



STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Londonderry
BF 016-1(33)
VT-11 Bridge 24

Boring No.: **B-101**

Page No.: 1 of 1

Pin No.: 13b262

Checked By: MLM

Boring Crew: GARROW, NIETO

Date Started: 11/12/15 Date Finished: 11/13/15

VTSPG NAD83: N 268141.53 ft E 1548565.44 ft

Station: 14+48 Offset: -23.90

Ground Elevation: 1335.0 ft

Type: WB
I.D.: 4 in
Hammer Wt: N.A.
Hammer Fall: N.A.
Hammer/Rod Type: Auto/AWJ
Rig: CME 45C SKID C. = UNKNOWN

Casing Sampler

WB SS

4 in 1.5 in

N.A. 140 lb.

N.A. 30 in.

Auto/AWJ

CME 45C SKID C. = UNKNOWN

Groundwater Observations

Date	Depth (ft)	Notes
11/13/15	6.2	W.T. after drilling

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 %	
5		A-1-b, GrSa, brn, Moist, Rec. = 0.9 ft, Lab Note: Grass and grass roots were within sample.				1-2-2-4 (4)	13.3	28.8	52.4	18.8	
		A-1-b, GrSa, brn-white, Moist, Rec. = 0.8 ft, Lab Note: Broken rock and small pieces of wood were within sample.				1-2-9-4 (11)	19.9	32.6	51.0	16.4	
		A-1-b, SiGrSa, brn-white, Moist, Rec. = 0.8 ft				1-2-6-3 (8)	21.0	31.8	46.3	21.9	
		Field Note:., Cleaned out with NXDC									
		A-1-b, SiSaGr, brn-gry, Moist, Rec. = 1.1 ft, Lab Note: Broken rock was within sample.					15-9-2-R@3.5" (11)	23.6	38.3	37.9	23.8
10		A-1-b, SaGr, gry, Moist, Rec. = 0.3 ft				R@3.5" (R)	11.3	46.2	39.7	14.1	
		A-1-b, SiSaGr, Lt/brn, Moist, Rec. = 0.8 ft, Lab Note: Broken rock was within sample.				37-33-R@0" (R)	12.7	44.6	35.2	20.2	
		Field Note:., Cleaned out with NXDC									
15		A-2-4, SaGrSi, Lt/brn-gry, Moist, Rec. = 1.0 ft, Lab Note: Broken rock was within sample.				12-19-19-14 (38)	13.3	33.2	32.9	33.9	
		A-4, GrSaSi, Lt/brn-orange, Moist, Rec. = 1.1 ft, Lab Note: Broken rock and a thick rust colored layer were within sample.				28-22-18-20 (40)	16.0	25.0	35.8	39.2	
		A-4, GrSaSi, Moist, Lab Note: Broken rock was within sample.				14-18-R@3.5" (R)	14.9	24.4	28.3	47.3	
		Field Note:., Cleaned out cobbles with NXDC									
20		A-1-a, SaGr, gry, Moist, Rec. = 0.4 ft, Lab Note: Broken rock was within sample.				R@5" (R)	9.0	60.6	25.1	14.3	
25		A-1-a, SaGr, gry, Moist, Rec. = 0.5 ft, Lab Note: Broken rock was within sample.				32-R@2.5" (R)	9.5	64.9	21.7	13.4	
30		27.5 ft - 32.5 ft, Light gray, Gneissic biotite-muscovite-quartz SCHIST, with rare pyrite. Light brown discoloration on joints. Hard, Slightly weathered, Good rock, NX, RMR=61	1 (25)	88 (65)	3	Top of Bedrock @ 27.5 ft					
					4						
					5						
					4						
35		32.5 ft - 37.5 ft, Light gray, Gneissic chlorite-biotite-muscovite-quartz SCHIST, with rare pyrite. Slickensided joint at 32.9 feet. Faint brown staining on joints. Hard, Slightly weathered, Fair rock, NX, RMR=44	2 (20)	96 (47)	5						
					6						
					4						
					4						
40		Hole stopped @ 37.5 ft			4						
Remarks: Hole collapsed at 7.4 feet.											

