APPENDIX II

EUSTIS ENGINEERING COMPANY, INC.

LOG OF BORING AND TEST RESULTS

HALTER MARINE SERVICES, INC.
CRANE PAVING AND MISCELLANEOUS IMPROVEMENTS
LOCKPORT, LOUISIANA

Ground Elev.: **Datum:** **Gr. Water Depth:** See Text **Job No.:** 15405 **Date Drilled:** 5/20/98 **Boring:** 5 Refer to "Legends & Notes"

Scale In Feet	PP	SPT	SPLR	Symbol	Visual Classification	USC	Sample Number	Depth In Feet	Water Content Percent	Density Dry	Density Wet	Shear Tests Type	Shear Tests φ	Shear Tests C	Atterberg Limits LL	Atterberg Limits PL	Atterberg Limits PI		Other Tests
0		45			Compact gray clayey silt w/shell fragments	ML	1	0-0.5	9										
							2	1-2											
		17			Very stiff tan & brown silty clay	CL	3	3-4											
					Medium stiff gray silty clay	CL	4	5-6	25	94	118	UC	–	435					
	0.25						5	8-9	34	86	115	UC	–	515					
10					Medium compact gray sandy silt	ML													
							6	11-12	29	94	121								
							7	14-15											
							8	18-19	30	89	116				29	24	5		
20																			
							9	23-24											
					Soft gray silty clay	CL													
							10	28-29	33	84	112	UC	–	265					
30		8			Loose gray clayey silt	ML	11	31-32											
					Medium dense gray clayey sand	SC													
	0.25						12	34-35	29	90	116	OB	–	670					
	0.25				Medium stiff gray sandy clay	CL	13	38-39											
40																			
	0.25						14	43-44	30	85	110	OB	–	525					
					Loose gray silty sand w/clay layers	SM													
							15	48-49	20										
50																			

Comments:

EUSTIS ENGINEERING COMPANY, INC.

LOG OF BORING AND TEST RESULTS

HALTER MARINE SERVICES, INC.
CRANE PAVING AND MISCELLANEOUS IMPROVEMENTS
LOCKPORT, LOUISIANA

Ground Elev.: **Datum:** **Gr. Water Depth:** See Text **Job No.:** 15405 **Date Drilled:** 5/20/98 **Boring:** 5 Refer to "Legends & Notes"

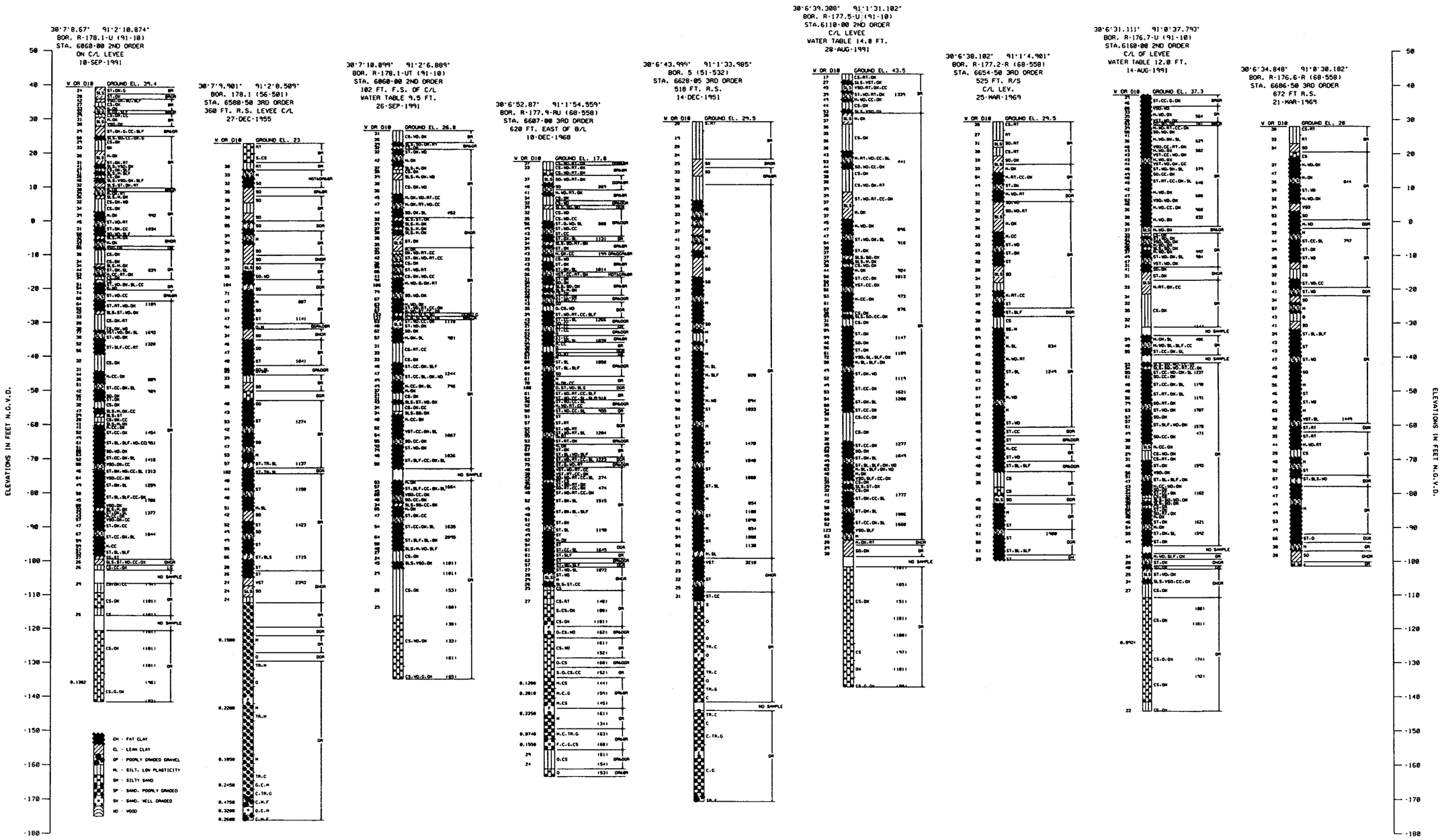
Scale In Feet	PP	SPT	SPLR	Symbol	Visual Classification	USC	Sample Number	Depth In Feet	Water Content Percent	Density Dry	Density Wet	Shear Tests Type	Shear Tests φ	Shear Tests C	Atterberg Limits LL	Atterberg Limits PL	Atterberg Limits PI		Other Tests
50					Loose gray silty sand w/clay layers	SM													
	0.25				Medium stiff gray clay w/shell fragments & sand lenses	CH	16	53-54	51	69	105	UC	–	790					
	0.25						17	58-59											
60																			
	0.25				Medium stiff gray silty clay	CL	18	63-64	34	82	110	UC	–	535					
	0.25				Medium stiff gray clay	CH	19	68-69											
70																			
	0.25						20	73-74	54	67	103	UC	–	720					
80																			
90																			
100																			

Comments:

Area 1

(1 of 1)

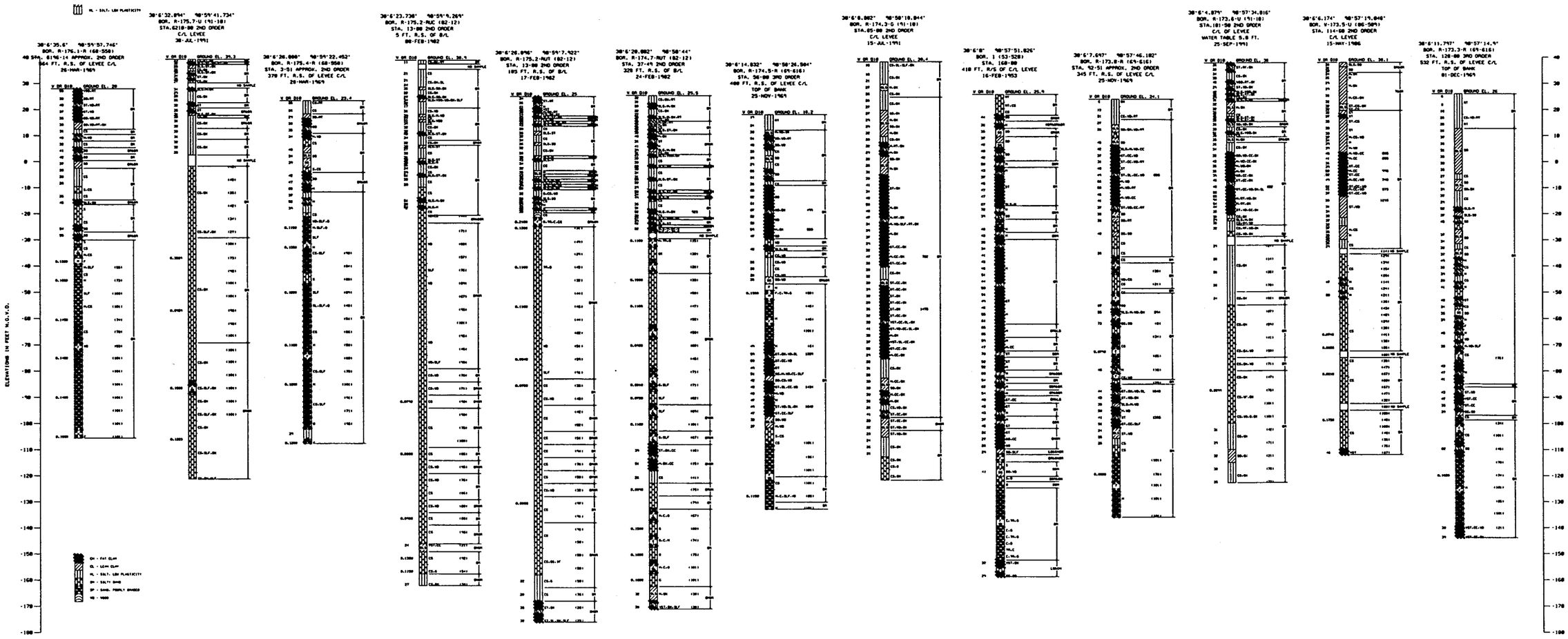
1" = 30'



