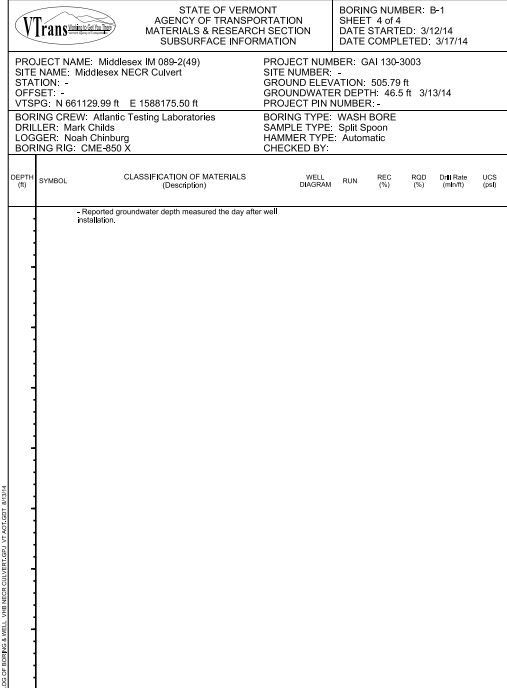


Notes:
 - A temporary observation well was installed to a depth of 48.0 feet.



VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B-2 SHEET 1 of 4 DATE STARTED: 3/07/14 DATE COMPLETED: 3/12/14			
PROJECT NAME: Middlesex IM 089-2(49) SITE NAME: Middlesex NECR Culvert STATION: - OFFSET: - VTSPG: N 661099.11 ft E 1588233.14 ft		PROJECT NUMBER: GAI 130-3003 SITE NUMBER: - GROUND ELEVATION: 504.78 ft GROUNDWATER DEPTH: 49.4 ft 3/11/14 PROJECT PIN NUMBER: -			BORING CREW: Atlantic Testing Laboratories DRILLER: Mark Childs LOGGER: Noah Chinburg BORING RIG: CME-850 X			
BORING TYPE: WASH BORE SAMPLE TYPE: Split Spoon HAMMER TYPE: Automatic 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: 507.38 ft 0.0 ft - 5.5 ft, Advanced to 8' with air hammer. Rock encountered to 5.5'.						
		S1: 6.0 ft - 10.0 ft, A-4, Olive brown, moist, loose, SILT, some sand, little gravel, trace clay, (SM), (FILL), Rec. = 0.6 ft		3-3-3 (7)	21.1	25.3	25.2	49.5
		S2: 10.0 ft - 12.0 ft, A-4, Olive brown, wet, loose, SILT, some sand, trace gravel, trace clay, (SM), (FILL), Rec. = 0.5 ft		4-3-3-4 (6)				
		S3: 12.0 ft - 14.0 ft, A-4, Olive brown, moist, loose, sandy SILT, trace gravel, (ML), (FILL), Rec. = 0.8 ft		3-3-3 (7)	22.6	12.6	26.6	60.8
		S4: 14.0 ft - 16.0 ft, A-4, Olive brown, wet, very loose, sandy SILT, trace clay, (ML), (FILL), PP = 0.0, 0.0, 0.0 tsf, Tv = 0.9 ft		3-2-2 (4)				
		S5: 16.0 ft - 18.0 ft, A-4, Olive brown, moist, loose, sandy SILT with layers of medium plastic clayey silt, (ML), (FILL), PP = 0.0, 0.3, 0.5 tsf, Tv = 1.0 tsf, Rec. = 0.8 ft		2-3-3-4 (6)	21.3	15.0	29.8	55.2
		S6: 18.0 ft - 20.0 ft, A-4, Olive brown, moist, very loose, SILT, little sand, trace gravel, trace clay, (ML), (FILL), PP = 0.4, 0.4, 0.3 tsf, Rec. = 1.1 ft		2-2-2-3 (4)	26.0	7.2	12.4	80.4

