



November 30, 2009

WD Transportation
7007 Discovery Blvd.
Dublin, Ohio 43017

Attention: Mr. Kevin Carpenter, P.E., P.S.
Roadway Division Manager

Reference: Test Boring Logs & GB1 Spreadsheet
MAD-70-10.27
PID No. 83245
Madison County, Ohio
CTL Project No. 09050096COL

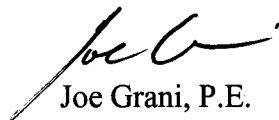
Dear Mr. Carpenter:

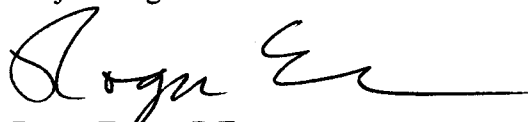
Enclosed you will find a copy of the Test Boring Logs for the above project along with a copy of the GB1 spreadsheet. As determined by ODOT District 6 personnel, no plan/profile sheets or geotechnical report will be prepared by CTL Engineering, Inc. for the roadway portion of this project. A digital copy of the GB1 spreadsheet is being sent via email.

We appreciate the opportunity to be of service to you on this project. If you have any questions or need further information, please do not hesitate to contact us.

Respectfully submitted,

CTL Engineering, Inc.


Joe Grani, P.E.
Project Engineer


Roger Evans, P.E.
Project Engineer

cc: Mr. Ferzan Ahmed, P.E, ODOT District 6 (via email)

PROJECT: MAD-70-10.27	DRILLING FIRM / OPERATOR: CTL / MK	STATION / OFFSET: 543+00, 6.72 RT	EXPLORATION ID
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: CTL / MK	ALIGNMENT: SR 29	B-001
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA	ELEVATION: 978.4 (MSL) EOB: 6.5 ft.	PAGE
START: 8/10/09 END: 8/10/09	SAMPLING METHOD: SPT	COORD: 715484.441 N, 1729956.386 E	1 OF 1

PROJECT: MAD-70-10.27 TYPE: ROADWAY PID: 83245 BR ID: N/A START: 8/10/09 END: 8/10/09	DRILLING FIRM / OPERATOR: CTL / MK SAMPLING FIRM / LOGGER: CTL / MK DRILLING METHOD: 3.25" HSA SAMPLING METHOD: SPT	DRILL RIG: CME 75 T-296 HAMMER: CME AUTOMATIC CALIBRATION DATE: 6/27/07 ENERGY RATIO (%): 89	STATION / OFFSET: 543+00, 6.72 RT ALIGNMENT: SR 29 ELEVATION: 978.4 (MSL) EOB: 6.5 ft. COORD: 715484.441 N, 1729956.386 E	GRADATION (%)		ODOT CLASS (G)										
				GR	ATTERBERG		WC									
				CS	FS	SI	CL	LL	PL	PI						
MATERIAL DESCRIPTION AND NOTES		SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP ID	(tsf)										
Asphalt concrete (10")	ELEV. 978.4															
Portland Cement concrete (8")	977.6															
Base course (8")	976.9															
STIFF, BLACK, ELASTIC CLAY, AND SILT, TRACE SAND, FILL, MOIST	976.2															
	975.4	2	10	67	SS-1	2.50	0	1	6	44	49	61	32	29	35	A-7-5 (20)
		3	4													
STIFF, BROWN, CLAY, AND SILT, TRACE SAND, MOIST		3	4	56	SS-2	3.00	0	1	7	43	49	52	24	28	25	A-7-6 (18)
		4	5													
		3	4	72	SS-3	2.00	0	1	8	37	54	53	23	30	29	A-7-6 (19)
	971.9	4	4													

DEPTH		DOB
1		
2		
3		
4		
5		
6		

NOTES: ST-1 OBTAINED IN OFFSET HOLE FROM 1' TO 3'

NOTES: NO GROUNDWATER ENCOUNTERED DURING DRILLING, DRY AT COMPLETION.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27	DRILLING FIRM / OPERATOR: CTL / MK	DRILL RIG: CME 75 T-296	STATION / OFFSET: 546+82.54, 5.11 LT		EXPLOSION ID: B-002
			ALIGNMENT: SR 29		
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: CTL / MK	HAMMER: CME AUTOMATIC	ELEVATION: 978.1 (MSL) EOB: 20.0 ft.		PAGE: 1 OF 1
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 6/27/07	COORD: 715347.376 N, 1730313.226 E		
START: 8/10/09 END: 8/10/09	SAMPLING METHOD: SPT	ENERGY RATIO (%): 89			
MATERIAL DESCRIPTION AND NOTES					
Asphalt concrete (12")					
Portland cement concrete (9")					
Base course (7")					
STIFF, BROWN, SILT AND CLAY, SOME GRAVEL, LITTLE SAND, FILL, MOIST					
STIFF, BROWN, CLAY, AND SILT, TRACE SAND, DAMP					
STIFF, BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, MOIST					
@6.5' STIFF, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, TILL, DAMP					
965.6					
VERY STIFF, GRAY, SANDY SILT, LITTLE CLAY, TRACE GRAVEL WITH COBBLES, TILL, DAMP					
@15.0'; HARD					
GRAVEL AND/OR STONE FRAGMENTS WITH SAND					
HARD, BROWN, SANDY SILT, SOME CLAY, TILL, DAMP					
958.1					

DEPTH	SPT/RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GRADATION (%)										WC	ODOT CLASS (GI)	INST.
					GR	CS	FS	SI	CL	LL	PL	PI					
1																	
2	2	10	56	3.50	28	4	15	34	19	28	16	12	22	A-6a (4)			
3	3	4															
4	2	3	9	44	3.50	0	7	43	50	55	25	30	25	A-7-6 (19)			
5	3	4	13	94	4.00	6	13	16	39	26	30	18	23	A-6a (7)			
6	4	5															
7																	
8	4	4	13	83	4.00	10	11	15	38	26	24	16	8	A-4a (6)			
9	4	5															
10																	
11	3	3	10	89	4.00	-	-	-	-	-	-	-	15	A-4a (V)			
12																	
13	7	7	28	94	4.50	-	-	-	-	-	-	-	11	A-4a (V)			
14																	
15	9	15	46	89	4.50	6	10	29	39	16	17	12	5	A-4a (4)			
16																	
17																	
18																	
19	9	11	39	94	4.50	0	11	28	39	22	19	12	7	A-4a (5)			
20																	

NOTES: ST-6 OBTAINED IN OFFSET HOLE FROM 8' TO 10'; ST-4 OBTAINED IN OFFSET HOLE FROM 5' TO 7'

NOTES: GROUNDWATER ENCOUNTERED @ 17.0' DURING DRILLING, 14.0' AT COMPLETION
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27		DRILLING FIRM / OPERATOR: CTL / MF		STATION / OFFSET: 550+64.43, 51.79 R		EXPLORATION ID: B-003							
TYPE: ROADWAY		HAMMER: CME AUTOMATIC		ALIGNMENT: SR 29		PAGE: 1 OF 1							
PID: 83245 BR ID: N/A		CALIBRATION DATE: 6/27/07		ELEVATION: 980.2 (MSL) EOB: 20.0 ft.									
START: 7/20/09 END: 7/20/09		ENERGY RATIO (%): 85		COORD: 715146.635 N, 1730643.685 E									
MATERIAL DESCRIPTION AND NOTES		REC SAMPLE ID		GRADATION (%)		ODOT CLASS (GI)							
		SPT / ROD	N ₆₀	GR	CS	FS	SI	CL	LL	PL	PI	WC	
ELEV.		DEPTHS											
Topsoil (3")	980.2	1											
VERY STIFF, BROWN, SILT AND CLAY, SOME SAND, FILL, DAMP	978.7	2	21	SS-1	11	12	15	40	22	29	17	12	9
VERY STIFF, BROWN, SANDY SILT, SOME CLAY, LITTLE GRAVEL	977.2	3	48	SS-3	17	21	15	34	13	33	22	11	14
HARD, BROWN, SILT AND CLAY, SOME SAND, LITTLE GRAVEL	976.2	4		ST-3A	11	10	15	38	26	23	15	8	-
HARD, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, FILL, DAMP		5	47	SS-4	13	17							10
		6	34	SS-5	11	18	45	23	24	15	9	11	11
		7											
		8											
		9	34	SS-6	11	11							12
		10											
VERY STIFF, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP	969.2	11	28	SS-7	6	9	13	15	39	24	25	16	9
		12											
		13											
@13.5'; HARD		14	41	SS-8	9	15							12
		15											
@16.0'; VERY STIFF, LITTLE CLAY, LITTLE GRAVEL, MOIST	962.2	16	17	SS-9	10	5	11	20	38	17	20	13	7
		17											11
		18		ST-10			28	9	13	35	15	23	8
		19	23	SS-11	2	5	39	40	7	2	NP	NP	25
MEDIUM DENSE, BROWN, GRAVEL AND/OR STONE FRAGMENTS WITH SAND, TRACE SILT, TRACE CLAY, WET	960.2	20											A-1-b (0)

NOTES: ST-2 AND ST-2A OBTAINED IN OFFSET HOLE FROM 1' TO 3'; ST-3A OBTAINED IN OFFSET HOLE FROM 3' TO 5'; ST-10 OBTAINED IN OFFSET HOLE FROM 16' TO 18'

NOTES: GROUNDWATER ENCOUNTERED @ 19.0' DURING DRILLING, DRY AT COMPLETION

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27		DRILLING FIRM / OPERATOR: CTL / MF		DRILL RIG: CME 75 T-349		STATION / OFFSET: 553+58.03, 85.0 LT		EXPLORATION ID											
TYPE: ROADWAY		SAMPLING FIRM / LOGGER: CTL / MF		HAMMER: CME AUTOMATIC		ALIGNMENT: SR 29		B-004											
PID: 83245 BR ID: N/A		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 6/27/07		ELEVATION: 962.4 (MSL) EOB: 25.0 ft.		PAGE											
START: 7/20/09 END: 7/20/09		SAMPLING METHOD: SPT		ENERGY RATIO (%): 85		COORD: 715158.206 N, 1730968.539 E		1 OF 1											
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	INST.	
Topsoil (3")		962.4	1	8	17	67	4.00	8	12	21	39	20	23	15	8	9	A-4a (5)		
VERY STIFF, BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL WITH ORGANICS, DAMP		960.4	2	7	5														
MEDIUM DENSE, BROWN, GRAVEL AND/OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, DAMP		959.4	3	5	16	67	-	45	17	16	14	8	19	13	6	8	A-1-b (0)		
BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL		958.9	4	4	21	72	4.50	8	10	31	38	13	NP	NP	NP	12	A-4a (3)		
MEDIUM DENSE, GRAY, SILT, SOME SAND, LITTLE CLAY, TRACE GRAVEL, DAMP		957.4	5	5	10	-	-	6	8	16	54	16	22	17	5	14	A-4b (7)		
VERY STIFF TO HARD, GRAY, SANDY SILT, LITTLE CLAY, LITTLE GRAVEL, TILL, DAMP @6.5'; HARD, WITH COBBLES			6	6	9	61	4.00	16	8	18	41	17	23	15	8	11	A-4a (5)		
@8.5'; WITH COBBLES			7	9	14	40	4.50	-	-	-	-	-	-	-	-	10	A-4a (V)		
			8	11	14	44	4.50	-	-	-	-	-	-	-	-	8	A-4a (V)		
			9	14	17	78	4.50	-	-	-	-	-	-	-	-	-	-		
			10	10	45	72	4.50	10	10	20	42	18	23	14	9	9	A-4a (5)		
			11	10	13	19													
			12	13	19	72	4.50	10	10	20	42	18	23	14	9	9	A-4a (5)		
			13	13	19														
			14	11	18	55	4.50	-	-	-	-	-	-	-	-	8	A-4a (V)		
			15	18	21	72	4.50	-	-	-	-	-	-	-	-	-	-		
			16	11	18	62	4.50	-	-	-	-	-	-	-	-	8	A-4a (V)		
			17	18	26	72	4.50	-	-	-	-	-	-	-	-	-	-		
			18	18	26														
		943.9	19	18	25	92	4.50	6	10	18	40	26	25	14	11	8	A-6a (7)		
HARD, GRAY, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP			20	40	40	67	4.50	6	10	18	40	26	25	14	11	8	A-6a (7)		
			21	47	50/4"	40	4.50	-	-	-	-	-	-	-	-	6	A-6a (V)		
			22	47	50/4"	40	4.50	-	-	-	-	-	-	-	-	6	A-6a (V)		
			23	47	50/4"	40	4.50	-	-	-	-	-	-	-	-	6	A-6a (V)		
			24	37	50/4"	40	4.50	-	-	-	-	-	-	-	-	6	A-6a (V)		
		937.4	25	37	50/4"	40	4.50	-	-	-	-	-	-	-	-	6	A-6a (V)		

