DRILL HOLE LOG

BORING NO. 08-P9-B1

PROJECT: I-15 UTAH COUNTY CORRIDOR - P9, I-15 OVER 770 WEST (920 SOUTH)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:251,413 E:593,182
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 40'
DRILLER: L. HILER
DEPTH TO WATER - INITIAL: ▽ 13.0' **AFTER 24 HOURS:** ▼ 14.0'

PROJECT NUMBER: 200801.200
DATE STARTED: 8/4/08
DATE COMPLETED: 8/5/08
GROUND ELEVATION: 4515.5'
LOGGED BY: G. PEASLEE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	USCS (AASHTO)	Material Description		Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4515							gray, dense	5" ASPHALT								
				12	38,12,13,(52)	GP GM	brown, dry, dense	6" GRAVEL (SLAG) SILTY GRAVEL possible cobbles								
4510	5			11	6,8,21,(61)	GP-GM (*A-1-a*)	brown, moist, dense			4.7		NP	59	32	9	
4505	10			5	13,23,17,(64)	GP-GM	brown, wet, dense	GRAVEL W/SILT & SAND possible cobbles								
4500	15			1	35,36,44,(99+)	GP-GM	brown, wet, very dense									
4495	20			5	67,42,36,(99)	GP-GM	gray, wet, very dense									
4490	25			14	9,14,10,(30)	SM (*A-2-4*)	gray, wet, med. dense	SILTY SAND		27.1		NP	0	76	24	5% -0.005 mm
4485	30			17	8,10,15,(30)	ML (*A-4(0)*)	dk. gray, wet, med. dense	SILT occasional silty sand layers to 3" thick, some layers slightly plastic		26.6		NP	0	13	87	
4480	35			13	4,5,5,(11) *0.15*	ML	dk. gray, wet, soft									
				16	*0.15* 8,9,5,(15)	ML (*A-4(2)*) ML (*A-4(0)*)	dk. gray, wet, soft; dk. gray, wet, med. dense	SILT W/SAND		29.7; 23.8	30	2; NP	0; 0	13; 24	87; 76	
4475	40			15	3,5,5,(11) *0.22*	ML ML	dk. gray, wet; dk. gray, wet, soft	SILT								
4470	45			14	Pushed	ML (*A-4(0)*)	dk. gray, wet	SANDY SILT	93.8	28.9	29	2	0	42	58	

DH_LOGV1 08-P9.GPJ US EVAL.GDT 5/28/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE — 2,3,2,(6) ← Blow Count per 6"; ← $(N_1)_{60}$ Value; *0.45* ← Torvane (tsf)

UNDISTURBED SAMPLE — PUSHED; *0.45* ← Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay

DRILL HOLE LOG

BORING NO. 08-P9-B1

PROJECT: I-15 UTAH COUNTY CORRIDOR - P9, I-15 OVER 770 WEST (920 SOUTH)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:251,413 E:593,182
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 40'
DRILLER: L. HILER
DEPTH TO WATER - INITIAL: ▽ 13.0' **AFTER 24 HOURS:** ▼ 14.0'

PROJECT NUMBER: 200801.200
DATE STARTED: 8/4/08
DATE COMPLETED: 8/5/08
GROUND ELEVATION: 4515.5'
LOGGED BY: G. PEASLEE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	USCS (AASHTO)	Material Description		Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4465			■	18	3,1,2,(3) *0.12*	ML	gray-brown, moist, soft	SANDY SILT								
						CL	gray-brown, moist, soft	LEAN CLAY								
4460	55		⊠	13	Pushed *0.13*	CH (*A-7-6(32)*)	gray, moist, soft	FAT CLAY	71.8	46.1	52	28	0	1	99	CT UU
4455	60		■	6	3,4,5,(8) *0.34*	CL	brown & gray, moist, firm									
4450	65		⊠	14	Pushed *0.15*	CL (*A-7-6(27)*)	dk. gray, moist, soft	LEAN CLAY occasional silt lenses & layers	80.1	39.6	45	25	0	1	99	CT
4445	70		■	10	2,3,3,(5) *0.39*	CL	dk. gray, moist, firm									
4440	75		⊠	10	Pushed	SM	dk. gray, wet									
			■	18	10,31,41,(61)	SM (*A-4(0)*)	dk. gray, wet, very dense	SILTY SAND		24.4		NP	0	53	47	
4435	80		■	18	9,15,27,(35)	CL-ML	gray, wet	SILTY CLAY								
						ML	dk. gray, wet, dense	SANDY SILT								
4430	85		⊠	18	Pushed	CL (*A-6(18)*)	dk. gray, moist, stiff	LEAN CLAY silt lenses	90.3	31.1	38	17	0	1	99	CT UC
4425	90		■	18	0/12",4,(3) *0.38*	CL	dk. gray, moist, firm									
4420	95		⊠	16	Pushed *0.50*	CL (*A-6(20)*)	gray, moist, firm to stiff	LEAN CLAY occasional silt lenses	97.0	26.9	38	19	0	1	99	UC UU

