

Job No.: <u>J6l3056</u> County: _		County: St.			and Ma	terials	Route: 1-64 & US 40					
							Location: Chesterfield Parkway West over I-64 & US					
Bent: Logged By: _k								Operator: Micha				
Station: 62+00.0 Northing: 102									7/28/15-07/28/15			
	t: <u>30</u>		Easting: 80	orthing:				Depth to Water: Depth Hole Open:				
		592.2										
		Station:	77.					Time Change:				
		Offset:	Equipment:									
	equested Elevation: Location						ane on Sout	uth-bound Chesterfield Parkway West, just north of bridg				
rill N	lo.: _C	-9577	Hammer Effi	ciency	: _84	% 		Drilling Method:	Hollow Stem Auge	er		
(ft)	Graphic	Description		Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N ₆₀)	Shear Data	Field Tests	Index Tests		
0	0 4 0	0.0-0.8' CONCRETE		-	-							
		0.8-1.0' CRUSHED AGGREGATE 1.0-21.0' Light brown, LEAN CLA' gravel, very stiff to medium stiff, n	Y trace	590								
5		pieces of limestone and shale (FII	-L)	-		40		Qu Test Results UCS = 2.52 ksf MC = 19.8% γ moist = 127.4 pcf	PP = 3.00 tsf Torvane = 0.90 tsf	LL = 40 PL = 19 MC = 18.1% γ _{sat} = 133 pcf ⁽¹⁾		
-				585		57			PP = 1.25 tsf Torvane = 0.60 tsf	MC = 21.1% γ _{sac} = 129 pcf ⁽¹⁾		
10			9			56		Qu Test Results UCS = 2.58 ksf MC = 22.3% γ moist = 127.9 pcf	PP = 1.00 tsf Torvane = 0.50 tsf	LL = 37 PL = 18 MC = 21.5% γ_{sol} = 129 pcf ¹¹		
				580		64			PP = 1.75 tsf Torvane = 1.00 tsf	MC = 21.6% γ sat = 129 pcf ⁽¹⁾		
15						52		Direct Shear Results Phi' = 30.2° c' = 333 psf MC = 24.595% γ _{moist} = 124.2061	PP = 0.75 tsf Torvane = 0.60 tsf	LL = 37 PL = 19 MC = 21.6% γ _{sat} = 129 pcf ⁽¹⁾		
-				575		16		pcf	PP = 1.00 tsf Torvane = 0.60 tsf	MC = 21.1% $\gamma_{sat} = 129 \text{ pcf}^{(1)}$		
20						60			PP = 1.00 tsf Torvane = 0.60 tsf	MC = 21.0% LL = 37 PL = 21 MC = 23.8% y _{set} = 126 pcf ⁽¹⁾		
		21.0-35.0' Brown, LEAN CLAY, sti	ff, moist	570		92			PP = 1.00 tsf Torvane = 0.30 tsf	MC = 29.6% γ _{sat} = 121 pcf ⁽¹⁾		
25				-		92			PP = 1.25 tsf Torvane = 0.60 tsf	MC = 26.2% LL = 33		
so = (E) = As	m/60)N sumed.	m N ₆₀ - Corrected N value for standard 60% (2) = Actual	SPT efficiency	Em - M	leasure	ed hammer e	efficiency in pe	rcent; Nm - Observed N	V-value			
		System: Modified U.S. State Plane 19	983 Coordin	ate Zor	ne: _1	Missouri E	ast	Coordinate Pr	oj. Factor: _1.0000	878		
oord	inate [Datum: NAD 83 (CONUS)	Coordin	ate Uni	its:	U.S. Surv	ey Feet					

Job No.: J6l3056 Design: S2321 Bent: Station: 62+00.0			Missouri Department of Transportat Construction and Materials County: St. Louis					Page 2 of 2				
			Skew:						Route: I-64 & US 40 Location: Chesterfield Parkway West over I-64 & US			
				Kevin	Moo	ire	·	Operator: Micha		31 OVEI 1-04 & O		
				Logged By: Kevin Moore					7/28/15-07/28/15			
Offset			15. 15	Northing: _1029017.83 Easting: 801232.55 Requested Northing:					720/13-01/20/13			
		592.2										
	_	Station:							Depth Hole Open:			
		Offset:										
		Elevation:		Location Note: Center of R. turn lane on South-bound Chesterfield Parkway West, just north o								
		G-9577	Hammer Efficiency: 84%					Drilling Method: Hollow Stem Auger				
D	OC	30077	Transfer El	licitory	1	1 1		Drining moundar	Tionew Clem / tage	,		
Depth (ft)	Graphic	Description		Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N ₆₀)	Shear Data	Field Tests	Index Tests		
25 -		21.0-35.0' Brown, LEAN CLAY (continued)	, stiff, moist	Egg		92	· ·		PP = 1.25 tsf Torvane = 0.60 tsf	PL = 20 MC = 25.1% $y_{sat} = 125 \text{ pcf}^{(1)}$		
				565						MC = 26.4% $\gamma_{sat} = 124 \text{ pcf}^{(1)}$		
30						88			PP = 1.50 tsf Torvane = 0.66 tsf	MC = 25.9% LL = 41 PL = 20		
-				560		88			PP = 1.50 tsf Torvane = 0.60 tsf	MC = 26.1% $\gamma_{set} = 124 \text{ pcf}^{(1)}$ MC = 26.8% $\gamma_{set} = 123 \text{ pcf}^{(1)}$		
35				-	THE REAL PROPERTY.	84			PP = 1.50 tsf Torvane = 0.90 tsf	MC = 24.4% y _{sat} = 126 pcf ⁽¹⁾		
-00		Bottom of borehole at	35.0 feet.							7 538 120 901		
N ₆₀ = (E	Em/60)I	Nm N _{eo} - Corrected N value for standard , (2) = Actual		cy; Em - N	Measu	ured hamme	er efficiency in p	percent; Nm - Observed	N-value			
		d, (2) = Actual System: Modified U.S. State Plan							oj. Factor: 1.000	0878		
		Datum: NAD 83 (CONUS)					rvey Feet		_,			
		ng this information are cautioned that the					-			× 0		

MISSOUR! HIGHWAYS AND TRANSPORT.

COMMISSION

LLNOS

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DATE

11/10/16

DATE PREPARED

10/12/16

ROUTE STATE

I -64 MO

DISTRICT SHEET NO.

SL 6

ST LOUIS

JOB NO.

WRSL 064B

CONTRACT ID.

PROJECT NO.

BORING LOGS SHEET 1 OF 2

Job N	lo.: J	613056	Construction and Materials County: St. Louis Skew:					Page 1 of 2 Route: I-64 & US 40 Location: Chesterfield Parkway West over I-64 & US					
Desig	n: _S2	2321											
Bent:			Logged By: _K	Logged By: Kevin Moore Northing: 1029045.73					Operator: Michael Donahoe Date of Work: 07/28/15-07/28/15				
Static	n: _61	1+75	Northing: _102										
Offse	t: _45	R	Easting: _801225.59 Requested Northing: Requested Easting:					Depth to Water:					
Eleva	tion:	592.9						Depth Hole Open					
Requ	ested \$	Station:						Time Change:					
Requ	ested (Offset:	Equipment: _C	CME 4	Spli	-Spoon	Sampler, S	Shelby Tube					
Requ	ested I	Elevation:	Location Note:										
Drill N	lo.: _C	S-9577	Hammer Efficie	ency:	84%			Drilling Method: Hollow Stem Auger					
O Depth	Graphic	Description		Elevation (ft)	Sample Type	(RQD %)	Blow Counts (N ₆₀)	Shear Data	Field Tests	Index Tests			
		0.0-15.0' Light brown, LEAN CLA gravel, stiff, moist, few pieces of I and shale (FILL)	Y trace limestone	-		40	2,970		PP = 3.50 tsf Torvane = 1.15 tsf	MC = 27.0% γ _{sat} = 123 pef ⁽¹⁾			
-				590	X	27	2-3-13 (22)		PP = 1.50 tsf	MC = 14.2% γ _{sat} = 138 pcf ⁽¹⁾			
5 -			-	585		48			PP = 3.00 tsf Torvane = 0.80 tsf	LL = 35 PL = 20 MC = 20.8% γ _{sat} = 129 pcf ⁽¹⁾			
10				-/	X	80	2-3-4 (10)		PP = 2.00 tsf	MC = 20.1% γ set = 130 pcf ⁽¹⁾			
-			-	580		48			PP = 2.50 tsf Torvane = 0.70 tsf	MC = 14.7% $\gamma_{\text{sat}} = 137 \text{ pcf}^{(1)}$			
15				2	X	93	2-5-7 (17)		PP = 2.25 tsf	MC = 24.5% γ _{sat} = 125 pcf ⁽¹⁾			
-		15.0-41.5' Brown, LEAN CLAY, st stiff, moist		-		92			PP = 1.25 tsf Torvane = 0.50 tsf	MC = 24.1% y _{sat} = 126 pcf ⁽¹⁾			
20				575	<u> </u>	93	3-4-6 (14)		PP = 1.75 tsf	LL = 33 PL = 22			
-				70		72			PP = 2.25 tsf Torvane = 1.00 tsf	MC = 27.2% γ _{sat} = 123 pcf ⁽¹⁾			
25				570	<u> </u>	107	2-3-3 (8)						
N ₈₀ = (E (1) = As Coord	isumed, inate S	m N ₆₀ - Corrected N value for standard 60% (2) = Actual System: Modified U.S. State Plane 1 Datum: NAD 83 (CONUS)		e Zone	: Mis	souri Ea	ast		l-value oj, Factor: _1.0000	878			

Job No.: <u>J613056</u>			Missouri Department of Transportat Construction and Materials County: St. Louis					Page 2 of 2 Route: I-64 & US 40				
		321		Skew:					Chesterfield Parkway West over I-64 & US Operator: Michael Donahoe			
Station			1000 CO 1000 C					Date of Work: 07/28/15-07/28/15 Depth to Water:				
Offset			Easting: 80									
		592.9 Station:	Requested N						:			
							Sampler S	Time Change:				
Requested Offset:				Equipment: _CME 45 ,Split-Spoon Sampler, Shelby Tube Location Note:								
		-9577		Hammer Efficiency: 84%					Drilling Method: Hollow Stem Auger			
D.I.I. 10	00		1101111101 =				1		Tonon stom ring	<u> </u>		
Depth (ft)	Graphic	Description		Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N ₆₀)	Shear Data	Field Tests	Index Tests		
25		15.0-41.5' Brown, LEAN CLA' stiff, moist (continued)	, stiff to very	-	-							
				565				, la				
30				-		1	2 10 10					
					X	120	2-3-5 (11)			MC = 25.4% γ sat = 125 pcf ⁽¹⁾		
				560								
35				-	X	120	2-3-4 (10)		PP = 1.00 tsf	MC = 26.8% γ _{set} = 123 pcf ⁽¹⁾		
				555								
40				-	X	100	2-5-5 (14)		PP = 1.75 tsf	MC = 24.3% y est = 126 pcf ⁽¹⁾		
2		Bottom of borehole at	41.5 feet.									
N _{ro} = /F	m/60\t	Im No Corrected N value for standar	d 60% SPT efficience	/; Em - N	Measur Measur	red hammer	r efficiency in r	percent: Nm - Observed	N-value			
Coord	inate	Im N _{so} - Corrected N value for standard, (2) = Actual System: Modified U.S. State Plan Datum: NAD 83 (CONUS)	ne 1983 Coordin	nate Zo	ne: _		East		roj. Factor: 1.000	00878		

BORING LOGS SHEET 2 OF 2

Expires 31/18

DATE

11/10/16

DATE PREPARED

10/12/16

ROUTE STATE

I - 64 MO

DISTRICT SHEET NO.

SL 7

COUNTY

ST LOUIS

JOB NO.

WRSL 064B

CONTRACT ID.

PROJECT NO.

