Illinois Department of Transportation
Division of Highways
SCI Engineering

# SOIL BORING LOG

Page 1 of 1

Date 10/05/10

ROUTE 331 DESCRIPTION IL Route 13 over BNSF Railroad near Marathon Drive LOGGED BY KEG

SECTION (1X-1)VB-1 LOCATION Marion, SECS. 10SW & 15NW, TWP. 9S, RNG. 2E

COUNTY Williamson DRILLING METHOD CME 550/HSA HAMMER TYPE Automatic

STRUCT. NO. 100-0093(WB)/0094(EB)
Station
BORING NO. SB-25
Station 1746+56.97
Offset 36.0 ft Lt
Ground Surface Elev. 445.34 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 424.3 ft ▼
Upon Completion ft
After - Hrs. ft

| Description | Elev. | DEPTH (ft) | BLOWS (/6") | UCS Qu (tsf) | MOIST (%) |
|---|---|---|---|---|---|
| GRASS & TOPSOIL - 12 inches | 444.3 | | | | |
| FILL: Brown and dark brown, clay, some sand (A-7) | 442.3 | | 6 7 8 | 7.5 B | 15 |
| FILL: Grayish brown, silty clay (A-6) | 439.8 | -5 | 3 2 2 | 0.5 B | 30 |
| CLAY: Gray and brown (A-7) | 437.3 | | 2 5 4 | 1.7 B | 26 |
| SILTY CLAY: Brown and gray (A-7) | 434.8 | -10 | 2 2 3 | 0.9 B | 24 |
| CLAY: Brown (A-7) | 427.3 | -15 | 2 2 3 | 1.1 B | 21 |
| Some sand, trace gravel | | | 2 3 4 | 1.2 B | 19 |
| | | | WH 1 5 | 0.3 B | 18 |
| SILTY CLAY: Brown (A-6) | | -20 | 3 3 3 | 1.0 B | 23 |
| CLAY: Brown, some sand, trace gravel (A-7) | 424.8 | | 3 4 5 | 0.9 B | 16 |
| | | -25 | 5 7 7 | 1.4 B | 12 |
| SILTY CLAY: Brown (A-6) | 419.8 | | 3 5 6 | 1.0 B | 19 |
| CLAY: Brown, some sand, trace gravel (A-7) | 417.3 | -30 | 4 4 10 | 3.5 B | 17 |
| SHALE: Dark gray | 415.3 | | | | |
| With coal fragments | | | 50/2" 50/1" | - | 17 |
| Auger refusal at 34.0 feet. Borehole continued with rock coring. | | -35 | | | |
| | | -40 | | | |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

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# ROCK CORE LOG

Page 1 of 2

Date 10/05/10

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SECTION (1X-1)VB-1 LOCATION Marion, SECS. 10SW & 15NW, TWP. 9S, RNG. 2E

COUNTY Williamson CORING METHOD Rotary, surface set diamond bit

STRUCT. NO. 100-0093(WB)/0094(EB) CORING BARREL TYPE & SIZE NBX conv dbl bbl split inner
Station
BORING NO. SB-25 Core Diameter 1.9 in
Station 1746+56.97 Top of Rock Elev. 415.3 ft
Offset 36.0 ft Lt Begin Core Elev. 411.3 ft
Ground Surface Elev. 445.34 ft

| Description | Elev. | DEPTH (ft) | CORE (#) | RECOVERY (%) | R.Q.D. (%) | CORE TIME (min/ft) | STRENGTH (tsf) | MOISTURE (%) |
|---|---|---|---|---|---|---|---|---|
| SHALE: Dark gray *(continued)* | | -35 | 1 | 100 | 53 | 5 | | |
| COAL | 409.6 | | | | | | 56.0 | 5 |
| CLAYEY SHALE: Gray | 407.0 | | | | | | | |
| SHALE: Gray | 405.5 | -40 | 2 | 98 | 88 | 5 | | |
| | | | | | | | 13.0 | 6 |
| | | -45 | 3 | 98 | 71 | 5 | 76.0 | 3 |
| | | -50 | 4 | 100 | 100 | 3 | | |
| | | | | | | | 55.0 | 4 |

Color pictures of the cores Yes
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

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# ROCK CORE LOG

Page 2 of 2

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Station 1746+56.97 Top of Rock Elev. 415.3 ft
Offset 36.0 ft Lt Begin Core Elev. 411.3 ft
Ground Surface Elev. 445.34 ft

| Description | Elev. | DEPTH (ft) | CORE (#) | RECOVERY (%) | R.Q.D. (%) | CORE TIME (min/ft) | STRENGTH (tsf) | MOISTURE (%) |
|---|---|---|---|---|---|---|---|---|
| SHALE: Gray *(continued)* | | -55 | 5 | 100 | 100 | 3 | | |
| | | | | | | | 84.0 | 3 |
| | 385.6 | | | | | | | |
| Boring terminated at 59.7 ft. | | -60 | | | | | | |
| | | -65 | | | | | | |
| | | -70 | | | | | | |

Color pictures of the cores Yes
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BBS, form 138 (Rev. 8-99)

CMT
CRAWFORD MURPHY & TILLY, INC.
CONSULTING ENGINEERS
SPRINGFIELD, IL ■ AURORA, IL ■ ST. LOUIS, MO
ROCKFORD, IL ■ PEORIA, IL ■ CHICAGO, IL

FILE NAME = I:\jobs\0906683\draw\cadd_sheets\structural plans\bnsf rr bridge\BORING LOGS 6.dgn

| | | | |
|---|---|---|---|
| USER NAME = Gary Davis | DESIGNED - MCC | REVISED - | |
| | CHECKED - ATI | REVISED - | |
| PLOT SCALE = | DRAWN - GLD | REVISED - | |
| PLOT DATE = 12/7/2011 | CHECKED - ATI | REVISED - | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS VI
STRUCTURE NO. 100-0093 (W.B.) & 100-0094 (E.B.)
SHEET NO. S-390F S-41 SHEETS

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 331 | (1X-1)VB-1 | WILLIAMSON | 367 | 205 |
| | | CONTRACT NO. 98859 | | |
| | | ILLINOIS FED. AID PROJECT | | |