DH_LOGV1 08-P9.GPJ US EVAL.GDT 5/28/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE ■ 2,3,2,(6) ← Blow Count per 6"; *0.45* ← $(N_1)_{60}$ Value; Torvane (tsf)

UNDISTURBED SAMPLE ⊠ PUSHED *0.45* ← Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay

DRILL HOLE LOG

BORING NO. 08-P9-B1

PROJECT: I-15 UTAH COUNTY CORRIDOR - P9, I-15 OVER 770 WEST (920 SOUTH)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:251,413 E:593,182
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 40'
DRILLER: L. HILER
DEPTH TO WATER - INITIAL: ▽ 13.0' **AFTER 24 HOURS:** ▼ 14.0'

PROJECT NUMBER: 200801.200
DATE STARTED: 8/4/08
DATE COMPLETED: 8/5/08
GROUND ELEVATION: 4515.5'
LOGGED BY: G. PEASLEE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4415			■	18	0/12",2,(2) *0.40*	CL	gray, moist, firm LEAN CLAY occasional silt lenses								
4410	105		⊠	18	Pushed *0.56*	CH (*A-7-6(38)*)	dk. gray, moist, stiff	71.5	47.1	56	35	0	2	98	CT UU
4405	110		■	18	0/12",3,(2) *0.40*	CH (*A-7-6(36)*)	dk. gray, moist, firm FAT CLAY		40.5	55	34	0	5	95	
4400	115		⊠	15	Pushed	CH ML	dk. gray, moist; dk. gray, moist SANDY SILT								
4395	120		■	18	9,21,28,(34)	SM (*A-2-4*)	dk. gray, wet, dense SILTY SAND		22.7		NP	0	77	23	
4390	125		⊠	18	Pushed *0.13*	ML	dk. gray, moist, soft SILT								
4385	130		■	18	4,6,6,(8) *0.48*	CL (*A-7-6(29)*)	dk. gray, moist, firm LEAN CLAY		33.6	46	27	0	1	99	
4380	135														
4375	140														
4370	145														

LEGEND:

DISTURBED SAMPLE ■ 2,3,2,(6) ← Blow Count per 6"; ← $(N_1)_{60}$ Value; *0.45* ← Torvane (tsf)

UNDISTURBED SAMPLE ⊠ PUSHED *0.45* ← Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay

RB&G ENGINEERING, INC.

DRILL HOLE LOG

BORING NO. 08-P9-B2

PROJECT: I-15 UTAH COUNTY CORRIDOR - P9, I-15 OVER 770 WEST (920 SOUTH)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:251,254 E:593,098
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 35'
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: ▽ 17.8' **AFTER 24 HOURS:** ▼ 10.8'

PROJECT NUMBER: 200801.200
DATE STARTED: 7/31/08
DATE COMPLETED: 8/4/08
GROUND ELEVATION: 4513.4'
LOGGED BY: J. PRICE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description		Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
				5	4,5,5,(21)	GP-GM	brown, dry, loose									
4510																
	5			15	20,47,50,(99+)	GP-GM (*A-1-a*)	brown, moist, very dense			5.9		NP	59	34	7	
4505								GRAVEL W/SILT & SAND possible cobbles								
	10			6	70/6",(REF)	GP-GM	brown, moist, very dense									
4500																
	15			10	18,19,22,(60)	GP-GM	brown, wet, dense									
4495																
	20			10	11,18,19,(50)	SP-SM (*A-3(0)*)	brown, wet, med. dense	SAND W/SILT		19.0		NP	9	86	5	
						GP-GM	brown, wet, med. dense	GRAVEL W/SILT & SAND								
4490																
	25			14	32,17,20,(47) *0.60*	GP-GM CL SP-SM	gray, wet; gray, moist, stiff; gray, wet, dense	LEAN CLAY; SAND W/SILT								
4485																
	30			15	9,9,11,(24)	ML (*A-4(0)*)	gray, wet, med. dense	SANDY SILT		30.6		NP	0	46	54	DS 11% -0.005 mm
4480																
	35			18	7,6,7,(16)	ML (*A-4(0)*)	gray, wet, med. dense	SILT W/SAND clay lenses		29.0	27	2	0	28	72	
4475																
	40			7	Pushed	ML (*A-4(0)*)	gray, wet	SANDY SILT clay lenses		21.8		NP	0	40	60	
4470																
	45			17	12,11,10,(23)	ML	gray, wet, med. dense									
4465								SILT plastic, clay lenses								

