

RECORD OF BOREHOLE No 08-46

1 OF 1

METRIC

W.P. 392-98-00 LOCATION 11+725 Lt 11.0m ORIGINATED BY P.R.  
DIST 54 HWY 17 BOREHOLE TYPE Hollow Stem Auger COMPILED BY T.G.  
DATUM Geodetic DATE 2004.12.02 CHECKED BY R.C.

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION SCALE	DYNAMIC CONE PENETRATION RESISTANCE PLOT					UNIT WEIGHT $\gamma$ kN/m <sup>3</sup>	REMARKS & GRAIN SIZE DISTRIBUTION (%)
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES			20	40	60	80	100		
176.3	Ground Surface													
176.0	TOPSOIL - 250mm													
0.3	SAND - trace silt, brown to grey, loose to compact		1	AS			176							0 91 (9)  Water level @ 2.7m on completion. Cave @ 2.7m on completion.
			2	SS	7		175							
			3	SS	9		174							
			4	SS	15		173							
			5	SS	9		172							
			6	SS	8		171							
			7	SS	6		170							
							169							
			8	SS	5		168							
							167							
			9	SS	9		166							
169.1	SAND - Silty, grey, loose													
7.2			10	SS	5									
			11	SS	4									
165.8	End of Borehole @ 10.5m.													
10.5														

$\times^3, \star^3$ : Numbers refer to Sensitivity  
 $\circ$  3% STRAIN AT FAILURE

ENCLOSURE 1

# RECORD OF BOREHOLE No 08-47

1 OF 1

METRIC

W.P. 392-98-00 LOCATION 11+745 Lt 16.0m ORIGINATED BY P.R.  
 DIST 54 HWY 17 BOREHOLE TYPE Hollow Stem Auger COMPILED BY T.G.  
 DATUM Geodetic DATE 2004.12.02 CHECKED BY R.C.

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION SCALE	DYNAMIC CONE PENETRATION RESISTANCE PLOT					PLASTIC LIMIT   NATURAL MOISTURE CONTENT   LIQUID LIMIT			UNIT WEIGHT  $\gamma$  kN/m <sup>3</sup>	REMARKS & GRAIN SIZE DISTRIBUTION (%)
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES			SHEAR STRENGTH kPa					W <sub>p</sub> W                      W <sub>L</sub>				
								○ UNCONFINED                      ✕ FIELD VANE □ QUICK TRIAXIAL                      ★ LAB VANE					WATER CONTENT (%)				
175.2	Ground Surface						20   40   60   80   100										
173.8	TOPSOIL - 250mm		1	AS			20   40   60   80   100									Water level @ 1.4m 2hrs after completion. Cave @ 1.4m 2hrs after completion.	
0.3	SAND - trace silt, brown/grey, loose to compact																
			2	SS	9												
			3	SS	15												
			4	SS	7												
172.2	SAND - Silty, trace gravel, brown/grey, very loose to loose																
3.0			5	SS	3												
			6	SS	8												
			7	SS	7												
			8	SS	8												
			9	SS	4												
166.2	SAND - trace silt, grey/brown, loose																
9.0			10	SS	7												
164.7																	
10.5			11	SS	4												
	End of Borehole @ 10.5m.																

Numbers refer to  
Sensitivity

3% STRAIN AT FAILURE





ENCLOSURE 2

# RECORD OF BOREHOLE No 08-48

1 OF 1

METRIC

W.P. 392-98-00 LOCATION 11+750 Lt 7.0m ORIGINATED BY P.R.  
 DIST 54 HWY 17 BOREHOLE TYPE Hollow Stem Auger COMPILED BY T.G.  
 DATUM Geodetic DATE 2004.12.02 CHECKED BY R.C.

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION SCALE	DYNAMIC CONE PENETRATION RESISTANCE PLOT					PLASTIC LIMIT W <sub>p</sub>	NATURAL MOISTURE CONTENT W	LIQUID LIMIT W <sub>L</sub>	UNIT WEIGHT  γ  kN/m <sup>3</sup>	REMARKS & GRAIN SIZE DISTRIBUTION (%)		
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES			SHEAR STRENGTH kPa											
								○ UNCONFINED	✕ FIELD VANE	□ QUICK TRIAXIAL	★ LAB VANE	WATER CONTENT (%)							
177.0	Ground Surface						20	40	60	80	100						GR SA SI CL		
0.0	FILL - SAND & GRAVEL		1	AS													15 72 (13)		
	----- - SAND - some gravel, some silt, brown to grey, loose to compact		2	SS	11														
			3	SS	11														
175.0	----- - trace organics																		
2.0	SAND - Silty, grey, loose		4	SS	7														
			5	SS	7														
174.0	SILT & SAND - grey, loose to compact		6	SS	22														
3.0																			
172.5																			
4.5	SAND - some silt to Silty, grey, loose		7	SS	9														0 48 (52)  Water level @ 2.9m on completion. Cave @ 2.9m on completion.
				8	SS	4													
				9	SS	6													

×<sup>3</sup>, ★<sup>3</sup>: Numbers refer to Sensitivity ○ 3% STRAIN AT FAILURE



ENCLOSURE 3

# RECORD OF BOREHOLE No 08-49

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METRIC

W.P. 392-98-00 LOCATION 11+775 Lt 15.0m ORIGINATED BY P.R.  
 DIST 54 HWY 17 BOREHOLE TYPE Hollow Stem Auger COMPILED BY T.G.  
 DATUM Geodetic DATE 2004.12.02 CHECKED BY R.C.

