TEST DATA SUMMARY

SWDGL REPORT NO. 7281

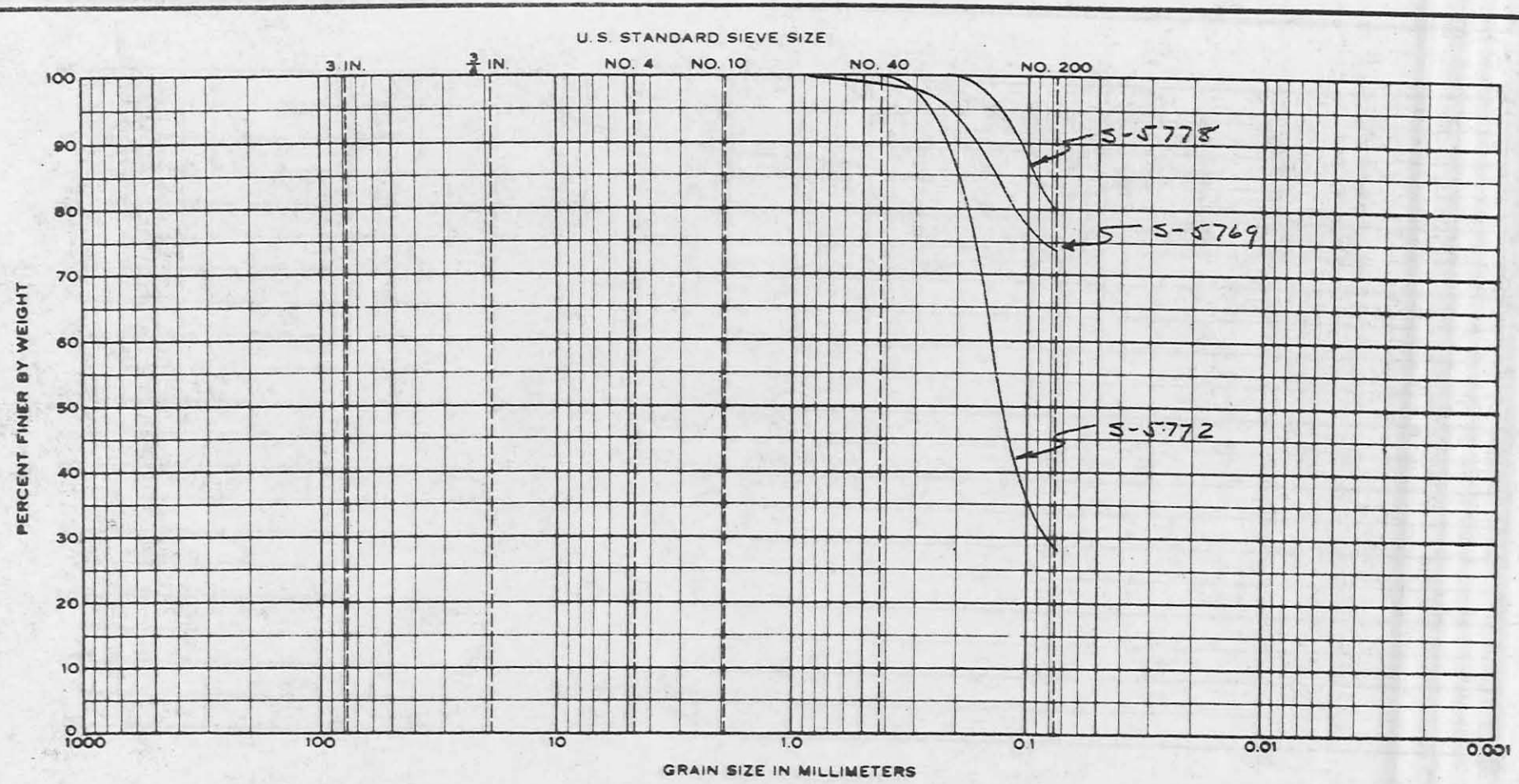
FEATURE FOUNDATION MATERIAL

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_1 %	W_F %	S_1 %	TYPE TEST	SPECIMEN SIZE INCHES	TEST	σ_m T/SQ FT	σ_1 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
GST-6-1																																	
S-S766		24.0-26.0	SANDSTONE								20.4	103				101	23.5			UC	5.8 x 8.5		0.0	19.6									
				Lt. gray argillaceous SANDSTONE, soft.																														
S-S767		34.0-35.5	SANDSTONE								15.8	112				110	17.8			UC	6.0 x 9.4		0.0	93.4									
				Tan SANDSTONE, fine-grained, mod. hard.																														
S-S768		35.5-36.5	SANDSTONE								19.1	108				111	16.4			UC	5.0 x 6.1		0.0	105.8									
				Tan and yellow SANDSTONE, med. hard.																														
GST-6-4																																	
S-S769		6.0-8.0	CL	0	26	74		50	12	2.66	14.9	116			.410	118	15.3		99	UC	4.6 x 6.7		0.0	6.8							0.17		LS=16
				Dk. gray sandy CLAY, hard.																														
S-S770		32.0-34.0	SHALY CLAY								28.4	98				99	25.0			UC	2.8 x 5.3		0.0	13.8									
				Dk. gray SHALY CLAY, hard; montmorillonitic.																														
S-S771		48.0-50.0	CLAYSTONE								21.3	103				103	21.6			UC	5.7 x 9.9		0.0	22.4									
				Lt. tan CLAYSTONE; color of interior of core is blue.																														
GST-6-5																																	
