



Illinois Department of Transportation

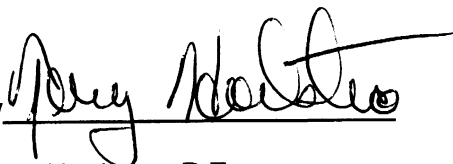
Memorandum

To: Gary Welton Attn.: Mike Allen
From: Terry Hoekstra By: David Miller
Subject: Foundation Boring Logs*
Date: November 30, 2010

* Route: FAP 781 (IL 33)
 Section: (108BR)B
 County: Crawford
 Contract: 74322
 Job No.: D-97-037-08
 Location: Lamotte Creek, just South of Palestine.
 Struct. No.: 017-0007

Attached is one copy of the foundation boring logs, with fence diagram, for the above captioned section.

If you have any questions, or require any additional information, please contact David Miller, District Geotechnical Engineer, at (217) 342-8233.

By 

Terry Hoekstra, P.E.
District Materials Engineer

DKM

Attachments



SOIL BORING LOG

ROUTE FAP 781 (IL 33) DESCRIPTION Lamotte Creek LOGGED BY E. Sandschafer

SECTION (108BR)B LOCATION NW 1/4, SEC. 2, TWP. 6 N, RNG. 11 W, 3 PM

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

STRUCT. NO. <u>017-0007</u>	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. <u>Dry</u> ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
Station <u>35+00</u>					Stream Bed Elev. <u>427.41</u> ft				
BORING NO. <u>1 N Abut</u>	Groundwater Elev.:					D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
Station <u>34+03</u>	First Encounter <u>421.2</u> ft								
Offset <u>6.00ft Rt</u>	Upon Completion <u>435.2</u> ft								
Ground Surface Elev. <u>443.66</u> ft	After 24 Hrs. <u>434.2</u> ft								

2 7/8" asphalt on 7 1/2" concrete pavement. 442.76					Soft, damp, gray, SILTY CLAY LOAM. <i>(continued)</i>		1	0.4	21
Brown, CLAY LOAM.							0	B	
		3							
		3	2.4	14			3		
440.66		3	B		Very soft, very damp, gray, SILTY LOAM.		8	0.1	24
Gray, SANDY CLAY LOAM.		3			Gray, wet, fine grained, SAND. 9% passing #200 sieve.		7	B	
439.16									
Medium to soft, damp, gray, SANDY LOAM.	-5	1			Very dense, moist, gray, SANDSTONE.	419.16	33		2
		1	0.7	17	Borehole continued with rock coring.	418.66	50/2"		
		1	S				50/0"		
		0							
		1	0.5	16					
		1	S						
434.16									
Soft, damp, gray, SILTY LOAM w/ wood splinters.	-10	0							
		0	0.4	34					
		1	B						
		1							
431.16									
Gray, damp, fine grained, SAND. 14% passing #200 sieve.	430.96	2	0.2	20					
		1	B						
Very soft, damp, gray, SILTY LOAM.									
429.16									
Soft, damp, gray, SANDY LOAM.	-15	0							
		0	0.4	29					
		1	S						
426.66									
Soft, damp, gray, SILTY LOAM.		0							
		1	0.3	27					
425.46		0	B						
Wet, gray, SANDY LOAM.									
424.16									
		0							
	-20								

Latitude W 87 deg 36.473 min, Longitude N 38 deg 59.718 deg, Map Datum WGS 84

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)



ROUTE FAP 781 (IL 33) DESCRIPTION Lamotte Creek LOGGED BY E. Sandschafer

SECTION (108BR)B LOCATION NW 1/4, SEC. 2, TWP. 6 N, RNG. 11 W, 3 PM

COUNTY Crawford CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 017-0007 CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner
Station 35+00

BORING NO. 1 N Abut Core Diameter 2.06 in
Station 34+03 Top of Rock Elev. 419.16 ft
Offset 6.00ft Rt Begin Core Elev. 418.66 ft
Ground Surface Elev. 443.66 ft

DESCRIPTION	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Gray, moderately weathered, SANDSTONE.	418.66	B1C1	70	17	0.7	
<i>Rock core B1C2 from depth 30.0' to 30.4' Qu = 432 tsf.</i>	413.26	B1C2	100	16	1.1	
Gray, moderately weathered, SANDY CLAY SHALE.	408.66					
Gray, soapy, slight to moderate weathered, SILTY CLAY SHALE. <i>Rock core B1C3 from depth 35.6' to 36.0' Qu = 74.7 tsf.</i>	403.66	B1C3	91	23	1.2	
Extent of exploration.						
Benchmark: BM 555 chiseled square on top of coping on SW corner of existing bridge, Sta 35+65, 16.1' Lt = 444.44'						