NOTES: ST-3 OBTAINED FROM OFFSET HOLE 2' TO 4'; ST-5 OBTAINED IN OFFSET HOLE FROM 4' TO 6'

NOTES: NO GROUNDWATER ENCOUNTERED DURING DRILLING. DRY AT COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27	DRILLING FIRM / OPERATOR: CTL / MF	STATION / OFFSET: 557+33.83, 27.47	EXPLOSION ID: B-005
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: CTL / MF	ALIGNMENT: SR 29	PAGE: 1 OF 1
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA	ELEVATION: 990.4 (MSL) EOB: 10.0 ft.	
START: 7/21/09 END: 7/21/09	SAMPLING METHOD: SPT	COORD: 714909.593 N, 1731269.345 E	
MATERIAL DESCRIPTION AND NOTES			
MEDIUM STIFF, BROWN, SILT AND CLAY, SOME CLAY, SOME GRAVEL, FILL, DAMP STIFF, BROWN, SANDY SILT, SOME CLAY, LITTLE GRAVEL, FILL, DAMP VERY STIFF, BROWN, SILTY CLAY, LITTLE SAND, DAMP STIFF, BROWN, CLAY, AND SILT, TRACE SAND, TRACE GRAVEL, MOIST @8.5'; VERY STIFF, DAMP	ELEV. 990.4 988.9 987.4 984.4 980.4	DEPTHS 1-10 1 2 3 4 5 6 7 8 9 10	SPT/RQD 3 2 3 4 4 3 3 5 7 4 6 9 2 4 4 6 8 7
		ELEV. 980.4	EOB 10

GR	CS	FS	GRADATION (%)				ATTERBERG				WC	ODOT CLASS(GI)	INST.
			SI	CL	LL	PL	PI	PL	PI	WC			
21	11	12	34	22	29	17	12	16	16	A-6a (5)			
13	10	14	37	26	26	16	10	11	11	A-4a (6)			
0	3	12	47	38	37	20	17	19	19	A-6b (11)			
-	-	-	-	-	-	-	-	15	15	A-6b (V)			
1	2	8	44	45	48	22	26	24	24	A-7-6 (16)			
-	-	-	-	-	-	-	-	-	-				
4.00	67	21	67	61	67	67	67	67	67	A-7-6 (V)			
4.00	67	21	67	61	67	67	67	67	67	A-7-6 (V)			

NOTES: NONE

NOTES: NO GROUNDWATER ENCOUNTERED DURING DRILLING, DRY AT COMPLETION.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27 ROADWAY
 TYPE: 83245 BR ID: N/A
 START: 6/30/09 END: 6/30/09
 MATERIAL DESCRIPTION AND NOTES

DRILLING FIRM / OPERATOR: CTL / MK
 SAMPLING FIRM / LOGGER: CTL / MK
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: CME 75 T-296
 HAMMER: CME AUTOMATIC
 CALIBRATION DATE: 6/27/07
 ENERGY RATIO (%): 89

STATION / OFFSET: 559+66.97, 21.5 LT
 ALIGNMENT: SR 29
 ELEVATION: 993.7 (MSL) EOB: 75.0 ft.
 COORD: 714864.169 N, 1731503.364 E

EXPLORATION ID	GRADATION (%)										ATTERBERG			INST.				
	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)								
Topsoil (5') VERY STIFF, BROWN, SILT AND CLAY, SOME SAND, FILL, DAMP @2.0'; TRACE GRAVEL	5	6	7	19	78	SS-1	4.50	0	6	19	50	30	18	12	10	A-6a (9)		
	6	6	7	19	89	SS-2	4.50	6	8	16	39	31	32	17	15	A-6a (9)		
	8	7	7	21	94	SS-3	3.50	-	-	-	-	-	-	-	-	11	A-6a (V)	
	5	5	6	16	100	SS-4	3.50	0	2	8	43	47	42	21	21	23	A-7-6 (13)	
	7																	
	7	6	6	18	94	SS-5	3.50	-	-	-	-	-	-	-	-	18	A-7-6 (V)	
	5	4	6	15	100	SS-6	3.00	-	-	-	-	-	-	-	-	13	A-7-6 (V)	
	15	15	10	37	89	SS-7	4.00	4	6	16	46	28	29	17	12	14	A-6a (9)	
	5	5	4	13	94	SS-8	3.50	-	-	-	-	-	-	-	-	19	A-6a (V)	
	6	7	6	19	0	SS-9	-	-	-	-	-	-	-	-	-	-	-	
	5	5	7	18	0	SS-10	-	-	-	-	-	-	-	-	-	-	-	
	5	6	8	21	94	SS-11	3.25	4	4	22	47	23	28	18	10	15	A-4a (7)	
7	8	9	25	89	SS-12	4.00	-	-	-	-	-	-	-	-	15	A-4a (V)		
18	19	32	76	67	SS-13	-	-	-	-	-	-	-	-	-	5	A-4a (V)		

PID: 83245	BR ID: N/A	PROJECT: MAD-70-10-27	STATION / OFFSET: 559+66.97, 21.5 LT	START: 6/30/09		END: 6/30/09		PG 3 OF 3		B-006							
				GR	CS	FS	SI	CL	LL		PL	PI					
MATERIAL DESCRIPTION AND NOTES		ELEV. 931.6	DEPTHS	SPT/RQD	N ₆₀	REC (%)	HP (tsf)	GRADATION (%)		WC	ODOT CLASS (GI)	INST.					
				GR	CS	FS	SI	CL	LL	PL	PI						
HARD, GRAY, SANDY SILT, SOME CLAY, TRACE GRAVEL WITH COBBLES, TILL, DAMP (continued)		931.6	63														
			64	27	-	73	4.00	4	11	23	42	20	24	15	9	7	A-4a (5)
@63.5'; DRY		931.6	65	50/5"													
			66														
No recovery		931.6	67														
			68														
@73.5'; DRY		918.7	69	50/4"	-	0	-	-	-	-	-	-	-	-	-	-	-
			70														
		918.7	71														
			72														
		918.7	73														
			74	48	-	78	4.50	-	-	-	-	-	-	-	-	-	6
			75	50/3"													
			EOB														

NOTES: NONE

NOTES: GROUNDWATER ENCOUNTERED @ 33.0' DURING DRILLING, 20.0' AT COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27		DRILLING FIRM / OPERATOR: CTL / MF		STATION / OFFSET: 560+42.61, 27.31 RT		EXPLORATION ID											
TYPE: ROADWAY		SAMPLING FIRM / LOGGER: CTL / MF		ALIGNMENT: SR 29		B-007											
PID: 83245 BR ID: N/A		DRILLING METHOD: 3.25" HSA		ELEVATION: 972.2 (MSL) EOB: 49.0 ft.		PAGE											
START: 8/11/09 END: 8/11/09		SAMPLING METHOD: SPT		COORD: 714789.869 N, 1731554.192 E		1 OF 2											
MATERIAL DESCRIPTION AND NOTES		ELEV.		GRADATION (%)		ODOT CLASS (GI)											
		DEPTHS		GR CS FS SI CL		LL PL PI WC											
		SPT/ RQD		REC SAMPLE HP													
		N ₆₀		ID (tsf)													
		%															
TOPSOIL (4') VERY STIFF, BROWN, SANDY SILT, LITTLE GRAVEL, LITTLE CLAY, TRACE ORGANICS, FILL, DAMP	1	4	17	67	SS-1	4.00	14	11	16	40	19	23	15	8	12	A-4a (5)	
	2	5	7														
	3	7	9	28	89	SS-2	4.50	-	-	-	-	-	-	-	12	A-4a (V)	
	4	9	11														
	5																
	6	10	11	33	100	SS-3	4.50	15	9	14	36	24	15	9	13	A-4a (5)	
	7	11	12														
	8																
	9	12	18	50	94	SS-4	-	-	-	-	-	-	-	-	6	A-1-a (V)	
	10	17	17														
DENSE, GRAY, GRAVEL AND/OR STONE FRAGMENTS, SOME SAND, TRACE CLAY, WITH COBBLES, DRY	11	14	47	89	SS-5	-	58	19	9	12	2	NP	NP	NP	13	A-1-a (0)	
	12	16	17														
	13																
	14	12	15	45	44	SS-6	3.50	-	-	-	-	-	-	-	10	A-4a (V)	
	15	17	17														
	16	14	16	44	67	SS-7	4.00	17	12	17	44	10	18	12	6	13	A-4a (4)
	17	15	15														
	18																
	19	37	50	-	92	SS-8	4.50	-	-	-	-	-	-	-	9	A-4a (V)	
	20																
HARD, GRAY, SANDY SILT, TRACE CLAY, LITTLE GRAVEL WITH COBBLES, TILL, DAMP	21	23	27	81	89	SS-9	4.50	9	11	27	38	15	16	11	5	9	A-4a (4)
	22	30	30														
	23																
	24	23	33	91	94	SS-10	4.50	-	-	-	-	-	-	-	8	A-4a (V)	
	25	31	31														
	26																
	27																
	28																
	29	24	30	92	94	SS-11	4.50	-	-	-	-	-	-	-	8	A-4a (V)	
	30	35	35														

