

VTTrans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: B-3						
		Clarendon BRO 1443 (48) Clarendon, VT		Page No.: 1 of 1		Pin No.: 12J160						
		Checked By: JFW										
Boring Crew: J. Leonhardt (TransTech), J. Gilman (GeoDesign)		Casing Sampler		Groundwater Observations								
Date Started: 3/06/13 Date Finished: 3/07/13		Type: FJ SS		Date		Notes						
VTSPG NAD83: N 383326 ft E 1501592 ft		I.D.: 4 in 1.38 in		03/06/13		9.0 Wet sample						
Station: 12+25.5 Offset: 7LT		Hammer Wt: N.A. 140 lb.										
Ground Elevation: 645 ft		Hammer Fall: N.A. 30 in.										
		Hammer/Rod Type: Auto/NWJ										
		Rig: CME 75 TRACK C _e = 1.43										
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. (ROD %)	Drill Rate (minutes/ft)	Blows/e ² (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
0 - 9'		Inferred Sand & Gravel fill.										
9 - 11'		S1 (9'-11'): Dense, mixed color fine to coarse GRAVEL, some fine to coarse Sand, trace Silt, wet. Rec. = 0.6 ft (AASHTO M145 Classification: A-1-a.)				17-22-25 (48)	7.9	74.8	16.1	9.1	NP	NP
11 - 20.3'		S2 (11'-20.3'): Refusal, gray fine to coarse SAND, some Silt, some fine to coarse Gravel, wet. Rec. = 1.0 ft (AASHTO M145 Classification: A-1-b.)										
20.3 - 25.5'		C1 (20.5'-25.5'): Good quality, hard, fresh, closely to moderately jointed, white-gray DOLOSTONE. Reacts to dilute HCl when powdered. Fractures typically 20 to 70 degrees from horizontal.	C1	97 (78)	6.5 (100+)	55-27-57 (73)	9.6	41.5	36.4	22.1	NP	NP
Hole stopped @ 25.5 ft												
Remarks: 1) Exploration location taped in the field by GeoDesign. Ground surface elevation, station, and offset shown are estimated from conceptual plans provided by VTTrans. 2) Driller used 3.25" ID HSA to advance to 5 feet deep to create pilot hole for FJ casing advance. 3) Transition between kame terrace and glacial fill strata is inferred based on boring B-4. No indication of strata change was noted during borehole advance. 4) Split spoon refusal and roller bit refusal at approximately 20.3 feet deep. Driller advanced casing to approximately 20.5 feet deep prior to coring. 5) Visual soil descriptions are per the Burmister system. Lab testing gradations reported are per AASHTO M145.												
Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. C _e 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.												