1" = 30'

Area 3 (1 of 1)

1" = 40'



SOIL TYPE & COLOR	qu	c	TYPE BREAK	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION	STA
BR SI. CL. WITR. RS.	—		..	.059	21	45	22	1	20	
BR. [illegible] SI. SA. TR. [illegible]	.96		45°	.059	32	34	11	5	15	
BR. & GR. SA. CL. SA		C:0.00 φ:0°	60°	.060	29	28	2	35	10	
GR. SA. CL. WLEN. CL. SA	0.88		N.S.	.061	30	37	15	15	5	
GR. SA. CL. SI. WITR. [illegible]			—	.059	—	N.	P	12	0	
GR. SI. CL. WLEN. CL. SA.	0.79		45°	.058	33	43	19	13	-5	
GR. SA. CL.	—		—	.058	33	42	19	14	-10	
GR. [illegible] CL. WLEN. SA.	0.86		45°	.058	30	42	19	15	-15	
GR. CL. SI. WLEN. SA.		C:0.25 φ:0°	60°	.061	30	29	3	16	-20	
GR. SI. CL.	1.10		N.S.	.058	33	45	20	17	-25	
GR. SA. CL. SI.		C:0.00 φ:10°	60°	.062	30	30	4	21	-30	
GR. SI. CL. WLEN. CL. SI.	0.52		51.5	.058	28	46	25	26	-35	
GR. CL.	0.97		51.5	.052	47	104	61	35	-40	
WITR. SH. & CLS. @ 115'-120'									-45	
	1.66		51.5	.052	53	—	—		-50	
WITR. SH. & CLS. 120'-125'									-55	
									-60	
									-65	
									-70	
									-75	
									-80	
									-85	
									-90	
									-95	
									-100	
									-105	
									-110	

TEST PILE No.
TYPE OF PILE:
TYPE OF HAMMER:
ENERGY PER BLOW: FT. LBS.
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: TONS

BORING Nº 1
DATE MADE 3-2-81
STA: 103+80.15
LOCATION: 12' [illegible] 15' N

DRIVING RESISTANCE
TONS

TEST LOAD
TONS

TIME
HOURS

SETTLEMENT
INCHES

SOIL TYPE & COLOR	qu	c	TYPE BREAK	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION	STA
GR. SA. CL. WLEN. CL. SI. SA. TR. [illegible]	[illegible]		[illegible]	[illegible]	[illegible]	26	[illegible]	34	16	
GR. A. [illegible]			60°	.061	32	32	7	36	11	
		C:0.00 φ:34°	—	.061	26	N.	P.		6	
		C:0.00 φ:38°	—	.060	26	N.	P.		1	
GR. FI. SI. SA.					—	N.	P. W.S.	35	-4	
							W.55		-9	
GR. FI. - MED. SA. WITR. 0.85					—	N.	N.P. D. W.40	36	-14	
							W.50		-19	
	N.C.						W.PENETRED 50		-24	
	N.C.						W.PENETRED 50		-29	
	N.C.						W.PENETRED 50		-34	
	N.C.						W.PENETRED 50		-39	
GR. FI. MED. SA.	N.C.				—	N.	P. W.PENETRED 50	37	-44	
									-49	
									-54	
									-59	
									-64	
									-69	
									-74	
									-79	

TEST PILE No.
TYPE OF PILE:
TYPE OF HAMMER:
ENERGY PER BLOW: FT. LBS.
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: TONS

BORING Nº 2
DATE MADE: [illegible]
STA: 104+04
LOCATION: [illegible]

DRIVING RESISTANCE
TONS

TEST LOAD
TONS

TIME
HOURS

SETTLEMENT
INCHES

SOIL TYPE & COLOR	qu	c	TYPE BREAK	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION	STA

TEST PILE No.
TYPE OF PILE:
TYPE OF HAMMER:
ENERGY PER BLOW: FT. LBS.
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: TONS

BORING Nº
DATE MADE:
STA:
LOCATION:

DRIVING RESISTANCE
TONS

TEST LOAD
TONS

TIME
HOURS

SETTLEMENT
INCHES

NOTES

F.A.P.	STATE PROJECT	PARISH	BR
BRO-009(035)	803-29-02	ASCENSION	114

26

BL. - Blue
BK. - Black
BR. - Brown
GR. - Gray
GN. - Green
PK. - Pink
WH. - White
YL. - Yellow
CONC. - Concretions
RTS. - Roots
ROT. - Rotten
VEG. - Vegetation
WD. - Wood

CL. - Clay
GRAV. - Gravel
ORG. - Organic
SA. - Sand
SH. - Shelly
SI - Silty
ALT. - Alternating
CO. - Coarse
FI. - Fine
MED. - Medium
I. O. - Iron Ore
LEN. - Lenses
Q. A. - Quick Acting

STR. - Strata
Mot. - Mottled
TR. - Trace
N. P. - Non-Plastic
PENET. - Penetration
N. C. - No Cull
S.S. - Slickensides
YLD. - Yield
M. S. - Multiple Shear
V. S. - Vertical Shear
60° S. - Shear Angle
SL. - Slump

MOISTURE CONTENT - Moisture Content of the material in its natural state expressed as a percentage of the dry weight of the material

(3) - Location and Identification of the sample

NO PENETRATION - Unable to drive split spoon sampler initial 6 inches

N - 18 - Number of blows of 140 lbs. hammer dropped 30 in. required to drive 2 in. O.D. Split Spoon sampler 1 ft. after first having been driven 6 in. unless amount of penetration shown otherwise

NO CULL - No preliminary 6" driving prior to securing drive data

c - Compressive strength from unconsolidated undrained triaxial shear test (Tons per sq. ft.)

qu - Compressive strength from consolidated undrained shear test (Tons per sq. ft.)

φ - Angle of internal friction

γ - Wet weight of in-place material (Tons per cu. ft.)

• - Strength determined by consolidated drained triaxial shear test (Tons per sq. ft.)

- Strength determined by penetrometer

CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES

SOIL		DESIGNATION	Nº OF BLOWS "N"	"qu" UNCONFINED COMPRESSIVE STRENGTH TONS PER SQ FT.
SAND & SILT	RELATIVE DENSITY	VERY LOOSE	LESS THAN 4	
		LOOSE	4 - 10	
		MEDIUM	10-30	
		DENSE	30-50	
		VERY DENSE	OVER 50	
CLAY	CONSISTENCY	VERY SOFT	LESS THAN 2	LESS THAN 0.25
		SOFT	2-4	0.25 - 0.50
		MEDIUM	4-8	0.50 - 1.00
		STIFF	8-15	1 - 2
		VERY STIFF	15-30	2 - 4
		HARD	OVER 30	OVER 4

PILE DATA

LOCATION (BENT)	STATION	PLAN TIP ELEV.	CUT-OFF ELEV.	PLAN PILE LENGTH	ORDER LENGTH	ORDER LENGTH	AS BUILT TIP ELEV. MAX. ELEV.	MIN. ELEV.	AVE. ELEV.

PROJECT ENGINEER

CORE BORINGS AND TEST PILES.

BAYOU LAFOURCHE BRIDGE AND APPROACHES
ROUTE LA. 943

DATED MAR. 13, 1981

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

SURVEYED	DETAILED	TRACED
CHECKED	CHECKED	CHECKED
MATERIAL SECTION		DESIGN SECTION

DATE	DESCRIPTION	BY

REVISIONS

AS BUILT

F.A.P.	STATE PROJECT	PARISH	SHEET NO.
9-910(3)	232-30-01	ASSUMPTION	129

CLASSIFICATION

SOIL TYPE & COLOR	qu	CONSISTENCY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
SILTY CLAY LOAM - TR. W/ ORGANIC MATTER			9	27	6		2.5
SILTY CLAY LOAM			10	24	8		-2.5
SILTY CLAY LOAM		STIFF	13	31	11		-5.0
BR. SILTY TO SANDY CLAY LOAM		STIFF	16	25	8		-7.5
BR. SILTY CLAY - TR. LOAM -		MED.	23	43	23		-10.0
BR. SILTY CLAY TO SANDY CLAY - TR. LOAM	0.72	MED.	30	38	9		-12.5
BR. SILT WITH CLAY LOAM	0.63	MED.	23	27	4		-15.0
BR. SILT WITH LOAM		LOOSE	30	N.P.	N.P.		-17.5
BR. SILT WITH CLAY LOAM		LOOSE TO MED.	29	N.P.	N.P.		-20.0
BR. SILT WITH CLAY LOAM		MED.	28	N.P.	N.P.		-22.5
BR. SILTY CLAY LOAM - SILT & CLAY		STIFF	29	N.P.	N.P.		-25.0
BR. SANDY SILT WITH LOAM		LOOSE TO MED.	36	N.P.	N.P.		-27.5
BR. SANDY SILT - TR. LOAM		MED.	27	N.P.	N.P.		-30.0
BR. SILTY CLAY LOAM		MED.	27	N.P.	N.P.		-32.5
BR. SANDY SILT		MED.	26	N.P.	N.P.		-35.0
BR. SILTY TO SOME SANDY SILT - CLAY LOAM	0.22	SOFT	39	46	8		-37.5
BR. SILTY CLAY		MED.	31	44	13		-40.0
LT. BR. SILTY CLAY		LOOSE	20	N.P.	N.P.		-42.5
BR. SILTY CLAY		MED.	28	42	14		-45.0
BR. SILTY CLAY - TR. SANDY SILT		MED.	23	44	21		-47.5
BR. SILTY CLAY - TR. SANDY SILT		MED.	27	46	19		-50.0
BR. SILTY CLAY		MED.	25	42	17		-52.5
BR. SILTY CLAY	STRONG	STIFF	28	44	16		-55.0
BR. SILTY CLAY TO MED. SAND	STRONG	SOFT	26	44	18		-57.5
BR. SILTY CLAY TR. SILTY SAND		MED.	26	N.P.	N.P.		-60.0
BR. SILTY CLAY BR. SILTY TO MED. SAND	STRONG	STIFF	27	48	21		-62.5
BR. SILTY TO MED. SAND		MED.	24	N.P.	N.P.		-65.0

TEST PILE Nº

TYPE OF PILE:
TYPE OF HAMMER:
ENERGY PER BLOW: FT.LBS
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: TONS

STA.