@5.5'; HARD, SOME CLAY

@11.0'; WET

@21.0'; LITTLE CLAY, TRACE GRAVEL

PID: 83245	BR ID: N/A	PROJECT: MAD-70-10-27	STATION / OFFSET: 560+42.61, 27.31 RT	START: 8/11/09	END: 8/11/09	PG 2 OF 2	B-007													
MATERIAL DESCRIPTION AND NOTES		ELEV.:	DEPTH	SPT/ RQD	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)			ATTERBERG			WC	ODOT CLASS (G)	INST.				
		942.2						GR	CS	FS	SI	CL	LL	PL	PI					
HARD, GRAY, SANDY SILT, TRACE CLAY, LITTLE GRAVEL WITH COBBLES, TILL, DAMP (continued) @38.5'; SOME CLAY			31																	
			32																	
			33																	
			34		50		83	SS-12	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	
			35																	
			36																	
			37																	
			38																	
			39		39		88	SS-13	4.50	5	7	23	41	24	23	14	9	9	A-4a (6)	
			40		35															
			41		50/5*															
			42																	
			43																	
			44		50/5*		100	SS-14	4.50	-	-	-	-	-	-	-	-	7	A-4a (V)	
			45																	
			46																	
			47																	
			48																	
			49	923.2	EOB	50/5*	0	SS-15												

NOTES: NONE

NOTES: GROUNDWATER ENCOUNTERED @ 11.0' DURING DRILLING, 10.1' AT COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27 TYPE: ROADWAY PID: 83245 BR ID: N/A START: 8/7/09 END: 8/7/09	DRILLING FIRM / OPERATOR: CTL / JD		STATION / OFFSET: 562+03.28, 26.13 RT		EXPLORATION ID B-008											
	SAMPLING FIRM / LOGGER: CTL / JD		ALIGNMENT: SR 29		PAGE 1 OF 2											
DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 6/27/07		ELEVATION: 972.1 (MSL) EOB: 55.0 ft.		INST.										
SAMPLING METHOD: SPT		ENERGY RATIO (%): 84		COORD: 714728.874 N, 1731702.334 E												
MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GRADATION (%)						WC	ODOT CLASS (SI)		
							GR	CS	FS	SI	CL	LL			PL	PI
Topsoil (6')	972.1	1	4	14	67	4.00	14	12	13	43	18	27	16	11	9	A-6a (6)
STIFF, BROWN, SILT AND CLAY, SOME SAND, LITTLE GRAVEL WITH COBBLES, DRY	971.6	2	5													
HARD BROWN, SANDY SILT, SOME CLAY, LITTLE GRAVEL, DRY	970.1	3	12	41	67	4.50	-	-	-	-	-	-	-	-	10	A-4a (V)
		4	14													
		5	15													
@5.5'; DAMP	964.1	6	10	31	67	4.50	13	9	15	41	22	25	15	10	13	A-4a (6)
		7	12													
LOOSE, GRAY, GRAVEL AND/OR STONE FRAGMENTS WITH SAND AND SILT, TRACE CLAY, MOIST	961.6	8														
		9	2	7	56	-	46	11	6	31	6	-	-	-	19	A-2-4 (V)
		10	3	2												
MEDIUM DENSE, GRAVEL AND/OR STONE FRAGMENTS WITH SAND, TRACE SILT, TRACE CLAY, MOIST		11	2	28	39	-	-	-	-	-	-	-	-	-	12	A-1-b (V)
		12	12	8												
@13.5'; WET		13	7	15	67	-	-	-	-	-	-	-	-	-	14	A-1-b (V)
		14	6	5												
		15														
		16	12	25	67	-	65	23	5	7	-	-	-	-	11	A-1-b (V)
		17	10	8												
		18														
		19	15	28	72	-	-	-	-	-	-	-	-	-	11	A-1-b (V)
		20	10	10												
HARD, GRAY, SANDY SILT, SOME GRAVEL, TRACE CLAY, TILL, DAMP	951.1	21	15	45	67	1.50	23	12	23	36	6	16	12	4	12	A-4a (1)
		22	13	19												
		23														
		24	15	59	67	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)
		25	20	22												
		26														
		27														
		28														
@28.5'; AND GRAVEL		29	29	50	92	3.50	52	14	13	17	4	-	-	-	9	A-4a (V)

PID:	83245	BR ID:	N/A	PROJECT:	MAD-70-10.27	STATION / OFFSET:	562+03.28, 26.13 RT	START:	8/7/09	END:	8/7/09	PG 2 OF 2	B-008									
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	INST.			
HARD, GRAY, SANDY SILT, SOME GRAVEL, TRACE CLAY, TILL, DAMP (continued) @43.5': LITTLE CLAY, TRACE GRAVEL		942.1	31																			
			32																			
			33																			
			34			17 30 50/5"	-	71	SS-12	-	-	-	-	-	-	-	-	-	-	8	A-4a (V)	
			35																			
			36																			
			37																			
			38																			
			39			25 50/4"	-	70	SS-13	-	-	-	-	-	-	-	-	-	-	10	A-4a (V)	
			40																			
			41																			
			42																			
			43																			
			44			40 50/3"	-	78	SS-14	4.50	4	8	23	46	19	23	13	10	8	8	A-4a (6)	
			45																			
			46																			
			47																			
			48																			
			49			50	-	100	SS-15	4.50	-	-	-	-	-	-	-	-	-	10	A-4a (V)	
			50																			
			51																			
			52																			
			53																			
			54			50	-	100	SS-16	4.50	-	-	-	-	-	-	-	-	-	9	A-4a (V)	
			55			917.1																

EOB

NOTES: NONE

NOTES: GROUNDWATER ENCOUNTERED @ 12.5' DURING DRILLING, 22.0' AT COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27			DRILLING FIRM / OPERATOR: CTL / MF			STATION / OFFSET: 564+00, 25.0 RT			EXPLORATION ID										
TYPE: ROADWAY			SAMPLING FIRM / LOGGER: CTL / MF			ALIGNMENT: SR 29			B-009										
PID: 83245 BR ID: N/A			DRILLING METHOD: 3.25" HSA			ELEVATION: 971.4 (MSL) EOB: 50.0 ft.			PAGE										
START: 7/21/09 END: 7/21/09			SAMPLING METHOD: SPT			COORD: 714666.465 N, 1731853.801 E			1 OF 2										
MATERIAL DESCRIPTION AND NOTES					REC SAMPLE ID		GRADATION (%)		ODOT CLASS (GI)										
ELEV.					SPT/ RQD	N ₆₀	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	INST.		
Topsoil (5')					3														
VERY STIFF, BROWN, SANDY SILT, SOME GRAVEL, LITTLE CLAY					4	21	3.50	25	11	15	35	14	23	15	8	10	A-4a (3)		
@3.5'; HARD, LITTLE GRAVEL					4	35	4.50	15	13	17	36	19	21	15	6	11	A-4a (4)		
ELEV. 965.4					9														
MEDIUM DENSE, BROWN, GRAVEL AND/OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, WET					11	30	-	53	20	10	13	4	NP	NP	NP	13	A-1-b (0)		
@11.0'; DENSE, WITH COBBLES					5	20	-	-	-	-	-	-	-	-	-	-	16	A-1-b (V)	
@13.5'; TRACE SILT, TRACE CLAY					10	37	-	-	-	-	-	-	-	-	-	-	20	A-1-b (V)	
@16.0'; MEDIUM DENSE					14	31	-	49	37	7	-	-	-	-	-	-	19	A-1-b (V)	
@18.5'; VERY DENSE, WITH COBBLES					9	23	-	-	-	-	-	-	-	-	-	-	26	A-1-b (V)	
ELEV. 947.9					10	64	83	-	-	-	-	-	-	-	-	9	A-1-b (V)		
HARD, GRAY, SILT AND CLAY, SOME SAND, TRACE GRAVEL, TILL, DAMP					12	52	67	43	38	3	-	16	-	-	-	16	A-1-b (V)		
					12	19	58	-	-	-	-	-	-	-	-	13	A-6a (V)		
					21	-	65	-	-	-	-	-	-	-	-	11	A-6a (6)		

PID: 83245	BR ID: N/A	PROJECT: MAD-70-10.27	STATION / OFFSET: 564+00, 25.0 RT	START: 7/21/09	END: 7/21/09	PG 2 OF 2		B-009						
						WC	INST.							
MATERIAL DESCRIPTION AND NOTES			SPT/ RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)			ATTERBERG			ODOT CLASS (GI)		
						GR	CS	FS	SI	CL	LL		PL	PI
HARD, GRAY, SILT AND CLAY, SOME SAND, TRACE GRAVEL, TILL, DAMP (continued)			31											
			32											
			33											
HARD, GRAY, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, DAMP			34	20	4.50	-	-	-	-	-	-	8	A-4a (V)	
			35	33										
			36	50										
			37											
			38											
			39	28	4.50	8	9	20	48	15	22	14	8	A-4a (6)
			40	50/3"										
			41											
			42											
			43											
			44	50/4"	4.50	-	-	-	-	-	-	-	7	A-4a (V)
			45											
			46											
			47											
			48											
			49	30	4.50	-	-	-	-	-	-	-	7	A-4a (V)
			50	50/5"										
			EOB											

NOTES: NONE

NOTES: GROUNDWATER ENCOUNTERED @ 9.0' DURING DRILLING. HOLE GROUTED AFTER COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10-27		DRILLING FIRM / OPERATOR: CTL / MF		DRILL RIG: CME 75 T-349		STATION / OFFSET: 565+17.1, 26.16 RT										EXPLORATION ID		
TYPE: ROADWAY		SAMPLING FIRM / LOGGER: CTL / MF		HAMMER: CME AUTOMATIC		ALIGNMENT: SR 29										B-010		
PID: 83245 BR ID: N/A		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 6/27/07		ELEVATION: 994.3 (MSL) EOB: 60.0 ft.										PAGE		
START: 7/23/09 END: 7/23/09		SAMPLING METHOD: SPT		ENERGY RATIO (%): 85		COORD: 714606.804 N, 1731992.095 E										1 OF 2		
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	OOOT CLASS (G)	INST.
Topsoil (2')		994.3	1	3	13	67	4.00	15	23	15	29	18	31	18	13	12	A-6a (3)	
STIFF TO VERY STIFF, BROWN, SILT AND CLAY, AND SAND, LITTLE GRAVEL, FILL, DAMP		994.1	2	4	13	67	4.00	15	23	15	29	18	31	18	13	12	A-6a (3)	
@2.0'; VERY STIFF, SOME SAND, SOME GRAVEL			3	4	16	72	3.00	31	14	15	25	15	27	16	11	13	A-6a (1)	
			4	4	21	11	3.50	-	-	-	-	-	-	-	-	12	A-6a (V)	
			5	8	7	11	3.50	-	-	-	-	-	-	-	-	14	A-6a (V)	
			6	7	23	72	4.00	-	-	-	-	-	-	-	-	14	A-6a (V)	
			7	9	9	72	4.00	-	-	-	-	-	-	-	-	14	A-6a (V)	
@6.5'; TRACE GRAVEL		986.3	8	4	17	78	4.00	5	6	18	40	31	31	17	14	3	A-6a (9)	
STIFF TO VERY STIFF, GRAY, SILTY CLAY, TRACE SAND, TRACE GRAVEL, DAMP			9	5	7	78	4.00	2	1	8	47	42	38	20	18	13	A-6b (11)	
@11.0'; STIFF			10	4	17	72	4.00	2	1	8	47	42	38	20	18	13	A-6b (11)	
			11	3	14	67	4.00	-	-	-	-	-	-	-	-	20	A-6b (V)	
			12	4	14	67	4.00	-	-	-	-	-	-	-	-	20	A-6b (V)	
			13	6	14	67	4.00	-	-	-	-	-	-	-	-	20	A-6b (V)	
@16.0'; LITTLE SAND			14	3	10	56	3.50	-	-	-	-	-	-	-	-	21	A-6b (V)	
			15	3	10	56	3.50	-	-	-	-	-	-	-	-	21	A-6b (V)	
			16	4	14	67	3.50	2	3	10	46	39	39	20	19	19	A-6b (12)	
			17	5	14	67	3.50	2	3	10	46	39	39	20	19	19	A-6b (12)	
			18	5	14	67	3.50	2	3	10	46	39	39	20	19	19	A-6b (12)	
STIFF, GRAY, CLAY, AND SILT, LITTLE SAND, TRACE GRAVEL, DAMP		976.3	19	5	14	61	3.50	1	3	9	53	34	43	23	20	20	A-7-6 (13)	
			20	4	14	61	3.50	1	3	9	53	34	43	23	20	20	A-7-6 (13)	
			21	6	14	61	3.50	1	3	9	53	34	43	23	20	20	A-7-6 (13)	
		973.3	22	5	23	72	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	
MEDIUM DENSE TO DENSE, BROWN, GRAVEL AND/OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, DAMP			23	8	23	72	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	
			24	8	23	72	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	
@23.5'; DENSE			25	9	31	78	-	14	39	22	20	5	NP	NP	NP	11	A-1-b (0)	
			26	13	31	78	-	14	39	22	20	5	NP	NP	NP	11	A-1-b (0)	
			27	13	31	78	-	14	39	22	20	5	NP	NP	NP	11	A-1-b (0)	
			28	13	31	78	-	14	39	22	20	5	NP	NP	NP	11	A-1-b (0)	
		965.8	29	23	67	67	-	-	-	-	-	-	-	-	-	9	A-1-a (V)	
			30	19	67	67	-	-	-	-	-	-	-	-	-	9	A-1-a (V)	
			31	28	67	67	-	-	-	-	-	-	-	-	-	9	A-1-a (V)	

