BUFFALO BAYOU, TEXAS
WHITE OAK BAYOU CHANNEL RECTIFICATION
SUMMARY OF DIRECT SHEAR TEST DATA

TABLE 2

Boring Number	Depth, feet	Type of test	Density Data MC %	Density Data UDW Lbs/cu ft	Shear Data maximum Ø	Shear Data maximum C	Atterberg Limits LL	Atterberg Limits PL	Bar L.S.	Gradation Gr	Gradation Sa	Gradation Fines	Classification
6ST-27	22.0-24.0	S	16	110	31.5	0.0	32	15	7	0	25	75	Rust-tan clay (CL),v/stiff
6ST-28	10.0-12.0	S	21	103	24.5	0.0	34	13	11	0	20	80	Rust-red clay (CL), soft
6ST-29	32.0-33.0	S	23	101	26.0	0.0	62	22	20	0	0	100	Red clay (CH), v/stiff
6ST-31	14.0-16.0	S	3	109	34.2	0.0	NP	NP	2	0	60	40	Gray silty sand (SM)
6ST-31	37.5-39.0	S	25	100	35.7	0.0	35	15	-	0	5	95	Rust clay (CL),stiff
6ST-113	29.0-30.5 32.0-34.0	S	-	101	35.0	0.0	-	-	-	0	90	10	Tan silty sand (SM-SP)
6ST-117	6.0-8.0	S	21	106	26.0	0.0	48	19	-	2	16	82	Tan sandy clay (CL),v/stiff
6ST-117	14.0-16.0	S	19	108	35.0	0.0	39	13	-	0	21	79	Red sandy clay (CL), hard
6ST-117	24.0-26.0	S	21	104	32.6	0.0	-	-	3.0	0	11	89	Red clayey silt (CL-ML), hard
6ST-123	0.0-2.0	S	15	109	28.5	0.0	45	18	-	0	21	79	Gray sandy clay (CL), hard
6ST-123	42.0-43.5	S	24	100	27.5	0.0	57	23	-	0	0	100	Red clay (CH), very stiff
6ST-154	20.0-22.0	S	23	100	34.6	0.0	-	-	0.0	8	19	73	Red sandy silt (ML)
6ST-156	30.0-32.0	S	17	106	30.0	0.0	33	19	-	0	0	100	Red clay (CL), very stiff
6ST-157	39.0-40.0	S	32	89	25.2	0.0	68	27	-	0	0	100	Brown clay (CH), hard
6ST-159	10.0-12.0	S	12	113	28.0	0.0	27	13	-	0	30	70	Tan sandy clay (CL), hard
6ST-169	10.0-12.0	S	29	95	19.8	0.0	62	18	-	0	1	99	Brown clay (CH), stiff
6ST-169	50.0-52.0	S	25	102	25.0	0.0	57	20	-	0	2	98	Red clay (CH), hard
6ST-171	26.0-28.0	S	22	105	28.1	0.0	53	18	-	0	1	99	Red clay (CH), very stiff

Galveston Dist. Lib. Report No. 1013

BUFFALO BAYOU, TEXAS

WHITE OAK BAYOU
PROPOSED ALIGNMENT

SCALE OF FEET

100' 0 100'

U.S. ARMY ENGINEER DISTRICT, GALVESTON, TEXAS APRIL 1963

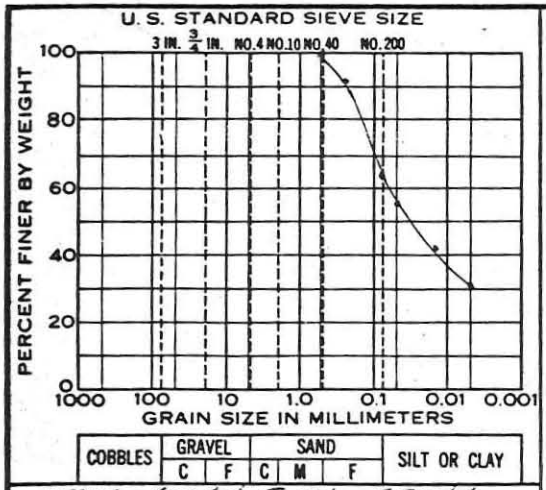
TO ACCOMPANY GENERAL DESIGN MEMORANDUM NO. 1 BUFFALO AND WHITE OAK BAYOUS AND WHITE OAK BAYOU FEATURE DESIGN MEMORANDUM NO. 2, MILE 1.07 TO YALE STREET

