

JOB NO. 94G783-4

DATE 8/31/94

PROJECT Houston-Galveston Navigation
Channel

AREA Houston, Texas

BORING NO. 93-97

SAMPLE NO. 3

DEPTH 4-6 ft

SPECIMEN NO. 1

CLASSIFICATION

Gray, Clay, Soft, Sandy, w/sand pockets

Tare No.	GE-7	Height	5.595 in.
Tare plus Wet Specimen	496.02 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	381.37 gm	Initial Area	6.290 sq in.
Water Weight	114.65 gm	Volume	35.194 cu in.
Tare Weight	42.43 gm	Volume of Solids	cu in.
Wet Specimen	1104.23 gm	Void Ratio	
Dry Specimen	825.12 gm	Saturation	%
Water Content	33.83 %	Dry Density	89.3 lb/cu ft
Specific Gravity of Solids			
LL = 28	PL = 14	PI = 14	

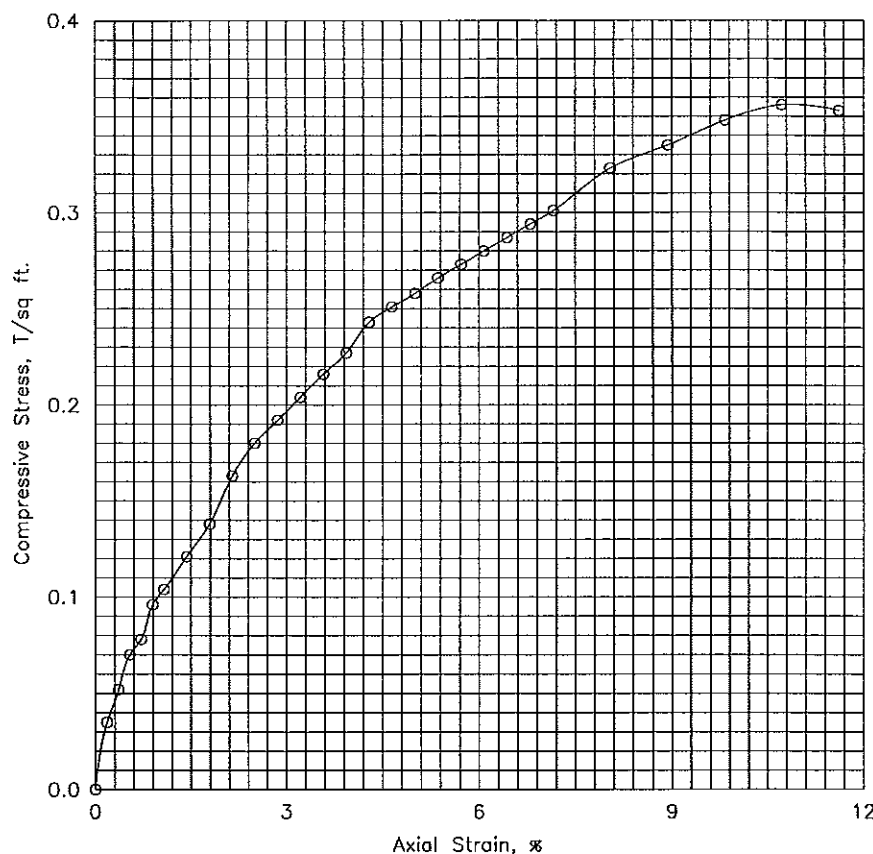
Proving Ring No. 10170

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
.3	20.	.020	6.0	4.6	.004	6.31	.052
.5	30.	.030	8.0	6.1	.005	6.32	.070
.7	40.	.040	9.0	6.9	.007	6.34	.078
.9	50.	.050	11.0	8.4	.009	6.35	.096
1.1	60.	.060	12.0	9.2	.011	6.36	.104
1.4	80.	.080	14.0	10.7	.014	6.38	.121
1.8	100.	.100	16.0	12.3	.018	6.40	.138
2.1	120.	.120	19.0	14.6	.021	6.43	.163
2.4	140.	.140	21.0	16.1	.025	6.45	.180
2.7	160.	.160	22.5	17.2	.029	6.48	.192
3.1	180.	.180	24.0	18.4	.032	6.50	.204
3.4	200.	.200	25.5	19.5	.036	6.52	.216
3.8	220.	.220	27.0	20.7	.039	6.55	.227
4.1	240.	.240	29.0	22.2	.043	6.57	.243
4.4	260.	.260	30.0	23.0	.046	6.60	.251
4.7	280.	.280	31.0	23.7	.050	6.62	.258
5.0	300.	.300	32.0	24.5	.054	6.65	.266
5.3	320.	.320	33.0	25.3	.057	6.67	.273
5.6	340.	.340	34.0	26.0	.061	6.70	.280
5.9	360.	.360	35.0	26.8	.064	6.72	.287
6.3	380.	.380	36.0	27.6	.068	6.75	.294
6.6	400.	.400	37.0	28.3	.071	6.77	.301
7.4	450.	.450	40.0	30.6	.080	6.84	.323
8.2	500.	.500	42.0	32.2	.089	6.91	.335