S-S772		2.0-4.0	SC	0	62	38		30	10	2.66	16.0	113																					LS=8
				Brown clayey SAND, very stiff; pockets of dk. gray clay.											.506	110	18.4	18.0	97	DS	3 x 3 x 0.5	1			0.0	32.2							
															.482	112	16.4	15.2	90	"	"	2											
															.517	110	19.0	14.0	98	"	"	3											
S-S777		6.0-8.0	CL								16.6	111																					
				V. dk. gray sandy CLAY, hard.																														
S-S773		23.0-25.0	SHALY CLAY								27.8	89				90	27.1			UC	5.7 x 9.7		0.0	1.7									
				Blue SHALY CLAY; old fracture planes.																														
S-S774		33.0-35.0	CL								25.7	97				98	23.6			UC	2.9 x 5.1		0.0	5.3									
				Grayish-brown very sandy CLAY, hard; montmorillonitic; blue splotches.																														
S-S775		38.0-40.0	SHALY CLAY								31.9	87				87	31.6			UC	3.7 x 5.0		0.0	11.8									
				Dk. grayish-brown carbonaceous SHALY CLAY.																														
S-S776		46.0-48.0	SHALY CLAY								22.4	101				102	22.4			UC	5.4 x 8.2		0.0	12.6									
				Bluish-gray SHALY CLAY, montmorillonitic.																														

Note: SWD Sample No. S-S777 was marked "Depth 60.0-80.0"; the depth shown above (6.0-8.0) is assumed correct.

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-5769	6.0-8.0	Sandy CLAY (CL)		50	12	38	16	65T-6-4
S-5772	2.0-4.0	Clayey SAND (SC)		30	10	20	8	65T-6-5
S-5778	10.0-11.0	CLAY (CL)		48	13	35	16	65T-6-6