BORING Nº 1 STA: 8+80
DATE MADE: SEPT. 19, 1960 LOCATION: ℄

DRIVING RESISTANCE TONS

TEST LOAD TONS

TIME HOURS

SETTLEMENT INCHES

CLASSIFICATION

SOIL TYPE & COLOR	qu	CONSISTENCY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
2' WATER @ 2.5ft							2.5
BR. SILTY CLAY -	0.02	VERY SOFT	111	68	43		
[illegible]	0.30	SOFT	48	39	24		-2.5
[illegible]	0.54	SOFT	48	68	27		-5.0
[illegible]	0.11	VERY SOFT	43	72	29		-7.5
[illegible]		VERY SOFT	48	74	29		-10.0
[illegible]	0.13	VERY SOFT	43	72	29		-12.5
[illegible]		MED.	25	44	21		-15.0
[illegible]		SOFT	28	36	11		-17.5
[illegible]		MED.	27	42	15		-20.0
[illegible]		MED.	24	44	20		-22.5
[illegible]		MED.	23	44	21		-25.0
[illegible]		MED.	23	44	21		-27.5
[illegible]		MED.	23	44	21	

Total Sheets	STATE PROJECT	PARISH	SHEET NO
52	804-10-09	ASSUMPTION	#0024

53

SOIL TYPE & COLOR	qu	φ	TYPE BREAK	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
[illegible]									25
[illegible]									20
BR. CLY. SILT w/TR. ORG. 5%	0.62	12.0	.126	27	32	12		5 (30)	15
BR. CLY. SDY. SILT	0.89	11.0	.140	23	N	P		5 (31)	10
GR. SI. CL. w/STR. SILT	0.60	12.0	.159	31	31	7		5 (32)	5
GR. CLY. SDY. SILT	1.13	11.0	.141	31	N	P		5 (33)	0
GR. SI. CL. w/STR. SILT	0.80	12.0	.140	32	33	11		5 (34)	-5
GR. CLY. SI. SA.	1.49	11.0	.139	23	N	P		5 (35)	-10
GR. CLY. SDY. SILT	0.85	12.0	.139	30	28	3		5 (36)	-15
GR. SI. CL.	0.71		115	.145	38	46	26	5 (37)	-20
GR. CL.	0.99		11.5	.139	35	39	37	5 (38)	-25
GR. CLY. SI. SA.		1.03	11.0	.150	32	N	P	5 (39)	-30
GR. SI. CL. w/STR. SI. SA.		1.01	11.5	.139	30	35	23	5 (40)	-35
GR. CL. w/TR. ORG.	1.26		115	.139	37	43	19	5 (41)	-40
[illegible] w/TR. SILT		0.35	11.0	.145	37	39	16	5 (42)	-45

TEST PILE No.
TYPE OF PILE:
TYPE OF HAMMER:
ENERGY PER BLOW: FT. LBS.
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: TONS

STA.

BORING No
DATE MADE: 2-8-71
STA: 14+36
LOCATION: 7' RT. ℄

DRIVING RESISTANCE
TONS

TEST LOAD TONS
TIME HOURS
SETTLEMENT INCHES

SOIL TYPE & COLOR	qu	φ	TYPE BREAK	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
[illegible]									25
[illegible]									20
[illegible]									15
[illegible]									10
[illegible]									5
[illegible]									0
[illegible]									-5
[illegible] w/TRS. 10%	0.85		11.5	.135	131	50	21	5 (43)	-10
GR. CL.	0.96		11.0	.146	79	53	34	5 (44)	-15
GR. SI. CL. w/TR. ORG. 5%	0.35		12.0	.135	31	36	8	5 (45)	-20
BR. CLY. SILT w/TR. ORG. 9%		0.87	12.0	.140	26	27	3	5 (46)	-25
GR. CLY. SILT	0.69		11.0	.139	37	30	5	5 (47)	-30
GR. CLY. SILT	0.80				24	26	2	5 (48)	-35
GR. CLY. SILT & GR. SI. SA.	0.80				23	N	P	5 (49)	-40
GR. SI. CL.		1.32		11.5	.140	29	47	27	5 (50)	-45
GR. SI. CL. w/TR. ORG.		1.17		11.5	.139	43	100	67	5 (51)	-50
GR. SI. CL.		0.79		11.0	.139	33	44	21	5 (52)	-55
GR. CL.		1.03		11.5	.139	43	81	53	5 (53)	-60

TEST PILE No.
TYPE OF PILE:
TYPE OF HAMMER:
ENERGY PER BLOW: FT. LBS.
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: TONS

STA.

BORING No
DATE MADE: 2-17-71
STA: 15+30
LOCATION: 18' LT. ℄

DRIVING RESISTANCE
TONS

TEST LOAD TONS
TIME HOURS
SETTLEMENT INCHES

SOIL TYPE & COLOR	qu	φ	TYPE BREAK	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
[illegible]									25
[illegible]									20
[illegible]		1.18	11.5	.139	23	33	12	5 (54)	15
BR. CLY. SILT w/TR. SA.		0.74	12.0	.136	27	31	8	5 (55)	10
BR. SI. CL. w/SILT TR. SA.		0.81	11.5	.137	23	35	15	5 (56)	5
GR. CLY. SDY. SILT		0.50	11.0	.139	31	28	4	5 (57)	0
GR. SI. CL. w/SILT		0.62	11.0	.137	33	33	10	5 (58)	-5
GR. CLY. SDY. SILT		1.00	11.0	.137	31	N	P	5 (59)	-10
GR. CLY. SDY. SILT		0.36	6.25	.140	27	27	4	5 (60)	-15
[illegible] w/TR. SI. SA.		0.60	11.5	.137	23	23	11	5 (61)	-20
BR. CL. SA.	SAND				17	N	P	5 (62)	-25
GR. CL. SA.					21	N	P 11.23	5 (63)	-30
GR. SI. CL. w/LT. SILT	MED.				23	35	P 11.22	5 (64)	-35
GR. SI. CL.		1.15		11.5	.137	31	43	28	5 (65)	-40
GR. CLY. SILT			1.16	11.0	.137	27	28	5	5 (66)	-45
GR. SI. CL. w/STR. SILT			0.35	11.0	.141	25	31	8	5 (67)	-50
GR. SI. CL. w/TR. ORG.		1.02		11.5	.137	39	71	49	5 (68)	-55

TEST PILE No.
TYPE OF PILE:
TYPE OF HAMMER:
ENERGY PER BLOW: FT. LBS.
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: TONS

STA.

BORING No
DATE MADE: 3-8-71
STA: 16+76
LOCATION: 7' LT. ℄

DRIVING RESISTANCE
TONS

TEST LOAD TONS
TIME HOURS
SETTLEMENT INCHES

NOTES

BL.	- Blue	CL.	- Clay	STR.	- Strata
BK.	- Black	GRAV.	- Gravel	STA.	- Streaks
BR.	- Brown	ORG.	- Organic	TR.	- Trace
GR.	- Gray	SA.	- Sand	N. P.	- Non-Plastic
GN.	- Green	SH.	- Shelly	PENET.	- Penetration
PK.	- Pink	SI.	- Silt	N. C.	- No Cull
WH.	- White	ALT.	- Alternating	S. S.	- Slickensides
YE.	- Yellow	CO.	- Coarse	YLD.	- Yield
CONC.	- Concretions	FI.	- Fine	M. S.	- Multiple Shear
RTS.	- Roots	MED.	- Medium	V. S.	- Vertical Shear
BOT.	- Bottom	LAM.	- Laminations	60° S.	- Shear Angle
VEG.	- Vegetation	LEN.	- Lenses	SL.	- Slope
WD.	- Wood	LY.	- Layers	SLY.	- Slightly
				CLY.	- Clayey

MOISTURE CONTENT - Moisture Content of the material in its natural state expressed as a percentage of the dry weight of the material

(3) - Location and Identification of the sample

NO PENETRATION - Unable to drive split spoon sampler initial 6 inches

N - 10 - Number of blows of 140 lbs. hammer dropped 30 in. required to drive 2 in. O.D. Split Spoon sampler 1 ft. after first having been driven 6 in. unless amount of penetration shown otherwise

NO CULL - No preliminary 6" driving prior to securing drive data

qu - Compressive strength from triaxial undrained shear test (tons per sq. ft.)

qc - Compressive strength from consolidated undrained shear test (tons per sq. ft.)

φ - Angle of internal friction

γ - Wet weight of in-place material (tons per cu. ft.)

* - Strength determined by vane shear test

E4" - Estimated unconfined compressive strength by correlation with similar material on this project.

CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES

SOIL		DESIGNATION *	Nº OF BLOWS "N"	"qu" UNCONFINED COMPRESSIVE STRENGTH TONS PER SQ. FT.
SAND & SILT	RELATIVE DENSITY	VERY LOOSE	LESS THAN 4	
		LOOSE	4-10	
		MEDIUM DENSE	10-30	
		DENSE	30-50	
		VERY DENSE	OVER 50	
CLAY	CONSISTENCY	VERY SOFT	LESS THAN 2	LESS THAN 0.25
		SOFT	2-4	0.25-0.50
		MEDIUM STIFF	4-8	0.50-1.00
		VERY STIFF	8-15	1-2
		HARD	15-30	2-4
			OVER 30	OVER 4

PILE DATA

LOCATION (BENT)	STATION ℄	PLAN TIP ELEV.	CUT-OFF ELEV.	PLAN PILE LENGTH	ORDER LENGTH	ORDER LENGTH	AS BUILT TIP ELEV. MAX. ELEV.	MIN. ELEV.	AVE. ELEV.
1	11+68	-36.17	18.83		55'				
2	11+87	-46.17	18.83		65'				
3	12+06	-51.17	18.83		70'				
4	12+25	-56.17	18.83		75'				
5	12+44	-56.17	18.83		75'				
6	12+63	-56.17	18.83		75'				
7	12+82	-56.17	18.83		75'				
8	13+01	-51.17	18.83		70'				
9	13+20	-46.17	18.83		65'				
10	13+39	-36.17	18.83		55'				

A. W. Biggs

CORE BORINGS AND TEST PILES

BAYOU LAFOURCHE BRIDGE AT PAINCOURTVILLE
La 403

DATED MAR. 5 19 71

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

SURVEYED [illegible] | DETAILED – | TRACED J.W.
CHECKED J.R.J. | CHECKED – | CHECKED L.J.