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B-2 SHEET 2 of 4 DATE STARTED: 3/07/14 DATE COMPLETED: 3/12/14			
PROJECT NAME: Middlesex IM 089-2(49) SITE NAME: Middlesex NECR Culvert STATION: - OFFSET: - VTSPG: N 661099.11 ft E 1588233.14 ft		PROJECT NUMBER: GAI 130-3003 SITE NUMBER: - GROUND ELEVATION: 504.78 ft GROUNDWATER DEPTH: 49.4 ft 3/11/14 PROJECT PIN NUMBER: -			BORING CREW: Atlantic Testing Laboratories DRILLER: Mark Childs LOGGER: Noah Chinburg BORING RIG: CME-850 X			
BORING TYPE: WASH BORE SAMPLE TYPE: Split Spoon HAMMER TYPE: Automatic 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 (%)
		20.0 ft - 21.0 ft, V1 at 21.0 ft = 24 lb (3772 psf) V2 at 22.0 ft = 42 lb (6602, 3772 psf)		2-3-3-4 (6)				
		S7: 21.0 ft - 23.0 ft, A-4, Olive brown, moist, loose, SILT, little sand, trace clay, (ML), (FILL), PP = 0.0, 0.0 tsf, Tv = 0.5, 0.6 tsf, Rec. = 1.1 ft		4-3-5-5 (8)				
		S8: 23.0 ft - 25.0 ft, A-4, Olive brown, moist, loose, SILT, little sand, trace gravel, trace clay, (ML), (FILL), Rec. = 1.6 ft		4-4-4-4 (8)				
		S9: 25.0 ft - 27.0 ft, A-4, Olive brown, moist, loose, SILT, little sand, trace gravel, trace clay, (ML), (FILL), Rec. = 0.7 ft		6-7-6-6 (13)				
		S10: 27.0 ft - 29.0 ft, A-4, Olive brown, wet, medium dense, sandy SILT, suspected wash, (ML), (FILL), Rec. = 0.1 ft		1-3-4-6 (7)	23.1	12.5	18.1	69.4
		S11: 29.0 ft - 31.0 ft, A-4, Olive brown with layers of rust brown, moist, loose, SILT, little sand, trace gravel, (ML), (FILL), Rec. = 0.9 ft		6-5-5-7 (10)				
		S12: 31.0 ft - 33.0 ft, A-4, Olive brown with layers of rust brown, moist, loose, SILT, little sand, trace gravel, (ML), (FILL), Rec. = 1.0 ft		4-4-6-7 (10)				
		S13: 33.0 ft - 35.0 ft, A-4, Olive brown mixed with rust brown, wet, loose, SILT, little sand, trace gravel, suspected wash, (ML), (FILL), Rec. = 0.7 ft		8-9-6-6 (14)				
		S14: 35.0 ft - 37.0 ft, A-4, Olive brown mixed with rust brown, moist, medium dense, SILT, little sand, little gravel, (ML), (FILL), Rec. = 1.1 ft		6-6-7-7 (13)				
		S15: 37.0 ft - 39.0 ft, A-4, Olive brown mixed with rust brown, moist, medium dense, SILT, little sand, little gravel, trace organics (twg), (ML), (FILL), Rec. = 0.9 ft		8-9-8-10 (18)				
		S16: 39.0 ft - 41.0 ft, Medium dense, no recovery, Rec. = 0.0 ft						

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B-2 SHEET 3 of 4 DATE STARTED: 3/07/14 DATE COMPLETED: 3/12/14			
PROJECT NAME: Middlesex IM 089-2(49) SITE NAME: Middlesex NECR Culvert STATION: - OFFSET: - VTSPG: N 661099.11 ft E 1588233.14 ft		PROJECT NUMBER: GAI 130-3003 SITE NUMBER: - GROUND ELEVATION: 504.78 ft GROUNDWATER DEPTH: 49.4 ft 3/11/14 PROJECT PIN NUMBER: -			BORING CREW: Atlantic Testing Laboratories DRILLER: Mark Childs LOGGER: Noah Chinburg BORING RIG: CME-850 X			
BORING TYPE: WASH BORE SAMPLE TYPE: Split Spoon HAMMER TYPE: Automatic 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 (%)
		S17: 41.0 ft - 43.0 ft, Medium dense, no recovery, possibly pushing cobble (FILL), Rec. = 0.0 ft		15-12-0-10 (21)				
		S18: 43.0 ft - 45.0 ft, A-2-4, Olive brown with rust brown staining, moist, medium dense, fine to medium SAND, some silt, little coarse sand, little gravel, (SM), (FILL), Rec. = 0.9 ft		5-5-6-5 (11)				
		S19: 45.0 ft - 47.0 ft, A-2-4, Olive brown, moist, medium dense, fine to medium SAND, some silt, little coarse sand, little gravel, (SM), (FILL), Rec. = 0.7 ft		9-7-11-12 (18)	11.2	23.3	46.4	30.3
		S20: 47.0 ft - 49.0 ft, A-2-4, Olive brown, moist, wet, medium dense, fine to medium SAND, some silt, little coarse sand, some gravel, (SM), (FILL), Rec. = 0.2 ft		9-9-7-9 (16)				
		S21: 49.0 ft - 51.0 ft, Loose, no recovery, Rec. = 0.0 ft		6-5-3-8 (8)				
		S22: 51.0 ft - 53.0 ft, Medium dense, no recovery, possibly pushing cobble, (FILL), Rec. = 0.0 ft		29-17-10-8 (27)				
		S23: 53.0 ft - 55.0 ft, Wood, Rec. = 0.6 ft		9-11-11-17 (22)				
		S24: 55.0 ft - 57.0 ft, Top 0.2': Wood Middle 0.6': Weathered phyllite cobble. Bottom 0.2': Brown, moist, medium SAND (ALLUVIUM), Rec. = 1.0 ft		13-33-31-19 (64)				
		S25: 57.0 ft - 59.0 ft, A-2-4, Layered brown and gray with dark brown staining, moist, medium dense, fine to medium SAND, little silt, (SP-SM), (ALLUVIUM), Rec. = 1.0 ft		5-5-9-7 (14)	22.3	0.8	87.5	11.7
		S26: 59.0 ft - 59.2 ft, Weathered bedrock in spoon sp, Rec. = 0.0 ft		50/0.2 (R)				

