

LOG OF BORING B-1

Surfside Pedestrian Bridge and Shore Stabilization
Surfside, Texas

TYPE OF BORING: Wet Rotary

PSI Project No.: 286-373

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	SAMPLES	COORDINATE (X) OR EASTING: 100 COORDINATE (Y) OR NORTHING: 100 APPROXIMATE SURFACE ELEVATION: 7 feet LATITUDE: LONGITUDE:	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/square foot) ○ HP ● UC △ TV ▲ UU 0.0 0.5 1.0 1.5 2.0 2.5	UNIT WEIGHT (pcf)
				SOIL DESCRIPTION								
				FILL: SILTY SAND LOOSE, LIGHT BROWN	5					14		
				FILL: SANDY LEAN CLAY FIRM, BROWN	7					17		
5					4	67	38	16	22	23		
										24	○	
10		SM		SILTY SAND (SM) DENSE, GRAY	30					21		
15				- with seashells, 13 to 15 feet	31	4				23		
20		CH		FAT CLAY (CH) FIRM TO VERY STIFF, GRAY AND YELLOWISH BROWN		89	51	21	30	32	○ ▲	107
25				- with silt seams, 23 to 30 feet						22	○	
30										21	○	
35				- yellowish brown, 33 to 40 feet - with calcareous nodules, 33 to 40 feet		98	56	25	31	27	○ ▲	99
40										26	○	
45				- gray and light reddish brown, 43 to 45 feet						27	●	101
50		CL		LEAN CLAY (CL) STIFF, LIGHT REDDISH BROWN AND GRAY - with silt seams						19	○	

DEPTH OF BORING: 60 FEET

INITIAL GROUND WATER: 8 FEET

DATE DRILLED: 10/25/10

FINAL GROUND WATER: 5 FEET, 24 HOURS AFTER DRILLING

NOTES:

BORING LOG - HOUSTON - PSHOUSTON.GDT - 12/21/10 10:21 - P:\286 REPORTS\286-373 SURF SIDE FOOTBRIDGE\286-373 BORING LOGS.GPJ

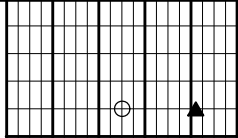
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											○ HP ● UC △ TV ▲ UU						
				LL							PL	PI	0.0	0.5	1.0	1.5	
		CH	 	FAT CLAY (CH) VERY STIFF TO HARD, GRAY AND BROWN		99	79	36	43	38							92
55										28							
60																	
65																	
70																	
75																	
80																	
85																	
90																	
95																	
100																	

