STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Illinois Department of Transportation — SOIL BORING LOG (Page 1 of 3)

Date 10/14/08

ROUTE FAP 781 (IL 33) DESCRIPTION Un-Named Stream LOGGED BY E. Sandschafer

SECTION 109B-1 LOCATION NW 1/4, SEC. 33, TWP. 5 N, RNG. 10 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0035, Station 705+40

BORING NO. 1 N Abut, Station 704+90, Offset 5.00ft Rt, Ground Surface Elev. 421.27 ft

Surface Water Elev. 408.38 ft; Stream Bed Elev. 407.73 ft

Groundwater Elev.: First Encounter 401.8 ft; Upon Completion 407.3 ft; After 24 Hrs. 407.3 ft

Columns: DEPTH (ft), BLOWS (/6"), UCS Qu (tsf), MOIST (%)

- 5" asphalt on 9 1/4" concrete pavement
- 420.07 Medium, damp, brown, CLAY LOAM — blows 2, 2, 3; Qu 0.8 B; moist 14 — blows 2, 2, 2; Qu 0.8 B; moist 21
- 414.27 Soft, damp, brown, SANDY CLAY — blows 2, 2, 2; Qu 0.3; moist 18
- 411.77 Soft, damp, brown mottled red, CLAY w/ some Sand — 10 — blows 3, 4, 5; Qu 1.7 B; moist 22
- 409.27 Medium, damp, brown, SANDY CLAY LOAM — blows 3, 3, 3; Qu 0.8 B; moist 11
- 406.77 Soft to medium, damp, brown, SANDY LOAM — 15 — blows 1, 2, 1; Qu 0.6 B; moist 14 — blows 0, 0, 0; Qu 0.4 PP; moist 17
- 401.77 — 20 — blows 1
- Loose, wet, brown, fine grained, SAND w/ few small Gravel. 4% passing #200 sieve — blows 2, 1; moist 17
- Coarse grained w/ medium Gravel 1% passing #200 sieve (continued) — blows 1, 2, 3; moist 4
- 396.77 Medium, wet, brown, coarse grained, SAND w/ many small Gravel. 0.2% passing #200 sieve — 25 — blows 4, 5, 6; moist 8
- 3% passing #200 sieve — blows 6, 8, 8; moist 9
- Fine grained w/ few small Gravel 5% passing #200 sieve — 30 — blows 4, 6, 7; moist 18
- 4% passing #200 sieve — 35 — blows 5, 7, 6; moist 14
- 381.77 — 40 — blows 11

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, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG (Page 2 of 3)

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Surface Water Elev. 408.38 ft; Stream Bed Elev. 407.73 ft

Groundwater Elev.: First Encounter 401.8 ft; Upon Completion 407.3 ft; After 24 Hrs. 407.3 ft

- Medium, wet, brown, fine grained, SAND. 5% passing #200 sieve — blows 16, 13; moist 12
- Low recovery this run. — 45 — blows 5, 8, 11; moist 20
- 3% passing #200 sieve — 50 — blows 4, 5, 9; moist 16
- 55
- 361.27 — 60 — blows 9
- Medium, wet, brown, fine grained, SAND. 2% passing #200 sieve — blows 10, 12; moist 18
- 65
- 3% passing #200 sieve — 70 — blows 9, 9, 12; moist 7
- 75
- 343.77 Very dense, moist, gray, CLAY SHALE.
- 341.67 Borehole continued with rock coring — 80 — 50/1"

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, from 137 (Rev. 8-99)

Illinois Department of Transportation — ROCK CORE LOG (Page 3 of 3)

Date 10/14/08

ROUTE FAP 781 (IL 33) DESCRIPTION Un-Named Stream LOGGED BY E. Sandschafer

SECTION 109B-1 LOCATION NW 1/4, SEC. 33, TWP. 5 N, RNG. 10 W, 3 PM

COUNTY Lawrence CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 051-0035, Station 705+40; CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner

BORING NO. 1 N Abut, Station 704+90, Offset 5.00ft Rt, Ground Surface Elev. 421.27 ft

Core Diameter 2.08 in; Top of Rock Elev. 341.77 ft; Begin Core Elev. 341.67 ft

Columns: DEPTH (ft), CORE (#), RECOVERY (%), R.Q.D. (%), CORE TIME (min/ft), STRENGTH (tsf)

