TEST DATA SUMMARY

SWDGL REPORT NO. 7281

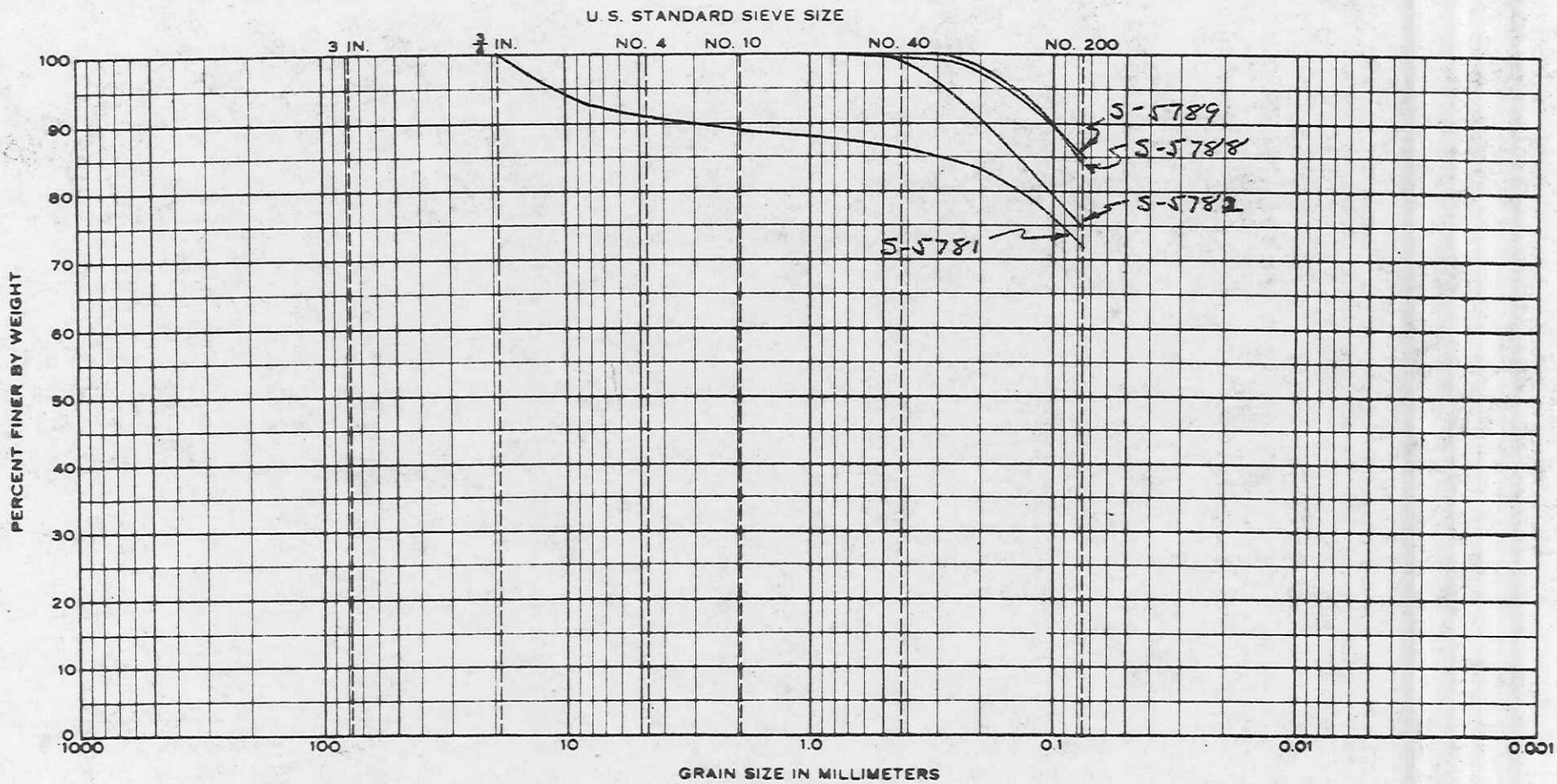
FEATURE FOUNDATION MATERIAL

Trinity River
Lock and Dam Site No. 6

BORING NO.	SAM. NO.	DEPTH OR ELEV. OF SAMPLE	LABORATORY CLASSIFICATION	MECHANICAL ANALYSIS: GRAVEL %	SAND %	FINES %	D_{10}	ATTERBERG LIMITS: LL	PL	SPECIFIC GRAVITY G	NAT. WATER CONT. %	NATURAL DRY DENSITY LBS/CU FT	COMPACTION DATA: OPT. WATER %	MAXIMUM DRY DENSITY LBS/CU FT	SHEAR DATA: INITIAL e	DRY DENSITY LBS/CU FT	W_I %	W_F %	S_I %	TYPE TEST	SPECIMEN SIZE INCHES	TEST	σ_m T/SQ FT	σ_I T/SQ FT	C T/SQ FT	ϕ DEGREES	PERMEABILITY: e	K FT/MIN.	CONSOLIDATION DATA: P_o T/SQ FT	P_c T/SQ FT	C_c	t_{50}*	REMARKS
6ST-6-6																																	
S-5	778	10.0-11.0	CL	0	20	80		48	13		15.4	113				113	15.4			UC	4.9 x 7.5		0.0	4.5									LS = 16
				Lt. gray and yellow mottled CLAY, hard.																													
S-5	779	30.0-32.0	CL-ML								32.2	88				90	29.8			UC	5.2 x 7.9		0.0	5.6									
				Bluish-gray silty CLAY, hard.																													
S-5	780	38.0-40.0	CL-ML								37.0	83				83	36.2			UC	5.3 x 7.8		0.0	8.7									
				Bluish-gray silty CLAY, hard.																													
6ST-6-7																																	
S-5	781	2.0-4.0	CL	9	19	72		68	14	2.65	22.5	101																					
				Yellowish-brown to very dk. gray sandy CLAY, stiff.											.718	96	24.5	25.6	90	DS-S	3 x 3 x 0.5	1			0.2	14.6							LS = 21
															.704	97	24.5	24.8	92	"	"	2											
															.713	97	24.3	22.2	90	"	"	3											
S-5	782	4.0-6.0	CH	0	25	75		52	13	2.67	16.8	113																			0.14		LS = 18
				Lt. gray and reddish-yellow sandy CLAY, hard.																													