BOTTOM OF
PILE CAP AB#2
ELEV. 636.70

EST. PILE TIP
ELEV. 621.70

GEODESIGN BORING LOG 750-08-10-CLARENDONBRO1443(48)LPJ VERMONT AUT.DBT 4/11/13

VTTrans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: B-4						
		Clarendon BRO 1443 (48) Clarendon, VT		Page No.: 1 of 1		Pin No.: 12J160						
		Checked By: JFW										
Boring Crew: J. Leonhardt (TransTech), J. Gilman (GeoDesign)		Casing Sampler		Groundwater Observations								
Date Started: 3/05/13 Date Finished: 3/06/13		Type: FJ SS		Date		Notes						
VTSPG NAD83: N 383331 ft E 1501609 ft		I.D.: 4 in 1.38 in		03/05/13		7.0 Wet sample						
Station: 12+20 Offset: 10.5RT		Hammer Wt: N.A. 140 lb.										
Ground Elevation: 645 ft		Hammer Fall: N.A. 30 in.										
		Hammer/Rod Type: Auto/NWJ										
		Rig: CME 75 TRACK C _e = 1.43										
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. (ROD %)	Drill Rate (minutes/ft)	Blows/e ² (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
0 - 2'		S1 (0.5'-2'): Medium dense, dark brown fine to coarse SAND, some fine to coarse Gravel, little Silt, moist. Rec. = 0.7 ft (AASHTO M145 Classification: A-1-b.)				7-10-10 (20)	7.1	48.4	43.5	8.1	NP	NP
2 - 4'		S2 (2'-4'): Loose, brown fine to coarse SAND, some fine to coarse Gravel, little Silt, moist. Rec. = 0.7 ft (AASHTO M145 Classification: A-1-b.)				6-4-4-5 (8)	7.9	45.8	42.7	11.5	NP	NP
4 - 5'		S3 (5'-7'): Loose, no recovery. Rec. = 0.0 ft				9-5-2-6 (7)						
5 - 7'		S4 (7'-9'): Loose, gray brown fine to coarse SAND, some fine to coarse Gravel, some Silt, wet. Rec. = 0.9 ft (AASHTO M145 Classification: A-2-4.)				7-4-5-10 (9)	16.0	36.9	42.1	21.0	NP	NP
7 - 10'		S5 (10'-12'): Dense, brown fine to coarse GRAVEL, some fine to coarse Sand, little Silt, wet. Rec. = 1.0 ft (AASHTO M145 Classification: A-1-a.)				21-15-28 (43)	9.3	64.9	22.1	13.0	NP	NP
10 - 12'		S6 (12'-13'): Refusal, brown fine to coarse GRAVEL and fine to coarse SAND, little Silt, wet. Rec. = 0.8 ft (AASHTO M145 Classification: A-1-a.)				25-100 (100+)	9.7	66.1	22.5	11.4	NP	NP
12 - 15'		S7 (15'-17'): Very dense, brown fine to coarse SAND, some fine to coarse Gravel, some Silt, wet. Rec. = 1.0 ft (AASHTO M145 Classification: A-1-b.)				47-35-30-37 (65)	9.7	41.1	35.0	23.9	NP	NP
15 - 17'		S8 (17'-19'): Very dense, gray fine to coarse SAND, some fine to coarse Gravel, some Silt, wet. Rec. = 1.3 ft (AASHTO M145 Classification: A-1-b.)				36-70-44-48 (100+)	8.3	43.0	31.8	25.2	NP	NP
17 - 20'		S9 (20'-22'): Very dense, gray fine to coarse SAND, some Silt, some fine to coarse Gravel, wet. Rec. = 1.0 ft (AASHTO M145 Classification: A-2-4.)				28-55-30-55 (65)	9.2	40.3	28.6	31.1	NP	NP
20 - 22'		C1 (22'-26'): Boulder Fragments.	C1	52 (0)	6.5 (100)							
22 - 26'		C2 (26'-27'): Excellent quality, hard, fresh to slightly weathered, close to moderately jointed, light grayish tan DOLOSTONE. Reacts to dilute HCl when powdered.	C2	100 (100)	8							
26 - 27'		C3 (27'-32'): Fair quality, hard, fresh to slightly weathered, moderately jointed, white-gray DOLOSTONE. Reacts to dilute HCl when powdered. Fractures typically 10 to 30 degrees from horizontal.	C3	87 (70)	5.8 (4.5)							
Hole stopped @ 32.0 ft												
Remarks: 1) Exploration location taped in the field by GeoDesign. Ground surface elevation, station, and offset shown are estimated from conceptual plans provided by VTTrans. 2) Driller used 3.25" ID HSA to advance to 5 feet deep to create pilot hole for FJ casing advance. 3) Roller bit refusal at 22 feet deep. Set casing to 22' deep prior to coring C1. 4) Core runs C1 and C2 were performed continuously without removal of the core barrel. Driller telescoped 3" I.D. casing through 4" I.D. casing to 25 feet deep after coring C1/C2, then advanced roller bit to 26 feet deep to clear the borehole of boulder debris prior to coring C3. 5) Visual soil descriptions are per the Burmister system. Lab testing gradations reported are per AASHTO M145.												
Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. C _e 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.												

BOTTOM OF
PILE CAP AB#2
ELEV. 636.70

EST. PILE TIP

GEODESIGN BORING LOG 750-08-10-CLARENDONBRO1443(48)LPJ VERMONT AUT.DBT 4/11/13

PROJECT NAME: CLARENDON
PROJECT NUMBER: BRO 1443(48)

FILE NAME: s12j160bor1ng
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
BORING LOGS 2

PLOT DATE: 10-SEP-2015
DRAWN BY: J. GRIGAS
CHECKED BY: G. LAROCHE
SHEET 29 OF 59