

PROJECT: Neches River Salt Water BarrierGDLR NO. 1077BORING NO. 80-24

LOCATION: _____

TEST DATA SUMMARY

DATE DRILLED: 16APR80

FIELD NO.	Sample Depth, Feet		CLASSIFICATION	Length of sample rec'd	SYMBOL	CONSISTENCY	POCKET (1) PENETROMETER	STAN. PENET. BLOWS/FT (2)	MOISTURE CONTENT %	DRY DENSITY	p. c. f.	L.L.	P.L.	Lab Sample No.	BAR	L.S.	SIEVE ANALYSIS							
	From	To															PERCENT			INIT. WL.	ACC. WT. RTND. SIEVE NO. (3)			
																	GRVL	SAND	FINES		NO. 4	NO. 10	NO. 40	NO. 200
1J	0.0	1.8	Grayish brown silty clayey sand with roots and organic 0.0-1.8	J	SM-SC			19					510	4.5			0	74	26	50	0	0	0	37
2C	1.8	4.5	Gray and yellow sandy clay 1.8-9.0	0.85	CL	ST	1.50	33	92				511											
3C	4.5	7.0	Gray and yellow sandy clay #Washed 9.0-10.0	1.2		ST	2.00	28	95	45	13		512				0	22	78	50	0	0	1	11
4C	7.0	9.0	Gray sandy clay with 3" sand layer	0.9		M	0.75	24	102	38	14		513				0	42	58	50	0	0	0	21
5J	10.0	12.0	Yellowish gray silty sand 10.0-27.0	J	SM	VD		25	22				514											
	12.0	15.0	#washed																					
6J	15.0	17.0	Yellowish gray silty sand	J		VD		40	24				515	0.5			0	74	26	50	0	0	0	37
	17.0	20.0	#washed																					
7J	20.0	22.0	Yellowish gray silty sand	J		VD		37	24				516											
	22.0	25.0	#washed																					
8J	25.0	27.0	Yellowish gray silty sand	J		VD		34	24				517											
	27.0	28.0	#washed																					
9C	28.0	30.0	Yellowish gray sandy clayey silt with random sand seams 28.0-30.0	0.7	ML	ST	2.50	20	110				518	3.5			0	40	60	50	0	0	0	20
10C	30.0	32.5	Light grayish green sandy clay with random sand seams 30.0-32.5	0.7	CL	H	4.25	16	113	33	15		519				0	38	62	50	0	0	0	19
11C	32.5	35.0	Yellowish gray sandy clay with random sand seams	1.15		H	4.50	19	108				520											
12C	35.0	37.5	Yellowish gray sandy clay with random sand seams	1.05		VST	2.50	20	106				521											
13C	37.5	40.0	Yellowish gray sandy clay with random sand seams 37.5-45.0	1.1	CH	VST	2.50	21	108	58	14		522				0	24	76	50	0	0	0	12
14C	40.0	42.5	Yellow and gray clay with random sand seams	0.9		VST	2.75	30	92				523											
15C	42.5	45.0	Yellow and gray clay with random sand seams	1.05		VST	2.75	30	91	53	14		524				0	2	98	50	0	0	0	1
16C	45.0	47.5	Greenish gray clay 45.0-50.0	1.05	CL	VST	2.50	20	109	31	14		525				0	10	90	50	0	0	0	5
17C	47.5	50.0	Greenish gray clay	1.1		VST	2.00	20	110	48	12		526				0	12	88	50	0	0	0	6

NOTES: (1) Tensile Strength - Consolidated Soils (2) Split Barrel Sampler (3) Acc. Wt. Method: Int. Wt. x 100 = % Ret.

(1) Tensile Strength - Consolidated Soils (2) Split Barrel Sampler (3) Acc. Wt. Method: Int. Wt. x 100 = % Ret.

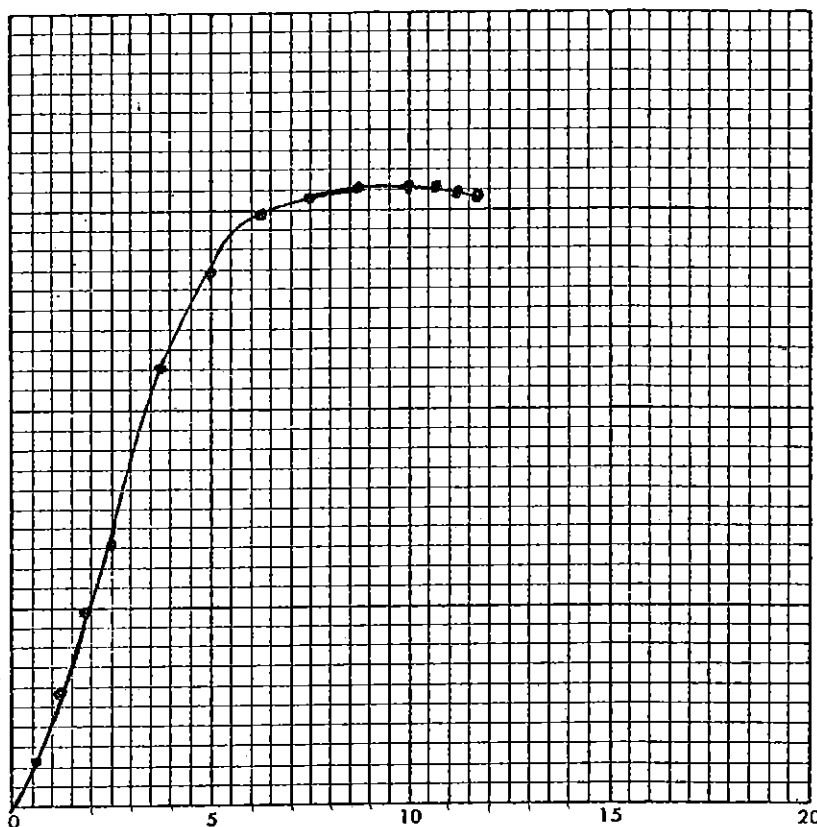
BORING NO. 80-24

Bottomed at 50.0 Water at 10.0 Tide Reading _____
 #information obtained from driller's log

Sheet 1 of sheets 1

1500
1000
500

COMPRESSIVE STRESS, T/SQ FT



AXIAL STRAIN, %

☐ CONTROLLED STRESS

☐ CONTROLLED STRAIN

TEST NO.

TYPE OF SPECIMEN

INITIAL	WATER CONTENT	w_o	%	%	%	%
	VOID RATIO	e_o				
	SATURATION	S_o	%	%	%	%
	DRY DENSITY, LB/CU FT	γ_d				

TIME TO FAILURE, MIN

 t_f

UNCONFINED COMPRESSIVE STRENGTH, T/SQ FT

 q_u

UNDRAINED SHEAR STRENGTH, T/SQ FT

 s_u

SENSITIVITY RATIO

 S_t

INITIAL SPECIMEN DIAMETER, IN

 D_o

INITIAL SPECIMEN HEIGHT, IN.

 H_o

CLASSIFICATION

LL

PL

PI

G.

REMARKS

• 80-24, S-3, 4.5-7.0

PROJECT

NECHES RIVER

AREA

BORING NO.

SAMPLE NO.

DEPTH
EL

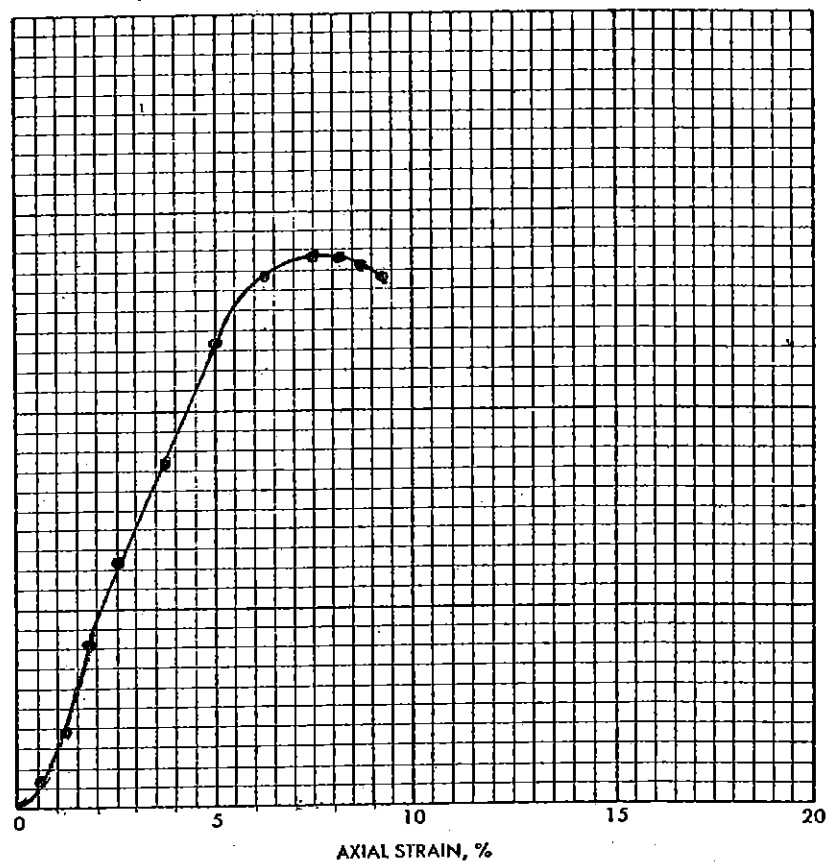
DATE

UNCONFINED COMPRESSION TEST REPORT

FAILURE SKETCHES 6000

4500
3000
1500

COMPRESSIVE STRESS, T/SQ FT



AXIAL STRAIN, %

- ☐ CONTROLLED STRESS
- ☐ CONTROLLED STRAIN

TEST NO.							
TYPE OF SPECIMEN							
INITIAL	WATER CONTENT		w_o	%	%	%	%
	VOID RATIO		e_o				
	SATURATION		S_o	%	%	%	%
	DRY DENSITY, LB/CU FT		γ_d				
TIME TO FAILURE, MIN			t_f				
UNCONFINED COMPRESSIVE STRENGTH, T/SQ FT			q_u				
UNDRAINED SHEAR STRENGTH, T/SQ FT			s_u				
SENSITIVITY RATIO			S_i				
INITIAL SPECIMEN DIAMETER, IN			D_o				
INITIAL SPECIMEN HEIGHT, IN.			H_o				
CLASSIFICATION							
LL		PL		PI		G _s	
REMARKS • 80-24, S-10, 300-32.5				PROJECT <u>NECHES RIVER</u>			
				AREA			
				BORING NO.		SAMPLE NO.	
				DEPTH EL		DATE	
				UNCONFINED COMPRESSION TEST REPORT			

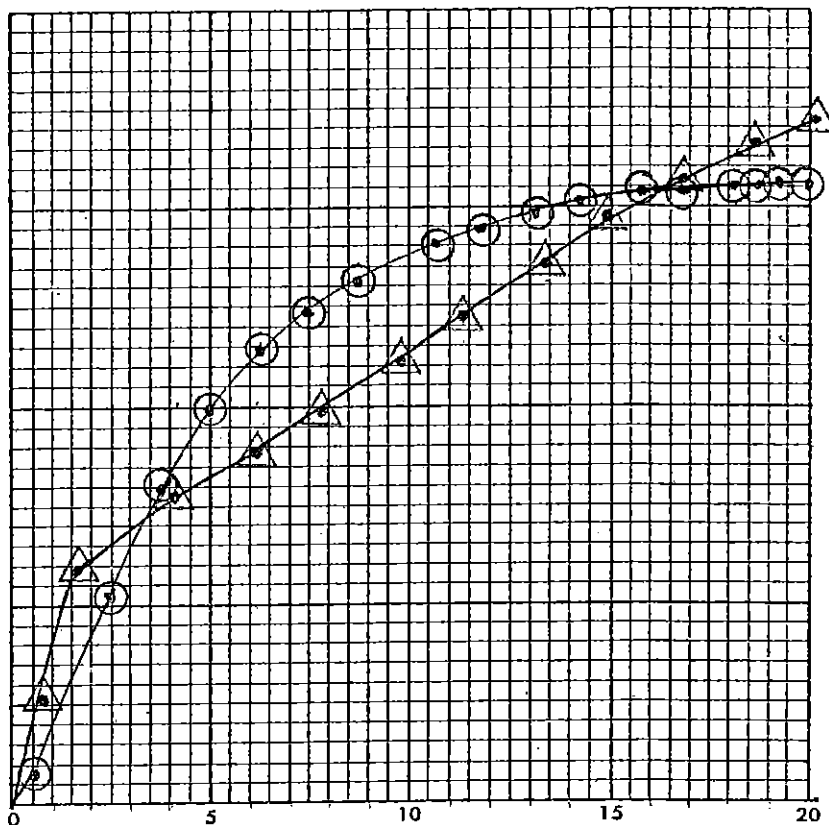
FAILURE SKETCHES 8000

1500

1000

500

COMPRESSIVE STRESS, T/SQ FT



AXIAL STRAIN, %

☐ CONTROLLED STRESS

☐ CONTROLLED STRAIN

TEST NO.

TYPE OF SPECIMEN

INITIAL	WATER CONTENT	w_o	%	%	%	%
	VOID RATIO	e_o				
	SATURATION	S_o	%	%	%	%
	DRY DENSITY, LB/CU FT	γ_d				
TIME TO FAILURE, MIN		t_f				
UNCONFINED COMPRESSIVE STRENGTH, T/SQ FT		q_u				
UNDRAINED SHEAR STRENGTH, T/SQ FT		s_u				
SENSITIVITY RATIO		S_t				
INITIAL SPECIMEN DIAMETER, IN		D_o				
INITIAL SPECIMEN HEIGHT, IN.		H_o				

CLASSIFICATION

LL PL PI G.

REMARKS

80-25, 5-2, 2.5-5.0
80-24, 5-4, 7.0-9.0

PROJECT NECHES RIVER

AREA

BORING NO.

DEPTH
EL

SAMPLE NO.

DATE

UNCONFINED COMPRESSION TEST REPORT

UNCONFINED COMPRESSION TEST

DATE

8/6/80

PROJECT

NECHES RIVER

Hole #

80-24

Lab. #

80-512

Sample

3 (4.5 - 7.0)

Depth

PROVING RING DIAL NUMBER

LC-2

PROVING RING NUMBER

5977

CALIBRATION CURVE NUMBER

3-5977

PROVING RING CONSTANT, K_r

*45.072

0-900 Dial

vertical dial #

LC-8

Cyl. #

3

RATE OF LOAD APPLICATION

0.040

FORMULAS

Deflection only

$$\text{Area} = \frac{\pi D^2}{4} = \frac{C^2 D}{4} \quad \text{Corrected Area, } A = \frac{A_0 (\text{sq. ft.})}{1 - E}$$

*45.072

$$\text{Unit Strain, } E = \frac{\Delta L}{L_0}$$

$$\text{Unit Stress} = \frac{P (\text{lb.})}{A (\text{sq. ft.})}$$

INITIAL MEASUREMENTS ON SAMPLE

AVERAGE AREA, A₀

	DIAMETER, D (in.)	CIRCUMFERENCE, C (in.)	AREA (sq. in.)	SQ. IN.	SQ. FT.
TOP	1.95		2.99	2.99	
CENTER				HEIGHT, L ₀ (in.)	
BOTTOM					
				4.0	

ELAPSED TIME (min.)	PROVING RING DIAL READING (0.0001 in.)	LOAD, P (lb.) (Ring Dial x K _r , or from calibration curve)	VERTICAL DIAL READING (in.)	VERTICAL DIAL DIFFERENCE, ΔL (in.)	UNIT STRAIN, E (in./in.)	CORRECTED AREA, A (sq. ft.)	UNIT STRESS (lb./sq. ft.)
	8		025	025	.625	3.01	120
	19		050	050	1.25	3.03	283
	31		075	075	1.87	3.05	458
	45		100	100	2.50	3.06	663
	63		125	125	3.13	3.09	919
	76		150	150	3.75	3.11	1101
	96		175	175	4.38	3.13	1238
	94		200	200	5.00	3.15	1345
	100		225	225	5.63	3.17	1422
	105		250	250	6.25	3.19	1484
	107		275	275	6.88	3.21	1502
	109		300	300	7.50	3.23	1521
	111		325	325	8.13	3.25	1539
	113		350	350	8.75	3.28	1553
	114		375	375	9.38	3.30	1557
	115		400	400	10.00	3.32	1561
	115		425	425	10.63	3.34	1552
	115		450	450	11.25	3.37	1538
	115		475	475	11.88	3.39	1529
			500	500	12.50	3.42	
			525	525	13.13	3.44	
			550	550	13.75	3.47	

WATER CONTENT (%)

W. in Cyl # 3

454

UNCONFINED COMPRESSIVE STRENGTH, q_u (lb./sq. ft.)

REMARKS AND CALCULATIONS (Use reverse side, if more space is needed)

(failure sketch)

Pen - 1.3

Color - Brown

Dish - 341

W. W. - 359

D. W. - 273



TECHNICIAN (Signature)

COMPUTED BY (Signature)

CHECKED BY (Signature)

UNCONFINED COMPRESSION TEST

DATE

8/6/80

PROJECT

NECHES RIVER

Hole#

D-24

Lab.#

D-513

SAMPLE NUMBER

6-4(7.0-9.0)

Depth

PROVING RING DIAL NUMBER

PROVING RING NUMBER

5977

CALIBRATION CURVE NUMBER

3-5977

PROVING RING CONSTANT, K_r

*45.072 0-900 Dial

VERTICAL DIAL NUMBER

LC-8

CYL #

4

RATE OF LOAD APPLICATION

0.028

FORMULAS

$$\text{Area} = \frac{\pi D^2}{4} = \frac{C^2 D}{4} \quad \text{Corrected Area, } A = \frac{A_0 (\text{sq. ft.})}{1 - E}$$

$$\text{Unit Strain, } E = \frac{\Delta L}{L_0}$$

$$\text{Unit Stress} = \frac{P (\text{lb.})}{A (\text{sq. ft.})}$$

INITIAL MEASUREMENTS ON SAMPLE

AVERAGE AREA, A_0

	DIAMETER, D (in.)	CIRCUMFERENCE, C (in.)	AREA (sq. in.)	SQ. IN.	SQ. FT.
TOP					
CENTER					
BOTTOM					

ELAPSED TIME (min.)	PROVING RING DIAL READING (0.0001 in.)	LOAD, P (lb.) (Ring Dial $\times K_r$, or from calibration)	VERTICAL DIAL READING (in.)	VERTICAL DIAL DIFFERENCE, ΔL (in.)	UNIT STRAIN, E (in./in.)	CORRECTED AREA, A (sq. ft.)	UNIT STRESS (lb./sq. ft.)
	11		.025		.88	1.550	320
	14		.050		1.76	1.560	491
	31		.075		2.65	1.580	599
	34		.100		3.52	1.590	680
	27		.125		4.41	1.600	761
	29		.150		5.29	1.620	807
	32		.175		6.17	1.630	885
	35		.200		7.05	1.650	956
	37		.225		7.94	1.670	999
	40		.250		8.82	1.680	1073
	42		.275		9.70	1.700	1114
	45		.300		10.59	1.720	1159
	47		.325		11.47	1.730	1224
	50		.350		12.35	1.750	1288
	53		.375		13.23	1.768	1351
	56		.400		14.11	1.786	1413
	59		.425		14.99	1.804	1474
	62		.450		15.87	1.823	1533
	64		.475		16.76	1.842	1586
	66		.500		17.64	1.863	1599
	69		.525		18.53	1.883	1652
	71		.550		19.41	1.903	1682
	73		.575		20.25	1.920	1714

WATER CONTENT (%)

W.W. in Cyl #4

1341

%

UNCONFINED COMPRESSIVE STRENGTH, q_u (lb./sq. ft.)

REMARKS AND CALCULATIONS (Use reverse side, if more space is needed)

(Failure Sketch)

Pen

Color

Dish

W.W.

D.W.

TECHNICIAN (Signature)

COMPUTED BY (Signature)

CHECKED BY (Signature)

UNCONFINED COMPRESSION TEST

DATE

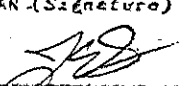
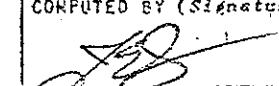
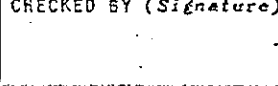
8/5/80

PROJECT NECHES RIVER		Hole # 80-24	Lab. # 80-519	Sample 10(30.0-32.5)	Depth
PROVING RING DIAL NUMBER LC-2		PROVING RING NUMBER 5977		CALIBRATION CURVE NUMBER 3-5977	
PROVING RING CONSTANT, K_r *45.072		vertical dial # LC-8	Cyl. # 3	RATE OF LOAD APPLICATION 0.040	
FORMULAS Deflection only					
$\text{Area} = \frac{\pi D^2}{4} = \frac{C^2 D}{4}$ $\text{Corrected Area, } A = \frac{A_0 (\text{sq. ft.})}{1 - E}$ $\text{Unit Strain, } E = \frac{\Delta L}{L_0}$ $\text{Unit Stress} = \frac{P (\text{lb.})}{A (\text{sq. ft.})}$					

INITIAL MEASUREMENTS ON SAMPLE						AVERAGE AREA, A_0	
	DIAMETER, D (in.)		CIRCUMFERENCE, C (in.)		AREA (sq. in.)	SQ. IN.	SQ. FT.
TOP	1.95				2.99	2.99	
CENTER						HEIGHT, L_0 (in.)	
BOTTOM						4.0	
ELAPSED TIME (min.)	PROVING RING DIAL READING (0.0001 in.)	LOAD, P (lb.) (Ring Dial $\times K_r$, or from calibration curve)	VERTICAL DIAL READING (in.)	VERTICAL DIAL DIFFERENCE, ΔL (in.)	UNIT STRAIN, E (in./in.)	CORRECTED AREA, A (sq. ft.)	UNIT STRESS (lb./sq. ft.)
	13		025	025	.625	3.01	195
	39		050	050	1.25	3.03	580
	83		075	075	1.87	3.05	1227
	127		100	100	2.50	3.06	1871
	162		125	125	3.13	3.09	2363
	192		150	150	3.75	3.11	2783
	223		175	175	4.38	3.13	3211
	248		200	200	5.00	3.15	3549
	277		225	225	5.63	3.17	3938
	288		250	250	6.25	3.19	4069
	295		275	275	6.88	3.21	4142
	297		300	300	7.50	3.23	4144
	296		325	325	8.13	3.25	4105
	295		350	350	8.75	3.28	4054
	294		375	375	9.38	3.30	4016
			400	400	10.00	3.32	
			425	425	10.63	3.34	
			450	450	11.25	3.37	
			475	475	11.88	3.39	
			500	500	12.50	3.42	
			525	525	13.13	3.44	
			550	550	13.75	3.47	

WATER CONTENT (%) W. W. in Cyl # 3	482	UNCONFINED COMPRESSIVE STRENGTH, q_u (lb./sq. ft.)
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REMARKS AND CALCULATIONS (Use reverse side, if more space is needed)		(failure sketch)
Pen - <u>3.5</u> Color - <u>Gray</u> Dish - <u>157</u> W. W. - <u>386</u> D. W. - <u>326</u>		

TECHNICIAN (Signature) 	COMPUTED BY (Signature) 	CHECKED BY (Signature) 
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DD FORM 1213

FAILURE SKETCHES

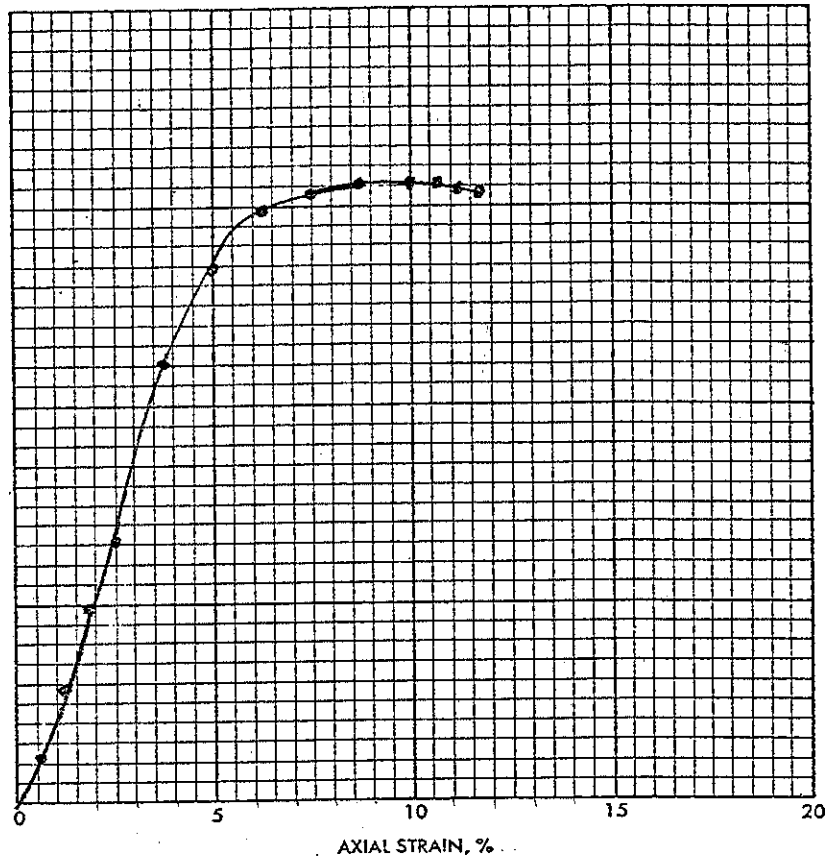
2000

1500

1000

500

COMPRESSION STRESS, T/SQ FT



☐ CONTROLLED STRESS

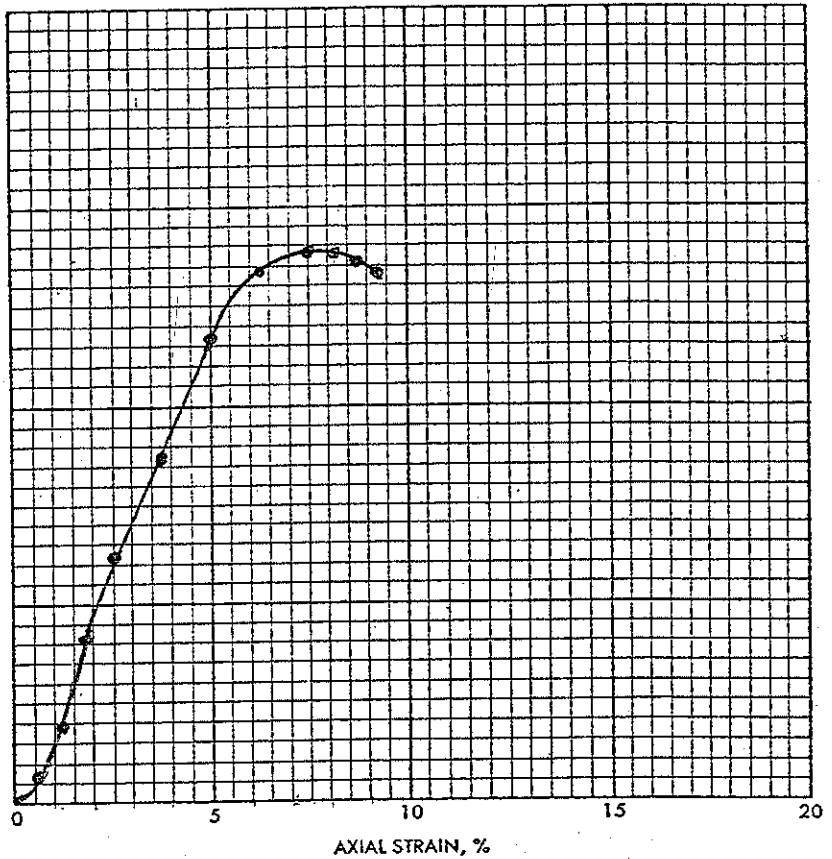
☐ CONTROLLED STRAIN

TEST NO.					
TYPE OF SPECIMEN					
INITIAL	WATER CONTENT	w_o	%	%	%
	VOID RATIO	e_o			
	SATURATION	S_o	%	%	%
	DRY DENSITY, LB/CU FT	γ_d			
TIME TO FAILURE, MIN		t_f			
UNCONFINED COMPRESSION STRENGTH, T/SQ FT		q_u			
UNDRAINED SHEAR STRENGTH, T/SQ FT		s_u			
SENSITIVITY RATIO		S_t			
INITIAL SPECIMEN DIAMETER, IN		D_o			
INITIAL SPECIMEN HEIGHT, IN		H_o			
CLASSIFICATION					
LL	PL	PI	G.		
REMARKS		PROJECT			
• 80-24, S-3, 4.5-7.0		NECHES RIVER			
		AREA			
		BORING NO.		SAMPLE NO.	
		DEPTH EL		DATE	
UNCONFINED COMPRESSION TEST REPORT					

FAILURE SKETCHES 6000

4500
3000
1500

COMPRESSION STRESS, T/SQ FT



- ☐ CONTROLLED STRESS
☐ CONTROLLED STRAIN

TEST NO.					
TYPE OF SPECIMEN					
INITIAL	WATER CONTENT	w_o	%	%	%
	VOID RATIO	e_o			
	SATURATION	S_o	%	%	%
	DRY DENSITY, LB/CU FT	γ_d			
TIME TO FAILURE, MIN		t_f			
UNCONFINED COMPRESSION STRENGTH, T/SQ FT		q_u			
UNDRAINED SHEAR STRENGTH, T/SQ FT		s_u			
SENSITIVITY RATIO		S_t			
INITIAL SPECIMEN DIAMETER, IN		D_o			
INITIAL SPECIMEN HEIGHT, IN		H_o			
CLASSIFICATION					
LL	PL	PI	G		
REMARKS		PROJECT <u>NECHES RIVER</u>			
• 80-24, S-10, 300 - 32.5		AREA			
		BORING NO.		SAMPLE NO.	
		DEPTH EL		DATE	
UNCONFINED COMPRESSION TEST REPORT					