

SUMMARY OF LABORATORY TEST RESULTS

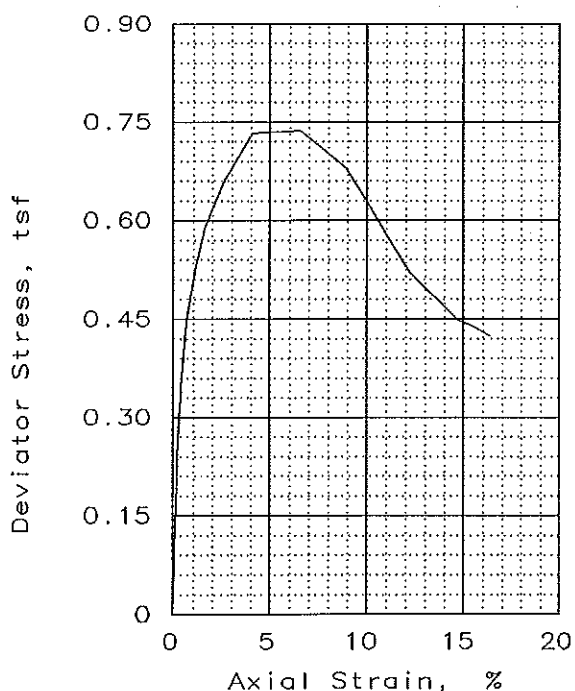
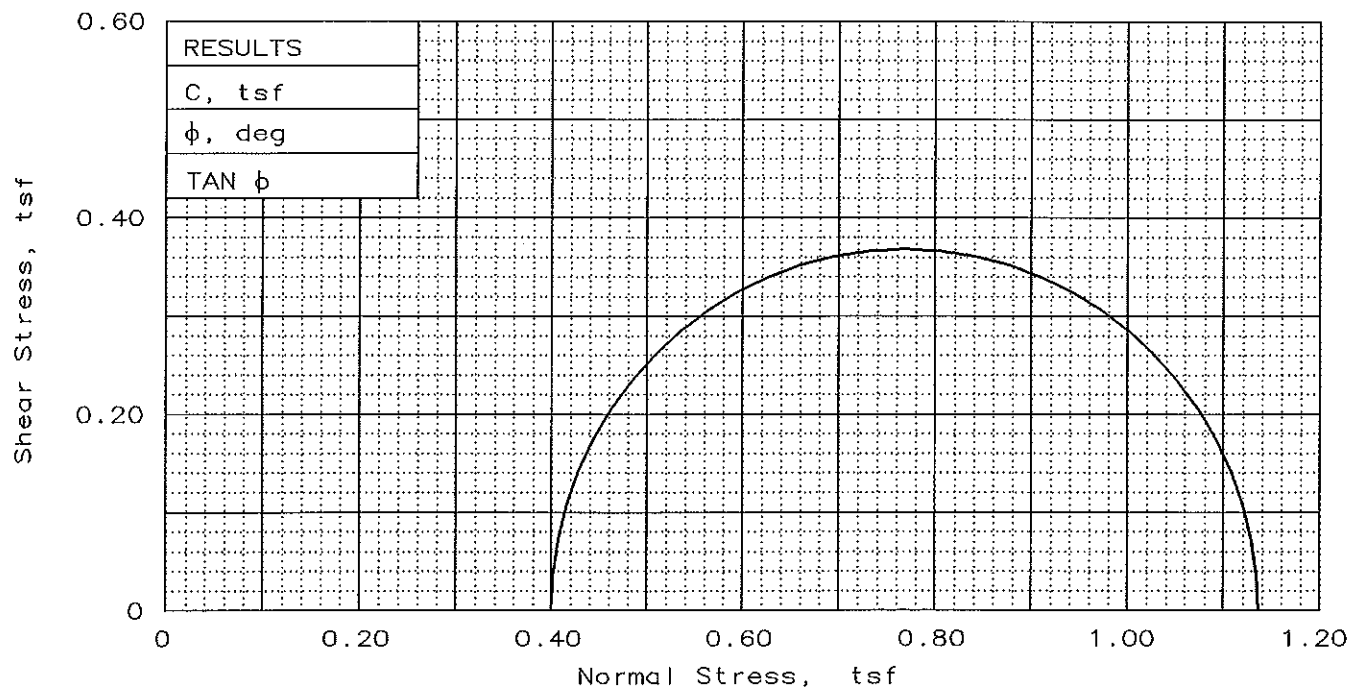
Boring No. 97-36

(+4.7 H₂O +29)

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	4.50+		Clay, w/roots, Hard, Yellowish brown	C H	26.3											
2	2 - 4	3.25		Clay, w/organic material, Very stiff, Yellowish brown	C H	26.2	92.5	116.8	77.0	27.0							
3	4 - 6	1.25		Clay, w/organic material, Stiff, Yellowish brown	C H	32.7											
4	6 - 8	1.00		Clay, w/organic material, Stiff, Brown	C H												
5	8 - 10	1.00		Clay, w/organic material, Stiff, Brown (Sw)	C H	31	90		63	19						Q _u = 740	
6	10 - 12	1.00		Clay, w/organic material, Stiff, Brown	C H	29.0	92.6	119.3	68.0	27.0	100.0	99.8	99.3	99.1	98.6		1.11
7	12 - 14	1.50		Clay, w/blocky structure & organic material, Stiff, Olive gray	C H	37.6											
8	14 - 16	1.50		Clay, w/silt seams & organic material, Stiff, Olive gray	C H	34.2											
9	16 - 18	0.75		Sandy Clay, w/sand layer, Medium stiff, Olive gray	C L	20.8											
10	18-19.5		49	Silty Sand, Dense, Gray	S M	22.2					100.0	100.0	97.9	35.8	15.0		
11	23-24.5		25	Sand, w/pea gravel & silt, Medium dense, Gray	SP-SM	19.8					100.0	99.6	85.3	17.6	8.6		
12	28-30	4.50+		Silty Clay, w/silt layer & organic material, Hard, Gray	C L	17.6											
13	30-31	4.50+	Foundation	Silty Clay, Hard, Gray	C L	13.8											
14	31-33	3.75		Silty Clay, w/organic material, Very stiff, Gray (Sw)	C L	16	115		26	13						Q _u = 1,270	
15	33-35	3.75		Silty Clay, w/calc nod fer stains & silt seams, Very stiff, Gray (Sw)	C L	18	111		42	16							Φ = 29.3 C = 18.45
16	35-37	3.75		Silty Clay, w/calc nod fer stains & silt seams, Very stiff, Gray	C L	17.3											
17	37-39	3.25		Silty Clay, w/fer stains & silt seams, Very stiff, Gray & Yellowish brown	C L	17.5											
18	39-40.5		37	Silty Sand, w/clay seams, Dense, Yellowish gray	S M						100.0	100.0	99.7	67.9	24.0		
19	41-43	1.75		Sandy Clay, w/sand seams, Stiff, Yellowish gray	C L	21.0											
20	43-44.5		43	Silty Sand, w/sandy clay seams, Dense, Yellowish gray	S M						100.0	100.0	99.6	62.1	32.9		

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



SAMPLE NO.		1
INITIAL	WATER CONTENT, %	31.9
	DRY DENSITY, pcf	88.7
	SATURATION, %	95.5
	VOID RATIO	0.901
	DIAMETER, in	2.74
	HEIGHT, in	6.11
AT TEST	WATER CONTENT, %	31.9
	DRY DENSITY, pcf	88.7
	SATURATION, %	95.5
	VOID RATIO	0.901
	DIAMETER, in	2.74
	HEIGHT, in	6.11
BACK PRESSURE, tsf		0.00
CELL PRESSURE, tsf		0.40
FAILURE STRESS, tsf		0.74
PORE PRESSURE, tsf		
STRAIN RATE, %/min.		0.366
ULTIMATE STRESS, tsf		
PORE PRESSURE, tsf		
σ_1 FAILURE, tsf		1.14
σ_3 FAILURE, tsf		0.4

TYPE OF TEST:

Unconsolidated undrained

SAMPLE TYPE: Undisturbed

DESCRIPTION: Fat Clay (CH)

LL= 63 PL= 19 PI= 44.0

SPECIFIC GRAVITY= 2.70

REMARKS: Specific Gravity Est.

CLIENT: US Army Corps of Engineers

Galveston District

PROJECT: Neches River Saltwater Barrier

SAMPLE LOCATION: Boring: 97-36, Fld No. 5

8.0-10.0, Lab No. 97/1101

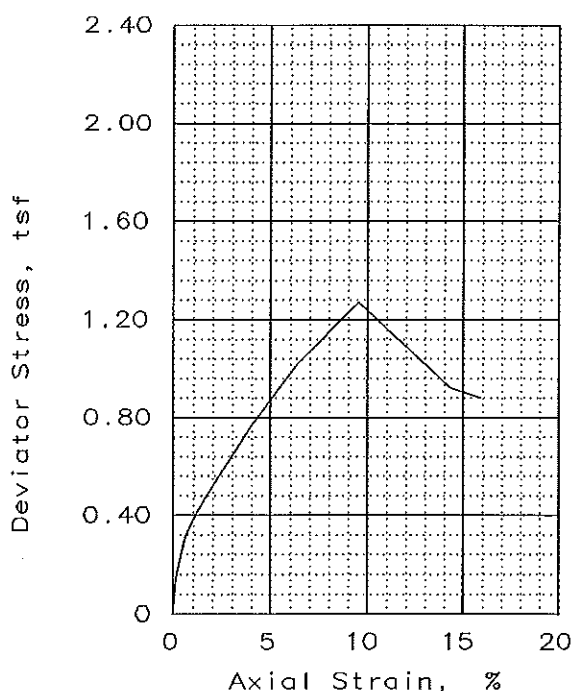
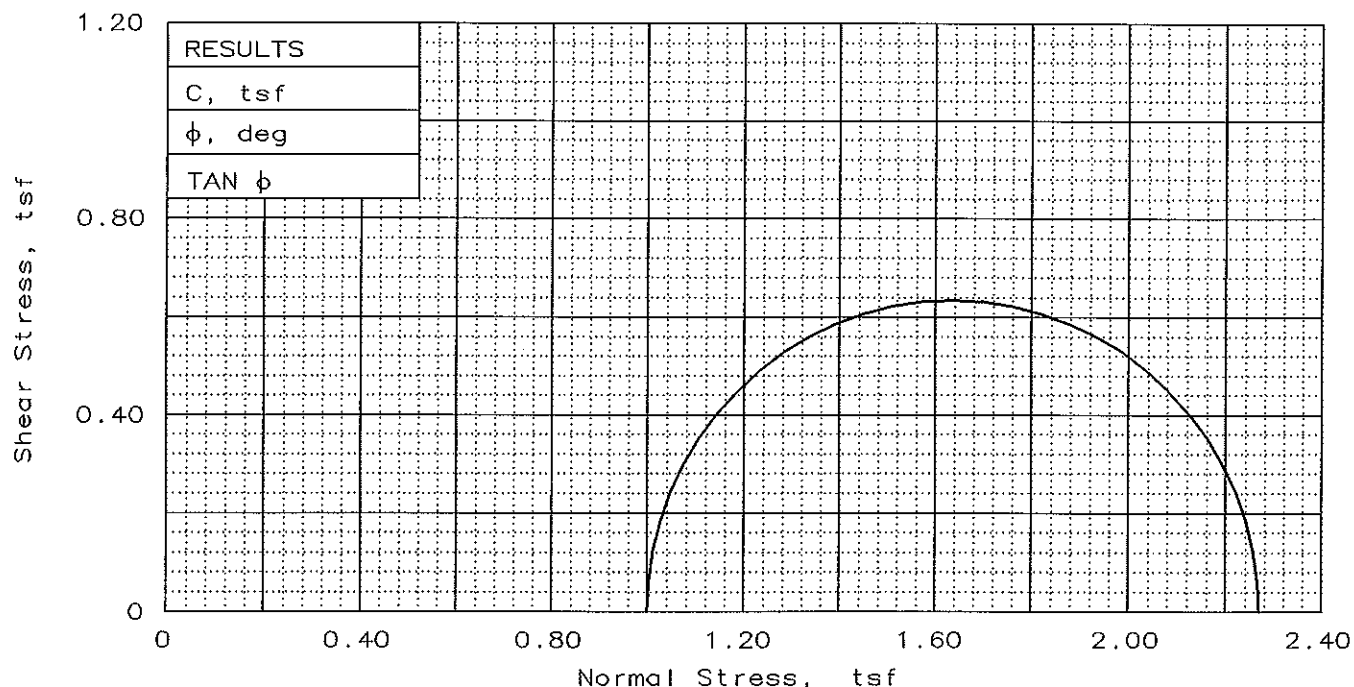
PROJ. NO.: 16858

DATE: October 1997

TRIAXIAL COMPRESSION TEST

CORPS OF ENGINEERS - SOUTHWESTERN

FIG. NO.



SAMPLE NO.		1
INITIAL	WATER CONTENT, %	16.0
	DRY DENSITY, pcf	114.8
	SATURATION, %	92.2
	VOID RATIO	0.468
	DIAMETER, in	2.73
	HEIGHT, in	6.29
AT TEST	WATER CONTENT, %	16.0
	DRY DENSITY, pcf	114.8
	SATURATION, %	92.2
	VOID RATIO	0.468
	DIAMETER, in	2.73
	HEIGHT, in	6.29
BACK PRESSURE, tsf		0.00
CELL PRESSURE, tsf		1.00
FAILURE STRESS, tsf		1.27
PORE PRESSURE, tsf		
STRAIN RATE, %/min.		0.366
ULTIMATE STRESS, tsf		
PORE PRESSURE, tsf		
σ_1 FAILURE, tsf		2.27
σ_3 FAILURE, tsf		1

TYPE OF TEST:

Unconsolidated undrained

SAMPLE TYPE: Undisturbed

DESCRIPTION: Sandy Lean Clay
(CL)

LL= 26 PL= 13 PI= 13.0

SPECIFIC GRAVITY= 2.70

REMARKS: Specific Gravity Est.

CLIENT: US Army Corps of Engineers

Galveston District

PROJECT: Neches River Saltwater Barrier

SAMPLE LOCATION: Boring: 97-36, Fld No. 14
31.0-33.0, Lab No. 97/1102

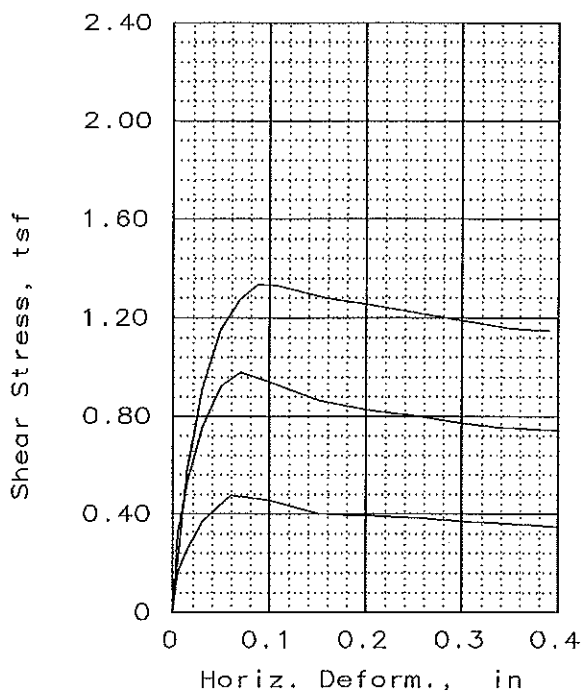
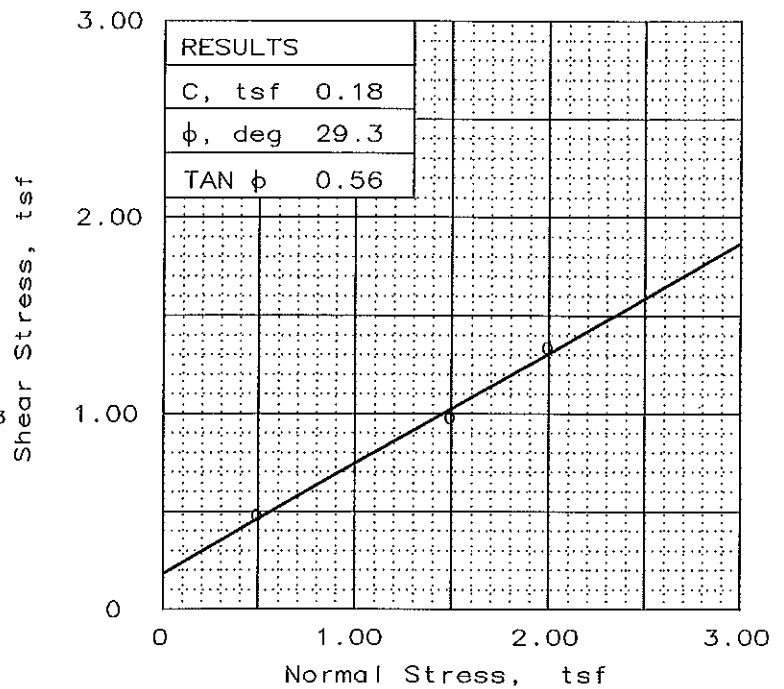
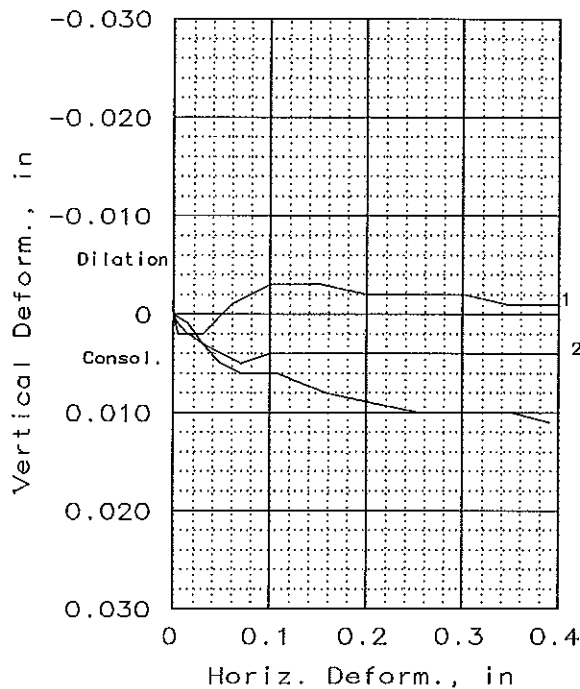
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TRIAxIAL COMPRESSION TEST

CORPS OF ENGINEERS - SOUTHWESTERN

FIG. NO.



SAMPLE NO.		1	2	3
INITIAL	WATER CONTENT, %	18.5	18.0	19.0
	DRY DENSITY, pcf	107.3	105.4	106.2
	SATURATION, %	87.4	81.2	87.6
	VOID RATIO	0.570	0.600	0.587
	DIAMETER, in	2.51	2.51	2.51
	HEIGHT, in	1.00	1.00	1.00
AT TEST	WATER CONTENT, %	19.2	20.0	18.3
	DRY DENSITY, pcf	110.9	109.5	113.0
	SATURATION, %	99.5	100.3	100.8
	VOID RATIO	0.520	0.539	0.491
	DIAMETER, in	2.51	2.51	2.51
	HEIGHT, in	0.97	0.96	0.94
NORMAL STRESS, tsf		0.50	1.50	2.00
MAX. SHEAR, tsf		0.48	0.98	1.34
STRAIN RATE, %/min.		0.004	0.004	0.004
ULT. SHEAR, tsf		0.35	0.74	1.15

SAMPLE DATA

SAMPLE TYPE: Undisturbed

DESCRIPTION: Sandy Lean Clay
(CL)

LL= 42 PL= 16 PI= 26.0

SPECIFIC GRAVITY= 2.70

REMARKS: Specific Gravity Est.

CLIENT: US Army Corps of Engineers

Galveston District

PROJECT: Neches River Saltwater Barrier

SAMPLE LOCATION: Boring: 97-36, Fld No. 15
33.0-35.0, Lab No. 97/1103

PROJ. NO.: 16858

DATE: October 1997

DIRECT SHEAR TEST

CORPS OF ENGINEERS - SOUTHWESTERN

FIG. NO.