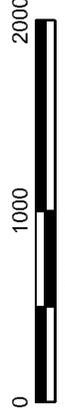


Images: ~Aerial photo.jpg ~ VMap.JPG
 Xrefs:
 File Last Updated: Jan 05, 2012
 Plot Info: 1-20-2012 @ 1:22pm By: KDohlen
 S&ME Filename: M:\DEPTSCADD\Drawings\Projects\1500 - 1599\012-01516-301\POB.dwg Layout: 8.5x11L



PLAN OF BORINGS	
NORTHSIDE INTERCEPTOR TUNNEL AKRON, OHIO	
Project: 012-01516-301	Drawn By: KJD
Drawing Date: 1-5-2011	Approved By: JLC
Last Updated: 1-5-2012	Scale: 1:1000
 WWW.SMEINC.COM	
ENGINEERING LICENSE NO: F-0176	

LEGEND
 B-1 BORING NUMBER AND LOCATION
 SCALE IN FEET

**LOG OF BORING NO. BH-5
NORTHSIDE INTERCEPTOR PRELIMINARY SSI
AKRON, OHIO**



LOCATION: N 244726.26; E 531774.02 ELEVATION: 984.7 DATE: 11/15/11 - 11/17/11
 DRILLING METHOD: 3-1/4" I.D. Hollow-stem Auger COMPLETION DEPTH: 230.5'
 SAMPLER(S): 2" O.D. Split-barrel Sampler, NX Rock Core Barrel

ELEV.	DEPTH, FEET	SAMPLE NUMBER	SAMPLE EFFORT	N ₆₀	SAMPLE REC-%	DESCRIPTION	NATURAL CONSISTENCY INDEX				TEST RESULTS
							NATURAL MOISTURE CONTENT				
							PLASTIC LIMIT	LIQUID LIMIT			
							10	20	30	40	
983.5	0	1A	2 / 6 / 9	20	100	TOPSOIL - 14 INCHES					H=4.5+
		1B			62	FILL: Medium-dense brown fine to coarse sand, little clayey silt, trace fine gravel, damp.					
981.7											
		2	8 / 8 / 10	24	100	Hard brown silty clay, trace fine to coarse sand, trace fine gravel, dry.					
	5										
977.2											
		3	4 / 9 / 14	31	53	Medium-dense brown fine to coarse sand, trace fine to coarse gravel, trace silt, damp.					
	10										
971.2											
		4	3 / 4 / 5	12	100	Loose brown fine to medium sand, trace silt, damp to moist.					
	15										
967.7											
		5A	2 / 5 / 5	14	100	Loose light brown silt, trace fine sand, trace clay.					
965.6		5B			100	Very-loose to loose brown fine to medium sand, trace silt, moist to wet.					
	20										
		6	2 / 2 / 2	5	100						
	25										

2010 NEW DEFAULT BORING LOG-W/ N60 201516301.GPJ BRCM.GPJ 2/29/12

WATER LEVEL: ▽ 17.5
 WATER NOTE: Encountered
 DATE: 11/15/11

SYMBOLS USED TO INDICATE TEST RESULTS

G - Gradation	} Separate Curves	H - Penetrometer (tsf)
Q - Uncon Comp		W - Unit Dry Wt (pcf)
T - Triax Comp		D - Relative Dens (%)
C - Consol.		

Drill Rod Energy Ratio : 0.81
 Last Calibration Date : 1/14/11
 Drill Rig Number : OTB MOB B57

**LOG OF BORING NO. BH-5
NORTHSIDE INTERCEPTOR PRELIMINARY SSI
AKRON, OHIO**



LOCATION: N 244726.26; E 531774.02 ELEVATION: 984.7 DATE: 11/15/11 - 11/17/11
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ELEV.	DEPTH, FEET	SAMPLE NUMBER	SAMPLE	SAMPLE EFFORT	N ₆₀	SAMPLE REC-%	DESCRIPTION	NATURAL CONSISTENCY INDEX				TEST RESULTS	
								NATURAL MOISTURE CONTENT					
								PLASTIC LIMIT	LIQUID LIMIT				
								10	20	30	40		
955.8	25-30	7A 7B	2 / 3 / 3		8	100 45	Loose brown silt, little fine sand, few silty clay seams and fine to medium sand seams, damp.						
950.7	35	8A 8B	2 / 7 / 13		27	100 90	Very-stiff to hard gray clayey silt, some fine to coarse sand, trace fine gravel; similar to very-soft shale in structure, damp.						H=3.5-4.5
945.7	40	9A 9B	43 / 50-5"R			100 100	Very-soft, weathered gray SHALE.						H=3.0-3.5
939.7	45	10	50-5"R			100							
	50	11	RQD 8%			89	R-11, 45.0'-50.5': Soft to medium-hard, moderately weathered, very fine grained, gray to dark gray laminated, thinly bedded SHALE; with interbedded siltstone, medium-hard to hard, fresh, fine grained sandstone between 45.0-45.2', well-cemented and slightly calcareous; horizontal to sub-horizontal, moderately weathered joints/fractures, very closely spaced.						