PID: 83245	BR ID: N/A	PROJECT: MAD-70-10-27	STATION / OFFSET: 565+17.1, 26.16 RT	START: 7/23/09	END: 7/23/09	PG 2 OF 2		B-010						
						WC	INST.							
MATERIAL DESCRIPTION AND NOTES			REC SAMPLE ID	HP (tsf)	GRADATION (%)			ATTERBERG						
					GR	CS	FS	SI	CL	LL	PL	PI		
DEPTHS			SPT/RQD	N ₆₀	REC (%)									
DENSE, BROWN, GRAVEL AND/OR STONE FRAGMENTS, SOME SAND, TRACE SILT, TRACE CLAY, WET (continued)			31											
			32											
@33.5'; DENSE			33											
			34	16	44	67	71	16	6	5	2	-	-	18
@38.5'; GRAY			35	18										
			36	13										
HARD, GRAY, SANDY SILT, SOME CLAY, TRACE GRAVEL, TILL, DAMP			37											
			38											
			39	10	42	78	-	-	-	-	-	-	14	A-1-a (V)
			40	13										
			41	17										
			42											
			43											
			44	27	119	72	6	9	21	40	24	24	14	10
			45	35										
			46	49										
			47											
			48											
			49	9	47	61	4.50	-	-	-	-	-	12	A-4a (V)
			50	15										
			51	18										
			52											
			53											
			54	10	64	67	3	8	22	42	25	23	14	9
			55	21										
			56	24										
			57											
			58											
			59	23	112	56	4.00	-	-	-	-	-	12	A-4a (V)
			60	40										
			39											
			EOB											

NOTES: NONE

NOTES: GROUNDWATER ENCOUNTERED @ 28.5' DURING DRILLING, GROUTED AT COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10-27	DRILLING FIRM / OPERATOR:	CTL / CG	DRILL RIG: CME 75 T-296	STATION / OFFSET: 568+06.15, 22.5 RT	EXPLORATION ID														
TYPE: ROADWAY	SAMPLING FIRM / LOGGER:	CTL / CG	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 29	B-011														
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 6/27/07	ELEVATION: 989.5 (MSL) EOB: 10.0 ft.	PAGE 1 OF 1														
START: 7/14/09 END: 7/14/09	SAMPLING METHOD: SPT		ENERGY RATIO (%): 89	COORD: 714498.061 N, 1732259.954 E															
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	INST.
VERY STIFF, BROWN, SANDY SILT, LITTLE CLAY, WITH ROCK FRAGMENTS, DAMP		989.5	1	5	22	56	SS-1	4.50	0	11	21	48	20	25	16	9	11	A-4a (7)	
@2.0'; HARD		989.4	2	10	31	100	SS-2	4.50	-	-	-	-	-	-	-	-	-	A-4a (V)	
HARD, BROWN, SILT AND CLAY, LITTLE SAND, DAMP		986.0	3	11															
HARD, BROWN, SILTY CLAY, SOME SAND, WITH ROCK FRAGMENTS, DAMP		984.5	4	8	31	94	SS-3	4.50	0	1	18	55	26	28	17	11	16	A-6a (8)	
@8.5'; VERY STIFF		979.5	5	10	36	100	SS-4	3.50	0	5	19	47	29	36	18	18	16	A-6b (11)	
			6	12															
			7																
			8																
			9	5	19	100	SS-5	3.00	-	-	-	-	-	-	-	-	-	A-6b (V)	
			10	8															

NOTES: NONE

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27		DRILLING FIRM / OPERATOR: CTL / MF		STATION / OFFSET: 572+12.37, 49.11 LT		EXPLORATION ID: B-012									
TYPE: ROADWAY		SAMPLING FIRM / LOGGER: CTL / MF		ALIGNMENT: SR 29		PAGE 1 OF 1									
PID: 83245 BR ID: N/A		DRILLING METHOD: 3.25" HSA		ELEVATION: 974.0 (MSL) EOB: 20.0 ft.											
START: 8/10/09 END: 8/10/09		SAMPLING METHOD: SPT		COORD: 714405.837 N, 1732663.556 E											
MATERIAL DESCRIPTION AND NOTES				GRADATION (%)				ODOT CLASS (GI)							
				ATTERBERG											
				LL PL PI											
				FS SI											
				GR CS FS SI											
				REC SAMPLE HP											
				ID (tsf)											
				N ₆₀											
				SPT/RQD											
				DEPTHS											
				ELEV.											
Topsoil (4")				974.0											
VERY STIFF, BROWN, CLAY, SOME SILT, LITTLE SAND, TRACE GRAVEL, FILL, DAMP				973.7											
HARD, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, TRACE ORGANICS, FILL, DAMP				972.0											
VERY STIFF, BROWN, SILT AND CLAY, SOME SAND, LITTLE GRAVEL, TILL, DAMP				970.5											
VERY STIFF, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP				967.5											
@8.5'; TRACE CLAY, SOME GRAVEL															
MEDIUM DENSE, BROWN, GRAVEL AND/OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, DAMP				963.0											
@13.5'; WET															
@18.5'; DENSE, WET															

DEPTH	SPT/RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	INST.
1	3	16	56	SS-1	4.00	2	4	9	35	50	62	27	35	24	A-7.6 (20)	
2	4	16	56	ST-1A	-	1	2	10	31	56	62	29	33	-	A-7.6 (20)	
3	11	34	67	SS-2	3.00	8	15	17	37	23	24	15	9	10	A-4a (5)	
4	12	28	61	ST-3	-	14	11	14	42	19	28	17	11	13	A-6a (6)	
5	12	28	61	SS-4	4.50	-	-	-	-	-	-	-	-	11	A-6a (V)	
6	10	27	72	SS-5	4.50	-	-	-	-	-	-	-	-	13	A-6a (V)	
7	9	27	67	SS-6	4.00	10	8	13	39	30	25	16	9	12	A-4a (7)	
8	8	30	72	ST-7	-	9	9	13	44	25	25	16	9	14	A-4a (7)	
9	8	30	72	SS-8	4.00	30	7	8	47	8	24	20	4	13	A-4a (4)	
10	13															
11	15	26	56	SS-9	-	49	21	12	14	4	-	-	-	11	A-1-b (V)	
12	9	26	56	SS-9	-	49	21	12	14	4	-	-	-	11	A-1-b (V)	
13	9	26	56	SS-9	-	49	21	12	14	4	-	-	-	11	A-1-b (V)	
14	7	20	61	SS-10	-	-	-	-	-	-	-	-	-	19	A-1-b (V)	
15	6	20	61	SS-10	-	-	-	-	-	-	-	-	-	19	A-1-b (V)	
16	8															
17																
18																
19	7	34	56	SS-11	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	
20	12															

NOTES: ST-1A OBTAINED IN OFFSET HOLE FROM 1' TO 3'; ST-3 OBTAINED IN OFFSET HOLE FROM 3' TO 5'; ST-7 OBTAINED IN OFFSET HOLE 8' TO 10'.

NOTES: GROUNDWATER ENCOUNTERED @ 18.5' DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27		DRILLING FIRM / OPERATOR: CTL / MF		STATION / OFFSET: 576+14.58, 55.11 LT		EXPLORATION ID												
TYPE: ROADWAY		SAMPLING FIRM / LOGGER: CTL / MF		ALIGNMENT: SR 29		B-013												
PID: 83245 BR ID: N/A		DRILLING METHOD: 3.25" HSA		ELEVATION: 974.4 (MSL) EOB: 10.0 ft.		PAGE												
START: 8/10/09 END: 8/10/09		SAMPLING METHOD: SPT		COORD: 714242.887 N, 1733031.332 E		1 OF 1												
MATERIAL DESCRIPTION AND NOTES		ELEV.		GRADATION (%)				ODOT CLASS (GI)										
				GR	CS	FS	SI	CL	LL	PL	PI	WC	INST.					
				SPT/ RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)										
Topsoil (5')		974.4		3	16	67	SS-1	2.50	0	0	21	42	37	43	21	22	18	A-7-6 (13)
VERY STIFF, BROWN, CLAY, AND SILT, SOME SAND, FILL, DAMP		973.9		4	7													
VERY STIFF, BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP		972.4		5	17	72	SS-2	3.00	1	5	15	47	32	37	20	17	18	A-6b (11)
@3.5'; STIFF		969.4		3	13	61	SS-3	4.50	-	-	-	-	-	-	-	-	16	A-6b (V)
HARD, SILT AND CLAY, SOME SAND, TRACE GRAVEL, TILL, DAMP		965.9		7	33	72	SS-4	4.00	2	4	17	52	25	27	16	11	18	A-6a (8)
DENSE, BROWN, GRAVEL AND/OR STONE FRAGMENTS, SOME SAND, TRACE SILT, TRACE CLAY, DRY		964.4		10	38	67	SS-5	-	61	17	10	10	2	-	-	-	7	A-1-a (V)
		EOB		12														