Color pictures of the cores Available upon request

Cores will be stored for examination until 10/27/15

The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

Field Rock Core Log

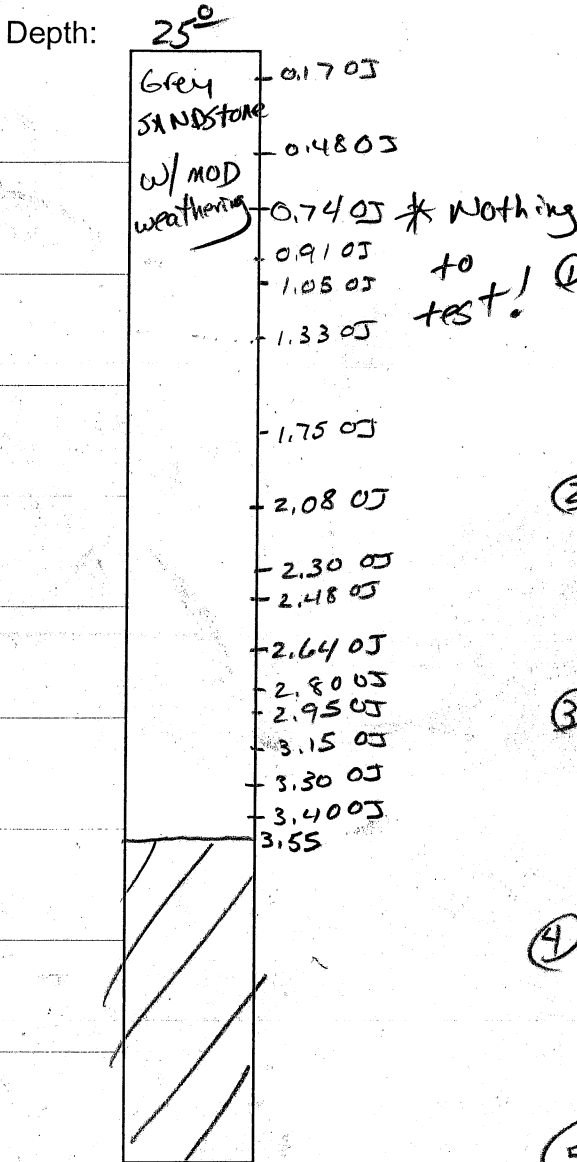
Date: 10-27-10

Structure #: 017-0007

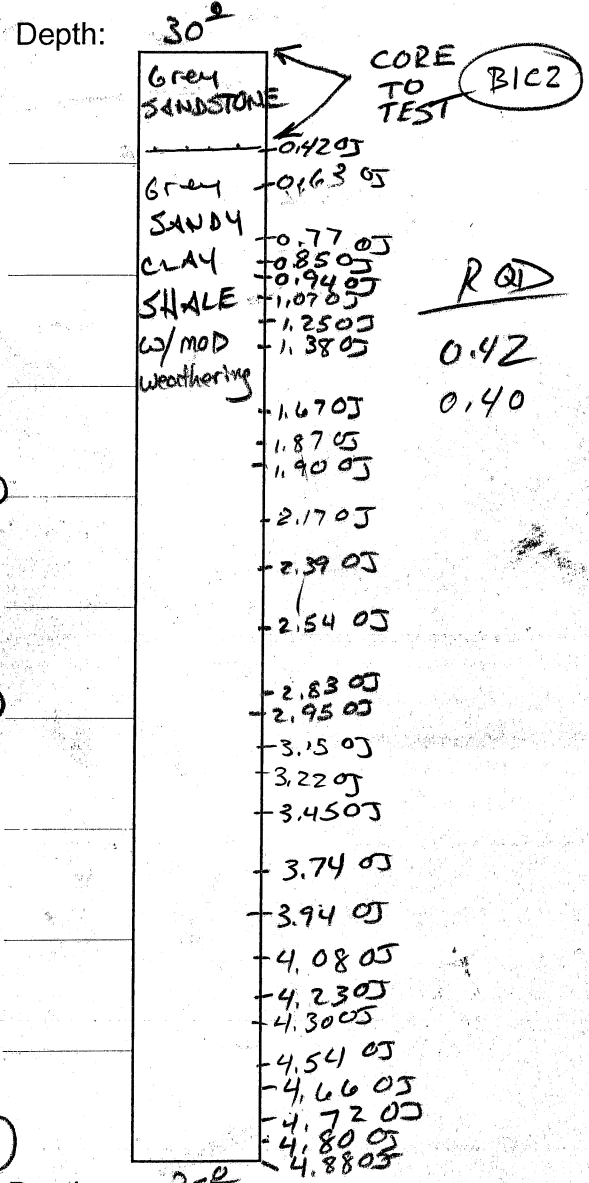
Boring #: 1 N ABUT → W ABUT

Rock Core #: B1 C1

Rock Core #: B1 C2



RQD
0.44
0.42



RQD
0.42
0.40

Depth: 30'
Core Time: 3:41 (0.7 ft/min)

