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

BORING LOG

MARLBORO
BRF 010-1 (43)

Boring No.: B-101
Page No.: 1 of 1
Pin No.:
Checked By: LJD

Boring Crew: Geosearch, Inc. Fitchburg, MA, JE
Date Started: 7/30/12 Date Finished: 7/31/12
VTSPG NAD83: N 137719.00 ft E 1588828.00 ft
Station: 393+10 Offset: 9 RT
Ground Elevation: 1,299.0 ft. (approx)

	Casing	Sampler
Type:	HW	SS
I.D.:	4 in	1.38 in
Hammer Wt:	300	140 lb.
Hammer Fall:	24	30 in.
Hammer/Rod Type:		Auto/N
Rig:	CME 55	CE = 1.3

Groundwater Observations

Date	Depth (ft)	Notes
07/30/12	9.5	

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Bituminous concrete, 0.0 ft – 0.5 ft							
		A-1-a, GrSaSi, gray, Rec. = 1.2 ft, (Fill)			11-17-18 (35)	1.0	54.2	33.7	12.1
		A-1-b, GrSaSi, gry-brn, Rec. = 1.3 ft, (Fill)			11-14-12-12 (26)	5.0	44.7	42.9	12.4
5		A-1-b, SaGrSi, gry-brn, Rec. = 1.0 ft, (Fill)			23-14-11-8 (25)	9.2	40.9	43.2	15.9
		A-4, SaSiGr, brn Rec. = 1.7 ft				31.6	14.2	44.5	41.3
		A-1-a, GrSaSi, brn			5-11-13-11 (24)	9.1	55.8	34.6	9.6
		A-1-a, GrSaSi, brn, Rec. = 1.5 ft			8-16-19-23 (35)	8.3	63.0	27.5	9.5
10		A-1-b, GrSaSi, brn, Rec. = 1.3 ft			20-26-29-46 (55)	6.9	53.3	31.6	15.1
AB #1 BOTTOM OF PILE CAP EL 1288.16		12.0 ft – 14.0 ft, Highly weathered bedrock Rec = 0.3 ft			62/6" (62+)				
15		14.0 ft – 17.5 ft, NXDC, Hard, fresh, dark gray, medium grained QUARTZITE, primary joints low angle, closely spaced (possible boulder).	1 (10-30)	88 (15.5)					
		17.5 ft – 19.0 ft, Hard, fresh light gray, fine grained, QUARTZITE, primary joints low angle, moderately spaced.							
AB #1 PILE TIP EL 1278.16 20		19.0 ft – 24.0 ft, NXDC, Hard, fresh light gray, fine grained, QUARTZITE, primary joints low angle, widely spaced.	2 (10-30)	97 (76)					
25		24.0 ft – 29.0 ft, NXDC, Hard, fresh light gray, fine grained, QUARTZITE, primary joints low angle, widely spaced. Qu = 9,390 psi (24.4 ft) Qu = 8,950 psi (24.7 ft)	3 (10-30)	95 (95)					
		Hole stopped @ 29.0 ft							

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.

BORING LOG J112150.GPJ VERMONT AOT.GDT 10/25/12

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BORING LOG

MARLBORO
BRF 010-1 (43)

Boring No.: B-102
Page No.: 1 of 1
Pin No.:
Checked By: LJD

Boring Crew: Geosearch, Inc. Fitchburg, MA, JE
Date Started: 8/01/12 Date Finished: 8/01/12
VTSPG NAD83: N 137775.00 ft E 1588854.00 ft
Station: 393+85 Offset: 10 LT
Ground Elevation: 1,298.5 ft. (approx)

	Casing	Sampler
Type:	HW	SS
I.D.:	4 in	1.38 in
Hammer Wt:	300	140 lb.
Hammer Fall:	24	30 in.
Hammer/Rod Type:		Auto/N
Rig:	CME 55	CE = 1.3

Groundwater Observations

Date	Depth (ft)	Notes
08/01/12	8.5	

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Bituminous concrete, 0.0 ft – 0.5 ft							
		Gravel base, 0.5 ft – 1.0 ft							
		A-1-a, GrSaSi, gry-brn, Rec. = 1.5 ft, (Fill)			6-11-13-21 (24)	2.3	57.4	31.6	11.0
5		A-1-b, GrSaSi, gry-brn, Rec. = 1.7 ft, (Fill)			5-2-2-7 (4)	3.7	47.8	43.1	9.1
10		A-4, SaSiGr, Rec. = 1.5 ft, with roots, wood pieces (Fill)			2-2-52-35 (54)	47.2	13.7	48.7	37.6
AB #2 BOTTOM OF PILE CAP EL 1286.64		A-4, C-F SAND, some silt, little gravel, brn, very dense							
15		13.0 ft – 15.0 ft, Highly weathered bedrock							
		15.0 ft – 20.0 ft, NXDC, Hard, fresh, gray, fine grained SCHIST, with high angle foliation. Qu = 5,760 psi (16.8 ft) Qu = 3,730 psi (18.6 ft)	1 (60-80)	100 (95)					
AB #2 PILE TIP EL 1276.64 20		20.0 ft – 25.0 ft, NXDC, Hard, fresh, gray, fine grained SCHIST, with high angle foliation, primary joint parallel to foliation, widely spaced. Qu = 1,654 psi (21.0 ft) Qu = 1,816 psi (22.2 ft) Qu = 2,430 psi (23.3 ft) Qu = 3,881 PSI (24.6 ft)	2 (60-80)	100 (87)					
25		Hole stopped @ 25.0 ft							

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.

BORING LOG J112150.GPJ VERMONT AOT.GDT 10/25/12

PROJECT NAME: MARLBORO
PROJECT NUMBER: BRF 010-1(43)

FILE NAME: sllb414bor.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: R. KLINEFLETER
BORING LOGS

PLOT DATE: 28-AUG-2013
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 22 OF 50