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION			BORING NUMBER: B-2 SHEET 4 of 4 DATE STARTED: 3/07/14 DATE COMPLETED: 3/12/14			
PROJECT NAME: Middlesex IM 089-2(49) SITE NAME: Middlesex NECR Culvert STATION: - OFFSET: - VTSPG: N 661099.11 ft E 1588233.14 ft		PROJECT NUMBER: GAI 130-3003 SITE NUMBER: - GROUND ELEVATION: 504.78 ft GROUNDWATER DEPTH: 49.4 ft 3/11/14 PROJECT PIN NUMBER: -			BORING CREW: Atlantic Testing Laboratories DRILLER: Mark Childs LOGGER: Noah Chinburg BORING RIG: CME-850 X			
BORING TYPE: WASH BORE SAMPLE TYPE: Split Spoon HAMMER TYPE: Automatic CHECKED BY:								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	RUN	REC (%)	RQD (%)	Ch Rate (min/ft)	UCS (psi)
		59.2 ft - 75.0 ft, Dark gray (N3), medium dark gray (N4), and white (N9), very fine to fine grained, fresh to slightly weathered, weak (R2) to medium weak (R3), strongly foliated, non-calcareous to slightly calcareous, quartz-cemented-chlorite PHYLLITE, discontinuities close to very widely spaced, parallel with foliation, dipping 75-90 degrees, with quartz veins parallel with foliation 0.1 to 4 cm wide. [STOWE FORMATION] R1: NX, Rec. = 4.8 ft		R1	96	50		
		R2: NX, Rec. = 5.1 ft		R2	102	100		
		R3: NX, Rec. = 4.8 ft		R3	96	96		
		Hole stopped @ 75.0 ft						
		Notes: - Inclinometer installed to 65.5 ft upon completion of boring. - Reported groundwater depth measured with bottom of casing at 53 ft after stabilizing overnight.						

LOC OF BORING & WELL: WEB NECR CULVERT (ZP) 17, NOT ZST, B1314

LOC OF BORING & WELL: WEB NECR CULVERT (ZP) 17, NOT ZST, B1314

LOC OF BORING & WELL: WEB NECR CULVERT (ZP) 17, NOT ZST, B1314

LOC OF BORING & WELL: WEB NECR CULVERT (ZP) 17, NOT ZST, B1314

PROJECT NAME: Middlesex IM 089-2(49) PROJECT NUMBER: GAI 130-3003
SITE NAME: Middlesex NECR Culvert SITE NUMBER: -
STATION: Middlesex NECR Culvert GROUND ELEVATION: 505.08 ft
OFFSET: - GROUNDWATER DEPTH: 58.0 ft 3/18/14
VTSPG: N 661099.20 ft E 1588237.05 ft PROJECT PIN NUMBER: -

BORING CREW: Atlantic Testing Laboratories BORING TYPE: WASH BORE
DRILLER: Mark Childs SAMPLE TYPE: Split Spoon
LOGGER: Noah Chinburg HAMMER TYPE: Automatic
BORING RIG: CME-850 X 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 Elevations: 507.89 ft								
0.0 ft - 5.5 ft		Rock fill encountered to 5.5'						
S1: 10.0 ft - 12.0 ft		Loose, no recovery, Rec. = 0.0 ft		4-2-3-3 (5)				
S2: 12.0 ft - 14.0 ft		A-4, Olive brown, moist, loose, SILT, little sand, trace gravel, (ML), (FILL), Rec. = 0.4 ft		6-3-4-6 (7)				
S3: 15.0 ft - 17.0 ft		Loose, no recovery, Rec. = 0.0 ft		3-4-4-4 (8)				
S4: 17.0 ft - 19.0 ft		A-4, Olive brown, moist, loose, SILT, little sand, trace gravel, (ML), (FILL), Rec. = 0.5 ft		3-4-4-3 (8)				

