



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

BORING NUMBER: B-201
SHEET 1 of 2
DATE STARTED: 11/30/06
DATE COMPLETED: 12/13/06

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 115+62.70
OFFSET: -35.40
VTSPG NAD83: N 888189.22 ft E 1721048.66 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 822.97 ft
GROUNDWATER DEPTH: 11.4 ft 12/14/06
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: HOLT
DRILLER: GARROW
LOGGER: WERNER

BORING RIG: LARGE SKID RIG w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
Top of Well Elevation: 824.47 ft										
		A-4, SaSi, brn, Moist, Rec. = 1.1 ft		7	14.4	11.6	37.2	51.2		
		A-4, SaSi, gry, Moist, Rec. = 1.3 ft		22	13.1	10.3	37.0	52.7		
5		A-4, SaSi, gry, Wet, Rec. = 0.7 ft		3	16.9	12.7	33.8	53.5		
		Field Note: No Recovery, Wood in sampler.		5						
		A-4, SaSi, gry, Wet, Rec. = 0.7 ft		6	14.3	16.2	28.2	55.6		
10		A-4, SaSi, brn, Wet, Rec. = 0.5 ft			14.6	2.1	38.8	59.1		
		A-4, SaSi, gry-brn, Wet, Rec. = 1.3 ft		32	15.4	1.8	31.1	67.1		
		A-4, SaSi, brn, Moist, Rec. = 1.75 ft		34	14.1	8.2	27.1	64.7		
15		A-4, SaSi, brn, Moist, Rec. = 1.5 ft		31	15.1	5.5	33.5	61.0		
		A-4, SaSi, gry, Moist, Rec. = 1.8 ft		31	18.2	4.1	23.4	72.5		
		A-4, Si, brn, Moist, Rec. = 0.4 ft		10	23.7	0.2	5.7	94.1		
		A-4, SaSi, gry, Moist, Rec. = 1.2 ft			18.2	5.3	34.5	60.2		
20		A-4, SaSi, gry, Moist, Rec. = 1.0 ft		15	18.1	13.1	28.4	58.5		
		A-4, SaSi, gry, Moist, Rec. = 1.0 ft		7	18.3	15.0	38.4	46.6		
25		Field Note: No Recovery		19						
		Field Note: No Recovery		15						
		A-4, SaSi, brn, Moist, Rec. = 1.5 ft		7	16.2	7.0	29.7	63.3		
30		A-4, SaSi, brn, Moist, Rec. = 0.8 ft		12	15.2	8.5	24.4	67.1		
		A-4, SaSi, gry, Moist, Rec. = 0.7 ft			12.1	14.0	22.0	64.0		
		A-4, SaSi (HP), gry, Moist, Rec. = 1.0 ft		26	10.3	17.6	21.8	60.6		
35		A-4, SaSi (HP), gry, Moist, Rec. = 0.7 ft		16	10.5	14.6	25.3	60.1		
		Field Note: No Recovery, Stone in end of sampler.		23						
		A-4, GrSaSi, gry, Moist, Rec. = 0.7 ft		R	12.2	24.3	36.1	39.6		
		Field Note: NXDC, Cored ahead, Cobbles								



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SHEET 2 of 2
DATE STARTED: 11/30/06
DATE COMPLETED: 12/13/06

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 115+62.70
OFFSET: -35.40
VTSPG NAD83: N 888189.22 ft E 1721048.66 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 822.97 ft
GROUNDWATER DEPTH: 11.4 ft 12/14/06
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: HOLT
DRILLER: GARROW
LOGGER: WERNER

BORING RIG: LARGE SKID RIG w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
		A-3, Sa, gry, Wet, Rec. = 0.3 ft		R	21.2	7.2	86.9	5.9		
		A-2-4, SiSaGr, gry, Wet, Rec. = 1.7 ft, Pulled casing and replaced shoe with diamond bit.		77	11.9	35.9	35.7	28.4		
		A-4, GrSiSa, gry, Wet, Rec. = 1.0 ft		77	14.5	22.3	40.9	36.8		
45		A-4, SaSi, gry, Wet, Rec. = 0.6 ft		41	22.0	2.7	47.3	50.0		
		A-4, SaSi, gry, Wet, Rec. = 1.7 ft		41	18.6	10.7	41.4	47.9		
		A-2-4, GrSiSa, gry, Wet, Rec. = 0.6 ft		44	15.4	21.8	46.6	31.6		
		A-4, SaSi, gry, Wet, Rec. = 1.0 ft			16.3	19.1	30.0	50.9		
		A-4, Si, gry, Wet, Rec. = 0.6 ft		32	18.3	1.8	18.4	79.8		
50		A-6, SiCl, gry, Wet, Rec. = 0.9 ft			26.1	0.0	3.1	96.9	37	16
		A-6, SiCl, gry, Moist, Rec. = 2.0 ft		31	25.0	0.9	4.5	94.6	33	11
55		A-6, SiCl, gry, Moist, Rec. = 2.0 ft		27	27.2	0.0	3.7	96.3	40	16
60		A-4, GrSaSi, gry, Moist, Rec. = 1.3 ft		R	11.8	29.7	34.2	36.1		
		Field Note: NXDC, Cleaned out casing.								
65		A-4, SiSa, gry, Moist, Rec. = 1.5 ft. Sample was a combination of silt and ground granite.		78	21.5	2.1	52.8	45.1		
		Field Note: Roller cored ahead, Advanced casing, Cleaned out casing, NXDC								
70		A-4, CiSi, gry, Moist, Rec. = 1.4 ft		R	12.2	1.9	22.1	76.0	24	7
		Hole stopped @ 71.5 ft								
75		DRILLER'S NOTES: 1. Installed Inclinator to 70.0 ft. 2. Top of Inclinator is 1.5 ft. above ground surface.								

LOG OF BORING NEWPORT SLOPE STABILITY VT191.GPJ VT AOT.GDT 8/18/14

LOG OF BORING NEWPORT SLOPE STABILITY VT191.GPJ VT AOT.GDT 8/18/14



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

BORING NUMBER: B-202
SHEET 1 of 3
DATE STARTED: 12/13/07
DATE COMPLETED: 1/17/08

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 113+17.00
OFFSET: 133.00
VTSPG NAD83: N 888157.65 ft E 1721345.48 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 812.5 ft
GROUNDWATER DEPTH: 32.5 ft 1/09/08
PROJECT PIN NUMBER: 07B156

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
		Top of Well Elevation: 815.2 ft								
		A-2-4, SiSa, bm, Moist, Rec. = 1.7 ft, Top of inclinometer casing is 2.7 feet above ground level.		12	12.0	16.3	58.5	25.2		
		NXDC, Cleaned out casing, 4.5 ft - 5.0 ft A-1-b, GrSa, bm, Wet, Rec. = 1.0 ft		25	9.9	35.1	52.0	12.9		
10		A-4, SaSl, gry, Wet, Rec. = 0.7 ft		13	14.2	19.3	33.6	47.1		
		No recovery, Stone in end of sampler, 15.0 ft - 17.0 ft		24						
20		A-4, SaSl, gry, Wet, Rec. = 0.9 ft		20	21.7	14.3	24.4	61.3		
		A-2-4, SiSa, bm, Wet, Rec. = 1.9 ft		18	19.5	5.8	62.9	31.5		
30		A-4, SaSl, gry-brn, Moist, Rec. = 1.2 ft		26	16.5	12.6	27.1	60.3		
		Cleaned out casing, 34.4 ft - 35.0 ft A-4, SaSl, bm, Moist, Rec. = 1.4 ft		18	18.4	10.2	22.3	67.5		
40		Visual Classification, A-4, with broken rock, brn, Moist, Rec. = 0.3 ft, insufficient sample for testing. Cobbles, 40.8 ft - 42.8 ft, NXDC, Cored ahead.		R						
		A-7-6, Cl, brn-gry, Moist, Rec. = 1.3 ft, Advanced casing to 47.0 ft.		14	29.2	1.3	4.7	94.0	48	22
50		Visual Classification, Cl with large stones through-out the sample, brn-gry, MTW, Rec. = 1.0 ft. The end of the tube was crushed. A-7-6, Cl, brn, Wet, Rec. = 1.25 ft, insufficient sample for other testing. A-1-b, SiSaGr, gry, Wet, Rec. = 0.85 ft		18	29.6 12.1	39.8	39.2	21.0	47	22
		A-2-4, GrSa, bm, Wet, Rec. = 0.5 ft		41	16.5	21.6	63.9	14.5		



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BORING NUMBER: B-202
SHEET 2 of 3
DATE STARTED: 12/13/07
DATE COMPLETED: 1/17/08

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 113+17.00
OFFSET: 133.00
VTSPG NAD83: N 888157.65 ft E 1721345.48 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 812.5 ft
GROUNDWATER DEPTH: 32.5 ft 1/09/08
PROJECT PIN NUMBER: 07B156

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
		A-2-4, GrSiSa, gry-brn, Moist, Rec. = 1.0 ft		42	17.8	22.0	48.4	29.6		
		A-2-4, SiSa, bm, Moist, Rec. = 1.1 ft		33	14.7	19.1	58.5	22.4		
70		Cobbles 66.0'-70.0' and gravel, NXDC 69.5'-70.0', Cored ahead, Advanced casing to 70.0 ft, 67.0 ft - 70.0 ft A-2-4, GrSa, brn-gry, Moist, Rec. = 1.5 ft		34	15.4	24.5	57.3	18.2		
		A-4, SaSl, gry, Moist, Rec. = 2.0 ft, Sample was hard packed with a trace of clay (NP).		22	18.7	2.6	47.6	49.8		
80		A-2-4, SaSiGr, gry, Wet, Rec. = 1.2 ft		29	16.3	40.6	29.2	30.2		
		A-4, GrSaSl, gry, Moist, Rec. = 1.4 ft, Hard packed material.		55	10.3	21.1	30.7	48.2		
90		Visual Classification, A-2-4, GrSaSl, gry, Wet, Rec. = 0.3 ft, insufficient sample for testing.		19						
		Visual Classification, A-2-4, GrSl, gry, Wet, Rec. = 0.5 ft, insufficient sample for testing, Roller-coned ahead & advanced casing.		39						
100		A-4, Sl, brn, Moist, Rec. = 1.25 ft NXDC, Cleaned out casing, 101.3 ft - 105.0 ft		74	17.3	19.5	14.9	65.6		
		A-4, GrSl, brn-gry, Moist, Rec. = 1.85 ft		75	16.8	30.9	14.0	55.1		
110		A-4, SaGrSl, brn, Moist, Rec. = 0.7 ft, Roller-coned ahead.		R	15.3	35.0	20.5	44.5		
		A-4, GrSl, gry-brn, Moist, Rec. = 1.0 ft, Roller-coned ahead, Advanced casing.		R	19.6	21.4	18.2	60.4		



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BORING NUMBER: B-202
SHEET 3 of 3
DATE STARTED: 12/13/07
DATE COMPLETED: 1/17/08

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 113+17.00
OFFSET: 133.00
VTSPG NAD83: N 888157.65 ft E 1721345.48 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 812.5 ft
GROUNDWATER DEPTH: 32.5 ft 1/09/08
PROJECT PIN NUMBER: 07B156

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
		A-4, Sl, gry-brn, Moist, Rec. = 1.0 ft, Roller-coned ahead, Advanced casing.		R	18.1	19.7	18.8	61.5		
		A-4, GrSl, gry, Moist, Rec. = 0.8 ft, Roller-coned ahead, Advanced casing.		R	18.0	27.4	17.0	55.6		
130		A-4, Sl, gry, Moist, Rec. = 0.9 ft, Roller-coned ahead, Advanced casing.		R	22.6	10.9	15.4	73.7		
		A-4, Sl, gry-brn, Moist, Rec. = 1.2 ft, Roller-coned ahead, Advanced casing.		R	23.3	10.4	16.5	73.1		
140		A-4, SaSl, gry, Moist, Rec. = 0.5 ft, Roller-coned ahead, Advanced casing.		R	14.2	17.4	26.3	56.3		
		A-4, Sl, brn, Moist, Rec. = 0.5 ft, Advanced casing.		R	22.7	0.4	17.0	82.6		
150		A-2-4, SiSaGr, brn, Moist, Rec. = 0.25 ft, Broken rock was throughout sample. Hole stopped @ 151.25 ft		R	10.9	41.0	32.2	26.8		
		DRILLER'S NOTES: 1. Installed inclinometer to 147.3 ft. 2. Top of inclinometer is 2.7 ft above ground surface. Ground water tables with dates: 22.5' on 12/26/07 20.1' on 12/27/07 35.5' on 12/28/07 34.9' on 01/04/08 35.5' on 01/07/08 33.9' on 01/08/08 32.5' on 01/09/08								
160										
170										

LOG OF BORING, NEWPORT, SLOPE STABILITY, VT191.GPJ, VT.ADT.GDT, #81614

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LOG OF BORING, NEWPORT, SLOPE STABILITY, VT191.GPJ, VT.ADT.GDT, #81614

PROJECT NAME: NEWPORT
 SITE NAME: SLIDE
 STATION: 115+15.00
 OFFSET: 129.00
 VTSPG NAD83: N 888283.55 ft E 1721191.24 ft

PROJECT NUMBER: STP 1343(22)
 SITE NUMBER: VT 191
 GROUND ELEVATION: 811.59 ft
 GROUNDWATER DEPTH: 29.0 ft 2/27/07
 PROJECT PIN NUMBER: 07B156

BORING CREW
 CREW CHIEF: PORTER
 DRILLER: PORTER
 LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
 BORING TYPE: WASH BORE
 SAMPLE TYPE: SPLIT BARREL
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
Top of Well Elevation: 814.19 ft										
0		A-2.4, SiSa, brn, Molst. Rec. = 1.6 ft		9	9.9	7.5	67.1	25.4		
1		A-2.4, Sa, brn, Molst. Rec. = 1.8 ft		12	8.7	8.7	74.8	16.5		
5		A-2.4, Sa, brn, Molst. Rec. = 1.7 ft		8	9.3	9.8	72.3	17.9		
8		Visual Classification, A-2.4, Gr Si Sa, brn, Molst. Rec. = 0.4 ft. Insufficient sample for testing. Cleaned out casing with NXDC.		50						
9		A-4, SaSi, brn-gry, Molst. Rec. = 1.2 ft		9	18.1	7.6	34.8	57.6		
10		A-4, SaSi, brn, Molst. Rec. = 1.7 ft		21	18.3	1.2	29.3	69.5		
12		A-2.4, SiSa, brn, Wet. Rec. = 1.25 ft		29	16.4	2.0	63.0	35.0		
15		A-2.4, SiSa, brn, Wet. Rec. = 1.2 ft		21	17.6	4.3	68.7	27.0		
17		A-4, SiSa, gry, Wet. Rec. = 1.7 ft		30	17.5	2.3	60.8	36.9		
20		A-2.4, SiSa, brn, Molst. Rec. = 1.6 ft		27	15.2	0.9	67.6	31.5		
22		A-2.4, SiSa, brn, Molst. Rec. = 1.7 ft		29	16.1	1.2	70.3	28.5		
24		A-2.4, SiSa, brn, Molst. Rec. = 1.1 ft		24	16.2	4.0	70.3	25.7		
25		A-2.4, SiSa, brn, Molst. Rec. = 1.0 ft		18	16.8	1.1	69.2	29.7		
28		A-2.4, SiSa, brn, Molst. Rec. = 1.8 ft. Some small roots & reed/grassy material were within the sample.		14	20.4	4.1	69.9	26.0		
30		A-2.4, SiSa, gry, Molst. Rec. = 0.6 ft. Broken rock was within the sample.		44	12.9	10.4	55.9	33.7		
31		A-4, SaSi, gry, Molst. Rec. = 1.5 ft		13	18.9	0.7	42.5	56.8		
32		A-4, SaSi, gry, Molst. Rec. = 1.7 ft. Small pieces of burnt wood were within the sample.		9	22.9	7.5	42.4	50.1		
35		Field Note: No sample. Stone in end of sampler.		25						
37		A-4, SiSa with some burnt wood and ash material, gry, Molst. Rec. = 0.5 ft		12	15.9	8.1	49.7	42.2		
38		A-1-b, GrSa, gry, Wet. Rec. = 0.5 ft		16.2	30.3	58.8	10.9			
40		Field Note: Boulder. Cored ahead with NXDC and advanced casing.		8	13.0	19.1	32.6	48.3		
41		A-4, SaSi, brn, Wet. Rec. = 1.1 ft		19	12.9	21.2	31.6	47.2		
42		A-4, GrSaSi brn, Wet. Rec. = 0.6 ft		19	12.9	21.2	31.6	47.2		
45		A-4, SaSi, gry, Molst. Rec. = 1.2 ft		24	10.7	16.4	28.7	54.9		
48		Visual Classification, A-4, Sa Si, gry, Molst. Rec. = 0.2 ft. Insufficient sample for testing.		31	13.7					
50		A-2.4, GrSiSa, gry, MTW, Rec. = 1.1 ft		22	13.3	25.8	43.7	30.5		

PROJECT NAME: NEWPORT
 SITE NAME: SLIDE
 STATION: 115+15.00
 OFFSET: 129.00
 VTSPG NAD83: N 888283.55 ft E 1721191.24 ft

PROJECT NUMBER: STP 1343(22)
 SITE NUMBER: VT 191
 GROUND ELEVATION: 811.59 ft
 GROUNDWATER DEPTH: 29.0 ft 2/27/07
 PROJECT PIN NUMBER: 07B156

BORING CREW
 CREW CHIEF: PORTER
 DRILLER: PORTER
 LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
 BORING TYPE: WASH BORE
 SAMPLE TYPE: SPLIT BARREL
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
12		A-4, SiSa, gry, Molst. Rec. = 0.5 ft		12	14.0	13.5	44.3	42.2		
13		A-2.4, GrSiSa, gry, Molst. Rec. = 1.1 ft		13	11.0	29.5	36.9	33.6		
16		A-4, GrSaSi, gry, Wet. Rec. = 1.01 ft		16	11.0	31.1	33.1	35.8		
55		A-4, SaSi, gry, Molst. Rec. = 0.5 ft		30	12.9	9.7	30.3	60.0		
60		A-4, Si, gry, Molst. Rec. = 1.1 ft		43	19.5	4.1	13.1	82.8		
62		A-6, SiCl, gry, Molst. Rec. = 1.6 ft		22	32.1	0.3	4.1	95.6	39	16
64		A-6, SiCl, gry, Molst. Rec. = 1.1 ft		29	30.9	0.0	3.7	96.3	36	15
67		A-6, SiCl, gry, Molst. Rec. = 2.0 ft		27	28.8	0.0	2.3	97.7	40	17
71		A-7-6, SiCl, gry, Molst. Rec. = 0.6 ft		7	33.4	0.0	1.9	98.1	41	19
75		A-6, SiCl, gry, Molst. Rec. = 2.0 ft. Cleaned out casing with roller cone.		25	30.2	0.0	1.0	99.0	34	14
76		Visual Classification, A-6, Sa Cl, gry, Wet. Rec. = 0.2 ft. Insufficient sample for testing.		26	41.4					
80		A-4, GrSiSa, gry, Molst. Rec. = 1.5 ft. Cleaned out casing with roller cone.		52	17.5	23.3	39.9	36.8		
85		A-4, SaSi HP, gry, Molst. Rec. = 1.7 ft. Cleaned out casing with roller cone.		49	11.5	7.4	40.4	52.2		
130		A-4, SaSi, gry, Molst. Rec. = 1.2 ft		16	14.0	6.9	25.9	67.2		
170		A-2.4, SiSa, gry, Molst. Rec. = 1.5 ft		17	20.7	10.8	55.4	33.8		
195		A-4, Si, gry-brn, Wet. Rec. = 1.7 ft		45	25.5	0.3	3.5	96.2	26	5

PROJECT NAME: NEWPORT
 SITE NAME: SLIDE
 STATION: 115+15.00
 OFFSET: 129.00
 VTSPG NAD83: N 888283.55 ft E 1721191.24 ft

PROJECT NUMBER: STP 1343(22)
 SITE NUMBER: VT 191
 GROUND ELEVATION: 811.59 ft
 GROUNDWATER DEPTH: 29.0 ft 2/27/07
 PROJECT PIN NUMBER: 07B156

BORING CREW
 CREW CHIEF: PORTER
 DRILLER: PORTER
 LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
 BORING TYPE: WASH BORE
 SAMPLE TYPE: SPLIT BARREL
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
105		A-6, SiCl, brn, Molst. Rec. = 1.5 ft		39	23.2	0.6	0.0	11.8	87.6	40
106		A-4, Si, brn, Molst. Rec. = 0.5 ft		26.2	26.2	0.6	3.4	87.6	96.6	
107		Field Note: Change in material at 103.0'. Cleaned out casing with roller cone.								
108		A-7-6, Cl Varved, gry-brn, Molst. Rec. = 2.0 ft		26	32.9	0.0	0.7	99.3	58	32
109		Field Note: Roller-coned ahead and advanced casing.								
110		A-7-6, Cl Varved, gry-brn, Molst. Rec. = 2.0 ft		31	31.1	0.0	0.9	99.1	53	27
115		A-7-6, Cl Varved, gry-brn, Molst. Rec. = 2.0 ft. Roller-coned ahead.		43	34.1	0.0	0.9	99.1	56	26
120		A-4, Si, gry, Molst. Rec. = 1.5 ft. Roller-coned ahead.		50	22.9	1.6	9.2	89.2		
125		A-4, SaGrSi, gry, Molst. Rec. = 1.0 ft. Broken rock was within the sample.		R	15.8	27.2	21.4	51.4		
130		A-2.4, GrSiSa, gry, Wet. Rec. = 0.5 ft		55	17.6	27.2	38.9	33.9		
131		A-6, SiCl, brn, Molst. Rec. = 1.3 ft		25.9	25.9	9.2	9.1	81.7		
132		Hole stopped @ 132.0 ft								
135		DRILLER'S NOTES: 1. Installed inclinometer to 130.0 ft. 2. Top of inclinometer is 2.6 ft, above ground surface.								