GRADATION CURVES

Project Trinity River Lock and Dam Site No. 6

FOUNDATION MATERIAL

Area GALVESTON DISTRICT

Boring No. 65T-6-4, -5 & -6

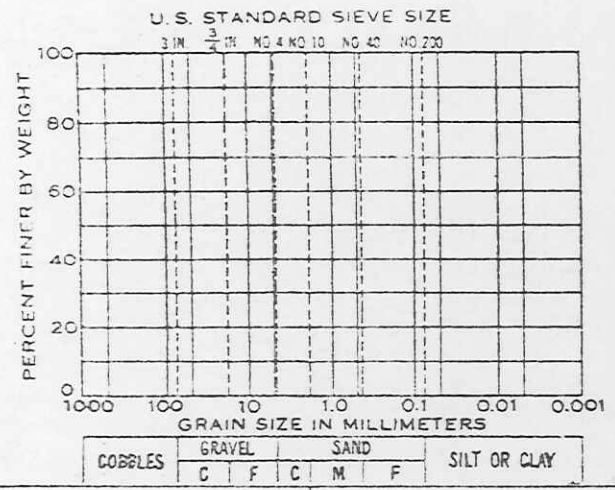
Date NOV 1961

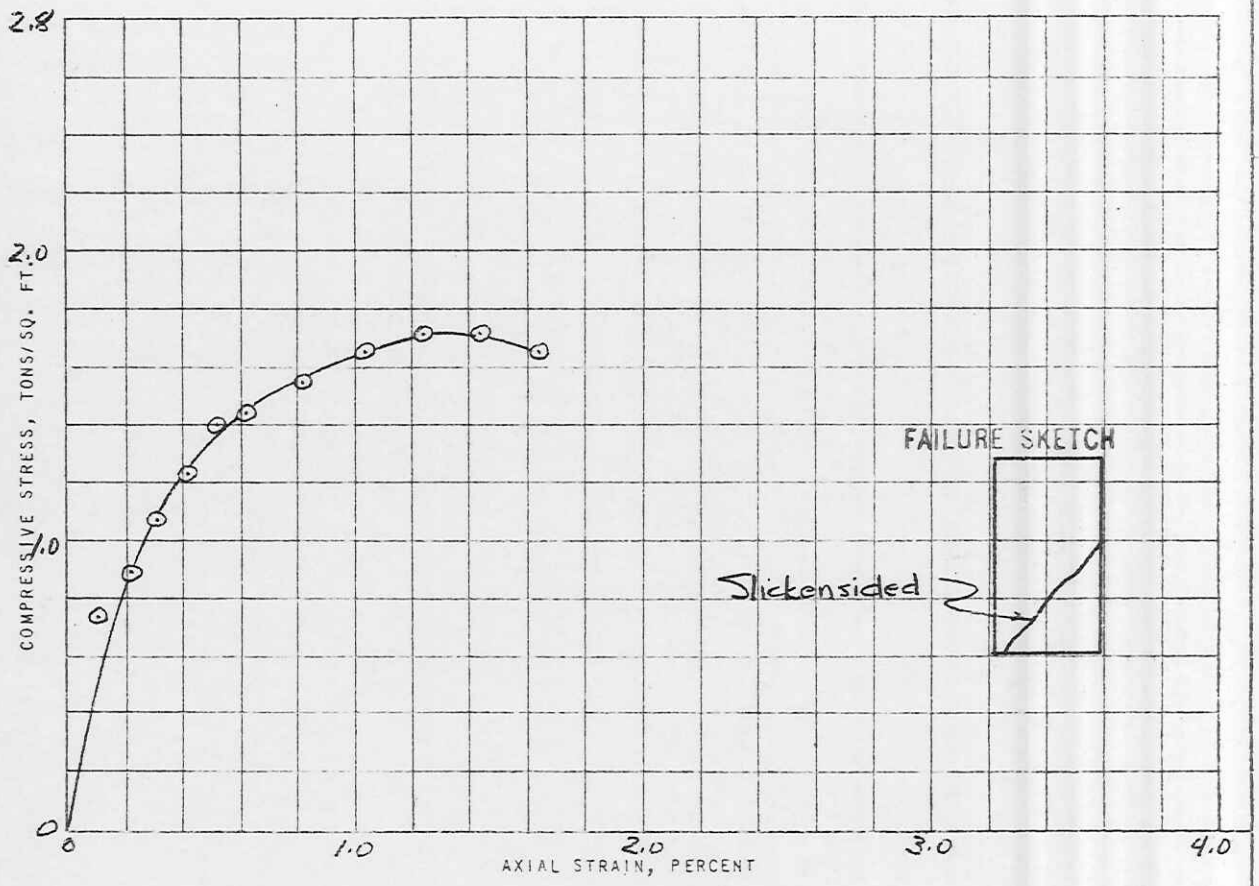
PLATE NO. 1

SWDGL REPORT NO. 7281

FORM 2087

SWD FORM 558-C
REV 10 MAR 52





LL	G	
PL	D_{10}	
X UNDISTURBED	REMOLDED	
WATER CONTENT, W_o %		27.1
DRY DENSITY LBS./CU.FT.		90
VOID RATIO e_o		
SATURATION, S_o %		
UNCONFINED COMP. STRENGTH q_u TONS/SQ.FT.		1.7
X q_u ADJUSTED, A.S.T.M. C42-44 TONS/SQ.FT.		1.7
SPECIMEN DIAMETER INCHES		5.7
SPECIMEN HEIGHT INCHES		9.7
Stress - CONTROL, 600 lbs./min.		