9.0	550.	.550	44.0	33.7	.098	6.98	.348
9.7	600.	.600	45.5	34.9	.107	7.05	.356
10.5	650.	.650	45.5	34.9	.116	7.12	.353

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	89.3		
Time to failure, min		t_f	9.72		
Unconfined compressive strength, T/sq ft		q_u	.36		
Undrained shear strength, T/sq ft		S_u	.18		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Gray, Clay, Soft, Sandy, w/sand pockets					
LL	28	PL	14	PI	14
Remarks		Project Houston-Galveston Navigation Channel Area Houston, Texas Boring No. 93-97 Sample No. 3 Depth 4-6 ft Date 8/31/94 El			
UNCONFINED COMPRESSION TEST REPORT					

JOB NO. 94G783-4

DATE 8/31/94

PROJECT Houston-Galveston Navigation
Channel

AREA Houston, Texas

BORING NO. 93-97

SAMPLE NO. 7

DEPTH 15-17 ft

SPECIMEN NO. 1

CLASSIFICATION

Gray, Clay, Very soft, Sandy, w/ shell fragments

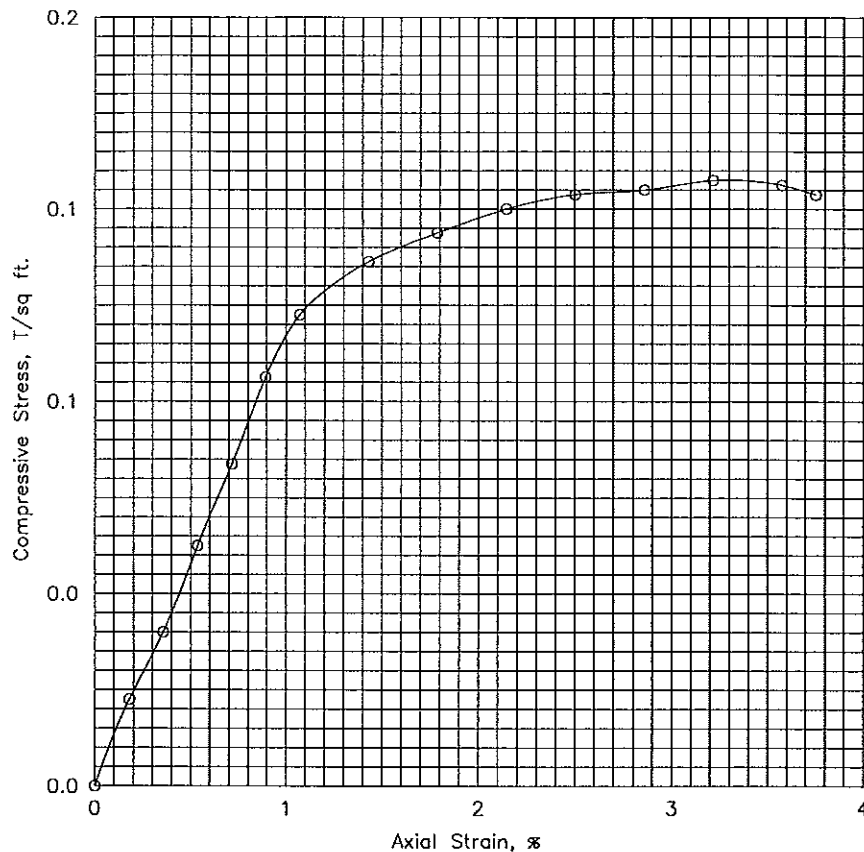
Tare No.	IM-1	Height	5.595 in.
Tare plus Wet Specimen	471.60 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	385.38 gm	Initial Area	6.290 sq in.
Water Weight	86.22 gm	Volume	35.194 cu in.
Tare Weight	42.52 gm	Volume of Solids	cu in.
Wet Specimen	1200.93 gm	Void Ratio	
Dry Specimen	959.61 gm	Saturation	%
Water Content	25.15 %	Dry Density	103.9 lb/cu ft
Specific Gravity of Solids			
LL = 26	PL = 15	PI = 11	