LOG OF BORING: NEWPORT SLOPE STABILITY VT191.GRA_VT_A07.GDT 8/8/04

LOG OF BORING: NEWPORT SLOPE STABILITY VT191.GRA_VT_A07.GDT 8/8/04

LOG OF BORING: NEWPORT SLOPE STABILITY VT191.GRA_VT_A07.GDT 8/8/04

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

BORING NUMBER: B-204
SHEET 1 of 4
DATE STARTED: 1/22/08
DATE COMPLETED: 3/07/08

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 117+10.00
OFFSET: 132.00
VTSPG NAD83: N 888409.14 ft E 1721039.58 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 784.0 ft
GROUNDWATER DEPTH: 23.4 ft 3/06/08
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
		Top of Well Elevation: 786.6 ft								
		A-2-4, SiSa, brn, Moist, Rec. = 1.2 ft		11	10.1	19.5	57.3	23.2		
5		A-1-b, SaGr, gry, Moist, Rec. = 0.5 ft		11	11.0	56.9	28.3	14.8		
10		A-2-4, SiSa, gry, Moist, Rec. = 0.2 ft		17	19.5	7.1	58.9	34.0		
15		A-2-4, SiSa, gry, Moist, Rec. = 1.1 ft		23	13.9	7.3	67.0	25.7		
20		A-8, Organic Silt (20.9%), brn, Moist, Rec. = 0.2 ft		15	103.8	8.1	33.3	58.6		
		A-4, SaSi, gry, Moist, Rec. = 1.0 ft			15.4					
25		A-4, SaSi, gry, Moist, Rec. = 1.8 ft		37	23.1	1.4	20.9	77.7		
30		Cobbles, 29.5 ft - 30.5 ft								
		A-6, SiCl, gry, Moist, Rec. = 1.4 ft, Roller-coned ahead.		23	24.1	7.5	15.5	77.0	37	16
35		A-7-6, Cl, gry, Moist, Rec. = 2.0 ft, Advanced casing, Roller-coned ahead.		39	27.4	0.0	1.3	98.7	44	20

LOG OF BORING: NEWPORT SLOPE STABILITY VT191.GPJ, VT.ADT.GDT, 8/18/14

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

BORING NUMBER: B-204
SHEET 2 of 4
DATE STARTED: 1/22/08
DATE COMPLETED: 3/07/08

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 117+10.00
OFFSET: 132.00
VTSPG NAD83: N 888409.14 ft E 1721039.58 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 784.0 ft
GROUNDWATER DEPTH: 23.4 ft 3/06/08
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
		Field Class, ClSi, gry, Moist, Rec. = 1.8 ft, Advanced casing, Roller-coned ahead. Sample delivered to UVM for testing.		28						
45		A-4, SaSi, gry, Moist, Rec. = 1.6 ft, Advanced casing, Roller-coned ahead.		60	18.1	2.6	20.1	77.3		
50		A-1-b, SiGrSa, gry, Wet, Rec. = 2.0 ft, Advanced casing, Roller-coned ahead.		41	9.2	22.4	56.5	21.1		
		Field Note, Possible cobbles and gravel. Very hard drilling.								
55		A-4, SaSi, gry, Moist, Rec. = 1.3 ft, Advanced casing.		20	15.3	14.8	25.0	60.2		
60		A-4, SaSi, gry, Moist, Rec. = 1.6 ft, Roller-coned ahead.		56	12.5	18.4	21.8	59.8		
65		Field Class, SaSi, gry, Moist, Rec. = 1.6 ft, Advanced casing, Roller-coned ahead. Sample delivered to UVM for testing.		68						
70		A-4, Si, gry, Moist, Rec. = 1.4 ft, Advanced casing.		R	14.4	11.7	14.7	73.6		
		NXDC, Cobbles, 71.4 ft - 75.0 ft								
75		A-4, Si, gry, Moist, Rec. = 1.6 ft, Advanced casing, Roller-coned ahead.		44	14.5	3.5	19.9	76.6		

LOG OF BORING: NEWPORT SLOPE STABILITY VT191.GPJ, VT.ADT.GDT, 8/18/14

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

BORING NUMBER: B-204
SHEET 3 of 4
DATE STARTED: 1/22/08
DATE COMPLETED: 3/07/08

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 117+10.00
OFFSET: 132.00
VTSPG NAD83: N 888409.14 ft E 1721039.58 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 784.0 ft
GROUNDWATER DEPTH: 23.4 ft 3/06/08
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
		Field Class, ClSi, gry, Moist, Rec. = 1.8 ft, Advanced casing, Roller-coned ahead. Sample delivered to UVM for testing.		64						
85		Field Class, ClSi, gry, Moist, Rec. = 1.5 ft, Advanced casing, Roller-coned ahead. Sample delivered to UVM for testing.		R						
90		Field Class, Sa, gry, Moist, Rec. = 2.0 ft, Advanced casing.		73						
95		A-2-4, SiSa, gry, Moist, Rec. = 1.9 ft, Advanced casing, Roller-coned ahead.		85	16.6	3.9	61.9	34.2		
100		A-4, SaSi, gry, Moist, Rec. = 1.5 ft, Roller-coned ahead. Hydrometer Analysis: Particles smaller than 0.002mm = 2.6%		R	23.0	0.5	22.3	77.2		
105		Field Class, SaClSi (varved), brn-gry, Moist, Rec. = 2.0 ft, Advanced casing, Roller-coned ahead. Sample delivered to UVM for testing.		55						
110		Field Class, SiSaCl (varved), brn-gry, Moist, Rec. = 2.0 ft, Advanced casing, Roller-coned ahead. Cleaned out casing, Sample delivered to UVM for testing.		33						
115		Field Class, SiSaCl Shelby tube, Rec. = 1.8 ft, Roller-coned ahead. Tube delivered to UVM for testing.								
		118.0 ft, Water return changed from brown to gray.								

LOG OF BORING: NEWPORT SLOPE STABILITY VT191.GPJ, VT.ADT.GDT, 8/18/14

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

BORING NUMBER: B-204
SHEET 4 of 4
DATE STARTED: 1/22/08
DATE COMPLETED: 3/07/08

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 117+10.00
OFFSET: 132.00
VTSPG NAD83: N 888409.14 ft E 1721039.58 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 784.0 ft
GROUNDWATER DEPTH: 23.4 ft 3/06/08
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)	RUN	
											REC (%)	RQD (%)
		A-4, Si, brn-gry, Moist, Rec. = 1.5 ft, Advanced casing, Roller-coned ahead. Hydrometer analysis for particles passing 0.002mm = 11.4%		94	18.0	2.7	13.1	84.2				
125		121.5 ft - 125.0 ft, Advanced casing, Roller-coned ahead. Very hard drilling. Possible cobbles.		R								
		Field Class, SiSa with rock, gry, Moist, Rec. = 0.25 ft, Sample delivered to UVM for testing.										
		Cobbles & Boulders, 125.25 ft - 127.0 ft										
130		A-2-4, SiSaGr, brn, Wet, Rec. = 1.0 ft, Advanced casing.		R	14.9	44.3	28.1	27.6				
135		A-4, GrSi, gry, Moist, Rec. = 1.1 ft, Advanced casing. Hydrometer analysis for particle size passing 0.002mm = 4.7%		R	31.6	23.1	17.0	59.9				
140		A-4, SaSi, gry, Moist, Rec. = 1.0 ft, Advanced casing. Hydrometer analysis for particle size passing 0.002mm = 3.5%		R	29.5	17.2	20.1	62.7				
145		Visual Class, SiGr, gry, Moist, Rec. = 0.25 ft		39	16.9	3.1	47.5	49.4				
		A-4, SaSi, brn, Moist, Rec. = 1.0 ft, Advanced casing.										
		147.5 ft - 149.5 ft, Hard. Slightly weathered. NXDC. Vitreous quartz and gray quartzose and micaceous metallimestone.		1	73	0	?					
		149.5 ft - 154.5 ft, Hard, NXMDC. Gray quartzose and micaceous metallimestone with vitreous quartz in the bottom 1 foot of run. Top 0.7 ft moderately weathered, Remainder of core run unweathered.		2	100	84	45					
155		Hole stopped @ 154.5 ft										

LOG OF BORING: NEWPORT SLOPE STABILITY VT191.GPJ, VT.ADT.GDT, 8/18/14

DRILLER'S NOTES:
1. Installed Inclinator to 154.0 ft.
2. Top of Inclinator is 2.6 ft, above ground surface.
NOTE: Accuracy of UVM results could not be relied upon for laboratory soil classification.

PROJECT NAME: NEWPORT PROJECT NUMBER: STP 1343(22)
 SITE NAME: SLIDE SITE NUMBER: VT 191
 STATION: 118+22.00 GROUND ELEVATION: 812.5 ft
 OFFSET: -25.00 GROUNDWATER DEPTH: See Driller's Notes
 VTSPG NAD83: N 888364.41 ft E 1720843.89 ft PROJECT PIN NUMBER: 07B156

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
 BORING TYPE: WASH BORE
 DRILLER: PORTER
 LOGGER: WERNER

CREW CHIEF: PORTER
 DRILLER: PORTER
 LOGGER: WERNER

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
		A-4, GrSaSl, gry, Moist, Rec. = 0.9 ft Field Note: NXDC, Granite cobbles 6.4'-9.0'	31	12.3	22.8	24.5	52.7		
10		A-4, Sl, gry, Moist, Rec. = 1.9 ft	43	17.0	11.4	14.2	74.4	23	5
		Field Note: NXDC, Cobbles 14.6'-16.0'							
		A-4, SaSl, gry, Moist, Rec. = 1.3 ft	52	10.9	13.1	26.0	60.9		
20		A-4, SaGrSl, gry, Moist, Rec. = 1.7 ft	74	11.3	24.0	22.7	53.3		
		A-4, SaSlGr, gry, Moist, Rec. = 1.5 ft	65	9.4	42.7	21.8	35.5		
30		A-2-4, SiSa, gry, Wet, Rec. = 1.7 ft	55	14.9	14.7	64.4	20.9		
		A-4, Sl, gry, Wet, Rec. = 1.9 ft	37	21.3	0.0	12.4	87.6	24	5
40		A-4, SaSl, gry, Wet, Rec. = 1.1 ft	R	20.7	0.5	47.1	52.4		
		A-7-6, Cl, gry, Moist, Rec. = 1.9 ft Field Note: Lost water at 47.0 ft., Roller coned ahead.	43	25.2	0.1	1.9	98.0	41	19
50		A-4, ClSl, gry, Moist, Rec. = 2.0 ft	45	26.8	0.7	2.0	97.3	30	10
		A-4, SaSl, gry, Moist, Rec. = 1.5 ft	89	21.3	0.6	21.5	77.9		

PROJECT NAME: NEWPORT PROJECT NUMBER: STP 1343(22)
 SITE NAME: SLIDE SITE NUMBER: VT 191
 STATION: 118+22.00 GROUND ELEVATION: 812.5 ft
 OFFSET: -25.00 GROUNDWATER DEPTH: See Driller's Notes
 VTSPG NAD83: N 888364.41 ft E 1720843.89 ft PROJECT PIN NUMBER: 07B156

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
 BORING TYPE: WASH BORE
 DRILLER: PORTER
 LOGGER: WERNER

CREW CHIEF: PORTER
 DRILLER: PORTER
 LOGGER: WERNER

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
		A-4, Sl, gry, Moist, Rec. = 1.7 ft	75	20.8	0.1	9.9	90.0		
		Field Note: Granite boulder 63.0'-65.0', Cored ahead.							
		A-4, SaSl, gry, Moist, Rec. = 1.3 ft	79	14.8	1.1	31.9	67.0		
70		A-4, Sl, gry, Moist, Rec. = 1.0 ft	R	16.9	0.4	13.5	86.1		
		A-4, SaSl, gry, Moist, Rec. = 0.7 ft	R	10.3	8.0	44.5	47.5		
80		A-4, SaSl, gry, Moist, Rec. = 1.3 ft	85	11.1	9.0	40.3	50.7		
		A-4, SiSa, gry, Moist, Rec. = 0.4 ft	R	10.1	16.2	42.1	41.7		
90		A-4, SaSl, gry, Moist, Rec. = 0.6 ft	R	9.5	7.7	33.9	58.4		
		A-4, SaSl, gry, Moist, Rec. = 0.6 ft	R	10.9	11.7	34.6	53.7		
100		A-4, SaSl, gry, Moist, Rec. = 0.8 ft	R	16.8	1.8	29.2	69.0	25	6
		A-4, SiSa, gry, Wet, Rec. = 0.7 ft	R	19.1	1.1	49.7	49.2		
110		A-4, SaSl, gry, Moist, Rec. = 0.8 ft	R	19.5	0.8	38.1	61.1		
		A-4, Sl, gry, Wet, Rec. = 2.0 ft	81	24.6	0.0	2.7	97.3		

PROJECT NAME: NEWPORT PROJECT NUMBER: STP 1343(22)
 SITE NAME: SLIDE SITE NUMBER: VT 191
 STATION: 118+22.00 GROUND ELEVATION: 812.5 ft
 OFFSET: -25.00 GROUNDWATER DEPTH: See Driller's Notes
 VTSPG NAD83: N 888364.41 ft E 1720843.89 ft PROJECT PIN NUMBER: 07B156

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
 BORING TYPE: WASH BORE
 DRILLER: PORTER
 LOGGER: WERNER

CREW CHIEF: PORTER
 DRILLER: PORTER
 LOGGER: WERNER

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
		A-4, Sl, gry, Moist, Rec. = 2.0 ft	68	25.1	0.0	5.6	94.4		
		A-7-6, Cl, gry, Moist, Rec. = 2.0 ft	48	26.3	0.3	4.4	95.3	49	21
130		A-7-6, Cl, gry, Moist, Rec. = 2.0 ft, Varved clay.	29	32.3	0.0	2.1	97.9	59	29
		A-7-6, Cl, gry, Moist, Rec. = 2.0 ft, Highly varved clay.	27	32.0	0.0	1.4	98.6	63	33
140		Shelby tube, Field Class: Si Cl, brn-gry, Moist, 138.0 ft - 139.5 ft							
		A-7-6, Cl, gry, Moist, Rec. = 2.0 ft, Highly varved clay.	71	33.5	0.0	4.2	95.8	46	20
		A-4, Sl, brn, Moist, Rec. = 1.3 ft	85	24.8	0.0	3.5	96.5		
150		A-4, SaGrSi, brn, Moist, Rec. = 0.9 ft Hole stopped @ 151.0 ft	R	15.0	30.5	25.6	43.9		
		DRILLER'S NOTES: Ground water tables with dates: a, 2.2' on 05/23/08 b, 6.0' on 05/28/08 c, 43.8' on 06/01/08 d, 27.8' on 06/05/08 e, 41.3' on 07/28/08							
160									
170									

LOG OF BORING NEWPORT SLOPE STABILITY VT191.GPJ, VT.ADT.GPJ, 8/18/14

LOG OF BORING NEWPORT SLOPE STABILITY VT191.GPJ, VT.ADT.GPJ, 8/18/14

LOG OF BORING NEWPORT SLOPE STABILITY VT191.GPJ, VT.ADT.GPJ, 8/18/14



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

BORING NUMBER: B-212
SHEET 1 of 2
DATE STARTED: 10/09/09
DATE COMPLETED: 10/23/09

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 115+32
OFFSET: 555.00
VTSPG NAD83: N 888619.76 ft E 1721454.52 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 721.40 See Note #3
GROUNDWATER DEPTH: See Driller's Notes
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
6		A-2-4, SiSaGr, brn, Wet, Rec. = 1.0 ft		6	20.3	38.4	32.8	28.8		
10		A-6, SiCl, gry, Moist, Rec. = 1.4 ft		14	28.1	0.6	8.5	90.9	37	12
		A-4, CiSi, gry, Wet, Rec. = 0.6 ft		27	26.0	3.7	14.3	82.0	30	10
20		A-4, SaSi, gry, Wet, Rec. = 1.5 ft		21	14.7	15.4	39.6	45.0	18	2
		A-4, Si, gry, Wet, Rec. = 1.6 ft		18	24.2	7.5	19.1	73.4	23	3
30		A-4, Si, gry, Wet, Rec. = 1.8 ft		20	28.5	0.0	1.1	98.9	27	4
		Shelby Tube, Rec. = 1.4 ft, 30.0 ft - 31.4 ft, R @ 31.4' 600 psl								
		A-4, Si, gry, Moist, Rec. = 1.3 ft		28	17.2	8.7	17.5	73.8		
40		A-7-6, Cl, gry, Moist, Rec. = 1.4 ft		21	30.2	0.0	1.0	99.0	49	22
		SiCl Shelby Tube, gry, Moist, Rec. = 1.5 ft, 40.0 ft - 41.5 ft, R @ 41.5'								
		A-1-b, Sa, gry, Wet, Rec. = 1.7 ft		46	17.5	11.4	69.9	18.7		
50		A-4, GrSi, gry, Wet, Rec. = 0.9 ft		42	19.8	23.0	19.4	57.6		
		A-7-6, Cl, gry, Wet, Rec. = 1.6 ft		10	37.3	0.0	2.9	97.1	59	30
		SiCl Shelby Tube, gry, Wet, Rec. = 1.8 ft, 55.0 ft - 57.0 ft								
60		A-7-6, Cl, gry, Moist, Rec. = 1.6 ft, Varved material		14	33.9	0.0	0.8	99.2	59	30
		Cl Shelby Tube, gry, Moist, Rec. = 1.5 ft, 60.0 ft - 62.0 ft								
		A-7-6, Cl, gry, Moist, Rec. = 2.0 ft, Varved material		14	34.4	0.0	1.2	98.8	54	24
70		SiCl Shelby Tube, gry, Moist, Rec. = 1.4 ft, 65.0 ft - 67.0 ft								
		A-6, SiCl, gry, Moist, Rec. = 1.8 ft, Varved material		26	30.5	0.0	4.2	95.8	38	13
		A-4, Si, gry, Moist, Rec. = 1.5 ft		30	31.3	0.0	11.6	88.4		

LOG OF BORING NEWPORT SLOPE STABILITY VT191.GPJ VT AOT.GDT 8/18/14



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

BORING NUMBER: B-212
SHEET 2 of 2
DATE STARTED: 10/09/09
DATE COMPLETED: 10/23/09

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 115+32
OFFSET: 555.00
VTSPG NAD83: N 888619.76 ft E 1721454.52 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 721.40 See Note #3
GROUNDWATER DEPTH: See Driller's Notes
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
				RUN	REC (%)	RQD (%)	D _{lp} (deg)	Drill Rate (min/ft)		
80		A-4, Si, gry, Moist, Rec. = 1.8 ft		31	31.0	0.0	3.7	96.3		
		A-4, Si, gry, Moist, Rec. = 2.0 ft		32	31.0	0.1	3.4	96.5		
90		Visual Classification, Weathered Rock, gry, Wet, Rec. = 0.2 ft Field Note: NXDC, Cobbles, Cored ahead		R						
		A-1-b, SiSaGr, gry, Wet, Rec. = 1.4 ft		80	15.5	41.2	38.2	20.6		
100		A-4, GrSaSi, brn, Moist, Rec. = 1.4 ft		67	19.3	22.6	29.1	48.3		
		Field Note: Boulder/Cobbles /Weathered Rock								
		105.5 ft - 110.5 ft, Gray, Meta-Limestone, Hard, Unweathered, BXMD, Competent		1	96	36	50	9 10 9 9 10		
110		Hole stopped @ 110.5 ft								
120		DRILLER'S NOTES: 1. Installed inclinometer to 105.5 ft. 2. Top of inclinometer is 2.5 ft. above ground surface. 3. Boring elevation approximated from contours on plan sheet.								
130		Ground water tables with dates: a. 1.9' on 10/14/09 (drilled to 28.0') b. 3.0' on 10/15/09 (drilled to 53.0') c. Overflow on 10/16/09 (drilled to 73.0' with casing 8.0' above ground) d. Overflow on 10/20/09 (drilled to 98.0' with casing 3.0' above ground)								
140										

LOG OF BORING NEWPORT SLOPE STABILITY VT191.GPJ VT AOT.GDT 8/18/14

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 115+78
OFFSET: 217.50
VTSPG NAD83: N 888391.59 ft E 1721200.67 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 756.73 ft
GROUNDWATER DEPTH:
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
0-1		A-2-4, GrSiSa, brn, Moist, Rec. = 1,1 ft	3	21,4	25,8	40,2	34,0		
5		NXDC, Cobbles, 3,6 ft - 5,5 ft. Cleaned out casing & cored ahead. Rec. = 0,3 ft	8	14,1	17,9	54,7	27,4		
5-6		A-2-4, SiSa, brn, Molst							
10		No Recovery, 10,0 ft - 12,0 ft. Very easy drilling.	7						
15		A-4, Si, gry, Wet, Rec. = 1,35 ft	12	25,7	4,6	4,8	90,6	24	3
20		A-4, SaSi, gry, Wet, Rec. = 1,0 ft, Roller coned ahead.	11	14,7	3,7	27,4	68,9		
25		A-4, SaSi, gry, Wet, Rec. = 1,2 ft, Roller coned ahead.	20	16,1	2,7	30,3	67,0	22	2
30		A-4, SaSi, gry, Molst, Rec. = 1,2 ft, Roller coned ahead.	15	15,3	5,7	26,1	68,2	24	4
35		A-4, Si, gry, Molst, Rec. = 1,3 ft, Roller coned ahead.	27	15,6	6,8	17,1	76,1	25	4
40		A-4, ClSi, gry, Molst, Rec. = 1,3 ft, Roller coned ahead.	21	18,8	1,9	12,1	86,0	30	10
45		A-4, SaSi, gry, Molst, Rec. = 1,6 ft, Roller coned ahead.	47	14,2	5,2	26,2	68,6	22	4

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 115+78
OFFSET: 217.50
VTSPG NAD83: N 888391.59 ft E 1721200.67 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 756.73 ft
GROUNDWATER DEPTH:
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
46		A-4, SaSi, gry, Moist, Rec. = 0,8 ft, Roller coned ahead.	46	14,9	12,1	27,0	60,9	21	2
55		A-4, SaSi, gry, Molst, Rec. = 1,6 ft, Roller coned ahead.	48	11,7	16,9	34,1	49,0		
60		A-4, Si, gry, MTW, Rec. = 0,4 ft	74	21,6	12,4	6,7	80,9		
60-61		A-2-4, SiSa, gry, MTW, Rec. = 1,4 ft, Roller coned ahead.		16,4	10,4	63,8	25,8		
65		No Recovery, Trace of clay at 65,0 ft, 65,0 ft - 67,0 ft, Roller coned ahead.	31						
70		A-7-5, Cl, brn, Molst, Rec. = 1,7 ft, 600 lb, down pressure.		32,8	0,0	0,0	100,0	65	34
75		A-7-5, Cl, brn, Molst, Rec. = 1,5 ft, Roller coned ahead.	27	31,2	0,0	0,8	99,2	55	25
80		A-7-5, Cl, brn, Molst, Rec. = 1,6 ft, Roller coned ahead.		30,1	0,0	7,0	93,0	57	24
85		A-7-6, Cl, gry-brn, Molst, Rec. = 1,7 ft, Roller coned ahead.	18	36,9	0,0	0,4	99,6	58	29
90		A-7-6, Cl, gry-brn, Molst, Rec. = 2,0 ft		54,6	0,0	1,4	98,6	54	26
90-91		Visual Classification, Si, brn, Molst							
95		A-2-4, SaSiGr, brn, Molst, Rec. = 0,9 ft. Some weathered rock was w/fin sample. 95,9 ft - 100,0 ft, NXDC, Difficult drilling, Layers of cobbles or weathered rock.	R	18,4	41,7	25,1	33,2		

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 115+78
OFFSET: 217.50
VTSPG NAD83: N 888391.59 ft E 1721200.67 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 756.73 ft
GROUNDWATER DEPTH:
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
100		A-4, Si, brn, Moist, Rec. = 1,0 ft. Material was weathered and had the consistency of powder.	R	30,1	1,4	8,2	90,4		
105		A-4, Si, brn, Molst, Rec. = 0,4 ft. Material was weathered and had the consistency of powder.	R	27,1	16,1	15,1	68,8		
110		A-4, Si, brn, Molst, Rec. = 1,0 ft. Material was weathered and had the consistency of powder.	R	29,6	0,0	6,9	93,1		
110-111		Field Note: No Recovery	R						
111-112		Field Note: Hard drilling.	R						
115		Field Note: Run #1, NXDC, 115-117', Rec. = 1,0 ft, NXDC, Advanced casing.							
115-120		Field Note: Run #2, NXDC, 117-120', NXDC, Cored ahead.							
120		A-2-4, SaSiGr, brn, Molst, Rec. = 0,5 ft. Material was weathered.	R	11,6	43,6	23,2	33,2		
120-121		Hole stopped @ 120,5 ft							
125-145		DRILLER'S NOTES: 1. Attempted to install inclinometer, but failed. 2. Drilled another hole near B-213 named B-213A. 3. Installed inclinometer in B-213A.							



STATE OF VERMONT
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BORING NUMBER: B-213A
 SHEET 1 of 1
 DATE STARTED: 11/07/08
 DATE COMPLETED: 11/07/08

PROJECT NAME: NEWPORT
 SITE NAME: SLIDE
 STATION: 115+73
 OFFSET: 217.50
 VTSPG NAD83: N 888388.34 ft E 1721204.51 ft

PROJECT NUMBER: STP 1343(22)
 SITE NUMBER: VT 191
 GROUND ELEVATION: 757.38 ft
 GROUNDWATER DEPTH: No water
 PROJECT PIN NUMBER: 07B156

BORING CREW
 CREW CHIEF: PORTER
 DRILLER: PORTER
 LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
 BORING TYPE: WASH BORE
 SAMPLE TYPE:
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
Top of Well Elevation: 759.88 ft								
10		No samples taken, 0.0 ft - 107.0 ft						
20								
30								
40								
50								
60								
70								
80								
90								
100								
110		Hole stopped @ 107.0 ft						
		DRILLER'S NOTES: 1. Installed Inclinator to 107.0 ft. 2. Top of Inclinator is 2.5 ft. above ground surface. 3. No samples taken for this boring.						