- Soft, gray, slightly weathered, SANDSTONE, scratches easily. 341.67 — 80 — B1C1; 95; 74; 0.9
- Rock core B1C1 from 81.7' to 82.3' depth Qu = 948 tsf
- 336.87 Soft, gray, severely weathered, SANDSTONE, scratches easily. 336.47
- Soft, gray, slightly weathered, SANDSTONE, scratches easily — 85 — B1C2; 94; 70; 0.7
- Rock core B1C2 from 86.6' to 87.1' depth Qu = 449 tsf
- 331.67 Extent of exploration — 90
- Benchmark: BM 512 chiseled square on top of NE wingwall of existing structure = 421.11', provided by Program Development
- 95

Color pictures of the cores Available on request
Cores will be stored for examination until 10/14/09
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG (Page 1 of 3)

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COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0035, Station 705+40

BORING NO. 2 S Abut, Station 705+90, Offset 5.50ft Lt, Ground Surface Elev. 421.29 ft

Surface Water Elev. 408.38 ft; Stream Bed Elev. 407.73 ft

Groundwater Elev.: First Encounter 401.8 ft; Upon Completion 407.5 ft; After 24 Hrs. 407.4 ft

- 4 3/4" asphalt on 9 1/4" concrete pavement
- 420.05 Soft, damp, gray, gravelly, CLAY — blows 4, 5, 4; Qu 1.4 B; moist 13
- 416.29 Soft, damp, gray-brown-red SANDY CLAY w/ few small Gravel — blows 1, 2, 3; Qu 0.5 B; moist 22 — blows 1, 2, 3; Qu 0.3 S; moist 27
- 411.29 — 10 — Soft, damp, brown mottled red, CLAY. — blows 2, 3, 4; Qu 1.5 B; moist 24
- 409.29 Very soft, very damp, brown, SANDY LOAM w/ some small Gravel — blows 2, 2, 3; Qu 0.5 B; moist 25
- 15 — blows 1, 3, 3; Qu 0.1 S; moist 17
- blows 1, 2, 1; Qu 0.2 PP; moist 18
- 401.79 — 20 — blows 1
- Loose, wet, brown, fine grained, SAND w/ medium Gravel. 4% passing #200 sieve — blows 2, 1; moist 16
- 3% passing #200 sieve (continued) — blows 2, 2, 3; moist 12
- 396.79 Medium, wet, brown, fine grained, SAND w/ small Gravel. 2% passing #200 sieve — 25 — blows 4, 5, 5; moist 9
- 2% passing #200 sieve — blows 6, 7, 7; moist 10
- 4% passing #200 sieve — 30 — blows 9, 13, 11; moist 11
- 4% passing #200 sieve — 35 — blows 4, 4, 6; moist 15
- 381.29 — 40 — blows 4

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
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STRUCT. NO. 051-0035, Station 705+40

BORING NO. 2 S Abut, Station 705+90, Offset 5.50ft Lt, Ground Surface Elev. 421.29 ft

Surface Water Elev. 408.38 ft; Stream Bed Elev. 407.73 ft

Groundwater Elev.: First Encounter 401.8 ft; Upon Completion 407.5 ft; After 24 Hrs. 407.4 ft

- Medium, wet, brown, fine grained SAND. 2% passing #200 sieve. With small Gravel. — blows 8, 8; moist 19
- 2% passing #200 sieve — 45 — blows 3, 6, 6; moist 16
- 3% passing #200 sieve — 50 — blows 4, 5, 5; moist 10
- 55
- 361.29 — 60 — blows 4
- Medium, wet, brown, fine grained, SAND. 2% passing #200 sieve — blows 5, 7; moist 16
- 65
- 0% passing #200 sieve — 70 — blows 5, 6, 7; moist 12
- 75
- 341.79 Very dense, moist, gray, SILTY — 80 — 50/1"; moist 13

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)
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- CLAY SHALE 341.69 — 50/0"
- Extent of exploration — 50/0"
- Benchmark: BM 512 chiseled square on top of NE wingwall of existing structure = 421.11', provided by Program Development
- 85, 90, 95, 100

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
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BBS, from 137 (Rev. 8-99)

BORING LOGS
STRUCTURE NO. 051-2008

ESCA CONSULTANTS, INC.

DESIGNED BY:	RDP/ELH	03/10
DRAWN BY:	DWH/HAS	03/10
CHECKED BY:	ELH	03/10
APPROVED BY:	RDP	03/10

	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEET NO. 10 / 10 SHEETS	781	109B-1	LAWRENCE	34	24
			CONTRACT NO. 74105		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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