Proving Ring No. 17015

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	9.0	2.8	.004	6.31	.032
.5	30.	.030	14.0	4.3	.005	6.32	.050
.6	40.	.040	19.0	5.9	.007	6.34	.067
.8	50.	.050	24.0	7.5	.009	6.35	.085
1.0	60.	.060	28.0	8.7	.011	6.36	.098
1.4	80.	.080	31.0	9.6	.014	6.38	.109
1.7	100.	.100	33.0	10.2	.018	6.40	.115
2.1	120.	.120	34.5	10.7	.021	6.43	.120
2.4	140.	.140	35.5	11.0	.025	6.45	.123
2.8	160.	.160	36.0	11.2	.029	6.48	.124
3.0	180.	.180	36.5	11.3	.032	6.50	.126
3.4	200.	.200	36.5	11.3	.036	6.52	.125
3.6	210.	.210	36.0	11.2	.038	6.54	.123

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	25.1 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	103.9		
Time to failure, min		t_f	3.05		
Unconfined compressive strength, T/sq ft		q_u	.13		
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, Sandy, w/ shell fragments					
LL	26	PL	15	PI	11
Remarks		G_s			
		Project Houston-Galveston Navigation			
		Channel			
		Area Houston, Texas			
		Boring No. 93-97		Sample No. 7	
		Depth 15-17 ft		Date 8/31/94	
UNCONFINED COMPRESSION TEST REPORT					

JOB NO. 94G783-4

DATE 8/31/94

PROJECT Houston-Galveston Navigation
Channel

AREA Houston, Texas

BORING NO. 93-97

SAMPLE NO. 13

DEPTH 33-35 ft

SPECIMEN NO. 1

CLASSIFICATION

Gray, Clay, Very soft, w/ shell fragments

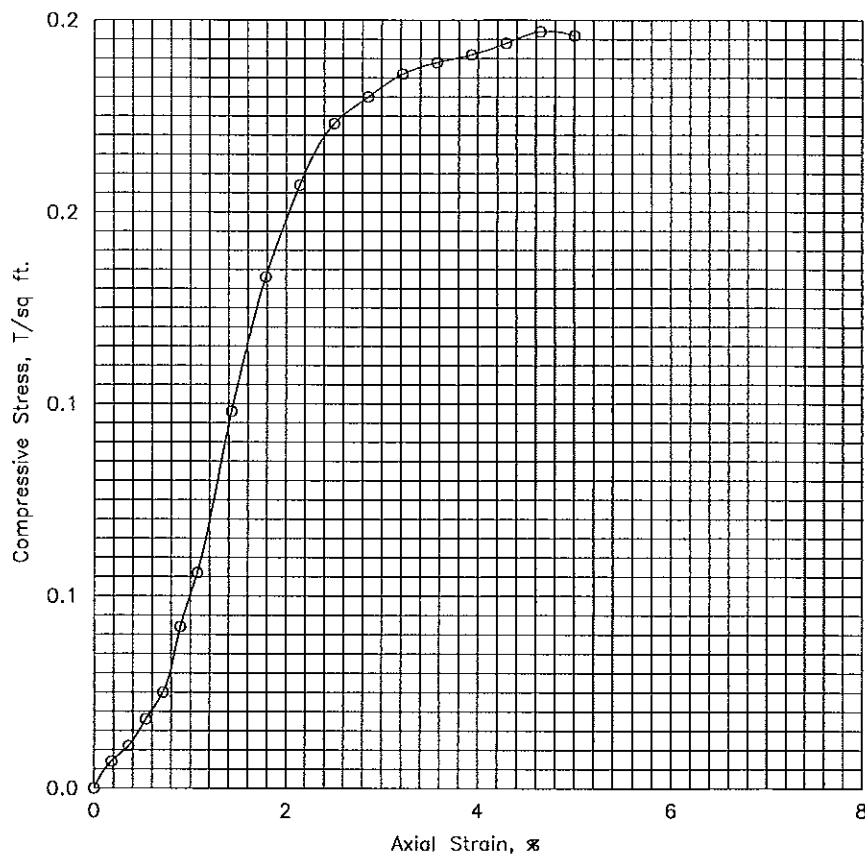
Tare No.	II	Height	5.595 in.
Tare plus Wet Specimen	408.17 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	287.76 gm	Initial Area	6.290 sq in.
Water Weight	120.41 gm	Volume	35.194 cu in.
Tare Weight	42.65 gm	Volume of Solids	cu in.
Wet Specimen	1007.84 gm	Void Ratio	
Dry Specimen	675.84 gm	Saturation	%
Water Content	49.12 %	Dry Density	73.2 lb/cu ft
Specific Gravity of Solids			
LL = 50	PL = 19	PI = 31	