REMARKS:

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

AREA GALVESTON DISTRICT

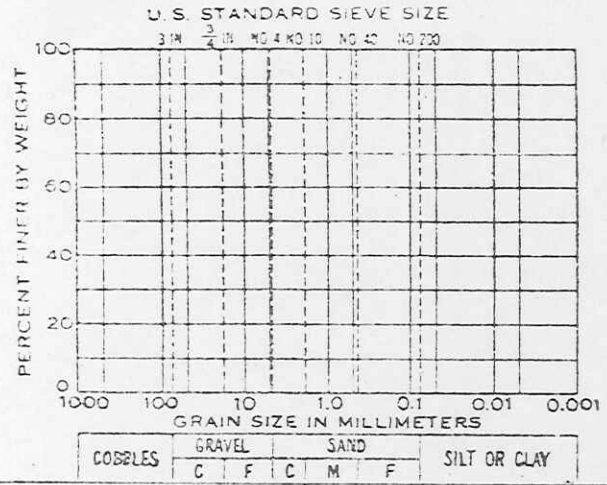
BORING NO. 6ST-6-5 | SAMPLE NO. S-5773 | ELEV. OR DEPTH 23.0-25.0 | DATE NOV 1961

UNCONFINED COMPRESSION TEST

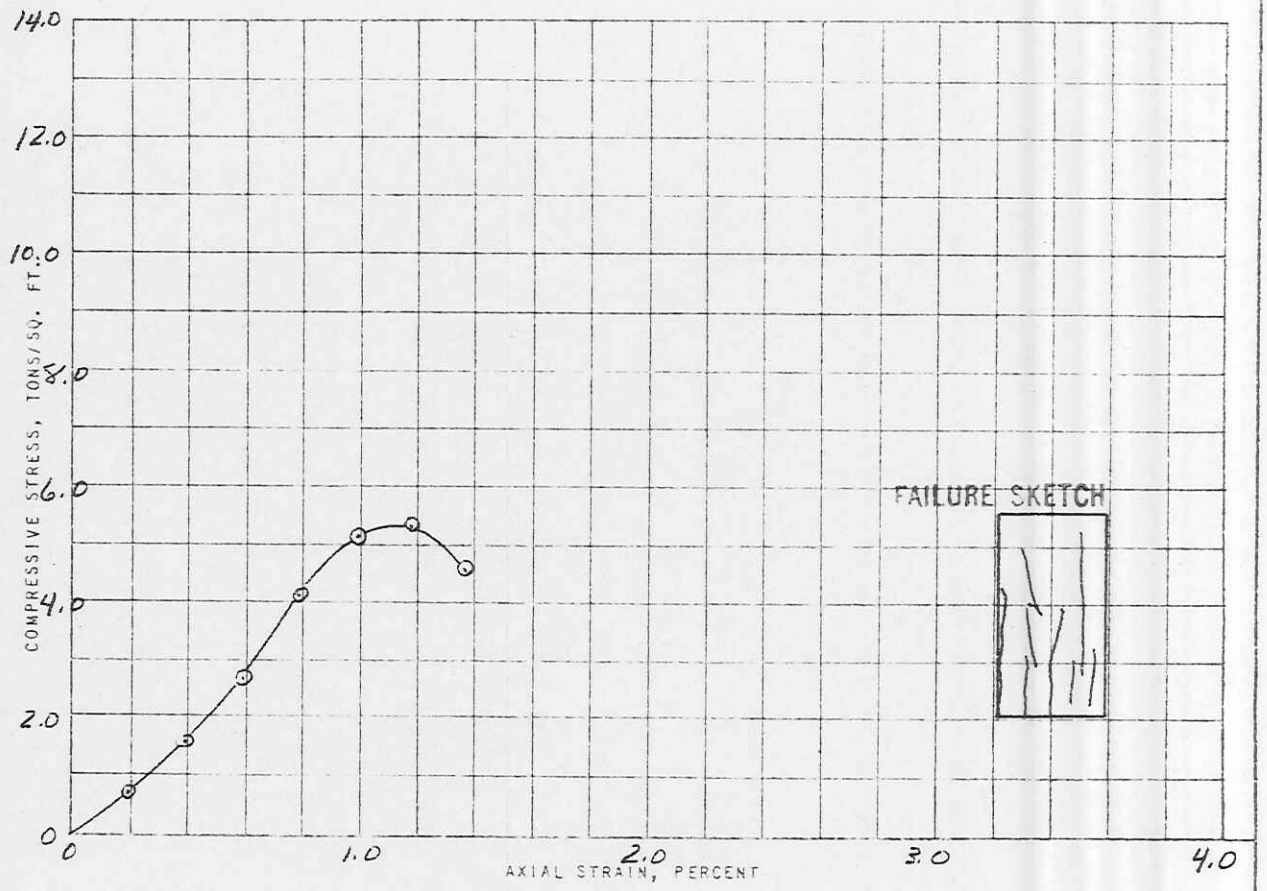
PLATE NO. 9

SWDGL REPORT NO. 7281

SWD FORM 558-C
REV 10 MAR 52



LL		G	
PL		D_{10}	
X	UNDISTURBED		REMOLDED
WATER CONTENT, W_o	%		23.6
DRY DENSITY	LBS./CU.FT.		98
VOID RATIO e_o			
SATURATION, S_o	%		
UNCONFINED COMP. STRENGTH q_u	TONS/SQ.FT.		5.4
X	q_u ADJUSTED, A.S.T.M. C42-44	TONS/SQ.FT.	5.3
SPECIMEN DIAMETER	INCHES		2.9
SPECIMEN HEIGHT	INCHES		5.1
Stress - CONTROL, 120 lbs./min.			



REMARKS:

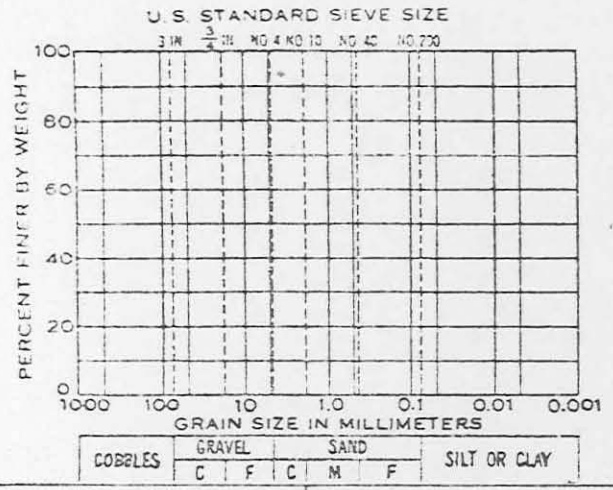
PROJECT Trinity River - Lock and Dam Site No. 6 FOUNDATION MATERIAL
AREA GALVESTON DISTRICT
BORING NO. 6ST-6-5 | SAMPLE NO. S-5774 | ELEV. OR DEPTH 33.0-35.0 | DATE NOV 1961

