BOTTOM OF ABUT. #1
ELEV. 624.00

APPROX. PILE TIP @ ABUT #1
ELEV. 598.00

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

BORING LOG

Hyde Park Bridge #42
STP CULV (26)

Boring No.: B-1
Page No.: 1 of 2
Pin No.:
Checked By: DTH

Boring Crew: J. Wimett (GeoDesign), J. Leonhardt (TransTech)
Date Started: 8/13/12 Date Finished: 8/14/12
VTSPG NAD83: N 762699.00 ft E 1612208.00 ft
Station: 2+84 Offset: 14' R
Ground Elevation: 635.0 ft

	Casing	Sampler
Type:	FJ	SS
I.D.:	4 in	1.38 in
Hammer Wt:	140 lb.	140 lb.
Hammer Fall:	30 in.	30 in.
Hammer/Rod Type:	Auto/NWJ	
Rig:	CME 75 TRACK	CE = 1.43

Groundwater Observations

Date	Depth (ft)	Notes
08/13/12	12.0	Wet soil.
08/14/12	21.0	In casing (overnight).

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
		Asphalt, 0.0 ft – 0.2 ft										
		Visual Description (Burmister), S1 (0.5'–2'): Medium dense, brown fine to coarse SAND, some fine Gravel, little Silt, slightly moist, (AASHTO M145 Classification: A-1-b) Rec. = 1.0 ft				9–12–14 (26)		37.3	39.3	11.6		
						10–10–14–12 (24)	4.1 10.6	25.3 0.9	48.4 61.9	13.8 37.1		
5		Visual Description (Burmister), S2 (2'–4'): Medium dense, S2A – Top 6": Similar to S1, (AASHTO M145 Classification: A-1-b) S2B – Bottom 18": Brown fine SAND and SILT, slightly moist, (AASHTO M145 Classification: A-4), Rec. = 2.0 ft				2–5–4–4 (9)	9.1	0.7	68.0	30.6		
						3–4–5–7 (9)	28.2 25.7		7.3 1.4	92.7 98.6	29	6
10							13.2		43.4	56.6		
						7–8–7–6 (15)	16.5					
		Visual Description (Burmister), S3 (5'–7'): S3A – Top 17": Loose, brown fine SAND, some Silt, slightly moist, (AASHTO M145 Classification: A-2-4) S3B – Bottom 4": Medium, gray finely parted SILT & CLAY, moist, (AASHTO M145 Classification: A-4), Rec. = 1.75 ft A-4				2–3–2–9 (5)	22.7 26.8	0.6	48.7 10.6	50.1 89.4		
15						8–9–5–4 (14)	22.2		30.9	69.1		
		Visual Description (Burmister), S4 (7'–9'): Loose, S4A – Top 17": Gray SILT, trace Clayey Silt, trace fine Sand, moist. S4B – Bottom 3": Brown SILT and fine SAND, slightly moist, Rec. = 1.67 ft, (AASHTO M145 Classification: A-4)				4–4–6–8 (10)	25.9		4.2	95.8		
20						6–4–5–5 (9)	24.7					
		Visual Description (Burmister), S5 (10'–12'): Medium dense, brown fine SAND and SILT, moist, Rec. = 2.0 ft				2–5–6–7 (11)	25.9		6.5	93.5	26	3
		Visual Description (Burmister), S6 (12'–14'): S6A – Top 6": Loose, brown fine SAND and SILT, wet. S6B – Bottom 12": Medium, gray finely parted Clayey SILT, trace fine Sand, moist, Rec. = 1.5 ft, (AASHTO M145 Classification: A-4)				5–6–6–15 (12)	25.9 16.0	7.5	7.0 36.8	93.0 51.6		
30		Visual Description (Burmister), S7 (15'–17'): Medium dense, alternating 3" to 6" layers of brown fine SAND and gray SILT, trace Clayey Silt, moist (silt layers) to wet (sand layers), Rec. = 1.33 ft, (AASHTO M145 Classification: A-4)				6–4–3–4 (7)	19.7	9.3	23.4	60.2		
		Visual Description (Burmister), S8 (17'–19'): Medium dense, gray finely parted Clayey SILT, trace fine Sand, trace Organic Fibers, moist to wet, Rec. = 1.33 ft, (AASHTO M145 Classification: A-4)				9–50	11.3	47.7	26.5	20.2		
35		Visual Description (Burmister), S9 (20'–22'): Loose, brown and gray with occasional block partings Clayey SILT, some fine Sand, trace Silt & Clay, trace Organic Fibers, slight Organic Odor, wet, Rec. = 1.33 ft	C1	100 (73)				Top of Bedrock @ 37.0 ft				
		Visual Description (Burmister), S10 (22'–24'): Medium dense, gray finely parted SILT, little Clayey Silt, trace Silty Clay partings, trace fine Sand, trace (–) Organic Fibers, wet, Rec. = 1.33 ft, (AASHTO M145 Classification: A-4)	C2	100	15							
40			C3	(100)	7.5							
		Visual Description (Burmister), S11 (25'–27'): Medium dense, S11A – Top 14": Grayish brown Clayey SILT, little fine Sand, trace Organic Fibers, wet. S11B – Bottom 1": Gray SILT and fine to medium SAND, little (–) fine Gravel, wet, Rec. = 1.25 ft, (AASHTO M145		85 (57)	7.5 7.5 7.5							
45												