LOG OF BORING NEWPORT SLOPE STABILITY VT191.GPJ VT.AOT.GDT 8/18/14



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BORING NUMBER: B-214
SHEET 1 of 3
DATE STARTED: 3/12/08
DATE COMPLETED: 4/03/08

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 115+77
OFFSET: 338.00
VTSFG NAD83: N 888479.63 ft E 1721283.41 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 747.93 ft
GROUNDWATER DEPTH: See Driller's Notes
PROJECT PIN NUMBER: 07B156
BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
5	A-4, SaSl, gry, Wet, Rec. = 0,95 ft			4	21,5	10,9	28,4	60,7	23	6
10	A-4, SiSa, brn, Wet, Rec. = 0,85 ft			13	16,8	14,0	43,6	42,4		
15	A-4, SaSl, brn, Wet, Rec. = 0,9 ft			6	15,8	8,4	38,7	52,9		
20	A-4, SaSl, brn, Wet, Rec. = 0,4 ft			14	14,1	16,0	35,3	48,7		
25	Visual Classification, Broken Granite rock pieces, Rec. = 0,2 ft									
30	Field Class., Cobbles, Cleaned out casing, Advanced rollercone ahead									
35	A-4, SaSl, gry, Moist, Rec. = 1,2 ft			17	15,3	3,3	23,0	73,7	24	6
40	A-2-4, SiGrSa, gry, Moist, Rec. = 1,5 ft, Roller-coned ahead, Advanced casing.			89	10,7	30,3	42,0	27,7		
45	Field Class., NXDC, Cobbles									
	A-7-6, Cl Varved, gry-brn, Moist, Rec. = 1,0 ft, Hydrometer Analysis; Particles smaller than 0,002mm = 35,7%			22	25,8	14,6	8,9	76,5	46	22
	A-6, SiCl, brn-gry, Moist, Rec. = 1,6 ft, Roller-coned ahead, Advanced casing.			30	25,0	1,7	13,5	84,8	39	16



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BORING NUMBER: B-214
SHEET 2 of 3
DATE STARTED: 3/12/08
DATE COMPLETED: 4/03/08

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 115+77
OFFSET: 338.00
VTSFG NAD83: N 888479.63 ft E 1721283.41 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 747.93 ft
GROUNDWATER DEPTH: See Driller's Notes
PROJECT PIN NUMBER: 07B156
BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
55	A-4, SaGrSl, brn, Moist, Rec. = 0,75 ft			R	14,0	31,4	20,3	48,3		
60	A-4, SaSl, brn, Moist, Rec. = 1,5 ft			88	12,3	19,4	38,3	42,3		
65	A-6, SiCl, brn-gry, Moist, Rec. = 1,2 ft			36	25,6	2,5	9,5	88,0	34	13
70	A-7-5, Cl, brn, Moist, Rec. = 2,0 ft, Roller-coned ahead.			29	32,2	0,0	1,2	98,8	66	34
75	A-7-6, Cl, brn-gry, Moist, Rec. = 2,0 ft, Roller-coned ahead, Advanced casing.			22	34,9	0,0	1,0	99,0	56	29
80	A-7-5, Cl, brn-gry, Moist, Rec. = 2,0 ft, Roller-coned ahead, Advanced casing.			22	35,7	0,0	0,6	99,4	65	34
85	A-7-5, Cl, brn-gry, Moist, Rec. = 1,3 ft, Tube sample using trimmings from triaxial & direct shear tests.				31,6	0,0	0,6	99,4	63	31
90	A-7-6, Cl, brn-gry, Moist, Rec. = 2,0 ft, Roller-coned ahead.			23	37,9	0,0	1,0	99,0	61	31
95	A-7-6, Cl, gry, Moist, Rec. = 2,0 ft, Used material from Triaxial sample "A".				35,1	0,0	0,6	99,4	53	32
	A-7-6, SiCl, gry, Moist, Rec. = 2,0 ft, Roller-coned ahead, Hydrometer Analysis; Particles smaller than 0,002mm = 30,3%			25	32,0	0,0	1,8	98,2	42	17
	A-4, Sl, gry, Moist, Rec. = 1,7 ft			44	28,6	0,0	4,7	95,3		



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BORING NUMBER: B-214
SHEET 3 of 3
DATE STARTED: 3/12/08
DATE COMPLETED: 4/03/08

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 115+77
OFFSET: 338.00
VTSFG NAD83: N 888479.63 ft E 1721283.41 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 747.93 ft
GROUNDWATER DEPTH: See Driller's Notes
PROJECT PIN NUMBER: 07B156
BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
105	A-4, SaGrSl, gry, Wet, Rec. = 1,0 ft, Broken rock was within sample.			R	16,0	39,1	21,7	39,2		
110	A-4, SaGrSl, brn, Moist, Rec. = 2,0 ft			38	16,8	26,2	21,1	52,7		
115	A-4, Si, brn, Wet, Rec. = 1,1 ft			62	32,1	8,3	11,7	80,0		
120	A-4, SiGr, brn, Wet, Rec. = 0,9 ft, Broken rock and some weathered rock was within sample. 115,9 ft - 118,0 ft, NXDC, No Recovery, Suspect severely weathered rock.			R	15,4	43,9	14,6	41,5		
125	118,0 ft - 123,0 ft, Hard, NXMD, Gray quartzite and micaceous metamimestone with vitreous quartz in the bottom 0,35 ft of run. Unweathered to slightly weathered.			1	0	?	?	?		
130	Hole stopped @ 123,0 ft			2	44	36	45	12	6	2
135	DRILLER'S NOTES: 1. Installed inclinometer to 117,8 ft. 2. Top of inclinometer is 2.5 ft. above ground surface.									
140	Ground water tables with dates: 16,3' on 03/14/08 14,5' on 03/18/08 12,8' on 03/29/08 1,4' on 03/21/08 4,7' on 03/25/08									
145										

LOG OF BORING NEWPORT SLOPE STABILITY VTB18.GPJ, VT_A07.GDT, 8/8/04

LOG OF BORING NEWPORT SLOPE STABILITY VTB18.GPJ, VT_A07.GDT, 8/8/04

LOG OF BORING NEWPORT SLOPE STABILITY VTB18.GPJ, VT_A07.GDT, 8/8/04



STATE OF VERMONT
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SUBSURFACE INFORMATION

BORING NUMBER: B-215
SHEET 1 of 2
DATE STARTED: 10/26/09
DATE COMPLETED: 10/30/09

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 117+94
OFFSET: 545.00
VTSPG NAD83: N 888781.10 ft E 1721247.30 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 708.60 See Note #3
GROUNDWATER DEPTH: See Driller's Notes
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
Top of Well Elevation: 710.6 ft										
		Field Note: Cobbles								
5		A-4, SaSi, brn, Wet, Rec. = 0.4 ft		26	25.9	4.0	31.1	64.9		
		A-4, SaSi, brn, Wet, Rec. = 0.4 ft		8	25.3	0.4	36.8	62.8		
10		A-4, Si, gry, Wet, Rec. = 0.4 ft		35	23.8	12.9	16.9	70.2		
15		A-4, ClSi, gry, Wet, Rec. = 1.4 ft		21	28.5	0.0	4.5	95.5	30	8
20		A-7-6, Cl, gry, Wet, Rec. = 0.4 ft		10	37.5	0.2	3.1	96.7	60	31
25		Shelby Tube, brn, Wet, Rec. = 1.3 ft, 25.0 ft - 27.0 ft		7	35.1	0.0	0.8	99.2	62	33
30		A-7-6, Cl, brn, Moist, Rec. = 1.3 ft		10	35.6	0.0	4.3	95.7	62	33
		Shelby Tube, brn, Moist, Rec. = 1.5 ft, 30.0 ft - 32.0 ft		11	33.8	0.0	1.9	98.1	55	28
35		A-7-6, Cl, brn, Moist, Rec. = 1.4 ft, Thin silt varves every 6-7 inches.		5	36.5	0.0	2.6	97.4	58	30
		Shelby Tube, brn, Moist, Rec. = 1.6 ft, 35.0 ft - 37.0 ft		6	18.7	0.0	2.2	97.8	60	33
40		A-7-6, Cl, brn, Moist, Rec. = 1.6 ft								
		Shelby Tube, brn, Moist, Rec. = 1.5 ft, 40.0 ft - 42.0 ft								
45		A-7-6, Cl, brn, Moist, Rec. = 1.4 ft, Silt varves about every 5 inches.								
		Shelby Tube, brn, Moist, Rec. = 1.4 ft, 45.0 ft - 47.0 ft								
		A-7-6, Cl, brn, Moist, Rec. = 1.8 ft, Silt varves about every 1/2-1 Inch.								



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BORING NUMBER: B-215
SHEET 2 of 2
DATE STARTED: 10/26/09
DATE COMPLETED: 10/30/09

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 117+94
OFFSET: 545.00
VTSPG NAD83: N 888781.10 ft E 1721247.30 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 708.60 See Note #3
GROUNDWATER DEPTH: See Driller's Notes
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
				RUN	REC (%)	RQD (%)	Dip (deg)	Drill Rate (min/ft)		
		Shelby Tube, brn, Moist, Rec. = 1.4 ft, 50.0 ft - 52.0 ft								
55		A-7-6, Cl, brn-gry, Moist, Rec. = 1.5 ft, Silt varves about every 1/2-1 inch.		11	37.1	0.0	1.5	98.5	45	20
60		A-7-6, SiCl, brn-gry, Moist, Rec. = 1.6 ft, Silt varves about every 1/2-3 Inches.		11	32.1	0.0	0.5	99.5	43	18
65		A-4, Si with noticeable layers, gry, Moist, Rec. = 1.6 ft		28	27.5	1.3	3.3	95.4		
70		A-4, Si with noticeable layers, gry, Moist, Rec. = 1.5 ft		27	28.5	0.0	5.0	95.0		
75		A-2-4, SiSaGr, gry, Wet, Rec. = 0.7 ft Field Note: NXDC, Soft broken rock		R	15.8	37.6	35.8	26.6		
80		78.0 ft - 83.0 ft, Gray, Meta-Limestone, Hard, Unweathered, BXMD, Competent		1	87	36	50	11 9 11 12 10		
85		Hole stopped @ 83.0 ft								
90		DRILLER'S NOTES: 1. Installed Inclinator to 78.0 ft. 2. Top of Inclinator is 2.0 ft. above ground surface. 3. Boring elevation approximated from contours on plan sheet.								
95		Ground water table: a. Artesian Condition: Overflow on 10/30/09 (drilled to 83.0' with casing 11.0' above ground)								

LOG OF BORING - NEWPORT SLOPE STABILITY VT191.GPJ VT AQT.GDT 8/18/14

LOG OF BORING - NEWPORT SLOPE STABILITY VT191.GPJ VT AQT.GDT 8/18/14



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

BORING NUMBER: B-216
SHEET 1 of 2
DATE STARTED: 11/13/08
DATE COMPLETED: 12/05/08

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 118+97
OFFSET: 282.00
VTSPG NAD83: N 888653.86 ft E 1720991.12 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 746.5 ft
GROUNDWATER DEPTH: 6.6 ft 11/21/08
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
Top of Well Elevation: 749.0 ft										
		Cobbles, No samples taken, 0.0 ft - 7.0 ft								
10		A-4, SaSi, gry, Wet, Rec. = 0.1 ft		8	20.5	9.6	32.5	57.9		
20		A-4, GrSi, gry, Wet, Rec. = 1.0 ft Field Class.: Layer of broken rock Field Class.: NXDC, Boulders & Cobbles		11	17.4	34.1	19.2	46.7		
		A-4, SaSi, gry, Moist, Rec. = 1.3 ft		26	18.2	10.0	22.1	67.9		
		A-2-4, Sa, gry, Wet, Rec. = 1.5 ft		20	18.9	6.7	76.1	17.2		
30		A-2-4, Sa, gry, Wet, Rec. = 1.2 ft		33	23.2	7.8	75.4	16.8		
		A-4, SiSa, gry, Wet, Rec. = 1.8 ft		40	24.6	0.5	49.8	49.7		
40		A-4, SaSi, gry, Wet, Rec. = 2.0 ft		28	26.4	0.0	34.0	66.0		
		A-4, Si, gry, Molst, Rec. = 1.0 ft		51	24.7	0.6	12.7	86.7		
50		A-4, SaSi, gry, Moist, Rec. = 2.0 ft		60	26.3	0.0	26.7	73.3		
		A-4, Si, gry, Moist, Rec. = 1.8 ft		50	27.1	0.0	1.3	98.7		
60		A-4, Si, gry, Moist, Rec. = 1.7 ft		42	26.0	0.0	4.1	95.9		



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

BORING NUMBER: B-216
SHEET 2 of 2
DATE STARTED: 11/13/08
DATE COMPLETED: 12/05/08

PROJECT NAME: NEWPORT
SITE NAME: SLIDE
STATION: 118+97
OFFSET: 282.00
VTSPG NAD83: N 888653.86 ft E 1720991.12 ft

PROJECT NUMBER: STP 1343(22)
SITE NUMBER: VT 191
GROUND ELEVATION: 746.5 ft
GROUNDWATER DEPTH: 6.6 ft 11/21/08
PROJECT PIN NUMBER: 07B156

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	N VALUE	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
		A-7-6, Cl, gry, Moist, Rec. = 0.5 ft Field Class.: Granite Boulder		R	28.4	21.3	9.5	69.2	54	26
70		A-7-5, Cl, brn, Moist, Rec. = 2.0 ft A-7-6, Cl, brn, Moist, Rec. = 1.6 ft		17	34.6	0.0	3.7	96.3	59	27
		A-7-5, Cl, brn, Moist, Rec. = 2.0 ft		20	34.8	0.0	1.2	98.8	66	34
80		A-7-6, Cl, brn, Moist, Rec. = 1.3 ft			34.9	0.0	0.6	99.4	58	30
		A-7-5, Cl Varved, gry, Moist, Rec. = 2.0 ft			34.0	0.0	0.4	99.6	63	33
90		A-7-5, Cl, gry, Moist, Rec. = 2.0 ft		20	36.1	0.0	3.7	96.3	60	29
		A-7-6, SiCl, gry, Moist, Rec. = 1.9 ft			31.7	0.0	2.0	98.0	45	17
100		A-4, Si, gry, Moist, Rec. = 2.0 ft		41	32.2	0.0	2.5	97.5		
		A-4, Si, gry, Wet, Rec. = 2.0 ft		39	31.2	0.0	1.8	98.2		
110		A-4, SaSiGr with weathered rock, brn, Molst, Rec. = 0.7 ft		R	13.3	37.9	26.0	36.1		
		A-1-b, SiSaGr with little weathered rock, brn, Moist, Rec. = 0.8 ft		R	13.2	51.0	25.9	23.1		
		Hole stopped @ 117.0 ft								
120		DRILLER'S NOTES: 1. Installed Inclinator to 117.0 ft. 2. Top of Inclinator is 2.5 ft. above ground surface. 3. No ground water present on 12/16/08.								

LOG OF BORING NEWPORT SLOPE STABILITY VT191.GPJ - VT AOT.GDT 8/18/14

LOG OF BORING NEWPORT SLOPE STABILITY VT191.GPJ - VT AOT.GDT 8/18/14

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B302a SHEET 1 of 8 DATE STARTED: 6/03/13 DATE COMPLETED: 6/04/13					
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPK: N 888103.78 ft E 1721020.69 ft		PROJECT NUMBER: GA1 133-87312 SITE NUMBER: - GROUND ELEVATION: 834.33 ft GROUNDWATER DEPTH: 35.0 ft 6/04/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY: -					
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
0.0 ft - 1.0 ft		Top of soil. Dark brown to black, wet, TOPSOIL.								
1.0 ft - 2.0 ft		A-4, dark brown, wet, silt-gravel, (SM).								
2.0 ft - 10.0 ft		A-4, gray-brown and gray, med. silty, fine to medium SAND, trace gravel, trace clay, gravel is rounded to subangular, (SM).								
10.0 ft - 19.0 ft		A-4, dark gray, dry, SILT, some fine sand, little gravel, (ML).			7.3	14.1	24.2	61.7		
19.0 ft - 19.3 ft		A-4, dark gray, damp, SILT, some fine SAND, 3/4" thick, (ML).								
19.3 ft - 22.0 ft		A-4, gray, dry, SILT, some fine sand, little gravel, fine clay, (ML).								
22.0 ft - 35.0 ft		A-4, dark gray, dry, SILT, some fine sand, little clay, grading at about 30' to same but slight increase medium sand, A-4, trace gravel, (ML).			14.3	2.0	23.0	75.0		

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B302a SHEET 2 of 8 DATE STARTED: 6/03/13 DATE COMPLETED: 6/04/13					
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPK: N 888103.78 ft E 1721020.69 ft		PROJECT NUMBER: GA1 133-87312 SITE NUMBER: - GROUND ELEVATION: 834.33 ft GROUNDWATER DEPTH: 35.0 ft 6/04/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY: -					
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
35.0 ft - 35.1 ft		A-4, brown-gray, fine to medium SAND (clean), (SP).								
35.1 ft - 36.0 ft		A-4, dark gray, dry to damp, dense, silty, fine to medium SAND, little gravel, (SM).								
36.0 ft - 44.0 ft		A-4, dark gray, dry, silty, fine SAND, little gravel, (SM). Brown, dense, medium sand layers at approx. 39', 43', and 44'.								
44.0 ft - 60.0 ft		A-4, dark gray, dry, very dense, SILT, little fine sand, grading to dark gray.								

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B302a SHEET 3 of 8 DATE STARTED: 6/03/13 DATE COMPLETED: 6/04/13					
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPK: N 888103.78 ft E 1721020.69 ft		PROJECT NUMBER: GA1 133-87312 SITE NUMBER: - GROUND ELEVATION: 834.33 ft GROUNDWATER DEPTH: 35.0 ft 6/04/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY: -					
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
0.0 ft - 11.2 ft		clayey SILT, (ML).			11.2	0.0	12.3	87.7	21	1
11.2 ft - 66.0 ft		A-2-4, dark gray, dry, fine to medium SAND, some gravel, some silt (SM).								
66.0 ft - 74.0 ft		A-2-4, dark gray, dry, fine to medium SAND, some gravel, some silt (SM).								
74.0 ft - 81.0 ft		A-4, dark gray, dry, silty, clay, some fine to medium sand, trace gravel.			8.1	26.8	45.0	28.2		

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B302a SHEET 4 of 8 DATE STARTED: 6/03/13 DATE COMPLETED: 6/04/13					
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPK: N 888103.78 ft E 1721020.69 ft		PROJECT NUMBER: GA1 133-87312 SITE NUMBER: - GROUND ELEVATION: 834.33 ft GROUNDWATER DEPTH: 35.0 ft 6/04/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY: -					
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
0.0 ft - 14.6 ft		(CL) Silty sandstone +/- silty on silty surfaces.								
14.6 ft - 18.3 ft		A-4, brown-gray, dry, silty, fine to coarse SAND, trace gravel. At 14.6' grades to gray-brown, fine to coarse SAND, some gravel, some silt (SM).			18.3	1.3	16.4	82.3		
18.3 ft - 93.0 ft		A-4, brown-gray, dry, silty, fine to coarse SAND, trace gravel. At 18.3' grades to gray-brown, fine to coarse SAND, some gravel, some silt (SM).								
93.0 ft - 104.0 ft		A-2-4, gray-brown, dry, fine to coarse SAND, some gravel, some silt, (SM).								

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B302a SHEET 5 of 8 DATE STARTED: 6/03/13 DATE COMPLETED: 6/04/13					
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPK: N 888103.78 ft E 1721020.69 ft		PROJECT NUMBER: GA1 133-87312 SITE NUMBER: - GROUND ELEVATION: 834.33 ft GROUNDWATER DEPTH: 35.0 ft 6/04/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY: -					
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
0.0 ft - 7.0 ft		A-4, dark gray, dry, fine sandy SILT, trace gravel, silty-sandstone, (ML).			7.0	22.8	45.8	31.4		
7.0 ft - 104.0 ft		A-4, dark gray and black, dry to damp, silty, fine to coarse SAND, little gravel, (SM).								
104.0 ft - 110.0 ft		A-4, medium brown, dry to damp, the sandy SILT, trace gravel, (ML).								
110.0 ft - 117.0 ft		A-4, medium brown, dry to damp, the sandy SILT, trace gravel, (ML).								
117.0 ft - 121.0 ft		A-4, medium brown, dry, trace gravel, (ML).			13.7	4.8	25.3	70.1		
121.0 ft - 125.0 ft		A-4, medium brown, trace black layers, dry, the sandy SILT, trace gravel, trace clay, (MH).								

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B302a SHEET 6 of 8 DATE STARTED: 6/03/13 DATE COMPLETED: 6/04/13					
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPK: N 888103.78 ft E 1721020.69 ft		PROJECT NUMBER: GA1 133-87312 SITE NUMBER: - GROUND ELEVATION: 834.33 ft GROUNDWATER DEPTH: 35.0 ft 6/04/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY: -					
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
125.0 ft - 127.0 ft		A-7-6, orange-brown and dark gray, dry to damp, varved SILT, (CH-MH). Banded color a few mm thick. Same material, different color.								
127.0 ft - 128.0 ft		A-7-6, orange-brown and dark gray, dry to damp, varved the SAND and SILT trace gravel, (CH-MH). Banded color not as apparent.								
128.0 ft - 138.0 ft		A-7-6, orange brown, damp, SILT, (CH-MH).								
138.0 ft - 146.0 ft		A-7-6, orange-brown, dry, SILT, some gravel (weathered subangular phyllite), little fine to coarse sand, (MH).								
146.0 ft - 150.0 ft		A-7-6, dark gray and orange-brown, dry, varved SILT, silty-sandstone, (MH).			32.2	0.0	0.9	99.1	61	29
150.0 ft - 160.0 ft		A-7-6, dark gray, silty, fine to medium SAND, trace gravel, (SM).								
160.0 ft - 167.0 ft		A-7-6, dark gray, silty, fine to medium SAND, trace gravel, (SM).								
167.0 ft - 170.0 ft		A-7-6, dark gray, silty, fine to medium SAND, trace gravel, (SM).								

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B302a SHEET 7 of 8 DATE STARTED: 6/03/13 DATE COMPLETED: 6/04/13					
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPK: N 888103.78 ft E 1721020.69 ft		PROJECT NUMBER: GA1 133-87312 SITE NUMBER: - GROUND ELEVATION: 834.33 ft GROUNDWATER DEPTH: 35.0 ft 6/04/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY: -					
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
0.0 ft - 28.3 ft		A-4, dark brown, moist, soft, SILT, trace sand, (ML). 100' = 125, 130, 150, 125 SF 100' = 125, 130, 150, 125 SF 100' = 125, 130, 150, 125 SF			28.3	0.0	8.8	91.4		
28.3 ft - 150.0 ft		A-4, dark gray, dry, silty, fine to medium SAND, trace gravel, (SM).								
150.0 ft - 158.0 ft		A-4, alternating dark brown, dry to damp, SILT, with orange-brown fine to medium sand layers +/- 12" thick, (ML).								
158.0 ft - 160.0 ft		A-4, dark gray, clayey SILT, with fragments of cobble as described above, weathered by Rq, (ML).								
160.0 ft - 161.0 ft		Highly weathered micaceous rock as described above, dry.								
161.0 ft - 164.0 ft		Highly weathered micaceous rock as described above, dry.								
164.0 ft - 166.0 ft		A-4, dark brown, moist to wet, silty, fine SAND, with interspersed rock fragments (as described above), (SM).								
166.0 ft - 171.0 ft		A-4, dark brown, moist to wet, silty, fine SAND, with interspersed competent rock fragments at bottom reworked by Rq, (SM).								
171.0 ft - 176.0 ft		Dark gray, silty, micaceous PHYLITE, highly weathered, very strong. Possible fracture zone 172.0 to 173 as described by smaller, weathered rock fragments.								

