

VTTrans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B-6 SHEET 1 of 4 DATE STARTED: 3/04/14 DATE COMPLETED: 3/06/14			
PROJECT NAME: Middlesex IM 089-2(49) SITE NAME: Middlesex NECR Culvert STATION: - OFFSET: - VTSPG: N 661081.24 ft E 1588270.27 ft		PROJECT NUMBER: GAI 130-3003 SITE NUMBER: - GROUND ELEVATION: 505.79 ft GROUNDWATER DEPTH: 45.0 ft 3/06/14 PROJECT PIN NUMBER: -					
BORING CREW: Atlantic Testing Laboratories DRILLER: Mark Childs LOGGER: Noah Chnburg BORING RIG: CME-850 X		BORING TYPE: WASH BORE SAMPLE TYPE: Spill Spoon HAMMER TYPE: Automatic 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, Top 1.0': Light brown, moist, very dense (frozen), fine to medium SAND and pieces of rock fl. (GM), (FILL), Bottom 0.4': Dark brown, moist, very dense (frozen), SAND and GRAVEL, some organics (roots), (GM), (FILL), Rec. = 1.4 ft	42-61-63 17 (144)				
		S2: 2.0 ft - 4.0 ft, A-1-b, Medium brown, moist, medium dense, fine to coarse SAND and GRAVEL, (GM), (FILL), Rec. = 1.2 ft	16-9-5-4 (14)				
		S3: 4.0 ft - 6.0 ft, A-4, Olive brown, moist, medium dense, SILT, some sand, trace gravel, layers of clay, (ML), (FILL), Rec. = 1.1 ft	11-6-6-4 (12)	21.7	7.8	20.5	71.9
		S4: 6.0 ft - 8.0 ft, A-4, Olive brown, moist, loose, SILT, some sand, (ML), (FILL), Rec. = 0.4 ft	6-3-3-3 (8)				
		S5: 8.0 ft - 10.0 ft, Loose, no recovery, Rec. = 0.0 ft	7-3-3-3 (6)				
		S6: 10.0 ft - 12.0 ft, A-4, Olive brown, moist, loose, SILT, some sand, little gravel, (ML), (FILL), Rec. = 0.9 ft	3-3-2-2 (5)				
		S7: 12.0 ft - 14.0 ft, A-4, Olive brown, moist, loose, SILT, some sand, little gravel, (ML), (FILL), Rec. = 0.6 ft	6-2-2-3 (4)				
		S8: 14.0 ft - 16.0 ft, Loose, no recovery, Rec. = 0.0 ft	7-6-5-6 (10)				
		S9: 16.0 ft - 18.0 ft, A-4, Olive brown, moist, loose, silty fine to coarse SAND, little gravel, (SM), (FILL), Rec. = 0.6 ft	9-3-4-4 (7)				
		S10: 18.0 ft - 20.0 ft, A-4, Olive brown, moist, loose, silty fine to medium SAND, little coarse sand, trace gravel, (SM), (FILL), Rec. = 0.4 ft	6-3-3-4 (6)				

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PROJECT NAME: Middlesex IM 089-2(49) SITE NAME: Middlesex NECR Culvert STATION: - OFFSET: - VTSPG: N 661081.24 ft E 1588270.27 ft		PROJECT NUMBER: GAI 130-3003 SITE NUMBER: - GROUND ELEVATION: 505.79 ft GROUNDWATER DEPTH: 45.0 ft 3/06/14 PROJECT PIN NUMBER: -					
BORING CREW: Atlantic Testing Laboratories DRILLER: Mark Childs LOGGER: Noah Chnburg BORING RIG: CME-850 X		BORING TYPE: WASH BORE SAMPLE TYPE: Spill Spoon HAMMER TYPE: Automatic CHECKED BY: -					
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		S11: 20.0 ft - 22.0 ft, Loose, no recovery - gravel stuck in spoon tip, Rec. = 0.0 ft	6-5-5-6 (10)				
		S12: 22.0 ft - 24.0 ft, Medium dense, clean coarse sand and gravel - suspected wash, Rec. = 0.7 ft	8-7-5-6 (12)				
		S13: 24.0 ft - 26.0 ft, Loose, no recovery, Rec. = 0.0 ft	4-4-4-4 (8)				
		S14: 26.0 ft - 28.0 ft, A-2-4, Olive brown, moist, loose, silty fine to medium SAND, little coarse sand, trace gravel, orange-brown stain 0.2' from bottom of spoon, (SM), (FILL), Rec. = 0.9 ft	9-4-4-4 (8)	14.0	33.0	42.0	25.0
		S15: 28.0 ft - 30.0 ft, A-2-4, Olive brown, moist, loose, silty fine to medium SAND, little coarse sand, trace gravel, (SM), (FILL), Rec. = 0.2 ft	2-4-4-5 (8)				
		S16: 30.0 ft - 32.0 ft, A-2-4, Olive brown, moist, loose, silty fine to medium SAND, little coarse sand, trace gravel, dark brown stain near bottom of spoon, (SM), (FILL), Rec. = 0.7 ft	5-3-4-6 (7)				
		S17: 32.0 ft - 34.0 ft, A-4, Olive brown, moist, medium dense, silty fine SAND, little medium to coarse sand, trace gravel, (SM), (FILL), Rec. = 0.2 ft	3-6-5-7 (12)				
		S18: 34.0 ft - 36.0 ft, A-4, Olive brown, moist, very loose, silty fine SAND, some medium to coarse sand, trace gravel, (SM), (FILL), Rec. = 0.9 ft	4-3-4-4 WOH (9)	22.1	16.2	43.5	40.3
		S19: 36.0 ft - 36.3 ft, A-4, Olive brown, moist, very loose, silty fine SAND, some medium to coarse sand, trace gravel, trace organics (shells and roots), (SM), (FILL), Rec. = 0.6 ft	WOR-1-1 3 (2)				
		S20: 36.3 ft - 38.0 ft, A-1-b, Medium brown red, moist, very loose, fine SAND, trace medium to coarse sand, trace gravel, (SP-SM), (ALLUVIUM)	14-8-9-7 (16)				
		S20: 38.0 ft - 40.0 ft, Medium dense, no recovery - gravel blocking spoon tip, Rec. = 0.2 ft					

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PROJECT NAME: Middlesex IM 089-2(49) SITE NAME: Middlesex NECR Culvert STATION: - OFFSET: - VTSPG: N 661081.24 ft E 1588270.27 ft		PROJECT NUMBER: GAI 130-3003 SITE NUMBER: - GROUND ELEVATION: 505.79 ft GROUNDWATER DEPTH: 45.0 ft 3/06/14 PROJECT PIN NUMBER: -					
BORING CREW: Atlantic Testing Laboratories DRILLER: Mark Childs LOGGER: Noah Chnburg BORING RIG: CME-850 X		BORING TYPE: WASH BORE SAMPLE TYPE: Spill Spoon HAMMER TYPE: Automatic CHECKED BY: -					
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		S21: 40.0 ft - 42.0 ft, A-1-b, Gray brown, moist, medium dense, fine to coarse SAND, little silt, trace gravel, (SP-SM), (ALLUVIUM), Rec. = 0.4 ft	16-14-15 20 (29)				
		S22: 42.0 ft - 44.0 ft, A-1-b, Gray brown, moist, medium dense, fine to coarse SAND, little silt, little gravel, (SP-SM), (ALLUVIUM), Rec. = 1.1 ft	16-14-13 15 (27)	9.3	38.3	50.6	11.1
		S23: 44.0 ft - 46.0 ft, A-1-b, Gray brown, moist, medium dense, fine to medium SAND, little coarse sand, trace gravel, rock stuck in spoon tip, (SP-SM), (ALLUVIUM), Rec. = 0.9 ft	6-7-8-20 (15)				
		S24: 46.0 ft - 48.0 ft, A-1-b, Gray brown, moist, medium dense, fine to medium SAND, little coarse sand, trace gravel, rock stuck in spoon tip, (SP-SM), (ALLUVIUM), Rec. = 0.1 ft	19-13-12 14 (25)				
		S25: 48.0 ft - 50.0 ft, A-2-4, Gray brown with layers of medium brown staining, moist, medium dense, fine SAND, little silt, little medium sand, trace coarse sand, (SM), (ALLUVIUM), Rec. = 0.9 ft	13-11-11 10 (22)				
		S26: 50.0 ft - 52.0 ft, A-2-4, Gray brown with layers of medium brown staining, moist, medium dense, fine SAND, little silt, little medium sand, trace coarse sand, lens of medium gravel in middle of spoon, (SM), (ALLUVIUM), Rec. = 1.5 ft	13-13-14 16 (27)				
		S27: 52.0 ft - 52.2 ft, A-2-4, Top 0.1': Gray brown with layers of medium brown staining, moist, medium dense, fine SAND, little silt, little medium sand, trace coarse sand, (SM), (ALLUVIUM). Bottom 0.1': Bedrock in spoon tip, Rec. = 0.0 ft	50/0.2 (R)				
		S27: 52.2 ft - 63.0 ft, Dark gray (N3), medium dark gray (N4), medium gray (N5), and white (N6), very fine to fine grained, weak (R2) to medium weak (R3), fresh to slightly weathered, strongly foliated, non-calcareous, quartz-epidote-chlorite PHYLITE, discontinuities parallel with foliation, dipping 65-90 degrees, moderately spaced, with quartz veins 0.1 to 4 cm wide, parallel with foliation, (STOWE FORMATION) R1: NX, Rec. = 5.0 ft	R1	100	86		
		R2: NX, Rec. = 4.7 ft	R2	94	82		

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BORING CREW: Atlantic Testing Laboratories DRILLER: Mark Childs LOGGER: Noah Chnburg BORING RIG: CME-850 X		BORING TYPE: WASH BORE SAMPLE TYPE: Spill Spoon HAMMER TYPE: Automatic CHECKED BY: -					
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	RUN	REC (%)	RQD (%)	D/I Rate (in/ft)	UCS (psi)
		Hole stopped @ 63.0 ft					
<p>Notes</p> <ul style="list-style-type: none"> Borehole backfilled with cement-bentonite grout. Reported groundwater depth measured with bottom of casing at 52 ft after stabilizing overnight. Lost water in borehole at 32'. Spoon dropped approx. 6" past end of S18 sample interval, possible cavity. 							

LOG OF BORING & WELL (W/NECR CULVERT) GP, VT AGT/GRT, 6/13/14

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