DH_LOGV1 08-P9.GPJ US EVAL.GDT 5/28/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value; *0.45* — Torvane (tsf)

UNDISTURBED SAMPLE — PUSHED; *0.45* — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay

DRILL HOLE LOG

BORING NO. 08-P9-B2

PROJECT: I-15 UTAH COUNTY CORRIDOR - P9, I-15 OVER 770 WEST (920 SOUTH)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:251,254 E:593,098
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 35'
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: ▽ 17.8' **AFTER 24 HOURS:** ▼ 10.8'

PROJECT NUMBER: 200801.200
DATE STARTED: 7/31/08
DATE COMPLETED: 8/4/08
GROUND ELEVATION: 4513.4'
LOGGED BY: J. PRICE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description		Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
			■	18	2,2,5,(7) *0.18*	ML (*A-4(5)*)	gray, wet, soft	SILT plastic, clay lenses		32.9	30	6	0	13	87	
4460																
	55		■	18	0/18",(0) *0.55*	CL	gray, moist, stiff									
4455																
	60		☒	18	Pushed *0.50*	CL (*A-6(19)*)	gray, moist, firm to stiff	LEAN CLAY silt & sand lenses 1"-3" apart	89.5	32.0	38	18	0	1	99	UC
4450																
	65		■	18	0,0,3,(3) *0.55*	CL	gray, moist, stiff									
4445																
	70		☒	18	Pushed *0.60*	CH (*A-7-6(31)*)	gray, moist, stiff		86.3	37.5	50	28	0	2	98	CT UU
4440								FAT CLAY								
	75		■	17	0,0,17,(15) *0.40*	CH	gray, moist, firm									
4435																
	80		■	16	17,28,32,(51)	SM (*A-2-4(0)*)	gray, wet, very dense	SILTY SAND		24.1		NP	0	69	31	
4430																
	85		☒	13	*0.39* Pushed	CL SM	gray, moist, firm / gray, wet	LEAN CLAY / SILTY SAND								
4425																
	90		■	18	1,1,3,(3) *0.40*	CL	gray, moist, firm	LEAN CLAY silt lenses 2"-5" apart								
4420																
	95		☒	18	Pushed *0.58*	CL (*A-6(21)*)	gray, moist, stiff	LEAN CLAY	93.3	28.9	40	20	0	1	99	CT UC
4415								FAT CLAY								

DH_LOGV1 08-P9.GPJ US EVAL.GDT 5/28/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE ■ 2,3,2,(6) *0.45* — Blow Count per 6" / $(N_1)_{60}$ Value / Torvane (tsf)

UNDISTURBED SAMPLE ☒ PUSHED *0.45* — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay

DRILL HOLE LOG

BORING NO. 08-P9-B2

PROJECT: I-15 UTAH COUNTY CORRIDOR - P9, I-15 OVER 770 WEST (920 SOUTH)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:251,254 E:593,098
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 35'
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: ▽ 17.8' **AFTER 24 HOURS:** ▼ 10.8'

PROJECT NUMBER: 200801.200
DATE STARTED: 7/31/08
DATE COMPLETED: 8/4/08
GROUND ELEVATION: 4513.4'
LOGGED BY: J. PRICE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Rec. (in)	See Legend	USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
			■	18	0/14",2,(2) *0.40*	CH	dk. gray, moist, firm — FAT CLAY								
4410							GRAVELS (driller's observation)								
	105		☒	18	Pushed *0.64*	CH (*A-7-6(42)*)	dk. gray, moist, stiff	80.6	42.4	61	37	0	1	99	UU
4405															
	110		■	18	0/14",4,(3) *0.52*	CH	dk. gray, moist, stiff — FAT CLAY								
4400															
	115		☒	18	Pushed *0.70*	CH (*A-7-6(34)*)	dk. gray, moist, stiff	93.9	27.3	53	30	0	1	99	CT UU
4395															
	120		■	18	*0.59* 18,15,23,(27) *0.62*	CL SM CL	gray, moist, stiff — LEAN CLAY; gray, wet — SILTY SAND; gray, moist, stiff — LEAN CLAY								
4390															
	125		■	18	11,16,22,(27)	ML (*A-4(2)*)	gray, wet, med. dense — SILT W/SAND		24.8	26	4	0	27	73	
4385															
	130		■	18	4,7,12,(13)	ML (*A-4(7)*)	gray, very moist, firm — SILT plastic		30.3	31	8	0	7	93	
4380															
	135														
4375															
	140														
4370															
	145														
4365															