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B302a SHEET 8 of 8 DATE STARTED: 6/03/13 DATE COMPLETED: 6/04/13					
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPK: N 888103.78 ft E 1721020.69 ft		PROJECT NUMBER: GA1 133-87312 SITE NUMBER: - GROUND ELEVATION: 834.33 ft GROUNDWATER DEPTH: 35.0 ft 6/04/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY: -					
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	RUN	REC (%)	ROD (%)	Dr Rate (in/hr)	UCS (psi)	LL (%)	PI (%)
0.0 ft - 176.0 ft		Hole stopped @ 176.0 ft								
<p>Notes</p> <ul style="list-style-type: none"> - 6" casing with continuous 4" core barrel casing used in expansion. - 18" hole was drilled using 8" casing and 6" core barrel to install inclinometer casing. - Piezometers installed at 60', 100 ft, and 166 ft. - 3.3" inclinometer casing installed to 176 ft. - Reported water level was measured with casing piezometer. - Data points indicated in soil descriptions are based on previous SPT values and field experience. 										

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B304a SHEET 1 of 7 DATE STARTED: 6/11/13 DATE COMPLETED: 6/11/13			
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888291.11 ft E 1721201.34 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 800.66 ft GROUNDWATER DEPTH: 25.45 ft 6/13/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY:			
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		0.0 ft - 0.5 ft. Topsoil and root mat. 0.5 ft - 10.0 ft. A-2-4, brown, dry to damp, fine to medium SAND, little silt, trace gravel, (CL), (SL).						
		10.0 ft - 28.0 ft. A-2-4, gray-brown, dry to damp, fine to coarse SAND, some silt, trace gravel, trace clay, (FLL), (SM). Occasional pockets of clayey SILT. Soils grayish color from 25-26 ft.			15.6	4.3	66.6	28.1
		16.0 ft. Cobble encountered.						

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B304a SHEET 2 of 7 DATE STARTED: 6/11/13 DATE COMPLETED: 6/11/13			
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888291.11 ft E 1721201.34 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 800.66 ft GROUNDWATER DEPTH: 25.45 ft 6/13/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY:			
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		28.0 ft - 31.0 ft. A-2-4, gray-brown, dry to damp, fine to coarse SAND, some silt, little clay, trace gravel, (FLL), (SM).						
		31.0 ft - 34.0 ft. A-4, dark brown, dry to damp, sandy SILT, trace gravel, little roots (ML).						
		34.0 ft - 36.0 ft. A-4, dark brown gray, moist, loose, SILT, trace gravel, trace fine to coarse sand, (ML).						
		36.0 ft - 51.0 ft. A-4, brown-gray, moist, very stiff, little to medium sandy SILT, (ML). Layers of coarse SAND at approx. 38', 42' and 45'. Color change to dark gray after 49 ft.						

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B304a SHEET 3 of 7 DATE STARTED: 6/11/13 DATE COMPLETED: 6/11/13			
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888291.11 ft E 1721201.34 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 800.66 ft GROUNDWATER DEPTH: 25.45 ft 6/13/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY:			
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		51.0 ft - 55.0 ft. A-4, dark gray, dry to moist, dense, silty fine SAND, little gravel, (SM). Slippensides at 54'. Grades to a silty clay, trace gravel.						
		55.0 ft - 56.0 ft. A-4, dark gray, dry to moist, little to medium SILT, little gravel, (SM). Varves beginning.						
		56.0 ft - 71.0 ft. Red dark gray dry to moist, hard, silty CLAY, trace gravel, (CL). Varves of silty CLAY and fine sand between 65-71'.						
		71.0 ft - 101.5 ft. A-4, dark gray, dry to damp, silty fine to medium SAND, little clay, fine silt, streak. Ground increases with depth. Clay varies from trace to little through interval (71-96'), (SM).						

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B304a SHEET 4 of 7 DATE STARTED: 6/11/13 DATE COMPLETED: 6/11/13			
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888291.11 ft E 1721201.34 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 800.66 ft GROUNDWATER DEPTH: 25.45 ft 6/13/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY:			
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		82.0 ft - 84.0 ft. Slippensides.						

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B304a SHEET 5 of 7 DATE STARTED: 6/11/13 DATE COMPLETED: 6/11/13			
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888291.11 ft E 1721201.34 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 800.66 ft GROUNDWATER DEPTH: 25.45 ft 6/13/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY:			
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		101.5 ft - 104.0 ft. A-4, mixed dark gray, moist, dense, silty CLAY pockets within a matrix of dark gray fine to coarse SAND, some silt, little clay. Silty clay appears as rounded soil. (CLML). Possible disturbed zone.				12.3	58.3	28.4
		104.0 ft - 111.0 ft. A-4, medium brown and gray, dry to moist, stiff, silty CLAY, slightly varved with fine sand, (CLML). Varves become more defined at 106'. Depths between 106'-120' are approximate due to sample.						
		111.0 ft - 121.0 ft. A-4, gray, dry to moist, stiff, silty CLAY, varved with the sand, (CLML). Varves grade from silty clay to clayey fine sand at approx. 116'. Depths between 105'-126' are approximate due to sample shown in core barrel.						

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B304a SHEET 6 of 7 DATE STARTED: 6/11/13 DATE COMPLETED: 6/11/13			
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888291.11 ft E 1721201.34 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 800.66 ft GROUNDWATER DEPTH: 25.45 ft 6/13/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY:			
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		125.5 ft - 126.5 ft. A-4, gray, dry to moist, stiff, silty CLAY, varved with the sand, (CLML), (approximate depths).						
		126.5 ft - 129.0 ft. A-4, mixed zone of medium orange-brown clayey SILT with gray silty SILT, some subangular gravel, (ML), (approximate depths).						
		129.0 ft - 130.0 ft. A-4, medium orange-brown, SILT, trace clay, (ML), (approximate depths).						
		130.0 ft - 132.0 ft. A-4, medium brown, dry to moist, SILT, with orange-brown varves, clayey SILT, (ML). Appears rounded/disturbed, (approximate depths).						
		132.0 ft - 136.0 ft. A-4, medium brown, dry to moist, SILT and clayey SILT, with orange-brown varves, (ML). Has clearly defined varves that appear folded, (approximate depths).				28.7	0.0	0.6
		136.0 ft - 137.0 ft. A-4, medium brown, dry to moist, silty fine to medium SAND, some gravel, trace clay, (SM), (approximate depths).						
		137.0 ft - 141.0 ft. A-4, gray and brown, dry to damp, SILT, little fine sand, some gravel (subangular weathered PHYLLITE), (ML).						
		141.0 ft - 143.0 ft. A-4, gray and orange-brown SILT. Zone appears rounded, (ML).						
		143.0 ft - 143.5 ft. A-4, orange brown, wet, SILT, (ML).						
		143.5 ft - 146.0 ft. A-4, dark gray-brown, moist, SILT, appears modified, (ML).						
		146.0 ft - 153.0 ft. A-4, gray and brown, dry to damp, SILT, little fine sand, little gravel (subangular weathered PHYLLITE).						

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B304a SHEET 7 of 7 DATE STARTED: 6/11/13 DATE COMPLETED: 6/11/13			
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888291.11 ft E 1721201.34 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 800.66 ft GROUNDWATER DEPTH: 25.45 ft 6/13/13 PROJECT PIN NUMBER: -			BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY:			
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Helena Hollauer BORING RIG: 600T Sonic								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		153.0 ft - 159.0 ft. A-4, dark brown-gray, moist, soft, SILT, (ML).						
		159.0 ft - 161.0 ft. A-6, cobble, followed by dark gray, moist, soft, silty CLAY, mixed with fresh rock fragments, (CL).						
		161.0 ft - 162.0 ft. A-4, dark gray, stiff, silty CLAY, mixed with fresh rock fragments, (CL).						
		162.0 ft - 163.0 ft. A-4, dark brown, medium dense, SILT, (ML).						
		Hole stopped @ 163.0 ft.						
		Notes: - Descriptions indicated in soil descriptions are based on adjacent SPT values and field experience. - 2" well screen set 140 to 145 ft. Same pack from 137.5 to 146 ft. Benetville cobbles from 133 to 137.5 ft and 146 to 163 ft. Grouted from 133 ft to ground surface.						

LOGS FOR BOREHOLE NO. NEWPORTCITY_STP134-3(22)_B304a

LOGS FOR BOREHOLE NO. NEWPORTCITY_STP134-3(22)_B304a

LOGS FOR BOREHOLE NO. NEWPORTCITY_STP134-3(22)_B304a

LOGS FOR BOREHOLE NO. NEWPORTCITY_STP134-3(22)_B304a

LOGS FOR BOREHOLE NO. NEWPORTCITY_STP134-3(22)_B304a

LOGS FOR BOREHOLE NO. NEWPORTCITY_STP134-3(22)_B304a

LOGS FOR BOREHOLE NO. NEWPORTCITY_STP134-3(22)_B304a

LOGS FOR BOREHOLE NO. NEWPORTCITY_STP134-3(22)_B304a

VTTrans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B305a SHEET 1 of 3 DATE STARTED: 6/10/13 DATE COMPLETED: 6/11/13		
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888253.58 ft E 1721088.23 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 825.16 ft GROUNDWATER DEPTH: 12.0 ft 6/11/13 PROJECT PIN NUMBER: -			BORING CREW: New Hampshire Boring DRILLER: Bub Thompson LOGGER: Noah Chlnburg BORING RIG: CME-750		
BORING CREW: New Hampshire Boring DRILLER: Bub Thompson LOGGER: Noah Chlnburg BORING RIG: CME-750		BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL HAMMER TYPE: ROPE & CATHEAD CHECKED BY:					
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		S1: 0.0 ft - 2.0 ft, A-1-b, A-1-b, dark brown, moist, loose, well graded fine to coarse SAND, little gravel, little organics, (FILL), (SP), Rec. = 0.17 ft	1-3-4-5 (7)				
		S2: 5.0 ft - 7.0 ft, A-4, A-1-b, top 3"; Gray brown, wet, medium dense, medium SAND, little gravel, (SP), A-4, bottom 12"; Gray, wet, medium dense, SILT, some fine to medium sand, little gravel, (FILL), (ML), Rec. = 1.25 ft	10-12-12-11 (24)	10.4	15.4	30.2	54.4
		S3: 10.0 ft - 12.0 ft, A-4, A-4, gray brown, wet, medium dense, SILT, some fine to medium SAND, little gravel, (FILL), (ML), Rec. = 1.42 ft	13-16-19-26 (35)				
		13.5 ft, Refusal of casing at approximately 13.5', 6-8" cobble.					
		S4: 15.0 ft - 17.0 ft, No recovery.	35-49-46-50 (95)				
		S5: 20.0 ft - 22.0 ft, A-4, gray-brown, wet, dense, SILT, some fine sand, (FILL), (ML), Black stain 12" from top, Rec. = 1.33 ft	13-17-20-26 (37)	16.0			
					2.0	23.4	74.6

VTTrans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B305a SHEET 2 of 3 DATE STARTED: 6/10/13 DATE COMPLETED: 6/11/13		
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888253.58 ft E 1721088.23 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 825.16 ft GROUNDWATER DEPTH: 12.0 ft 6/11/13 PROJECT PIN NUMBER: -			BORING CREW: New Hampshire Boring DRILLER: Bub Thompson LOGGER: Noah Chlnburg BORING RIG: CME-750		
BORING CREW: New Hampshire Boring DRILLER: Bub Thompson LOGGER: Noah Chlnburg BORING RIG: CME-750		BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL HAMMER TYPE: ROPE & CATHEAD CHECKED BY:					
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		S6: 25.0 ft - 27.0 ft, A-4, gray-brown, wet, dense, SILT, some fine to coarse sand, little gravel, (FILL), (SM), Layer of clayey sand about 8" from top of sample, Rec. = 0.92 ft	11-15-23-28 (38)				
		S7: 30.0 ft - 32.0 ft, A-4, top 6"; Medium brown, wet, very dense, fine to medium SAND, little gravel, little silt, (FILL), (SM), A-4, bottom 5"; Gray brown, wet, very dense, sandy SILT, trace clay, Low plasticity, high dilatency, trace organics (roots), (ML), Rec. = 0.92 ft	15-33-32-27 (65)	11.0	19.7	63.6	16.7
		S8: 35.0 ft - 37.0 ft, A-4, gray brown, wet, very dense, silty fine to medium SAND, trace clay, (SM), Rec. = 1.08 ft	15-24-27-26 (51)				
		S9: 40.0 ft - 42.0 ft, A-4, gray brown, wet, medium dense, silty fine SAND grading to gray, medium dense, silty medium SAND, (SM), Rec. = 1.08 ft	7-7-9-7 (16)				
		S10: 42.0 ft - 44.0 ft, A-4, top 9"; Gray, wet, medium dense, silty fine SAND, (SM), A-4, bottom 9"; Brown-gray, wet, medium dense, silty fine sand, little gravel, (SM), Rec. = 1.5 ft	5-8-11-15 (19)				
		S11: 44.0 ft - 46.0 ft, A-4, gray-brown, wet, medium dense, sandy SILT, some gravel, some clay, low plasticity, high dilatency, (ML), Gravel blocking top of spoon, Top 8-10" suspected wash, Rec. = 1.25 ft	12-13-12-12 (25)				
		S12: 46.0 ft - 48.0 ft, No recovery; spoon full of wash.	16-21-29-32 (50)				

VTTrans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B305a SHEET 3 of 3 DATE STARTED: 6/10/13 DATE COMPLETED: 6/11/13		
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888253.58 ft E 1721088.23 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 825.16 ft GROUNDWATER DEPTH: 12.0 ft 6/11/13 PROJECT PIN NUMBER: -			BORING CREW: New Hampshire Boring DRILLER: Bub Thompson LOGGER: Noah Chlnburg BORING RIG: CME-750		
BORING CREW: New Hampshire Boring DRILLER: Bub Thompson LOGGER: Noah Chlnburg BORING RIG: CME-750		BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL HAMMER TYPE: ROPE & CATHEAD CHECKED BY:					
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		S13: 50.0 ft - 52.0 ft, A-4, gray, moist, dense, SILT, some fine sand, trace gravel, trace clay, (ML), PP = 3.2 tsf, Rec. = 1.33 ft	17-17-26-35 (43)	14.6	7.9	23.0	69.1
		54.0 ft - 55.0 ft, Approx. 10" of cobble based on drill rig behavior.					
		S14: 55.0 ft - 57.0 ft, A-4, gray, wet, medium dense, silty fine to medium SAND, some coarse gravel, trace clay, (SM), Rec. = 0.67 ft	17-15-10-15 (25)				
		57.0 ft - 60.0 ft, Driller reported cobbles 57-60.					
		S15: 60.0 ft - 62.0 ft, A-4, gray, wet, very dense, silty fine SAND, (SM), Top 2" of sample dayey silt, PP = 1.5, 1.7, 2.1 tsf, Tv = 0.25, 0.21 tsf, Rec. = 0.75 ft	32-35-40-54 (75)				
Hole stopped @ 62.0 ft							
Notes: - Drilled with 60 ft of 5" casing. - Hole abandoned at 62 ft due to deviation of casing on suspected boulder/cobble. Casing broke at 55 ft during removal. See log for B305b for depths greater than 62 ft.							

LOG OF BORING & WELL, NEWPORT (GPA), VT, AOT, GDT, #13134

LOG OF BORING & WELL, NEWPORT (GPA), VT, AOT, GDT, #13134

LOG OF BORING & WELL, NEWPORT (GPA), VT, AOT, GDT, #13134

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

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landside
STATION: -
OFFSET: -
VTSPG: N 888253.58 ft E 1721088.23 ft

BORING CREW: New Hampshire Boring
DRILLER: Bub Thompson
LOGGER: Noah Chibburg / Helena Hollauer
BORING RIG: CME-750

BORING NUMBER: B3056
SHEET: 1 of 8
DATE STARTED: 6/11/13
DATE COMPLETED: 6/19/13

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 825.16 ft
GROUNDWATER DEPTH: 35.15 ft 6/13/13
PROJECT PIN NUMBER: -

BORING TYPE: Wash Bore
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 8 IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		Top of Wall Elevations: 828.72 ft								
		1.0 ft - 65.0 ft. Note: Continuation of B3055. Washed to 65 ft.								

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

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landside
STATION: -
OFFSET: -
VTSPG: N 888253.58 ft E 1721088.23 ft

BORING CREW: New Hampshire Boring
DRILLER: Bub Thompson
LOGGER: Noah Chibburg / Helena Hollauer
BORING RIG: CME-750

BORING NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 825.16 ft
GROUNDWATER DEPTH: 35.15 ft 6/13/13
PROJECT PIN NUMBER: -

BORING TYPE: Wash Bore
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 8 IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		48.0 ft. Driller reported cobble.								

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

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landside
STATION: -
OFFSET: -
VTSPG: N 888253.58 ft E 1721088.23 ft

BORING CREW: New Hampshire Boring
DRILLER: Bub Thompson
LOGGER: Noah Chibburg / Helena Hollauer
BORING RIG: CME-750

BORING NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 825.16 ft
GROUNDWATER DEPTH: 35.15 ft 6/13/13
PROJECT PIN NUMBER: -

BORING TYPE: Wash Bore
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 8 IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
52.0 ft - 53.0 ft		Driller reported cobbles.								
64.0 ft - 65.0 ft		Driller reported cobbles.								
81.0 ft - 81.0 ft		A-4, gray, med. hard, silty clay. little fine sand, high plasticity, low dilatancy, (CL), PP = 3.25, 3.2, 3.3 lb. T _v = 0.75, 0.65, 1.0 lb. Rec. = 0.02 ft.		33-34-40	27.4	73	(63)		40	15
81.0 ft - 82.0 ft		A-4, gray, med. hard, silty clay. little fine sand, high plasticity, high dilatancy, (ML), Rec. = 1.0 ft.		16-30-27	24.1	0.0	2.0	98.0		

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

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landside
STATION: -
OFFSET: -
VTSPG: N 888253.58 ft E 1721088.23 ft

BORING CREW: New Hampshire Boring
DRILLER: Bub Thompson
LOGGER: Noah Chibburg / Helena Hollauer
BORING RIG: CME-750

BORING NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 825.16 ft
GROUNDWATER DEPTH: 35.15 ft 6/13/13
PROJECT PIN NUMBER: -

BORING TYPE: Wash Bore
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 8 IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
81.0 ft - 82.0 ft		A-4, gray, med. hard, silty clay. little fine sand, high plasticity, low dilatancy, (CL), PP = 3.25, 3.2, 3.3 lb. T _v = 0.75, 0.65, 1.0 lb. Rec. = 0.02 ft.		33-34-40	27.4	73	(63)		40	15
81.0 ft - 82.0 ft		A-4, gray, med. hard, silty clay. little fine sand, high plasticity, high dilatancy, (ML), Rec. = 1.0 ft.		16-30-27	24.1	0.0	2.0	98.0		

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

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landside
STATION: -
OFFSET: -
VTSPG: N 888253.58 ft E 1721088.23 ft

BORING CREW: New Hampshire Boring
DRILLER: Bub Thompson
LOGGER: Noah Chibburg / Helena Hollauer
BORING RIG: CME-750

BORING NUMBER: B3056
SHEET: 8 of 8
DATE STARTED: 6/11/13
DATE COMPLETED: 6/19/13

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 825.16 ft
GROUNDWATER DEPTH: 35.15 ft 6/13/13
PROJECT PIN NUMBER: -

BORING TYPE: Wash Bore
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 8 IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
82.0 ft - 100.0 ft		A-4, gray, med. very dense, SILT, some fine sand, trace gravel, (ML), PP = 4.2, 4.5 lb. Rec. = 0.83 ft.		37						
100.0 ft - 105.0 ft		A-4, gray, med. very dense, SILT, some fine sand, trace gravel, (ML), PP = 2.3 (sample at ground point - may not be representative), Rec. = 0.17 ft.		50						
105.0 ft - 109.0 ft		A-4, no recovery - resampled with 3" spoon; Gray, med. hard, silty CLAY, little fine sand, trace gravel, suspected dilatancy about 5" from top of spoon, T _v = 0.8, 0.8, 0.75 lb. PP = 3.25, 4.5 lb. Rec. = 1.0 ft.		129-32						
109.0 ft - 110.0 ft		A-4, no recovery - resampled with 3" spoon; Gray, med. hard, silty CLAY, little fine sand, trace gravel, suspected dilatancy about 5" from top of spoon, T _v = 0.8, 0.8, 0.75 lb. PP = 3.25, 4.5 lb. Rec. = 1.0 ft.		51-49	18.3	6.1	14.0	79.9	32	13
110.0 ft - 112.0 ft		A-4, no recovery - resampled with 3" spoon; Gray, med. hard, silty CLAY, little fine sand, trace gravel, suspected dilatancy about 5" from top of spoon, T _v = 0.8, 0.8, 0.75 lb. PP = 3.25, 4.5 lb. Rec. = 1.0 ft.		129-32						
112.0 ft - 114.0 ft		A-4, no recovery - resampled with 3" spoon; Gray, med. hard, silty CLAY, little fine sand, trace gravel, suspected dilatancy about 5" from top of spoon, T _v = 0.8, 0.8, 0.75 lb. PP = 3.25, 4.5 lb. Rec. = 1.0 ft.		70						
114.0 ft - 116.0 ft		A-4, no recovery - resampled with 3" spoon; Gray, med. hard, silty CLAY, little fine sand, trace gravel, suspected dilatancy about 5" from top of spoon, T _v = 0.8, 0.8, 0.75 lb. PP = 3.25, 4.5 lb. Rec. = 1.0 ft.		50						
116.0 ft - 122.0 ft		A-4, no recovery - resampled with 3" spoon; Gray, med. hard, silty CLAY, little fine sand, trace gravel, suspected dilatancy about 5" from top of spoon, T _v = 0.8, 0.8, 0.75 lb. PP = 3.25, 4.5 lb. Rec. = 1.0 ft.		107-50						

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

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landside
STATION: -
OFFSET: -
VTSPG: N 888253.58 ft E 1721088.23 ft

BORING CREW: New Hampshire Boring
DRILLER: Bub Thompson
LOGGER: Noah Chibburg / Helena Hollauer
BORING RIG: CME-750

BORING NUMBER: B3056
SHEET: 8 of 8
DATE STARTED: 6/11/13
DATE COMPLETED: 6/19/13

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 825.16 ft
GROUNDWATER DEPTH: 35.15 ft 6/13/13
PROJECT PIN NUMBER: -

BORING TYPE: Wash Bore
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 8 IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
125.0 ft - 126.4 ft		A-4, dark gray and brown, dry to med. hard, var. SILT, trace gravel, (ML), Rec. = 0.33 ft.		31-56	27.6				42	15
131.0 ft - 131.4 ft		A-4, gray-brown, dry, med. hard, var. SILT, dry, Change at 131.0 ft to a gray-brown, wet, fine sand, Rec. = 1.0 ft.		37-73						
133.0 ft - 134.8 ft		A-4, dark gray-brown and orange-brown, var. very dense, SILT, some fine sand, trace gravel (subangular weathered phyllite), trace clay, (ML), Rec. = 1.0 ft.		79	22.7	14.2	26.5	59.3		
140.0 ft - 140.8 ft		A-4, dark gray-brown and orange-brown, var. very dense, var. SILT, some fine sand, trace clay, (ML), Cobble 8 ft, Rec. = 0.7 ft.		28	25.6	0.6	4.8	94.6		
141.0 ft - 141.8 ft		A-4, gray-brown, var. hard, SILT, trace gravel (subangular weathered phyllite), (ML), Rec. = 0.8 ft.		100						
143.0 ft - 144.4 ft		A-4, gray-brown, var. hard, SILT, trace gravel (subangular weathered phyllite), (ML), Rec. = 0.33 ft.		125						
146.0 ft - 146.8 ft		A-4, gray-brown, var. hard, SILT, trace gravel (subangular weathered phyllite), (ML), Rec. = 0.8 ft.		67-71	26.6	0.0	4.2	95.8	48	21

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

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landside
STATION: -
OFFSET: -
VTSPG: N 888253.58 ft E 1721088.23 ft

BORING CREW: New Hampshire Boring
DRILLER: Bub Thompson
LOGGER: Noah Chibburg / Helena Hollauer
BORING RIG: CME-750

BORING NUMBER: B3056
SHEET: 7 of 8
DATE STARTED: 6/11/13
DATE COMPLETED: 6/19/13

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 825.16 ft
GROUNDWATER DEPTH: 35.15 ft 6/13/13
PROJECT PIN NUMBER: -

BORING TYPE: Wash Bore
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 8 IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
149.0 ft - 151.0 ft		Reddish-brown, silty, clay, trace gravel, (ML), Rec. = 0.33 ft.		32-57						
152.0 ft - 152.3 ft		UT: Tube attempt 4" recovery (not used).		32-57						
152.3 ft - 153.0 ft		A-4, orange-brown, dry, med. hard, var. SILT, some fine sand, (CL), Rec. = 0.33 ft.		67	19.6					
158.2 ft - 158.6 ft		Gravel layer based on drill log behavior.		57						
160.0 ft - 160.8 ft		A-4, gray-brown, dry, var. hard, SILT, trace gravel (subangular weathered phyllite), (ML), Rec. = 0.8 ft.		100						
165.0 ft - 165.8 ft		A-4, dark brown, var. hard, SILT, little fine sand, (ML), Rec. = 0.8 ft.		100	2.0	13.4	84.6			
170.0 ft - 170.5 ft		A-4, dark brown, var. hard, SILT, (ML), Rec. = 0.25 ft.		150						
172.5 ft - 173.0 ft		Possible rock surface based on drill log behavior. Reddish-brown, silty, clay, trace gravel, (ML), Rec. = 0.25 ft.		150						

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

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landside
STATION: -
OFFSET: -
VTSPG: N 888253.58 ft E 1721088.23 ft

BORING CREW: New Hampshire Boring
DRILLER: Bub Thompson
LOGGER: Noah Chibburg / Helena Hollauer
BORING RIG: CME-750

BORING NUMBER: B3056
SHEET: 8 of 8
DATE STARTED: 6/11/13
DATE COMPLETED: 6/19/13

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 825.16 ft
GROUNDWATER DEPTH: 35.15 ft 6/13/13
PROJECT PIN NUMBER: -

BORING TYPE: Wash Bore
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 8 IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
178.0 ft - 183.0 ft		ND, Rec. = 5.0 ft.		81	100				82	
183.0 ft - 183.3 ft		UT: Hole stopped at 183.3 ft.								