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	2.0	.6	.002	6.30	.007
.3	20.	.020	3.0	.9	.004	6.31	.011
.5	30.	.030	5.0	1.6	.005	6.32	.018
.7	40.	.040	7.0	2.2	.007	6.34	.025
.8	50.	.050	12.0	3.7	.009	6.35	.042
1.0	60.	.060	16.0	5.0	.011	6.36	.056
1.4	80.	.080	28.0	8.7	.014	6.38	.098
1.7	100.	.100	38.0	11.8	.018	6.40	.133
2.1	120.	.120	45.0	14.0	.021	6.43	.157
2.4	140.	.140	50.0	15.5	.025	6.45	.173
2.7	160.	.160	52.0	16.2	.029	6.48	.180
3.1	180.	.180	54.0	16.8	.032	6.50	.186
3.4	200.	.200	55.0	17.1	.036	6.52	.189
3.7	220.	.220	56.0	17.4	.039	6.55	.191
4.0	240.	.240	57.0	17.7	.043	6.57	.194
4.4	260.	.260	58.0	18.0	.046	6.60	.197
4.7	280.	.280	58.0	18.0	.050	6.62	.196

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	49.1 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	73.2		
Time to failure, min		t_f	4.40		
Unconfined compressive strength, T/sq ft		q_u	.20		
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/ shell fragments					
LL	50	PL	19	PI	31
Remarks		Project Houston-Galveston Navigation Channel Area Houston, Texas Boring No. 93-97 Sample No. 13 Depth 33-35 ft Date 8/31/94			
UNCONFINED COMPRESSION TEST REPORT					

JOB NO. 94G783-4

DATE 8/31/94

PROJECT Houston-Galveston Navigation
Channel

AREA Houston, Texas

BORING NO. 93-97

SAMPLE NO. 17

DEPTH 41-43 ft

SPECIMEN NO. 1

CLASSIFICATION

Gray, Clay, Very soft, Sandy, w/ shell fragments

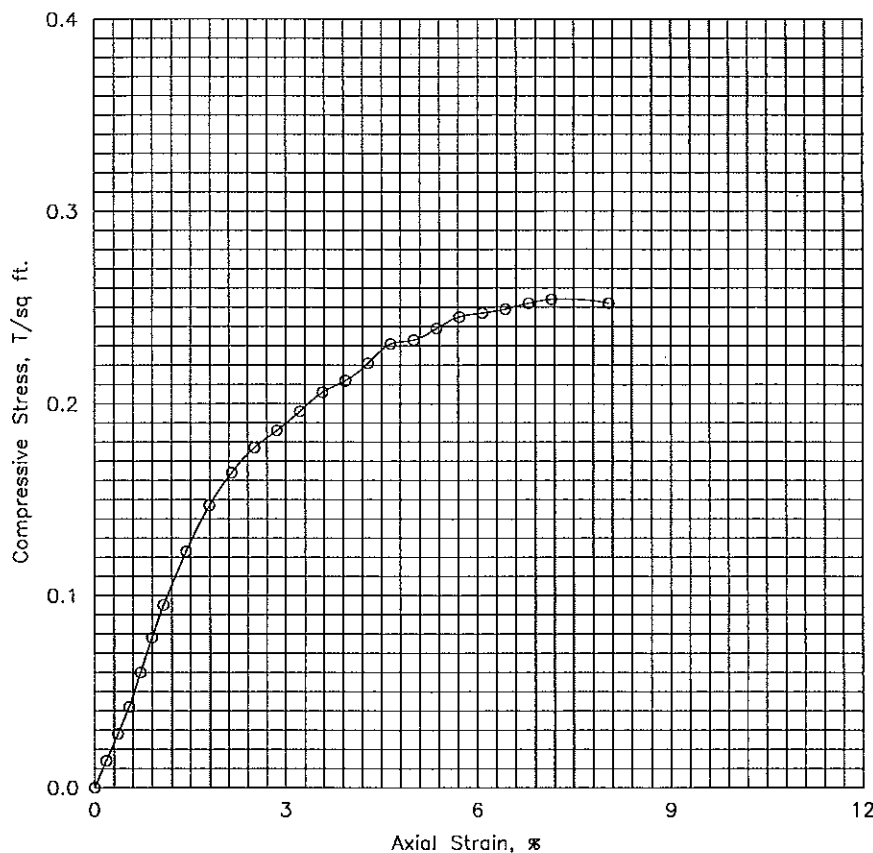
Tare No.	KL-2	Height	5.595 in.
Tare plus Wet Specimen	450.56 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	356.97 gm	Initial Area	6.290 sq in.
Water Weight	93.59 gm	Volume	35.194 cu in.
Tare Weight	42.40 gm	Volume of Solids	cu in.
Wet Specimen	1083.99 gm	Void Ratio	
Dry Specimen	835.43 gm	Saturation	%
Water Content	29.75 %	Dry Density	90.4 lb/cu ft
Specific Gravity of Solids			
LL = 34	PL = 15	PI = 19	