S-5	783	46.0-48.0	SHALY CLAY								26.7	97				98	25.9			UC	2.0 x 3.3		0.0	11.0									
				Lt. olive-brown and bluish-gray SHALY CLAY, montmorillonitic, slickensided.																													
6ST-6-8																																	
S-5	784	22.0-24.0	CL-ML								25.9	95				95	25.9			UC	5.3 x 7.6		0.0	1.4									
				Olive and blue silty CLAY, montmorillonitic.																													
S-5	785	26.0-28.0	ML-CL								27.8	94				95	27.1			UC	5.4 x 8.5		0.0	2.6									
				Blue clayey SILT, montmorillonitic.																													
S-5	786	33.5-35.5	ML-CL								26.9	95				95	26.9			UC	5.7 x 7.9		0.0	3.4									
				Olive clayey SILT, montmorillonitic.																													
S-5	787	35.5-37.5	CL-ML								26.5	95				96	26.0			UC	5.7 x 9.2		0.0	4.1									
				Olive silty CLAY, montmorillonitic.																													
6ST-6-10																																	
S-5	788	24.0-26.0	CL	0	16	84		44	21		28.9	96				97	27.9			UC	5.4 x 8.8		0.0	2.2									LS = 8
				Bluish-gray CLAY, montmorillonitic.																													
6ST-6-12																																	
S-5	789	8.0-10.0	CH	0	15	85		68	14	2.64	27.6	94																					LS = 21
				Dk. gray CLAY, stiff; few platy calcareous nodules to ¼" size.											.981	83	31.6	32.8	85	DS-S	3 x 3 x 0.5	1			0.1	15.1							
															1.015	82	34.1	30.1	89	"	"	2											
															.932	85	27.2	28.6	77	"	"	3											

NOTE: Materials described above as "silty" or "silt" are typically low-P.I. materials having some structural strength and characterized by friableness in varying degrees.

