

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	BORING NO. <u>92-121</u> DATE: BEGIN <u>1-22-93</u> PAGE <u>1 / 1</u> JOB NO. <u>146622</u> COMPLETE <u>1-22-93</u> Thin Walled Tube PROJECT <u>Brazos Island Harbor Project</u> ☒ 3" ☐ 6" LOCATION <u>along Brownsville Shipchannel, Brownsville Tx</u> ELEVATION OF HOLE _____ MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Ardeco K4x4</u> GROUNDWATER: DEPTH <u>3 1/2</u> ft., ELEV. _____ ft., at end of Drilling WEATHER <u>Sunny & Hot</u> DRILLER <u>Scott Grezurek</u> LOGGER <u>Troy Mostamand</u>						
					COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS		
0					1	0.25	Gray	clay	Soft		-encounter water @ 3 1/2'
					2	0.00	Gray	clay	Very Soft		
5					3	0.00	Gray	clay	Very Soft		
					4	0.00	Gray	clay	Very Soft		
					5	0.00	Gray	clay	Very Soft		
10											Bottom of 92-121 @ 10'
15											
20											
25											
30											
35											

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 92-121

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 4/1/93

PROJECT Brazos Island Harbor Project
Brownsville Shipchannel

AREA Brownsville, Texas

BORING NO. 92-121

SAMPLE NO. 2

DEPTH 2-4 ft

SPECIMEN NO. 1

CLASSIFICATION

Yellowish Brown, Clay, Very soft, w/sand & silt seams

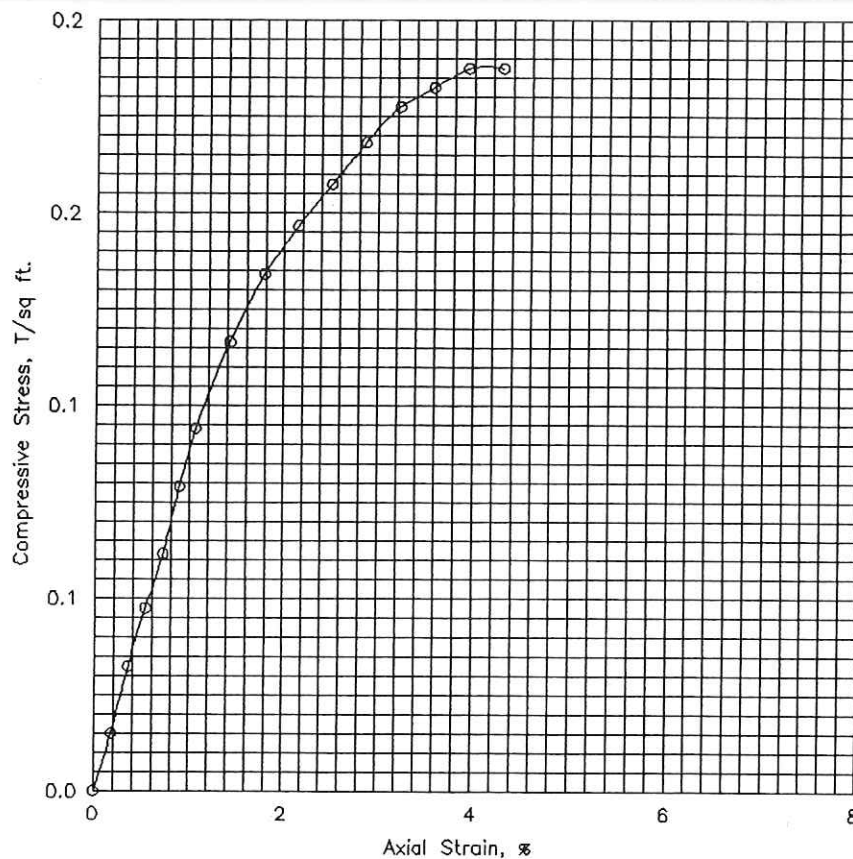
Tare No.	P-8	Height	5.595 in.
Tare plus Wet Specimen	447.62 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	345.34 gm	Initial Area	6.290 sq in.
Water Weight	102.28 gm	Volume	35.194 cu in.
Tare Weight	42.60 gm	Volume of Solids	cu in.
Wet Specimen	1035.14 gm	Void Ratio	
Dry Specimen	773.74 gm	Saturation	%
Water Content	33.78 %	Dry Density	83.8 lb/cu ft
Specific Gravity of Solids			
LL = 50	PL = 21	PI = 29	

Proving Ring No. 10170

Proving Ring Constant, K = .311 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	5.0	1.6	.002	6.30	.018
.3	20.	.020	11.0	3.4	.004	6.31	.039
.5	30.	.030	16.0	5.0	.005	6.32	.057
.7	40.	.040	21.0	6.5	.007	6.34	.074
.9	50.	.050	27.0	8.4	.009	6.35	.095
1.0	60.	.060	32.0	9.9	.011	6.36	.113
1.4	80.	.080	40.0	12.4	.014	6.38	.140
1.7	100.	.100	46.0	14.3	.018	6.40	.161
2.0	120.	.120	50.5	15.7	.021	6.43	.176
2.4	140.	.140	54.5	16.9	.025	6.45	.189
2.7	160.	.160	58.5	18.2	.029	6.48	.202
3.0	180.	.180	62.0	19.3	.032	6.50	.213
3.3	200.	.200	64.0	19.9	.036	6.52	.219
3.6	220.	.220	66.0	20.5	.039	6.55	.225
3.9	240.	.240	66.0	20.5	.043	6.57	.225