DEPTH OF BORING: 60 FEET

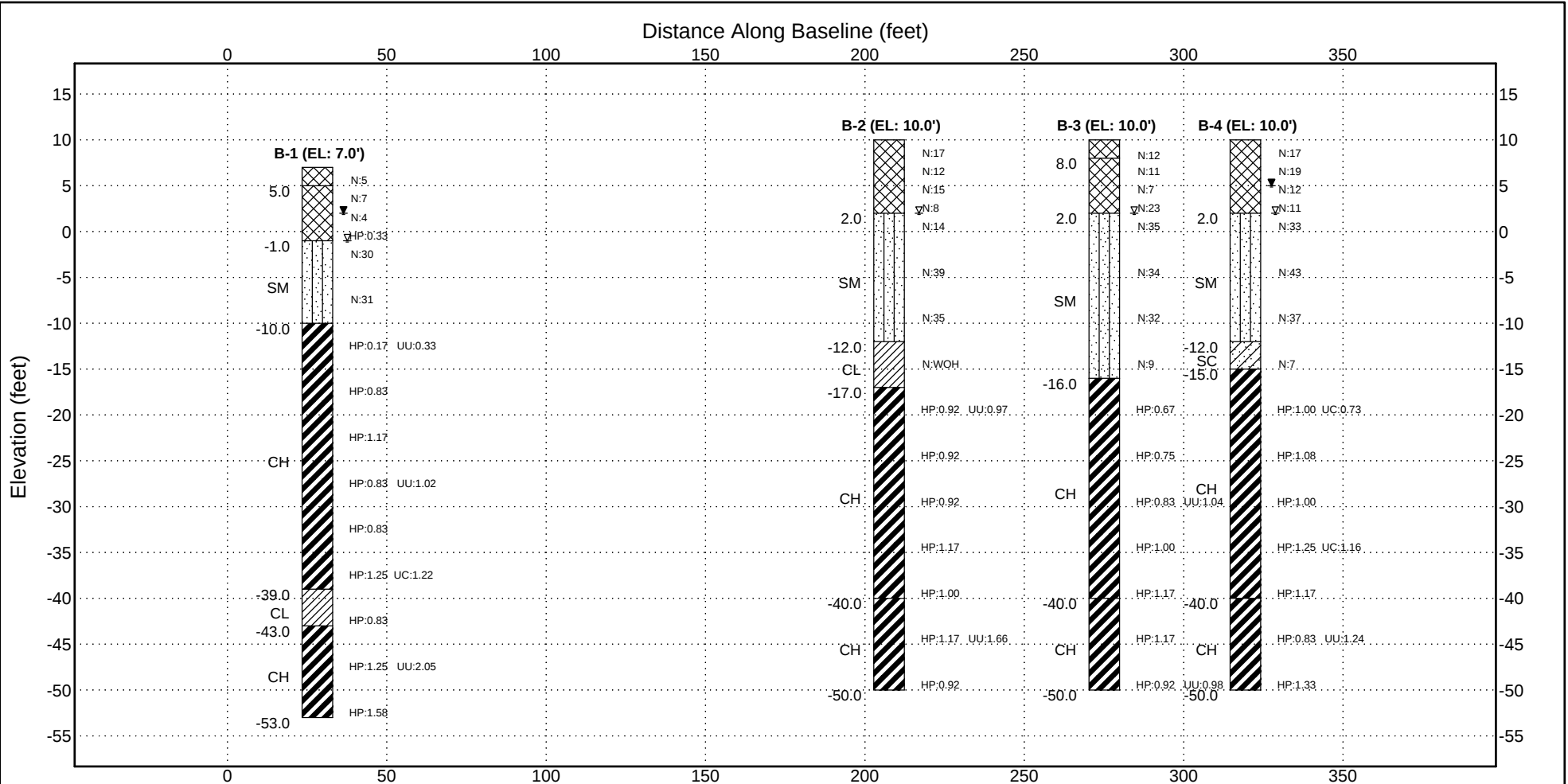
INITIAL GROUND WATER: 8 FEET

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NOTES:

FENCE, PSI - PSIHOUSTON.GDT - 12/21/10 10:25 - P:\286 REPORTS\286-373 SURSIDE FOOTBRIDGE\286-373 BORING LOGS.GPJ



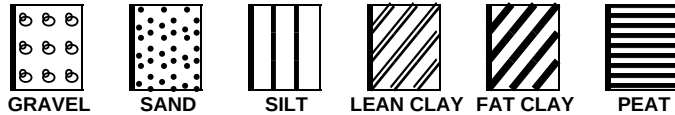
Stratifications shown are generalized and variations could occur in the field. The Hand Penetrometer (HP), Unconfined Compression (UC) values are shear strengths in tsf. N is blows per foot.

Fill Material Silty Sand (SM) Fat Clay (CH) Lean Clay (CL) Clayey Sand (SC)

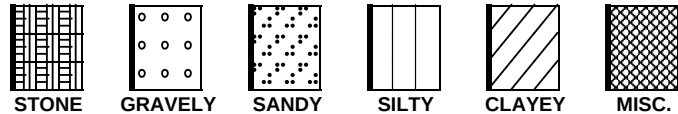
STRATUM	START	END	STRATUM DESCRIPTION	GENERALIZED SUBSURFACE PROFILE		
				Surfside Pedestrian Bridge and Shore Stabilization Surfside, Texas		
				PROJECT No. 286-373	DATE Dec 2010	PLATE 8

