

SOIL LEGEND AND AASHTO CLASSIFICATION										CONSISTENCY OR DENSENESS			
GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)				SILT-CLAY MATERIALS (≥ 35% PASSING #200)				ORGANIC MATERIALS	PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTANCE (N - VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH (q <sub>u</sub> ) (kN / m <sup>2</sup> )
GROUP CLASS.	A-1	A-3	A-2		A-4	A-5	A-6	A-7	A-1,A-2	A-4,A-5			
SYMBOL													
% PASSING	#10 50 MX	#40 38 MX	#10 15 MX	#40 25 MX	#10 35 MX	#40 35 MX	#10 35 MX	#40 35 MX	GRANULAR SOILS	SILT-CLAY SOILS	MUCK, PEAT		
(PASSING #40)	LL				40 MX	41 MN	40 MX	41 MN	SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER				
PI	6 MX	N.P.			10 MX	10 MN	11 MN	11 MN	HIGHLY ORGANIC SOILS				
GROUP INDEX	0	0	0	4 MX	8 MX	12 MX	16 MX	ND MX					
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS. GRAVEL & SAND	FINE SAND	SILTY OR CLAYEY GRAVEL AND SAND		SILTY SOILS	CLAYEY SOILS							
* PI OF A-7-5 < (LL-30); PI OF A-7-6 > (LL-30)													

  

TEXTURE OR GRAIN SIZE						
BOULDER	COBBLE	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
GRAIN (mm)	305	75	2	0.25	0.075	0.005
SIZE (IN)	12	3				

  

SOIL MOISTURE - CORRELATION OF TERMS		
SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
LL LIQUID LIMIT	-SATURATED- (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
PLASTIC RANGE (PI) PL PLASTIC LIMIT	-WET- (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
OM OPTIMUM MOISTURE	-MOIST- (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
SL SHRINKAGE LIMIT	-DRY- (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

  

ROCK DESCRIPTION	
IN THE BROADEST MEANING, HARD ROCK IS CONSIDERED TO BE THAT INDURATED EARTH MATERIAL WHICH CANNOT BE SAMPLED BY CONVENTIONAL SOIL SAMPLING TOOLS OR TECHNIQUES. THE BOUNDARY BETWEEN SOIL AND ROCK IS ARBITRARY. TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF "WEATHERED ROCK". FOR THE PURPOSE OF THIS INVESTIGATION, THESE MATERIALS ARE DIVIDED AS FOLLOWS:	
TERM	SYMBOLS
HARD ROCK (HR)	CORED ROCK
WEATHERED ROCK (WR)	HARD WEATHERED ROCK (HWR)
	SOFT WEATHERED ROCK (SWR)
	INFERRED ROCK LINE

  

TERM	SYMBOLS	DESCRIPTION
HARD ROCK (HR)		MATERIAL THAT CANNOT BE PENETRATED BY POWER AUGERS, EXCEPT IN THIN LEDGES, AND REQUIRES ROCK CORING TOOLS FOR OBTAINING A SAMPLE
WEATHERED ROCK (WR)		MATERIAL THAT CAN BE PENETRATED WITH GREAT DIFFICULTY USING POWER AUGERS AND YIELDS SPT REFUSAL
		MATERIAL THAT CAN BE PENETRATED WITH SOME DIFFICULTY USING POWER AUGERS AND YIELDS SPT VALUES > 100 BLOWS BUT < SPT REFUSAL
		AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH AUGERS COULD NO LONGER PENETRATE. THE HARD ROCK SYMBOL IS SHOWN WHEN ROCK IS CORED AND ONLY TO THAT DEPTH CORED. A DESCRIPTION OF ROCK IS GIVEN, INCLUDING:

  

1 SPT REFUSAL ≤ 2.5 cm OF PENETRATION PER 50 BLOWS IN SPT.	
2 AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH AUGERS COULD NO LONGER PENETRATE. THE HARD ROCK SYMBOL IS SHOWN WHEN ROCK IS CORED AND ONLY TO THAT DEPTH CORED. A DESCRIPTION OF ROCK IS GIVEN, INCLUDING:	
CORE RECOVERY (REC.) - TOTAL LENGTH OF ROCK RECOVERED IN THE CORE BARREL DIVIDED BY THE TOTAL LENGTH OF THE CORE RUN TIMES 100%.	
ROCK QUALITY DESIGNATION (ROD) - TOTAL LENGTH OF SOUND ROCK SEGMENTS RECOVERED THAT ARE LONGER THAN OR EQUAL TO 0.1 m DIVIDED BY THE TOTAL LENGTH OF THE CORE RUN TIMES 100%.	