Failure Sketches



- ☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	33.8 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	83.8		
Time to failure, min		t_f	3.60		
Unconfined compressive strength, T/sq ft		q_u	.23		
Undrained shear strength, T/sq ft		S_u	.11		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Yellowish Brown, Clay, Very soft, w/sand & silt seams					
LL	50	PL	21	PI	29
				G_s	
Remarks		Project Brazos Island Harbor Project			
		Brownsville Shipchannel			
		Area Brownsville, Texas			
		Boring No. 92-121		Sample No. 2	
		Depth 2-4 ft		Date 4/1/93	
		UNCONFINED COMPRESSION TEST REPORT			

JOB NO. 14G627

DATE 4/1/93

PROJECT Brazos Island Harbor Project
Brownsville Shipchannel

AREA Brownsville, Texas

BORING NO. 92-121

SAMPLE NO. 4

DEPTH 6-8 ft

SPECIMEN NO. 1

CLASSIFICATION

Gray, Clay, Very soft

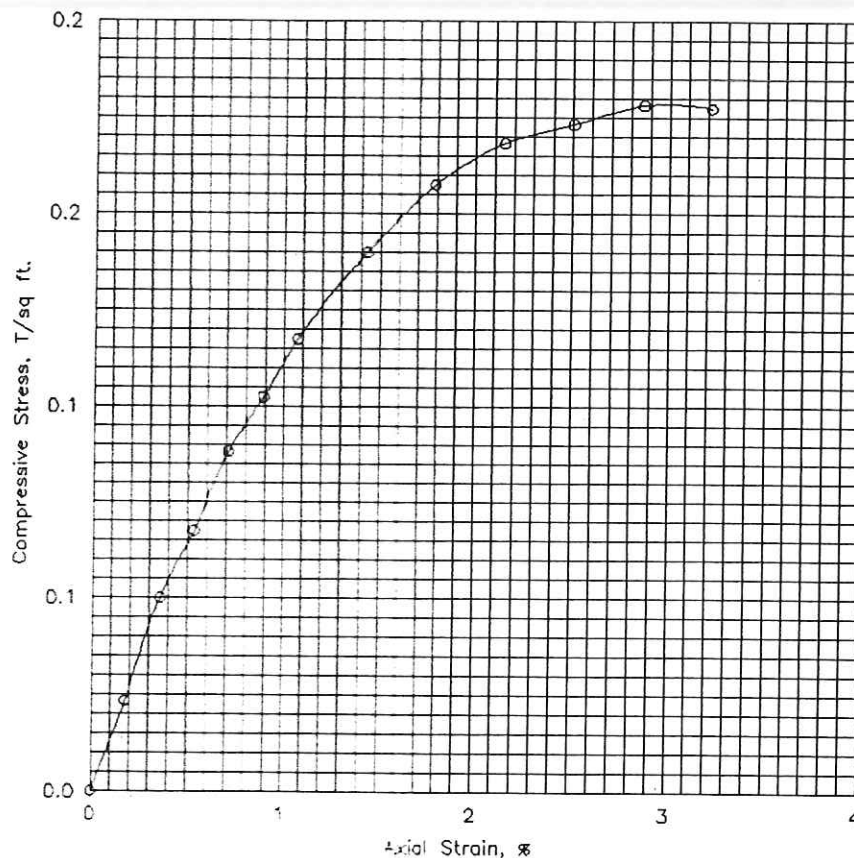
Tare No.	100	Height	5.595 in.
Tare plus Wet Specimen	550.97 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	392.85 gm	Initial Area	6.290 sq in.
Water Weight	158.12 gm	Volume	35.194 cu in.
Tare Weight	53.69 gm	Volume of Solids	cu in.
Wet Specimen	999.88 gm	Void Ratio	
Dry Specimen	681.95 gm	Saturation	%
Water Content	46.62 %	Dry Density	73.8 lb/cu ft
Specific Gravity of Solids			
LL = 56	PL =	PI =	

Proving Ring No. 10170

Proving Ring Constant, K = .311 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	2.5	.002	6.30	.028
.4	20.	.020	17.0	5.3	.004	6.31	.060
.6	30.	.030	23.0	7.1	.005	6.32	.081
.7	40.	.040	30.0	9.3	.007	6.34	.106
.9	50.	.050	35.0	10.9	.009	6.35	.123
1.0	60.	.060	40.0	12.4	.011	6.36	.141
1.4	80.	.080	48.0	14.9	.014	6.38	.168
1.7	100.	.100	54.0	16.8	.018	6.40	.189
2.0	120.	.120	58.0	18.0	.021	6.43	.202
2.3	140.	.140	60.0	18.6	.025	6.45	.208
2.7	160.	.160	62.0	19.3	.029	6.48	.214
3.0	180.	.180	62.0	19.3	.032	6.50	.213

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	46.6 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	73.5		
Time to failure, min		t_f	2.65		
Unconfined compressive strength, T/sq ft		q_u	.21		
Undrained shear strength, T/sq ft		S_u	.11		
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					
LL	56	PL		PI	G_s
Remarks		Project Brazos Island Harbor Project			
		Brownsville Shipchannel			
		Area Brownsville, Texas			
		Boring No. 92-121	Sample No. 4		
		Depth 6-8 ft	Date 4/1/93		
		UNCONFINED COMPRESSION TEST REPORT			