SOIL BORING LOGS

GEODESIGN INCORPORATED
P.O. Box 699, Windsor, VT 05089, Tel: (802) 674-2033
1233 Shelburne Road, Suite E-1, South Burlington, VT 05403, Tel: (802) 652-5140

BORING LOG

Project Name: Shelburne-South Burlington NH EGC 019-4(19)

Boring No.: B-213
Page No.: 1 of 1
File No.: 750-03.8
Checked By: RSA

Boring Company: M&W Soils Engineering
Foreman: Mike Hitchcock
GeoDesign Rep.: Rob Achilles
Date Started: September 26, 2002 Date Finished: September 26, 2002
N. Coordinate: 39126.0 ft E. Coordinate: -87.0 ft
Ground Surface Elevation (feet): 144.4
Station: 39126 Offset: 87.0 ft L

	Casing:	Sampler:
Type:	H.S.A.	SS
I.D./O.D.:	3.25 in.	2.0 in.
Hammer Wt.:	NA	140 lbs
Hammer Fall:	NA	30 in.
Rig Type:	Mobile Drill B-47	
Other:	Track mounted	

Groundwater Observations

Date and Time	Depth (ft)	Elevation (ft)	Notes
▽ 9/26/02 12:00 PM	5.0	139.4	rmrk (5')

Depth (ft)	Casing Blows/ft	Sample Info: Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows/6 inch: 0-6	6-12	12-18	18-24	Coring Time (min./ft)	PID Result	Sample Description (Classification System: Burmister)	Symbol	Strata Description (Elevation & Depth (feet))
		1	SS	24.0	18.0	0.0	1	1	2	3		-	S-1) Top 8" - TOPSOIL. Bottom 12" - Very loose, brown fine to medium SAND, trace Silt, moist.		SILT and SAND (Fill)
		2	SS	24.0	18.0	2.0	3	3	3	2		-	S-2) Loose, dark brown SILT, some fine Sand, moist.		140.4
5		3	SS	24.0	0.0	4.0	16	17	27	30		-	S-3) Dense, no sample recovery. Gray SILT, little fine SAND, moist (from auger cuttings).		4.0 SILT and SAND ▽
		4	SS	24.0	19.0	7.0	17	32	36	44		-	S-4) Very dense, gray SILT and fine SAND, wet.		
10															
15		5	SS	18.0	16.0	14.0	42	56	65			-	S-5) Similar to S-4.		
20		6	SS	22.0	9.0	19.0	27	26	37	100/4"		-	S-6) Very dense, gray SILT, little fine Sand with occasional pieces of red fine Gravel and Silty CLAY seams, moist.		124.4 20.0 Weathered Bedrock
25															122.1 22.3 Bottom of Borehole at 22.2 ft
30															

Remarks:
(0'): Groundsurface elevation based on hand level survey from proposed VAOT staked boring location. Location is estimated from site plan based on locations taped from proposed VAOT staked boring location and plotted by GeoDesign.
(0'): Stream is located approximately 7' south of boring location and approximately 5' below groundsurface elevation at boring.
(5'): Groundwater depth based on water inside borehole during drilling.
(4-6'): SS sampler possibly pushing cobble or boulder. Coarse gravel, cobble and boulders observed along stream banks.
(20'): Depth of strata change based on observed higher drilling resistance. (22.3'): Auger refusal on possible bedrock.

Notes:
1) Soil Samples screened in the field using a thermal Environmental Systems Model 580S Photoionization Detector. The meter was calibrated relative to a benzene-in-air standard. ND = None Detected, - = Sample Not Screened
2) Stratification Lines Represent Approximate Boundary Between Material Types, Transitions May Be Gradual.
3) Water Level Readings Have Been Made At Times And Under Conditions Stated, Fluctuations Of Groundwater May Occur Due To Other Factors Than Those Present At The Time Measurements Were Made. AC = After Coring, Rock
4) Sample Type Coding: A = Auger; C = Core; PS = Piston Sampler; SS = Split Barrel (Split Spoon); ST = Shelby Tube; V = Vane
5) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-213