MATERIALS & TESTING SECTION — BRIDGE DESIGN SECTION

DATE	DESCRIPTION	BY
	REVISIONS	

AS BUILT PLANS

TEST PILE No.

TYPE OF PILE:
TYPE OF HAMMER:
ENERGY PER BLOW: FT. LBS.
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: TONS

SOIL TYPE & COLOR	qu	qc	TYPE BREAK	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
(W/TR. VD. @ 884. @ EL. +19.4 - +13.4) GR. BR. CL. SI.		0.72	N.S.	.056	-	N.	P.	(3)	
GR. CL. SI.		0.36	N.S.	.061	-	N.	P.	(3)	
GR. SI. CL. W/STR. SI.	1.12		N.S.	.059	31	37	14	(3)	
GR. BR. FI. SI. SA.	N.C. / N.C.				-	N.	P.	(3)	
GR. CL. W/SA. LENS					51	67	[illegible]	(3)	
GR. SI. CL.	1.27 / 1.48		V.S.	.066	29 / 27	40	19	(3)	

BORING NO 1
DATE MADE 4-9-75
STA: 100+45
LOCATION: ℄

DRIVING RESISTANCE
TONS

TEST LOAD TONS
TIME HOURS
SETTLEMENT INCHES

TEST PILE No.

TYPE OF PILE:
TYPE OF HAMMER:
ENERGY PER BLOW: FT. LBS.
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: TONS

SOIL TYPE & COLOR	qu	qc	TYPE BREAK	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
WATER @ DRIV.									
GR. SI. CL. SOME SA.	0.60		SL.	.064	-	31	10	(3)	
GR. CL. SI. SA.		0.40	N.S.	.057	-	N.	P.	(3)	
		0.36							
GR. CL. SI. SA.		0.66	N.S.	.061	-	26	8	(3)	
GR. CL. SI.		0.90	N.S.	.061	-	33	9	(3)	
GR. SI. CL. W/STR. CL. SA.	0.60		-	.061	37	44	20	(3)	
GR. FI. SA.					-	N.	[illegible]	(3)	
GR. SI. CL.					31	70	44	(3)	
GR. FI. SA.					-	N.	[illegible]	(3)	
GR. SI. CL.	0.96		V.S.	.061	28	39	22	(3)	
GR. SI. CL.	0.78		V.S.	.057	30	39	14	(3)	
GR. SA. SI. CL.	0.91		V.S.	.060	24	36	15	(3)	
GR. CL. SI.					-	N.	[illegible]	(3)	

BORING NO 2
DATE MADE: 5-7-75
STA: 101+48
LOCATION: 50' RT. ℄

DRIVING RESISTANCE
TONS

TEST LOAD TONS
TIME HOURS
SETTLEMENT INCHES

TEST PILE No. 1.

TYPE OF PILE: Treated Timber
TYPE OF HAMMER:
ENERGY PER BLOW: FT. LBS.
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: 20.5 TONS

SOIL TYPE & COLOR	qu	qc	TYPE BREAK	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
WATER @ DRIV.									
GR. CL. SI. W/TR. SAND	0.60	SL.	.061	-	33	7		(3)	
GR. CL. SI. SA.	0.8	V.S.	.062	-	N.	P.		(3)	
GR. SI. CL.	0.39	V.S.	.060	-	-	-		(3)	
GR. CL. SA.	0.63	V.S.	.059	-	N.	P.		(3)	
GR. SAND. SA. W/WD.	0.50	-	.056	-	N.	P.		(3)	
GR. SI. CL.				51	70	44			
GR. FI. SA.				-	N.	P.			
GR. SI. CL. W/LENS SI. SA.	1.15	V.S.	.065	41	65	27		(3)	
GR. SI. CL. W/LENS SI. SA.	0.50	V.S.	.060	49	90	54		(3)	
GR. SAND. SA.				-	N.	P.			
GR. SI. CL.	0.66	V.S.	.060	33	54	23			
GR. FI.-MED. SA. W/TR. CONC.				-	N.	N=43 / N=40 / N=46		(3)	

BORING NO 3
DATE MADE: 5-7-75
STA: 100+00
LOCATION: 25' LT. ℄

DRIVING RESISTANCE
TONS

TEST LOAD TONS
TIME HOURS
SETTLEMENT INCHES

NOTES

BL.	= Blue	CL.	= Clay	STR	= Strata
BK.	= Black	GRAV.	= Gravel	Mot.	= Mottled
BR.	= Brown	ORG.	= Organic	Tr.	= Trace
GR.	= Gray	SA.	= Sand	N. P.	= Non-Plastic
GN.	= Green	SH.	= Shelly	PENET.	= Penetration
PK.	= Pink	SI	= Silty	N. C.	= No Cull
WH.	= White	ALT.	= Alternating	S S	= Slickensides
YE.	= Yellow	CO.	= Coarse	YLD.	= Yield
CONC.	= Concretions	FI.	= Fine	M. S.	= Multiple Shear
RTS.	= Roots	MED.	= Medium	V. S.	= Vertical Shear
ROT.	= Rotten	I. O.	= Iron Ore	60° S.	= Shear Angle
VEG.	= Vegetation	LEN.	= Lenses	SL.	= Slump
WD.	= Wood	Q. A.	= Quick Acting		

MOISTURE CONTENT = Moisture Content of the material in its natural state expressed as a percentage of the dry weight of the material

(3) = Location and identification of the sample

NO PENETRATION = Unable to drive split spoon sampler initial 6 inches

N = 18 = Number of blows of 140 lbs. hammer dropped 30 in. required to drive 2 in. O.D. Split Spoon sampler 1 ft. after first having been driven 6 in. unless amount of penetration shown otherwise

NO CULL = No preliminary 6" driving prior to securing drive data

qu = Compressive strength from triaxial undrained shear test (tons per sq. ft.)

qc = Compressive strength from consolidated undrained shear test (tons per sq. ft.)

φ = Angle of internal friction

γ = Wet weight of in-place material (Tons per cu. ft.)

• = Strength determined by PENETROMETER

•4' = Estimated unconfined compressive strength by correlation with similar material on this project.

CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES

SOIL		DESIGNATION	Nº OF BLOWS "N"	"qu" UNCONFINED COMPRESSIVE STRENGTH TONS PER SQ FT.
SAND & SILT	RELATIVE DENSITY	VERY LOOSE	LESS THAN 4	
		LOOSE	4-10	
		MEDIUM	10-30	
		DENSE	30-50	
		VERY DENSE	OVER 50	
CLAY	CONSISTENCY	VERY SOFT	LESS THAN 2	LESS THAN 0.25
		SOFT	2-4	0.25-0.50
		MEDIUM	4-8	0.50-1.00
		STIFF	8-15	1-2
		VERY STIFF	15-30	2-4
		HARD	OVER 30	OVER 4

PILE DATA

LOCATION (BENT)	STATION	PLAN TIP ELEV.	CUT-OFF ELEV.	PLAN PILE LENGTH	ORDER LENGTH	ORDER LENGTH	AS BUILT TIP ELEV. MAX. ELEV.	MIN. ELEV.	AVE. ELEV.
1	100+78.82	-51.78	18.22	70					
2	100+97.82	-51.04	18.96	70					
3	101+16.82	-51.51	18.49	70					
4	101+35.82	-51.57	18.43	70					
5	101+54.82	-51.24	18.76	70					
6	101+73.82	-56.10	18.89	75					

STATE PROJECT	FEDERAL AID PROJECT	SHEET NO
804-11-06	Assumption	112

CORE BORINGS AND TEST PILES.

BAYOU LAFOURCHE BRIDGE AT MUNSON
LA. 402

DATED JUNE 25, 1975

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

SURVEYED CHARLTY TEMPLET | DETAILED | TRACED R.A.A.
CHECKED P.H.G.JR. | CHECKED | CHECKED R.D.E.
MATERIAL SECTION — BRIDGE DESIGN SECTION

