

Aptim Environmental & Infrastructure, LLC

6401 Congress Avenue, Suite 140 Boca Raton, Florida 33487 Phone # 1-561-391-8102

Legend for Geotechnical Data

Grain Size Scale for Sediments

Unified Soil Classification		APTIM Standard Sieve Stack						
System (USCS) (ASTM D2487/2488)		Sieve Number	Size (phi)	Size (mm)				
	Coarse Gravel	3/4	-4.25	19.03				
	Fine Gravel	5/8	-4.00	16.00				
Gravel		7/16	-3.50	11.20				
Glavei		5/16	-3.00	8.00				
		3 ½	-2.50	5.60				
		4	-2.25	4.75				
	Coarse Sand	5	-2.00	4.00				
		7	-1.50	2.80				
		10	-1.00	2.00				
	Medium Sand	14	-0.50	1.40				
		18	0.00	1.00				
		25	0.50	0.71				
Sand		35	1.00	0.50				
	Fine Sand	45	1.50	0.36				
		60	2.00	0.25				
		80	2.50	0.18				
		120	3.00	0.13				
		170	3.50	0.09				
		200	3.75	0.08				
Fines	Silt/Clay	230	4.00	0.06				

Proportional Definition of Descriptive Terms

<u>Descriptive Term</u>	Range of Proportions
Sandy, gravelly, etc.	35 % to 50 %
Some	20 % to 35 %
Little	10 % to 20 %
Trace	1 % to 10 %

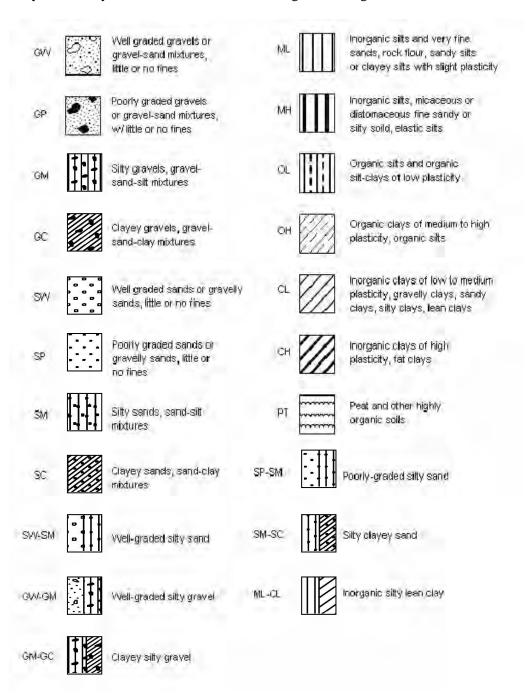
Consistency of Cohesive Soils

Description	Consistency Index	Approximate Undrained Shear Strength (kPa)	Field Identification
Hard		Over 300	Indented with difficulty by thumbnail, brittle.
Very Stiff	>1	150-300	Readily indented by thumbnail, still very tough.
Stiff	0.75-1	75-150	Readily indented by thumb but penetrated only with difficulty. Cannot be moulded in the fingers.
Firm	0.5-0.75	40-75	Can be penetrated several centimeters by thumb with moderate effort and moulded in fingers by strong pressure.
Soft	< 0.5	20-40	Easily penetrated several centimeters by thumb, easily moulded.
Very Soft		Less than 20	Easily penetrated several centimeters by fist, exudes between fingers when squeezed in fist.

Source: Engineering Properties of Soils and Rocks, Fourth Edition by Fred G. Bell