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION SCALE	DYNAMIC CONE PENETRATION RESISTANCE PLOT					PLASTIC LIMIT   NATURAL MOISTURE CONTENT   LIQUID LIMIT			UNIT WEIGHT  γ  kN/m <sup>3</sup>	REMARKS & GRAIN SIZE DISTRIBUTION (%)				
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES			SHEAR STRENGTH kPa					W <sub>p</sub> W                      W <sub>L</sub>								
								20   40   60   80   100	○ UNCONFINED                      ✕ FIELD VANE □ QUICK TRIAXIAL                      ★ LAB VANE					WATER CONTENT (%)							
174.9	Ground Surface		1	AS																	
0.0 174.6	TOPSOIL - 300mm		2	SS	5															Water level @ 0.7m 2.5hrs after completion. Cave @ 0.9m 2.5hrs after completion.	
0.3	SAND - Silty, brown, loose to compact		3	SS	13																
			4	SS	5																
			5	SS	5																
			6	SS	5																
			7	SS	9																
				8	SS		4														
				9	SS	4															
			10	SS	7																
			11	SS	7																
164.4	End of Borehole @ 10.5m.																				
10.5																					

RECORD OF BOREHOLE No 08-50

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METRIC

W.P. 392-98-00 LOCATION 11+800 Lt 16.0m ORIGINATED BY P.R.  
DIST 54 HWY 17 BOREHOLE TYPE Hollow Stem Auger COMPILED BY T.G.  
DATUM Geodetic DATE 2004.12.03 CHECKED BY R.C.

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION SCALE	DYNAMIC CONE PENETRATION RESISTANCE PLOT					PLASTIC LIMIT NATURAL MOISTURE CONTENT LIQUID LIMIT			UNIT WEIGHT $\gamma$ kN/m <sup>3</sup>	REMARKS & GRAIN SIZE DISTRIBUTION (%)				
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE			"N" VALUES	SHEAR STRENGTH kPa					WATER CONTENT (%)							
						20	40	60	80	100	20	40	60	80	100	10	20	30		
174.9	Ground Surface																			
170.0	TOPSOIL - 200mm																			
170.8	PEAT - black																			
0.4	SAND - trace to some silt, brown, loose to compact		1	AS																
			2	SS	5															
			3	SS	10															
			4	SS	9															
			5	SS	2															
			6	SS	8															
			7	SS	9															
			8	SS	7															
167.4	End of Borehole @ 7.5m. Auger Refusal.																			

# RECORD OF BOREHOLE No 08-51

1 OF 1

METRIC

W.P. 392-98-00 LOCATION 11+820 Lt 14.0m ORIGINATED BY P.R.  
 DIST 54 HWY 17 BOREHOLE TYPE Hollow Stem Auger COMPILED BY T.G.  
 DATUM Geodetic DATE 2004.12.03 CHECKED BY R.C.

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION SCALE	DYNAMIC CONE PENETRATION RESISTANCE PLOT					PLASTIC LIMIT  w <sub>p</sub>	NATURAL MOISTURE CONTENT  w	LIQUID LIMIT  w <sub>L</sub>	UNIT WEIGHT  γ  kN/m <sup>3</sup>	REMARKS & GRAIN SIZE DISTRIBUTION (%)							
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES			SHEAR STRENGTH kPa									WATER CONTENT (%)				GR	SA	SI	CL
								○ UNCONFINED	✕ FIELD VANE	□ QUICK TRIAXIAL	★ LAB VANE													
175.5	Ground Surface																							
176.0	TOPSOIL - 200mm		1	AS																				
0.2	SAND - trace silt, brown, loose to compact																							
		2	SS	11																				
		3	SS	11																				
		4	SS	12																				
		5	SS	3																				
		6	SS	8																				
		7	SS	10																				
168.8		8	SS	8																				
6.7	End of Borehole @ 6.7m. Auger Refusal.																							