Triaxial Compression
UC – Unconfined Compression
DS – Direct Shear
UU – Unconsolidate Undrained
Consolidated Drained
CU – Consolidated Undrained
* Values at Pressure
T/SQ FT



COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Elev or Depth	Classification	Nat WC	LL	PL	PI	LS	Hole No.
S-5781	2.0-4.0	Sandy CLAY (CL)		68	14	54	21	6ST-6-7
S-5782	4.0-6.0	Sandy CLAY (CH)		52	13	39	18	"
S-5788	24.0-26.0	CLAY (CL)		44	21	23	8	6ST-6-10
S-5789	8.0-10.0	CLAY (CH)		68	14	54	21	6ST-6-12

Project: Trinity River Lock and Dam Site No. 6

FOUNDATION MATERIAL

Area: GALVESTON DISTRICT

Boring No. 6ST-6-7, -10 & -12

Date: NOV 1961

GRADATION CURVES

PLATE NO. 2

SWDGL REPORT NO. 7281

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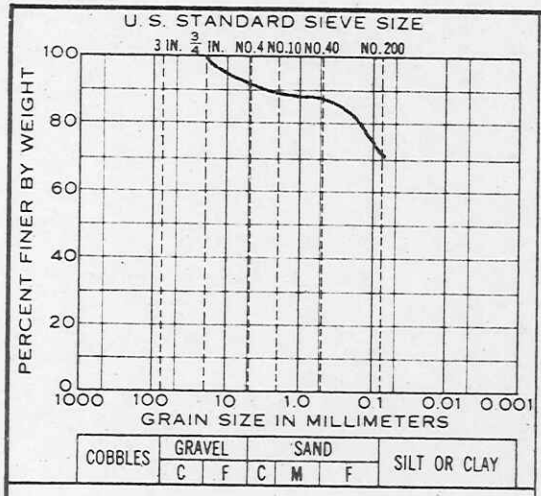
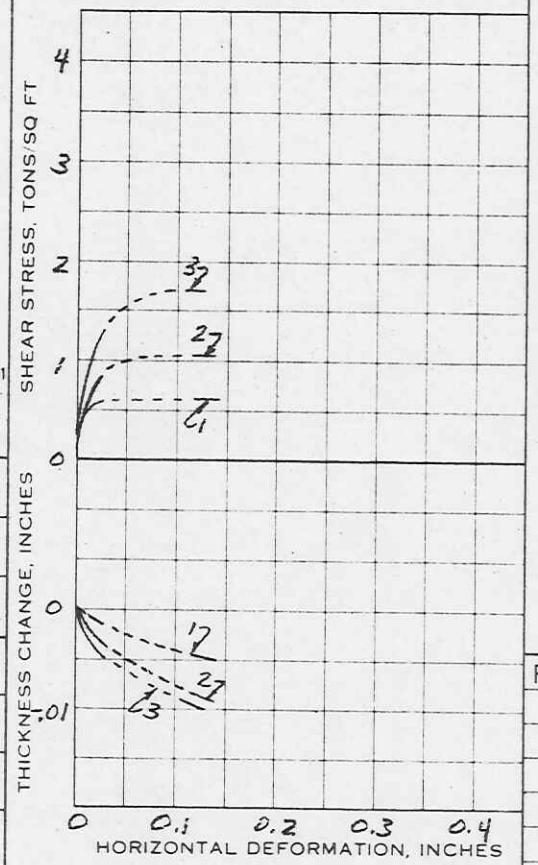
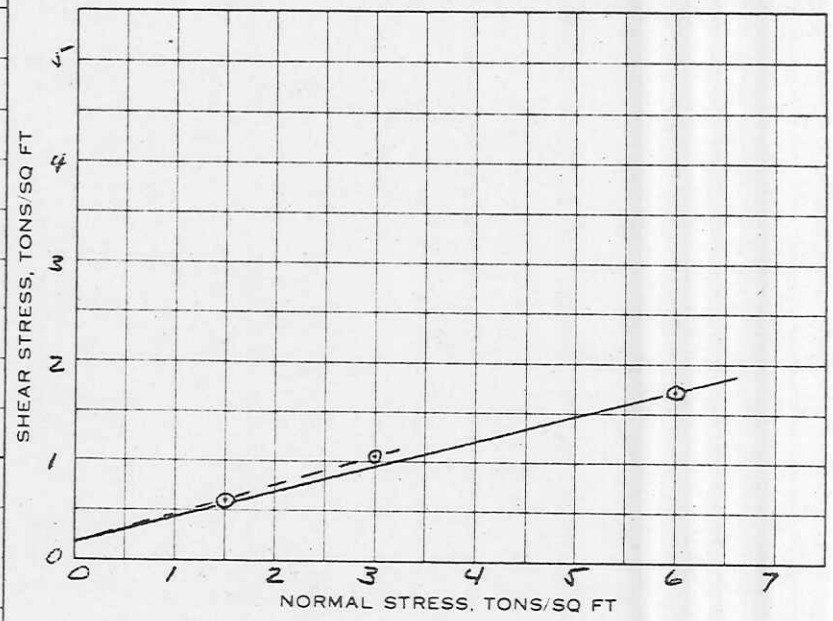






