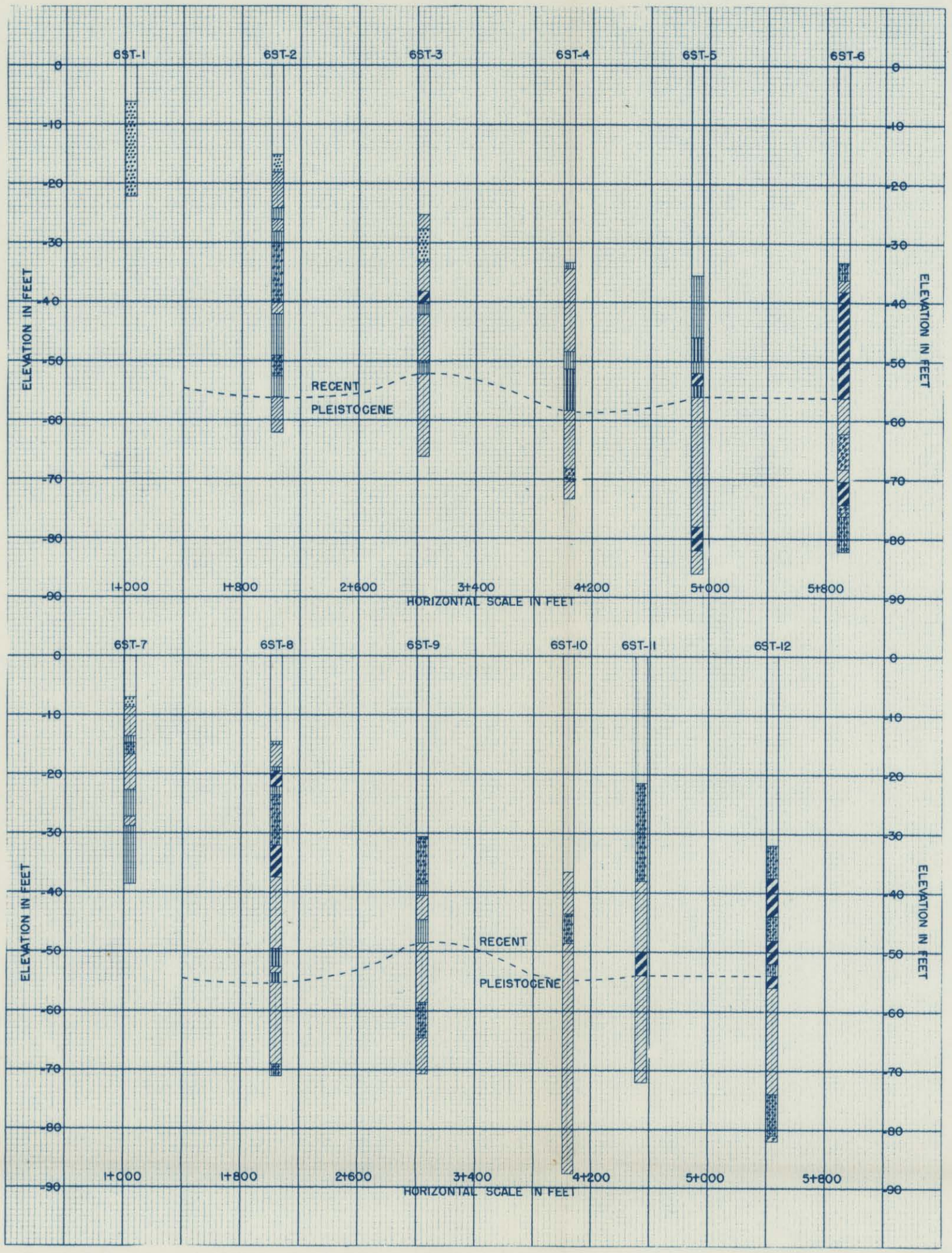


LEGEND

- WATER
- POORLY-GRADED SANDS
- SILTY SANDS
- CLAYEY SANDS
- INORGANIC SILTS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
- INORGANIC SILTS OR ELASTIC SILTS
- LEAN CLAYS, SILTY CLAYS, & SANDY CLAYS
- FAT CLAYS OF HIGH PLASTICITY

