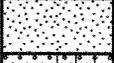
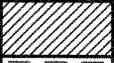
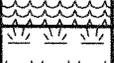


UNIFIED SOIL CLASSIFICATION SYSTEM - ASTM D2488

MAJOR DIVISION		GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH * 5% FINES	 GW	Well-graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES	 GP	Poorly graded GRAVEL
		GRAVEL WITH ≥ 15% FINES	 GW-GM	Well-graded GRAVEL with silt
			 GW-GC	Well-graded GRAVEL with clay
			 GP-GM	Poorly graded GRAVEL with silt
			 GP-GC	Poorly graded GRAVEL with clay
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SAND WITH * 5% FINES	 SW	Well-graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES	 SP	Poorly graded SAND
		SAND WITH ≥ 15% FINES	 SW-SM	Well-graded SAND with silt
			 SW-SC	Well-graded SAND with clay
			 SP-SM	Poorly graded SAND with silt
			 SP-SC	Poorly graded SAND with clay
		 SM	Silty SAND	
		 SC	Clayey SAND	
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50	 ML	Inorganic SILT with low plasticity
		 CL	Lean inorganic CLAY with low plasticity	
		 OL	Organic SILT with low plasticity	
	LIQUID LIMIT GREATER THAN 50	 MH	Elastic inorganic SILT with moderate to high plasticity	
		 CH	Fat inorganic CLAY with moderate to high plasticity	
		 OH	Organic SILT or CLAY with moderate to high plasticity	
HIGHLY ORGANIC SOILS		 PT	PEAT soils with high organic contents	

NOTES:

- 1) Sample descriptions are based on visual field and laboratory observations using classification methods of ASTM D2488. Where laboratory data are available, classifications are in accordance with ASTM D2487.
- 2) Solid lines between soil descriptions indicate change in interpreted geologic unit. Dashed lines indicate stratigraphic change within the unit.
- 3) Fines are material passing the U.S. Std. #200 Sieve.