Classification Sandy CLAY (CL)

LL 68	G 2.65		
PL 14	D_{10}		
Test No.	1	2	3
Initial Water Content, W_0 %	24.5	24.5	24.3
Dry Density Lbs/Cu Ft	96	97	97
Void Ratio, e_0	.718	.704	.713
Saturation, S_0 %	90	92	90
Duration of Test (to τ)	1000+'	1000+'	1000+'
WC after Test, W_F %	25.6	24.8	22.2
Normal Stress, σ T/Sq Ft	1.5	3.0	6.0
Max. Shear Stress, τ T/Sq Ft	0.61	1.05	1.73
t_{50}	–	–	–

Type of Test – S
Strain – Control
Rate: 0.0001 in./min.
x Consolidated
x Drained

Type of Specimen
UNDISTURBED
3.0 in. square
0.5 in. thickness

SHEAR VALUES	Ø	TAN Ø	C, T/SQ FT
Maximum	14.6	.260	0.2
Ultimate			

Remarks:

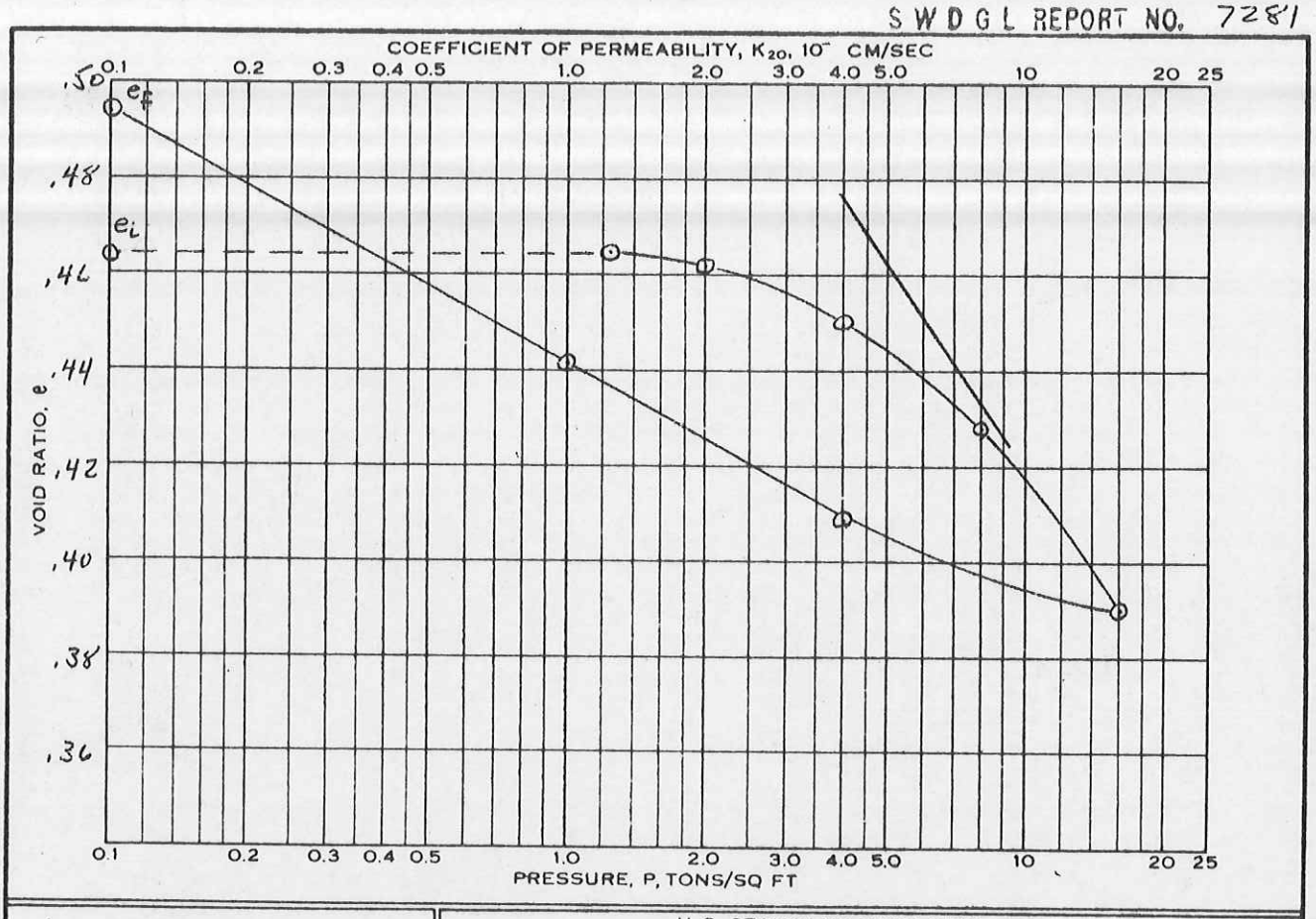
Project Trinity River - Lock and Dam Site No. 6
FOUNDATION MATERIAL
Area GALVESTON DISTRICT
Boring No. 6ST-6-7 Sample No. S-5781
Elev or Depth 2.0-4.0 Date NOV 1961

DIRECT SHEAR TEST REPORT

PLATE NO. 23

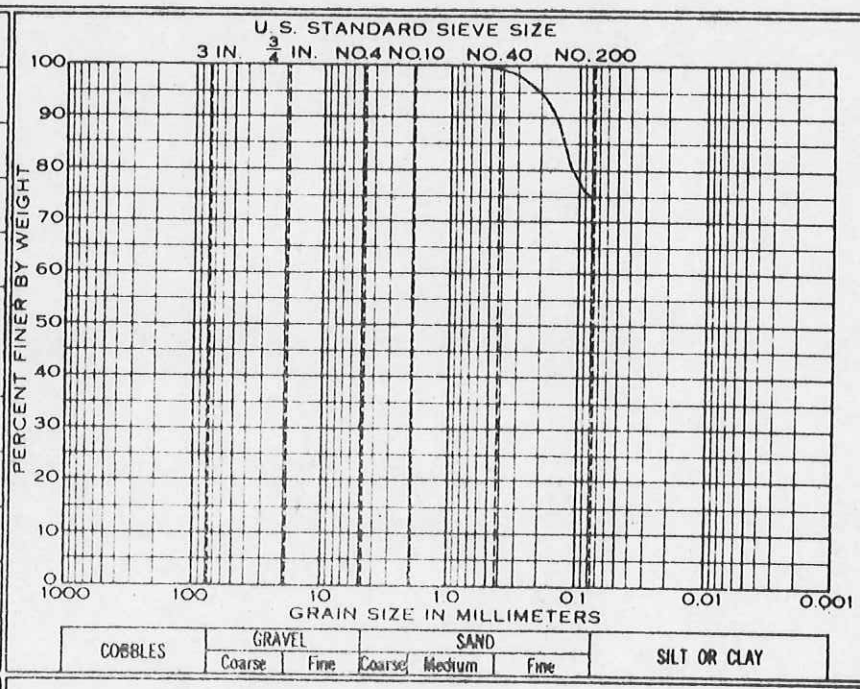
ENG FORM 2092

S.W.D.G.I. REPORT NO. 7281



TEST DATA

Type of Specimen	UNDISTURBED
Overburden Pressure, P_0	Tons/Sq Ft
Preconsol Pressure, P_c	Tons/Sq Ft
Compression Index, C_c	0.14
Permeability at Initial e	K_{20} _____ x 10^{-} Cm/Sec _____ Ft/Min
Initial Ht. 2H = 1.00 in.	Diam. 4.44 in.
Initial Saturation, S_0 %	92
Final Saturation, S_f %	100
Initial Dry Density Lbs/Cu Ft	114
Initial Water Content, W_0 %	16.1



Remarks:
Expansion pressure slightly greater than 1.25 tsf.

Classification Sandy CLAY (CH)

LL 52	G 2.67
PL 13	D_{10}

Project Trinity River - Lock and Dam Site No. 6

FOUNDATION MATERIAL

Area GALVESTON DISTRICT

Boring No. 65T-6-7	Sample No. S-5782
Elev or Depth 4.0 - 6.0	Date NOV 1961

CONSOLIDATION TEST REPORT

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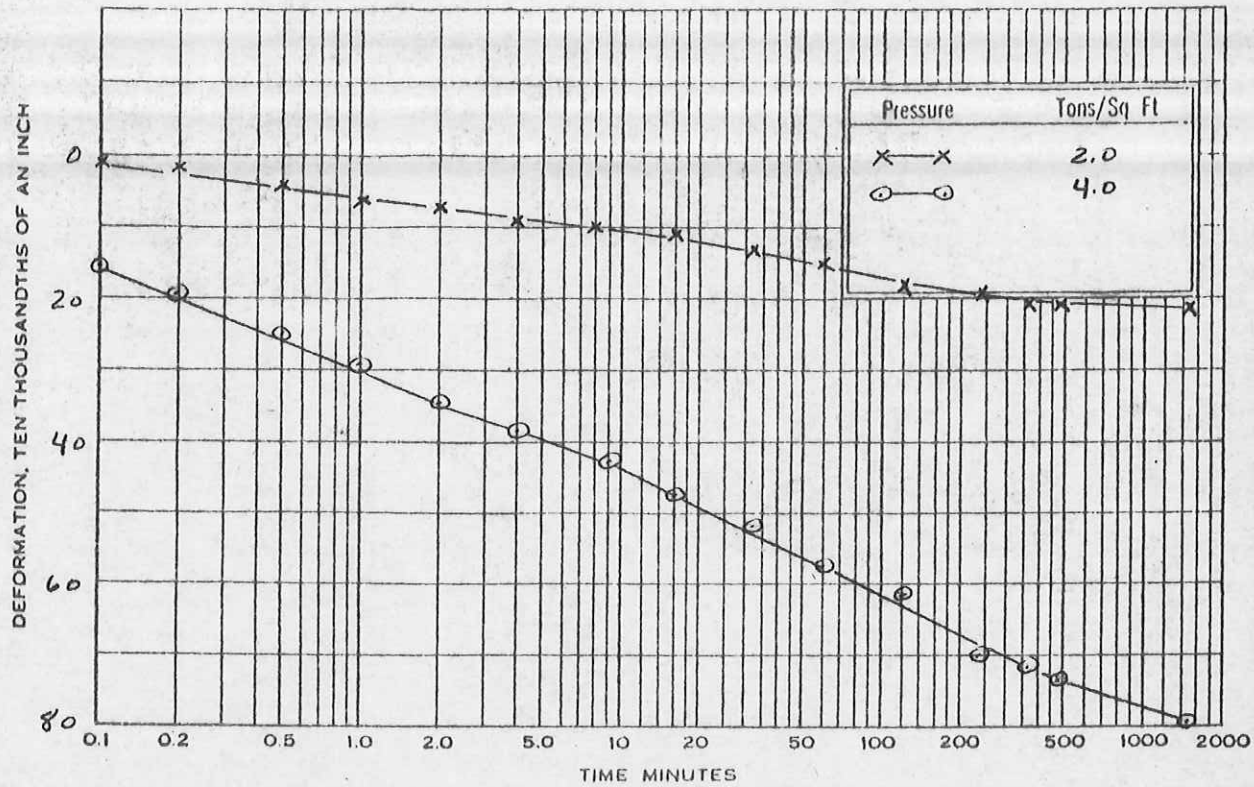

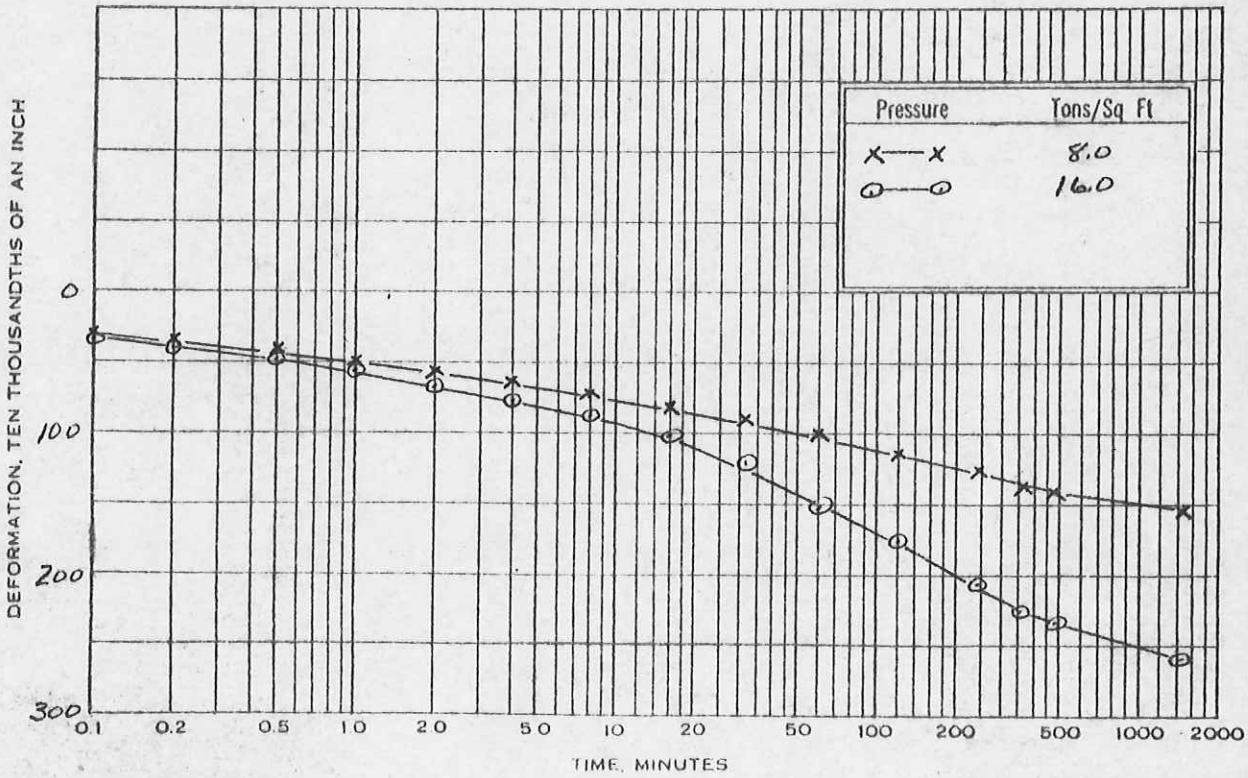

Project Trinity River - Lock and Dam Site No. 6 FOUNDATION MATERIAL

Area GALVESTON DISTRICT

Boring No. 6ST-6-7 | Sample No. S-5782 | Elev or Depth 4.0-6.0 | Date NOV 1961

CONSOLIDATION TEST-TIME CURVES

ENG FORM 2088

PLATE NO. 28