DH_LOGV1 08-P9.GPJ US EVAL.GDT 5/28/09

LEGEND:

DISTURBED SAMPLE ■ 2,3,2,(6) ← Blow Count per 6"; ← $(N_1)_{60}$ Value; *0.45* ← Torvane (tsf)

UNDISTURBED SAMPLE ☒ PUSHED *0.45* ← Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay

RB&G ENGINEERING, INC.

DRILL HOLE LOG

BORING NO. 08-P9-C1

SHEET 1 OF 1

PROJECT: I-15 UTAH COUNTY CORRIDOR - P9, I-15 OVER 770 WEST (920 SOUTH)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:251,363 E:593,207
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 35'
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: N.M. **AFTER 24 HOURS:** 18.0'

PROJECT NUMBER: 200801.200
DATE STARTED: 11/10/08
DATE COMPLETED: 11/10/08
GROUND ELEVATION: 4515.0'
LOGGED BY: C. SANBORN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
							5.5" ASPHALT								
							ROADBASE (SAND W/SILT & GRAVEL)								
				13	47,41,26,(99+)	SP-SM GM	gray-brown, moist, very dense; brown, moist, very dense								
							Fabric at 1.5'								
							SILTY GRAVEL W/SAND possible cobbles								
4510	5			10	7,15,23,(86)	SM GM	gray-brown, moist; brown, moist, dense								
							SILTY SAND W/GRAVEL								
							SILTY GRAVEL W/SAND possible cobbles								
4505	10			5	42,65,42,(99+)	GP-GM	brown, very moist, very dense								
4500	15			7	69,29,26,(79)	GP-GM	brown, very moist, dense								
							GRAVEL W/SILT & SAND possible cobbles								
4495	20			6	11,19,20,(50)	GP-GM	brown, wet, dense								
4490	25			9	20,13,17,(37)	ML	gray, wet, dense								
							SANDY SILT								
4485	30			14	6,16,24,(46)	ML SM	gray, wet; gray, wet, dense								
							SILTY SAND								
4480	35			16	6,6,6,(13) *0.40*	ML	gray, moist, firm								
							SANDY SILT								
							Note: Predrilled hole to 36.5' for CPT sounding.								
4475	40														
4470	45														

DH_LOGV1 08-P9.GPJ US EVAL.GDT 5/28/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value; *0.45* — Torvane (tsf)

UNDISTURBED SAMPLE — PUSHED; *0.45* — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay

DRILL HOLE LOG

BORING NO. 08-P9-C2

SHEET 1 OF 1

PROJECT: I-15 UTAH COUNTY CORRIDOR - P9, I-15 OVER 770 WEST (920 SOUTH)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:251,282 E:593,063
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 30'
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: N.M. **AFTER 24 HOURS:** 17.0'

PROJECT NUMBER: 200801.200
DATE STARTED: 11/10/08
DATE COMPLETED: 11/10/08
GROUND ELEVATION: 4513.6'
LOGGED BY: C. SANBORN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
							5" ASPHALT								
							ROADBASE (SAND W/SILT & GRAVEL)								
				14	29,33,29,(99+)	SP-SM GM	gray-brown, moist, very dense; brown, moist, very dense								
4510	5						Fabric at 1.6' SILTY GRAVEL W/SAND possible cobbles								
				10	10,9,5,(32)	GM CL-ML	brown, moist; brown, moist, stiff								
							SANDY SILTY CLAY W/GRAVEL								
4505	10			10	16,25,22,(81)	GP-GM	brown, very moist, dense								
4500							GRAVEL W/SILT & SAND possible cobbles								
	15			7	18,8,14,(32)	GP-GM	brown, wet, med. dense								
4495															
	20			10	9,17,23,(52)	GM	brown, wet, dense								
4490	25						SILTY GRAVEL W/SAND possible cobbles								
4485															
	30						Note: Predrilled hole to 30' for CPT sounding.								
4480	35														
4475	40														
4470	45														
4465															

DH_LOGV1 08-P9.GPJ US EVAL.GDT 5/28/09

LEGEND:

DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value; 0.45 — Torvane (tsf)

UNDISTURBED SAMPLE — PUSHED; 0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay

RB&G ENGINEERING, INC.