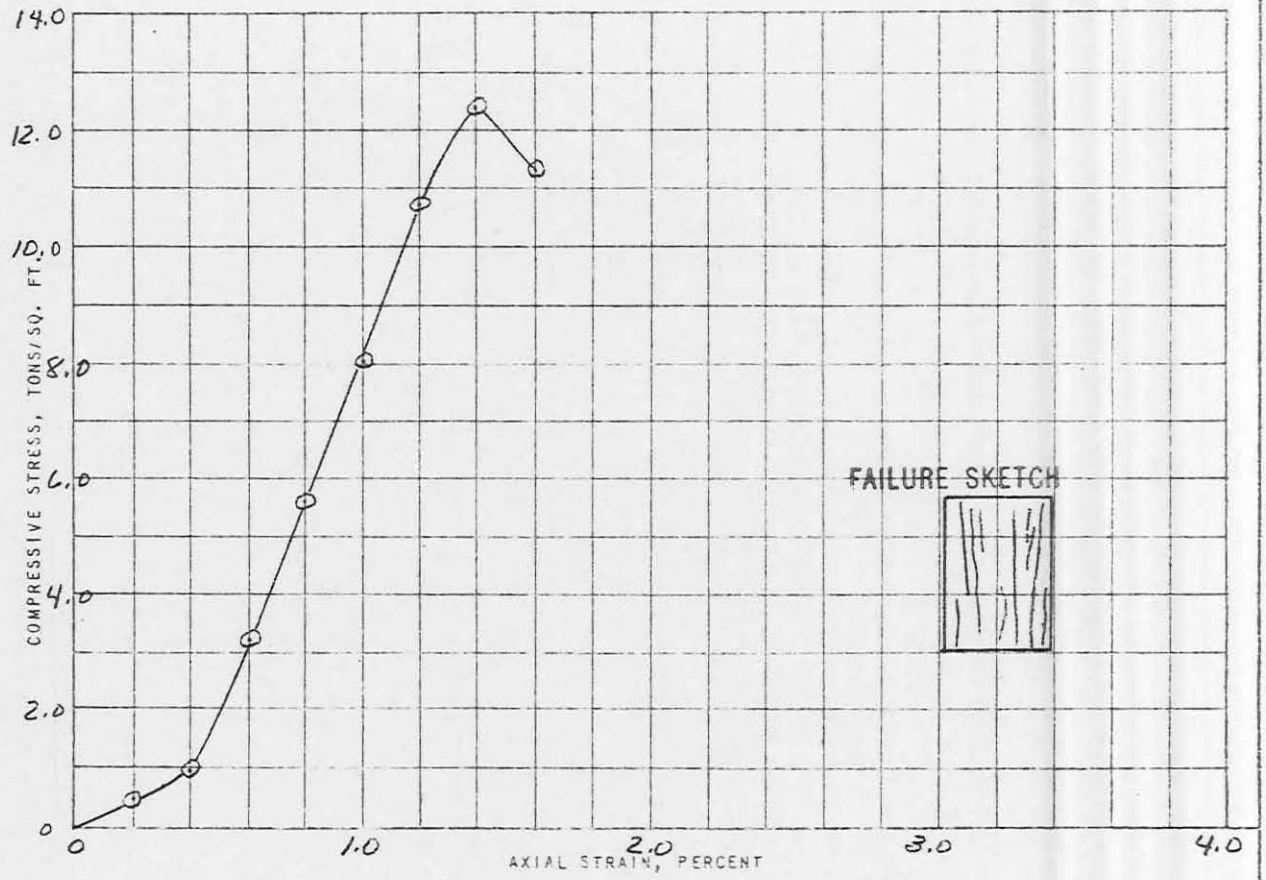
UNCONFINED COMPRESSION TEST

PLATE NO. 10

SWD/CE REPORT NO. 7281

SWD FORM 558-C
REV 10 MAR 52





LL		G	
PL		D_{10}	
X	UNDISTURBED		REMOLDED

WATER CONTENT, W_o	%	31.6
DRY DENSITY	LBS./CU.FT.	87
VOID RATIO e_o		
SATURATION, S_o	%	
UNCONFINED COMP. STRENGTH q_u	TONS/SQ.FT.	12.4
X q_u ADJUSTED, A.S.T.M. C42-44	TONS/SQ.FT.	11.8
SPECIMEN DIAMETER	INCHES	3.7
SPECIMEN HEIGHT	INCHES	5.0

Stress - CONTROL, 60 lbs./min.

REMARKS:

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

AREA GALVESTON DISTRICT

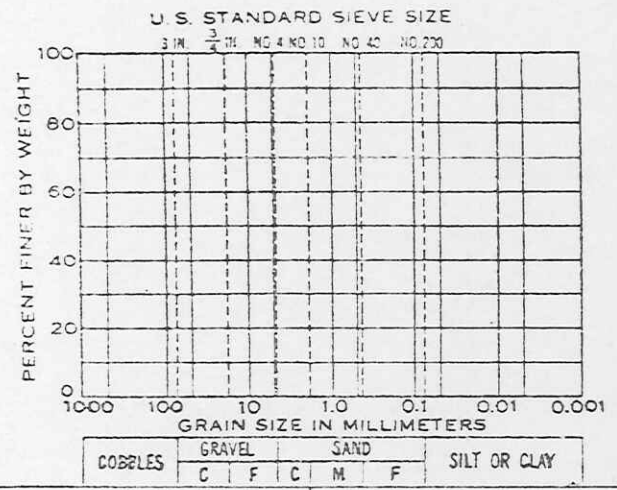
BORING NO. 6ST-6-5 | SAMPLE NO. S-5775 | ELEV. OR DEPTH 38.0-40.0 | DATE NOV 196

