

# SOIL BORING LOGS

| GEO DESIGN<br>INCORPORATED   |                | BORING LOG  |      | Boring No.: <b>B-207</b>                       |                   |            |                         |      |       |                    |                       |                    |        |  |                               |
|--|----------------|---|------|--|-------------------|------------|-------------------------|------|-------|--------------------|-----------------------|--------------------|--------|--|-------------------------------|
| P.O. Box 699<br>Windsor, VT 05089<br>Tel: (802) 674-2033                       |                | 1233 Shelburne Road, Suite E-1<br>South Burlington, VT 05403<br>Tel: (802) 652-6140 |      | Project Name                                   |                   |            |                         |      |       |                    |                       |                    |        |  |                               |
| P.O. Box 699<br>Windsor, VT 05089<br>Tel: (802) 674-2033                       |                | 1233 Shelburne Road, Suite E-1<br>South Burlington, VT 05403<br>Tel: (802) 652-6140 |      | Shelburne-South Burlington<br>NH EGC 019-4(19) |                   |            |                         |      |       |                    |                       |                    |        |  |                               |
| Boring Company: <b>M&amp;W Soils Engineering</b>                               |                | Casing: <b>H.S.A.</b> Sampler: <b>SS</b>  |      | Date and Time                                  |                   |            |                         |      |       |                    |                       |                    |        |  |                               |
| Foreman: <b>Mike Hitchcock</b>   |                | L.D./O.D.: <b>3.25 in.</b> <b>2.0 in.</b>   |      | Depth (ft)    Elevation (ft)    Notes          |                   |            |                         |      |       |                    |                       |                    |        |  |                               |
| GeoDesign Rep.: <b>Aaron Humphrey</b>  |                | Hammer Wt.: <b>NA</b> <b>140 lbs</b>  |      | 9/9/02 2:00 PM    18.0    152.8    rnrk (18')  |                   |            |                         |      |       |                    |                       |                    |        |  |                               |
| Date Started: <b>September 9, 2002</b> Date Finished: <b>September 9, 2002</b> |                | Hammer Fall: <b>NA</b> <b>30 in.</b>  |      | 9/9/02 5:25 PM    13.0    157.8    open hole   |                   |            |                         |      |       |                    |                       |                    |        |  |                               |
| N. Coordinate: _____    E. Coordinate: _____                                   |                | Rig Type: <b>Acker Soil Mex</b>   |      | 9/10/02 4:30 PM    13.0    157.8    open hole  |                   |            |                         |      |       |                    |                       |                    |        |  |                               |
| Ground Surface Elevation (feet): <b>170.8</b>                                  |                | Other: <b>Truck mounted</b>   |      |  |                   |            |                         |      |       |                    |                       |                    |        |  |                               |
| Station: <b>39380</b> Offset: <b>48.0 ft L</b>                                 |                |   |      |  |                   |            |                         |      |       |                    |                       |                    |        |  |                               |
| Sample Information   |                |   |      |  |                   |            |                         |      |       | Sample Description |                       | Strata Description |        |  |                               |
| Depth (ft)   | Casing Blowoff | Number  | Type | Penetration (inches)                           | Recovery (inches) | Depth (ft) | Blows / 6 inch Interval |      |       |                    | Coring Time (min./ft) | PTD Result         | Symbol | Elevation & Depth (feet)   |                               |
|  |                |   |      |  |                   |            | 0-6                     | 6-12 | 12-18 | 18-24              |                       |                    |        |  |                               |
|  |                | 1   | SS   | 24.0   | 12.0              | 0.0        | 8                       | 13   | 10    | 11                 | -                     |                    | 168.8  | S-1) Top 1' - TOPSOIL. Bottom 11" - Medium dense, brown fine to coarse SAND, little Silt, trace Root Fibers, trace fine to coarse Gravel, dry. | SILT and SAND (Fill)          |
|  |                | 2   | SS   | 24.0   | 17.0              | 2.0        | 6                       | 10   | 15    | 19                 | -                     |                    | 168.8  | S-2) Top 1' - Similar to S-1. Bottom 16" - Very stiff, brown-gray SILT and CLAY, laminated, trace fine to medium Sand, moist.                  | CLAY and SILT (Possible Fill) |
|  |                | 3   | SS   | 24.0   | 17.0              | 4.0        | 12                      | 8    | 8     | 5                  | -                     |                    | 163.8  | S-3) Stiff dark brown laminated SILT and CLAY, some fine to medium Sand, trace fine Gravel, moist.   | SILT and SAND (Possible Fill) |
|  |                | 4   | SS   | 24.0   | 0.0               | 6.0        | 6                       | 8    | 4     | 5                  | -                     |                    | 159.8  | S-4) No recovery after 2 sample attempts.  |                               |
|  |                | 5   | SS   | 24.0   | 18.0              | 8.0        | 4                       | 4    | 5     | 5                  | -                     |                    | 11.0   | S-5) Loose, dark brown fine to medium SAND, little Silt, trace organics (root fibers), moist.  | CLAY and SILT                 |
|  |                | 6   | SS   | 24.0   | 19.0              | 10.0       | 6                       | 6    | 7     | 11                 | -                     |                    | 150.8  | S-6) Top 4" - Similar to S-5. Bottom 15" - Stiff brown-gray SILT and CLAY, laminated, moist.   |                               |
|  |                | 7   | SS   | 24.0   | 17.0              | 14.0       | 15                      | 18   | 20    | 35                 | -                     |                    | 20.0   | S-7) Dense, brown SILT, some fine to coarse Sand, little fine Gravel, moist.   |                               |
|  |                | 8   | SS   | 24.0   | 18.0              | 18.0       | 18                      | 22   | 31    | 40                 | -                     |                    | 20.0   | S-8) Hard, dark gray SILT and CLAY, with occasional gray fine Sand lamination, wet.  | Bottom of Borehole at 20.0 ft |