Notes:
- Drilled with 50 ft of 5" casing and 85 ft of 4" casing.
- 5' Spigot with 3" spoon, N-values should not be used for design.
- Piezometers installed at 506, 120H, and 1656 ft ground levels.
- 1" SAA casing installed to 157H.

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888366.74 ft E 1721114.15 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 793.5 ft
GROUNDWATER DEPTH: Not measured
PROJECT PIN NUMBER: -

BORING CREW: Boart Longyear
DRILLER: Jason Koefing
LOGGER: Helena Hollbauer
BORING RIG: 600T Sonic

BORING TYPE: Sonic
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
0.0 ft - 0.5 ft		Top of well (Borehole: 795.84 ft)						
0.5 ft - 2.0 ft		A-1-b; dark brown, dry to moist, fine to coarse SAND, fine silty trace gravel, (SM)						
2.0 ft - 30.0 ft		A-4; gray and brown, silty, fine to coarse SAND, some silty, some gravel (mixed fill and native silty CLAY, slightly moist at 16' grading to a dark gray-brown, very moist, silty fine to medium SAND, trace gravel, trace clay, (SM).						
30.0 ft - 36.0 ft		A-4, slightly moist, silty CLAY grading to clayey SILT, trace coarse sand, (CL to ML), PP = 0.5 to 4.5 tcf, Tv = 0.5 to 1.25 tcf.						
36.0 ft - 46.0 ft		A-4, gray, silty fine SAND, (SM), 20' to 44' trace clay, Soller trace 46-48'						
46.0 ft - 56.0 ft		A-4, gray, clayey SILT, trace gravel (rounded), (ML), PP = 3.5, 4.0, 4.25 tcf, Tv = 2 tcf.						

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888366.74 ft E 1721114.15 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 793.5 ft
GROUNDWATER DEPTH: Not measured
PROJECT PIN NUMBER: -

BORING CREW: Boart Longyear
DRILLER: Jason Koefing
LOGGER: Helena Hollbauer
BORING RIG: 600T Sonic

BORING TYPE: Sonic
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
0.0 ft - 52.0 ft		Slackensides 52-63 ft.						
52.0 ft - 76.0 ft		A-4, very stiff, dry, silty CLAY, some fine sand, little gravel, (CL), PP = 4.5 tcf.						
76.0 ft - 71.0 ft		Slackensides 71-73 ft.						

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888366.74 ft E 1721114.15 ft

PROJECT NUMBER: B306a
SHEET 3 of 7
DATE STARTED: 6/09/13
DATE COMPLETED: 6/10/13

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888366.74 ft E 1721114.15 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 793.5 ft
GROUNDWATER DEPTH: Not measured
PROJECT PIN NUMBER: -

BORING CREW: Boart Longyear
DRILLER: Jason Koefing
LOGGER: Helena Hollbauer
BORING RIG: 600T Sonic

BORING TYPE: Sonic
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
76.0 ft - 80.0 ft		A-4, gray, wet, silty fine SAND, (SM), Soller reported soft conditions, hard at 80 ft.						
80.0 ft - 86.0 ft		A-4, gray, dry, very stiff, silty CLAY, some fine sand, little gravel, (CL).						
86.0 ft - 86.0 ft		A-4, gray, wet, silty fine SAND, (SM).						
86.0 ft - 89.0 ft		A-4, gray-brown, wet, fine to coarse SAND, some silty, little gravel, (SM).						
89.0 ft - 94.0 ft		A-4, gray to gray-brown, wet, fine to medium SAND and SILT grading to SILT, trace gravel, (SM).						
94.0 ft - 97.0 ft		A-4, mixed zone of gray and brown, slightly moist, SILT and fine to coarse sand, little gravel, (ML). Possible slide zone.						
97.0 ft - 116.0 ft		A-4, medium brown, slightly moist, very stiff, silty CLAY, varved, (CL). Varves are medium brown (M) CLAY and gray fine sand. Color change at 103' to gray, PP = 2.5, 2.5, 2.5, 2.5, 1st.						

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888366.74 ft E 1721114.15 ft

PROJECT NUMBER: B306a
SHEET 5 of 7
DATE STARTED: 6/09/13
DATE COMPLETED: 6/10/13

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888366.74 ft E 1721114.15 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 793.5 ft
GROUNDWATER DEPTH: Not measured
PROJECT PIN NUMBER: -

BORING CREW: Boart Longyear
DRILLER: Jason Koefing
LOGGER: Helena Hollbauer
BORING RIG: 600T Sonic

BORING TYPE: Sonic
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
110.0 ft		Sand varves increasing in thickness 110-116 ft.						
116.0 ft - 118.0 ft		A-4, gray-brown, firm to stiff, silty CLAY, little fine sand, noticeably much softer than material above, (CL). Zone appears to be same soil as 97'-116' but varved. Some pockets of undisturbed silty clay. Possible slide zone?						
118.0 ft - 126.0 ft		A-4, gray-brown, dry, SILT, some fine to medium sand, some gravel, (gravel is weathered PHYLITE).						

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888366.74 ft E 1721114.15 ft

PROJECT NUMBER: B306a
SHEET 6 of 7
DATE STARTED: 6/09/13
DATE COMPLETED: 6/10/13

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888366.74 ft E 1721114.15 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 793.5 ft
GROUNDWATER DEPTH: Not measured
PROJECT PIN NUMBER: -

BORING CREW: Boart Longyear
DRILLER: Jason Koefing
LOGGER: Helena Hollbauer
BORING RIG: 600T Sonic

BORING TYPE: Sonic
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
126.0 ft - 132.0 ft		A-4, coarsely layered highly weathered PHYLITE with pockets of gray-brown, dry, silty CLAY, (CL).						
132.0 ft - 142.0 ft		A-4, dark brown, moist to wet, soft, SILT, trace fine sand, little clay, (ML)						
142.0 ft - 144.0 ft		Moderately weathered PHYLITE (cobbles).						
144.0 ft - 149.0 ft		A-4, gray-brown, moist, gray clayey SILT, (ML), Gravel is weathered PHYLITE.						
149.0 ft - 151.0 ft		Dry, moderately weathered PHYLITE fragments, garnets weathered to fine powder (cobbles).						

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888366.74 ft E 1721114.15 ft

PROJECT NUMBER: B306a
SHEET 7 of 7
DATE STARTED: 6/09/13
DATE COMPLETED: 6/10/13

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888366.74 ft E 1721114.15 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 793.5 ft
GROUNDWATER DEPTH: Not measured
PROJECT PIN NUMBER: -

BORING CREW: Boart Longyear
DRILLER: Jason Koefing
LOGGER: Helena Hollbauer
BORING RIG: 600T Sonic

BORING TYPE: Sonic
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
151.0 ft - 156.0 ft		A-4, dark brown grading to gray, SILT, (ML) Trace gravel (angular moderately weathered PHYLITE) present at 154.5 ft. Slightly moist at 151' grading to dry at 156'.						
156.0 ft - 160.0 ft		A-4, dark, gray, moist, clayey SILT with fresh meta-siltstone cobbles (ML).						
160.0 ft - 168.0 ft		Slightly weathered, dark gray meta-siltstone. Possible fracture zone +/- 168' indicated by iron staining on banded rock fragments.						
168.0 ft		Top of bedrock @ 168.0 ft						
168.0 ft		Hole stopped @ 168.0 ft						

Notes:
- 4" casing with continuous 4" core barrel sampling used in exploration.
- 3" inclinometer casing installed to 168 ft.
- Densities indicated in soil descriptions are based on adjacent SPT values and field experience.

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888366.74 ft E 1721114.15 ft

PROJECT NUMBER: B306a
SHEET 4 of 7
DATE STARTED: 6/09/13
DATE COMPLETED: 6/10/13

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888366.74 ft E 1721114.15 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 793.5 ft
GROUNDWATER DEPTH: Not measured
PROJECT PIN NUMBER: -

BORING CREW: Boart Longyear
DRILLER: Jason Koefing
LOGGER: Helena Hollbauer
BORING RIG: 600T Sonic

BORING TYPE: Sonic
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
76.0 ft - 80.0 ft		A-4, gray, wet, silty fine SAND, (SM), Soller reported soft conditions, hard at 80 ft.						
80.0 ft - 86.0 ft		A-4, gray, dry, very stiff, silty CLAY, some fine sand, little gravel, (CL).						
86.0 ft - 86.0 ft		A-4, gray, wet, silty fine SAND, (SM).						
86.0 ft - 89.0 ft		A-4, gray-brown, wet, fine to coarse SAND, some silty, little gravel, (SM).						
89.0 ft - 94.0 ft		A-4, gray to gray-brown, wet, fine to medium SAND and SILT grading to SILT, trace gravel, (SM).						
94.0 ft - 97.0 ft		A-4, mixed zone of gray and brown, slightly moist, SILT and fine to coarse sand, little gravel, (ML). Possible slide zone.						
97.0 ft - 116.0 ft		A-4, medium brown, slightly moist, very stiff, silty CLAY, varved, (CL). Varves are medium brown (M) CLAY and gray fine sand. Color change at 103' to gray, PP = 2.5, 2.5, 2.5, 2.5, 1st.						

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B306b SHEET 1 of 6 DATE STARTED: 6/20/13 DATE COMPLETED: 6/26/13						
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888362.58 ft E 1721113.60 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 793.7 ft GROUNDWATER DEPTH: 23.9 ft 6/24/13 PROJECT PIN NUMBER: -		BORING TYPE: Wash Bore SAMPLE TYPE: SPLIT BARREL & TUBE HAMMER TYPE: ROPE & CATHEAD CHECKED BY:						
BORING CREW: New Hampshire Boring DRILLER: Bub Thompson LOGGER: Helena Hollauer BORING RIG: CME-750										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		Top of Well Elevation: 795.84 ft								
		S1: 0.0 ft - 0.33 ft, Topsoil and root mat, Rec. = 1.5 ft		3-4-8-22 (12)						
		S2: 0.33 ft - 2.0 ft, A-3, dark brown, slightly moist, medium dense, fine to medium SAND, trace gravel, trace silt, cobble fragments in spoon tip, (FILL), (SW), Rec. = 0.53 ft		13-19-21-30 (40)						
		S3: 10.0 ft - 12.0 ft, A-1-b, dark brown, wet (drill water), medium dense, fine to coarse SAND, some gravel, some silt, (FILL), (SM), Rec. = 0.5 ft		10-7-5-4 (12)						
		S4: 15.0 ft - 17.0 ft, A-1-b, gray-brown, wet, medium dense, mixed zone of silty fine SAND, trace clay, and fine SAND, trace silt, (FILL and NATIVE mix), (SM), Rec. = 1.08 ft		11-13-17-21 (30)						
		S5: 20.0 ft - 20.25 ft, Burled topsoil/root mat, Rec. = 1.42 ft		3-13-9-10 (22)						
		S6: 20.25 ft - 22.0 ft, A-2-4, gray-brown, moist, medium dense, fine SAND, some silt, little clay, (NATIVE), (SM), Rec. = 1.08 ft		NA (R)						

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B306b SHEET 2 of 6 DATE STARTED: 6/20/13 DATE COMPLETED: 6/26/13						
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888362.58 ft E 1721113.60 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 793.7 ft GROUNDWATER DEPTH: 23.9 ft 6/24/13 PROJECT PIN NUMBER: -		BORING TYPE: Wash Bore SAMPLE TYPE: SPLIT BARREL & TUBE HAMMER TYPE: ROPE & CATHEAD CHECKED BY:						
BORING CREW: New Hampshire Boring DRILLER: Bub Thompson LOGGER: Helena Hollauer BORING RIG: CME-750										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		S6: 25.0 ft - 27.0 ft, A-2-4, gray-brown, very moist, medium dense, fine to medium SAND, some silt, trace gravel, (SM), Rec. = 1.08 ft		13-18-11-11 (29)	12.9	11.1	63.6	25.3		
		S7: 30.0 ft - 32.0 ft, A-6, dark gray, slightly moist, stiff, silty CLAY, trace fine sand, changing at 31.6 ft to clayey SILT, (CL), Rec. = 1.58 ft		6-7-8-10 (15)	26.9	0.0	1.0	99.0	39	16
		S8: 35.0 ft - 37.0 ft, A-6, dark gray, wet, very stiff, alternating seams of fine SAND, some silt, and silty CLAY, (CL), Rec. = 0.58 ft		11-8-10-15 (18)						
		S9: 40.0 ft - 42.0 ft, A-4, dark gray, wet, dense, silty fine SAND, trace clay, (SM), Rec. = 1.5 ft		12-17-17-21 (34)						
		S10: 44.0 ft - 46.0 ft, A-6, dark gray, wet, very stiff, alternating seams of fine SAND, some silt (1-1.5" thick), and silty CLAY, (CL), Rec. = 1.67 ft		11-8-8-6 (16)						
		S11: 48.0 ft - 50.0 ft, A-4, dark gray, moist, very dense, fine to medium sandy SILT, trace gravel (rounded), cobble from 49.5 to 49.7 ft, (ML), Rec. = 1.17 ft		27-34-59-78 (93)	12.0	7.1	34.8	58.1		

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B306b SHEET 3 of 6 DATE STARTED: 6/20/13 DATE COMPLETED: 6/26/13						
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888362.58 ft E 1721113.60 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 793.7 ft GROUNDWATER DEPTH: 23.9 ft 6/24/13 PROJECT PIN NUMBER: -		BORING TYPE: Wash Bore SAMPLE TYPE: SPLIT BARREL & TUBE HAMMER TYPE: ROPE & CATHEAD CHECKED BY:						
BORING CREW: New Hampshire Boring DRILLER: Bub Thompson LOGGER: Helena Hollauer BORING RIG: CME-750										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		S12: 55.0 ft - 57.0 ft, A-4, dark gray, slightly moist, very dense, fine to medium sandy SILT, trace gravel (rounded), (ML), Rec. = 1.25 ft		38-60-68-76 (128)						
		S13: 60.0 ft - 62.0 ft, A-4, No recovery with 2" split spoon, Resampled with 3" split spoon, A-4, dark gray, slightly moist, very dense, fine sandy SILT, trace gravel (rounded), trace clay, (ML), Rec. = 1.17 ft		29-42-41-32 (83)						
		S14: 65.0 ft - 66.7 ft, A-4, dark gray, moist, very dense, fine to medium sandy SILT, trace gravel (rounded), trace clay, (ML), Rec. = 1.25 ft		30-63-60-100/5" (123)						
		70.0 ft - 70.3 ft, U1: Attempted a Shelby tube, The tube advanced 3.5" with 1000 lbs down pressure, End of tube folded in, Rec. = 0.29 ft		NA (R)						
		S15: 70.3 ft - 71.8 ft, A-4, dark gray, moist, very dense, fine to medium sandy SILT, trace gravel (rounded), trace clay, (ML), Siltskenades at approx. 71.5 ft, P.P. > 4.5 tsf, Rec. = 1.25 ft		38-96-115/6" (R)						

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B306b SHEET 4 of 6 DATE STARTED: 6/20/13 DATE COMPLETED: 6/26/13						
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888362.58 ft E 1721113.60 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 793.7 ft GROUNDWATER DEPTH: 23.9 ft 6/24/13 PROJECT PIN NUMBER: -		BORING TYPE: Wash Bore SAMPLE TYPE: SPLIT BARREL & TUBE HAMMER TYPE: ROPE & CATHEAD CHECKED BY:						
BORING CREW: New Hampshire Boring DRILLER: Bub Thompson LOGGER: Helena Hollauer BORING RIG: CME-750										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		S16: 75.0 ft - 80.0 ft, A-4, dark gray, slightly moist, very dense, silty fine to medium SAND, some gravel, (SM), Rec. = 0.58 ft		67-120/6" (R)						
		S17: 80.0 ft - 80.8 ft, A-4, dark gray, slightly moist, very dense, silty fine to medium SAND, some gravel, (SM), Rec. = 0.67 ft		86-120/4" (R)	10.4	26.3	30.0	43.7		
		S18: 85.0 ft - 85.83 ft, A-6, dark gray, moist, hard, silty CLAY, (CL), Rec. = 1.5 ft		37-80-110/6" (R)						
		S19: 85.83 ft - 86.5 ft, A-4, dark gray, moist, very dense, fine to medium SAND, little silt, (SM), Rec. = 1.0 ft		77-120/5" (R)						
		S20: 90.0 ft - 92.0 ft, A-1-b, dark gray, wet, very dense, fine SAND, some silt, with occasional layers of silty CLAY, (SM), Rec. = 1.67 ft		40-80-103-128" (183)						
		S21: 95.0 ft - 96.0 ft, A-6, gray and gray brown (slightly mottled), very moist, very dense, fine SAND and silty CLAY, trace angular gravel (phyllite), (SC), Rec. = 0.58 ft		65-113/6" (R)						

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B306b SHEET 5 of 6 DATE STARTED: 6/20/13 DATE COMPLETED: 6/26/13						
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888362.58 ft E 1721113.60 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 793.7 ft GROUNDWATER DEPTH: 23.9 ft 6/24/13 PROJECT PIN NUMBER: -		BORING TYPE: Wash Bore SAMPLE TYPE: SPLIT BARREL & TUBE HAMMER TYPE: ROPE & CATHEAD CHECKED BY:						
BORING CREW: New Hampshire Boring DRILLER: Bub Thompson LOGGER: Helena Hollauer BORING RIG: CME-750										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		S22: 100.0 ft - 102.0 ft, A-7-6, medium brown, slightly moist, hard, SILT, trace fine sand, (ML), Rec. = 0.67 ft		25-36-40-66" (76)	27.1	0.0	1.3	98.7	49	20
		S23: 105.0 ft - 107.0 ft, A-7-6, medium brown and dark gray, slightly moist, hard, CLAY, varved with fine sand, Trace gravel fragments at 105.8 ft, (CH)		26-23-29-34" (52)	26.4				56	27
		110.0 ft - 112.0 ft, A-7-5, U2: Shelby tube, pushed with 1150 lbs of pressure, Tube was not related to extract, Rec. 1.54 ft, Silty CLAY, (CH-MH)			30.9	0.0	1.6	98.4	54	24
		S24: 114.0 ft - 116.0 ft, A-7-6, gray-brown, slightly moist, hard, silty CLAY, varved with fine sand, (CL), Rec. = 1.33 ft		19-28-52-48" (80)	28.8	0.0	1.6	98.4	48	22
		117.0 ft - 118.8 ft, A-4, U3: Shelby tube pushed with 1200 lbs pressure, Rec. = 1.75 ft			24.0	0.0	2.0	98.0	34	10
		S25: 120.0 ft - 120.8 ft, A-4, gray-brown, slightly moist, hard, SILT, varved with fine sand, (ML), Note: Similar to S24 but thinner fine sand seams, Rec. = 0.42 ft		5-120/3" (R)	23.9				32	5

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B306b SHEET 6 of 6 DATE STARTED: 6/20/13 DATE COMPLETED: 6/26/13						
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888362.58 ft E 1721113.60 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 793.7 ft GROUNDWATER DEPTH: 23.9 ft 6/24/13 PROJECT PIN NUMBER: -		BORING TYPE: Wash Bore SAMPLE TYPE: SPLIT BARREL & TUBE HAMMER TYPE: ROPE & CATHEAD CHECKED BY:						
BORING CREW: New Hampshire Boring DRILLER: Bub Thompson LOGGER: Helena Hollauer BORING RIG: CME-750										
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		S26: 125.0 ft - 125.8 ft, A-4, gray-brown, slightly moist, hard, SILT, some fine to medium sand, some gravel (subangular weathered phyllite), (ML), Rec. = 0.58 ft		66-100/3" (R)						
		S27: 132.0 ft - 133.0 ft, A-1-b, brown and gray, slightly moist, very dense, fine to coarse SAND, some gravel, little silt, (SM), Rec. = 0.92 ft		94-140/6" (R)	11.4	43.0	38.8	18.2		
		133.0 ft - 136.5 ft, 133 - 134.5 ft Driller reports gravelly conditions								
		134.5 - 135.5 ft Driller reports softer material								
		135.5 - 136.5 ft Driller reports gravelly conditions								
		136.5 ft Driller reports softer material								
		S28: 137.0 ft - 137.8 ft, A-4, gray-brown (mottled), very dense, SILT, (ML), Rec. = 0.5 ft		119-120/4" (R)						
		Hole stopped @ 138.0 ft								
		Notes: - Sampled with 3" split spoon, Do not use N-values for design. - Vibrating wire piezometers installed at 41 ft, 91 ft, and 137 ft in grouted borehole.						0.3	7.5	92.2

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PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSFG: N 888411.18 ft E 1721046.56 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 788.42 ft
GROUNDWATER DEPTH: 12.3 ft 6/07/13
PROJECT PIN NUMBER: -

BORING CREW: Boart Longyear
DRILLER: Jason Koeing
LOGGER: Helena Hollauer
BORING RIG: 600T Sonic

BORING TYPE: SONIC
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
0.0 - 0.5 ft		Top of Well Elevator: 789.83 ft								
0.5 - 2.0 ft		A-4, dark brown, moist, silty fine to coarse SAND, little gravel, (FILL), (SM).								
2.0 - 6.0 ft		A-2-4, dark gray, moist, fine to coarse SAND, some silt, little gravel rounded, (FILL), (SM).								
6.0 - 11.0 ft		A-2-4, dark gray mixed with dark brown, moist, fine to coarse SAND, some silt, little gravel, (MIXED FILL), (SM).								
11.0 - 21.0 ft		A-4, gray-brown, moist, silty fine to medium SAND, trace roots. Disordered layering of sands and silts apparent. Trace wood, and trace the roots at 16' (SM).			17.9	2.8	60.1	37.1		
21.0 - 22.0 ft		dark brown, moist, root mat and topped silty								
22.0 - 23.0 ft		A-4, dark gray, moist, SILT and the SAND, occasional clean medium to coarse sand layers, (SM).								

