

Elevation _____ Location Disposal Area 7 Driller R. AGUILAR

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37

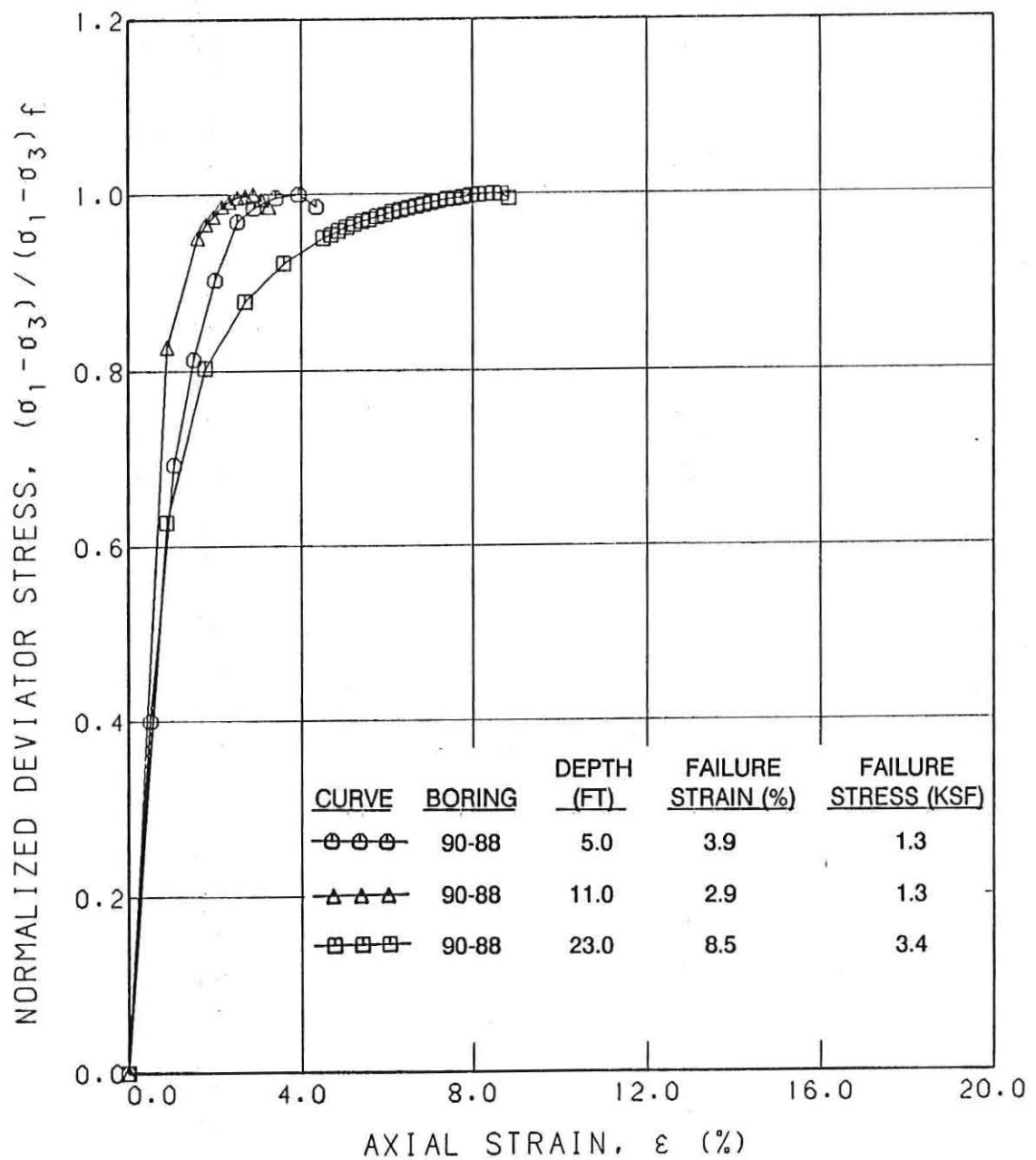
SUMMARY OF TEST RESULTS
Galveston District, Corps of Engineers
Delivery Order No. 0016
Brazos Island Harbor
Brownsville Ship Channel

Top El. 12.5

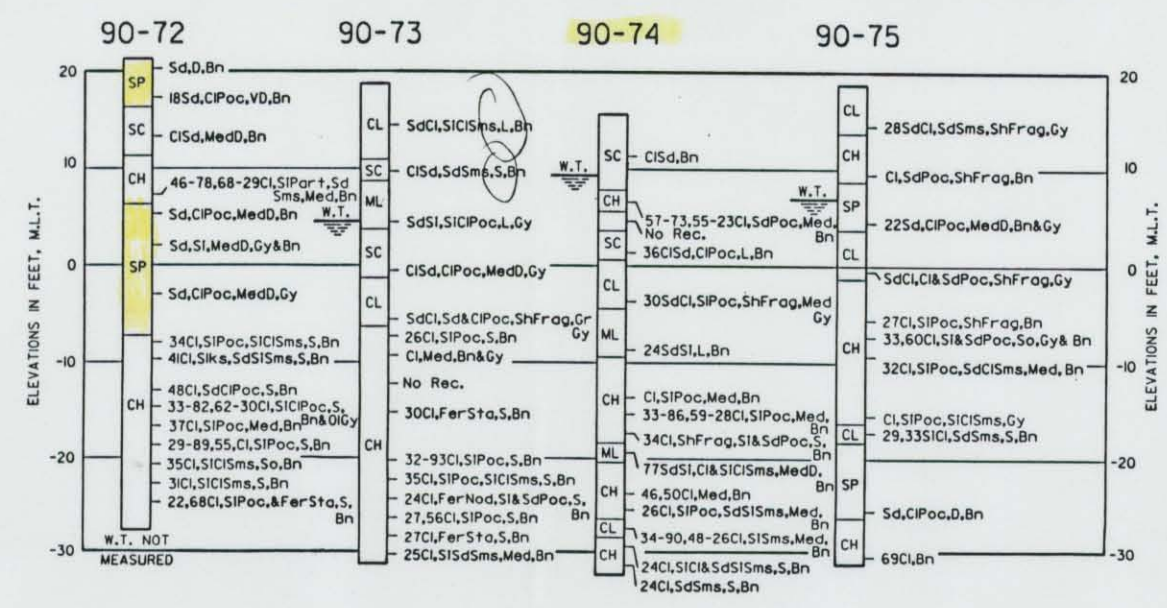
Boring Number	Sample Number	Sample Depth (ft)	Visual Classification	USCS	MC (%)	UDW (pcf)	LL	PL	PI	Gradation, % Passing Sieve No. 4 10 40 200	UNC Su (ksf)	TV Su (ksf)
90-88	1Q	3-5	Firm brown CLAY	CH	30	87	71	22		100 99 97	0.7	0.6
90-88	2Q	5-7	Very stiff dark brown CLAY w/ calcareous deps	CH	29							
90-88	3Q	7-9	Stiff dark brown CLAY w/ ferrous nodules	CH	35							
90-88	4Q	9-11	Firm brown CLAY w/ ferrous stains	CH	37	82	67	22		100 99 98 97	0.7	0.5
90-88	5Q	11-13	Firm red and brown CLAY w/ ferrous nods	CH	39							
90-88	6Q	13-15	Red CLAY w/ ferrous nods & calcareous deps	CH	35							
90-88	7Q	15-17	Red and gray CLAY sls w/ ferrous stns & silt pkcts	CL	35	83	44					
90-88	8Q	17-19	Very stiff red CLAY w/ silt parts & ferrous nods	CH	29							
90-88	9Q	19-21	Very stiff red CLAY w/ vert sacd sms & pkcts	CH	35							
90-88	10Q	21-23	Stiff brown CLAY	CH	32	91	70	30		100 99 98	1.7	
90-88	11J	23-25	Olive gray SILTY CLAY	CL	31					100 99 96		
90-88	12J	25-26.5	Olive gray fine SILTY SAND	SM								
90-88	13J	30-31.5	Greenish gray CLAYEY SAND	SC	18					100 78 30		
90-88	14J	35-36.5	Gray and red SANDY CLAY w/ calcareous deps	CL	26							
Top El. 11.3												
90-89	1Q	3-5	Stiff brown SANDY CLAY	CL	21	99	38	17		100 99 83	1.0	0.9
90-89	2Q	5-7	Stiff red CLAY w/ si pkcts, calc nods & fe stns	CH	25							
90-89	3Q	7-9	Stiff red CLAY w/ si cl sms, fe & calc nods	CH	24							
90-89	4Q	9-11	Stiff red CLAY w/ silt pkcts & ferrous stns	CH	29	95	41	17		100 99 99 90	1.1	0.6
90-89	5J	11-13	SANDY CLAY w/ clay pockets	CL	27							
90-89	6	13.5-15	Olive gray SANDY CLAY w/ clay sms & sand pkcts	CL	30					100 92 65		
90-89	7	18-20	Very stiff red SILTY CLAY w/ fe stns, calc deps & si pckt	CL	29		44					
90-89	8	20-22	Brown SANDY SILT	ML	21					100 98 57		
90-89	9	23.5-25	Olive gray SAND w/ clay pockets	SP	26							

Avg Stiff

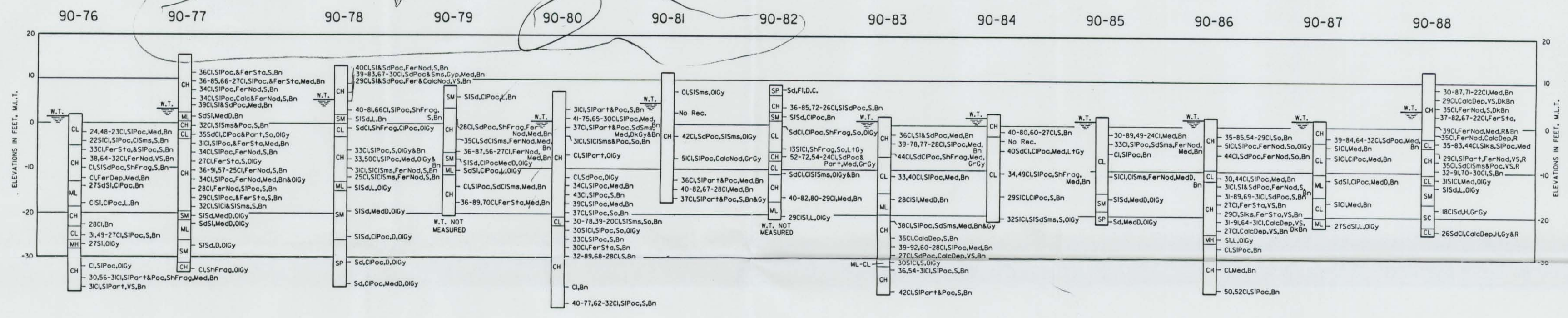
$$\begin{aligned} \text{Average for Stiff} &= \frac{1.7 + 1.0}{2} = 1.35 \text{ ksf} \\ \text{Firm} &= \text{---} = 700 \\ \text{v/s} &= \text{---} = 1800 \text{ (assumed)} \end{aligned}$$



STRESS-STRAIN CURVES
UNCONFINED COMPRESSION TEST



DISPOSAL AREA No. 2



DISPOSAL AREA No. 4

NOTES:

1. SOILS HAVE BEEN CLASSIFIED IN ACCORDANCE WITH MILITARY STANDARD 698 "UNIFIED SOIL CLASSIFICATION SYSTEM FOR ROADS, AIRFIELDS, EMBANKMENTS AND FOUNDATIONS." CONSISTENCY OF SOILS SUCH AS SOFT, MEDIUM, HARD, LOOSE, DENSE, ETC., ARE RELATIVE TERMS BASED ON ESTIMATED UNDISTURBED SHEAR STRENGTH OF THE MATERIAL AS DETERMINED BY VISUAL CLASSIFICATION, POCKET PENETROMETER TESTS AND PENETRATION RESISTANCE DURING SAMPLING.
2. FIGURES TO THE RIGHT OF BORING LOGS ARE WATER CONTENTS IN PERCENT OF THE DRY WEIGHT, DRY DENSITY, LIQUID LIMIT, PLASTIC LIMIT, AND BAR LINEAR SHRINKAGE. (MC-UOW), (LL-PL), (B.L.S.)
3. BORINGS WERE DRILLED USING WET ROTARY DRILLING TECHNIQUES AND UNDISTURBED SAMPLES WERE RECOVERED WITH A 3-INCH DIAMETER THIN WALL SAMPLER WHERE COHESIVE MATERIALS WERE ENCOUNTERED. WHERE COHESIONLESS MATERIALS WERE ENCOUNTERED, DISTURBED SAMPLES WERE TAKEN WITH A SPLIT SPOON SAMPLER DURING PERFORMANCE OF STANDARD PENETRATION TESTING.
4. WATER TABLE LEVELS SHOWN ON BORING LOGS WERE DETERMINED AFTER DRILLING BORINGS BY MEASURING THE TOP OF FLUID LEVELS IN THE BORINGS. INASMUCH AS WET ROTARY DRILLING TECHNIQUES AND DRILLING MUD WERE USED TO DRILL THE HOLES, THE LEVEL OF DRILLING FLUIDS IN THE BORE HOLES MAY NOT HAVE STABILIZED TO THE LEVEL OF THE ACTUAL WATER TABLE. ADDITIONALLY, WATER TABLES IN THE FIELD ARE LIKELY TO FLUCTUATE DEPENDING ON WEATHER CONDITIONS. THEREFORE, SOME VARIATION SHOULD BE ANTICIPATED BETWEEN WATER TABLES INDICATED AND WATER TABLES ENCOUNTERED IN THE FIELD.

VISUAL CLASSIFICATIONS

Bn Brownish	Gr Green(ish)	R Reddish	Sta Stains)
Cdc Colorous	Gy Gray(ish)	Rec Recovery	Y Very
Cl Clayey)	Gyp Gypsum	S Stiff	W.T. Water Table
D Dense	H Hard	Sd Sandy)	
D.C. Driller's	L Loose	Sh Shale	
Classification	Lt Light	Sh Shelly)	
Dep Deposit(s)	Med Medium	Sl Silty	
Dk Dark	Nod Nodules	Sls Silty	
Fer Ferrous	Ol Olive	Sks Slickensides	
Fl Fine(s)	Port Partic(s)	Sms Seams	
Frag Fragment(s)	Poc Pocket(s)	So Soft	

LABORATORY CLASSIFICATION

SP POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES.
 SM SILTY SANDS, SAND-SILT MIXTURES.
 SC CLAYEY SANDS, SAND-CLAY MIXTURES.
 ML INORGANIC SILTS AND VERY FINE SANDS, WITH SLIGHT PLASTICITY.
 CL INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, LEAN CLAYS.
 MH INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS.
 CH INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS.

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.		BRAZOS ISLAND HARBOR, TEXAS BROWNSVILLE CHANNEL DREDGING INSHORE REACH NO. 1 DISPOSAL AREAS Nos. 2 & 4 BORING LOGS	
CHECKED BY J.T.F.		SUBMITTED BY David Campbell DIST. ENGINEER	
APPROVED BY David Campbell DIST. ENGINEER		DATE MAY 1992	
Prepared under the direction of Brink P. Miller, Col., C.E. District Engineer			
SCALE AS SHOWN		SPEC. DATE	
DRAWING NUMBER F-6		SHEET 13 OF 17 FILE NO. RIO 901-204	