NOTES: NONE

NOTES: NO GROUNDWATER ENCOUNTERED DURING DRILLING, DRY AT COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27		DRILLING FIRM / OPERATOR: CTL / MK		STATION / OFFSET: 580+09.16, 0.7 RT		EXPLORATION ID							
TYPE: ROADWAY		SAMPLING FIRM / LOGGER: CTL / MK		ALIGNMENT: SR 29		B-014							
PID: 83245 BR ID: N/A		DRILLING METHOD: 3.25" HSA		ELEVATION: 970.9 (MSL) EOB: 20.0 ft.		PAGE							
START: 8/11/09 END: 8/11/09		SAMPLING METHOD: SPT		COORD: 714014.321 N, 1733359.879 E		1 OF 1							
MATERIAL DESCRIPTION AND NOTES		ELEV.		GRADATION (%)		ODOT CLASS (SI)							
		DEPTHS		ATTERBERG		INST.							
		SPT / RQD		GR		WC							
		N ₆₀		GR CS FS SI CL		LL PL PI							
		REC SAMPLE ID		HP (tsf)									
		HP (%)											
Asphalt concrete (8") over Brick (3")	970.9												
Portland cement concrete (8")	970.2												
Base course (7")	969.3												
STIFF, BROWN, SANDY SILT, LITTLE CLAY, SOME GRAVEL, FILL, DAMP	968.7												
BROWN, SILTY CLAY, TRACE SAND	967.9	3	12	78	5	22	37	14	22	14	8	14	A-4a (3)
	967.4	4	4	-	0	1	6	49	44	39	21	18	A-6b (11)
MEDIUM STIFF, GRAY, CLAY, AND SILT, LITTLE SAND, TRACE GRAVEL, FILL, MOIST	965.9	4	3	67	2	10	39	47	52	26	26	28	A-7-6 (17)
MEDIUM STIFF TO STIFF, BROWN, CLAY, AND SILT, TRACE SAND, TRACE GRAVEL, DAMP		2	7	83	1	9	40	49	50	25	25	26	A-7-6 (16)
		3		-	9	8	6	43	34	42	23	19	A-7-6 (12)
		3	10	89	-	-	-	-	-	-	-	-	A-7-6 (V)
	960.9	3	4										
MEDIUM DENSE, BROWN, COARSE AND FINE SAND, AND GRAVEL, SOME SILT, TRACE CLAY WITH COBBLES, DAMP		4	13	44	42	14	9	25	10	-	-	14	A-3a (V)
		5											
MEDIUM DENSE, GRAY, GRAVEL AND/OR STONE FRAGMENTS, SOME SAND, TRACE SILT, TRACE CLAY, WET	958.4	5	16	72	-	-	-	-	-	-	-	19	A-1-a (V)
		6											
		4	16	67	59	28	7	6	-	-	-	17	A-1-a (V)
		5											
	952.4	4	15	39	22	11	17	36	14	19	13	6	A-4a (3)
STIFF, GRAY, SANDY SILT, SOME CLAY, SOME GRAVEL, TILL, DAMP	950.9	5											
		5											

NOTES: ST-2 OBTAINED IN OFFSET HOLE FROM 2.5' TO 4.5'; ST-5 OBTAINED IN OFFSET HOLE FROM 5' TO 7'

NOTES: GROUNDWATER ENC @ 12.5 DURING DRILLING, 10.2' AT COMPLETION.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27		DRILLING FIRM / OPERATOR: CTL / MF		STATION / OFFSET: 584+01.99, 60.89 LT		EXPLORATION ID												
TYPE: ROADWAY		SAMPLING FIRM / LOGGER: CTL / MF		ALIGNMENT: SR 29		B-015												
PID: 83245 BR ID: N/A		DRILLING METHOD: 3.25" HSA		ELEVATION: 966.8 (MSL) EOB: 10.0 ft.		PAGE												
START: 8/10/09 END: 8/10/09		SAMPLING METHOD: SPT		COORD: 713889.292 N, 1733740.191 E		1 OF 1												
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP ID	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	INST.
Topsoil (4")		966.8	1	2	14	56	SS-1	1	3	11	37	48	52	26	26	21	A-7-6 (17)	
STIFF, BROWN, CLAY, AND SILT, LITTLE SAND, TRACE GRAVEL, DAMP		964.8	2	3	7													
HARD, GRAY, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP		963.3	3	13	52	61	SS-2	5	11	15	43	26	27	17	10	11	A-4a (7)	
MEDIUM DENSE, BROWN AND GRAY, COARSE AND FINE SAND, SOME GRAVEL, LITTLE SILT, TRACE CLAY, WITH COBBLES, DAMP @5.0'; DENSE, MOIST			4	7	24	56	SS-3	23	28	23	19	7	NP	NP	NP	10	A-3a (0)	
			5	12	42	67	SS-4	-	-	-	-	-	-	-	-	15	A-3a (V)	
			6	18														
			7															
			8															
STIFF, GRAY, SILT AND CLAY, TRACE SAND, TRACE GRAVEL, MOIST		958.3	9	5	11	44	SS-5	1	1	6	51	41	30	18	12	22	A-6a (9)	
		956.8	10	5														

NOTES: NONE

NOTES: GROUNDWATER ENCOUNTERED @ 8.5' DURING DRILLING. 6.0' AT COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27		DRILLING FIRM / OPERATOR: CME 75 T-349		STATION / OFFSET: 588+00, 84.58 LT		EXPLORATION ID: B-016					
TYPE: ROADWAY		HAMMER: CME AUTOMATIC		ALIGNMENT: SR 29		PAGE: 1 OF 1					
PID: 83245 BR ID: N/A		CALIBRATION DATE: 6/27/07		ELEVATION: 969.5 (MSL) EOB: 12.5 ft.							
START: 8/11/09 END: 8/11/09		ENERGY RATIO (%): 85		COORD: 713710.531 N, 1734097.310 E							
MATERIAL DESCRIPTION AND NOTES		SPT / RQD		REC SAMPLE ID		GRADATION (%)		ODOT CLASS (GI)		INST.	
		DEPTHS		HP (tsf)		GR CS FS SI CL LL PL PI WC					
Topsoil (6")		1		4.50		4 9 14 42 31 35 19 16 15		A-6b (10)			
VERY STIFF, BROWN, SILTY CLAY, SOME SAND, TRACE GRAVEL, DAMP		2		4.50		8 9 26 11 17 39 25 26 16 10 14		A-4a (6)			
VERY STIFF, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP		3									
No recovery		4		-		-		-			
@5.0' Little gravel		5		4.00		4 6 16 10 15 36 23 25 16 9 15		A-4a (5)			
No recovery		6									
		7									
		8									
No recovery		9		-		-		-			
		10		-		-		-			
@11.0' MEDIUM DENSE, GRAY, GRAVEL AND/OR STONE FRAGMENTS WITH SAND, TRACE SILT, TRACE CLAY, WET		11		-		-		-			
		12		-		-		-			
		EOB									

NOTES: NONE

NOTES: GROUNDWATER ENCOUNTERED @ 11.0 DURING DRILLING, 6.0' AT COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27 ROADWAY
 TYPE: ROADWAY
 PID: 83245 BR ID: N/A
 START: 8/10/09 END: 8/10/09

DRILLING FIRM / OPERATOR: CTL / MK
 SAMPLING FIRM / LOGGER: CTL / MK
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: CME 75 T-296
 HAMMER: CME AUTOMATIC
 CALIBRATION DATE: 6/27/07
 ENERGY RATIO (%): 89

STATION / OFFSET: 591+96.36, 2.22 LT
 ALIGNMENT: SR 29
 ELEVATION: 973.1 (MSL) EOB: 20.0 ft.
 COORD: 713435.230 N, 1734395.858 E

EXPLOSION ID: B-017
 PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)	INST.
							GR	CS	FS	SI	OL	LL	PL			
Asphalt concrete (17")	973.1	1														
Base course (8")	971.7	2														
STIFF, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, FILL, DAMP	971.1	3	3	12	78	4.00	6	8	15	44	27	16	9	13	A-4a (7)	
	969.6	4	4	4	-	-	10	10	16	49	15	24	9	12	A-4a (6)	
VERY STIFF, BROWN, SILT AND CLAY, AND SAND, TRACE GRAVEL, FILL, DAMP		5	5	18	39	4.50	1	19	23	37	20	15	12	9	A-6a (5)	
		6	6	6												
No recovery		7	7	24	0	-										
	965.6	8	8	9												
VERY STIFF, BROWN, SANDY SILT, SOME CLAY, LITTLE GRAVEL, TILL, DAMP		9	9	18	83	4.00	12	16	17	34	21	14	8	13	A-4a (4)	
		10	10	6												
		11	11	21	94	4.00								12	A-4a (V)	
	960.6	12	12	8												
MEDIUM DENSE, GRAY, COARSE AND FINE SAND, SOME GRAVEL, LITTLE SILT, TRACE CLAY, WET		13	13	30	94	-	22	23	38	14	3	NP	NP	15	A-3a (0)	
		14	14	12												
		15	15	9												
		16	16	30	89	-								13	A-3a (V)	
		17	17	11												
		18	18													
		19	19	6												
	953.1	20	20	7	78	-								11	A-3a (V)	

0 hr

EOB

NOTES: ST-2 OBTAINED IN OFFSET HOLE FROM 2' TO 4'

NOTES: GROUNDWATER ENCOUNTERED @ 12.5' DURING DRILLING, 10.0' AT COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27	DRILLING FIRM / OPERATOR: CTL / MK	STATION / OFFSET: 595+94.67, CL	EXPLORATION ID: B-018
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: CTL / MK	ALIGNMENT: SR 29	
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA	ELEVATION: 975.6 (MSL) EOB: 6.5 ft.	PAGE 1 OF 1
START: 8/10/09 END: 8/10/09	SAMPLING METHOD: SPT	COORD: 713228.662 N, 1734736.197 E	
MATERIAL DESCRIPTION AND NOTES			
Asphalt concrete (18")	ELEV. 975.6		
Base course (7")	974.1		
MEDIUM STIFF, BROWN, SILT AND CLAY, TRACE SAND, TRACE ORGANICS, FILL, DAMP @ 3.5 Stiff, some sand, trace gravel	973.5		
STIFF, BROWN, CLAY, AND SILT, TRACE SAND, FILL, MOIST	970.6		
	969.1	EOB	

SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GRADATION (%)						WC	ODOT CLASS (GI)	INST.		
				GR	CS	FS	SI	CL	LL				PL	PI
2	7	67	3.00	-1	1	5	61	34	32	20	12	17	A-6a (9)	
3	13	83	4.00	1	5	24	35	35	33	20	13	16	A-6a (8)	
3	15	89	4.50	0	0	2	45	53	52	24	28	27	A-7-6 (18)	