PROJECT NAME: Middlesex IM 089-2(49) PROJECT NUMBER: GAI 130-3003
SITE NAME: Middlesex NECR Culvert SITE NUMBER: -
STATION: Middlesex NECR Culvert GROUND ELEVATION: 505.08 ft
OFFSET: - GROUNDWATER DEPTH: 58.0 ft 3/18/14
VTSPG: N 661099.20 ft E 1588237.05 ft PROJECT PIN NUMBER: -

BORING CREW: Atlantic Testing Laboratories BORING TYPE: WASH BORE
DRILLER: Mark Childs SAMPLE TYPE: Split Spoon
LOGGER: Noah Chinburg HAMMER TYPE: Automatic
BORING RIG: CME-850 X 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 (%)
S5: 20.0 ft - 22.0 ft		A-4, Olive brown, moist, loose, SILT, little sand, trace gravel, (ML), (FILL), Rec. = 0.1 ft		4-3-4-1 (7)				
S6: 22.0 ft - 24.0 ft		A-4, Olive brown, moist, loose, SILT, little sand, trace gravel, (ML), (FILL), Rec. = 0.5 ft		3-4-5-3 (9)	20.5	22.7	11.7	65.6
S7: 25.0 ft - 27.0 ft		A-4, Olive brown, moist, loose, SILT, little sand, trace gravel, trace organics (root), (ML), (FILL), Rec. = 0.8 ft		3-4-4-4 (8)				
S8: 27.0 ft - 29.0 ft		A-4, Olive brown, moist, loose, SILT, some sand, (ML), (FILL), Rec. = 0.6 ft		3-5-5-5 (10)				
S9: 30.0 ft - 32.0 ft		Medium dense, no recovery, Rec. = 0.0 ft		8-5-6-7 (11)				
S10: 32.0 ft - 34.0 ft		Medium dense, no recovery, gravel in spoon tip, Rec. = 0.0 ft		11-7-7-8 (14)				
S11: 34.0 ft - 36.0 ft		A-4, Olive brown, moist, loose, silty fine SAND, little medium to coarse sand, trace gravel, (SM), (FILL), Rec. = 1.0 ft		6-4-5-4 (9)				
S12: 36.0 ft - 38.0 ft		A-4, Olive brown, moist, medium dense, fine to medium SAND, some silt, little coarse sand, little gravel, (SM), (FILL), Rec. = 0.7 ft		6-5-7-4 (12)	13.5	19.0	44.5	36.5
S13: 38.0 ft - 40.0 ft		A-4, Olive brown, moist, medium dense, fine to medium SAND, some silt, little coarse sand, trace gravel, (SM), (FILL), Rec. = 0.7 ft		9-6-6-9 (12)				

PROJECT NAME: Middlesex IM 089-2(49) PROJECT NUMBER: GAI 130-3003
SITE NAME: Middlesex NECR Culvert SITE NUMBER: -
STATION: Middlesex NECR Culvert GROUND ELEVATION: 505.08 ft
OFFSET: - GROUNDWATER DEPTH: 58.0 ft 3/18/14
VTSPG: N 661099.20 ft E 1588237.05 ft PROJECT PIN NUMBER: -

BORING CREW: Atlantic Testing Laboratories BORING TYPE: WASH BORE
DRILLER: Mark Childs SAMPLE TYPE: Split Spoon
LOGGER: Noah Chinburg HAMMER TYPE: Automatic
BORING RIG: CME-850 X 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 (%)
S14: 40.0 ft - 42.0 ft		A-1-4, Olive brown, moist, medium dense, fine to medium SAND, some silt, little coarse sand, little gravel, (SM), (FILL), Rec. = 0.3 ft		9-6-6-7 (12)	11.0	29.8	45.5	24.7
S15: 44.0 ft - 46.0 ft		A-2-4, Olive brown, moist, medium dense, fine to medium SAND, some silt, little coarse sand, trace gravel, (SM), (FILL), Rec. = 0.7 ft		8-5-8-8 (13)	16.1	14.2	53.3	32.5
S16: 48.0 ft - 51.0 ft		A-2-4, Top 0.6': Olive brown, moist, medium dense, fine to medium SAND, some silt, little coarse sand, trace gravel, (SM), (FILL), Bottom 0.2': Weathered phyllite cobble, Rec. = 0.8 ft		15-6-8-28 (17)				
S17: 54.0 ft - 56.0 ft		A-2-4, Gray, moist, loose, layered silty fine SAND with SAND and SILT, little medium to coarse sand, trace gravel, trace organics (wood), (SM), (ALLUVIUM), Rec. = 1.2 ft		6-4-3-6 (7)				
Hole stopped @ 59.0 ft								
Top of Bedrock @ 58.8 ft								

Notes:

PROJECT NAME: Middlesex IM 089-2(49) PROJECT NUMBER: GAI 130-3003
SITE NAME: Middlesex NECR Culvert SITE NUMBER: -
STATION: Middlesex NECR Culvert GROUND ELEVATION: 505.08 ft
OFFSET: - GROUNDWATER DEPTH: 58.0 ft 3/18/14
VTSPG: N 661099.20 ft E 1588237.05 ft PROJECT PIN NUMBER: -

BORING CREW: Atlantic Testing Laboratories BORING TYPE: WASH BORE
DRILLER: Mark Childs SAMPLE TYPE: Split Spoon
LOGGER: Noah Chinburg HAMMER TYPE: Automatic
BORING RIG: CME-850 X 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 (%)
- A permanent observation well was installed to a depth of 59.0 feet. - Reported groundwater depth measured the day after well installation.								