USCS Classifications

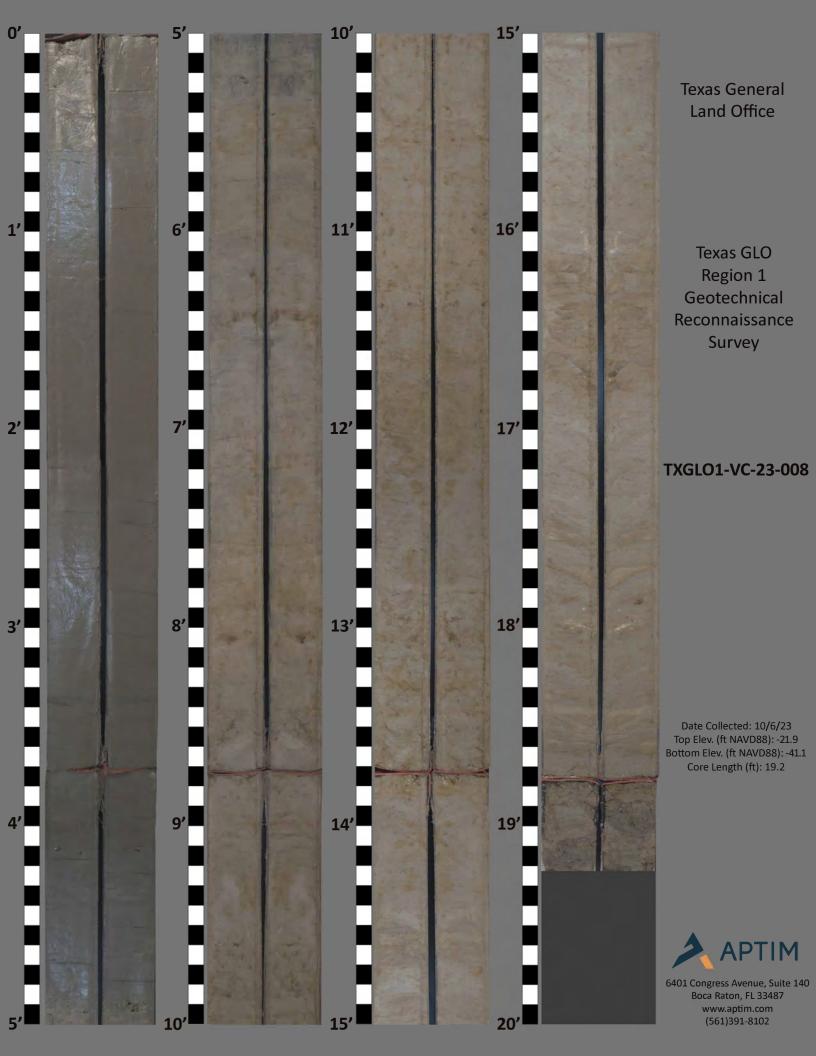
Refers to the Army Corps of Engineers Unified Soils Classification System. Class types are defined primarily by grain size, sorting and percent of material passing the #200 sieve. Classification of materials on the core logs based on visual field examinations are identified on the core logs under the Classification of Materials Description. Classifications based on laboratory sieve analyses are identified on the core logs in the Legend and under Remarks.



Note: Information is after ACOE Atlantic Division Manual # 1110-1-1 titled Engineering and Design Geotechnical Manual for Surface and Subsurface Investigations

Boring Designation TXGLO1-VC-23-008

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Mini Vane Shear Test Results

CORFIR	SAMPLE DEPTH	TORVANE	TORVANE	TORVANE					
CORE ID	(ft)	(kg/cm²)	(tsf)	(kpa)	DESCRIPTION ¹				
TXGLO1-VC-23-001	No Torvane Conducted								
TVCI 01 VC 22 002	3.0	1.5	0.15	147.10	Stiff				
TXGLO1-VC-23-002	6.0	1.0	0.10	98.07	Stiff				
	10.3	4.5	0.46	441.30	Hard				
TXGLO1-VC-23-003	13.4	5.5	0.56	539.37	Hard				
	16.3	2.5	0.26	245.17	Very Stiff				
	9.1	3.0	0.31	294.20	Very Stiff				
TXGLO1-VC-23-004	11.9	5.0	0.51	490.33	Hard				
	14.1	6.0	0.61	588.40	Hard				
	4.8	6.0	0.61	588.40	Hard				
TVCI 01 VC 22 00F	7.5	5.0	0.51	490.33	Hard				
TXGLO1-VC-23-005	13.5	5.5	0.56	539.37	Hard				
	16.5	3.5	0.36	343.23	Hard				
TXGLO1-VC-23-006		No Tor	vane Conducte	ed	•				
TVCI 01 VC 22 007	9.0	5.5	0.56	539.37	Hard				
TXGLO1-VC-23-007	15.1	1.5	0.15	147.10	Stiff				
	7.1	5.5	0.56	539.37	Hard				
TVCI 01 VC 22 000	8.1	9.0	0.92	882.60	Hard				
TXGLO1-VC-23-008	10.2	8.0	0.82	784.53	Hard				
	16.0	8.0	0.82	784.53	Hard				
TXGLO1-VC-23-009		No Tor	vane Conducte	ed					
	8.0	7.0	0.72	686.47	Hard				
TXGLO1-VC-23-010	10.0	8.5	0.87	833.57	Hard				
	12.5	9.5	0.97	931.63	Hard				
TVCI 01 VC 22 011	4.4	5.5	0.56	539.37	Hard				
TXGLO1-VC-23-011	16.0	6.5	0.67	637.43	Hard				
TXGLO1-VC-23-012	0.8	0.0	0.00	0.00	Very Soft				
1XGLU1-VC-23-U12	2.6	1.0	0.10	98.07	Stiff				
TXGLO1-VC-23-013	3.0	2.5	0.26	245.17	Very Stiff				
	6.4	3.0	0.31	294.20	Very Stiff				
	13.7	8.0	0.82	784.53	Hard				
	0.8	0.0	0.00	0.00	Very Soft				
	1.9	2.0	0.20	196.13	Very Stiff				
TXGLO1-VC-23-014	5.0	2.5	0.26	245.17	Very Stiff				
	10.0	2.8	0.28	269.68	Very Stiff				
	18.0	3.0	0.31	294.20	Very Stiff				
TXGLO1-VC-23-015	No Torvane Conducted								
	2.4	7.0	0.72	686.47	Hard				
TXGLO1-VC-23-016	5.5	7.5	0.77	735.50	Hard				