

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	BORING NO. <u>92-118</u> DATE: BEGIN <u>1-22-93</u> PAGE <u>1 11</u> JOB NO. <u>146622</u> COMPLETE <u>1-22-93</u> Thin Walled Tube PROJECT <u>Braxos Island Harbor Project</u> ☒ 3" ☐ 6" LOCATION <u>along Brownsville ship channel, Brownsville, Tx</u> ELEVATION OF HOLE _____ MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Ardeco K4X4</u> GROUNDWATER: DEPTH <u>1.5</u> ft., ELEV. _____ ft., at end of Drilling WEATHER <u>Sunny & Hot</u> DRILLER <u>Scott. Cargueta</u> LOGGER <u>Iray Mostanand</u>				
			COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0	1	0.00	Gray	clay	very soft		-w/ 2" of sand on top
	2	0.00	Gray	clay	Very Soft		-encounter water @ 1.5'
5	3	0.00	"	"	" "		
	4	0.00	"	"	" "		
	5	0.00	"	"	" "		
10							Bottom of 92-118 @ 10'
15							
20							
25							
30							
35							

Top of boring
El. 3.90

$$\begin{aligned} X &= 2,390,308.985 \\ \sigma &= 115,383.147 \end{aligned}$$

Contract No. DACW64-92-D-0005 Delivery order No. 0009

Boring No. 92-118

[illegible]

S #: Sample Number, P P: Pocket Penetrometer Reading, U S C: Unified Soil Classification, M c: Moisture Content
q u: Unconfined Compressive Strength, W O H: Weight of hammer, W O P: Weight of pipe

Geotest Engineering, Inc.

JOB NO. 14G627

DATE 3/30/93

PROJECT Brazos Island Harbor Project
Brownsville Shipchannel

AREA Brownsville, Texas

BORING NO. 92-118

SAMPLE NO. 3

DEPTH 4-6 ft

SPECIMEN NO. 1

CLASSIFICATION

Gray, Clay, Very soft w/sand pockets

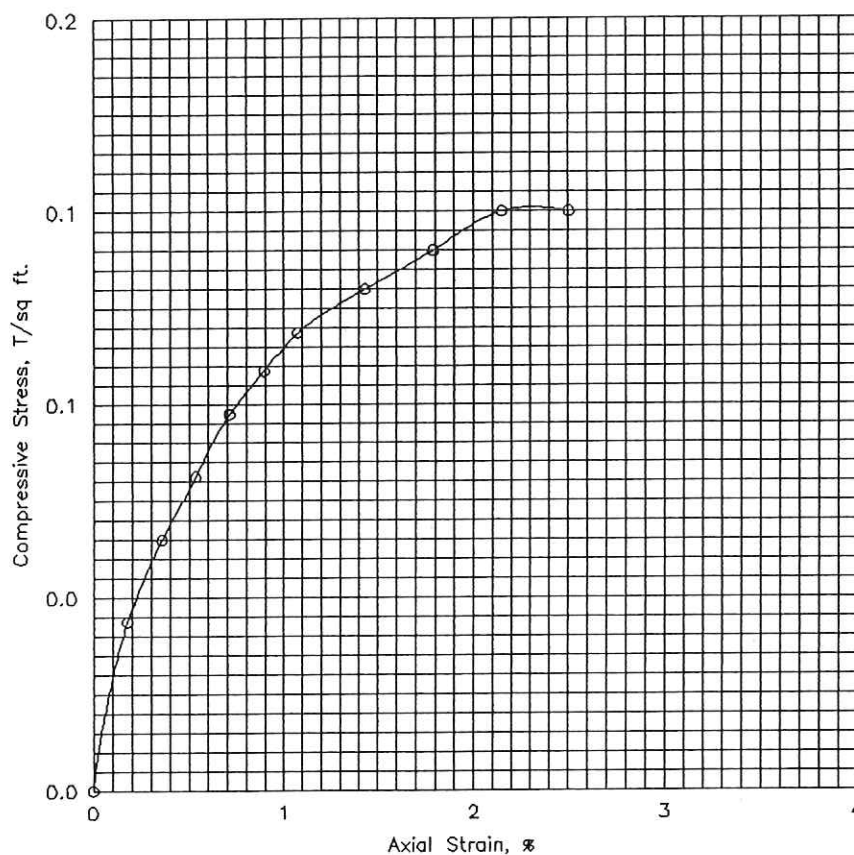
Tare No.	KL-8	Height	5.595 in.
Tare plus Wet Specimen	508.22 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	380.68 gm	Initial Area	6.290 sq in.
Water Weight	127.54 gm	Volume	35.194 cu in.
Tare Weight	42.85 gm	Volume of Solids	cu in.
Wet Specimen	1046.77 gm	Void Ratio	
Dry Specimen	759.89 gm	Saturation	%
Water Content	37.75 %	Dry Density	82.3 lb/cu ft
Specific Gravity of Solids			
LL = 51	PL = 22	PI = 29	