Depth: 35'
Core Time: 5:20 (1.1 ft/min)

Recovery: 70%

Recovery: 100%

RQD: 17%

RQD: 16.4%

Logged By: Eric Sandschafer

Field Rock Core Log

Date: 10-27-10

Structure #: 017-0007

Boring #: B1 NABOT/WABOT

Rock Core #: B1C3

Rock Core #: _____

Depth: 35'

Depth: _____

Grey silty CLAY SHALE
 V scapy w/ slight to mod weathering

0.25 0J
 0.63 0J
 1.04 0J
 1.33 0J
 1.43 0J
 1.49 0J
 1.52 0J
 1.59 0J
 1.83 0J
 1.95 0J
 2.08 0J
 2.15 0J
 2.20 0J
 2.22 0J - 2.30 0J
 2.49 0J
 2.59 0J
 2.66 0J
 2.85 0J - 2.87 0J
 3.00 0J
 3.22 0J
 3.37 0J
 3.61 0J
 3.69 0J
 3.74 0J
 3.99 0J
 4.23 0J
 4.30 0J
 4.55'

CORE TO TEST B1C3

①

②

③

④

⑤

RQD
0.37
0.41
0.39

Depth: 40'

Depth: _____

Core Time: 5:55 (1.2 hr)

Core Time: _____

Recovery: 90.8%

Recovery: _____

RQD: 23.4%

RQD: _____

Logged By: Eric Sandschafer



ROUTE FAP 781 (IL 33) DESCRIPTION Lamotte Creek LOGGED BY E. Sandschafer

SECTION (108BR)B LOCATION NW 1/4, SEC. 2, TWP. 6 N, RNG. 11 W, 3 PM

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

STRUCT. NO.	Station	DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After 288 Hrs.	DEPTH	BLOW	UCS	MOIST
		(ft)	(/6")	(tsf)	(%)	Dry	ft		ft	ft	ft	(ft)	(/6")	(tsf)	(%)
017-0007	35+00														
2 S Abut	35+89														
	7.00ft Lt														
	443.97														
3 3/4" asphalt on 10 1/2" concrete pavement.						Medium to very soft, damp, gray to brown, SANDY LOAM. (continued)						1	0.4	20	
	442.77											2	S		
Medium, damp, brown to gray, SILTY CLAY LOAM.															
			1			421.97									
			2	0.7	17	421.47						8			
			2	B								42	3.2	15	
												50/3"	S		
			1									14			
			1	0.6	17							25	6.4	12	
			2	BS								33	S		
	436.97														
Medium, damp, gray, SANDY LOAM.												50/4"			5
			1	0.6	19							50/1"			
			2	BS								50/1"			
	434.47														
Medium, damp, gray, SILTY CLAY LOAM.															
			1												
			2	0.8	17										
			2	B											
	431.97														
Medium to very soft, damp, gray to brown, SANDY LOAM.															
			1	0.6	16										
			1	B											
			1	0.3	18										
			1	B											
			1	0.1	22										
			1	B											
			1												

Latitude W 87 deg 36.442 min, Longitude N 38 deg 59.698 deg, Map Datum WGS 84

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)

Structure Number 017-0007 Lamotte Creek
 Located in the NW 1/4 of Section 2, Township 6 N, Range 11 W of the 3 P.M.



NOT TO HORIZONTAL SCALE

VARIATIONS IN SUBSURFACE
 CONDITIONS MAY EXIST
 BETWEEN BORINGS

Groundwater
 First Encounter
 Completion
 after (refer to log) hours

Abbreviations
 WOH - Sampler Advanced by Weight
 of Hammer, WOP - Weight of Pipe
 B.S. - Before Seating

SUBSURFACE DATA PROFILE

Route: FAP 781 (IL 33)

Section: (108BR)B

County: Crawford



**Illinois Department
 of Transportation**
 Division of Highways
 Illinois Department of Transportation