2010 NEW DEFAULT BORING LOG-W/ N60 201516301.GPJ BRCM.GPJ 2/29/12

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Drill Rod Energy Ratio : 0.81
 Last Calibration Date : 1/14/11
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**LOG OF BORING NO. BH-5
NORTHSIDE INTERCEPTOR PRELIMINARY SSI
AKRON, OHIO**



LOCATION: N 244726.26; E 531774.02 ELEVATION: 984.7 DATE: 11/15/11 - 11/17/11
 DRILLING METHOD: 3-1/4" I.D. Hollow-stem Auger COMPLETION DEPTH: 230.5'
 SAMPLER(S): 2" O.D. Split-barrel Sampler, NX Rock Core Barrel

ELEV.	DEPTH, FEET	SAMPLE NUMBER	SAMPLE EFFORT	N ₆₀	SAMPLE REC-%	DESCRIPTION	NATURAL CONSISTENCY INDEX				TEST RESULTS
							NATURAL MOISTURE CONTENT				
							PLASTIC LIMIT	LIQUID LIMIT			
							10	20	30	40	
929.2	50	12	RQD 11%		100	R-12, 50.5'-55.5': Similar to R-11 with medium hard to hard, fresh, fine grained, gray, laminated siltstone between 51.4'-51.6' and 54.5'-54.8'.					
924.2	55	13	RQD 0%		94	R-13, 55.5'-60.5': Similar to R-11.					
919.2	60	14	RQD 32%		100	R-14, 60.5'-65.5': Similar to R-11.					
914.2	65	15	RQD 37%		100	R-15, 65.5'-70.5': Similar to R-11.					
	70	16	RQD 40%		100	R-16, 70.5'-75.5': Similar to R-11, with medium-hard to hard, fresh, finely grained, gray, laminated, siltstone between 72.1'-72.5', 73.8'-74.1', and 74.5'-74.8'.					
	75										

2010 NEW DEFAULT BORING LOG-W/N60 201516301.GPJ BRCM.GPJ 2/29/12

WATER LEVEL: 17.5
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SYMBOLS USED TO INDICATE TEST RESULTS

G - Gradation	} Separate Curves	H - Penetrometer (tsf)
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Drill Rod Energy Ratio : 0.81
 Last Calibration Date : 1/14/11
 Drill Rig Number : OTB MOB B57

**LOG OF BORING NO. BH-5
NORTHSIDE INTERCEPTOR PRELIMINARY SSI
AKRON, OHIO**



LOCATION: N 244726.26; E 531774.02 ELEVATION: 984.7 DATE: 11/15/11 - 11/17/11
 DRILLING METHOD: 3-1/4" I.D. Hollow-stem Auger COMPLETION DEPTH: 230.5'
 SAMPLER(S): 2" O.D. Split-barrel Sampler, NX Rock Core Barrel

ELEV.	DEPTH, FEET	SAMPLE NUMBER	SAMPLE EFFORT	N ₆₀	SAMPLE REC-%	DESCRIPTION	NATURAL CONSISTENCY INDEX				TEST RESULTS	
							NATURAL MOISTURE CONTENT					
884.2	100					R-22, 100.5'-105.5': Similar to R-18, except severely weathered between 101.3'-102.4' with medium-hard to hard, fresh, fine grained, gray, laminated siltstone between 104.3'-105.0'.						
		22	RQD 75%		100							
879.2	105					R-23, 105.5'-110.5': Similar to R-18.						
		23	RQD 57%		100							
874.2	110					R-24, 110.5'-115.5': Similar to R-18 with medium-hard to hard, fresh, fine grained, gray, laminated siltstone between 111.2'-111.6'.						
		24	RQD 50%		100							
869.2	115					R-25, 115.5'-120.5': Similar to R-18.						
		25	RQD 52%		100							
864.2	120					R-26, 120.5'-125.5': Similar to R-18. - Few pyrite nodules at 122.0'						
		26	RQD 77%		100							