LOG OF BORING & WELL: VTR-NECR-CULVERT-GZU-VT-A07-GZ07-B1314

LOG OF BORING & WELL: VTR-NECR-CULVERT-GZU-VT-A07-GZ07-B1314

LOG OF BORING & WELL: VTR-NECR-CULVERT-GZU-VT-A07-GZ07-B1314

LOG OF BORING & WELL: VTR-NECR-CULVERT-GZU-VT-A07-GZ07-B1314

PROJECT NAME: Middlesex IM 089-2(49)
SITE NAME: Middlesex NECR Culvert
STATION: -
OFFSET: -
VTSPG: N 661122.22 ft E 1588249.71 ft

PROJECT NUMBER: GAI 130-3003
SITE NUMBER: -
GROUND ELEVATION: 506.16 ft
GROUNDWATER DEPTH: 39.6 ft 3/19/14
PROJECT PIN NUMBER: -

BORING CREW: Atlantic Testing Laboratories
DRILLER: Mark Childs
LOGGER: Noah Chlnburg
BORING RIG: CME-850 X

BORING TYPE: WASH BORE
SAMPLE TYPE: Split 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 (%)
1-3		S1: 0.0 ft - 2.0 ft, A-1-5, Medium dense, low recovery - snow and gravel blocking spoon tip, (FILL), Rec. = 0.1 ft	1-3-12-10 (15)				
11-5		S2: 2.0 ft - 4.0 ft, A-1-5, Brown and gray, moist, medium dense, fine to coarse SAND and GRAVEL, (GM), (FILL), Rec. = 0.5 ft	11-5-54 (11)				
9-6		S3: 4.0 ft - 6.0 ft, A-4, Olive brown, moist, medium dense, fine to medium SAND, little silt, some gravel, (SM), (FILL), Rec. = 0.7 ft	9-6-66 (12)				
9-5		S4: 6.0 ft - 8.0 ft, A-4, Top 0.9: Olive brown, moist, medium dense, fine to medium SAND, little silt, some gravel, (SM), (FILL) Bottom 0.1: Olive brown, moist, medium dense, SILT, some sand, trace organics (root), (ML), (FILL), Rec. = 1.0 ft	9-5-67 (13)				
9-7		S5: 8.0 ft - 10.0 ft, A-4, Olive brown, moist, medium dense, silty fine sand mixed with clean gravel, suspected wash, (ML), (FILL), Rec. = 0.1 ft	9-7-66 (13)				
9-5		S6: 10.0 ft - 12.0 ft, A-4, Olive brown, moist, loose, SILT, some sand, little gravel, (ML), (FILL), Rec. = 0.9 ft	9-5-34 (8)	13.0	17.6	27.1	55.3
10-5		S7: 12.0 ft - 14.0 ft, A-4, Olive brown, moist, loose, SILT, some sand, trace gravel, (ML), (FILL), Rec. = 0.3 ft	10-5-45 (9)				
4-3		S8: 14.0 ft - 16.0 ft, A-4, Olive brown, moist, loose, SILT, some sand, trace gravel, (ML), (FILL), Rec. = 0.7 ft	4-3-43 (7)				
7-4		S9: 16.0 ft - 18.0 ft, Loose, no recovery, Rec. = 0.0 ft	7-4-34 (7)				
3-4		S10: 18.0 ft - 20.0 ft, Loose, no recovery, gravel stuck in spoon tip, Rec. = 0.0 ft	3-4-43 (8)				

PROJECT NAME: Middlesex IM 089-2(49)
SITE NAME: Middlesex NECR Culvert
STATION: -
OFFSET: -
VTSPG: N 661122.22 ft E 1588249.71 ft

PROJECT NUMBER: GAI 130-3003
SITE NUMBER: -
GROUND ELEVATION: 506.16 ft
GROUNDWATER DEPTH: 39.6 ft 3/19/14
PROJECT PIN NUMBER: -

BORING CREW: Atlantic Testing Laboratories
DRILLER: Mark Childs
LOGGER: Noah Chlnburg
BORING RIG: CME-850 X

BORING TYPE: WASH BORE
SAMPLE TYPE: Split 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 (%)
5-5		S11: 20.0 ft - 22.0 ft, A-4, Olive brown, moist, medium dense, SILT, little sand, trace gravel, (ML), (FILL), Rec. = 0.9 ft	5-5-76 (12)				
4-3		S12: 22.0 ft - 24.0 ft, A-4, Olive brown, moist, loose, SILT, little sand, (ML), (FILL), Rec. = 1.1 ft	4-3-24 (5)	29.8	2.9	11.2	85.9
3-4		S13: 24.0 ft - 26.0 ft, A-4, Olive brown, moist, loose, sandy SILT, trace gravel, (ML), (FILL), Rec. = 1.0 ft	3-4-43 (8)				
5-6		S14: 26.0 ft - 28.0 ft, A-4, Olive brown, moist, medium dense, sandy SILT, trace gravel, (ML), (FILL), Rec. = 1.1 ft	5-6-57 (11)	18.1	2.0	41.0	57.0
2-3		S15: 28.0 ft - 30.0 ft, A-4, Olive brown, moist, loose, SILT, little sand, bottom 0.1' frozen, (ML), (FILL), Rec. = 0.9 ft	2-3-46 (7)				
22-26		S16: 30.0 ft - 32.0 ft, A-4, Olive brown, moist, SILT, little sand, entire sample frozen, (ML), (FILL), Rec. = 2.0 ft	22-26-31 (59)				
22-34		S17: 32.0 ft - 34.0 ft, A-4, Olive brown, moist, SILT, little sand, entire sample frozen, (ML), (FILL), Rec. = 2.0 ft	22-34-39 (73)	34.0	3.3	14.0	82.7
16-5		S18: 34.0 ft - 36.0 ft, A-4, Olive brown, moist, medium dense, SILT, little sand, trace gravel, top 0.3' frozen, (ML), (FILL), Rec. = 1.1 ft	16-5-64 (11)				
7-5		S19: 36.0 ft - 38.0 ft, A-4, Olive brown, moist, medium dense, silty fine SAND, trace medium to coarse sand, trace gravel, (ML), (FILL), Rec. = 0.5 ft	7-5-66 (11)				
4-3		S20: 38.0 ft - 40.0 ft, A-4, Olive brown, moist, loose, silty fine SAND, trace medium to coarse sand, trace gravel, (ML), (FILL), Rec. = 0.7 ft	4-3-34 (6)				

PROJECT NAME: Middlesex IM 089-2(49)
SITE NAME: Middlesex NECR Culvert
STATION: -
OFFSET: -
VTSPG: N 661122.22 ft E 1588249.71 ft

PROJECT NUMBER: GAI 130-3003
SITE NUMBER: -
GROUND ELEVATION: 506.16 ft
GROUNDWATER DEPTH: 39.6 ft 3/19/14
PROJECT PIN NUMBER: -

BORING CREW: Atlantic Testing Laboratories
DRILLER: Mark Childs
LOGGER: Noah Chlnburg
BORING RIG: CME-850 X

BORING TYPE: WASH BORE
SAMPLE TYPE: Split 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 (%)						
								RUN	REC (%)	RQD (%)	DIH Rate (in/ft)	UCS (psi)	
6-3		S21: 40.0 ft - 42.0 ft, A-4, Olive brown, moist, loose, silty fine SAND, trace medium to coarse sand, trace gravel, (ML), (FILL), Rec. = 0.9 ft	6-3-35 (6)	20.1	10.7	37.5	51.8						
2-1		S22: 42.0 ft - 44.0 ft, A-4, Olive brown, wet, very loose, silty fine SAND, trace medium to coarse sand, trace gravel, (ML), (FILL), Rec. = 0.5 ft	2-1-WOR-WOR (0)										
2-4		S23: 44.0 ft - 46.0 ft, A-4, Olive brown, wet, loose, silty fine SAND, some medium to coarse sand, little gravel, (ML), (FILL), Rec. = 0.4 ft	2-4-45 (8)										
11-11		S24: 46.0 ft - 47.1 ft, A-4, Olive brown with rust staining in bottom 0.4', moist, compact, fine to coarse SAND and GRAVEL, some silt, broken rock in spoon tip, suspected cobble, (ML), (FILL), Rec. = 1.1 ft	11-11-50/0.1 (R)										
		47.1 ft - 48.0 ft, Cobble											
8-3		S25: 48.0 ft - 50.0 ft, A-2-4, Gray, wet, silty fine to medium SAND, trace coarse sand, trace gravel, (SM), (ALLUVIUM), Rec. = 0.4 ft	8-3-56 (8)										
6-5		S26: 50.0 ft - 50.9 ft, A-2-4, Top 0.8: Gray, wet, silty fine to medium SAND, Bottom 0.3: Light gray, moist, cemented silty fine to medium SAND, possible weathered cobble, Rec. = 0.9 ft	6-5/0.5 (R)										
50/4		S27: 52.0 ft - 52.4 ft, A-2-4, Light gray silty sand mixed with broken rock, (SM), (ALLUVIUM), Rec. = 0.3 ft	50/4 (R)										
R1		S24 ft - 63.0 ft, Medium gray (N6), medium light gray (N6), and white (N6), very fine grained, fresh to highly weathered, extremely weak (R0) to medium weak (R3), strongly foliated, non-calcareous, quartz-sericite-chlorite PHYLLITE, discontinuities extremely closely spaced to moderately spaced, dipping 75-90 degrees, with abundant quartz veins up to 1 cm wide parallel with foliation, [STOWE FORMATION] R1: NX, Rec. = 1.4 ft		28	16								
R2		R2: NX, Rec. = 4.8 ft		96	90								

PROJECT NAME: Middlesex IM 089-2(49)
SITE NAME: Middlesex NECR Culvert
STATION: -
OFFSET: -
VTSPG: N 661122.22 ft E 1588249.71 ft

PROJECT NUMBER: GAI 130-3003
SITE NUMBER: -
GROUND ELEVATION: 506.16 ft
GROUNDWATER DEPTH: 39.6 ft 3/19/14
PROJECT PIN NUMBER: -

BORING CREW: Atlantic Testing Laboratories
DRILLER: Mark Childs
LOGGER: Noah Chlnburg
BORING RIG: CME-850 X

BORING TYPE: WASH BORE
SAMPLE TYPE: Split Spoon
HAMMER TYPE: Automatic
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	RUN	REC (%)	RQD (%)	DIH 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 after rock coring with casing set into bedrock. 							



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

BORING NUMBER: B-5
SHEET 1 of 2
DATE STARTED: 3/20/14
DATE COMPLETED: 3/20/14

PROJECT NAME: Middlesex IM 089-2(49)
SITE NAME: Middlesex NECR Culvert
STATION: -
OFFSET: -
VTSPG: N 660999.04 ft E 1588121.54 ft

PROJECT NUMBER: GAI 130-3003
SITE NUMBER: -
GROUND ELEVATION: 434.57 ft
GROUNDWATER DEPTH: 7.4 ft 3/21/14
PROJECT PIN NUMBER: -

BORING CREW: Atlantic Testing Laboratories
DRILLER: Mark Childs
LOGGER: Noah Chinburg
BORING RIG: CME-850 X

BORING TYPE: WASH BORE
SAMPLE TYPE: Split Spoon
HAMMER TYPE: Automatic
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 (%)
0.0 - 0.4		S1: 0.0 ft - 2.0 ft, A-1-b, Gray brown, moist, medium dense (frozen), silty fine to medium SAND, (SM), (ALLUVIUM), Rec. = 0.4 ft		1-11-9-2 (20)				
2.0 - 4.0		S2: 2.0 ft - 4.0 ft, A-1-a, Medium brown, moist, loose, fine to medium SAND, some silt, trace coarse sand, trace gravel, trace organics (roots), (SM), (ALLUVIUM), Rec. = 0.7 ft		2-2-2-3 (4)				
4.0 - 6.0		S3: 4.0 ft - 6.0 ft, A-1-b, Medium brown, wet, medium dense, fine to medium SAND, little silt, some coarse sand, some gravel, trace organics (wood), (SM), (ALLUVIUM), Rec. = 0.7 ft		7-5-5-3 (10)	16.7	43.7	41.2	15.1
6.0 - 8.0		S4: 6.0 ft - 8.0 ft, A-1-b, Medium brown, wet, loose, fine to coarse SAND, little silt, some gravel, trace organics (wood), (SM), (ALLUVIUM), Rec. = 0.8 ft		5-5-5-3 (10)				
8.0 - 10.0		S5: 8.0 ft - 10.0 ft, A-1-b, Medium brown and gray, medium dense, wet, fine to coarse SAND and GRAVEL, little silt, (SP-SM), (ALLUVIUM), Rec. = 0.6 ft		7-11-18-15 (29)				
10.0 - 12.0		S6: 10.0 ft - 12.0 ft, A-1-b, Medium brown and gray, medium dense, wet, fine to coarse SAND and GRAVEL, little silt, (SP-SM), (ALLUVIUM), Rec. = 1.1 ft		15-10-10-11 (20)	11.0	55.7	32.7	11.6
12.0 - 14.0		S7: 12.0 ft - 14.0 ft, A-1-b, Brown gray with rust staining, wet, medium dense, fine to coarse SAND, some gravel, little silt, (SP-SM), (ALLUVIUM), Rec. = 1.0 ft		22-11-10-10 (21)				
14.0 - 16.0		S8: 14.0 ft - 16.0 ft, A-1-b, Brown gray, wet, medium dense, fine to coarse SAND, little silt, some gravel, (SP-SM), (ALLUVIUM), Rec. = 0.8 ft		11-8-6-5 (14)				
16.0 - 18.0		S9: 16.0 ft - 18.0 ft, A-1-b, Brown gray, wet, loose, fine to medium SAND, trace silt, trace coarse sand, (SM), (ALLUVIUM), Rec. = 1.0 ft		4-3-3-5 (6)				
18.0 - 20.0		S10: 18.0 ft - 20.0 ft, A-1-b, Brown gray with rust staining, wet, loose, fine to medium SAND, little silt, trace coarse sand, trace gravel, (SM), (ALLUVIUM), Rec. = 0.9 ft		8-4-4-6 (8)				



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

BORING NUMBER: B-5
SHEET 2 of 2
DATE STARTED: 3/20/14
DATE COMPLETED: 3/20/14

PROJECT NAME: Middlesex IM 089-2(49)
SITE NAME: Middlesex NECR Culvert
STATION: -
OFFSET: -
VTSPG: N 660999.04 ft E 1588121.54 ft

PROJECT NUMBER: GAI 130-3003
SITE NUMBER: -
GROUND ELEVATION: 434.57 ft
GROUNDWATER DEPTH: 7.4 ft 3/21/14
PROJECT PIN NUMBER: -

BORING CREW: Atlantic Testing Laboratories
DRILLER: Mark Childs
LOGGER: Noah Chinburg
BORING RIG: CME-850 X

BORING TYPE: WASH BORE
SAMPLE TYPE: Split Spoon
HAMMER TYPE: Automatic
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 (%)
20.0 - 22.0		S11: 20.0 ft - 22.0 ft, A-1-b, Top 0.6': Brown gray with rust staining, wet, medium dense, fine to medium SAND, little silt, trace coarse sand, trace gravel, (SM), (ALLUVIUM). Bottom 0.7': Layered rust, brown, and gray, moist, medium dense, fine to coarse SAND and GRAVEL, some silt, (SP-SM), (ALLUVIUM), Rec. = 1.3 ft		12-18-13-10 (31)	19.2	14.7	75.0	10.3
22.0 - 24.0		S12: 22.0 ft - 24.0 ft, A-1-b, Brown gray, wet, loose, layered sandy GRAVEL, clean fine to coarse SAND, and sandy CLAY, (SP-SM), (ALLUVIUM), Rec. = 0.8 ft		14-4-2-5 (6)				
24.0 - 26.0		S13: 24.0 ft - 26.0 ft, A-1-b, Brown gray with rust staining, wet, medium dense, fine to medium SAND, little silt, trace coarse sand, trace gravel, (SM), (ALLUVIUM), Rec. = 0.7 ft		7-7-6-6 (13)				
26.0 - 27.5		S14: 26.0 ft - 27.5 ft, A-1-b, Brown gray with rust staining, wet, medium dense, fine to medium SAND, little silt, trace coarse sand, bedrock in spoon tip, (SM), (ALLUVIUM), Rec. = 1.7 ft		5-7-7-50/0.4 (14)				
27.5 - 36.5		27.5 ft - 36.5 ft, Dark greenish gray (5GY 4/1), greenish black (5GY 2/1), medium gray (N5), and white (N9), very fine to fine grained, weak (R2) to medium weak (R3), fresh to slightly weathered, strongly foliated, non-calcareous to very slightly calcareous, quartz-sericite-chlorite PHYLLITE, discontinuities parallel with foliation, dipping 75-90 degrees, moderately to widely spaced, with abundant quartz veins 1-2 cm wide parallel with foliation. [STOWE FORMATION] R1: NX, Rec. = 4.7 ft						
36.5 - 38.0		R2: NX, Rec. = 2.8 ft			94	100		

Top of Bedrock @ 27.5 ft

Hole stopped @ 36.5 ft

Notes:
- A temporary observation well was installed to a depth of 28.0 feet.
- Reported groundwater depth measured with casing set into bedrock after stabilizing overnight.

LOG OF BORING & WELL VHB NECR CULVERT.GPJ VT AOT.GDT 8/13/14

LOG OF BORING & WELL VHB NECR CULVERT.GPJ VT AOT.GDT 8/13/14

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 Chitburg 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)				

VTTrans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B-6 SHEET 2 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 Chitburg 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	8-7-5-5 (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 (leaves 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)					
		S20: 38.0 ft - 40.0 ft, Medium dense, no recovery - gravel blocking spoon tip, Rec. = 0.2 ft	14-8-8-7 (16)				

VTTrans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B-6 SHEET 3 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 Chitburg 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		

VTTrans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B-6 SHEET 4 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 Chitburg 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 _{RI} 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 AGY, GERT, 6/13/14

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

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

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