Proving Ring No. 10170

Proving Ring Constant, K = .766 lbs/div.

Elapsed Time min.	Dial Reading 0.001"	Cumulative Change in.	Proving Ring Dial Reading	Axial Load lb	Axial Strain	Area Corr. sq in.	Compr. Stress tsf
.0	0.	.000	.0	.0	.000	6.29	.000
.2	10.	.010	4.0	3.1	.002	6.30	.035
.4	20.	.020	6.0	4.6	.004	6.31	.052
.5	30.	.030	7.5	5.7	.005	6.32	.065
.7	40.	.040	9.0	6.9	.007	6.34	.078
1.9	50.	.050	10.0	7.7	.009	6.35	.087
1.0	60.	.060	11.0	8.4	.011	6.36	.095
1.4	80.	.080	12.0	9.2	.014	6.38	.104
1.6	100.	.100	13.0	10.0	.018	6.40	.112
2.0	120.	.120	14.0	10.7	.021	6.43	.120
2.3	140.	.140	14.0	10.7	.025	6.45	.120

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	37.8 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	82.3		
Time to failure, min		t_f	1.98		
Unconfined compressive strength, T/sq ft		q_u	.12		
Undrained shear strength, T/sq ft		S_u	.06		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Gray, Clay, Very soft w/sand pockets					
LL	51	PL	22	PI	29
Remarks		Project Brazos Island Harbor Project Brownsville Shipchannel Area Brownsville, Texas Boring No. 92-118 Sample No. 3 Depth 4-6 ft Date 3/30/93 UNCONFINED COMPRESSION TEST REPORT			