  

DRILL UNITS:	ADVANCING TOOLS:	HAMMER TYPE:
<input checked="" type="checkbox"/> MOBILE B-57	<input type="checkbox"/> CLAY BITS	<input checked="" type="checkbox"/> AUTOMATIC <input checked="" type="checkbox"/> MANUAL
<input type="checkbox"/> BK-51	<input type="checkbox"/> 152 mm CONTINUOUS FLIGHT AUGER	CORE SIZE:
<input type="checkbox"/> CME-45C	<input checked="" type="checkbox"/> 203 mm HOLLOW AUGERS	<input type="checkbox"/> -B
<input checked="" type="checkbox"/> CME-550	<input checked="" type="checkbox"/> HARD FACED FINGER BITS	<input type="checkbox"/> -N
<input type="checkbox"/> PORTABLE HOIST	<input type="checkbox"/> TUNG-CARBIDE INSERTS	<input type="checkbox"/> -H
<input type="checkbox"/> OTHER _____	<input type="checkbox"/> CASING <input type="checkbox"/> w/ ADVANCER	HAND TOOLS:
<input type="checkbox"/> OTHER _____	<input checked="" type="checkbox"/> TRICONE 75 mm STEEL TEETH	<input type="checkbox"/> POST HOLE DIGGER
	<input type="checkbox"/> TRICONE _____ mm _____	<input type="checkbox"/> HAND AUGER
	<input type="checkbox"/> CORE BIT	<input type="checkbox"/> SOUNDING ROD
	<input type="checkbox"/> OTHER _____	<input type="checkbox"/> VANE SHEAR TEST
		<input type="checkbox"/> OTHER _____

  

GROUND WATER			
<input type="checkbox"/>	WATER LEVEL IN BORE HOLE	<input type="checkbox"/>	IMMEDIATELY AFTER DRILLING (I.A.D.)
<input type="checkbox"/>	STATIC WATER LEVEL (AFTER 24 HRS.)	<input type="checkbox"/>	SOON AFTER DRILLING ( _____ HRS.)
<input type="checkbox"/>	PERCHED WATER (PW), SATURATED ZONE, OR WATER BEARING STRATA	<input type="checkbox"/>	
<input type="checkbox"/>	SPRING OR SEEPAGE	<input type="checkbox"/>	

  

MISCELLANEOUS SYMBOLS AND ABBREVIATIONS			
	ROADWAY EMBANKMENT WITH SOIL DESCRIPTION		SPT TEST BORING
	SOIL SYMBOL		AUGER BORING
	ARTIFICIAL FILL OTHER THAN ROADWAY EMBANKMENTS		CORE BORING
	INFERRED SOIL BOUNDARIES		PIEZOMETER INSTALLATION
	STRIKE AND DIP		SLOPE INDICATOR INSTALLATION
	APPARENT DIP (NORMAL TO _____)		SPT N-VALUE
	ROD SOUNDING		MONITORING WELL

  

ABBREVIATIONS			
ALLUV.	ALLUVIUM	MIC.	MICACEOUS
AR	AUGER REFUSAL	MOT.	MOTTLED
BLDR.	BOULDER	N	BLOWS / 30 CM
CALC.	CALCAREOUS	NS	NO SAMPLE TAKEN
CL.	CLAY	ORG.	ORGANIC
CLY.	CLAYEY	P.P.	POCKET PENETROMETER
COB.	COBBLE	REF.	REFER TO
CSE.	COARSE	RES.	RESIDUAL
DPT	DYNAMIC PENETRATION TEST	S.	SOFT
EST.	ESTIMATED	SAT.	SATURATED
F.	FINE	SD.	SAND
FIAD	FILLED IMMED. AFTER DRILLING	SDY.	SANDY
FOSS.	FOSSILIFEROUS	SED(S).	SEDIMENT(S)
FRAC.	FRACTURED	SL.	SILT, SILTY
FRAG(S).	FRAGMENT(S)	SLI.	SLIGHTLY
GR.	GRAVEL	SPT	STANDARD PENETRATION TEST
GS	SPECIFIC GRAVITY	TS.	TOPSOIL
GW	GROUND WATER	VST	VANE SHEAR TEST
MED.	MEDIUM	V.	VERY
		W/	WITH

  

BENCH MARK: -BY17- PINC 1003 AT STA. 13+02.896

ELEVATION: 88.272 METERS

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