RECENT

RECENT-PLEISTOCENE CONTACT, FAIR CORRELATIONS

PLEISTOCENE

OFFICE OF THE DISTRICT ENGINEER
U.S. ARMY ENGINEER DISTRICT, GALVESTON
CORPS OF ENGINEERS
GALVESTON, TEXAS

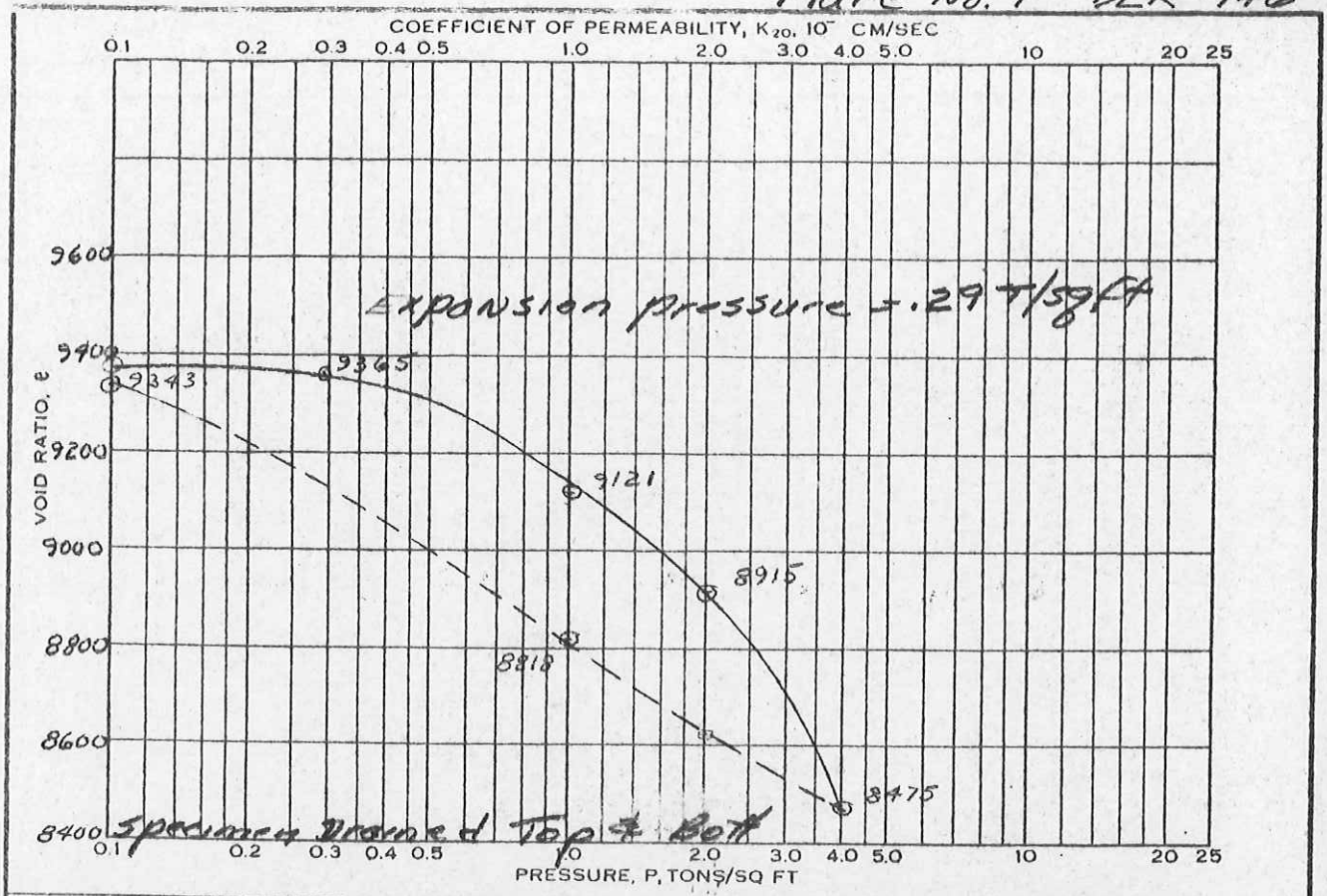
DRAWN BY: M.D.S.	PORT ISABEL, TEXAS
GEOLOGY BY: M.D.S.	BRAZOS ISLAND HARBOR JETTIES
CHECKED BY: R.E.M.	GEOLOGIC CROSS SECTIONS
SUBMITTED BY: Ralph E. Mercer CHIEF, GEOLOGY SUB-SECTION	
CHIEF, FDN. & MTLS. BRANCH	CHIEF ENGINEERING DIVISION
	DATE 3 JAN. 1963
	SCALE: AS SHOWN
	SPEC. DATE
	DRAWING NUMBER
	PLATE NO. 2
	FILE NO.