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSFG: N 888411.18 ft E 1721046.56 ft

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SITE NUMBER: -
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BORING CREW: Boart Longyear
DRILLER: Jason Koeing
LOGGER: Helena Hollauer
BORING RIG: 600T Sonic

BORING TYPE: SONIC
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
26.0 - 32.0 ft		A-2-4, dark brown, very soft moist to wet, fine to medium SAND, some silt, trace gravel, trace the roots, (SM).								
32.0 - 35.0 ft		A-1-2, dark brown, moist, fine to coarse SAND, little silt, trace gravel (rounded), (SM).								
35.0 - 40.5 ft		A-6, dark gray, wet, silty CLAY, (CL).								
40.5 - 42.5 ft		A-6, dark gray, wet, varved silty CLAY, the SAND in varves, (CL).								
42.5 - 46.5 ft		A-4, dark gray, moist, varved fine sand and SILT, with occasional pockets of medium to coarse sand, (ML), P.P. = 43, 43.0, 43.0, 42.5 ft.								
46.5 - 56.0 ft		A-4, dark gray, moist, fine to medium SAND and SILT, little gravel, trace clay, (SM).								

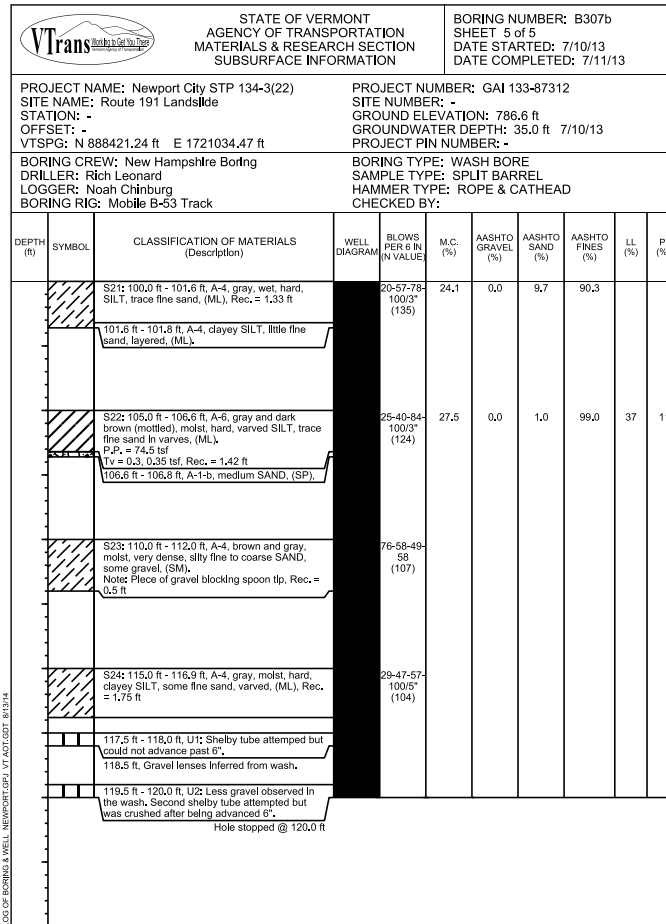
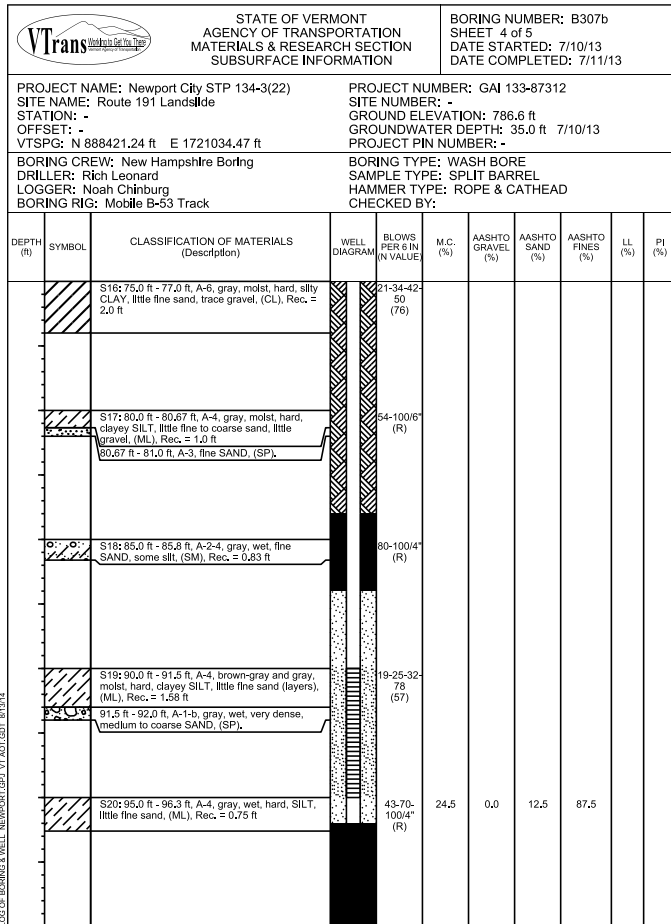
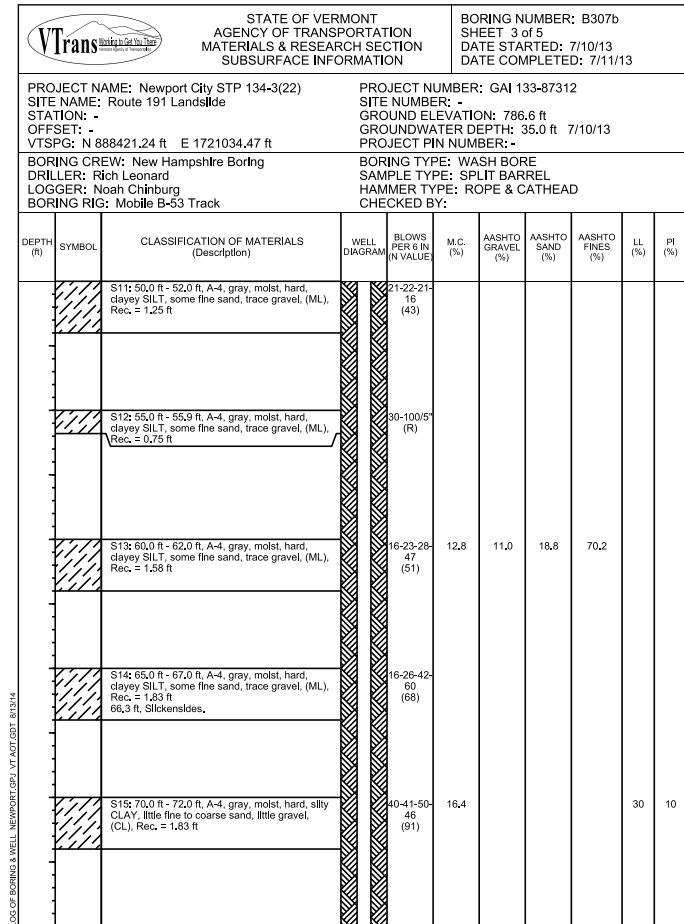
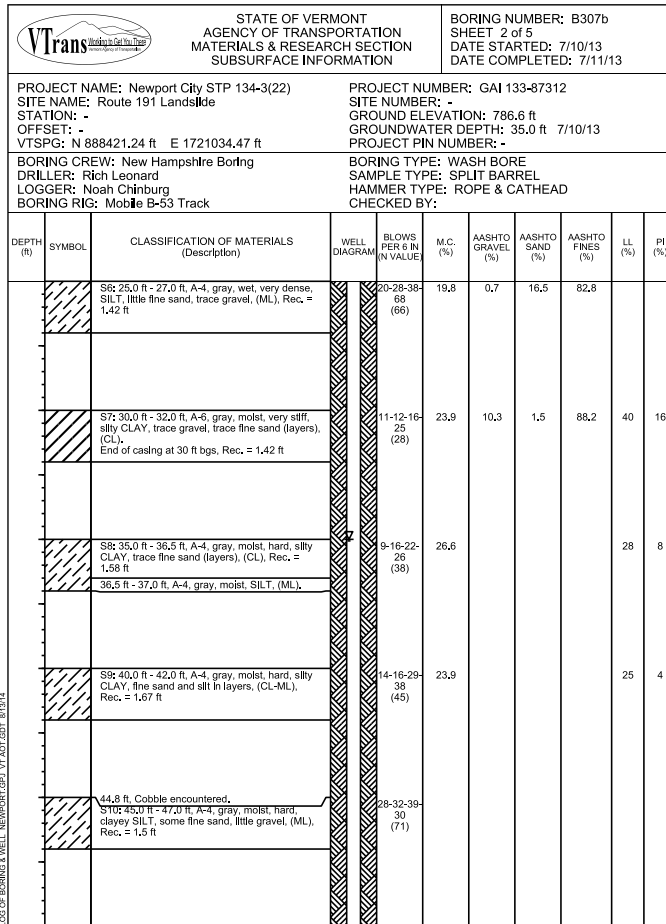
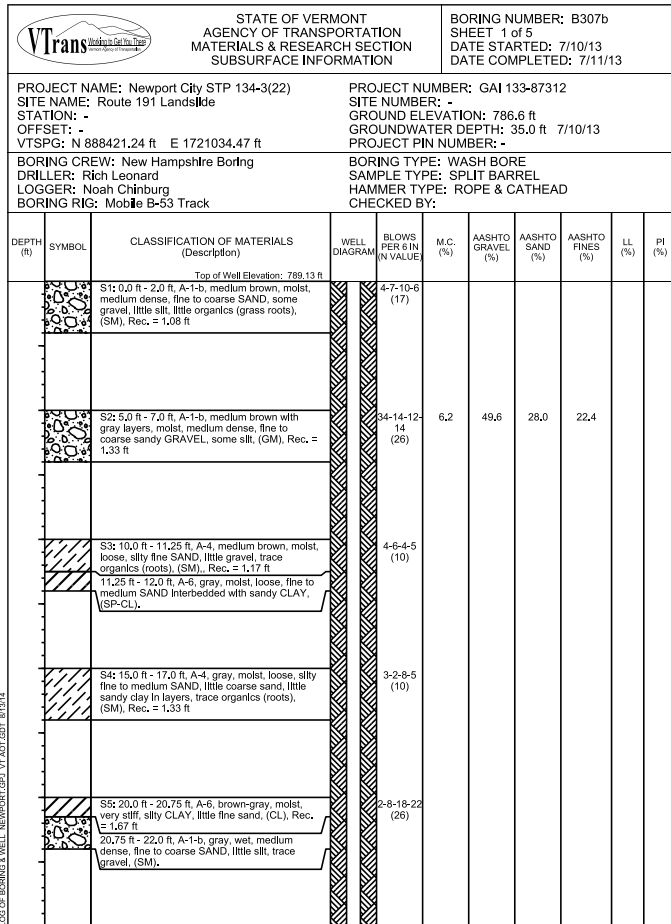
PROJECT NAME: Newport City STP 134-3(22)
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DRILLER: Jason Koeing
LOGGER: Helena Hollauer
BORING RIG: 600T Sonic

BORING TYPE: SONIC
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY: -

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FT (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
56.0 - 76.0 ft		A-4, dark gray, dry to moist, clayey SILT, trace gravel, (ML).								
76.0 - 77.0 ft		Driller reported soil zone, could not recover.								
77.0 - 78.0 ft		Driller reported soil zone, could not recover.								
78.0 - 79.0 ft		Driller reported soil zone, could not recover.								
79.0 - 80.0 ft		Driller reported soil zone, could not recover.								
80.0 - 81.0 ft		Driller reported soil zone, could not recover.								
81.0 - 82.0 ft		Driller reported soil zone, could not recover.								
82.0 - 83.0 ft		Driller reported soil zone, could not recover.								
83.0 - 84.0 ft		Driller reported soil zone, could not recover.								
84.0 - 85.0 ft		Driller reported soil zone, could not recover.								
85.0 - 86.0 ft		Driller reported soil zone, could not recover.								
86.0 - 87.0 ft		Driller reported soil zone, could not recover.								
87.0 - 88.0 ft		Driller reported soil zone, could not recover.								
88.0 - 89.0 ft		Driller reported soil zone, could not recover.								
89.0 - 90.0 ft		Driller reported soil zone, could not recover.								
90.0 - 91.0 ft		Driller reported soil zone, could not recover.								
91.0 - 92.0 ft		Driller reported soil zone, could not recover.								
92.0 - 93.0 ft		Driller reported soil zone, could not recover.								
93.0 - 94.0 ft		Driller reported soil zone, could not recover.								
94.0 - 95.0 ft		Driller reported soil zone, could not recover.								
95.0 - 96.0 ft		Driller reported soil zone, could not recover.								
96.0 - 97.0 ft		Driller reported soil zone, could not recover.								
97.0 - 98.0 ft		Driller reported soil zone, could not recover.								
98.0 - 99.0 ft		Driller reported soil zone, could not recover.								
99.0 - 100.0 ft		Driller reported soil zone, could not recover.								
100.0 - 101.0 ft		Driller reported soil zone, could not recover.								
101.0 - 102.0 ft		Driller reported soil zone, could not recover.								
102.0 - 103.0 ft		Driller reported soil zone, could not recover.								
103.0 - 104.0 ft		Driller reported soil zone, could not recover.								
104.0 - 105.0 ft		Driller reported soil zone, could not recover.								
105.0 - 106.0 ft		Driller reported soil zone, could not recover.								
106.0 - 107.0 ft		Driller reported soil zone, could not recover.								
107.0 - 108.0 ft		Driller reported soil zone, could not recover.								
108.0 - 109.0 ft		Driller reported soil zone, could not recover.								
109.0 - 110.0 ft		Driller reported soil zone, could not recover.								
110.0 - 111.0 ft		Driller reported soil zone, could not recover.								
111.0 - 112.0 ft		Driller reported soil zone, could not recover.								
112.0 - 113.0 ft		Driller reported soil zone, could not recover.								
113.0 - 114.0 ft		Driller reported soil zone, could not recover.								
114.0 - 115.0 ft		Driller reported soil zone, could not recover.								
115.0 - 116.0 ft		Driller reported soil zone, could not recover.								
116.0 - 117.0 ft		Driller reported soil zone, could not recover.								
117.0 - 118.0 ft		Driller reported soil zone, could not recover.								
118.0 - 119.0 ft		Driller reported soil zone, could not recover.								
119.0 - 120.0 ft		Driller reported soil zone, could not recover.								
120.0 - 121.0 ft		Driller reported soil zone, could not recover.								
121.0 - 122.0 ft		Driller reported soil zone, could not recover.								
122.0 - 123.0 ft		Driller reported soil zone, could not recover.								
123.0 - 124.0 ft		Driller reported soil zone, could not recover.								
124.0 - 125.0 ft		Driller reported soil zone, could not recover.								
125.0 - 126.0 ft		Driller reported soil zone, could not recover.								
126.0 - 127.0 ft		Driller reported soil zone, could not recover.								
127.0 - 128.0 ft		Driller reported soil zone, could not recover.								
128.0 - 129.0 ft		Driller reported soil zone, could not recover.								
129.0 - 130.0 ft		Driller reported soil zone, could not recover.								
130.0 - 131.0 ft		Driller reported soil zone, could not recover.								
131.0 - 132.0 ft		Driller reported soil zone, could not recover.								
132.0 - 133.0 ft		Driller reported soil zone, could not recover.								
133.0 - 134.0 ft		Driller reported soil zone, could not recover.								
134.0 - 135.0 ft		Driller reported soil zone, could not recover.								
135.0 - 136.0 ft		Driller reported soil zone, could not recover.								
136.0 - 137.0 ft		Driller reported soil zone, could not recover.								
137.0 - 138.0 ft		Driller reported soil zone, could not recover.								
138.0 - 139.0 ft		Driller reported soil zone, could not recover.								
139.0 - 140.0 ft		Driller reported soil zone, could not recover.								
140.0 - 141.0 ft		Driller reported soil zone, could not recover.								
141.0 - 142.0 ft		Driller reported soil zone, could not recover.								
142.0 - 143.0 ft		Driller reported soil zone, could not recover.								
143.0 - 144.0 ft		Driller reported soil zone, could not recover.								
144.0 - 145.0 ft		Driller reported soil zone, could not recover.								
145.0 - 146.0 ft		Driller reported soil zone, could not recover.								
146.0 - 147.0 ft		Driller reported soil zone, could not recover.								
147.0 - 148.0 ft		Driller reported soil zone, could not recover.								
148.0 - 149.0 ft		Driller reported soil zone, could not recover.								
149.0 - 150.0 ft		Driller reported soil zone, could not recover.								
150.0 - 151.0 ft		Driller reported soil zone, could not recover.								
151.0 - 152.0 ft		Driller reported soil zone, could not recover.								
152.0 - 153.0 ft		Driller reported soil zone, could not recover.								
153.0 - 154.0 ft		Driller reported soil zone, could not recover.								
154.0 - 155.0 ft		Driller reported soil zone, could not recover.								
155.0 - 156.0 ft		Driller reported soil zone, could not recover.								
156.0 - 157.0 ft		Driller reported soil zone, could not recover.								
157.0 - 158.0 ft		Driller reported soil zone, could not recover.								
158.0 - 159.0 ft		Driller reported soil zone, could not recover.								
159.0 - 160.0 ft		Driller reported soil zone, could not recover.								
160.0 - 161.0 ft		Driller reported soil zone, could not recover.								
161.0 - 162.0 ft		Driller reported soil zone, could not recover.								
162.0 - 163.0 ft		Driller reported soil zone, could not recover.								
163.0 - 164.0 ft		Driller reported soil zone, could not recover.								
164.0 - 165.0 ft		Driller reported soil zone, could not recover.								
165.0 - 166.0 ft		Driller reported soil zone, could not recover.								
166.0 - 167.0 ft		Driller reported soil zone, could not recover.								
167.0 - 168.0 ft		Driller reported soil zone, could not recover.								
168.0 - 169.0 ft		Driller reported soil zone, could not recover.								
169.0 - 170.0 ft		Driller reported soil zone, could not recover.								
170.0 - 171.0 ft		Driller reported soil zone, could not recover.								
171.0 - 172.0 ft		Driller reported soil zone, could not recover.								
172.0 - 173.0 ft		Driller reported soil zone, could not recover.								
173.0 - 174.0 ft		Driller reported soil zone, could not recover.								
174.0 - 175.0 ft		Driller reported soil zone, could not recover.								
175.0 - 176.0 ft		Driller reported soil zone, could not recover.								
176.0 - 177.0 ft		Driller reported soil zone, could not recover.								
177.0 - 178.0 ft		Driller reported soil zone, could not recover.								
178.0 - 179.0 ft		Driller reported soil zone, could not recover.								
179.0 - 180.0 ft		Driller reported soil zone, could not recover.								
180.0 - 181.0 ft		Driller reported soil zone, could not recover.								
181.0 - 182.0 ft		Driller reported soil zone, could not recover.								
182.0 - 183.0 ft		Driller reported soil zone, could not recover.								
183.0 - 184.0 ft		Driller reported soil zone, could not recover.								
184.0 - 185.0 ft		Driller reported soil zone, could not recover.								



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LOG OF BORINGS & WELL - NEWPORT.CEP, VT ADT.GDT, 8/13/14

LOG OF BORINGS & WELL - NEWPORT.CEP, VT ADT.GDT, 8/13/14

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		Top of Well Elevation: 725.12 ft		2-3-4.4 (7)						
		S1: 0.0 ft - 2.0 ft, A-4, gray-brown (mottled), very moist, medium stiff, SILT, some fine to medium sand, trace roots (0-4"), trace clay, (ML), Rec. = 1.83 ft								
		4.3 ft - 6.2 ft, Encountered boulders. Casing could not be advanced beyond 5 ft.								
		S2: 5.0 ft - 7.0 ft, A-4, gray-brown (mottled), very moist, hard, SILT, some fine to medium sand, trace roots (0-4"), trace clay, (ML). Note: End of casing. Boulders prevented driving casing further, Rec. = 1.0 ft		15-20-42.34 (62)						
		9.0 ft - 9.8 ft, Encountered boulders.								
		S3: 10.0 ft - 10.33 ft, A-1-b, gray-brown, wet, medium dense, clean medium to coarse SAND, some angular rock fragments, (SP), Rec. = 1.0 ft		5-9-13-22 (22)						
		10.33 ft - 12.0 ft, A-7-6, gray and brown, slightly moist, very stiff, SILT, thinly varved, (MH), P.P. = 1.25, 1.75 tsf								
		S4: 15.0 ft - 17.0 ft, A-7-6, gray and brown, slightly moist, very stiff, SILT, thinly varved, (MH), Tv = 4.5 tsf, Rec. = 0.83 ft		7-12-14.29 (26)						
		S5: 17.0 ft - 19.0 ft, A-7-6, gray and brown, slightly moist, hard, SILT, trace gravel, trace fine sand, thinly varved, (MH), P.P. = 4.5, 1.5, 2.5, tsf; Tv = 1.0 tsf, Rec. = 1.33 ft		7-13-19.29 (32)	37.0	1.8	0.8	97.4	53	23
		S6: 19.0 ft - 21.0 ft, A-7-6, gray and brown, slightly moist, hard, SILT, trace gravel, thinly varved, (MH), Rec. = 0.17 ft		14-18-20.17 (38)						

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		S7: 25.0 ft - 27.0 ft, A-7-6, gray and brown, slightly moist, hard, SILT, trace gravel, thinly varved, (MH), P.P. = 2.5, 2.75 tsf; Tv = 1.25 tsf, Rec. = 1.17 ft		8-14-21.25 (35)						
		S8: 30.0 ft - 32.0 ft, A-7-6, gray and brown, slightly moist, very stiff, SILT, trace gravel, thinly varved, (MH), P.P. = 2.25, 3.0, 1.5 tsf; Tv = 0.625 tsf, Rec. = 2.0 ft		7-12-16.19 (28)						
		S9: 35.0 ft - 37.0 ft, A-7-6, gray and brown, slightly moist, very stiff, SILT, trace gravel, thinly varved, (MH), P.P. = 2.75, 2.75, 3.0 tsf; Tv = 1.0 tsf Note: 3/4" seam of gray fine sand at bottom of sample, Rec. = 1.67 ft		6-11-16.23 (27)						
		S10: 40.0 ft - 42.0 ft, A-7-5, gray and brown, slightly moist, very stiff, SILT, thinly varved, (CH-MH), P.P. = 2.0, 2.0, 2.0 tsf; Tv = 0.625 tsf Note: 1/2" seams of gray, very stiff, fine sand at bottom of sample, Rec. = 1.5 ft		8-12-17.22 (29)	38.4	0.0	0.5	99.5	56	26
		S11: 45.0 ft - 47.0 ft, A-7-6, gray and brown, slightly moist, hard, SILT, thinly varved, (MH), P.P. = 2.5, 2.5, 2.75 tsf; Tv = 1.25 tsf, Rec. = 1.5 ft		9-20-22.30 (42)						

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		S12: 50.0 ft - 52.0 ft, A-7-6, gray and brown, slightly moist, hard, SILT, trace gravel, thinly varved, (MH), P.P. = 2.0, 2.0, 1.5 tsf; Tv = 1.0 tsf Note: 1/2" seams of gray, very stiff, fine sand at bottom of sample, Rec. = 1.83 ft		9-18-22.25 (40)						
		S13: 55.0 ft - 57.0 ft, A-7-6, gray and brown, slightly moist, very stiff, silty CLAY, thinly varved, (CH-MH), P.P. = 2.25, 1.25, 3.0 tsf; Tv = 0.875 tsf Note: A seam of gray fine sand at bottom of sample and occasional fine sand partings, Rec. = 1.5 ft		9-11-16.23 (27)	38.0	0.0	0.4	99.6	52	23
		60.2 ft - 61.7 ft, A-7-5, U1: Shelby tube pushed 19", Rig Jack slipped and rig moved. Tube bottom was crushed possibly from subsurface material and not rig movement, Clay, (CH)			32.0				51	26
		A-7-5								
		S14: 61.9 ft - 63.9 ft, A-1-b, dark gray, wet, very dense, fine SAND, brown silty clay seams, (SP), Rec. = 1.33 ft		19-28-25.29 (53)	33.8	0.0	0.6	99.4	58	28
		S15: 63.9 ft - 65.9 ft, A-7-5, brown, slightly moist, CLAY, gray fine sand seams, (CH), Rec. = 1.33 ft		14-21-25.34 (46)	35.4				60	30
		66.0 ft - 68.0 ft, A-7-6, U2; Tube sample taken, Rec. = 2.25 ft, Clay (CH).			36.0	0.0	1.0	99.0	58	29
		70.0 ft - 72.0 ft, A-7-6, U3; Tube sample taken, Rec. = 2.0 ft, Clay (CH).			27.0				55	28

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		S16: 75.0 ft - 77.0 ft, A-3, brown-gray, wet, very dense, fine SAND, (SP), Note: Mica particles are visible, Rec. = 1.67 ft		15-28-38.49 (66)						
		S17: 80.0 ft - 82.0 ft, A-3, gray-brown, wet, very dense, fine SAND, (SP), Note: Mica particles are visible, Rec. = 1.83 ft		20-33-42.51 (75)						
		S18: 85.0 ft - 87.0 ft, A-1-b, gray-brown, wet, very dense, fine SAND, little silt, trace clay, occasional black seams of silty clay (1/8" thick), (SP), Rec. = 1.83 ft		17-36-49.58 (85)						
		S19: 90.0 ft - 92.0 ft, A-1-b, brown and gray, wet, very dense, fine to medium SAND, little fine to coarse gravel (rounded), little silt, (SP), Rec. = 1.67 ft		36-80-72.59 (152)						
		Hole stopped @ 92.0 ft								

Notes:
 - Vibrating wire piezometers installed at 63 and 88.3 ft. Hole fully backfilled with grout.

