

LOG OF BORING B-4

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: 400 COORDINATE (Y) OR NORTHING: 50 APPROXIMATE SURFACE ELEVATION: 10 feet LATITUDE: LONGITUDE:	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/square foot)					UNIT WEIGHT (pcf)	
											SOIL DESCRIPTION						○ HP
							LL	PL	PI		0.0	0.5	1.0	1.5	2.0	2.5	
0 - 5				FILL: CLAYEY SAND MEDIUM DENSE, GRAYISH BROWN - with organic material, 0 to 2 feet - with seashells, 2 to 4 feet	17					12							
5 - 11					19	33	31	14	17	12							
11 - 12					12					17							
12 - 18					11					18							
18 - 24		SM		SILTY SAND (SM) DENSE, GRAY - with seashells, 13 to 20 feet	33					24							
24 - 25					43	5				23							
25 - 28		SC		CLAYEY SAND (SC) LOOSE, BROWNISH GRAY - with seashells	37					21							
28 - 30		CH		FAT CLAY (CH) STIFF TO VERY STIFF, GRAY AND BROWN - with calcareous nodules, 28 to 30 feet	7	18				33							101
30 - 35										28							
35 - 40										22							
40 - 43						98	68	24	44	26							
43 - 45				- with calcareous nodules, 43 to 45 feet						28							97
45 - 50										28							
50 - 55										25							

DEPTH OF BORING: 60 FEET

INITIAL GROUND WATER: 8 FEET

DATE DRILLED: 10/22/10

FINAL GROUND WATER: 5 FEET, 24 HOURS AFTER DRILLING

NOTES:

BORING LOG - HOUSTON - PSHOUSTON.GDT - 12/21/10 10:21 - P:\286 REPORTS\286 2010 REPORTS\286-373 SURF SIDE FOOTBRIDGE\286-373 BORING LOGS.GPJ

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											○ HP ● UC △ TV ▲ UU 0.0 0.5 1.0 1.5 2.0 2.5							
55		CH	■	FAT CLAY (CH) STIFF TO VERY STIFF, GRAY AND REDDISH BROWN		94	53	21	32	23	○	▲						105
60			■								25	○						
65																		
70																		
75																		
80																		
85																		
90																		
95																		
100																		

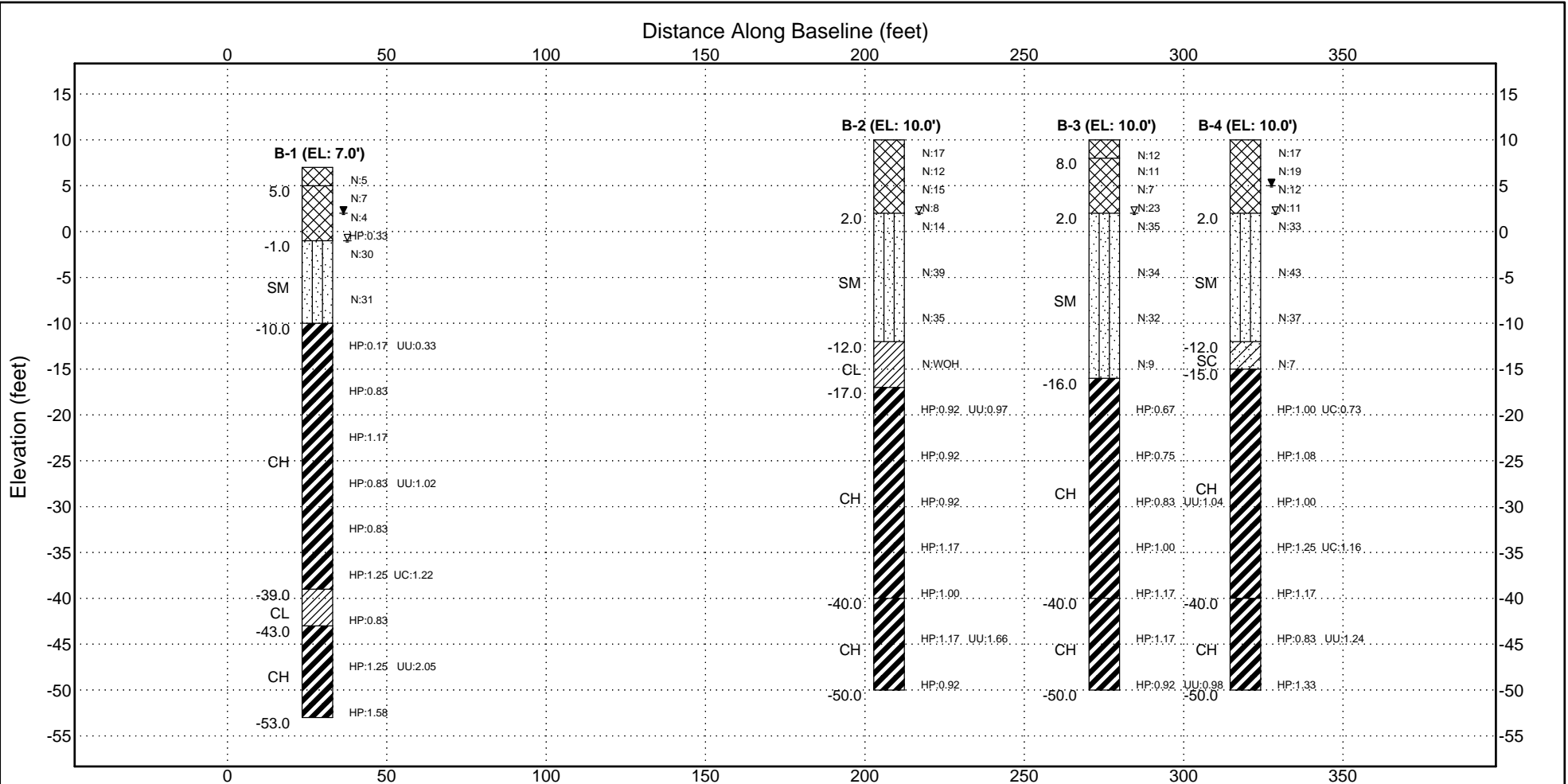
BORING LOG - HOUSTON - PSHOUSTON.GDT - 12/21/10 10:21 - P:\286 REPORTS\286 2010 REPORTS\286-373 SURFSIDE FOOTBRIDGE\286-373 BORING LOGS.GPJ