Remarks: (0): Boring performed at proposed VAOT staked boring location. Groundsurface elevation and station/offset based on VAOT survey data.  
 (6): No SS sample recovery after 2 sampling attempts.  
 (7): Approximate depth of strata change to silt and sand based on auger cuttings. (0-11'): Possible fill due to organics in sample S-5.  
 (18): Groundwater depth based on saturated soil conditions during drilling.  
 (20): Borehole was left open for groundwater observations until the end of drilling on 09/11/02.

Notes: 1) Soil Samples screened in the field using a thermal Environmental Systems Model 5808 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; P8 = 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%

| GEO DESIGN<br>INCORPORATED   |                | BORING LOG  |      | Boring No.: <b>B-208</b>                       |                   |            |                         |      |       |                    |                       |                    |        |   |                               |
|--|----------------|---|------|--|-------------------|------------|-------------------------|------|-------|--------------------|-----------------------|--------------------|--------|---|-------------------------------|
| P.O. Box 699<br>Windsor, VT 05089<br>Tel: (802) 674-2033                         |                | 1233 Shelburne Road, Suite E-1<br>South Burlington, VT 05403<br>Tel: (802) 652-6140 |      | Project Name                                   |                   |            |                         |      |       |                    |                       |                    |        |   |                               |
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| Boring Company: <b>M&amp;W Soils Engineering</b>                                 |                | Casing: <b>H.S.A.</b> Sampler: <b>SS</b>  |      | Date and Time                                  |                   |            |                         |      |       |                    |                       |                    |        |   |                               |
| Foreman: <b>Mike Hitchcock</b>   |                | L.D./O.D.: <b>3.25 in.</b> <b>2.0 in.</b>   |      | Depth (ft)    Elevation (ft)    Notes          |                   |            |                         |      |       |                    |                       |                    |        |   |                               |
| GeoDesign Rep.: <b>Aaron Humphrey</b>  |                | Hammer Wt.: <b>NA</b> <b>140 lbs</b>  |      | 9/10/02 3:45 PM    6.0    148.0    rnrk (6')   |                   |            |                         |      |       |                    |                       |                    |        |   |                               |
| Date Started: <b>September 10, 2002</b> Date Finished: <b>September 10, 2002</b> |                | Hammer Fall: <b>NA</b> <b>30 in.</b>  |      | 9/10/02 4:20 PM    9.5    144.5    open hole   |                   |            |                         |      |       |                    |                       |                    |        |   |                               |
| N. Coordinate: _____    E. Coordinate: _____                                     |                | Rig Type: <b>Acker Soil Mex</b>   |      | 9/11/02 2:00 PM    10.0    144.0    open hole  |                   |            |                         |      |       |                    |                       |                    |        |   |                               |
| Ground Surface Elevation (feet): <b>154.0</b>                                    |                | Other: <b>Truck mounted</b>   |      |  |                   |            |                         |      |       |                    |                       |                    |        |   |                               |
| Station: <b>39053</b> Offset: <b>55.0 ft R</b>                                   |                |   |      |  |                   |            |                         |      |       |                    |                       |                    |        |   |                               |