DRILL HOLE LOG

BORING NO. 09-P9-B3

PROJECT: I-15 UTAH COUNTY CORRIDOR - P9, I-15 OVER 770 WEST (920 SOUTH)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:251,176 E:593,012
DRILLING METHOD: 96-CME-55 / N.W. CASING TO 45'
DRILLER: E. RICHARDSON
DEPTH TO WATER - INITIAL: N.M. **AFTER 24 HOURS:** 15.3' 4/17/09

PROJECT NUMBER: 200801.200
DATE STARTED: 4/15/09
DATE COMPLETED: 4/15/09
GROUND ELEVATION: 4513.2'
LOGGED BY: C. SANBORN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description		Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
				11	60,45,15,(99+)	SP-SM (A-1-a(0))	gray, moist, very dense	SAND W/SILT & GRAVEL (SLAG)		12.4		NP	34	56	10	
4510	5			10	21,28,28,(99+)	GP-GM	brown, moist, very dense	GRAVEL W/SILT & SAND possible cobbles								
4505	10			9	11,13,13,(42)	GP (A-1-a(0))	gray-brown, moist, med. dense			6.2		NP	76	22	2	
4500	15			6	9,12,17,(39)	GP	gray-brown, wet, med. dense	GRAVEL W/SAND possible cobbles								
4495	20															
4490	25			14	6,4,10,(17)	SM (A-2-4(0))	gray-brown, wet, med. dense	SILTY SAND trace organics		27.9		NP	0	75	25	8% -0.005 mm
4485	30			15	8,11,17,(33)	SM	gray-brown, wet, dense									
4480				11	5,6,9,(17)	ML (A-4(0))	gray-brown, wet, med. dense	SANDY SILT		29.8		NP	0	50	50	9% -0.005 mm
	35			16	9,7,9,(18)	SM	gray-brown, wet, med. dense	SILTY SAND sandy silt layers to 5" thick								
4475				14	3,2,3,(5) 0.27	ML (A-4(8))	gray-brown, moist, firm	SILT W/SAND plastic, sand layers 1/4" thick every 1"-4"		35.2	36	9	0	18	82	17% -0.005 mm
	40			16	2,3,3,(6) 0.39	ML	gray-brown, moist, firm									
4470				14	3,4,4,(8)	ML (A-4(0))	gray-brown, wet, loose			33.2		NP	0	13	87	17% -0.005 mm
	45			9	6,6,6,(12)	ML (A-4(0))	gray-brown, wet, med. dense	SILT W/SAND sand lenses & layers to 1/4" thick		28.0		NP	0	29	71	13% -0.005 mm
4465				17	3,3,4,(7)	ML (A-4(0))	gray-brown, wet, loose			31.5		NP	0	28	72	14% -0.005 mm

DH_LOGV1 08-P9.GPJ US EVAL.GDT 5/28/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value; 0.45 — Torvane (tsf)

UNDISTURBED SAMPLE — PUSHED; 0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay

DRILL HOLE LOG

BORING NO. 09-P9-B3

PROJECT: I-15 UTAH COUNTY CORRIDOR - P9, I-15 OVER 770 WEST (920 SOUTH)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:251,176 E:593,012
DRILLING METHOD: 96-CME-55 / N.W. CASING TO 45'
DRILLER: E. RICHARDSON
DEPTH TO WATER - INITIAL: N.M. **AFTER 24 HOURS:** 15.3' 4/17/09

PROJECT NUMBER: 200801.200
DATE STARTED: 4/15/09
DATE COMPLETED: 4/15/09
GROUND ELEVATION: 4513.2'
LOGGED BY: C. SANBORN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
			■	15	2,1,1,(2) *0.27*	ML (*A-4(9)*)	gray-brown, wet, firm SILT plastic, sand lenses		38.7	34	8	0	1	99	29% -0.005 mm
4460															
	55														
4455															
	60														
4450															
	65														
4445															
	70														
4440															
	75														
4435															
	80														
4430															
	85														
4425															
	90														
4420															
	95														
4415															

DH_LOGV1 08-P9.GPJ US EVAL.GDT 5/28/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE ■ 2,3,2,(6) ← Blow Count per 6"; $(N_1)_{60}$ Value
0.45 ← Torvane (tsf)

UNDISTURBED SAMPLE ☒ PUSHED
0.45 ← Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay