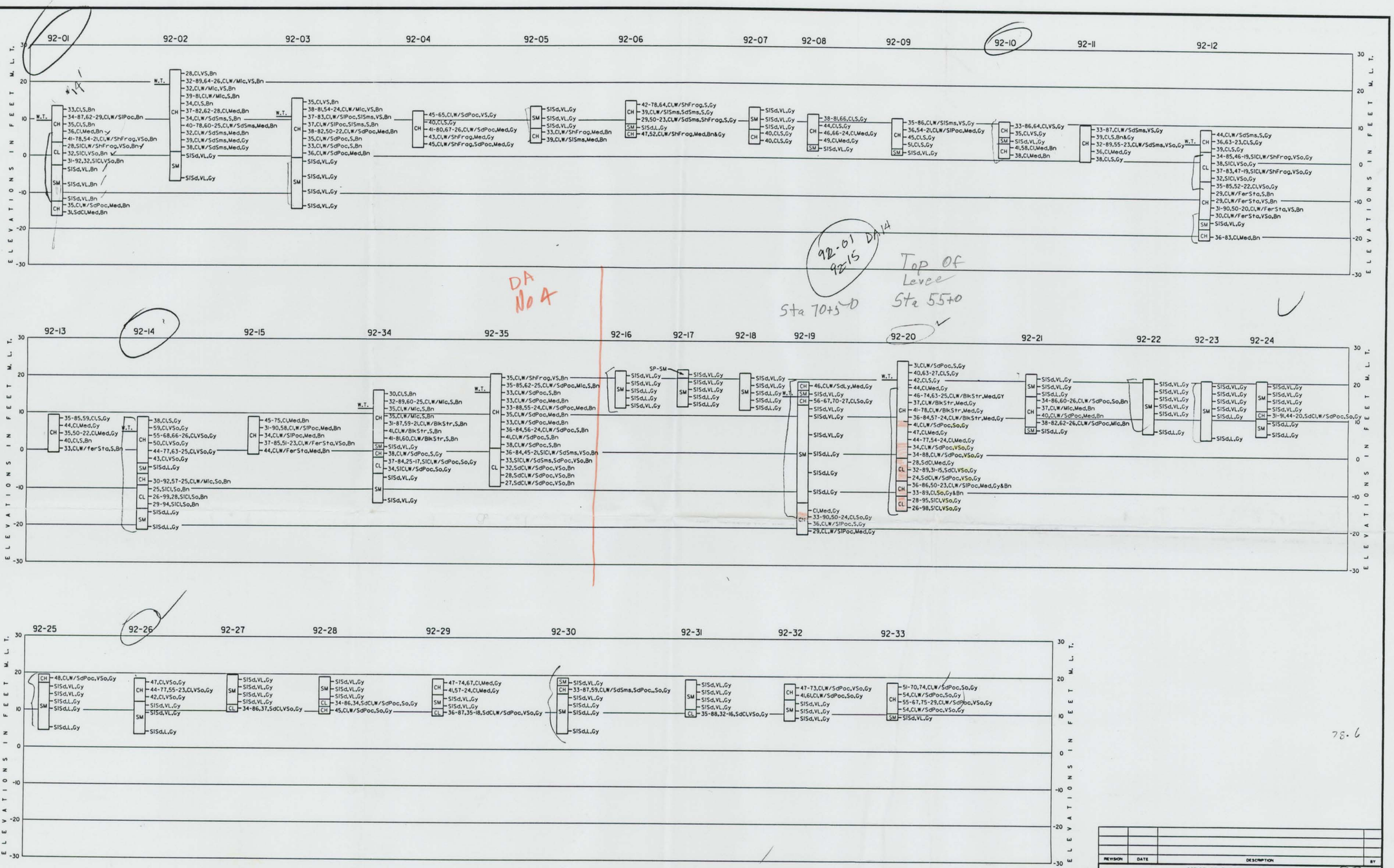


NOTE: SEE DRAWING NUMBER F-6 FOR SOILS NOTES .