Proving Ring No. 17015

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	4.0	1.2	.002	6.30	.014
.3	20.	.020	8.0	2.5	.004	6.31	.028
.5	30.	.030	12.0	3.7	.005	6.32	.042
.6	40.	.040	17.0	5.3	.007	6.34	.060
.9	50.	.050	22.0	6.8	.009	6.35	.078
1.0	60.	.060	27.0	8.4	.011	6.36	.095
1.4	80.	.080	35.0	10.9	.014	6.38	.123
1.8	100.	.100	42.0	13.0	.018	6.40	.147
2.1	120.	.120	47.0	14.6	.021	6.43	.164
2.5	140.	.140	51.0	15.8	.025	6.45	.177
2.8	160.	.160	54.0	16.8	.029	6.48	.186
3.1	180.	.180	57.0	17.7	.032	6.50	.196
3.4	200.	.200	60.0	18.6	.036	6.52	.206
3.8	220.	.220	62.0	19.3	.039	6.55	.212
4.1	240.	.240	65.0	20.2	.043	6.57	.221
4.4	260.	.260	68.0	21.1	.046	6.60	.231
4.8	280.	.280	69.0	21.4	.050	6.62	.233
5.1	300.	.300	71.0	22.1	.054	6.65	.239
5.5	320.	.320	73.0	22.7	.057	6.67	.245
5.8	340.	.340	74.0	23.0	.061	6.70	.247
6.0	360.	.360	75.0	23.3	.064	6.72	.249
6.4	380.	.380	76.0	23.6	.068	6.75	.252
6.7	400.	.400	77.0	23.9	.071	6.77	.254
7.0	450.	.450	77.0	23.9	.080	6.84	.252

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	29.8 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	90.4		
Time to failure, min		t_f	6.70		
Unconfined compressive strength, T/sq ft		q_u	.25		
Undrained shear strength, T/sq ft		S_u	.13		
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, Sandy, w/ shell fragments					
LL	34	PL	15	PI	19
Remarks		Project Houston-Galveston Navigation Channel Area Houston, Texas Boring No. 93-97 Sample No. 17 Depth 41-43 ft Date 8/31/94			
UNCONFINED COMPRESSION TEST REPORT					