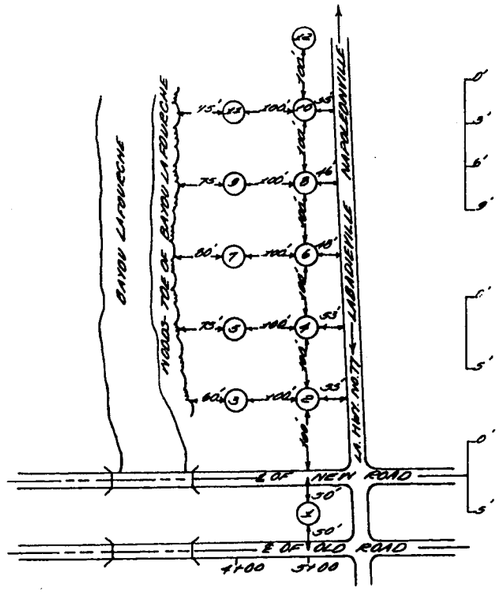
F.B. NO. SL-3975

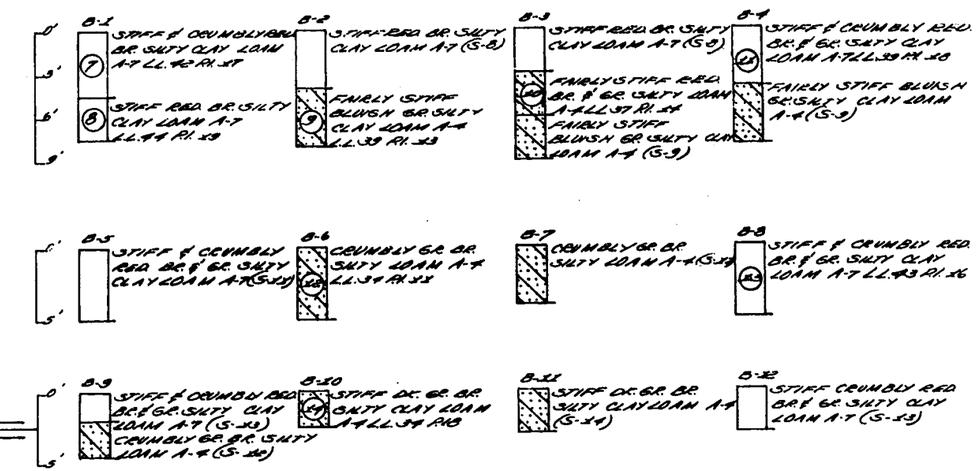
DATE	DESCRIPTION	BY

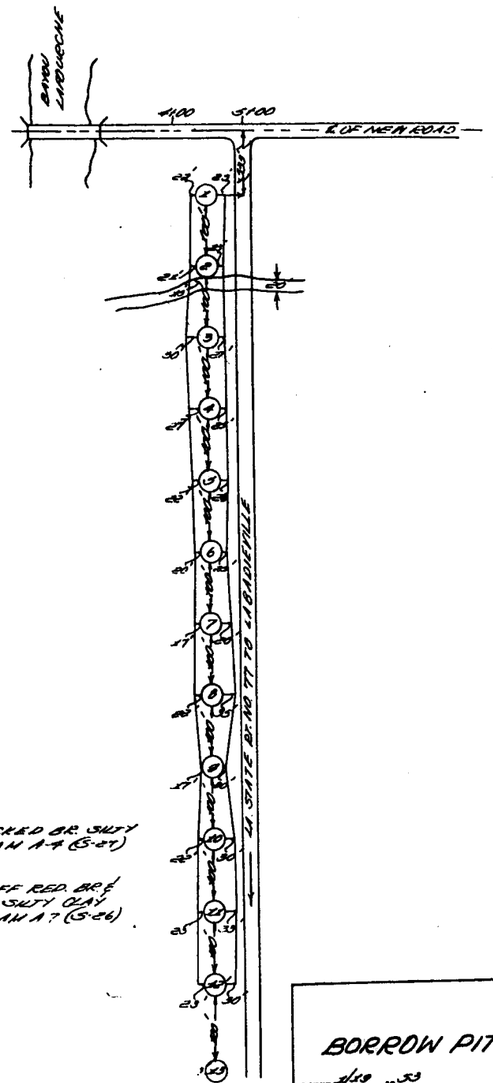
REVISIONS

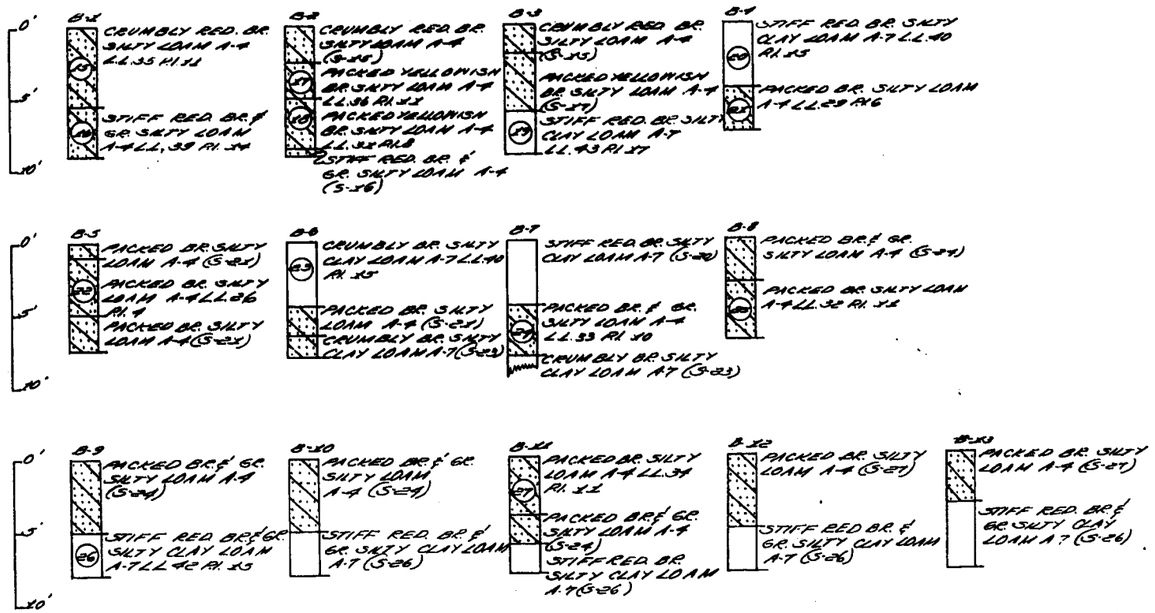
7

	PROJECT	PARISH	SHEET









DATE	DESCRIPTION	BY

REVISIONS

BORROW PIT MAPS

DATED 4/13 19 53

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DESIGNED JNF.	DETAILED GBW.	TRACED GBW.
CHECKED JMJ.	CHECKED WBD.	CHECKED WBD.

IN CHARGE OF H. L. LENHARDT-TESTING & RESEARCH ENGR.

	STATE PROJECT	PARISH	SHEET NO.
	737-02-61	ASSUMPTION	112

22

TEST PILE No.

TYPE OF PILE:
TYPE OF HAMMER:
ENERGY PER BLOW: FT. LBS.
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: TONS

SOIL TYPE & COLOR	qu	qp	TYPE BREAK	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
BR. SI. CL. w/LEN. SI. & ORG. 4%	1.08		–	.060	25	39	18	(52)	18
BR. SI. CL. w/LEN. SI. ORG. 6%	0.15		VLS.	.054	41	59	21	(53)	5
BR. SI. CL. ORG. 6%	0.34		M.S.	.053	42	57	26	(54)	0
BR. CL. SI. w/LEN. SI.	0.40		VLS.	.055	–	34	10	(55)	-5 -10 -15
BR. SI. CL. w/LEN. SI. WD. @ 40'-40'	0.71		VLS.	.059	31	35	14	(56)	-20 -25 -30 -35 -40
BR. CL. SI.	0.70		V.S.	.057	–	35	8	(57)	-45
BR. SI. CL. w/LEN. SI. & TR. ORG.	1.35		VVS	.057	31	56	25	(58)	-50 -55
BR. CL. TR. ORG. WD @ 50'-50'	1.50		V/S	.051	50	86	44	(59)	-60 -65 -70 -75
BR. SA. SI.		0.0	SL.	.088	–	N.	P.	(60)	-80 -85 -90 -95
BR. CL. & BR. SI. SA.	0.99		V/S	.050	51	91	50	(61)	-100
BR. CL. w/WD. & CONC.	1.00		V/S	.050	48	86	44	(62)	-105 -110 -115 -120

BORING No
DATE MADE 3.25.94 STA: 101+50 LOCATION: 3' RT. ℄

DRIVING RESISTANCE TONS

TEST LOAD TONS
TIME HOURS
SETTLEMENT INCHES

TEST PILE No.

TYPE OF PILE:
TYPE OF HAMMER:
ENERGY PER BLOW: FT. LBS.
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: TONS

SOIL TYPE & COLOR	qu	qp	TYPE BREAK	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
5' WATER @ SURF.									15 10 5 0
MUCK & BR. ORG. 11%	0.0		SL.	.062	–	56	25	(1)	-5 -10
BR. CL. SI.	0.48		M.S.	.061	–	30	9	(2)	-15 -20 -25 -30 -35 -40 -45 -50 -55 -60 -65 -70 -75 -80 -85 -90 -95 -100 -105 -110 -115 -120
BR. CL. SI.					–	N.	P.	(3)	
BR. SI. CL. TR. ORG. @ 80'-85'	1.31		M.S.	.059	52	102	67	(4)	
BR. FR. SI. SA. w/TR. CL. & ORG.					–	N.	P.	(5)	
BR. SI. CL. w/TR. CONC. STR. SI. SA. @ 30'-100'	1.53		M.S.	.052	51	95	60	(6)	

BORING No
DATE MADE: 3.19.94 STA: 102+50 LOCATION: 18' RT. ℄

DRIVING RESISTANCE TONS

TEST LOAD TONS
TIME HOURS
SETTLEMENT INCHES

TEST PILE No. 1

TYPE OF PILE: 1-16" CONC. @ 80'
TYPE OF HAMMER:
ENERGY PER BLOW: FT. LBS.
DATE OF DRIVING:
DATE OF LOADING:
DESIGN LOAD: 80.0 TONS

SOIL TYPE & COLOR	qu	qp	TYPE BREAK	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
5' WATER @ SURF.									15 10 5 0
MUCK & BR. ORG. 9%	0.0		SL.	.036	–	63	25	(1)	-5 -10
BR. SI. CL.	0.31		VLS.	.056	36	36	14	(2)	-15 -20
BR. CL. SA. SI.		0.0	SL.	.057	–	N.	P.	(3)	-25
BR. SI. CL. w/STR. SA. TR. ORG. @ 35'-35'	0.83		VLS.	.058	–	32	10	(4)	-30 -35 -40 -45 -50 -55 -60 -65 -70 -75 -80 -85 -90 -95 -100 -105
BR. SI. CL.	0.92		S/S	.050	57	100	65	(5)	
STR. SI. @ 90'-95'									
(TR. ORG. & WD.) 100'-105'									

BORING No
DATE MADE: 3.30.94 STA: 103+00 LOCATION: 26' RT. ℄

DRIVING RESISTANCE TONS

TEST LOAD TONS
TIME HOURS
SETTLEMENT INCHES

NOTES

BL.	Blue	CL.	Clay	STR	Strata
BK.	Black	CLAY.	Clayey	M	Mottled
BR.	Brown	C	Coarse	L	Loose
GR.	Gray	SA.	Sand	FR. PL.	Fine-Plastic
GN.	Green	SH.	Shelly	PR. PL.	Practically
PK.	Pink	SI	Silty	BL. CL.	Black-Clay
WH.	White	ALT.	Alternating	S. S	Slickensides
YE.	Yellow	CO.	Coarse	YLD.	Yield
CONC.	Concretions	FI.	Fine	M. S.	Multiple Shear
RTS.	Roots	MED.	Medium	V. S.	Vertical Shear
ROT.	Rotten	I. O.	Iron Ore	ANG.	Sharp Angle
VEG.	Vegetation	LEN.	Lenses	SL.	Slicken
WD.	Wood	Q. A.	Quick Acting		

MOISTURE CONTENT - Moisture Content of the material in its natural state expressed as a percentage of the dry weight of the material

(3) - Location and identification of the sample

NO PENETRATION - Unable to drive split spoon sampler initial 6 inches

N - 18 - Number of blows of 140 lbs. hammer dropped 30 in. required to drive 2 in. O.D. Split Spoon sampler 1 ft. after first having been driven 6 in. unless amount of penetration shown otherwise

NO CULL - No preliminary 6" driving prior to securing drive data

qp - Compressive strength from triaxial unconfined shear test (Tons per sq. ft.)

qu - Compressive strength from consolidated undrained shear test (Tons per sq. ft.)