REVISION	DATE	DESCRIPTION	BY

OFFICE OF THE DISTRICT ENGINEER
U.S. ARMY ENGINEER DISTRICT, GALVESTON
CORPS OF ENGINEERS
GALVESTON, TEXAS

DRAWN BY: P.B.S.
TRACED BY:
CHECKED BY: J.T.F.
SUBMITTED BY: David P. Campbell, CHIEF, SOILS DESIGN SECTION
APPROVED: David P. Campbell, CHIEF, GEOTECH. & SURVEYS BRANCH
APPROVED: for CHIEF ENGINEERING DIVISION
DATE: MAY 1992

BRAZOS ISLAND HARBOR, TEXAS
BROWNSVILLE CHANNEL
DREDGING INSHORE REACH No. 1
DISPOSAL AREAS Nos. 2 & 4
BORING LOGS

Prepared under the direction of
Brink P. Miller, Col., C.E.,
District Engineer

SCALE: AS SHOWN | SPEC. DATE:
DRAWING NUMBER: F-7
SHEET 14 OF 17 FILE NO. RIO 901-240

78.6

U.S. ARMY CORPS OF ENGINEERS

BORING NO. 92-34 DATE: BEGIN 3-23-92 PAGE 1 / 1
JOB NO. 146535 COMPLETE 3-23-92 Thin Walled Tube
PROJECT Brownsville Dist. Area #4 ☒ 3" ☐ 6"
LOCATION Ship Channel
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG ARDCO-C-1000
GROUNDWATER: DEPTH 5' ft., ELEV. ft., at end of Drilling
WEATHER Cloudy - Cool - Windy
DRILLER D. Mitchell LOGGER T. Berg

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0		1	2.25	Tan	Clay	very stiff		
		2	1.75	"	"	Stiff		
5		3	.75	"	"	med Stiff		
		4	2.5	Tan & Gray	"	very stiff		
		5	1.25	"	"	Stiff		
10		6	0.5	Gray	"	Med. stiff		
		7	.25	"	"	Soft		w/Sa. Sms.
15	X	8	1-12"/1	Tan	Silt	very loose	Sand	Sa. Si. at 14'
		9	0.25	Gray	Clay	Soft	Sand	Sa. Cl. at 16'
		10	.25	"	"	"	Silt	
20		11	.25	"	"	"	"	
	X	12	1-12"/1	Gray	Silt	very loose		w/shell frag Strat 22'
25								
	X	13	1-12"/1	"	"	"		
30				—	—	—	—	Bottom of 92-34 30'
35								

Project : Disposal Areas Nos.2 and 4 for Brownsville Ship Channel
Brownsville, Texas
Contract No. DACW64-92-D-0001 Delivery order No. 0008

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 92-34

S #	Depth (ft)	P P (tsf)	SPT Blows per Foot	Visual Classification	U S C	M c (%)	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	1.50		Brown,Clay,Stiff	CH	30.4											
2	2-4	1.75		Brown,Clay,Stiff,w/mica	CH	32.3	88.7	117.4	60	25							
3	4-6	1.25		Brown,Clay,Stiff,w/mica	CH	35.0											
4	6-8	1.50		Brown,Clay,Stiff,w/mica	CH	35.3											
5	8-10	1.50		Brown,Clay,Stiff,w/blocky structure	CH	32.6	87.3	115.7	59	21	100.0	100.0	99.9	99.5	99.0		0.95
6	10-12	1.50		Brown,Clay,Stiff,w/blocky structure	CH	41.3											
7	12-14	1.50		Brown,Clay,Stiff,w/blocky structure	CH	40.6	80.6	113.3	60								
8	14.5-16		1-12"/1	Gray,Sand,Very loose,Silty	S M						100.0	100.0	99.9	87.1	40.2		
9	16-18	1.00		Gray,Clay,Stiff,w/sand pockets	CH	37.7											
10	18-20	0.25		Gray,Clay,Soft,Silty,w/sand pockets	CL	36.5	83.6	114.1	25	17	99.4	99.3	99.2	92.7	93.3		
11	20-22	0.25		Gray,Clay,Soft,Silty,w/sand pockets	CL	33.5											
12	22.5-24		1-12"/1	Gray,Sand,Very loose,Silty	S M												
13	28.5-30		1-12'/1	Gray,Sand,Very loose,Silty	S M												

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

JOB NO. 14G538 DATE 4/9/92

PROJECT Disposal Areas Nos.2 and 4 for Brownsvill Ship Channel,Brown

BORING NO. 92-34 SAMPLE NO. 5 DEPTH 8-10 ft

SPECIMEN NO. 1

CLASSIFICATION
Brown,Clay,Stiff,w/blocky structure

Tare No.	P-23	Height	5.595 in.
Tare plus Wet Specimen	537.99 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	416.30 gm	Initial Area	6.290 sq in.
Water Weight	121.69 gm	Volume	35.194 cu in.
Tare Weight	42.75 gm	Volume of Solids	cu in.
Wet Specimen	1068.89 gm	Void Ratio	
Dry Specimen	806.24 gm	Saturation	%
Water Content	32.58 %	Dry Density	87.3 lb/cu ft