JOB NO. 94G783-4

DATE 8/31/94

PROJECT Houston-Galveston Navigation
Channel

AREA Houston, Texas

BORING NO. 93-97

SAMPLE NO. 21

DEPTH 49-51 ft

SPECIMEN NO. 1

CLASSIFICATION

Gray, Clay, Soft, w/ shell fragments

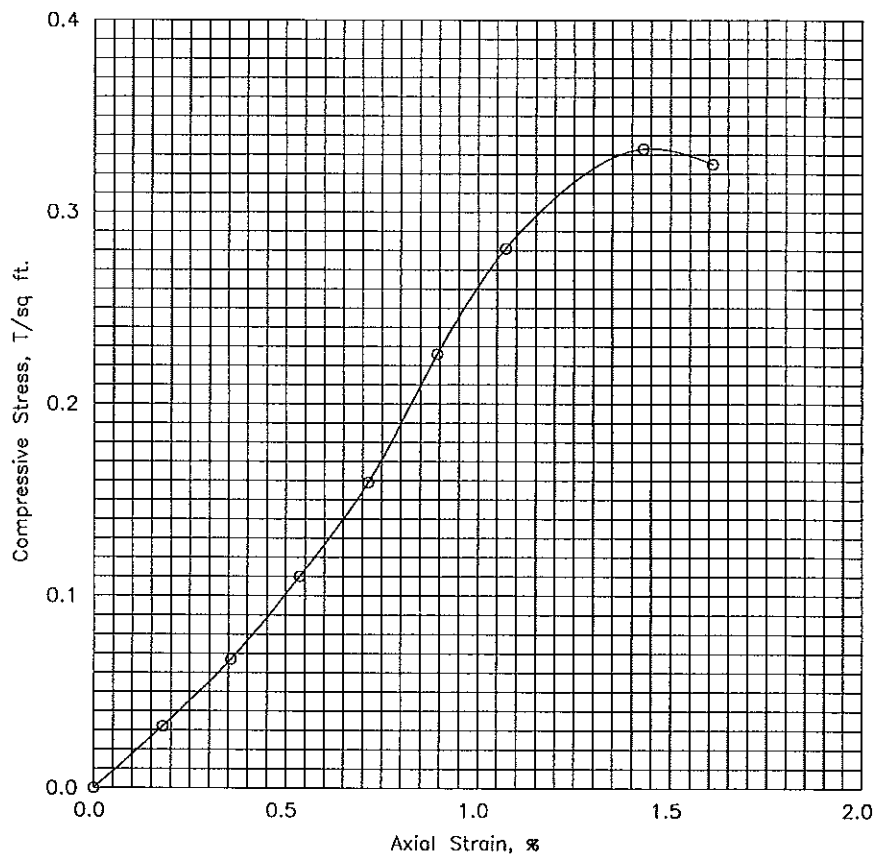
Tare No.	W-15	Height	5.595 in.
Tare plus Wet Specimen	356.97 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	217.82 gm	Initial Area	6.290 sq in.
Water Weight	139.15 gm	Volume	35.194 cu in.
Tare Weight	42.70 gm	Volume of Solids	cu in.
Wet Specimen	898.43 gm	Void Ratio	
Dry Specimen	500.63 gm	Saturation	%
Water Content	79.46 %	Dry Density	54.2 lb/cu ft
Specific Gravity of Solids			
LL = 110	PL = 40	PI = 70	

Proving Ring No. 17015

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	9.0	2.8	.002	6.30	.032
.4	20.	.020	19.0	5.9	.004	6.31	.067
.6	30.	.030	31.0	9.6	.005	6.32	.110
.9	40.	.040	45.0	14.0	.007	6.34	.159
1.1	50.	.050	64.0	19.9	.009	6.35	.226
1.2	60.	.060	80.0	24.8	.011	6.36	.281
1.5	80.	.080	95.0	29.5	.014	6.38	.333
1.6	90.	.090	93.0	28.9	.016	6.39	.325

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	79.5 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	54.2		
Time to failure, min		t_f	1.55		
Unconfined compressive strength, T/sq ft		q_u	.33		
Undrained shear strength, T/sq ft		S_u	.17		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Gray, Clay, Soft, w/ shell fragments					
LL	110	PL	40	PI	70
		G_s			
Remarks		Project Houston-Galveston Navigation			
		Channel			
		Area Houston, Texas			
		Boring No. 93-97		Sample No. 21	
		Depth 49-51 ft		Date 8/31/94	
		UNCONFINED COMPRESSION TEST REPORT			