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DATE DRILLED: 10/22/10

INITIAL GROUND WATER: 8 FEET
FINAL GROUND WATER: 5 FEET, 24 HOURS AFTER DRILLING

NOTES:

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



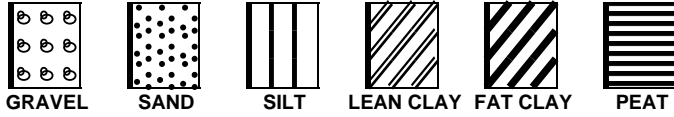
Stratifications shown are generalized and variations could occur in the field. The Hand Penetrometer (HP), Unconfined Compression (UC) values are shear strengths in tsf. N is blows per foot.

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

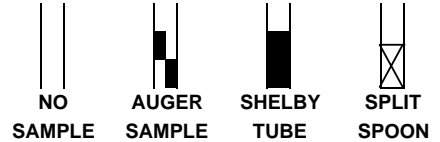
STRATUM	START	END	STRATUM DESCRIPTION	GENERALIZED SUBSURFACE PROFILE		
				Surfside Pedestrian Bridge and Shore Stabilization Surfside, Texas		
				PROJECT No.	DATE	PLATE
				286-373	Dec 2010	8

KEY TO TERMS AND SYMBOLS USED ON LOGS

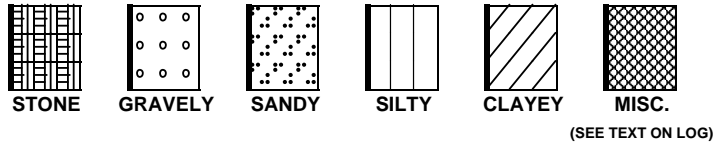
SOIL TYPE



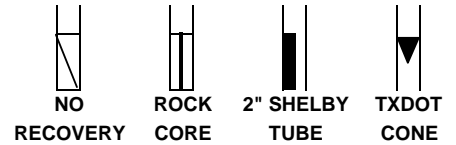
SAMPLER TYPE



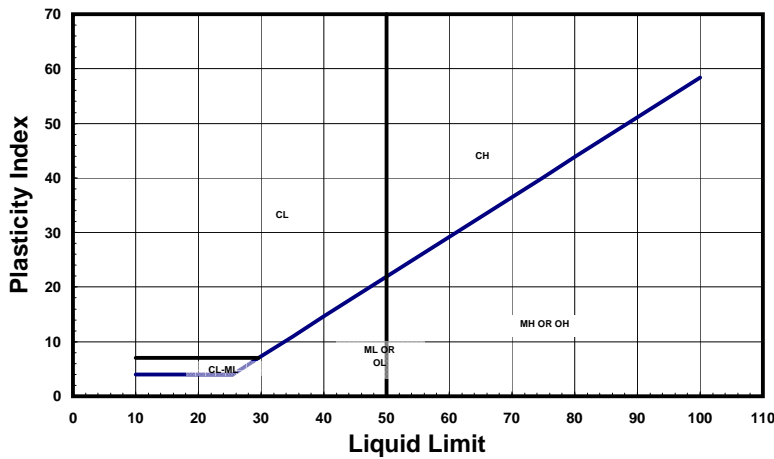
MODIFIERS



(SEE TEXT ON LOG)



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)		GRAVEL				SAND			SILT OR CLAY	CLAY
6"	3"	3/4"	4	10	40	200	COARSE	MEDIUM		
BOULDERS	COBBLES									
152	76.2	19.1	4.76	2.0	0.42	0.074				0.002
GRAIN SIZE IN MM										