| Sample Information   |                |   |      |  |                   |            |                         |      |       | Sample Description |                       | Strata Description |        |   |                               |
| Depth (ft)   | Casing Blowoff | Number  | Type | Penetration (inches)                           | Recovery (inches) | Depth (ft) | Blows / 6 inch Interval |      |       |                    | Coring Time (min./ft) | PTD Result         | Symbol | Elevation & Depth (feet)  |                               |
|  |                |   |      |  |                   |            | 0-6                     | 6-12 | 12-18 | 18-24              |                       |                    |        |   |                               |
|  |                | 1   | SS   | 24.0   | 0.0               | 0.0        | 3                       | 6    | 10    | 10                 | -                     |                    | 148.0  | S-1) Medium dense soils. No recovery after 2 sample attempts.                       | SILT and SAND (Fill)          |
|  |                | 2   | SS   | 24.0   | 12.0              | 2.0        | 9                       | 9    | 7     | 5                  | -                     |                    | 146.0  | S-2) Medium dense, brown fine to coarse SAND, little fine Gravel, little Silt, dry. |                               |
|  |                | 3   | SS   | 24.0   | 20.0              | 4.0        | 4                       | 2    | 4     | 4                  | -                     |                    | 8.0    | S-3) Loose, brown-gray fine to coarse SAND, some Silt and fine Gravel, moist.       | SILT and SAND                 |
|  |                | 4   | SS   | 24.0   | 24.0              | 6.0        | 2                       | 2    | 3     | 2                  | -                     |                    | 20.5   | S-4) Similar to S-3, except wet.  | Bottom of Borehole at 20.5 ft |
|  |                | 5   | SS   | 24.0   | 24.0              | 8.0        | 3                       | 4    | 8     | 12                 | -                     |                    |        | S-5) Medium, dense brown fine to coarse SAND and SILT, trace fine Gravel, moist.    |                               |
|  |                | 6   | SS   | 24.0   | 24.0              | 10.0       | 4                       | 7    | 14    | 17                 | -                     |                    |        | S-6) Similar to S-5.  |                               |
|  |                | 7   | SS   | 8.0  | 6.0               | 14.0       | 54/6"                   |      |       |                    | -                     |                    |        | S-7) Similar to S-5.  |                               |
|  |                | 8   | SS   | 18.0   | 18.0              | 19.0       | 23                      | 23   | 54/6" |                    | -                     |                    |        | S-8) Dense, gray SILT and fine SAND, trace fine Gravel, moist.                      |                               |

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.  
 (6): Driller maintained hydraulic head inside borehole to reduce possibility of sand blowing up inside augers.  
 (8): Groundwater depth based on saturated soil conditions during drilling.  
 (14.5): SS sampler refusal on possible cobble or boulder. (14.5-15.5'): Observed high drilling resistance through possible cobble.  
 (20.5): Borehole was left open for groundwater observations until end of drilling on 09/11/02.

Notes: 1) Soil Samples screened in the field using a thermal Environmental Systems Model 5808 Photoionization Detector. The meter was calibrated relative to a benzene-in-air standard. ND = None Detected, - = Sample Not Screened  
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DATUM  
VERTICAL NGVD 1929  
HORIZONTAL NAD 1927

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. 2  
 SHEET NO. 226 OF 283