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 is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG Z LONDONDERRY BF016-1(33).GPJ VERMONT AOT.GDI 1/2/2015



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BORING LOG

Londonderry
BF 016-1(33)
VT-11 Bridge 24

Boring No.: **B-102**
Page No.: 1 of 1
Pin No.: 13b262
Checked By: MLM

Boring Crew: NIETO, GARROW
Date Started: 11/13/15 Date Finished: 11/16/15
VTSPG NAD83: N 268101.48 ft E 1548570.66 ft
Station: 14+65 Offset: 13.00
Ground Elevation: 1337.6 ft

Type: WB
I.D.: 4 in
Hammer Wt: N.A.
Hammer Fall: N.A.
Hammer/Rod Type: Auto/AWJ
Rig: CME 45C SKID C. = UNKNOWN

Groundwater Observations		
Date	Depth (ft)	Notes
11/16/15	15.0	

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 %
		Asphalt Pavement, 0.0 ft - 1.0 ft								
		A-1-a, Gr, brn, Moist, Rec. = 0.3 ft				10-17-13-10 (30)	9.2	76.7	17.4	5.9
		A-1-b, SiSaGr, brn, Moist, Rec. = 1.4 ft Field Note:., Cleaned out				10-12-13-9 (25)	13.2	40.4	34.9	24.7
		A-1-a, SaGr, brn, Moist, Rec. = 0.2 ft, Field Note: Stone in end of sampler.				25-20-13-13 (33)	8.4	72.4	22.8	4.8
		A-2-4, GrSiSa, brn, Moist, Rec. = 0.8 ft Field Note:., Cleaned out				7-5-4-4 (9)	15.4	26.1	39.5	34.4
		A-1-b, SaGr, brn, Moist, Rec. = 0.4 ft				5-R@3.5" (R)	9.5	53.7	30.9	15.4
		Field Note:., Cleaned out, Cobbles				9-R@2.5" (R)	10.8	66.7	22.0	11.3
		A-1-a, SaGr, brn, Moist, Rec. = 0.2 ft, Lab Note: Broken rock was within sample. Field Note:., Cleaned out, Cobbles				16-6-2-3 (8)	16.7	84.5	12.5	3.0
		A-1-a, Gr, gry, Moist, Rec. = 0.4 ft, Lab Note: A lot of broken rock was within sample.				4-4-6-8 (10)	18.8	28.7	36.4	34.9
		A-2-4, GrSiSa, gry, Moist, Rec. = 0.9 ft, Lab Note: Sample tested non-plastic.				13-13-15-20 (28)	19.1	19.4	40.2	40.4
		A-4, SaSi, gry, Moist, Rec. = 1.1 ft				25-R@5" (R)	13.4	27.4	30.7	41.9
		A-4, GrSaSi, gry, Moist, Rec. = 0.8 ft								
		Field Note:., No Recovery				R@6" (R)				
		Field Note:., Cleaned out								
		23.5 ft - 25.0 ft, Light gray, Gneissic biotite-muscovite-quartz SCHIST, Faint orange and brown staining on joints. Hard, Very slightly weathered, Fair rock, NX, RMR=49	1 (20)	30 (60)	3					
		25.0 ft - 27.0 ft, Light gray, Gneissic biotite-muscovite-quartz SCHIST, Orange and brown staining along joints. Highly fractured. Moderately hard, Slightly weathered, Poor rock, NX, RMR=21	2 (10)	36 (0)	6					
		27.0 ft - 32.0 ft, Light gray, Gneissic biotite-muscovite-chlorite-quartz SCHIST, Light orange and brown staining on joints. Hard, Very slightly weathered, Poor rock, NX, RMR=36	3 (15-20)	76 (22)	8					
		32.0 ft - 34.0 ft, Light gray, Gneissic biotite-muscovite-chlorite-quartz SCHIST, with rare pyrite. Faint brown staining on joints. Quartz vein at 33.6-33.8 feet. Hard, Very slightly weathered, Good rock, NX, RMR=61	4 (15-20)	36 (78)	6					
		Hole stopped @ 34.0 ft								
		Remarks: Hole collapsed at 18.4 feet.								
		1.) Attempted sample at 23.0 feet. No penetration. No recovery.								

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. is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG Z LONDONDERRY BF016-1(33).GPJ VERMONT AUT.GDT 1/21/15