KEY TO TERMS AND SYMBOLS USED ON LOGS

SOIL TYPE

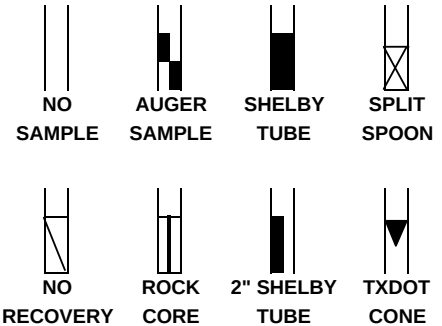


MODIFIERS

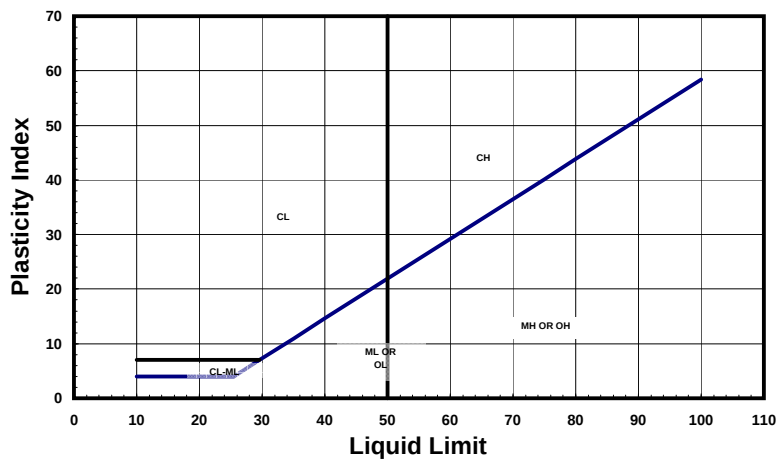


(SEE TEXT ON LOG)

SAMPLER TYPE



UNIFIED SOIL CLASSIFICATION SYSTEM - ASTM D 2487



CONSISTENCY OF COHESIVE SOILS

CONSISTENCY	SHEAR STRENGTH IN TONS/FT ²
VERY SOFT	0 TO 0.125
SOFT	0.125 TO 0.25
FIRM	0.25 TO 0.5
STIFF	0.5 TO 1.0
VERY STIFF	1.0 TO 2.0
HARD	> 2.0 OR 2.0+

RELATIVE DENSITY - GRANULAR SOILS

CONSISTENCY	N-VALUE (BLOWS/FOOT)
VERY LOOSE	0 TO 4
LOOSE	5 TO 9
MEDIUM DENSE	10 TO 29
DENSE	30 TO 50
VERY DENSE	> 50 OR 50+

DEGREE OF PLASTICITY OF COHESIVE SOILS

DEGREE OF PLASTICITY	PLASTICITY INDEX	SWELL POTENTIAL
NONE OR SLIGHT	0 TO 4	NONE
LOW	4 TO 20	LOW
MEDIUM	20 TO 30	MEDIUM
HIGH	30 TO 40	HIGH
VERY HIGH	> 40	VERY HIGH

MOISTURE CONDITION COHESIVE SOILS

DESCRIPTION	CONDITION
Absence of moisture, dusty, dry to touch	DRY
Damp but no visible water	MOIST
Visible free water	WET

CONSISTENCY OF COHESIVE SOILS AFTER TERZAGHI (1948)

CONSISTENCY	N-VALUE (BLOWS/FOOT)
VERY SOFT	< 2
SOFT	2 TO 4
FIRM	4 TO 8
STIFF	8 TO 15
VERY STIFF	15 TO 30
HARD	> 30

ABBREVIATIONS

HP - HAND PENETROMETER UC - UNCONFINED COMPRESSION TEST
TV - TORVANE UU - UNCONSOLIDATED UNDRAINED TRIAXIAL
MV - MINIATURE VANE CU - CONSOLIDATED UNDRAINED

NOTE: PLOT INDICATES SHEAR STRENGTH AS OBTAINED BY ABOVE TESTS

▽ FINAL GROUND WATER LEVEL
▽ INITIAL GROUND WATER LEVEL

CLASSIFICATION OF GRANULAR SOILS

U.S. STANDARD SIEVE SIZE(S)							
6"	3"	3/4"	4	10	40	200	
BOULDERS	COBBLES	GRAVEL		SAND			
		COARSE	FINE	COARSE	MEDIUM	FINE	
152	76.2	19.1	4.76	2.0	0.42	0.074	
							0.002
							CLAY



Geotechnical Consulting Services
Houston, Texas.