φ - Angle of internal friction

γ - Wet weight of in-place material (Tons per cu. ft.)

• - Strength determined by PENETROMETER

E 4' - Estimated unconfined compressive strength by correlation with similar material on this project.

CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES

SOIL		DESIGNATION	Nº OF BLOWS "N"	"Qu" UNCONFINED COMPRESSIVE STRENGTH TONS PER SQ. FT.
SAND & SILT	RELATIVE DENSITY	VERY LOOSE	LESS THAN 4	
		LOOSE	4-10	
		MEDIUM	10-30	
		DENSE	30-50	
		VERY DENSE	OVER 50	
CLAY	CONSISTENCY	VERY SOFT	LESS THAN 2	LESS THAN 0.25
		SOFT	2-4	0.25-0.50
		MEDIUM	4-8	0.50-1.00
		STIFF	8-15	1-2
		VERY STIFF	15-30	2-4
		HARD	OVER 30	OVER 4

PILE DATA

LOCATION (BENT)	STATION	PLAN TIP ELEV.	CUT-OFF ELEV.	PLAN PILE LENGTH	ORDER LENGTH	ORDER LENGTH	AS BUILT TIP ELEV. MAX. ELEV.	AS BUILT TIP ELEV. MIN. ELEV.	AS BUILT TIP ELEV.
1	101+57	-33.98	16.02	50'					
2	101+76	-38.98	16.02	55'					
3	101+95	-48.98	16.02	65'					
4	102+14	-53.98	16.02	70'					
5	102+33	-58.98	16.02	75'					
6	102+52	-58.98	16.02	75'					
7	102+71	58.98	16.02	75'					
8	102+90	-58.98	16.02	75'					
9	103+09	-58.98	16.02	75'					
10	103+28	-48.98	16.02	65'					
11	103+47	-38.98	16.02	55'					
12	103+66	-33.98	16.02	50'					

F.B. NO. SL-3228

DATE	DESCRIPTION	BY
	REVISIONS	

CORE BORINGS AND TEST PILES

BAYOU LAFOURCHE BRIDGE (SUPREME)

LA.1011

DATED APRIL 17 1974

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

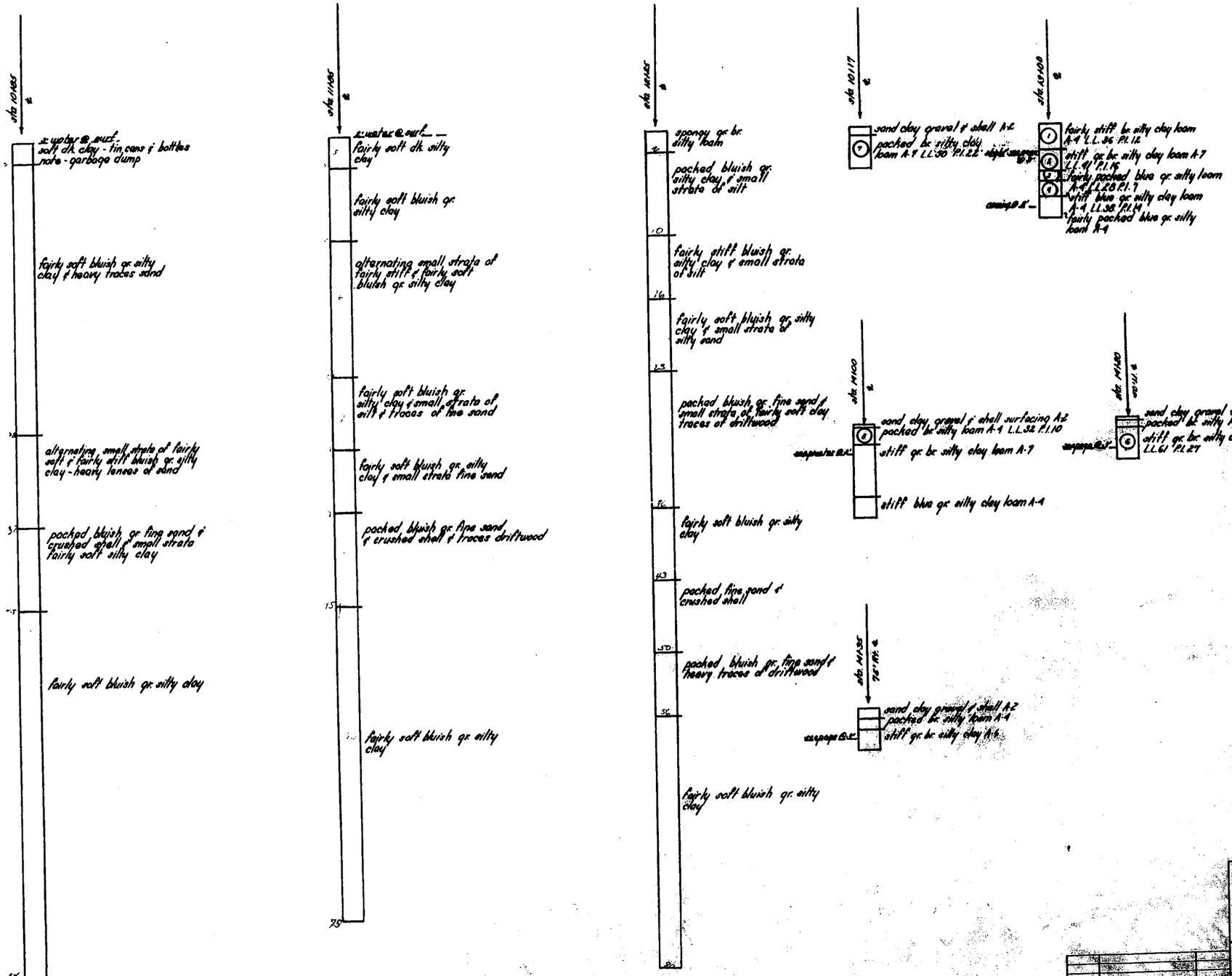
SURVEYED J. DIRIDE & BRIDGE | DETAILED – | TRACED
CHECKED J. M. FASTER | CHECKED | CHECKED

MATERIAL SECTION — BRIDGE DESIGN SECTION

F.A.P.	STATE PROJ.	PARISH	SHEET NO.
	804-35-51	ASSUMPTION	7

10

BAYOU LAFOURCHE BRIDGE - LABADIEVILLE
STATE PROJ. 804-35-51
ASSUMPTION PARISH



legend

scales: logs of borings 1"=5'

(1) indicates sample location & identification
L.L. indicates liquid limit of material
P.I. indicates plastic index of material
A-4 indicates subgrade soil group
N.P. indicates non plastic
indicates level of free water
indicates boring location & identification

sta. 0+00 ℄

field book no 30-822

note:
ground elev. "0" unless otherwise shown.

DATE	DESCRIPTION	BY
	REVISIONS	

SUBSURFACE SOIL SURVEY

FAP	STATE PROJECT		SHEET NO
01-040(002)	424-08-03	LAFOURCHE	216

TEST PILE No. 4 — 14"ø CLP

480 TONS

SOIL TYPE & COLOR	qu	qc	CONSISTENCY	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
									10
									4.5
GROUND SURFACE									
BR. SI. CL	4.39		VERY STIFF		26.9			1	0
TAN & GR. SI. CL. W/CL. SI. LY.	0.62		MED STIFF		32.7			2	
GR. CL W/SI. LEN.	0.24		VERY SOFT		48.2			3	
GR. SI. CL. W/ CL. SI. LY.	0.92		SOFT		35.8			4	-10
	0.41				35.4	39	15	5	
	0.59				30.2			6	
	0.84				29.5			7	-20
GR. CL. SI. W/ SI. CL. LY.	*φ=0°, c=0.10		LOOSE		31.4			8	
	*φ=5°, c=0.05				31.5			9	-30
	*φ=9°, c=0.10				34.5			10	
GR. SI. CL. W/ CL. SI. LY.	0.44		SOFT		31.8			11	-40
GR. CL. W/ SILT LEN.	0.99		SOFT		48.4			12	
	0.37				51.2			13	-50
GR. SI. SA.			DENSE		N=35			14	
GR. SI. SA.			VERY DENSE		N=50+7" N=50+7"			15 16	-60
GR. SI. SA. W/CL.			MED. DENSE		N=20			17	
GR. CL. W/SI. LEN.	0.94		MED. STIFF		48.8			18 19 20	
GR. SI. SA.			DENSE		N=29				-70
GR. SI. SA.			DENSE		N=30			21	
					N=14			22	
GR. CL. W/SI. LEN.			MED. STIFF					23	-80
GR. CL. SI. W/ SI. & CL. LY.			MED. COMP.					24	
GR. CL. W/ SILT & TR. ORG. MAT.	1.10		STIFF		56.0	105	79	25	-90
	1.33				64.4			26	
GR. CL. W/SI. SA. LEN.	1.14		STIFF		33.1			27	-100