2010 NEW DEFAULT BORING LOG-W/N60 201516301.GPJ BRCM.GPJ 2/29/12

WATER LEVEL: <u>▽ 17.5</u> WATER NOTE: <u>Encountered</u> DATE: <u>11/15/11</u>	SYMBOLS USED TO INDICATE TEST RESULTS G - Gradation See Q - Uncon Comp Separate T - Triax Comp Curves C - Consol.	H - Penetrometer (tsf) W - Unit Dry Wt (pcf) D - Relative Dens (%)	Drill Rod Energy Ratio : 0.81 Last Calibration Date : 1/14/11 Drill Rig Number : OTB MOB B57
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**LOG OF BORING NO. BH-5
NORTHSIDE INTERCEPTOR PRELIMINARY SSI
AKRON, OHIO**



LOCATION: N 244726.26; E 531774.02 ELEVATION: 984.7 DATE: 11/15/11 - 11/17/11
 DRILLING METHOD: 3-1/4" I.D. Hollow-stem Auger COMPLETION DEPTH: 230.5'
 SAMPLER(S): 2" O.D. Split-barrel Sampler, NX Rock Core Barrel

ELEV.	DEPTH, FEET	SAMPLE NUMBER	SAMPLE EFFORT	N ₆₀	SAMPLE REC-%	DESCRIPTION	NATURAL CONSISTENCY INDEX				TEST RESULTS
							NATURAL MOISTURE CONTENT				
							PLASTIC LIMIT	LIQUID LIMIT			
							10	20	30	40	
859.2	125					R-27, 125.5'-126.8': Similar to R-18.					
857.9											
		27	RQD 100%		100	R-27, 126.8'-130.5': Medium-hard to hard, fresh, very fine grained, gray, laminated SANDSTONE; widely spaced joints/fractures, horizontal to sub-horizontal, slightly weathered.					
854.2	130					R-28, 130.5'-135.5': Similar to the sandstone in Core R-27 with soft to medium-hard, slightly weathered, very fine grained, gray and dark gray, laminated to thinly laminated SHALE between 132.0'-132.3', 132.6'-132.9', 133.1'-133.6', 134.4'-134.6', and 134.8'-155.5'. - Few pyrite nodules between 132.0'-133.6'.					
		28	RQD 100%		100						
849.2	135					R-29, 135.5'-140.5': Similar to the sandstone in Core R-27 with soft to medium-hard, slightly weathered, very fine grained, gray and dark gray, laminated to thinly laminated SHALE between 135.5'-136.6', 137.7'-138.0', 138.3'-138.6', 138.9'-139.3', and 139.9'-140.2'.					
		29	RQD 72%		98						
844.2	140					R-30, 140.5'-145.5': Similar to the sandstone in Core R-27 with soft to medium-hard, slightly weathered, very fine gravel, gray and dark gray, laminated to thinly laminated SHALE between 140.5'-141.1', 141.5'-141.6', 143.3'-143.4', 143.8'-144.1', 144.3'-144.5', and 144.6'-145.5'.					
		30	RQD 89%		100						
839.2	145					R-31, 145.5'-150.5': Soft to medium-hard, fresh, very fine grained, gray and dark gray, thinly laminated, SHALE with medium-hard to hard, fresh, fine grained, gray, laminated siltstone between 147.3'-148.8'; closely to moderately spaced joints/fractures, horizontal to sub-horizontal, slightly weathered.					
		31	RQD 77%		100						
	150										

WATER LEVEL: 17.5
 WATER NOTE: Encountered
 DATE: 11/15/11

SYMBOLS USED TO INDICATE TEST RESULTS

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Q - Uncon Comp	Separate	W - Unit Dry Wt (pcf)
T - Triax Comp	Curves	D - Relative Dens (%)
C - Consol.		

Drill Rod Energy Ratio : 0.81
 Last Calibration Date : 1/14/11
 Drill Rig Number : OTB MOB B57

2010 NEW DEFAULT BORING LOG-W/N60 201516301.GPJ BRCM.GPJ 2/29/12

**LOG OF BORING NO. BH-5
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LOCATION: N 244726.26; E 531774.02 ELEVATION: 984.7 DATE: 11/15/11 - 11/17/11
 DRILLING METHOD: 3-1/4" I.D. Hollow-stem Auger COMPLETION DEPTH: 230.5'
 SAMPLER(S): 2" O.D. Split-barrel Sampler, NX Rock Core Barrel

ELEV.	DEPTH, FEET	SAMPLE NUMBER	SAMPLE EFFORT	N ₆₀	SAMPLE REC-%	DESCRIPTION	NATURAL CONSISTENCY INDEX				TEST RESULTS
							NATURAL MOISTURE CONTENT				
							PLASTIC LIMIT	LIQUID LIMIT			
							10	20	30	40	
834.2	150					R-32, 150.5'-155.5': Similar to R-31 with medium-hard to hard gray siltstone between 152.1'-152.6' and 155.2'-155.5'.					
		32	RQD 73%		100						
829.2	155					R-33, 155.5'-160.5': Similar to R-31 with medium-hard to hard gray siltstone between 156.8'-157.1' and 159.5'-160.5'.					
		33	RQD 97%		100						
824.2	160					R-34, 160.5'-165.5': Similar to R-31 with medium-hard to hard gray and brown siltstone between 160.5'-161.2', 161.5'-162.1', 163.6'-163.7' and 164.6'-164.9'.					
		34	RQD 95%		100						
819.2	165					R-35, 165.5'-170.5': Similar to R-31 with medium-hard to hard gray siltstone between 166.7'-167.1'. Few pyrite nodules at 166.8'.					
		35	RQD 83%		100						
814.2	170					R-36, 170.5'-175.5': Similar to R-31 except joints/fractures are widely spaced with gray and brown siltstone between 171.9'-172.8' and 174.9'-175.2'.					
		36	RQD 96%		98						

2010 NEW DEFAULT BORING LOG-W/N60 201516301.GPJ BRCM.GPJ 2/29/12

WATER LEVEL: 17.5 17.5
 WATER NOTE: Encountered
 DATE: 11/15/11

SYMBOLS USED TO INDICATE TEST RESULTS

G - Gradation	See	H - Penetrometer (tsf)
Q - Uncon Comp	Separate	W - Unit Dry Wt (pcf)
T - Triax Comp	Curves	D - Relative Dens (%)
C - Consol.		

Drill Rod Energy Ratio : **0.81**
 Last Calibration Date : **1/14/11**
 Drill Rig Number : **OTB MOB B57**

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AKRON, OHIO**



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ELEV.	DEPTH, FEET	SAMPLE NUMBER	SAMPLE EFFORT	N ₆₀	SAMPLE REC-%	DESCRIPTION	NATURAL CONSISTENCY INDEX				TEST RESULTS
							NATURAL MOISTURE CONTENT				
							PLASTIC LIMIT	LIQUID LIMIT			
							10	20	30	40	
784.2	200					R-42, 200.5'-205.5': Similar to R-37 except joints/fractures very closely spaced between 201.8'-203.0'.					Q
		42	RQD 55%		96						
779.2	205					R-43, 205.5'-210.5': Similar to R-37 except joints/fractures very closely spaced between 207.3'-207.5'.					Q
		43	RQD 80%		100						
774.2	210					R-44, 210.5'-215.5': Similar to R-37 except joints/fractures closely spaced between 212.0'-212.9' and 204.9'-205.3'.					Q
		44	RQD 68%		100						
769.2	215					R-45, 215.5'-220.5': Similar to R-37 except joints/fractures closely spaced between 217.6'-218.7'.					Q
		45	RQD 75%		98						
764.2	220					R-46, 220.5'-225.5': Similar to R-37 except joints/fractures closely spaced between 230.8'-232.2'.					Q
		46	RQD 87%		100						

2010 NEW DEFAULT BORING LOG-W/N60 201516301.GPJ BRCM.GPJ 2/29/12

WATER LEVEL: <u>17.5</u>	SYMBOLS USED TO INDICATE TEST RESULTS	Drill Rod Energy Ratio : 0.81
WATER NOTE: <u>Encountered</u>	G - Gradation See	Last Calibration Date : <u>1/14/11</u>
DATE: <u>11/15/11</u>	Q - Uncon Comp Separate	Drill Rig Number : <u>OTB MOB B57</u>
	T - Triax Comp Curves	
	C - Consol.	
	H - Penetrometer (tsf)	
	W - Unit Dry Wt (pcf)	
	D - Relative Dens (%)	

