SB-01

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Jaeger Court, Suite 204
Naperville, Illinois 60563
630/355-7580

SOIL BORING LOG

PAGE 1 of 4
DATE 39-102009
LOGGED BY DR
GSI JOB No. 08201

ROUTE I-70
DESCRIPTION I-70 Tri-Level Connection IDOT Job No. D-98-059-08
SECTION 82-2-1HVB
LOCATION I-70 Curved Approach Structures
COUNTY St. Clair
DRILLING METHOD 3.25" Hollow Stem Auger
HAMMER TYPE CME Automatic

STRUCT. NO. S.N. 082-0318
Station: 127+00 to 140+74
BORING NO. SB-01
Station: 130+04
Offset: 43.0' Left
Ground Surface Elev. 405.8

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter n/a
Upon Completion n/a
After 24 Hrs. n/a

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
6.0" TOPSOIL-black	405.3		AS	–	29
SILTY CLAY-dark brown & gray-medium stiff to stiff (A-7) Wet			2		*83*
			2		
			4	1.6B	33
			1		*80*
		–5	2	0.7B	41
			2		*82*
			2		
			5	1.2B	40
	397.8				
SAND-brown-loose to medium dense (A-3)			5		
			5		
		–10	6	NP	6
			3		
			4		
			5	NP	27
			6		
			5		
		–15	6	NP	28
			4		
			6		
			7	NP	25
			5		
			7		
		–20	7	NP	28
SAND-brown-loose to medium dense (A-3)			5		
			7		
			8		
			15	NP	15
			6		
			8		
		–30	10	NP	24
	475.3				
SAND-gray-loose to medium dense (A-3)			7		
			12		
			17	NP	24
			11		
			10		
		–35	9	NP	21
			5		
			7		
			11	NP	13
			10		
			11		
		–40	10	NP	16

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

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Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter n/a
Upon Completion n/a
After 24 Hrs. n/a

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SAND-gray-loose to medium dense (A-3)			3		
			3		
			3	NP	17
			20		
			24		
		–45	25	NP	23
			3		
			6		
			9	NP	18
			14		
			15		
		–50	11	NP	18
			4		
			6		
			10	NP	15
			8		
			20		
		–55	18	NP	22
			21		
			26		
			27	NP	21
			5		
Trace organics from –58.5' to –60.0'.			4		
		–60	10	NP	27
SAND-loose to medium dense (A-3)	345.3				
SAND & GRAVEL-gray-medium dense (A-1)			7		
			6		
			6	NP	15
	342.8				
			7		
			9		
		–65	11	NP	20
			10		
Trace organics from –66.0' to –67.5'.			12		
			14	NP	24
SAND-brown & gray-medium dense to dense (A-3)			6		
			10		
		–70	12	NP	25
			10		
			11		
			18	NP	19
			21		
			18		
		–75	15	NP	12
			18		
			27		
			28	NP	18
			14		
			18		
		–80	18	NP	17

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Upon Completion n/a
After 24 Hrs. n/a

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SAND-medium dense to dense (A-3)	325.3				
SAND with Gravel-brown & gray-medium dense to dense (A-1-b)			9		
			10		
			13	NP	15
			22		
			27		
		–85	28	NP	12
			16		
			26		
			25	NP	15
			32		
			34		
		–90	15	NP	16
			31		
	313.8		503"		
SAND & GRAVEL-gray-very dense (A-1)				NP	14
			506"		
		–95		NP	10
			39		
			506"		
				NP	8
	307.8				
SAND with Gravel-gray-very dense (A-1-b)			26		
			33		
		–100	505"	NP	15
SAND with Gravel-very dense (A-1-b)	305.3				
			46		
			503"		
				NP	10
SAND & GRAVEL-gray-very dense (A-1)			16		
			503"		
				NP	6
			505"		
				NP	9
	297.8				
Drillers Observation: Apparent Bedrock.	296.8				
RUN 1 (–109.0' to –119.0') Mississippian System, Valmeyeran Series Limestone					
Light gray & fine grained with horizontal bedding becoming gray & coarser grained @ –113.45. Some chert replacement throughout. Horizontal fractures @ –109.3', –109.4', –109.5', –110.1', –110.2', –110.7', –111.1', –111.8', –112.0' & –112.2'. Tight horizontal fractures between –112.2' & –113.4'. Horizontal fractures @ –113.4', –114.5', –115.1', –116.3', –116.7', –117.0', –117.6' & –118.6'.					RUN 1
	–110				
	–115				
Recovery=97.0% R.Q.D.=71.8%					
	286.8				
RUN 2 (–119.0' to –124.0')					RUN 2
	–120				

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NR-No Recovery

..\082031B-CONN-05-010-MS.DGN,..\082031B-CONN-05-010-HS.DGN,..\082031B-CONN-05-010-HS.DGN,..\082031B-CONN-99-001-SD.DGN
© 02-2010, 16:42:38 BUNDHUJO \\VS-0044\GHVHAL\JJ-TRANS.07\2202\20868-001\STRUCT\CAD\01 DESIGN\082031B\SHEET\082031B-CONN-05-001-SHT-MS.DGN

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN - SNB	REVISED -
TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE - 06/04/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
I-70 CONNECTION OVER
NS, TRRA, MCT AND INDUSTRIAL DR.

SOIL BORING LOGS
1 OF 20

SCALE: | SHEET NO. S-92 OF S-111 | STA. 134+22.00 TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
998	82-2-1HVB	ST. CLAIR	285	202
SN 082-0318 (EB) & 0319 (WB)		CONTRACT NO. 76C44		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		