fractured WEATHERED ROCK, little fine to coarse Sand, trace Silt, wet. (WEATHERED ROCK) Rec. = 0.7 ft (AASHTO M145 Classification: A-1-a) (AASHTO M145 Classification: Visual Description (Burmister).)	C1	100 (68)	2.4	34-50/2" (100+)	17.1	66.2	24.4	9.4
		C1 Fair quality, moderately hard, fresh to moderately weathered with occasional highly weathered joints and zones, moderately to very closely jointed, dark gray with white banding PHYLLITE Jointing ~60 degrees from horizontal. Occasional very slight reaction to dilute HCl on joints in possible Limestone beds.				3.1	Top of Bedrock @ 21.0 ft			
		C2 Very poor quality, moderately hard, moderately weathered, closely jointed to fissured, dark gray with orange jointing and white banding PHYLLITE Fractured surfaces show some schistosity. Jointing ~60 degrees from horizontal. Slight reaction to dilute HCl in joints in upper 2" of core.				3.1				
		C3 Poor quality, slight to moderately weathered with moderately weathered jointing, closely jointed, dark gray with orange joints and white				3.2				
						3.9				

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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											Core Rec. (ROD %)
5	XXXX	banding PHYLLITE Fractured surfaces show some schistosity. Jointing ~50 - 70 degrees from horizontal. No reaction to dilute HCl except for a strong reaction in a white seam towards bottom of core.									
		C4 Poor quality, 0" to 24" and 43" to 60" : Slight to moderately weathered with moderately weathered jointing, moderate to closely jointed, dark gray with orange joints and white banding PHYLLITE Jointing ~70 to 80 degrees from horizontal. No reaction to dilute HCl. 24" to 43" : Hard, fresh to slightly weathered, closely to moderately jointed, gray with white banding LIMESTONE. Jointing ~45 degrees from horizontal. Strong reaction to dilute HCl.									
35	XXXX	Hole stopped @ 37.0 ft		100 (47)							
											3
											4.2
											2.3
40	XXXX	Hole stopped @ 37.0 ft									
											2.7
45	XXXX	Hole stopped @ 37.0 ft									
											2.6
50	XXXX	Hole stopped @ 37.0 ft									
											40
											45
											50
											55

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GEOTECH BORING LOG: BRATTLEBORO IM 091-1(65) BR 9 VTRANS FORMAT.GPJ, VERMONT AUT.GDT 12/2/13

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