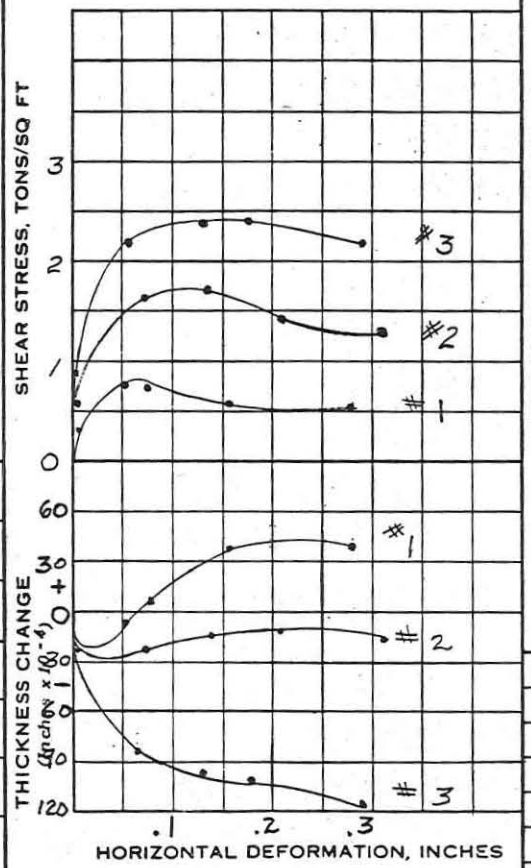
DATED: APRIL 1963

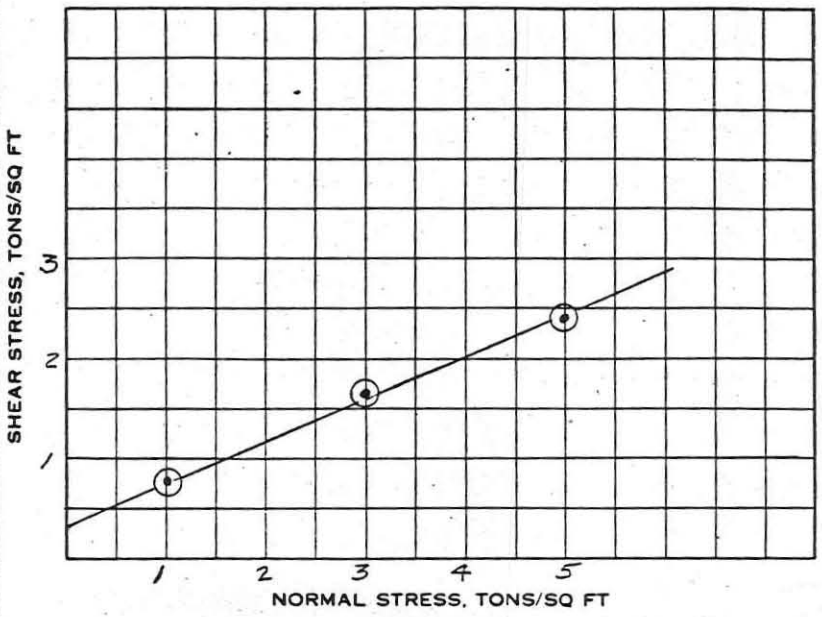
FILE: HSC 402-133

Sheet 4 of 7

PLATE 59







Classification Tan-Light Gray Sandy Clay

LL 27.4	G
PL 13.4	D_{10}

Test No.	1	2	3
Initial Water Content, W_0 %	12.1	12.1	12.1
Dry Density Lbs/Cu Ft	113.3	114.1	113.3
Void Ratio, e_0			
Saturation, S_0 %			
Duration of Test (min)	100	160	250
WC after Test, W_f %	16.9	15.0	15.3
Normal Stress, σ T/Sq Ft	1	3	5
Max. Shear Stress, τ T/Sq Ft	.75	1.72	2.41

Type of Test: Strain - Control Rate .001 in/min; Consolidated; Drained

Type of Specimen: Undisturbed; 3 in. square; .75 in. thickness

SHEAR VALUES	Ø	TAN Ø	C, T/SQ FT
Maximum	22.55°	.4152	.335
Ultimate			

Remarks:

Project WHITE OAK

Area

Boring No. 6 ST-159 Sample No. 64-5945

Elev or Depth 10' - 12' Date July '64

DIRECT SHEAR TEST REPORT

Plate No. 4

White Oak Bayou LOG OF BORING NO. 6ST-159

TYPE: 6 in. Shelby Tube LOCATION:

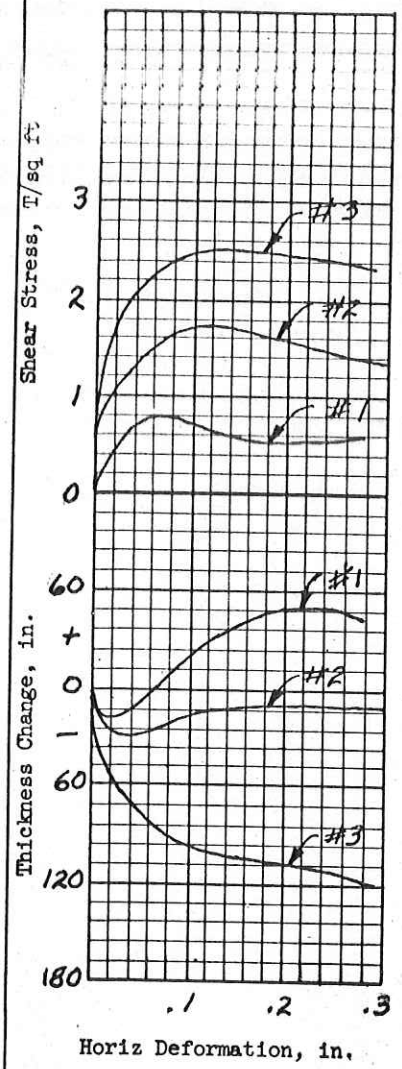
SURF EL:

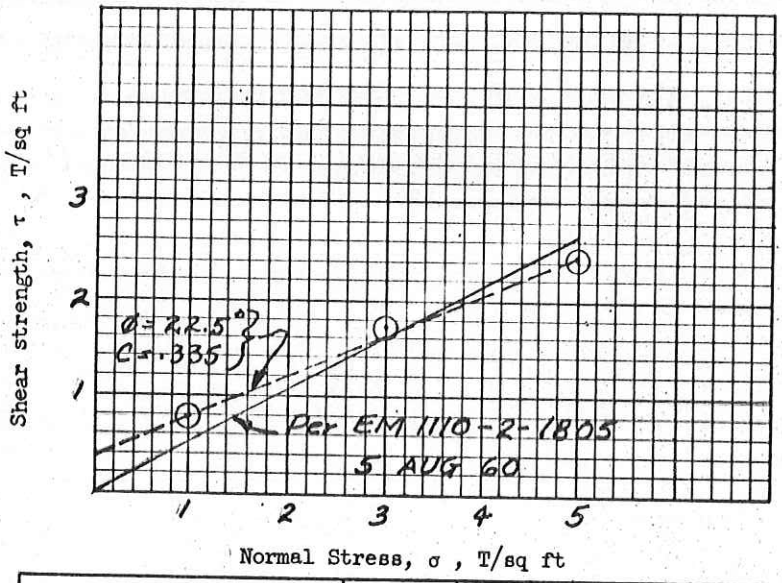
DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT.	UNIT DRY WT. LBS./CU.FT.	POCKET PENETROMETER TONS / SQ. FT. (0.5 1.0 1.5 2.0 2.5 3.0) / PLASTIC LIMIT — WATER CONTENT, % — LIQUID LIMIT (10 20 30 40 50 60)	ELEVATION FT
0			Red Tan Gray Sandy Clay, Hard Fill 0'-4' Variegated			4.5	
			Org. Mat. 4'-8'			4.5	
5	CL		LS-10.0 0-21-79		109	4.5+	
						4.5	
10			LS-7.0 1-33-66		115		
			Red Gray Clay, Hard Sand Seams 12'-16'			4.5+	
15	CH		Cal. Nod. 16'-20'			4.5+	
			LS-19.0 0-2-98		107	4.5+	
20	CL ML		Red Gray Silty Clay, Hard Variegated LS-4.0 SS 2-11-87		117	4.5+	
	ML		Red Gray Sandy Silt, w/sandstone LS-0.0 Variegated 0-40-60		108		
25			Clay Pockets 24'-26'				
			LS-0.0 0-64-36		109		
	SM		Red Silty Sand Sandstone 26'-26.5' D.C. Believed to be silty sand				
30			Red Clay, Very Stiff Silt Seams 30'-32'	20			
	CL		SS 32'-34' LS-8.0 0-0-100		103		
35			Red Clay, Very Stiff Layers of Silt LS-15.0 0-0-100		98	3.5	
	CH						
40	ML		Red Sandy Silt LS-0.0 0-47-53		106		
45							
50							

COMPLETION DEPTH 40.0 Ft. DEPTH TO WATER IN BORING 25.0 Ft.

DATE 19 June 1964 DATE

SWN 266(C)
22 AUG 62





Test No.			1	2	3	
Initial	Water content	w_o	12.1 %	12.1 %	12.1 %	%
	Void ratio	e_o				
	Saturation	S_o	%	%	%	%
	Dry density lb/cu ft	γ_d	113.3	114.1	113.3	
Void ratio after consolidation		e_c				
Time for 50% consolidation, min		t_{50}				
Final	Water content	w_f	16.9 %	15.0 %	15.3 %	%
	Void ratio	e_f				
	Saturation	S_f	%	%	%	%
Actual time to failure, min.		t_f	100	160	250	
Normal stress T/sq ft		σ	1	3	5	
Maximum shear strength, T/sq ft		τ	.75	1.72	2.41	

Shear Values

ϕ' = 28.0°

tan ϕ' = .533

c' = 0.0

Test Type (Check One) ☐ Controlled, stress ☑ Controlled, strain

Type of Specimen Undisturbed | 3 in. Square | .75 in. Thickness

Classification Tan-Light Gray Sandy Clay (CL)

LL 27.4 | PL 13.4 | PI | D_{10}

Remarks RATE OF STRAIN .001 in/min.

Project WHITE OAK

Area

Boring No. 65T-159 | Sample No. 64-5945

Depth El 10' - 12' | Date JULY 64

DIRECT SHEAR TEST REPORT

ENG FORM 2092 1 MAY 63 PREVIOUS EDITIONS ARE OBSOLETE. (TRANSLUCENT) C 3437

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PLATE 31