NOTES: NONE

NOTES: NO GROUNDWATER ENCOUNTERED DURING DRILLING. DRY AT COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27	DRILLING FIRM / OPERATOR: CTL / MF	DRILL RIG: CME 75 T-349	STATION / OFFSET: 547+31.37, 793.83 R	EXPLORATION ID: B-101								
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: CTL / MF	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 29									
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 6/27/07	ELEVATION: 980.1 (MSL) EOB: 10.0 ft.	PAGE 1 OF 1								
START: 7/13/09 END: 7/13/09	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	COORD: 714604.160 N, 1730020.913 E									
MATERIAL DESCRIPTION AND NOTES		GRADATION (%)		ODOT CLASS (GI)								
DEPTH (ft)	ELEV.	GR	CS	FS	SI	CL	LL	PL	PI	WC		
1	979.9		2	3	9	49	37	31	18	13	18	A-6a (9)
2												
3	976.6										25	A-6a (V)
4			1	2	9	34	54	56	31	25	28	A-7-5 (17)
5	975.1											
6			1	1	9	42	47	58	29	29	23	A-7-6 (19)
7												
8												
9												
10	970.1										18	A-7-6 (V)
@8.5'; STIFF												

NOTES: NONE

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27 TYPE: ROADWAY PID: 83245 BR ID: N/A START: 7/13/09 END: 7/13/09	DRILLING FIRM / OPERATOR: CTL / CG SAMPLING FIRM / LOGGER: CTL / CG DRILLING METHOD: 3.25" HSA SAMPLING METHOD: SPT	DRILL RIG: CME 75 T-296 HAMMER: CME AUTOMATIC CALIBRATION DATE: 6/27/07 ENERGY RATIO (%): 89	STATION / OFFSET: 550+34.03, 582.81 R ALIGNMENT: SR 29 ELEVATION: 976.7 (MSL) EOB: 10.0 ft. COORD: 714666.657 N, 1730415.104 E								
MATERIAL DESCRIPTION AND NOTES		GRADATION (%)									
Limestone gravel (6")		GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)
VERY STIFF, BROWN AND GRAY, SILT AND CLAY, SOME SAND, LITTLE GRAVEL, DAMP		13	16	14	35	22	-	-	-	16	A-6a (V)
DENSE, BROWN, GRAVEL AND/OR STONE FRAGMENTS WITH SAND AND SILT, TRACE CLAY, DAMP		33	23	12	24	8	-	-	-	7	A-2-4 (V)
VERY STIFF, BROWN, SILT, SOME CLAY, TRACE SAND, TRACE GRAVEL, MOIST		1	0	1	67	31	25	17	8	20	A-4b (B)
VERY STIFF, BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP		-	-	-	-	-	-	-	-	18	A-4b (V)
ELEV. 976.7 976.2 974.7 973.2 968.2 966.7											
DEPTHS 1 2 3 4 5 6 7 8 9 10											
SPT/RQD 7 6 7 8 10 14 12 10 5 5 5 7 5 6 7											
REC SAMPLE ID SS-1 SS-2 SS-3 SS-4											
HP (tsf) 4.00 - 3.50 3.50											
REC (%) 28 67 33 -											
N ₆₀ 19 36 22 18											
INST.											

NOTES: NONE

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27 ROADWAY DRILLING FIRM / OPERATOR: CTL / CG CTL / CG
 TYPE: ROADWAY BR ID: N/A SAMPLING FIRM / LOGGER: 3.25" HSA
 PID: 83245 BR ID: N/A DRILLING METHOD: SPT
 START: 7/13/09 END: 7/13/09 SAMPLING METHOD: SPT

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC SAMPLE ID	HP (tsf)	GRADATION (%)						WC	ODOT CLASS (GI)	INST.	
							GR	CS	FS	SI	CL	LL				PL
Topsoil (3")	978.0	1	4	18	SS-1	4.50	0	1	9	54	36	45	23	22	21	A-7-6 (14)
VERY STIFF, BROWN, CLAY, AND SILT, TRACE SAND, FILL, DAMP	977.7	2	5	7												
VERY STIFF, GRAY, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP	976.0	3	9	22	SS-2	4.50	3	5	13	51	28	30	19	11	15	A-6a (8)
@3.5'; MOIST		4	7	16	SS-3	3.50	1	2	12	49	36	35	20	15	22	A-6a (10)
HARD, GRAY, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP	973.0	5	7	50	SS-4	3.00	5	10	19	45	21	25	16	9	13	A-4a (6)
@8.5'; VERY STIFF		6	17	17												
		7														
		8														
		9	6	7	SS-5	-	-	-	-	-	-	-	-	-	14	A-4a (V)
	968.0	10	8	8												

NOTES: NONE

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27			DRILLING FIRM / OPERATOR: CTL / CG			STATION / OFFSET: 58+92.96, 236.26 L			EXPLORATION ID: B-104		
TYPE: ROADWAY			SAMPLING FIRM / LOGGER: CTL / CG			ALIGNMENT: SR 29			PAGE: 1 OF 1		
PID: 83245 BR ID: N/A			DRILLING METHOD: 3.25" HSA			ELEVATION: 980.4 (MSL) EOB: 10.0 ft.					
START: 7/14/09 END: 7/14/09			SAMPLING METHOD: SPT			COORD: 715105.975 N, 1731534.075 E					
MATERIAL DESCRIPTION AND NOTES			ELEV.			GRADATION (%)			ODOT CLASS (G)		
			980.4			GR CS FS SI CL LL PL PI WC					
VERY STIFF, BROWN, SILT AND CLAY, SOME SAND, SOME GRAVEL, DAMP			978.4			GR CS FS SI CL LL PL PI WC					
VERY STIFF, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP						GR CS FS SI CL LL PL PI WC			A-6a (2)		
@3.5'; LITTLE GRAVEL						GR CS FS SI CL LL PL PI WC			A-4a (6)		
						GR CS FS SI CL LL PL PI WC			A-4a (5)		
						GR CS FS SI CL LL PL PI WC			A-4a (V)		
@8.5'; HARD			970.4			GR CS FS SI CL LL PL PI WC			A-4a (V)		
			EOB								
			10								

NOTES: NONE

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27	DRILLING FIRM / OPERATOR: CTL / CG	DRILL RIG: CME 75 T-296	STATION / OFFSET: 561+95.99, 229.47 L	EXPLORATION ID: B-105														
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: CTL / CG	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 29															
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 6/27/07	ELEVATION: 974.8 (MSL) EOB: 10.0 ft.	PAGE: 1 OF 1														
START: 7/14/09 END: 7/14/09	SAMPLING METHOD: SPT	ENERGY RATIO (%): 89	COORD: 714968.392 N, 1731791.946 E															
MATERIAL DESCRIPTION AND NOTES																		
STIFF, BROWN, SILTY CLAY, SOME SAND, SOME GRAVEL, DAMP @2.0'; HARD, LITTLE SAND, TRACE GRAVEL @3.5'; VERY STIFF VERY STIFF, BROWN, CLAY, AND SILT, LITTLE SAND, DAMP VERY STIFF, BROWN, SILT AND CLAY, LITTLE SAND, DAMP	ELEV.	974.8	DEPTHS															
	SPT/RQD	N ₆₀	REC SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	INST.			
	3	4	5	13	94	SS-1	3.50	28	18	12	25	17	-	-	-	12	A-6b (V)	
	9	12	11	34	56	SS-2	4.50	9	7	11	39	34	37	21	16	16	A-6b (10)	
	9	8	10	27	94	SS-3	-	-	-	-	-	-	-	-	-	-	-	
	9	9	10	28	100	SS-4	3.00	0	2	16	36	46	44	20	24	28	A-7-6 (14)	
	7	9	10	28	100	SS-5	4.00	-	-	-	-	-	-	-	-	13	A-6a (V)	
	EOB																	

NOTES: NONE

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10-27		DRILLING FIRM / OPERATOR: CTL / CG		STATION / OFFSET: 563+13.66, 231.0 RT		EXPLORATION ID: B-106										
TYPE: ROADWAY		SAMPLING FIRM / LOGGER: CTL / CG		ALIGNMENT: SR 29		PAGE: 1 OF 1										
PID: 83245 BR ID: N/A		DRILLING METHOD: 3.25" HSA		ELEVATION: 977.7 (MSL) EOB: 20.0 ft.												
START: 7/14/09 END: 7/14/09		SAMPLING METHOD: SPT		COORD: 714498.784 N, 1731720.188 E												
MATERIAL DESCRIPTION AND NOTES		ELEV. 977.7		GRADATION (%)		ODOT CLASS (G)										
				GR	CS	FS	SI	CL	LL	PL	PI	WC				
		SPT/ RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	ATTERBERG									
HARD, BROWN, SILTY CLAY, SOME SAND, LITTLE GRAVEL, FILL, DAMP	1	6	37	89	SS-1	4.00	16	10	12	34	35	19	16	9	A-6b (8)	
	2	11	14													
HARD, BROWN, CLAY, AND SILT, LITTLE SAND, TRACE GRAVEL, FILL, DAMP	3	10	31	94	SS-2	4.50	5	4	7	36	45	23	22	16	A-7-6 (14)	
	4	11	34	78	SS-3	4.50	8	9	14	39	29	17	12	7	A-6a (8)	
HARD, BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL WITH ROCK FRAGMENTS, FILL, DAMP	5	7	19	94	SS-4	4.50	-	-	-	-	-	-	-	23	A-7-6 (V)	
	6	5	8													
VERY STIFF, BROWN, CLAY, AND SILT, TRACE SAND, DAMP	7				ST-5	-	-1	2	4	51	44	51	24	27	25	A-7-6 (17)
	8															
BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST	9	6	10	100	SS-7	2.50	5	5	14	48	28	17	11	16	A-6a (8)	
	10	3	4													
@11.0'; VERY STIFF, SOME SAND	11	7	25	100	SS-8	4.00	10	8	14	38	30	27	16	11	12	A-6a (7)
	12	8	9													
VERY STIFF, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP	13															
	14	8	27	94	SS-10	4.00	8	10	16	39	27	25	16	9	11	A-4a (6)
MEDIUM DENSE, GRAY, GRAVEL AND/OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, WET	15															
	16	4	15	67	SS-11	-	-	-	-	-	-	-	-	17	A-1-b (V)	
	17	5	5													
	18															
	19	5	15	44	SS-12	-	48	23	9	15	5	NP	NP	18	A-1-b (0)	
	20	5	5													

NOTES: ST-5 OBTAINED IN OFFSET HOLE FROM 5' TO 7'; ST-6 IN OFFSET HOLE FROM 8' TO 10'; ST-9 IN OFFSET HOLE FROM 12' TO 14'

NOTES: GROUNDWATER ENC. @ 15.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27
 TYPE: ROADWAY
 PID: 83245 BR ID: N/A
 START: 7/13/09 END: 7/13/09
 DRILLING FIRM / OPERATOR: CTL / CG
 SAMPLING FIRM / LOGGER: CTL / CG
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: CME 75 T-296
 HAMMER: CME AUTOMATIC
 CALIBRATION DATE: 6/27/07
 ENERGY RATIO (%): 89
 STATION / OFFSET: 566+91.77, 211.0 RT
 ALIGNMENT: SR 29
 ELEVATION: 982.6 (MSL) EOB: 10.0 ft.
 COORD: 714368.265 N, 1732082.568 E

DEPTH	SPT/ RQD	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)										WC	OBT CLASS (G)
					GR	CS	FS	SI	CL	LL	PL	PI				
1	4	61	SS-1	4.00	5	6	22	41	26	24	15	9	8	A-4a (6)		
2	14	67	SS-2	4.50	4	6	20	42	28	27	16	11	13	A-6a (7)		
3	8	72	SS-3	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)		
4	11	72	SS-4	-	5	14	18	40	23	25	15	10	10	A-4a (6)		
5	13															
6	9															
7																
8																
9	10	61	SS-5	-	-	-	-	-	-	-	-	-	-	A-4a (V)		
10	18															
EOB																