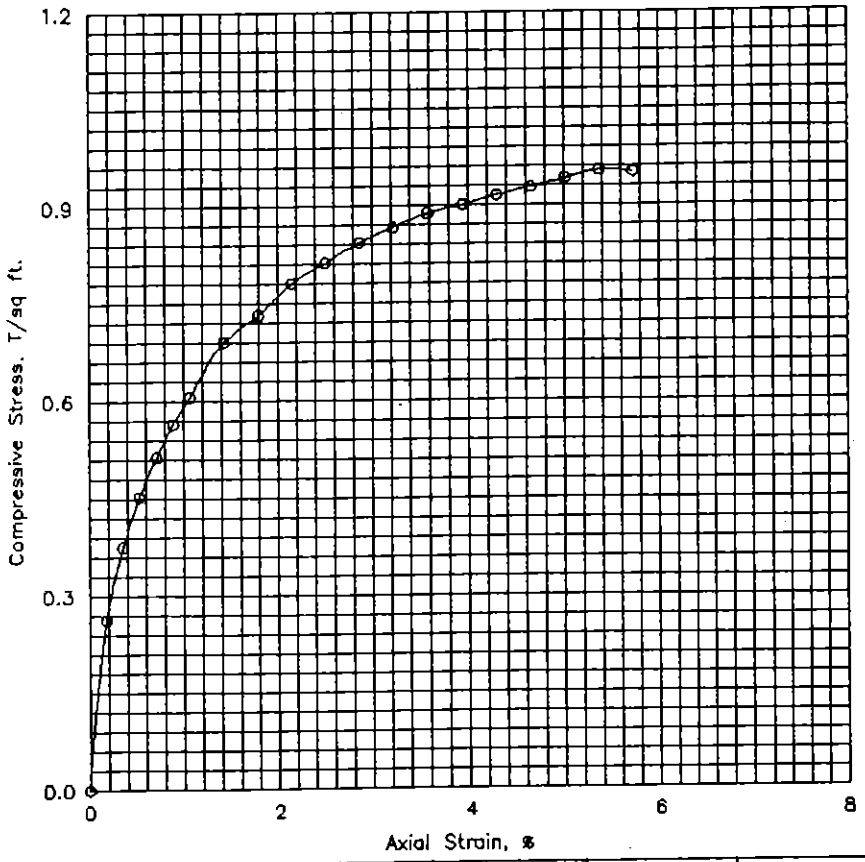
Specific Gravity of Solids
LL = 59 PL = 21 PI = 38

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	30.0	23.0	.002	6.30	.263
.4	20.	.020	43.0	32.9	.004	6.31	.376
.6	30.	.030	52.0	39.8	.005	6.32	.453
.7	40.	.040	59.0	45.2	.007	6.34	.514
.9	50.	.050	65.0	49.8	.009	6.35	.565
1.1	60.	.060	70.0	53.6	.011	6.36	.607
1.5	80.	.080	80.0	61.3	.014	6.38	.691
1.8	100.	.100	85.0	65.1	.018	6.40	.732
2.1	120.	.120	91.0	69.7	.021	6.43	.781
2.4	140.	.140	95.0	72.8	.025	6.45	.812
2.8	160.	.160	99.0	75.8	.029	6.48	.843
3.1	180.	.180	102.0	78.1	.032	6.50	.866
3.4	200.	.200	105.0	80.4	.036	6.52	.888
3.7	220.	.220	107.0	82.0	.039	6.55	.901
4.1	240.	.240	109.0	83.5	.043	6.57	.915
4.4	260.	.260	111.0	85.0	.046	6.60	.928
4.8	280.	.280	113.0	86.6	.050	6.62	.941
5.1	300.	.300	115.0	88.1	.054	6.65	.954
5.5	320.	.320	115.0	88.1	.057	6.67	.951

Job No. 146538

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial: Water content	w_o	32.6 %	%	%	%
Initial: Void ratio	e_o				
Initial: Saturation	S_o	%	%	%	%
Initial: Dry density, lb/cu ft	γ_d	87.3			
Time to failure, min	t_f	5.07			
Unconfined compressive strength, T/sq ft	q_u	.95			
Undrained shear strength, T/sq ft	S_u	.48			
Sensitivity ratio	S_t				
Initial specimen diameter, in.	D_o	2.830			
Initial specimen height, in.	H_o	5.595			

Classification Brown,Clay,Stiff,w/blocky structure

LL	PL	PI	G_s
59	21	38	

Remarks

Project Disposal Areas Nos. 2 and 4 for Brownsville

Area Ship Channel, Brownsville, Texas

Boring No. 92-34 | Sample No. 5

Depth El 8-10 ft | Date 4/9/92

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 3659
1 JUN 65

PLATE XI-2