* Quick Triaxial Shear Test

BORING No. C-121 STA: 219+00
DATE MADE: 7/5, 6, 7, 8/69 LOCATION: 50' LT. ℄

DRIVING RESISTANCE TONS

TEST PILE No.
TYPE OF PILE
TYPE OF HAMMER
ENERGY PER BLOW FT. LBS.
DATE OF DRIVING
DATE OF LOADING
DESIGN LOAD TONS

SOIL TYPE & COLOR	qu	qc	CONSISTENCY	γ	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	SAMPLE NUMBER	ELEVATION
C-121 Continued									
GR. CL. W/ORG. MAT.	0.81		MED. STIFF		64.1			27	-100
GR. SI. SA.			DENSE		N=56			28 29	
					N=11			30	-110
GR. CL. W/ SI. LEN.	1.24				52.2			31	
	1.55				49.5	69	38	32	-120
	1.05				40.8			33	
GR. CL. SI.			MED. COMP.					34 35	-130
GR. SI. SA.			DENSE		N=41			36	
GR. SI. CL. W/ CL. SI. LY.	0.61		MED. STIFF		32.4			37	
GR. CL. W/TR. ORG. MAT.	2.36		VERY STIFF		53.9			38	-140
GR. ORG. CL. W/ TR. ORG. MAT.	0.77		VERY STIFF		84.7	168	131	39	
GR. CL. W/SI. LEN. & TR. ORG. MAT.	1.48		STIFF		41.9			40	-150
GR. SI. SA.			MED. DENSE					41	
GR. SI. SA.			DENSE		N=49			42	
GR. CL. W/TR. ORG. MAT.			STIFF		N=16			43	-160
GR. SI. SA. W/CL. LY.			MED. COMP.					44	
GR. SI. SA.			VERY DENSE		N=50+8"			45	
					N=50 (N.C.)			46	-170
					N=50+5"			47	
					N=55 (N.C.)			48	-180
									-190

BORING No. C-121 Cont. STA:
DATE MADE: LOCATION:

DRIVING RESISTANCE TONS

TEST LOAD TONS
TIME HOURS
SETTLEMENT INCHES

TEST PILE No.
TYPE OF PILE
TYPE OF HAMMER
ENERGY PER BLOW FT. LBS.
DATE OF DRIVING
DATE OF LOADING
DESIGN LOAD TONS

BORING No. STA:
DATE MADE: LOCATION:

DRIVING RESISTANCE TONS

TEST LOAD TONS
TIME HOURS
SETTLEMENT INCHES

NOTES

BL — Bleu
BR. — Brown
BK. — Black
GR. — Gray
GRN. — Green
PK. — Pink
YEL. — Yellow
ORG. — Orange
CONC. — Concrete
BTS. — Brick
ROT. — Rotten
VEG. — Vegetation
WD. — Wood

FRAG. = Fragments
W/ = With
POC. = Pockets
MAT. = Matter
COMP. = Compact

MOISTURE CONTENT: [illegible]

③ [illegible]

NO PENETRATION: [illegible]

N 15: [illegible]

NO CORE: [illegible]

qc: Compressive strength [illegible] per sq. ft.

qu: Compressive strength [illegible] per sq. ft.

φ: Angle of internal friction

γ: Wet weight of soil [illegible] per cu. ft.

c: Strength [illegible]

1.4": Estimated [illegible] strength [illegible] similar material [illegible]

CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES

SOIL	DESIGNATION		Nº OF BLOWS "N"	"qu" UNCONFINED COMPRESSIVE STRENGTH TONS PER SQ FT
SAND & SILT	RELATIVE DENSITY	VERY LOOSE	LESS THAN 4	
		LOOSE	4-10	
		MEDIUM	10-30	
		DENSE	30-50	
		VERY DENSE	OVER 50	
CLAY	CONSISTENCY	VERY SOFT	LESS THAN 2	LESS THAN 0.25
		SOFT	2-4	0.25-0.50
		MEDIUM	4-8	0.50-1.00
		STIFF	8-15	1-2
		VERY STIFF	15-30	2-4
		HARD	OVER 30	OVER 4

PILE DATA

LOCATION (BENT)	STATION	TEST PILE ELEV.	TEST PILE CUT-OFF ELEV.	TEST PILE ORDER LENGTH	ORDER LENGTH	ORDER LENGTH	AS BUILT TIP ELEV. MAX ELEV.	MIN ELEV.	AVE ELEV.
34E	LL 218+98.19	-84.0	11.3.0	97'					

NOTE: The Test Pile Cut-Off Elevation is 8.0' (Approx.) Above The Existing Ground.

CORE BORINGS AND TEST PILES

RELOCATION OF U.S. 90
(RACELAND - GIBSON)
SECTION I-B: LA. 308 TO U.S. 90

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
SEPTEMBER 1969 METAIRIE, LA.

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

SURVEYED	DETAILED	TRACED
CHECKED	CHECKED	CHECKED

MATERIALS & TESTING SECTION — BRIDGE DESIGN SECTION

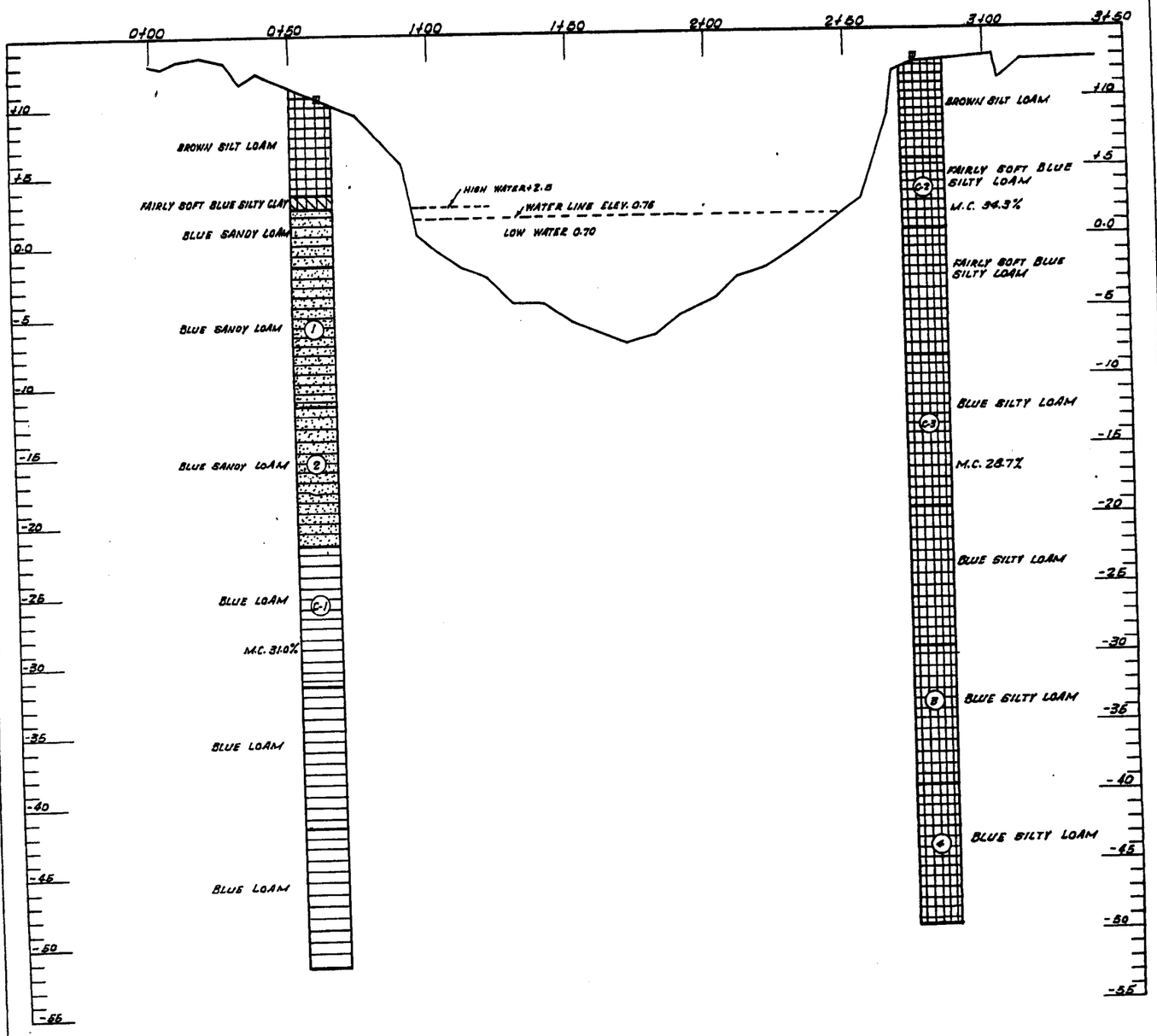
DATE	DESCRIPTION	BY
	REVISIONS	

FIGURE 7

FINAL TRACINGS

8

SOIL SURVEY
STATE PROJ. 931-00-23
BAYOU LAFOURCHE PONTOON BRIDGE
LAFOURCHE PARISH



NOTE
⊡.... CENTER OF DRILLING
M.C. 23.6%... MOISTURE CONTENT OF SAMPLE
(C-1)... CORE SAMPLE NUMBER & LOCATION
(2)... SAMPLE No. & LOCATION (DISTURBED CORE)

DATE	DESCRIPTION	BY

REVISIONS

TESTING LABORATORY
SOILS MECHANICS DIVISION

DATE

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

SURVEYED BY JONES DRAWN BY A.D. MAYHALL
CHECKED BY L.V. HOUGH TRACED BY Bedford
IN CHARGE OF H.L. LEHMANN, Testing & Rch. Engr.