MATERIAL DESCRIPTION
 AND NOTES
 Limestone gravel (6")
 VERY STIFF, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, DRY
 VERY STIFF, BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP
 HARD, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP
 @5.0'; VERY STIFF
 @8.5'; HARD

NOTES: NONE
 NOTES: NONE
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27 TYPE: ROADWAY PID: 83245 BR ID: N/A START: 7/14/09 END: 7/14/09	DRILLING FIRM / OPERATOR: CTL / CG SAMPLING FIRM / LOGGER: CTL / CG DRILLING METHOD: 3.25" HSA SAMPLING METHOD: SPT	DRILL RIG: CME 75 T-296 HAMMER: CME AUTOMATIC CALIBRATION DATE: 6/27/07 ENERGY RATIO (%): 89	STATION / OFFSET: 570+12.56, 226.81 L ALIGNMENT: SR 29 ELEVATION: 978.6 (MSL) EOB: 10.0 ft. COORD: 714645.356 N, 1732552.404 E	EXPLORATION ID: B-108 PAGE: 1 OF 1											
MATERIAL DESCRIPTION AND NOTES		SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GR	GRADATION (%)					WC	ODOT CLASS (GI)	INST.	
ELEV.		DEPTHS				ATTERBERG	GR	CS	FS	SI	CL	LL	PL	PI	
VERY STIFF, BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, MOIST	978.6	3 7 7	21	89	3.00	10	15	21	39	15	22	16	6		7 A-4a (4)
VERY STIFF, BROWN, SILTY CLAY, SOME SAND, TRACE GRAVEL, MOIST	976.6	5 7 10	25	100	3.50	1	3	17	48	31	36	18	18		18 A-6b (11)
@3.5'; HARD		15 15 15	44	100	4.50	-	-	-	-	-	-	-	-		11 A-6b (V)
@5.0'; VERY STIFF		5 7 7	21	44	4.00	1	7	17	48	27	34	17	17		12 A-6b (11)
@8.5'; HARD	968.6	11 12 12	36	100	4.50	-	-	-	-	-	-	-	-		17 A-6b (V)
	EOB														

NOTES: NONE

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27	DRILLING FIRM / OPERATOR: CTL / CG	STATION / OFFSET: 572+70.91, 441.98 L	EXPLOSION ID: B-109												
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: CTL / CG	ALIGNMENT: SR 29													
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA	ELEVATION: 967.9 (MSL) EOB: 10.0 ft.	PAGE: 1 OF 1												
START: 7/14/09 END: 7/14/09	SAMPLING METHOD: SPT	COORD: 714746.709 N, 1732866.556 E													
MATERIAL DESCRIPTION AND NOTES		GRADATION (%)				ODOT CLASS (G)									
	ELEV.	SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP ID	GR	FS	SI	CL	LL	PL	PI	WC		
VERY STIFF, BROWN, SILT AND CLAY, AND SAND, TRACE GRAVEL, DRY @2.0'; SOME SAND, DAMP VERY STIFF, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP	967.9	5	18	100	SS-1	3	20	21	38	18	27	16	11	6	A-6a (5)
	964.4	6	22	100	SS-2	2	9	16	45	28	29	17	12	15	A-6a (8)
		7	21	100	SS-3	0	7	23	46	24	24	15	9	13	A-4a (7)
		8	27	100	SS-4	4.00	-	-	-	-	-	-	-	13	A-4a (V)
		9	21	100	SS-5	4.00	-	-	-	-	-	-	-	-	12
	10														
	EOB														

NOTES: NONE

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT:	MAD-70-10-27	DRILLING FIRM / OPERATOR:	CTL / MF	STATION / OFFSET	546+90.05, 149.77 L	EXPLORATION ID	B-201									
TYPE:	ROADWAY	SAMPLING FIRM / LOGGER:	CTL / MF	ALIGNMENT:	SR 29											
PID:	83245 BR ID: N/A	DRILLING METHOD:	3.25" HSA	ELEVATION:	976.5 (MSL) EOB: 10.0 ft.	PAGE										
START:	8/12/09 END: 8/12/09	SAMPLING METHOD:	SPT	COORD:	715478.510 N, 1730373.996 E	1 OF 1										
MATERIAL DESCRIPTION AND NOTES			SPT/RQD	N ₆₀	REC (%)	HP (tsf)	GR	GRADATION (%)			WC	ODOT CLASS (GI)	INST.			
			DEPTHS	ELEV.				CS	FS	SI	CL	LL	PL	PI		
Topsoil (7')				976.5												
STIFF, BROWN, CLAY, AND SILT, TRACE SAND, MOIST			1	975.9	3	4	0	1	8	50	41	56	26	30	27	A-7-6 (19)
VERY STIFF, BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST			2	974.5	4	5	6	5	13	42	34	34	18	16	23	A-6b (10)
VERY STIFF, BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, MOIST			3	973.0	6	9	10	13	16	42	19	26	16	10	16	A-4a (5)
@5.0'; WITH STONE FRAGMENTS, DAMP			4		5	7	-	-	-	-	-	-	-	-	13	A-4a (V)
HARD, GRAY, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, DAMP			5	968.0	7	7										
			6													
			7													
			8													
			9													
			10	966.5	5	10	8	11	15	47	19	21	14	7	11	A-4a (6)
			13													
			EOB													

NOTES: NONE

NOTES: NO GROUNDWATER ENCOUNTERED DURING DRILLING, DRY AT COMPLETION.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27	DRILLING FIRM / OPERATOR: CTL / JD	STATION / OFFSET: 550+64.45, 51.73 RT	EXPLORATION ID
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: CTL / JD	ALIGNMENT: SR 29	B-202
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA	ELEVATION: 969.4 (MSL) EOB: 10.0 ft.	PAGE
START: 6/29/09 END: 6/29/09	SAMPLING METHOD: SPT	COORD: 715281.312 N, 1730821.082 E	1 OF 1
MATERIAL DESCRIPTION AND NOTES			
Chip & seal (3")	ELEV. 969.4		
Base course (7")	969.2 / 968.6		
STIFF, BROWN, SILT, SOME CLAY, SOME SAND, TRACE GRAVEL, DAMP	966.9		
STIFF, BROWN, SANDY SILT, LITTLE CLAY, LITTLE GRAVEL, DAMP	965.4		
STIFF, BROWN, SILT AND CLAY, AND SAND, TRACE GRAVEL, DAMP			
@5.5'; MEDIUM STIFF, WET			
VERY STIFF, BROWN, SANDY SILT, LITTLE CLAY, LITTLE GRAVEL, DAMP	960.9		
	959.4		
		EOB	

SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GR	GRADATION (%)							WC	ODOT CLASS (GI)	INST.	
					CS	FS	SI	CL	LL	PL	PI				
3															
4	11	67	4.50	6	11	10	52	21	24	15	9	13	A-4b (8)		
4	13	67	4.50	13	11	15	41	20	25	16	9	13	A-4a (5)		
3	11	67	4.50	-	-	-	-	-	-	-	-	12	A-6a (6)		
2	6	67	-	1	13	29	36	21	31	17	14	31	A-6a (6)		
4	20	67	-	12	18	22	33	15	21	14	7	8	A-4a (3)		
7	7														
4	7														
7	7														

NOTES: NONE

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10-27	DRILLING FIRM / OPERATOR: CTL / CG	STATION / OFFSET: 545+98.2, 323.76 RT	EXPLORATION ID											
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: CTL / CG	ALIGNMENT: SR 29	B-203											
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA	ELEVATION: 975.9 (MSL) EOB: 10.0 ft.	PAGE											
START: 7/13/09 END: 7/13/09	SAMPLING METHOD: SPT	COORD: 715076.445 N, 1730104.464 E	1 OF 1											
MATERIAL DESCRIPTION AND NOTES Topsoil (6") VERY STIFF, BROWN, SILT AND CLAY, LITTLE SAND, MOIST @2.0': STIFF VERY STIFF, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, MOIST VERY STIFF, BROWN TO GRAY, SILT AND CLAY, LITTLE SAND, WET MEDIUM DENSE, BROWN, GRAVEL AND/OR STONE FRAGMENTS WITH SAND, SOME SILT, TRACE CLAY, DAMP		DRILL RIG: CME 75 T-296 HAMMER: CME AUTOMATIC CALIBRATION DATE: 6/27/07 ENERGY RATIO (%): 89												
ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GR	GRADATION (%)				ODOT CLASS (GI)	INST.		
975.9		4	18	67	3.00	0	CS	FS	SI	CL	LL	PL	PI	WC
975.4	1	6	6											
	2	6	5	39	3.00	-								24
972.4	3	5	5											22
	4	6	7	39	3.50	2	8	18	49	23	24	15	9	18
970.9	5	6	8											19
	6	7	9	-	3.00	-								
	7													
	8													
967.4	9	4	6	56	-	41	21	13	22	3	18	15	3	11
965.9	10	12	27											
	EOB													A-1-b (0)

NOTES: NONE

NOTES: GROUNDWATER ENCOUNTERED @ 7.0' DURING DRILLING, 5.0' ATR COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27	DRILLING FIRM / OPERATOR: CTL / CG	STATION / OFFSET: 549+05.71, 302.6 RT	EXPLORATION ID: B-204
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: CTL / CG	ALIGNMENT: SR 29	
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA	ELEVATION: 974.1 (MSL) EOB: 10.0 ft.	PAGE 1 OF 1
START: 7/13/09 END: 7/13/09	SAMPLING METHOD: SPT	COORD: 714974.800 N, 1730405.812 E	
MATERIAL DESCRIPTION AND NOTES		GRADATION (%)	
	ELEV.	ATTERBERG	
	974.1	GR CS FS SI CL LL PL PI WC	
Topsoil (6")	973.6	GR CS FS SI CL LL PL PI WC	
STIFF, BROWN, CLAY, AND SILT, LITTLE SAND, TRACE GRAVEL, DAMP	972.1	GR CS FS SI CL LL PL PI WC	
VERY STIFF, BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP	969.1	GR CS FS SI CL LL PL PI WC	
@3.5'; HARD	965.6	GR CS FS SI CL LL PL PI WC	
VERY STIFF, BROWN, SILT, SOME SAND, LITTLE CLAY, TRACE GRAVEL, DAMP	964.1	GR CS FS SI CL LL PL PI WC	
HARD, BROWN, SANDY SILT, TRACE CLAY, TRACE GRAVEL, TILL, MOIST	964.1	GR CS FS SI CL LL PL PI WC	

SPT/ RQD	N ₆₀	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)	INST.
				GR	CS	FS	SI	CL	LL	PL			
2	4	SS-1	4.00	1	10	66	22	48	24	24	23	A-7-6 (15)	
2	8	SS-2	4.00	2	9	14	45	30	29	18	13	A-6a (8)	
8	10	SS-3	3.50	-	-	-	-	-	-	-	9	A-6a (V)	
4	5	SS-4	4.00	4	10	19	51	16	23	16	7	A-4b (6)	
11	25	SS-5	3.00	-	-	-	-	-	-	-	14	A-4a (V)	
	19												