BRAZOS ISLAND HARBOR, TEXAS
SUMMARY OF UNCONFINED COMPRESSION DATA

TABLE NO. 1

DISTRICT SERIAL NO	HOLE NO	DEPTH FT.	MECHANICAL ANALYSIS Gr	Sa	Fines	LL	bar LS	NATURAL WATER CONTENT, %	U.D.W. p.c.f.	% STRAIN @ MAX. STRESS	MAX. STRESS LBS./sq. ft.	POCKET PENET.	CLASSIFICATION
62-6222	6ST-4	40.0-42.0	0	1	99	39.6	15.0	43.6	76.3	11.96	1496 748	.25	G,Cl(CL), So
62-6229	6ST-4	56.0-58.0	0	1	99	56.3	13.0	33.6	85.8	10.50	2349 1175	.50	G,Si(MH), med
62-6235	6ST-4	68.0-70.0	0	21	79	40.9	12.0	22.8	102.5	4.20	3474 1737	3.25	G,SaCl(CL), v/st
62-6246	6ST-5	54.0-56.0	0	1	99	52.8	14.0	45.9	75.0	14.75	2236 1118	1.5	G,Cl(CH), St
62-6253	6ST-5	68.0-70.0	0	12	88	47.5	14.0	27.7	96.9	3.50	2276 1138	2.0	G,Cl(CL), v/st.
62-6258	6ST-5	78.0-80.0	0	5	95	29.5	7.5	22.6	100.6	3.50	5520 2760	3.50	Ru,Cl(CL), v/st
62-6264	6ST-6	40.0-42.0	0	0	100	51.0	19.0	51.2	72.7	10.50	1243 622	0.0	G,Cl(CH), v/so
62-6272	6ST-6	58.0-60.0	0	23	77	36.8	12.0	21.3	105.0	2.80	6103 3052	3.50	G,SaCl(CL), v/st
62-6253	6ST-9	44.0-46.0	0	0	100	33.0	7.0	33.3	91.3	14.75	930 465	0.0	G,Cl(CL), v/so
62-6239	6ST-9	56.0-58.0	0	42	58	25.3	5.0	22.5	104.3	8.40	* 1432 716	.25	Lt G,SaCl(CH), So
62-6353	6ST-10	54.0-56.0	0	25	75	38.4	9.0	32.3	84.9	11.20	* 2173 1087	.75	G,SaCl(CL), med
62-6363	6ST-10	74.0-76.0	0	10	90	36.2	9.0	21.5	105.2	2.10	1343 672	3.0	G,Cl(CL), v/st
62-6380	6ST-11	52.0-54.0	0	4	96	53.0	15.0	49.8	73.7	9.1	2707 1354	.75	D,Cl(CH), med
62-6385	6ST-11	62.0-64.0	0	24	76	41.3	12.0	20.1	108.0	4.2	3049 1525	3.0	G,SaCl(CL), v/st
62-6398	6ST-12	50.0-52.0	0	0	100	66.2	18.0	37.9	83.4	2.8	1206 603	1.25	G,Cl(CH), st.
62-6404	6ST-12	62.0-64.0	0	36	64	35.3	10.0	22.3	103.9	5.6	4341 2171	1.75	G,SaCl(CL), st.

Plate No. 7 DLR 946



TEST DATA

Type of Specimen: undisturbed

Overburden Pressure, P_o Tons/Sq Ft

Preconsol Pressure, P_c Tons/Sq Ft

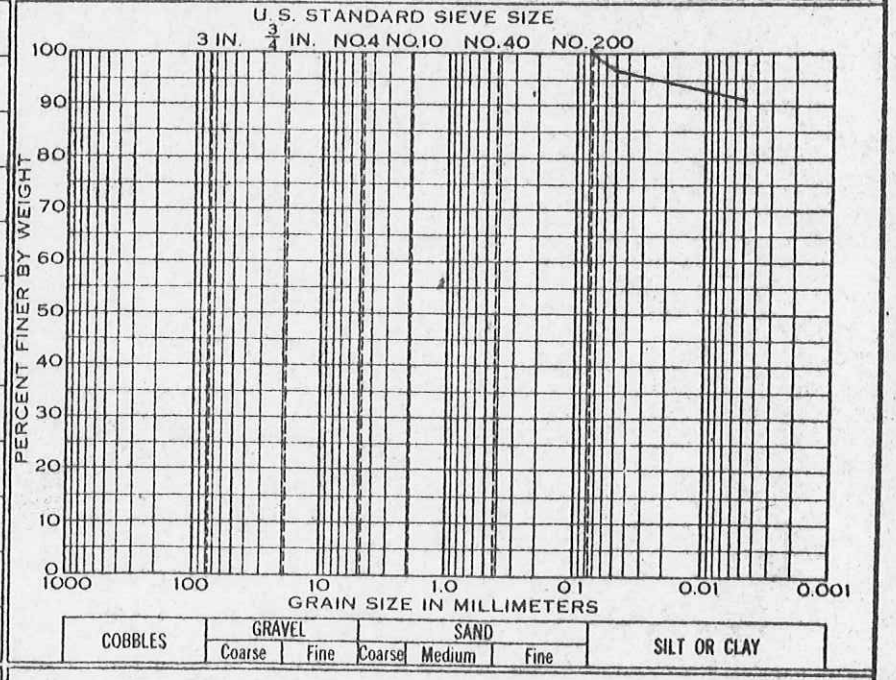
Compression Index, C_c

Permeability at Initial e

K_{20} _____ x 10^{-} Cm/Sec

_____ Ft/Min

Initial Ht.	1.158 in.	Diam.	4.0 in.
Initial Saturation, S_o	%	100.0	
Final Saturation, S_f	%	100.0	
Initial Dry Density	Lbs/Cu Ft	87.8	
Initial Water Content, W_o	%	35.9	



Remarks:

Project: Brazos Island Harbor

Area

Boring No. 65T-6 Sample No. 62-6267

Elev or Depth 46.0 - 48.0 Date Dec. 1962

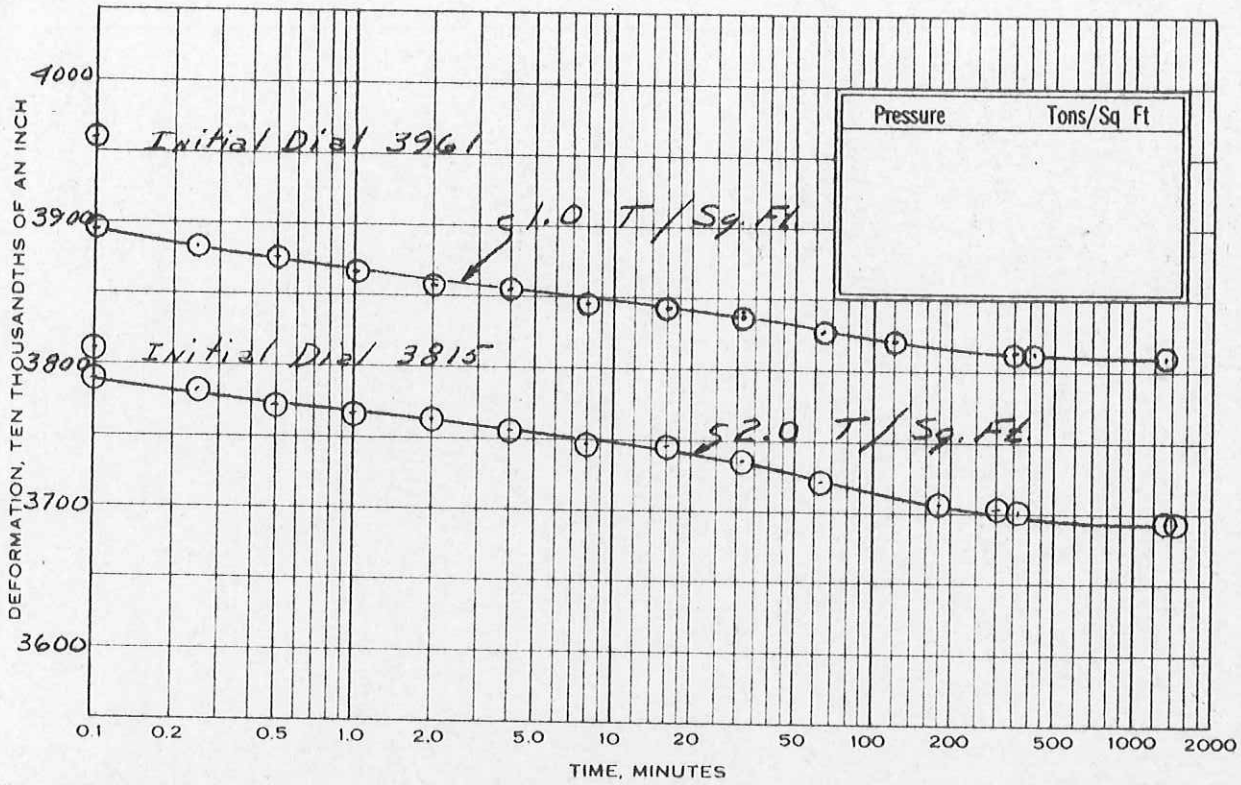
Classification: Gray Clay (CH) v/ stiff

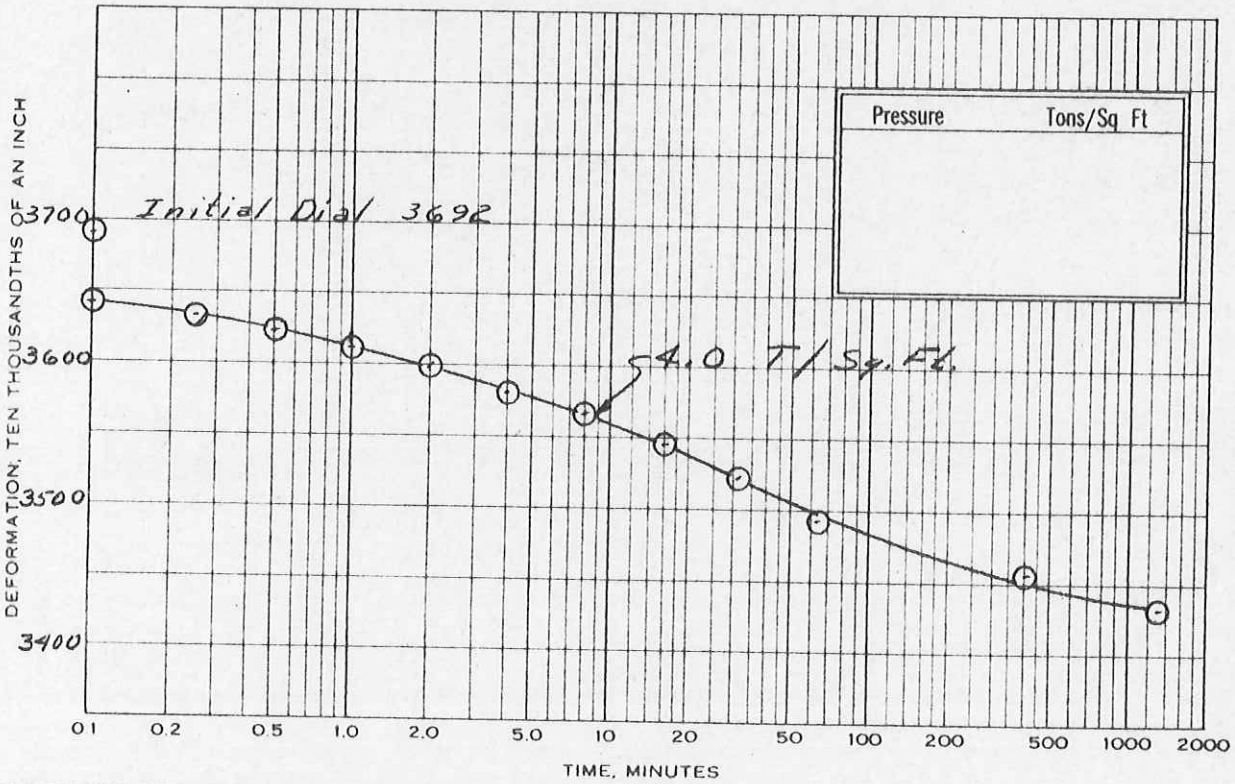
LL	65.0	G	2.72
PL	26.8	D_{10}	

CONSOLIDATION TEST REPORT