Project: Port of Galveston Navigation Channel

SUMMARY OF LABORATORY TEST RESULTS

Contract No. DACW64-94-C-0040Boring No. 93-97

S #	Depth (ft)	P P (tsf)	SPT Blows per Foot	Visual Classification	U S C	Mc (%)	Dry Unit Wt (pcf)	Wet Unit Wt (pcf)	L L (%)	P L (%)	Mechanical Analysis % Passing					Torvane Shear Strength (tsf)	q u (tsf)
											#4	#10	#40	#100	#200		
1	0 - 2	0.00		Brown, Clay, Very soft, Sandy, w/roots and shell fragments	C L	28.6											
2	2 - 4	0.25		Gray, Clay, Soft, Sandy, w/sand pockets	C L	34.2											
3	4 - 6	0.25		Gray, Clay, Soft, Sandy, w/sand pockets	C L	33.8	89.3	119.5	28.0	14.0	100.0	99.9	99.7	94.9	79.2		0.36
4	6 - 8	0.25		Gray, Clay, Soft, Sandy, w/sand pockets	C L	26.5											
5	8-9.5		W.O.H	Gray, Sand, Very loose, Silty	S M						100.0	100.0	99.6	88.6	45.0		
6	13-15	0.00		Gray, Clay, Very soft, Sandy, w/shell fragments	C L	43.7											
7	15-17	0.00		Gray, Clay, Very soft, Sandy, w/shell fragments	C L	25.1	103.9	130.0	26.0	15.0	100.0	99.9	99.1	91.8	59.1		0.13
8	17-18.5		13	Gray, Sand, Medium dense, Silty, w/shell fragments	S M												
9	22-23.5		11	Gray, Sand, Medium dense, Silty, w/shell fragments	S M						97.8*	94.3*	93.0	74.1	26.6		
10	27-29	0.00		Gray, Clay, Very soft, Sandy, w/shell fragments	C L	31.5											
11	29-31	0.00		Gray, Clay, Very soft, Sandy, w/sand pockets	C L	27.1											
12	31-33	0.00		Gray, Clay, Very soft, Sandy <i>See SWD report 16167</i> CONSOL	<i>CH</i>	<i>40.7</i>	<i>80</i>		<i>53</i>	<i>15</i>							
13	33-35	0.00		Gray, Clay, Very soft, w/shell fragments	C H	49.1	73.2	117.3	50.0	19.0	100.0	100.0	99.6	99.1	98.4		0.20
14	35-37	0.00		Gray, Clay, Very soft, Sandy, w/shell fragments	C L	24.4											
15	37-39	0.00		Gray, Clay, Very soft, Sandy, w/shell fragments	C L	31.2											
16	39-41	0.00		Gray, Clay, Very soft, Sandy, w/shell fragments	C L	35.3											
17	41-43	0.25		Gray, Clay, Soft, Sandy, w/shell fragments	C L	29.8	90.4	117.3	34.0	15.0	99.8	99.5	98.3	89.1	66.7		0.25
18	43-45	0.25		Gray, Clay, Soft, w/shell fragments	C H	39.5											
19	45-47	0.25		Gray, Clay, Soft, w/shell fragments	C H	46.0											
20	47-49	0.25		Gray, Clay, Soft, w/shell fragments	C H	47.8											

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classification, M c : Moisture Content

q u : Uncogined Compressive Strength, W O H : Weight of hammer, W O P : Weight of Pipe

* : Material retained are shell fragments

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 93-97

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classification, M c : Moisture Content
q u : Uncogined Compressive Strength, W O H : Weight of hammer, W O P : Weight of Pipe
* : Material retained are shell fragments

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET		SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	BORING NO. <u>93-97</u>	DATE: BEGIN <u>3-26-94</u>	PAGE <u>1 / 2</u>
					JOB NO. <u>946783-1</u>	COMPLETE <u>3-29-94</u> Thin Walled Tube	
					PROJECT <u>HOUSTON-GALVESTON Navigation Channel</u>	☒ 3" ☐ 6"	
					LOCATION <u>Disposal Area # 16</u>		
					ELEVATION OF HOLE _____		
					MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Hicko K4x4, C-1000 Marsh Buggy</u>		
					GROUNDWATER: DEPTH <u>0</u> ft., ELEV. _____ ft., at end of Drilling		
					WEATHER <u>Sunny and Hot 95°</u>		
					DRILLER <u>David Dreareuk</u>	LOGGER <u>Willie Barnes</u>	
Torvane Reading		COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS	
0							
	1	7.5	Brown Clay	M. stiff		W- Roots & Gravel & shell fragments	
	2	7.5	Brown Clay	M. stiff			
0-10	3	0.00 0.2	Gray Clay	V. soft	Sandy		
	4	3 1/3	Gray Sand	loose	silty		
-10							
	5	7.5	Brown Clay	loose	silty	W- sand rock ts	
	6		DK Gray Sand	loose	clay		
-15	7	4 3/4	Gray Sand	loose	silty		
	8	4 1/2	Gray Sand	loose	silty	W- shell fragments 20'-21.5'	
-20							
	9	1 1/4	Gray Sand	VERY LOOSE	silty		
-25							
	10	1 1/2	Gray Sand	VERY LOOSE	silty		
-30							
-35						Torvane Multiplier 0.2	

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET		SAMPLE NO.	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	BORING NO. <u>93-97</u> DATE: BEGIN <u>8-1-94</u> PAGE <u>112</u> JOB NO. <u>946783-1</u> COMPLETE <u>8-1-94</u> Thin Walled Tube PROJECT <u>HOUSTON-GALVESTON Navigation Channel</u> 3" 6" LOCATION <u>DISPOSAL AREA #16</u> ELEVATION OF HOLE _____ MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Arco R4x4, C-1000 Marsh Buggy</u> GROUNDWATER: DEPTH <u>0</u> ft., ELEV. _____ ft., at end of Drilling WEATHER <u>Sunny and Hot 90 to 40 to Rain</u> DRILLER <u>David Gregurek</u> LOGGER <u>Willie Barnes</u>				
					COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
Torvane Reading	0								
0.25		1	0.00 0.05		Brown	Clay	Very Soft	Sandy	W/roots 0'-6'
0.25		2	0.00 0.05		Gray	Clay	Very Soft	Sandy	
0.25		3	0.00 0.05		Gray	Clay	Very Soft	Sandy	
0.25		4	0.00 0.05		Gray	Clay	Very Soft	Sandy	
		5	W.O.H		Gray	SAND	Very loose	SILTY	
	-10-								
		6	0.00 0.08		Gray	Clay	Very Soft	Sandy	W/Shell Fragments 13'-17'
0.4	15	7	0.00 0.07		Gray	Clay	Very Soft	Sandy	
0.35		8	3/5/8		Gray	Sand	M. Dense	Silty	Sand AT 17'
	-20-								
		9	2/5/6		Gray	Sand	M. Dense	Silty	
	-25-								
		10	0.00 0.09		Gray	Clay	V. Soft	Sandy	Clay AT 27'
0.45		11	0.00 0.09		Gray	Clay	Very Soft	Sandy	
0.45	30	12	0.00 0.08		Gray	Clay	Very Soft	Sandy	
0.4		13	0.00 0.08		Gray	Clay	Very Soft	Sandy	
0.4	35	14	0.00 0.08		Gray	Clay	Very Soft	Sandy	

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET		SAMPLE NO.	PEN./TORVANE	SPT. - BLOW COUNT	BORING NO. <u>93-97</u>	DATE: BEGIN <u>8-1-94</u>	PAGE <u>2</u> of <u>2</u>
					JOB NO. <u>946783.1</u>	COMPLETE <u>8-1-94</u>	Thin Walled Tube ☒ 3" ☐ 6"
					PROJECT <u>Houston-Galveston Navigation Channel</u>		
					LOCATION <u>Disposal Area # 16</u>		
					ELEVATION OF HOLE _____		
					MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Ardeo K444, C-1000 Marsh Buggy</u>		
					GROUNDWATER: DEPTH <u>0</u> ft., ELEV. _____ ft., at end of Drilling		
					WEATHER <u>Hot 90° to 90% Rain</u>		
					DRILLER <u>David Gregurek</u>	LOGGER <u>Willie Barnes</u>	
Torvane Reading		COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS	
35							
0.4	15	Gray	Clay	Very Soft	Sandy	w/shell fragments 37'-39'	
0.4	40	Gray	Clay	Very Soft	Sandy		
0.3	17	Gray	Clay	Very Soft	Sandy		
0.4	18	Gray	Clay	Very Soft	Sandy		
0.5	45	Gray	Clay	Very Soft	Sandy	w/shell fragments 45'-57'	
0.3	20	Gray	Clay	Very Soft	Sandy		
0.2	50	Gray	Clay	Very Soft	Sandy		
0.25	22	Gray	Clay	Very Soft	Sandy		
0.3	23	Gray	Clay	Very Soft	Sandy		
0.4	55	Gray	Clay	Very Soft	Sandy		
	25	Gray	Sand	Dense	Silty	- w/shell fragments	
	26	Gray	Sand	Dense	Silty	- w/shell fragments	
60						Torvane Multiplier 0.2	
65							
70							