NOTES: NONE

NOTES: GROUNDWATER ENCOUNTERED @ 7.0' DURING DRILLING, 7.5' AT COMPLETION.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27	DRILLING FIRM / OPERATOR: CTL / JD	STATION / OFFSET: 586+82.45, 600.0 RT	EXPLORATION ID: B-205
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: CTL / JD	ALIGNMENT: SR 29	
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA	ELEVATION: 971.0 (MSL) EOB: 10.0 ft.	PAGE: 1 OF 1
START: 6/29/09 END: 6/29/09	SAMPLING METHOD: SPT	COORD: 712839.084 N, 1733438.543 E	
MATERIAL DESCRIPTION AND NOTES		DRILL RIG: CME 75 R-25	
		HAMMER: CME AUTOMATIC	
		CALIBRATION DATE: 6/27/07	
		ENERGY RATIO (%): 84	
ELEV.	DEPTHS	GRADATION (%)	
971.0	1	GR	CS
970.3	2	FS	SI
	3	CL	LL
	4	PL	PI
965.0	5	WC	ODOT CLASS (GI)
	6		
	7		
	8		
961.0	9		
	10		
	EOB		

SPT/ RQD	N ₆₀	REC SAMPLE ID	HP (tsf)	GRADATION (%)					WC	ODOT CLASS (GI)	INST.	
				GR	CS	FS	SI	CL				
11	50	SS-1	-	47	20	10	19	4	-	7	A-1-b (V)	
14	22											
28	34	SS-2	-	-	-	-	-	-	-	6	A-1-b (V)	
10	14											
13	5	SS-3	-	47	15	10	22	6	-	9	A-1-b (V)	
5	5											
4	5	SS-4	3.50	12	13	17	40	18	23	16	7	A-4a (5)
5	5											
7	7	SS-5	4.50	-	-	-	-	-	-	-	-	A-4a (V)
10	10											

NOTES: NONE

NOTES: NO GROUNDWATER ENCOUNTERED DURING DRILLING, DRY AT COMPLETION.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED.

PROJECT: MAD-70-10.27	DRILLING FIRM / OPERATOR: CTL / JD	STATION / OFFSET: 586+66.02, 598.02 R		EXPLORATION ID: B-206													
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: CTL / JD	ALIGNMENT: SR 29															
PID: 83245 BR ID: N/A	DRILLING METHOD: 3.25" HSA	ELEVATION: 969.2 (MSL) EOB: 10.0 ft.		PAGE 1 OF 1													
START: 6/29/09 END: 6/29/09	SAMPLING METHOD: SPT	COORD: 713203.411 N, 1733616.749 E															
MATERIAL DESCRIPTION AND NOTES																	
ASPHALT CONCRETE (7") BASE COURSE (8") STIFF, BROWN, CLAY, AND SILT, LITTLE SAND, TRACE GRAVEL, DAMP @4.5'; WITH COBBLES VERY STIFF, BROWN, SILT, SOME SAND, LITTLE GRAVEL, DAMP MEDIUM DENSE, BROWN, GRAVEL AND/OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, WET	ELEV.	REC (%)	SPT/ RQD	N ₆₀	HP (tsf)	GRADATION (%)			WC	ODOOT CLASS (G)	INST.						
	969.2					GR	CS	FS	SI	CL	LL	PL	PI				
	968.7																
	968.0																
		67	4	11	49	35	52	25	27	24				A-7-6 (17)			
		67	4	13	36	45	49	25	24	25				A-7-6 (15)			
		67	3	4	-	-	-	-	-	-	-	-	-	19	A-7-6 (V)		
	962.7																
	960.7																
	959.2																
	0 hr																
	EOB																
			12	10	29	72	SS-5	-	31	17	18	3	NP	NP	NP	8	A-1-b (0)

NOTES: NONE

NOTES: GROUNDWATER ENCOUNTERED @ 9.5' DURING DRILLING AND AT COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: MAD-70-10.27 TYPE: ROADWAY PID: 83245 BR ID: N/A START: 6/29/09 END: 6/29/09		DRILLING FIRM / OPERATOR: CME 75 R-25 HAMMER: CME AUTOMATIC CALIBRATION DATE: 6/27/07 ENERGY RATIO (%): 84		STATION / OFFSET: 585+95.66, 205.75 R ALIGNMENT: SR 29 ELEVATION: 969.6 (MSL) EOB: 20.0 ft. COORD: 713570.580 N, 1733765.546 E		EXPLORATION ID: B-207 PAGE: 1 OF 1												
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GR	GRADATION (%)							WC	ODOT CLASS (GI)	INST.
									GR	CS	FS	SI	CL	LL	PL	PI		
Topsoil (8")		969.6	1	5	20	67	-	25	10	20	30	15	24	16	8	9	A-4a (2)	
VERY STIFF, BROWN, SANDY SILT, SOME GRAVEL, LITTLE CLAY, DAMP		968.9	2	7				42	11	10	26	11	26	16	10	13	A-4a (0)	
VERY STIFF, BROWN, CLAY, AND SILT, LITTLE SAND, TRACE GRAVEL, DAMP		967.6	3	8	22	72	-	5	4	15	39	37	43	22	21	21	A-7-6 (13)	
VERY STIFF, BROWN, SILT AND CLAY, SOME GRAVEL, LITTLE SAND WITH COBBLES, DAMP		966.1	4	8	29	67	-	-	-	-	-	-	-	-	-	-	A-6a (V)	
HARD, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP		964.6	5	13				23	9	11	34	23	30	18	12	15	A-6a (5)	
			6	11	41	72	4.50	1	12	16	45	26	26	16	10	13	A-4a (7)	
			7	12														
		961.6	8															
MEDIUM DENSE, BROWN, COARSE AND FINE SAND, SOME SILT, TRACE CLAY, DAMP			9	13	28	67	-	14	32	21	28	5	NP	NP	NP	12	A-3a (0)	
@11.0'; LITTLE SILT, WET			10	9														
NO RECOVERY			11	7	25	67	-	15	25	39	18	3	NP	NP	NP	15	A-3a (0)	
			12	9														
			13	7														
			14	8	25	0	-	-	-	-	-	-	-	-	-	-		
NO RECOVERY			15	10														
@16.0'; DENSE, WET			16	14														
		952.1	17	12	34	67	-	-	-	-	-	-	-	-	-	-	10	A-3a (V)
DENSE, GRAY, GRAVEL AND/OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY WITH COBBLES, WET			18	12														
			19	10	41	72	-	50	18	15	14	3	NP	NP	NP	9	A-1-b (0)	
		949.6	20	17														

NOTES: ST-2 OBTAINED IN OFFSET HOLE FROM 1' TO 3'; ST-5 OBTAINED IN OFFSET HOLE FROM 3' TO 5'.
 NOTES: GROUNDWATER ENC @ 11.0' DURING DRILLING, 13.0' AT COMPLETION. ST-2 OBTAINED IN OFFSET HOLE FROM 1' TO 3'.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

Subgrade Analysis
V. 9.09 08/10/07

Design 6	
CBR Item 320	No
Global CS Option	No
Global LS Option	No

MAD-70-10.27, PID No. 83245

Classification Counts by Sample																	
R	1a	1b	3	3a	2-4	2-5	2-6	2-7	4a	4b	5	6a	6b	7-5	7-6	8a	8b
0	0	0	1	0	0	0	0	0	30	6	0	26	9	2	17	0	0
0.0%			1.1%						33%	7%		29%	10%	2%	19%		

Average		Maximum		Minimum	
34	Total Borings	22.1	14.8	6	6
15.5	M _{opt}	14.4	27.1	8	4
14.2	M _{opt}	32	35	67	54
26	M _{opt}	19	13	6	8
8	M _{opt}	17	6	17	6
0	M _{opt}				
	GI	8.71			
	GI	20			
	GI	0			

#	B #	Boring Location	Depth To	Cut		Standard Penetration							Physical Characteristics			Moisture		Classification	Comments
				Fill	To	n ₂	n ₃	N _m	Rig	N ₆₀	N _L	LL	PL	PI	% Silt	% Clay	P		

1	B-001	715484.441N 1729956.386E	2.0 3.5 3.5 5.0 5.0 6.5			3	4	7	A	10	61	32	29	44	49	93	35																									
2	B-002	715347.376N 1730313.226E	2.0 3.5 3.5 5.0 5.0 6.5			3	3	6	A	10	28	16	12	34	19	53	22	14	6a																							
3	B-003	715146.635N 1730643.685E	1.0 2.5 2.5 4.0 4.0 5.5 5.0 7.0			6	9	15	B	21	29	17	12	40	22	62	9	14	6a																							
4	B-004	715158.206N 1730968.539E	0.5 2.0 2.0 3.5 3.5 5.0 5.0 6.5			7	5	12	B	17	23	15	8	39	20	59	9	10	4a																							
5	B-005	714909.593N 1731269.345E	0.0 1.5 1.5 3.0 3.0 4.5 4.5 6.0			2	3	5	B	7	29	17	12	34	22	56	16	14	6a																							
6	B-006	714864.169N 1731503.364E	0.5 2.0 2.0 3.5 3.5 5.0 5.0 6.5			6	7	13	A	19	30	18	12	50	25	75	10	14	6a																							
7	B-010	714606.804N 1731992.095E	0.5 2.0 2.0 3.5 3.5 5.0 5.0 6.5			6	7	13	A	19	32	17	15	39	31	70	12	14	6a																							
8	B-011	714498.061N 1732259.954E	0.5 2.0 2.0 3.5 3.5 5.0 5.0 6.5			5	6	11	B	16	42	21	21	43	47	90	23	18	7-6																							
9	B-012	714405.837N 1732663.556E	0.5 2.0 2.0 3.5 3.5 5.0 5.0 6.5			4	7	11	B	16	62	27	35	35	50	85	24	24	7-6																							
10	B-013	714242.887N 1733031.332E	0.5 2.0 2.0 3.5 3.5 5.0 5.0 6.5			4	7	11	B	16	43	21	22	42	37	79	18	18	7-6																							
11	B-014	714014.321N 1733359.879	2.0 3.5 3.5 5.0 5.0 6.5 7.5 9.0			4	4	8	A	12	27	14	8	37	44	51	14	10	4a																							

Rig	ER
A	89
B	85
C	84
D	
E	
F	
G	
H	

% Surface	26%
% Borings	6%
% Borings	21%
#/VALUE	1
21% #####	1

% Borings	0%
N _{<=5}	0%
N _{<=10}	21%
N _{>=20}	21%
M+	#####
R	0%

Class @ Surface		
2-5	0	3%
4b	1	
5	0	
7-5	1	3%
7-6	6	18%
8a	0	
8b	0	
R	0	

Analysis		
Treatments		
LS	CS	UC
12		All
12		1
14	12	1
14	12	1
#####	#####	#####
#####	#####	#####
#####	#####	#####
#####	#####	#####

Problem		
w/	w/	UC
Class	Class	Class
Uh	MN	All
	MN	1
	N	1
	MN	1
4b	#####	#####
4b	#####	#####
	N	2