ENG FORM 1961-51 2000

Plate No. 8 DLR 946





Project Brazos Island Harbor

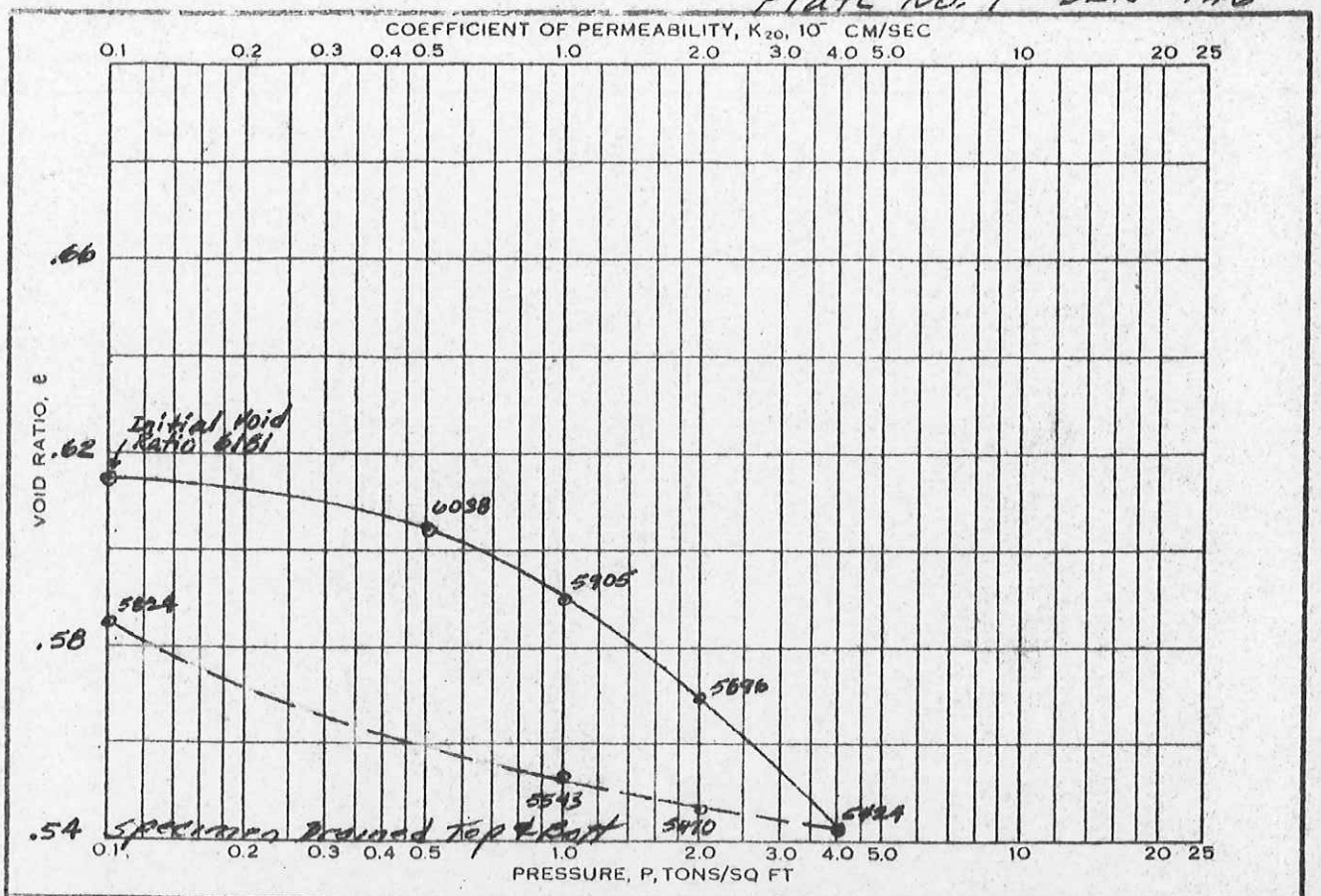
Area

Boring No. 65T-6 | Sample No. 62-6267 | Elev or Depth 460-480 | Date Dec. 1962

CONSOLIDATION TEST-TIME CURVES

ENG FORM 2088 (Translucent) (EM 1110-2-1803)

Plate No. 9 DLR 946



TEST DATA

Type of Specimen: undisturbed

Overburden Pressure, P_0 Tons/Sq Ft

Preconsol Pressure, P_c Tons/Sq Ft

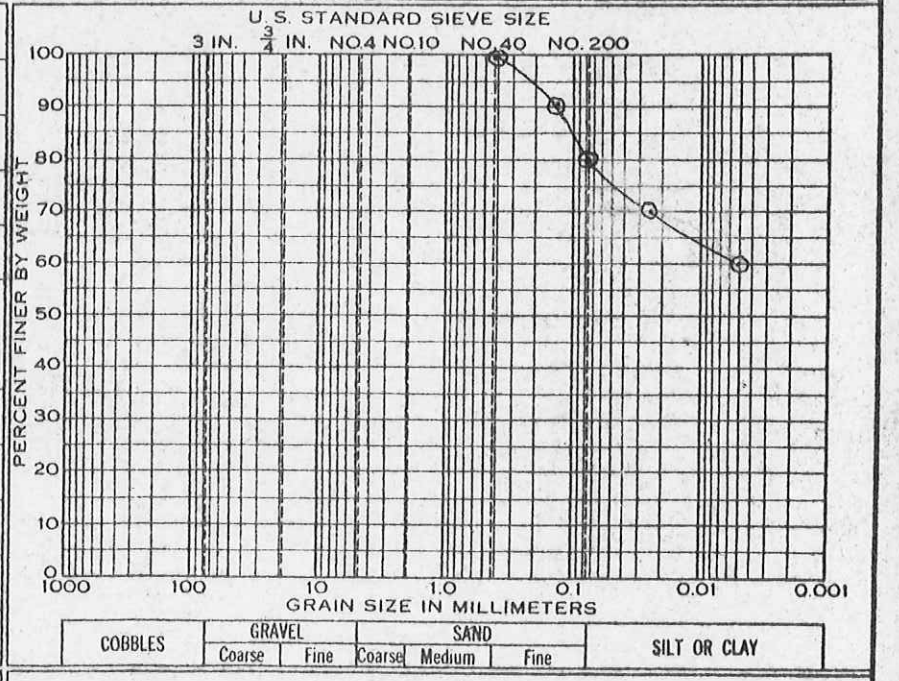
Compression Index, C_c

Permeability at Initial e

K_{20} _____ x 10^{-} Cm/Sec

_____ Ft/Min

Initial Ht.	1.165 in.	Diam.	4 in.
Initial Saturation, S_0	%	100	
Final Saturation, S_f	%	100	
Initial Dry Density	Lbs/Cu Ft	103.9	
Initial Water Content, W_0	%	23.8	



Remarks:

Gray Sandy Clay (CL) v/Stiff

Classification

LL	43.4	G	2.69
PL	18.9	D_{10}	

Project BRAZOS ISLAND HARBOR

Area

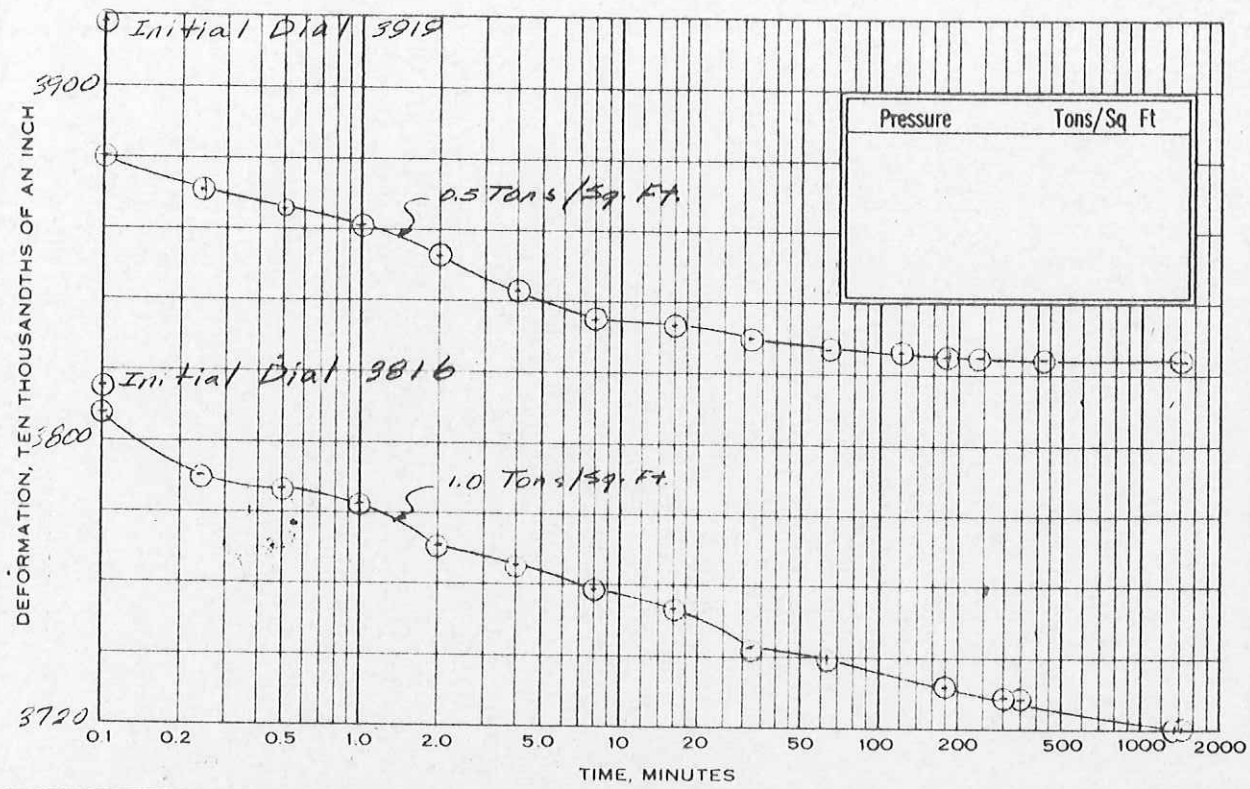
Boring No. GST-6 Sample No. 62-6273

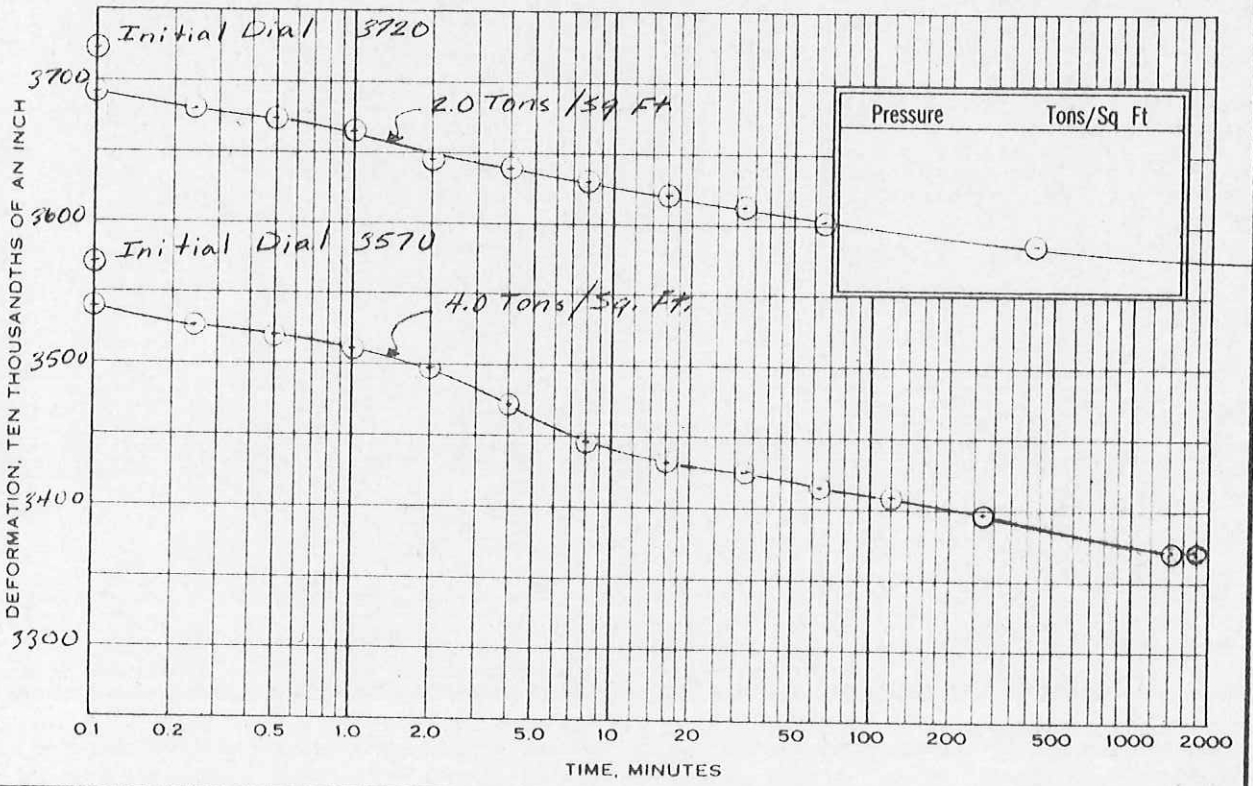
Elev or Depth 60.0-62.0 Date DEC. 1962

CONSOLIDATION TEST REPORT

ENG FORM 1 OCT 51 2090

Plate No. 10 DLR 946





Project BRAZOS ISLAND HARBOR

Area

Boring No. 65T-6	Sample No. 62-6273	Elev or Depth 60-62	Date DEC. 1962

CONSOLIDATION TEST-TIME CURVES

ENG FORM 1 DEC 61 2088 (Translucent) (EM 1110-2-1803)

Brazos Island Harbor Jetty

TEST DATA SUMMARY

Sheet ____ of ____

FEATURE Log of Soil Boring

BORING NO.	SAMPLE NO.	DEPTH OR ELEV OF SAMPLE	LABORATORY CLASSIFICATION	MECHANICAL ANALYSIS GRAVEL %	SAND %	FINES %	D_{10}*	ATTERBERG LIMITS LL	PL*	SPECIFIC GRAVITY G	NATURAL WATER CONTENT %	NATURAL DRY DENSITY LBS/CU FT	COMPACTION DATA OPTIMUM 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_1 T/SQ FT	C T/SQ FT	Ø DEGREES	PERMEABILITY e	K FT/MIN	CONSOLIDATION DATA P_o T/SQ FT	P_c T/SQ FT	C_c	t_{50}*	REMARKS
6ST-62-6	S	0.0											Water																				
	S	35.0											Sand, no recovery																				
	6263	38.0	CL	0	6	94		43.8	15.0		45.8		Gray Clay (CL)																				
	6264	40.0	Same as 6265		CH		0.0				51.2	72.7	Gray Clay (CH) v/Soft																				
	6265	42.0	CH	0	0	100	1.50	52.6	19.5		33.6	88.3	Gray Clay (CH) Stiff																				
	6266	44.0	Same as 6265		CH		1.25				32.8	89.6	Gray Clay (CH) Stiff																				
	6267	46.0	CH	0	0	100	2.75	65.0	17.0		32.7	90.7	Gray Clay (CH) v/Stiff																				
	S	48.0									(32)																						
	6268	50.0	Same as 6265				2.50				30.6	88.5	Gray Clay (CH) v/Stiff																				
	6269	52.0	Same as 6265				1.50				41.2	80.1	Gray Clay (CH) Stiff	stiff to v/stiff																			
	6270	54.5	Same as 6265				1.0				30.2	90.8	Black Clay (CH) Stiff																				
	6271	56.0	Same as 6265				1.75				23.8	100.9	Gray Clay (CH) Stiff																				
	6272	58.0	CL	0	23	77	3.50	36.8	12.0		21.3	105.0	Gray Sandy Clay (CL) v/Stiff																				
	6273	60.0	CL	0	20	80	2.50	43.4	13.0		25.2	101.1	Gray Sandy Clay (CL) v/Stiff	stiff to v/stiff																			
	6274	62.0	CL	0	27	73	1.25	33.6	11.0		(24) 25.6	99.1	Lt. Gray Sandy Clay (CL) Stiff																				
	6275	64.0	SC-SM	0	61	39	1.00		4.0		23.0	101.8	Gray Clayey Silty Sand (SC-SM) Stiff to Medium																				
	6276	66.0	Same as 6275		SC-SM		0.75				23.7	100.6	Clayey Silty Sand (SC-SM) Medium																				
	S	68.0									(23)																						
	6277	70.0	CL	0	13	87	1.75	31.3	8.0		22.4	103.0	Gray Clay (CL) Stiff																				
	6278	72.0	CH	0	7	93	1.50	53.6	19.0		30.7	92.9	Tan Clay (CH) Stiff to Hard																				
	6279	74.0	Same as 6278				4.25				(30) 28.6	99.7	Clay (CH) Hard																				
	6280	76.0	SC	0	54	46	0.75		8.0		20.0	108.3	Tan Clayey Sand (SC) Medium																				
	6281	78.0	SM	0	84	16			0.0		28.0		Gray Silty Sand (SM)																				
	6282	80.0	SM	0	83	17			0.0		24.5		Gray Silty Sand (SM)	Very Dense																			66/80.5-81.5
		82.0									(26)																						

* Values at Pressure T/SQ FT

TX – Triaxial Compression
UC – Unconfined Compression
DS – Direct Shear
UU – Unconsolidated Undrained
CD – Consolidated Drained
CU – Consolidated Undrained

Brazos Island Harbor Jetty

TEST DATA SUMMARY

Sheet ____ of ____

FEATURE Log of Soil Boring

BORING NO.	SAMPLE NO.	DEPTH OR ELEV OF SAMPLE	LABORATORY CLASSIFICATION	MECHANICAL ANALYSIS GRAVEL %	SAND %	FINES %	D_{10}*	ATTERBERG LIMITS LL	PL*	SPECIFIC GRAVITY G	NATURAL WATER CONTENT %	NATURAL DRY DENSITY LBS CU FT	COMPACTION DATA OPTIMUM 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_1 T/SQ FT	C T/SQ FT	Ø DEGREES	PERMEABILITY e	K FT/MIN	CONSOLIDATION DATA P_o T/SQ FT	P_c T/SQ FT	C_c	t_{50}*	REMARKS
GST-62-6	6283	82.0 84.0	SM	0	74	26			0.0		25.9		Tan Silty Sand (SM) Very Dense																				82/83.0-84.0
													Bottomed In Above.																				

* Values at Pressure T/SQ FT

TX - Triaxial Compression
UC - Unconfined Compression
DS - Direct Shear
UU - Unconsolidated Undrained
CD - Consolidated Drained
CU - Consolidated Undrained