Kaskaskia Engineering Group, LLC

# SOIL BORING LOG



ROUTE FA 14 DESCRIPTION IL 15 Bridge over IL 13 (Old Freeburg Rd) & ICG Railroad Date 6/14/10 LOGGED BY KEG

SECTION 27-1-VHB LOCATION St. Clair Twp - 1.4m E of IL 159; W1/2

COUNTY St. Clair DRILLING METHOD CME 55 w/HSA & Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0051/0052 (existing) Station

BORING NO. SB-1 Station 703+65 Offset 53.1 ft Lt Ground Surface Elev. 469.00 ft

Surface Water Elev. ft Stream Bed Elev. ft

Groundwater Elev.: First Encounter 455.5 ft ▼ Upon Completion - ft After - Hrs. - ft

| DEPTH (ft) | BLOWS (/6") | UCS Qu (tsf) | MOIST (%) |
|---|---|---|---|
| TOPSOIL - 12 inches | | | |
| 468.0 | | | |
| FILL: Dark brown to black cinders | 5 | | |
| | 2 | - | 8 |
| | 2 | | |
| 466.0 | | | |
| FILL: Brown, silty clay (A-7) | 2 | | |
| | 2 | 1.1 | 22 |
| -5 | 2 | B | |
| 463.5 | | | |
| FILL: Gray, clay (A-7) | 1 | | |
| | 2 | 0.3 | 33 |
| | 2 | B | |
| 461.0 | | | |
| CLAY: Gray (A-7) | 1 | | |
| | 2 | 1.1 | 25 |
| -10 | 3 | B | |
| | 1 | | |
| | 2 | 1.2 | 26 |
| | 2 | B | |
| 456.0 | | | |
| SILTY CLAY: Grayish brown (A-7) ▼ | 1 | | |
| | 2 | 0.7 | 27 |
| -15 | 3 | B | |
| 453.5 | | | |
| SILTY CLAY: Grayish brown (A-6) | 1 | | |
| | 2 | 0.5 | 27 |
| | 2 | B | |
| 451.0 | | | |
| SILTY CLAY: Brown (A-7) | WH | | |
| | 1 | 0.2 | 32 |
| -20 | 2 | B | |
| SILTY CLAY: Brown (A-7) *(continued)* | | | |
| | WH | | |
| | 2 | 0.7 | 28 |
| | 3 | B | |
| | 2 | | |
| -25 | 2 | 0.8 | 24 |
| 443.5 | 4 | B | |
| SILTY CLAY: Grayish brown, some sand (A-6) | 1 | | |
| | 3 | 0.5 | 21 |
| | 4 | B | |
| 441.0 | | | |
| CLAY: Brown and gray, some sand, trace gravel (A-7) | 3 | | |
| | 3 | 0.9 | 19 |
| -30 | 3 | B | |
| Mud rotary drilling started at approximately 30 feet. | | | |
| Becomes gray and brown, trace sand | 3 | | |
| | 4 | 1.2 | 21 |
| -35 | 5 | B | |
| Becomes brown, some sand, trace gravel | 2 | | |
| | 4 | 1.0 | 19 |
| -40 | 4 | B | |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Kaskaskia Engineering Group, LLC

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ROUTE FA 14 DESCRIPTION IL 15 Bridge over IL 13 (Old Freeburg Rd) & ICG Railroad Date 6/14/10 LOGGED BY KEG

SECTION 27-1-VHB LOCATION St. Clair Twp - 1.4m E of IL 159; W1/2

COUNTY St. Clair DRILLING METHOD CME 55 w/HSA & Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0051/0052 (existing) Station

BORING NO. SB-1 Station 703+65 Offset 53.1 ft Lt Ground Surface Elev. 469.00 ft

Surface Water Elev. ft Stream Bed Elev. ft

Groundwater Elev.: First Encounter 455.5 ft ▼ Upon Completion - ft After - Hrs. - ft

| DEPTH (ft) | BLOWS (/6") | UCS Qu (tsf) | MOIST (%) |
|---|---|---|---|
| CLAY: Brown and gray, some sand, trace gravel *(continued)* | | | |
| | 3 | | |
| No sand and gravel | | | |
| | 5 | 2.3 | 22 |
| -45 | 6 | B | |
| Becomes bluish gray and greenish gray | 4 | | |
| | 5 | 2.5 | 26 |
| -50 | 6 | S | |
| 417.0 | | | |
| SHALEY CLAY: Bluish gray and greenish gray (A-7) | 9 | | |
| | 15 | 3.3 | 22 |
| -55 | 16 | B | |
| 412.0 | | | |
| CLAYEY SHALE: Tan, trace limestone rock | 6 | | |
| | 12 | - | 22 |
| -60 | 50 | | |
| CLAYEY SHALE: Tan, trace limestone rock *(continued)* | | | |
| Becomes tan and gray | | 27 | |
| | 50/1" | - | 20 |
| -65 | | | |
| 403.4 | | | |
| WEATHERED LIMESTONE | | | |
| 400.5 | | | |
| NO RECOVERY | | 50/0" | - |
| End of Boring | | | |
| -70 | | | |
| -75 | | | |
| -80 | | | |