JOB NO. 14G627

DATE 3/30/93

PROJECT Brazos Island Harbor Project
Brownsville Shipchannel

AREA Brownsville, Texas

BORING NO. 92-118

SAMPLE NO. 5

DEPTH 8-10 ft

SPECIMEN NO. 1

CLASSIFICATION

Gray, Clay, Very soft w/sand pockets

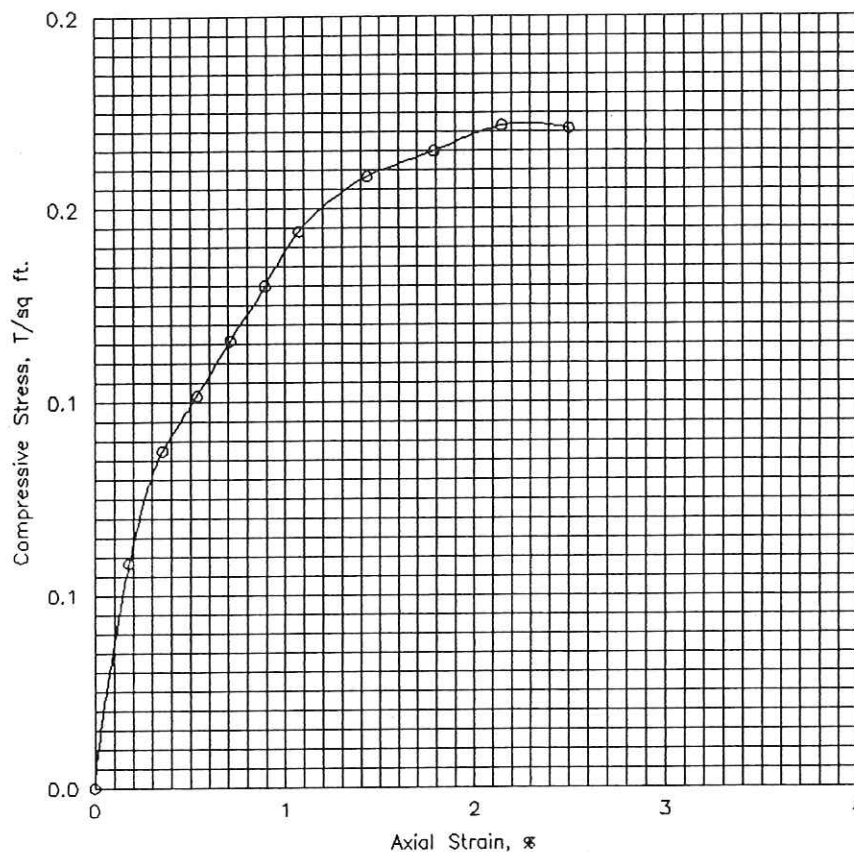
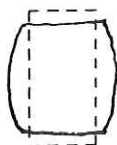
Tare No.	KL-9	Height	5.595 in.
Tare plus Wet Specimen	742.65 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	580.22 gm	Initial Area	6.290 sq in.
Water Weight	162.43 gm	Volume	35.194 cu in.
Tare Weight	42.91 gm	Volume of Solids	cu in.
Wet Specimen	1089.02 gm	Void Ratio	
Dry Specimen	836.23 gm	Saturation	%
Water Content	30.23 %	Dry Density	90.5 lb/cu ft
Specific Gravity of Solids			
LL = 54	PL = 24	PI = 30	

Proving Ring No. 10170

Proving Ring Constant, K = .766 lbs/div.

Elapsed Time min.	Dial Reading 0.001"	Cumulative Change in.	Proving Ring Dial Reading	Axial Load lb	Axial Strain	Area Corr. sq in.	Compr. Stress tsf
.0	0.	.000	.0	.0	.000	6.29	.000
.2	10.	.010	8.0	6.1	.002	6.30	.070
.4	20.	.020	12.0	9.2	.004	6.31	.105
.5	30.	.030	14.0	10.7	.005	6.32	.122
.7	40.	.040	16.0	12.3	.007	6.34	.139
.9	50.	.050	18.0	13.8	.009	6.35	.156
1.0	60.	.060	20.0	15.3	.011	6.36	.173
1.4	80.	.080	22.0	16.9	.014	6.38	.190
1.7	100.	.100	23.0	17.6	.018	6.40	.198
2.0	120.	.120	24.0	18.4	.021	6.43	.206
2.3	140.	.140	24.0	18.4	.025	6.45	.205

Failure Sketches



Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	30.2 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	90.5		
Time to failure, min		t_r	1.97		
Unconfined compressive strength, $T/sq\ ft$		q_u	.21		
Undrained shear strength, $T/sq\ ft$		S_u	.10		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Gray, Clay, Very soft w/sand pockets					
LL	54	PL	24	PI	30
				G_s	
Remarks		Project Brazos Island Harbor Project			
		Brownsville Shipchannel			
		Area Brownsville, Texas			
		Boring No. 92-118		Sample No. 5	
		Depth 8-10 ft		Date 3/30/93	
		UNCONFINED COMPRESSION TEST REPORT			