LOG OF BORING & WELL, NEWPORT.CITY, VT, AOT.GSD, 8/13/14

LOG OF BORING & WELL, NEWPORT.CITY, VT, AOT.GSD, 8/13/14

LOG OF BORING & WELL, NEWPORT.CITY, VT, AOT.GSD, 8/13/14

LOG OF BORING & WELL, NEWPORT.CITY, VT, AOT.GSD, 8/13/14

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B313a SHEET 1 of 4 DATE STARTED: 6/20/13 DATE COMPLETED: 6/21/13					
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888823.04 ft E 1721235.08 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 708.2 ft GROUNDWATER DEPTH: Not measured PROJECT PIN NUMBER: -			BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Noah Chinburg BORING RIG: 600T Sonic					
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Noah Chinburg BORING RIG: 600T Sonic		BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY:								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		Top of Well Elevation: 710.86 ft								
		0.0 ft - 4.0 ft, A-1-b, dark brown, wet, loose, fine to medium SAND, some organics (roots), little silt, (SP).								
		3.0 ft - 3.5 ft, Gray, wet, loose, fine SAND.								
		3.5 ft - 4.0 ft, A-1-b, dark brown, wet, fine to medium SAND, some organics (roots).								
		4.0 ft - 6.0 ft, A-4, gray, moist, firm, SILT, some gravel (possibly from cobble at 4ft), little fine sand, (ML).								
		5.0 ft, Boulder encountered.								
		6.0 ft - 13.0 ft, A-1-b, stratigraphy changes to gray, wet, loose, clean fine to coarse SAND, (SP). Depth of stratigraphy change unknown due to poor recovery (cobble in core barrel).								
		13.0 ft - 15.0 ft, A-1-b, gray, wet, loose, clean fine to coarse SAND, (SP).								
		15.0 ft - 17.0 ft, A-4, gray, moist, firm, SILT, little fine sand, little gravel, (ML). Note: Cobbles encountered in sample. P.P. = 1.2, 0.7 tsf; Tv = 0.4, 0.4 tsf.								
		17.0 ft - 36.0 ft, A-4, brown-gray, moist, very stiff to hard SILT, trace fine gray sand layers, fissured, (ML).								
		21.0 ft, Same as above with less sand in layers.								
		23.0 ft, A-7-6, CLAY, (CH).			32.0	0.0	0.0	100.0	60	30

LOG OF BORING & WELL, NEWPORT.CITY, VT, AOST.GDT, 8/13/14

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B313a SHEET 2 of 4 DATE STARTED: 6/20/13 DATE COMPLETED: 6/21/13					
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888823.04 ft E 1721235.08 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 708.2 ft GROUNDWATER DEPTH: Not measured PROJECT PIN NUMBER: -			BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Noah Chinburg BORING RIG: 600T Sonic					
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Noah Chinburg BORING RIG: 600T Sonic		BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY:								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		30.5 ft, Same as above with additional sand (trace) in layers.			34.2	0.0	0.4	99.6		
		36.0 ft - 41.0 ft, A-7-6, brown-gray, moist, soft, CLAY, trace fine sand throughout, (CH).								
		38.0 ft, P.P. = 0.5, 0.0, 0.2 tsf								
		40.0 ft, Tv = 0.45, 0.20, 0.20 tsf			40.6					59 30
		41.0 ft - 54.0 ft, A-7-6, brown-gray, moist, firm-hard, CLAY, trace fine sand layers, fissured, (CH).								
		42.0 ft, P.P. = 3.2 tsf								
		44.0 ft, P.P. = 2.7 tsf								
		45.0 ft - 51.0 ft, Thickness of Sand layers increasing to 0.5 - 1.0".								

LOG OF BORING & WELL, NEWPORT.CITY, VT, AOST.GDT, 8/13/14

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B313a SHEET 3 of 4 DATE STARTED: 6/20/13 DATE COMPLETED: 6/21/13					
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888823.04 ft E 1721235.08 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 708.2 ft GROUNDWATER DEPTH: Not measured PROJECT PIN NUMBER: -			BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Noah Chinburg BORING RIG: 600T Sonic					
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Noah Chinburg BORING RIG: 600T Sonic		BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY:								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		50.0 ft, P.P. = 0.0, 0.0, 0.5 tsf; Tv = 0.2, 0.2 tsf								
		51.0 ft - 51.25 ft, A-3, black, clean fine SAND, (SP).								
		52.0 ft, Amount of sand in soil decreasing, P.P. = 2.7 tsf; Tv = 0.75 tsf								
		53.0 ft, P.P. = 3.7 tsf; Tv = 0.80 tsf								
		54.0 ft - 57.0 ft, A-7-6, brown-gray, moist, firm-hard, CLAY, trace to little fine sand layers, fissured, (CH), P.P. = 3.0 tsf; Tv = 1.00 tsf								
		57.0 ft - 59.0 ft, A-7-6, gray, moist, firm, CLAY, trace to little fine sand in varves, (CH). P.P. = 3.0 tsf								
		59.0 ft - 62.0 ft, A-4, gray, moist, firm, SILT, some clay, little fine and coarse sand interbedded in layers, (ML).								
		62.0 ft - 66.0 ft, A-4, gray, moist, firm, SILT, some clay, little fine and coarse sand interbedded in layers, (ML), PP = 2.1 tsf								
		65.0 ft - 66.0 ft, Fractured rock, Driller noted increase in water pressure from 65 - 66 ft and a decrease past 66 ft.								
		66.0 ft - 72.0 ft, A-4, gray, wet, firm, clayey SILT, trace fine sand, interbedded with fractured rock pieces, (ML), Note: Density increases at 72 ft.								
		72.0 ft - 73.0 ft, A-4, gray, moist, hard, clayey SILT, trace fine sand, interbedded with rock fragments, (ML).								
		73.0 ft - 78.0 ft, A-4, gray, wet, firm, clayey SILT, trace fine sand, interbedded with rock fragments, (ML).								

LOG OF BORING & WELL, NEWPORT.CITY, VT, AOST.GDT, 8/13/14

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B313a SHEET 4 of 4 DATE STARTED: 6/20/13 DATE COMPLETED: 6/21/13					
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888823.04 ft E 1721235.08 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 708.2 ft GROUNDWATER DEPTH: Not measured PROJECT PIN NUMBER: -			BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Noah Chinburg BORING RIG: 600T Sonic					
BORING CREW: Boart Longyear DRILLER: Jason Koering LOGGER: Noah Chinburg BORING RIG: 600T Sonic		BORING TYPE: Sonic SAMPLE TYPE: Continuous Core HAMMER TYPE: N/A CHECKED BY:								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		78.0 ft - 80.0 ft, Bedrock, Pulverized rock (rock flour). Driller indicated that this occurs when drilling competent bedrock dry.								
		81.0 ft - 86.0 ft, Bedrock (PHYLLITE).								
		Hole stopped @ 86.0 ft								
		Notes: - 3.34" Inclinator casing installed in fully grouted borehole. - Densities indicated in soil descriptions are based on adjacent SPT values and field experience.								

LOG OF BORING & WELL, NEWPORT.CITY, VT, AOST.GDT, 8/13/14

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888821.93 ft E 1721229.79 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 708.26 ft
GROUNDWATER DEPTH: Not measured
PROJECT PIN NUMBER: -

BORING CREW: New Hampshire Boring
DRILLER: Rich Leonard
LOGGER: Helena Hollauer
BORING RIG: Mobile B-53 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		0,0 ft - 5,0 ft. No samples taken.								
		S1: 5,0 ft - 6,0 ft, A-4, gray-brown, wet, hard, clayey SILT, (ML), Rec. = 1,5 ft 6,0 ft - 7,0 ft, A-4, gray-brown, wet, dense, fine sandy SILT, (ML).		7-22-19-26 (41)						
		S2: 7,0 ft - 9,0 ft, A-4, gray-brown, wet, very dense, fine sandy SILT, (ML), Rec. = 0,67 ft		31-31-28-37 (59)	23,2	0,9	36,9	62,2		
		S3: 10,0 ft - 12,0 ft, A-7-5, gray-brown, wet, very stiff, CLAY, thinly varved with 1,5" layer of medium sand, little silt, (CH). Note: Casing driven to 10 ft, open hole below, Rec. = 1,17 ft		10-8-11-15 (19)						
		S4: 12,0 ft - 14,0 ft, A-7-5, gray-brown, slightly moist, very stiff, CLAY, thinly varved with a few gray fine sand seams, (CH), Rec. = 1,5 ft		6-12-16-21 (28)						
		S5: 16,0 ft - 18,0 ft, A-7-5, brown-gray, slightly moist, very stiff, CLAY, thinly varved with a few gray fine sand seams, (CH). P.P. = 1,25, 1,25, 1,25 tsf; Tv = 0,875 tsf, Rec. = 1,33 ft		5-7-11-20 (18)						
		S6: 20,0 ft - 22,0 ft, A-7-5, brown-gray, slightly moist, very stiff, CLAY, thinly varved with a few gray fine sand seams, (CH). MV1: 22,0-22,2 ft Vane attempted, advanced 2,5", Rec. = 1,33 ft		3-7-9-12 (16)	36,8	0,0	0,3	99,7	60	30
		S7: 22,0 ft - 24,0 ft, A-7-5, brown-gray, slightly moist, very stiff, CLAY, thinly varved with a few gray fine sand seams, (CH), Rec. = 1,33 ft		5-8-12-14 (20)						

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888821.93 ft E 1721229.79 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 708.26 ft
GROUNDWATER DEPTH: Not measured
PROJECT PIN NUMBER: -

BORING CREW: New Hampshire Boring
DRILLER: Rich Leonard
LOGGER: Helena Hollauer
BORING RIG: Mobile B-53 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		S8: 26,0 ft - 28,0 ft, A-7-6, brown-gray, slightly moist, very stiff, CLAY, thinly varved with a few gray fine sand seams, (CH). P.P. = 1,25, 1,25 tsf; Tv = 0,82 tsf, Rec. = 1,17 ft		5-7-11-14 (18)						
		S9: 30,0 ft - 32,0 ft, A-7-6, brown-gray, slightly moist, very stiff, CLAY, thinly varved with a few gray fine sand seams, (CH). P.P. = 1,75, 1,75, 1,75 tsf; Tv = 1,5 tsf, Rec. = 1,17 ft		3-7-10-13 (17)	36,6				60	31
		S10: 35,0 ft - 37,0 ft, A-7-5, brown-gray, slightly moist, very stiff, CLAY, thinly varved with a few gray fine sand seams, (CH). P.P. = 1,25, 1,25, tsf; Tv = 1,0 tsf, Rec. = 1,5 ft		6-9-12-16 (21)						
		S11: 39,0 ft - 41,0 ft, A-7-6, brown-gray, slightly moist, very stiff, CLAY, thinly varved with a few gray fine sand seams, (CH). Note: Fine sand seams becoming slightly wider. Vane attempted at 39 ft but could not be advanced with two men. P.P. = 2,0, 2,25, 2,25 tsf; Tv = 0,5 tsf, Rec. = 1,5 ft		7-11-16-20 (27)	53,3	0,0	1,6	98,4	64	33
		S12: 47,0 ft - 49,0 ft, A-7-6, brown-gray, slightly moist, very stiff, CLAY, thinly varved with a few gray fine sand seams, (CH). Note: Numerous seams of gray fine sand, Rec. = 1,83 ft		7-10-14-19 (24)						
		S13: 45,0 ft - 47,0 ft, A-7-6, U2: Tube pushed 24" with 550 lbs of force, Rec. = 2,0 ft, A-7-6, CLAYEY SILT, little fine sand, (CH).			33,0	0,0	11,0	89,0	52	27

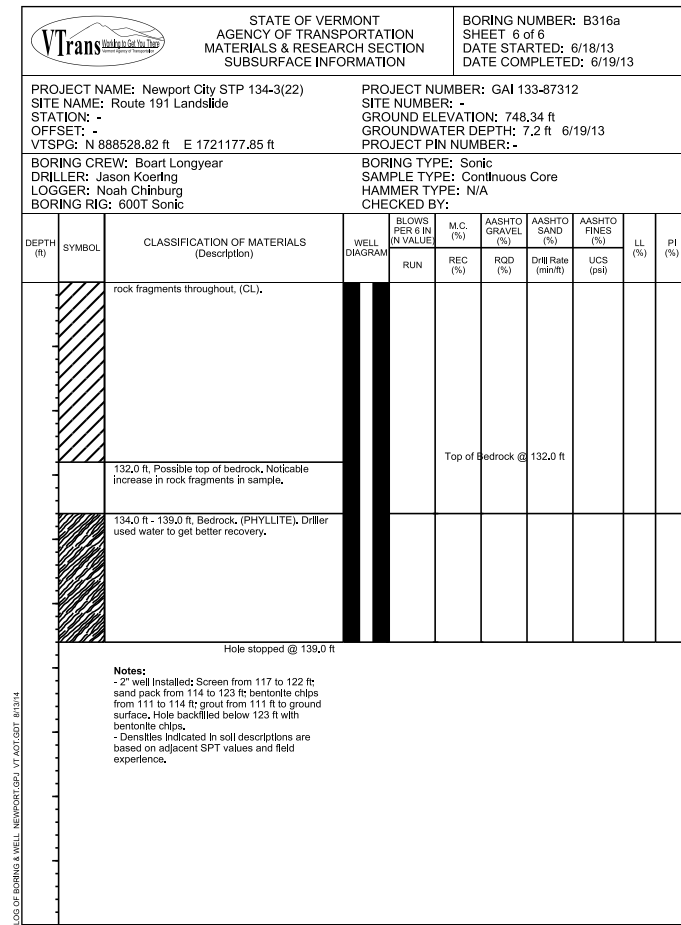
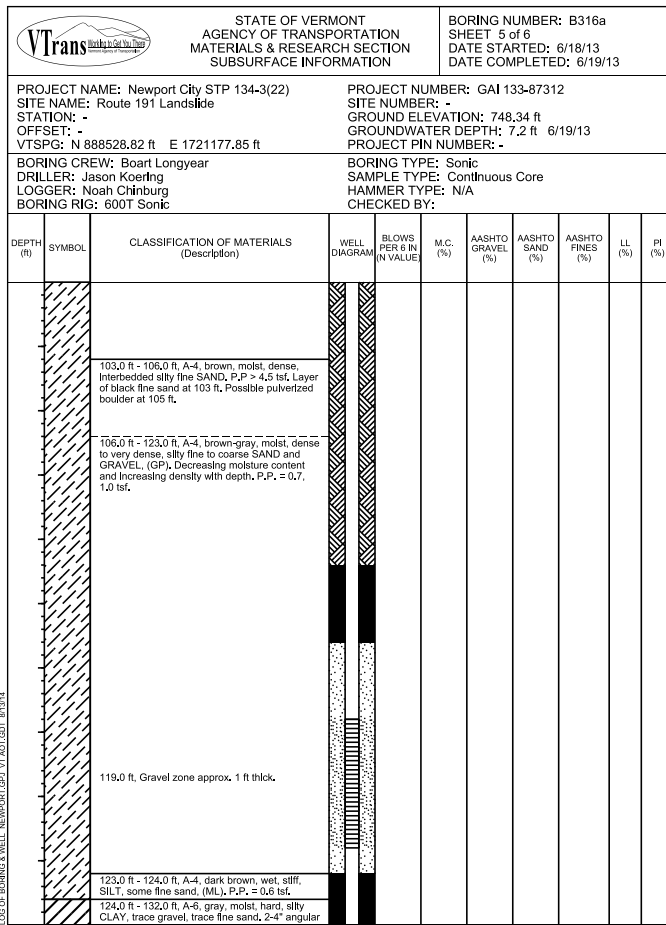
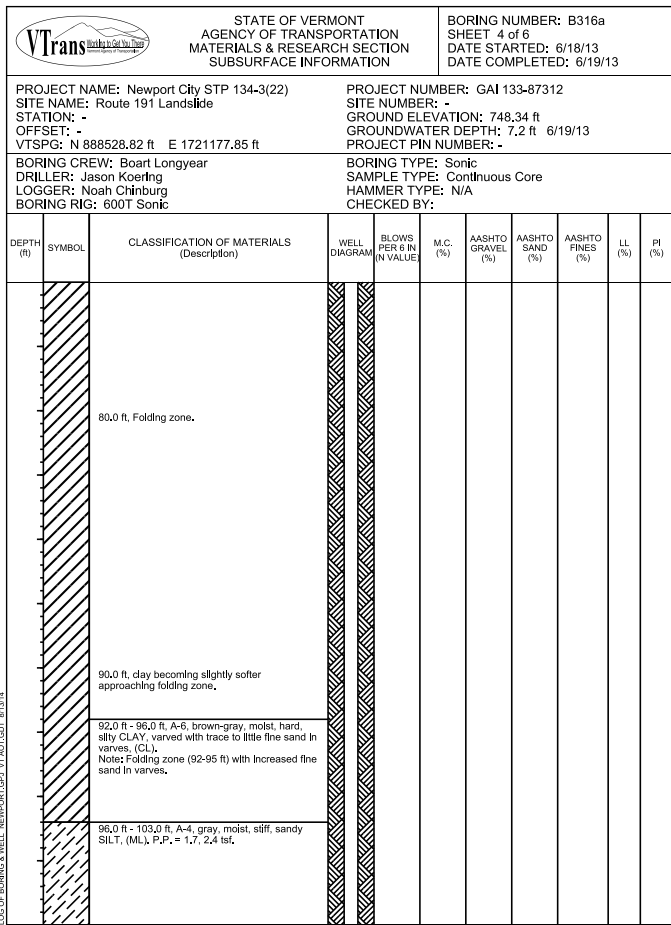
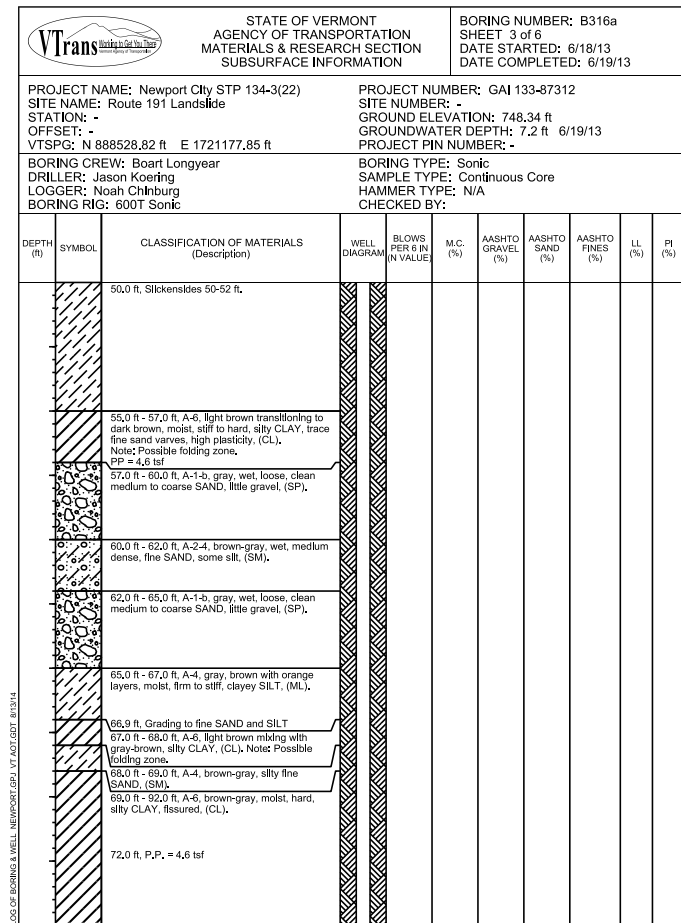
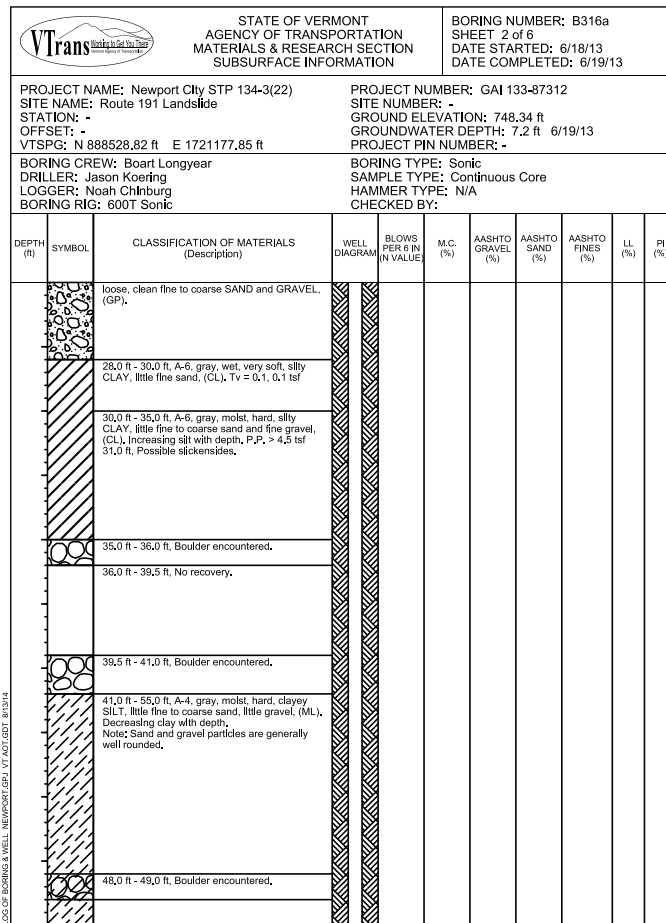
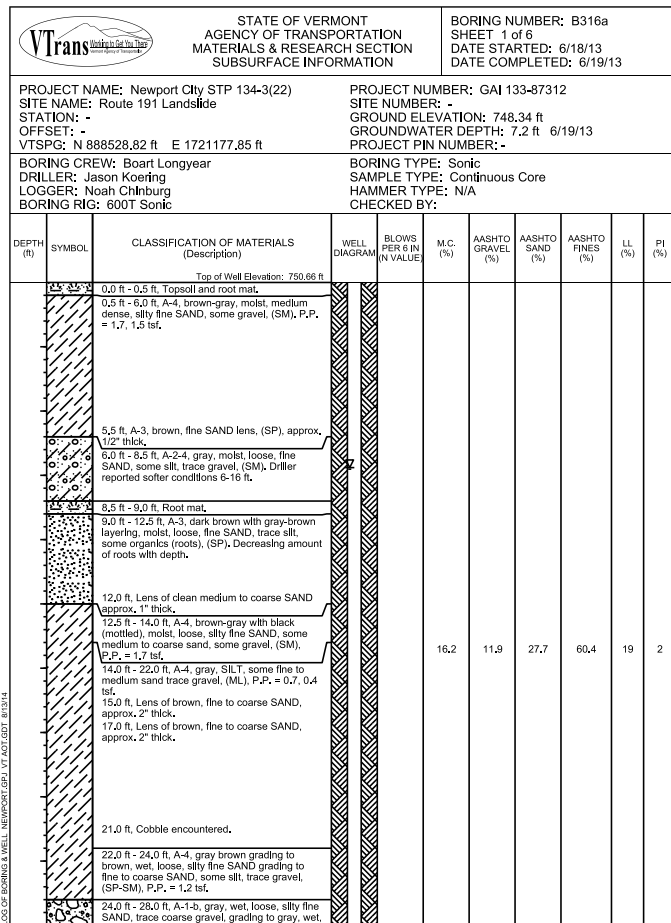
PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888821.93 ft E 1721229.79 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 708.26 ft
GROUNDWATER DEPTH: Not measured
PROJECT PIN NUMBER: -

BORING CREW: New Hampshire Boring
DRILLER: Rich Leonard
LOGGER: Helena Hollauer
BORING RIG: Mobile B-53 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL & TUBE
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		50,0 ft - 52,0 ft, U3: Tube pushed 24" with 500 lbs of pressure, Rec. = 2,0 ft.								
		52,0 ft, MV4: Vane attempted, advanced 2".								
		54,0 ft - 56,0 ft, U4: Tube pushed 24" with 475 lbs of pressure, Rec. = 2,0 ft.								
		55,9 ft, MV5: 56,0-56,1 ft Vane attempted, advanced 1". S13: 56,0 ft - 58,0 ft, A-6, dark gray and brown-gray, wet, medium dense, alternating/varved seams of gray fine SAND with silty CLAY, (SC). Note: Seams are of equal thicknesses, Rec. = 1,33 ft		10-13-13-16 (28)						
		S14: 60,0 ft - 62,0 ft, A-4, dark gray to brown-gray to orange brown, wet, dense, alternating/varved seams of gray fine SAND with silty CLAY and SILT, (SM). Note: Seams are of equal thicknesses, Rec. = 2,0 ft		10-15-27-37 (42)						
		S15: 64,0 ft - 66,0 ft, A-4, orange brown to gray-brown, wet, very dense, SILT, some silty clay seams, trace fine sand, (ML), Rec. = 1,67 ft		12-17-36-67 (53)	30,4	0,0	0,6	99,4		
		Hole stopped @ 66,0 ft			35,0				58	29
		Notes: - Vibrating wire piezometers installed at 8ft and 66ft in fully grouted borehole.								



VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B316b SHEET 1 of 4 DATE STARTED: 7/15/13 DATE COMPLETED: 7/17/13						
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888534.05 ft E 1721175.80 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 748.37 ft GROUNDWATER DEPTH: 21.25 ft 7/18/13 PROJECT PIN NUMBER: -		BORING CREW: New Hampshire Boring DRILLER: Rich Leonard LOGGER: Helena Hollauer BORING RIG: Mobile B-53 Track						
BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL HAMMER TYPE: ROPE & CATHEAD CHECKED BY:		BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL HAMMER TYPE: ROPE & CATHEAD CHECKED BY:								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		Top of Well Elevation: 750.63 ft								
		S1: 0.0 ft - 0.33 ft, Topsoil and rootmat, Rec. = 1.5 ft		2-3-7-9 (10)						
		0.33 ft - 2.0 ft, A-4, gray-brown, slightly moist, loose, fine SAND, grading to a silty fine SAND, trace gravel, trace roots, (FILL), (ML).								
		S2: 5.0 ft - 7.0 ft, A-2-4, dark gray, slightly moist, loose, fine sandy SILT, grading to a silty fine (SM), Rec. = 1.5 ft		4-3-2-2 (5)						
		S3: 10.0 ft - 12.0 ft, A-4, brown, moist, soft, SILT, trace medium to coarse sand, trace wood, slight structure, possible native surface, (ML), Rec. = 0.67 ft		3-2-2-3 (4)						
		S4: 15.0 ft - 17.0 ft, A-4, gray-brown (slightly mottled), moist, medium stiff, fine sandy SILT, trace clay, trace gravel, Pocket of clean medium to coarse sand, depositional structure, (ML), Rec. = 1.67 ft		3-3-4-6 (7)						
		S5: 20.0 ft - 22.0 ft, A-4, gray-brown, wet, medium stiff, clayey SILT, trace fine to medium sand, trace gravel, trace wood, (ML), Rec. = 0.83 ft		4-5-3-5 (8)						

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B316b SHEET 2 of 4 DATE STARTED: 7/15/13 DATE COMPLETED: 7/17/13						
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888534.05 ft E 1721175.80 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 748.37 ft GROUNDWATER DEPTH: 21.25 ft 7/18/13 PROJECT PIN NUMBER: -		BORING CREW: New Hampshire Boring DRILLER: Rich Leonard LOGGER: Helena Hollauer BORING RIG: Mobile B-53 Track						
BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL HAMMER TYPE: ROPE & CATHEAD CHECKED BY:		BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL HAMMER TYPE: ROPE & CATHEAD CHECKED BY:								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		S6: 25.0 ft - 27.0 ft, Rec. = 0.0 ft		4-4-5-7 (9)						
		S7: 30.0 ft - 32.0 ft, A-4, gray-brown (slightly mottled), moist, hard, fine sandy SILT, trace gravel, (ML), Rec. = 1.0 ft		10-31-64-32 (95)	13.6	4.0	37.2	58.8		
		S8: 35.0 ft - 37.0 ft, A-4, gray-brown (slightly mottled), moist, very stiff, fine sandy SILT, trace gravel, (ML), Note: Cobble in spoon tip, Rec. = 0.17 ft		10-12-10-18 (22)						
		S9: 40.0 ft - 42.0 ft, A-4, gray, slightly moist, hard, fine to coarse sandy SILT, trace gravel, (ML), Rec. = 1.17 ft		10-19-28-37 (47)	12.4					18 2
		S10: 45.0 ft - 47.0 ft, A-4, gray, slightly moist, hard, fine to coarse sandy SILT, trace gravel, (ML), Rec. = 1.67 ft		25-28-45-38 (73)	11.6	10.2	31.3	58.5		

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B316b SHEET 3 of 4 DATE STARTED: 7/15/13 DATE COMPLETED: 7/17/13						
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888534.05 ft E 1721175.80 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 748.37 ft GROUNDWATER DEPTH: 21.25 ft 7/18/13 PROJECT PIN NUMBER: -		BORING CREW: New Hampshire Boring DRILLER: Rich Leonard LOGGER: Helena Hollauer BORING RIG: Mobile B-53 Track						
BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL HAMMER TYPE: ROPE & CATHEAD CHECKED BY:		BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL HAMMER TYPE: ROPE & CATHEAD CHECKED BY:								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		S11: 50.0 ft - 50.4 ft, A-4, dry, hard, fine sandy SILT, trace gravel, (ML), Note: Bottom 3" of sample had a mix of weathered rock, Rec. = 0.83 ft		50-50/5" (R)						
		S12: 55.0 ft - 57.0 ft, A-1-b, gray-brown, wet, very dense, fine to medium SAND, little silt, trace gravel (SM), Rec. = 1.5 ft		33-50-43-47 (93)	16.6	6.7	77.2	16.1		
		S13: 60.0 ft - 62.0 ft, A-2-4, gray-brown, wet, very dense, fine to medium SAND, little silt, trace gravel (SM), Rec. = 1.83 ft		28-40-44-66 (84)	16.4	5.0	76.7	18.3		
		S14: 65.0 ft - 66.0 ft, A-6, gray-brown and orange, dry, hard, silty CLAY, fine sand varves, (CL), Rec. = 1.33 ft		18-52-65-66 (117)						
		66.0 ft - 66.9 ft, A-3, gray-brown, moist, very dense, clean fine SAND, trace silt, (SP)								
		66.9 ft - 67.0 ft, A-4, gray-brown, dry, SILT, (ML)								
		S15: 70.0 ft - 72.0 ft, A-7-5, gray and brown, slightly moist, hard, CLAYEY SILT, thin fine sand varves, (CH-MH), Rec. = 1.33 ft		17-30-30-40 (60)	30.5				58	28

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B316b SHEET 4 of 4 DATE STARTED: 7/15/13 DATE COMPLETED: 7/17/13						
PROJECT NAME: Newport City STP 134-3(22) SITE NAME: Route 191 Landslide STATION: - OFFSET: - VTSPG: N 888534.05 ft E 1721175.80 ft		PROJECT NUMBER: GAI 133-87312 SITE NUMBER: - GROUND ELEVATION: 748.37 ft GROUNDWATER DEPTH: 21.25 ft 7/18/13 PROJECT PIN NUMBER: -		BORING CREW: New Hampshire Boring DRILLER: Rich Leonard LOGGER: Helena Hollauer BORING RIG: Mobile B-53 Track						
BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL HAMMER TYPE: ROPE & CATHEAD CHECKED BY:		BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL HAMMER TYPE: ROPE & CATHEAD CHECKED BY:								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
		S16: 75.0 ft - 77.0 ft, A-7-5, gray and brown, slightly moist, hard, CLAYEY SILT, thin fine sand varves, (CH-MH), Rec. = 1.67 ft		17-24-28-37 (52)						
		78.0 ft - 80.0 ft, A-7-5, U1; Shelby tube taken with about 800lbs of applied pressure, Rec. = 2.0 ft, (MH).			34.0	0.0	0.4	99.6	58	25
		S17: 80.0 ft - 82.0 ft, A-7-5, gray and brown, slightly moist, hard, CLAYEY SILT, thin fine sand varves, (CH-MH), Note: Varves spaced wider than at Sample D15 (1/8-1/4"), Rec. = 1.0 ft		16-23-26-42 (49)						
		84.0 ft - 85.2 ft, A-7-5, U2; Shelby tube taken with about 1000lbs of applied pressure, Rec. = 1.5 ft, (CH-MH).			33.3	2.0	1.4	96.6	56	26
		S18: 87.0 ft - 89.0 ft, A-7-5, gray and brown, very slightly moist, hard, CLAYEY SILT, thin fine sand varves, (CH-MH), Rec. = 1.83 ft		12-16-24-32 (40)	35.5				58	27
		91.0 ft - 92.6 ft, U3; Shelby tube attempted with about 1000lbs of applied pressure (19" push), No recovery.								
		Hole stopped @ 92.6 ft								
		Notes: - 2" well installed, Screen from 55 to 60 ft; sand pack from 53 to 61.5 ft; bentonite chips from 50 to 53 ft grouted from 50 to ground surface. Hole backfilled below 61.5 ft with alternating layers of sand and bentonite chips.								

LOG OF BORING & WELL, NEWPORT.CITY, VT, AOT.GDT, 8/13/14

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LOG OF BORING & WELL, NEWPORT.CITY, VT, AOT.GDT, 8/13/14



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

BORING NUMBER: B318a
SHEET 1 of 2
DATE STARTED: 7/02/13
DATE COMPLETED: 7/03/13

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: -

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 815.33 ft
GROUNDWATER DEPTH: Not encountered
PROJECT PIN NUMBER: -

BORING CREW: New Hampshire Boring
DRILLER: Bub Thompson
LOGGER: Noah Chinburg
BORING RIG: CME-750 ATV

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
0.0 ft - 5.0 ft		Drilling pad. No samples until 5 ft.							
5.0 ft - 7.0 ft		S1: 5.0 ft - 7.0 ft, A-2-4, medium-brown, moist, medium dense, fine to coarse SAND, some gravel, some silt, (SM), Rec. = 1.58 ft	6-7-11-12 (18)	8.1	33.3	38.7	28.0		
10.0 ft - 12.0 ft		S2: 10.0 ft - 12.0 ft, A-4, light-brown, moist, stiff, clayey SILT, some gravel, some fine sand, (ML). Note: Low sample recovery. Possibly wash material, Rec. = 0.08 ft	8-7-7-7 (14)						
15.0 ft - 17.0 ft		S3: 15.0 ft - 17.0 ft, A-4, gray-brown, moist, medium dense, silty fine to coarse SAND, little gravel, trace organics (roots), (SM). Note: Possible root mat recovered in spoon, Rec. = 0.67 ft	22-14-15-15 (29)	13.3	19.3	37.8	42.9		
18.0 ft		Driller indicated soft conditions.							
20.0 ft - 22.0 ft		S4: 20.0 ft - 22.0 ft, A-4, gray, wet, medium dense, silty fine to medium SAND, little gravel, (SM). Note: Low sample recovery. Possible wash material, Rec. = 0.08 ft	3-7-11-6 (18)						



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

BORING NUMBER: B318a
SHEET 2 of 2
DATE STARTED: 7/02/13
DATE COMPLETED: 7/03/13

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: -

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 815.33 ft
GROUNDWATER DEPTH: Not encountered
PROJECT PIN NUMBER: -

BORING CREW: New Hampshire Boring
DRILLER: Bub Thompson
LOGGER: Noah Chinburg
BORING RIG: CME-750 ATV

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	LL (%)	PI (%)
25.0 ft - 27.0 ft		S5: 25.0 ft - 27.0 ft, A-4, brown-gray, stiff, SILT, little gravel, little fine to coarse sand, (ML). Note: Low recovery (gravel in tip of spoon). Suspected wash material, Rec. = 0.17 ft	19-12-6-7 (18)						
28.0 ft		Cobble suspected due to drill response.							
30.0 ft - 32.0 ft		S6: 30.0 ft - 32.0 ft, A-4, gray, moist, hard, SILT, trace fine to medium sand in lenses, (ML). P.P. = 1.5, 1.9, 1.7 tsf; Tv = 0.5, 0.45, 0.35 tsf., Rec. = 1.17 ft	33-26-19-23* (45)	22.6				24	4
35.0 ft - 37.0 ft		S7: 35.0 ft - 37.0 ft, A-4, gray, moist, hard, SILT, little fine to medium sand, trace gravel, (ML), Rec. = 1.0 ft	26-32-28-29* (60)	13.0	10.8	16.5	72.7	18	1
40.0 ft - 40.3 ft		Spoon was bouncing during driving. Hole stopped @ 40.0 ft	60/4" (R)						
<p>Notes:</p> <ul style="list-style-type: none"> - * 3" spoon used. Do not use N-values for design. - Hole abandoned after encountering suspected horizontal drain. Hole backfilled with grout. Boring continued in B318b. 									

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

BORING NUMBER: PTWa
SHEET 6 of 8
DATE STARTED: 6/07/13
DATE COMPLETED: 6/08/13

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888334.52 ft E 1721114.01 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 796.58 ft
GROUNDWATER DEPTH: 33.6 ft 6/08/13
PROJECT PIN NUMBER: -

BORING CREW: Boart Longyear
DRILLER: Jason Koering
LOGGER: Helena Hollauer
BORING RIG: 600T Sonic

BORING TYPE: Sonic
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
126.0 ft - 134.0 ft		A-4, brown-gray, moist, clayey SILT, trace fine sand with orange, varved silty CLAY, (ML). Some varves are concentric and folded rather than oriented near horizontal. Possible slide zone. P.P. = 1.5, 2.5, 2.5, 2.75 tsf.						
132.0 ft		Mica flakes and mottling visible to 134 ft.						
134.0 ft - 140.0 ft		A-4, gray-orange-brown, slightly moist, silty fine to coarse SAND, some gravel (angular weathered PHYLLITE and rounded gravel), (SM).						
140.0 ft - 141.5 ft		Highly weathered PHYLLITE cobble, garnets weathered.						
141.5 ft - 147.0 ft		A-4, gray-brown, slightly moist, clayey SILT, some gravel (angular, highly weathered PHYLLITE), some fine to coarse sand, (ML).						
147.0 ft - 149.0 ft		Moderately weathered cobble, PHYLLITE.						
149.0 ft - 150.0 ft		A-1-a, gray-brown, wet, fine SAND, little silt, trace gravel (rounded), trace clay, (SP).						



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

BORING NUMBER: PTWa
SHEET 7 of 8
DATE STARTED: 6/07/13
DATE COMPLETED: 6/08/13

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888334.52 ft E 1721114.01 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 796.58 ft
GROUNDWATER DEPTH: 33.6 ft 6/08/13
PROJECT PIN NUMBER: -

BORING CREW: Boart Longyear
DRILLER: Jason Koering
LOGGER: Helena Hollauer
BORING RIG: 600T Sonic

BORING TYPE: Sonic
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
150.0 ft - 160.0 ft		A-4, gray-brown, slightly moist, clayey SILT, some gravel (angular, moderately weathered PHYLLITE), little fine to coarse sand, (ML). 152.5 ft. Sample is dry.						
160.0 ft - 162.0 ft		A-6, Driller reports softer material while drilling, A-6, dark gray, moist, silty CLAY, some gravel (angular, moderately weathered PHYLLITE), little fine to coarse sand, (CL). P.P. < 0.25 tsf. Tv = 0.25, 0.25, 0.25, 0.25 tsf.						
162.0 ft - 163.0 ft		Dark gray, moist, very highly weathered rock (PHYLLITE) with some rock layering/structure, Garnets weathered.						
163.0 ft - 165.8 ft		A-6, dark gray brown, moist, silty CLAY grading to mottled, clayey SILT, (CL). Soil becomes dark gray-black about 165.5'. P.P. = 3.25, 1.5, 2.5, 2.75 tsf. Tv = 0.625, 0.625, 0.625 tsf.						
165.8 ft - 166.0 ft		Competent rock fragments						
166.0 ft - 171.0 ft		Bedrock (PHYLLITE).						
Top of Bedrock @ 166.0 ft								
Hole stopped @ 171.0 ft								
<p>Notes:</p> <ul style="list-style-type: none"> - 6" casing with continuous 4" core barrel sampling used in exploration. - Entire hole was over-cored using 8" casing and 6" core barrel to install monitoring well. - 4" well screen set 135 to 140 ft. Sand pack from 132 to 141 ft. Bentonite chips from 128.5 to 132. Grout from 128.5 ft to 								



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

BORING NUMBER: PTWa
SHEET 8 of 8
DATE STARTED: 6/07/13
DATE COMPLETED: 6/08/13

PROJECT NAME: Newport City STP 134-3(22)
SITE NAME: Route 191 Landslide
STATION: -
OFFSET: -
VTSPG: N 888334.52 ft E 1721114.01 ft

PROJECT NUMBER: GAI 133-87312
SITE NUMBER: -
GROUND ELEVATION: 796.58 ft
GROUNDWATER DEPTH: 33.6 ft 6/08/13
PROJECT PIN NUMBER: -

BORING CREW: Boart Longyear
DRILLER: Jason Koering
LOGGER: Helena Hollauer
BORING RIG: 600T Sonic

BORING TYPE: Sonic
SAMPLE TYPE: Continuous Core
HAMMER TYPE: N/A
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
ground surface. Boring below 141 ft backfilled with bentonite chips. - Densities indicated in soil descriptions are based on adjacent SPT values and field experience.								



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

BORING NUMBER: PTWb
SHEET 1 of 4
DATE STARTED: 6/09/13
DATE COMPLETED: 6/09/13

PROJECT NAME: Newport City STP 134-3(22) PROJECT NUMBER: GAI 133-87312
SITE NAME: Route 191 Landslide SITE NUMBER:
STATION: - GROUND ELEVATION: 796.42 ft
OFFSET: - GROUNDWATER DEPTH: 14.5 ft 6/09/13
VTSPG: N 888336.61 ft E 1721110.45 ft PROJECT PIN NUMBER: -
BORING CREW: Boart Longyear BORING TYPE: Sonic
DRILLER: Jason Koering SAMPLE TYPE: Continuous Core
LOGGER: Helena Hollauer HAMMER TYPE: N/A
BORING RIG: 600T Sonic CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		Top of Well Elevation: 796.76 ft 0.0 ft - 86.0 ft, No samples taken.						

LOG OF BORING & WELL, NEWPORT, GAI, VT, AOT, GSDT, 8/13/14



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

BORING NUMBER: PTWb
SHEET 2 of 4
DATE STARTED: 6/09/13
DATE COMPLETED: 6/09/13

PROJECT NAME: Newport City STP 134-3(22) PROJECT NUMBER: GAI 133-87312
SITE NAME: Route 191 Landslide SITE NUMBER:
STATION: - GROUND ELEVATION: 796.42 ft
OFFSET: - GROUNDWATER DEPTH: 14.5 ft 6/09/13
VTSPG: N 888336.61 ft E 1721110.45 ft PROJECT PIN NUMBER: -
BORING CREW: Boart Longyear BORING TYPE: Sonic
DRILLER: Jason Koering SAMPLE TYPE: Continuous Core
LOGGER: Helena Hollauer HAMMER TYPE: N/A
BORING RIG: 600T Sonic CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)

LOG OF BORING & WELL, NEWPORT, GAI, VT, AOT, GSDT, 8/13/14



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

BORING NUMBER: PTWb
SHEET 3 of 4
DATE STARTED: 6/09/13
DATE COMPLETED: 6/09/13

PROJECT NAME: Newport City STP 134-3(22) PROJECT NUMBER: GAI 133-87312
SITE NAME: Route 191 Landslide SITE NUMBER:
STATION: - GROUND ELEVATION: 796.42 ft
OFFSET: - GROUNDWATER DEPTH: 14.5 ft 6/09/13
VTSPG: N 888336.61 ft E 1721110.45 ft PROJECT PIN NUMBER: -
BORING CREW: Boart Longyear BORING TYPE: Sonic
DRILLER: Jason Koering SAMPLE TYPE: Continuous Core
LOGGER: Helena Hollauer HAMMER TYPE: N/A
BORING RIG: 600T Sonic CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)

LOG OF BORING & WELL, NEWPORT, GAI, VT, AOT, GSDT, 8/13/14



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

BORING NUMBER: PTWb
SHEET 4 of 4
DATE STARTED: 6/09/13
DATE COMPLETED: 6/09/13

PROJECT NAME: Newport City STP 134-3(22) PROJECT NUMBER: GAI 133-87312
SITE NAME: Route 191 Landslide SITE NUMBER:
STATION: - GROUND ELEVATION: 796.42 ft
OFFSET: - GROUNDWATER DEPTH: 14.5 ft 6/09/13
VTSPG: N 888336.61 ft E 1721110.45 ft PROJECT PIN NUMBER: -
BORING CREW: Boart Longyear BORING TYPE: Sonic
DRILLER: Jason Koering SAMPLE TYPE: Continuous Core
LOGGER: Helena Hollauer HAMMER TYPE: N/A
BORING RIG: 600T Sonic CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)

Hole stopped @ 86.0 ft

Notes:
 - 6" casing with continuous 4" core barrel sampling used in exploration.
 - Entire hole was over-cored using 8" casing and 6" core barrel to install monitoring well.
 - Boring completed set well casing. Use PTWb for stratigraphy.
 - 4" well screen set 80 to 85 ft. Sand pack from 78 to 86 ft. Bentonite chips from 75 to 78 ft. Grout from 75 ft to ground surface.

LOG OF BORING & WELL, NEWPORT, GAI, VT, AOT, GSDT, 8/13/14