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# SOIL BORING LOG



ROUTE FA 14 DESCRIPTION IL 15 Bridge over IL 13 (Old Freeburg Rd) & ICG Railroad Date 6/15/10 LOGGED BY KEG

SECTION 27-1-VHB LOCATION St. Clair Twp - 1.4m E of IL 159; W1/2

COUNTY St. Clair DRILLING METHOD CME 550 w/HSA & Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0051/0052 (existing) Station

BORING NO. SB-2 Station 704+62 Offset 13.5 ft Lt Ground Surface Elev. 464.97 ft

Surface Water Elev. ft Stream Bed Elev. ft

Groundwater Elev.: First Encounter 451.5 ft ▼ Upon Completion - ft After - Hrs. - ft

| DEPTH (ft) | BLOWS (/6") | UCS Qu (tsf) | MOIST (%) |
|---|---|---|---|
| CRUSHED ROCK - 12 inches | | | |
| 464.0 | | | |
| FILL: Brown, clay, with some crushed rock (A-7) | 2 | | |
| | 2 | - | 22 |
| | 2 | | |
| Some sand and trace coal | 1 | | |
| | 1 | 0.1 | 39 |
| -5 | 1 | B | |
| Some cinders | WH | | |
| | WH | - | 23 |
| 457.0 | WH | | |
| FILL: Grayish brown, silty clay (A-6) | WH | | |
| | 2 | 0.5 | 26 |
| -10 | 2 | B | |
| 454.5 | | | |
| SILTY CLAY: Grayish brown and brown (A-6) | WH | | |
| | WH | - | 32 |
| | 1 | | |
| 452.0 | | | |
| CLAYEY SILT: Gray and brown (A-4) ▼ | 2 | | |
| | 2 | 1.6 | 25 |
| -15 | 3 | B | |
| 449.5 | | | |
| SILTY CLAY: Gray (A-6) | 2 | | |
| | 3 | 0.2 | 29 |
| | 2 | B | |
| 446.0 | 1 | | |
| CLAY: Gray and brown (A-7) | 2 | 0.4 | 31 |
| -20 | 2 | B | |
| 444.5 | | | |
| SILTY CLAY: Gray, some sand (A-6) | 1 | | |
| | 2 | 0.9 | 22 |
| | 3 | B | |
| | 4 | | |
| -25 | 5 | 1.0 | 20 |
| 439.5 | 8 | S | |
| SANDY CLAY: Grayish brown (A-4) | 1 | | |
| | 2 | 0.5 | 23 |
| | 3 | B | |
| 437.0 | | | |
| CLAY: Gray, trace sand (A-7) | 1 | | |
| | 2 | 1.3 | 25 |
| -30 | 4 | B | |
| Mud rotary drilling started at approximately 30 feet. | | | |
| Becomes gray and brown | 5 | | |
| | 5 | 1.8 | 23 |
| -35 | 6 | B | |
| Becomes brown and gray, some sand | 5 | | |
| | 6 | 2.5 | 17 |
| -40 | 11 | B | |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

FILE NAME = 082019-0120-76884-042 Boringlogs.dgn

STV

| | | |
|---|---|---|
| USER NAME = brazzaro | DESIGNED - MJK | REVISED - - |
| | CHECKED - JAN | REVISED - - |
| PLOT SCALE = 2:0.0000 '' / IN. | DRAWN - MJK | REVISED - - |
| PLOT DATE = 10/19/2011 | CHECKED - JAN | REVISED - - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**BORING LOGS**
**STRUCTURE NO. 082-0119 (E.B.) & 082-0120 (W.B.)**
SHEET NO. S-42 OF S-51 SHEETS

| F.A.P RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 103 | 27-1-VHB-1 | ST. CLAIR | 277 | 219 |
| | | CONTRACT NO. 76884 | | |
| | ILLINOIS FED. AID PROJECT | | | |