# RECORD OF BOREHOLE No 08-52

1 OF 1

METRIC

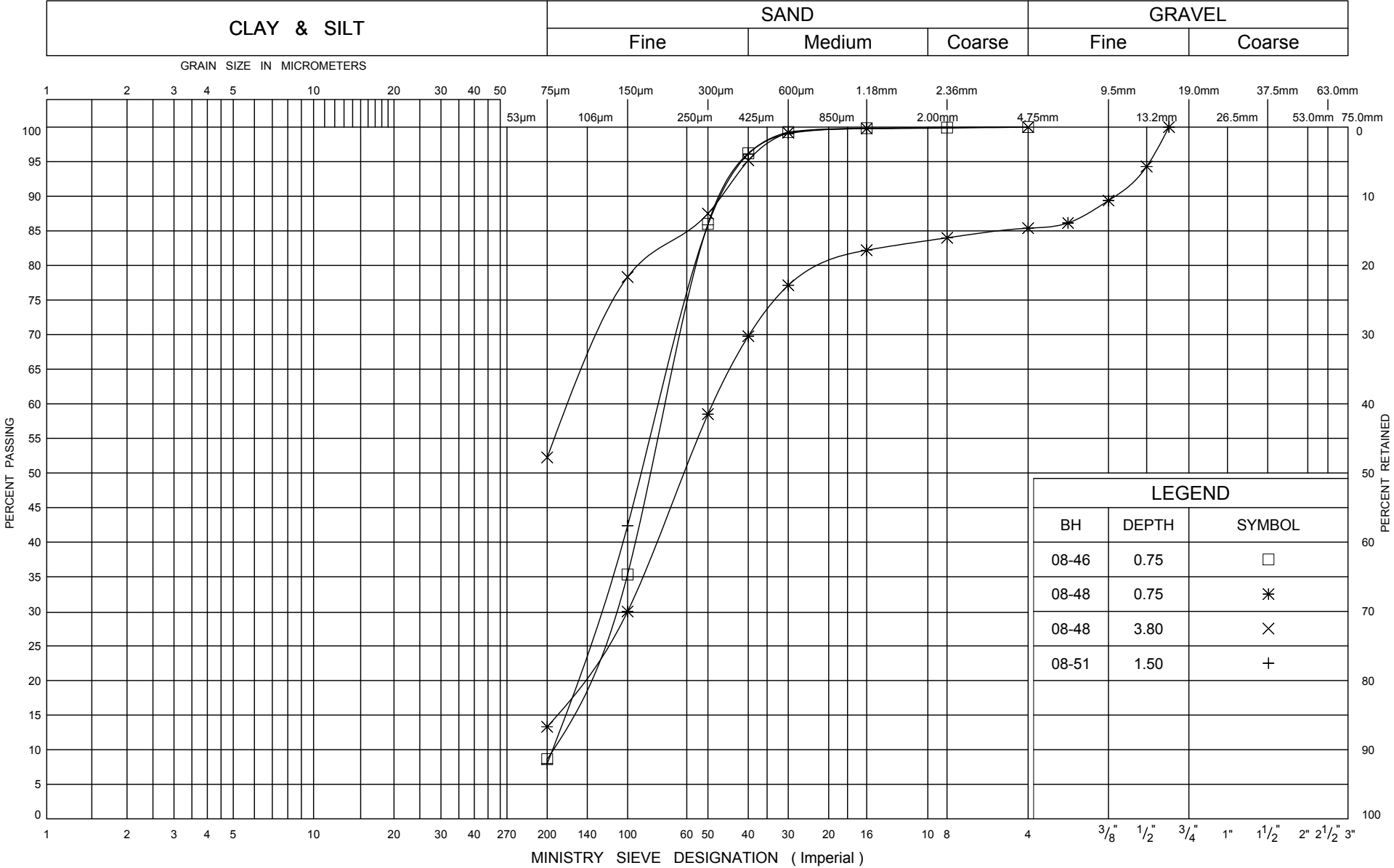
W.P. 392-98-00 LOCATION 11+800 Lt 5.3m ORIGINATED BY P.R.  
 DIST 54 HWY 17 BOREHOLE TYPE Hollow Stem Auger COMPILED BY T.G.  
 DATUM Geodetic DATE 2004.12.08 CHECKED BY R.C.

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION SCALE	DYNAMIC CONE PENETRATION RESISTANCE PLOT				PLASTIC LIMIT NATURAL MOISTURE CONTENT LIQUID LIMIT			UNIT WEIGHT  $\gamma$  kN/m <sup>3</sup>	REMARKS & GRAIN SIZE DISTRIBUTION (%)
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES			SHEAR STRENGTH kPa				WATER CONTENT (%)				
								20	40	60	80	100	W <sub>p</sub>	W		
177.1	Ground Surface															
0.0	FILL - SAND & GRAVEL															
	----- - SAND - trace gravel, trace silt, loose to compact		1	AS												
			2	SS	11											
	----- - trace organics		3	SS	8											
174.9																
2.2	SAND - trace to some silt, brown, loose to compact		4	SS	7											
			5	SS	18											
			6	SS	10											
			7	SS	10											
			8	SS	6											
			9	SS	10											
			10	SS	14											
			11	SS	11											
166.3																
10.8	End of Borehole @ 10.8m.															

$\times^3, \star^3$ : Numbers refer to Sensitivity  $\bigcirc$  3% STRAIN AT FAILURE

ENCLOSURE 7

UNIFIED SOIL CLASSIFICATION SYSTEM



GRAIN SIZE DISTRIBUTION

ENCLOSURE 8

W P 392-98-00



Ministry of  
Transportation