OFFICES LOG WL 750-03.8.GPJ GEODSGN.GDT 1/22/03

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BORING LOG

Project Name: Shelburne-South Burlington NH EGC 019-4(19)

Boring No.: B-215
Page No.: 1 of 1
File No.: 750-03.8
Checked By: RSA

Boring Company: M&W Soils Engineering
Foreman: Mike Hitchcock
GeoDesign Rep.: Aaron Humphrey
Date Started: September 10, 2002 Date Finished: September 10, 2002
N. Coordinate: 39833.0 ft E. Coordinate: -52.0 ft
Ground Surface Elevation (feet): 147.0
Station: 39833 Offset: 52.0 ft L

	Casing:	Sampler:
Type:	H.S.A.	SS
I.D./O.D.:	3.25 in.	2.0 in.
Hammer Wt.:	NA	140 lbs
Hammer Fall:	NA	30 in.
Rig Type:	Acker Soil Max	
Other:	Truck mounted	

Groundwater Observations

Date and Time	Depth (ft)	Elevation (ft)	Notes
▽ 9/10/02 12:00 PM			rmrk (26.3')

Depth (ft)	Casing Blows/ft	Sample Info: Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows/6 inch: 0-6	6-12	12-18	18-24	Coring Time (min./ft)	PID Result	Sample Description (Classification System: Burmister)	Symbol	Strata Description (Elevation & Depth (feet))
		1	SS	24.0	15.0	0.0	4	4	5	4		-	S-1) Top 1" - TOPSOIL. Bottom 14" - Loose, brown fine to medium SAND, some fine Gravel, some Brick pieces, little Silt, dry.		SILT and SAND (Fill)
		2	SS	24.0	14.0	2.0	6	4	4	4		-	S-2) Loose, brown fine to medium SAND, little Silt, trace fine Gravel, moist.		
5		3	SS	24.0	18.0	4.0	4	5	5	4		-	S-3) Similar to S-2.		
		4	SS	24.0	18.0	6.0	4	4	5	5		-	S-4) Loose, brown fine to medium SAND, some Silt, trace fine Gravel, trace Brick pieces, dry.		
10		5	SS	24.0	16.0	8.0	4	4	6	5		-	S-5) Top 8" - Similar to S-4. Bottom 8"- Gray SILT and fine SAND, moist.		138.0 9.0 SILT and SAND
		6	SS	24.0	22.0	10.0	11	13	18	22		-	S-6) Dense, gray layered SILT and fine SAND, moist.		
		7	SS	24.0	14.0	12.0	17	23	30	30		-	S-7) Similar to S-6, except very dense and no layering visible.		
15		8	SS	0.0	0.0	14.0	100/0"					-	S-8) Refusal, no sample recovery.		
20		9	SS	24.0	20.0	19.0	36	41	44	61		-	S-9) Very dense, gray SILT and fine SAND, moist.		
25		10	SS	24.0	22.0	24.0	32	33	44	92		-	S10) Similar to S-9.		120.7 26.3 Bottom of Borehole at 26.3 ft
30															

Remarks:
(0): Groundsurface elevation estimated from VAOT cross-section based on locations taped from existing features and plotted by GeoDesign. Elevations and locations should be considered accurate only to the degree implied by the method used.
(14'): SS sampler refusal on possible cobble or boulder.
(14-15'): Observed higher drilling resistance through possible cobble or boulder.
(26.3'): Observed auger refusal on possible boulder or bedrock. Groundwater was not observed during drilling.
(26.3'): Borehole was left open for obser. until end of drilling on 09/10/02. Borehole had collapsed below a depth of 1' before obtaining an obser.

Notes:
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Boring No.: B-215

OFFICES LOG WL 750-03.8.GPJ GEODSGN.GDT 1/22/03

SHELBURNE – SOUTH BURLINGTON

SURVEYED BY V.S.C. INC. DATE
DRAWN BY E.A.A. INC. DATE
TRACED BY E.A.A. INC. DATE

PROJECT NH-EGC-019-4(28)
SOIL BORING DRAWING NO. 6
SHEET NO. 230 OF 283

DATUM
VERTICAL NGVD 1929
HORIZONTAL NAD 1927

4/4/03