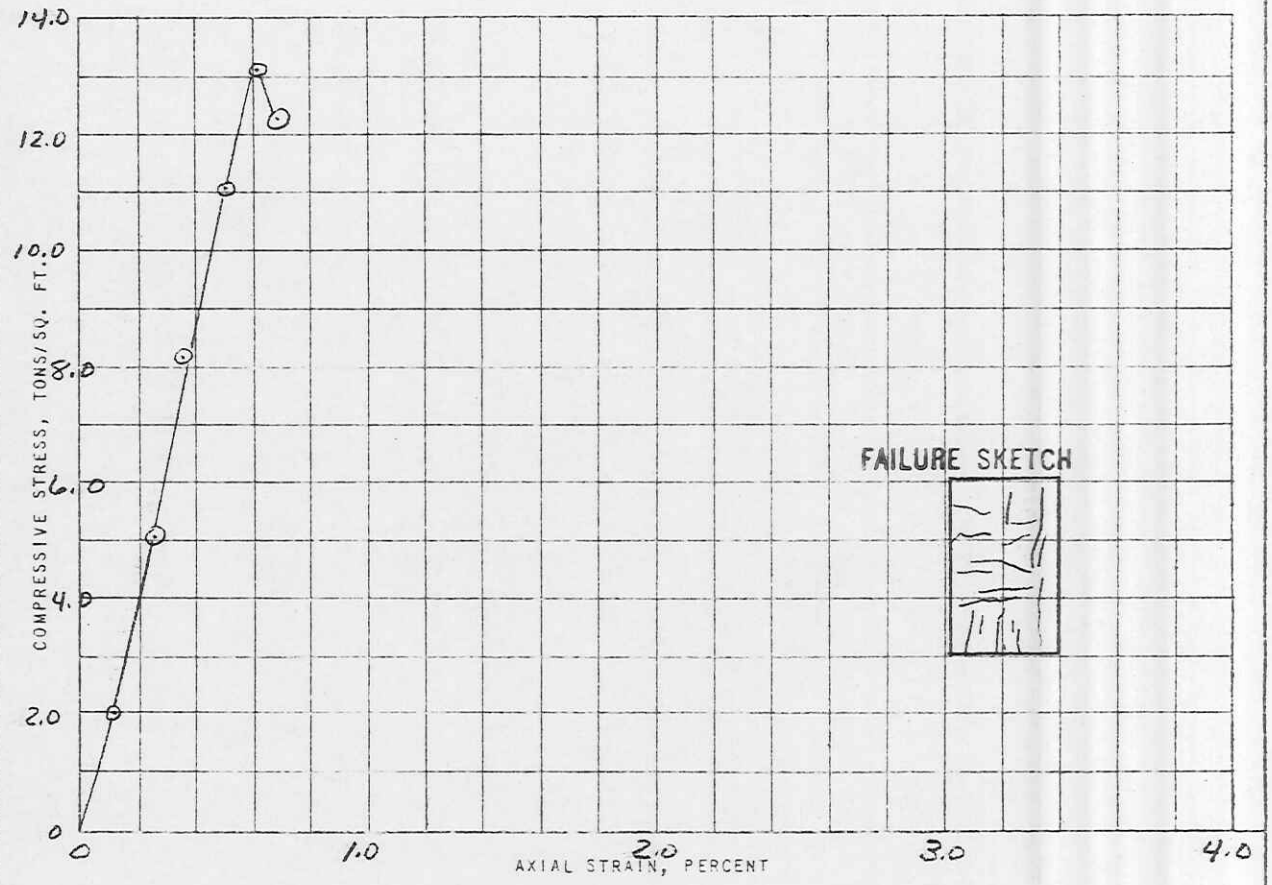
UNCONFINED COMPRESSION TEST

PLATE NO. 11

SWD/L REPORT NO. 72281

SWD FORM 558-C
REV 10 MAR 52





LL		G	
PL		D_{10}	
X	UNDISTURBED		REMOLDED
WATER CONTENT, W_o	%	22.4	
DRY DENSITY	LBS./CU.FT.	102	
VOID RATIO e_o			
SATURATION, S_o	%		
UNCONFINED COMP. STRENGTH q_u	TONS/SQ.FT.	13.1	
X	q_u ADJUSTED, A.S.T.M. C42-44 TONS/SQ.FT.	12.6	
SPECIMEN DIAMETER	INCHES	5.5	
SPECIMEN HEIGHT	INCHES	8.2	

Stress - CONTROL, 600 lbs./min.

REMARKS:

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

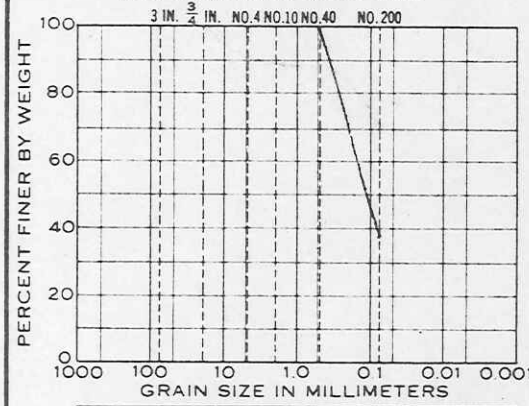
AREA GALVESTON DISTRICT

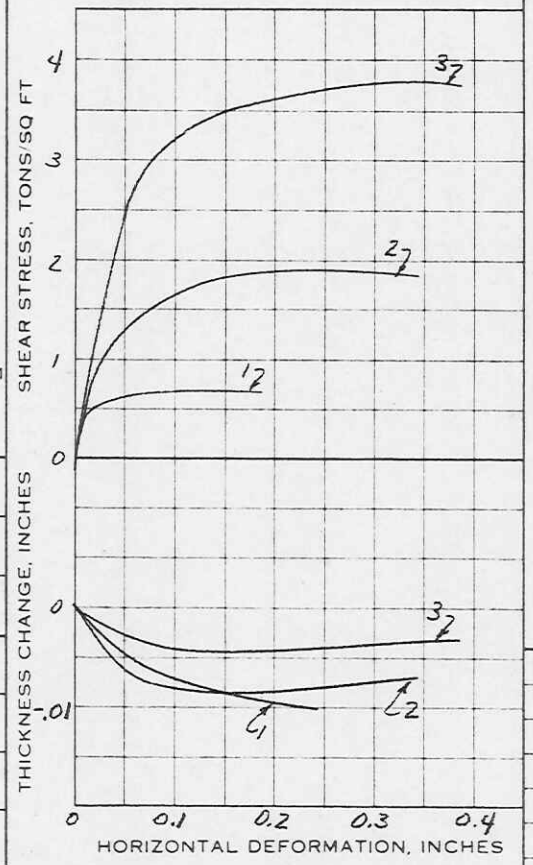
BORING NO. 6ST-6-5 | SAMPLE NO. S-5776 | ELEV. OR DEPTH 46.0 - 48.0 | DATE NOV 1961

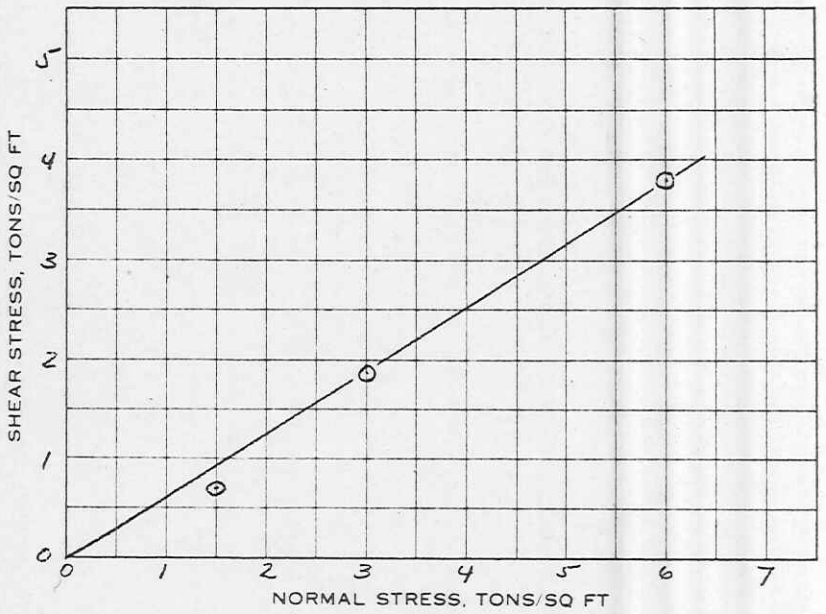
UNCONFINED COMPRESSION TEST

PLATE NO. 12

SWDGL REPORT NO. 7231







Classification Clayey SAND (SC)

LL 30 G 2.66

PL 10 D_{10}

Test No.	1	2	3
Initial Water Content, W_0 %	18.4	16.4	19.0
Dry Density Lbs/Cu Ft	110	112	110
Void Ratio, e_0	.506	.482	.517
Saturation, S_0 %	97	90	98
Duration of Test (to t_{50})	150'	260'	390'
WC after Test, W_F %	18.0	15.2	14.0
Normal Stress, σ T/Sq Ft	1.5	3.0	6.0
Max. Shear Stress, τ T/Sq Ft	0.71	1.91	3.80
t_{50}	-	-	9'

Type of Test
Strain - Control
Rate: 0.001 in./min.
X Consolidated
Drained

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

SHEAR VALUES	Ø	TAN Ø	C, T/SQ FT
Maximum	32.2	.630	0.0
Ultimate			

Remarks:

Project Trinity River-Lock and Dam Site No. 6
FOUNDATION MATERIAL
Area GALVESTON DISTRICT
Boring No. 6ST-6-5 Sample No. S-5772
Elev or Depth 2.0-4.0 Date NOV 1961

DIRECT SHEAR TEST REPORT

PLATE NO. 22

ENG FORM 2092

SWDGL REPORT NO. 7281