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.

BROOK LOG (EDITED) 888-042 HYDE PARK.GPJ VERMONT AOT.GDT 10/22/12

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VTSPG NAD83: N 762699.00 ft E 1612208.00 ft
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Groundwater Observations

Date	Depth (ft)	Notes
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Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
		Classification: A-4)										
55		Visual Description (Burmister), S12 (30'–32'): Loose, gray to grayish brown SILT, some finely parted Clayey Silt, little fine to medium Sand, trace fine Gravel, trace Organic Fibers, wet, Rec. = 0.83 ft, (AASHTO M145 Classification: A-4)										
		Visual Description (Burmister), S13 (35'–36'): Refusal, brownish gray fine to coarse SAND and fine GRAVEL, some Silt, wet, (AASHTO M145 Classification: A-1-b) Rec. = 0.42 ft										
60		Field Note:, Inferred weathered rock.										
		37.0 ft – 42.0 ft, (C1) Fair quality, hard, fresh with occasional decayed abscesses up to 1/4" in diameter in top 12" of core, close to moderately jointed, gray with occasional white intrusions PHYLLITE. Moderate reaction to dilute HCl in white intrusions only. Graphite sheen noticeable on fractured surfaces. Fractured surfaces range widely from horizontal to near vertical.										
65												
		42.0 ft – 43.1 ft, (C2) Excellent quality, slightly weathered with moderately weathered jointing, hard, closely jointed gray with white intrusions PHYLLITE. Moderate reaction to dilute HCl in white portions. Jointing at approximately 70 degrees from horizontal with occasional horizontal seams.										
70												
		43.1 ft – 47.0 ft, (3) Fair quality, slightly to moderately weathered, hard, close to moderately jointed, gray PHYLLITE with white intrusions (Quartz and other minerals). Occasional white intrusions have a moderate reaction to HCl (non-quartz portions). Jointing typically between 70 degrees from horizontal to vertical with occasional horizontal fractures and joints.										
75												
		Hole stopped @ 47.0 ft										
80												
85												
90												
95												

Remarks:
1) Ground surface elevation, coordinates, and stationing are estimated from an electronic site plan provided by TY Lin and taped measurements in the field.
2) Augered to 6" deep prior to sampling S1.
3) Noted a wet layer in at the top of the spoon in sample S6 at 12' deep. Let stabilize for 15 minutes and check water level in borehole. Borehole dry to 14'. Infer wet zone to be perched water within the fill soils.
4) Used 3.25" I.D. hollow stem augers (HSA) to 15' deep. Switch from HSA's to 4" O.D. flush joint casing after sampling S7 at 15' deep.
5) Driller notes loss of water while drilling from 33' deep. Infer due to reaching bottom of clayey silt fill soils.
6) Advance roller bit through inferred weathered rock from 36' to 37' deep.
7) Note black graphite sheen on wash water throughout coring.
8) Core run C2 was stopped after 13" of penetration at 43.1' deep due to core blockage.
9) SPT N-values were performed according to ASTM D1586.
10) Lab testing gradations reported are per AASHTO M145.

Notes:
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TYLININTERNATIONAL

PROJECT NAME: HYDE PARK
PROJECT NUMBER: STP CULV(26)

FILE NAME: z11b292bdrborlogl.dgn
PROJECT LEADER: R. HEBERT
DESIGNED BY: J. OLUND
BORING LOGS 1

PLOT DATE: 11/6/2013
DRAWN BY: S. MORGAN
CHECKED BY: J. OLUND
SHEET 25 OF 60