SOIL TYPE ⊗ AND COLOR	WET UNIT WEIGHT	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	qu	SPT or UU	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE
BR SI W/CL W/TR RTS ORG: 5%	19	–	39	9	79.98		MS	C 66		3.50	
GR + BR SI W/TR 1 ROOT ORG: 5%	19	31	44	17	103.42		MS	C 68			
GR SI ORG: 5%	18	28	40	12	53.63		Y.L.D	C 70	2	1.50	T/S
ORG: 5%	18	87	47	18	52.61		Y.L.D	C 71			
W/SA ORG: 4%	19	–	25	1	78.52 / 53.79		MS	C 72	4	-0.50	
W/TR SA ORG: 5%	18	–	29	4	54.71 / 41.38		MS	C 73			
GR ELASTIC SI W/ TR ORG	17	55	58	27	48.85		S/S	C 74	6	-2.50	
GR CL W/TR ORG	17	43	56	27	48.85		Y.L.D	C 75			
GR SI SA W/TR ORG	19	–	N	P	89.31 / 80.35		Y.L.D	C 76	8	-4.50	
GR SI W/SA + TR ORG	18	–	N	P	41.18 / 80.35		MS	C 77			
W/TR SA + ORG	18	34	40	13	53.63		S/S	C 78	10	-6.50	
GR ELASTIC SI W/ LENS SA + TR SH	16	54	81	43	56.59		S/S	C 79			
GR LEAN CL W/ TR SH	17	51	49	24	57.46		Y.L.D	C 80	12	-8.50	
GR ELASTIC SI W/ORG	15	54	83	42	71.82		S/S	C 81			
GR SA SI W/TR ORG	19	–	N	P	22.98 / 22.36		MS	C 82	14	-10.50	
ALT STRA GR SA SI		–	N	P			MS	C 83			
GR LEAN CL	18	45	38	18	43.03						
CL W/TR ORG	18	49	74	42	113.00		S/S	C 84	16	-12.50	
W/TR ORG + SH	17	43	78	47	81.40		S/S	C 85	18	-14.50	
SI W/SA + TR	19	–	N	P				C 86			
W/TR ORG	18	45	79	45	108.21		S/S	C 87	20	-16.50	
SI W/TR	19	–	N	P	182.50 / 135.86		MS	C 88	22	-18.50	
SI	17	34	83	49	79.48		S/S	C 89			
		–	37	8					24	-20.50	
STIC SI	17	51	76	37				C 90			
ORG + SH	17	44	74	44	102.46		S/S	C 91	26	-22.50	NOTE: SCALE CHANGE
ORG + SH	18	37	–	–	118.74		MS				
SI W/TR ORG	16	51	83	45	130.23		S/S	C 93	30	-26.50	
+ ROT WD	15	73	79	33	230.78		S/S	C 94			
ORG	18	32	67	35	129.28		S/S	C 95			
+ TR ORG	19	–	32	5	68.12 / 58.52		MS	C 96	34	-30.50	
SA		–	N	P				C 97			
ORG	16	63	82	46	119.70		S/S	C 98	38		
SA + TR ORG	18	–	N	P	–		–	C 99			
SI W/	17	86	63	29	–		–	C 100			
SH	17	48	80	47	182.90		S/S	C 101	42		
	16	51	–	–	161.84		S/S				
SI W/TR	17	39	60	27	205.89		S/S	C 103	46		

STA.: 6 + 119.5 ○

6-7-94 LOCATION: 1.5' RT CL NEW BRIDGE

TEST PILE NO.

STA.:
LOCATION :
TYPE OF PILE :
TYPE OF HAMMER :
RATED ENERGY : kJ
DATE OF DRIVING :

DRIVING RESISTANCE (kN)

TEST LOAD (kN) → DATE OF LOADING :

TEST PILE NO: DESIGN LOAD : ULTIMATE CAPACITY:

SOIL TYPE ⊗ AND COLOR	WET UNIT WEIGHT	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	qu	SPT or UU	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE
BR LEAN CL W/SA + TR RTS ORG: 5%	19	–	33	11	–		–	C 104		1.90	
GR SI W/TR SA + TR ORG	19	–	40	12	30.64 / 34.88		MS	C 105			
W/TR SA ORG: 5%	19	–	30	5	30.64 / 42.76		MS	C 106			
GR LEAN CL ORG: 6%	18	–	32	9	45.01		Y.L.D	C 107	2	-0.10	
GR SI W/TR SA ORG: 5%	19	–	36	11	49.80 / 58.62		MS	C 108			
W/TR SA ORG: 5%	18	28	39	13	60.38		Y.L.D	C 109			
W/TR SA ORG: 7%	18	28	40	13	56.50		Y.L.D	C 110	6	-4.10	
W/TR SA + TR ORG	18	34	39	13	45.01		Y.L.D	C 111			
GR CL W/TR SA + TR ORG	18	39	69	38	40.22		S/S	C 112	8	-6.10	
GR LEAN CL W/TR SA + TR ORG	18	47	47	20	46.92		S/S	C 113			
GR SI SA W/TR ORG	18	–	N	P	75.65 / 55.52		MS	C 114	10	-8.10	
GR SI W/SA + TR ORG	18	–	44	16	82.13 / 113.10		MS	C 115			
ALT STRA GR CL W/TR SA SI W/SA + TR ORG	19	38 –	55 N	26 P	36.30		MS	C 116	12	-10.10	
GR SA SI W/TR ORG	19	–	24	1				C 117			
	19	–	31	6	135.48 / 137.43		Y.L.D	C 118			
	19	–	23	1	71.82 / 148.97		MS	C 119	14	-12.10	
GR CL W/TR SA	18	31	63	32	–		–	C 120	16	-14.10	
W/TR ORG	16	57	70	39	61.23		S/S	C 121	18	-16.10	
ALT STRA GR CL GR SA	15	77 –	86 N	56 P	11.49		Y.L.D	C 122	20	-18.10	
ALT STRA GR CL W/SA GR SA		– –	57 N	39 P				C 123			
GR SA W/TR SH		–	N	P				C 124	22	-20.10	
W/TR SH						H: 10			24	-22.10	
GR SI SA W/CL + TR SH		–	36	13				C 126	26	-28.10	
GR CL W/TR ORG	18	45	85	51	146.51		S/S	C 127			NOTE: SCALE CHANGE
W/TR ORG	17	47	–	–	114.91		S/S				
W/TR ORG	17	59	–	–	128.32		S/S		30	-29.10	
ALT STR GR CL SI W/SA		– –	62 N	34 P				C 130			
GR SI W/TR SA		–	N	P				C 131			
W/TR SA	19	–	41	14	116.88 / 120.35			C 132	34		
GR CL W/TR ORG	16	65	74	40	113.00		S/S	C 133			
GR SI W/SA		–	N	P				C 134	38		
GR ELASTIC SI	17	47	75	40	158.00		S/S	C 136			
W/TR ORG, SH, + CONC	17	47	–	–	173.33		S/S				
W/TR ORG	16	59	68	28	181.94		S/S	C 137	42		
W/TR ORG	14	65	56	14	155.13		S/S	C 138			
W/TR ORG + RT WD	16	50	56	17	182.90		S/S	C 139	46		

BORING NO. STA.: 6 + 119.5 ○

DATE MADE: 6-8-94 LOCATION: 2.1' LT ℄ NEW BRIDGE

TEST PILE NO.

STA.:
LOCATION :
TYPE OF PILE :
TYPE OF HAMMER :
RATED ENERGY : kJ
DATE OF DRIVING :

DRIVING RESISTANCE (kN)

TEST LOAD (kN) → DATE OF LOADING :

MOVEMENT (MILIMETERS) ↓

TEST PILE NO: DESIGN LOAD : ULTIMATE CAPACITY:

SOIL TYPE ⊗ AND COLOR	WET UNIT WEIGHT	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	qu	SPT or UU	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE

BORING NO. STA.: ○

DATE MADE: LOCATION:

TEST PILE NO.

STA.:
LOCATION :
TYPE OF PILE :
TYPE OF HAMMER :
RATED ENERGY : kJ
DATE OF DRIVING :

DRIVING RESISTANCE (kN)

TEST LOAD (kN) → DATE OF LOADING :

MOVEMENT (MILIMETERS) ↓

TEST PILE NO: DESIGN LOAD : ULTIMATE CAPACITY:

FEDERAL PROJECT	STATE PROJECT	PARISH	SHEET NO.
BRO-001S(130) BRO-001S(055)	700-23-0084 829-10-0013	LAFOURCHE	165

STANDARD ABBREVIATIONS & DEFINITIONS

MATERIAL:
CL. • Clay
CONC. • Concretion
GRAV. • Gravel
I.O. • Iron Ore
LIG. • Lignite
N.P. • Non-Plastic
ORG. • Organic
PT. • Peat
RT. • Roots
SA. • Sand
SH. • Shell
SI. • Silt
VEG. • Vegetation
WD. • Wood

COLOR:
BR. • Brown
BK. • Black
BL. • Blue
GR. • Gray
GN. • Green
PK. • Pink
RD. • Red
WH. • White
YE. • Yellow

TEXTURE:
CO. • Coarse
FI. • Fine
MED. • Medium

STRUCTURE:
ALT. • Alternating
LAM. • Laminated
LEN. • Lens
LYR. • Layer
MOT. • Mottled
PKT. • Pocket
STK. • Streak
STR. • Strata
TRA. • Trace

FAILURE MODE:
M.S. • Multiple Shear
SL. • Slump
S/S • Sidekensides
V.S. • Vertical Shear
Y.L.D. • Yield
60°S. • Shear Angle

SOIL PROPERTIES:

WET UNIT WEIGHT • Wet unit weight of in-place soil, (kN per cu. meter), determined by AASHTO T208.

MOISTURE CONTENT • Moisture Content of in-place soil, expressed as a percentage of the dry weight of the soil, (%), determined by DOTD TR 403, Method B.

LIQUID LIMIT & PLASTICITY INDEX • Atterberg limits and indices, DOTD TR 428, (%)

qu • Unconfined compressive strength, AASHTO T 208, (kN per sq. meter)

SPT • Standard Penetration Test, AASHTO T 206, number of blows, N', per 0.3 meter of penetration, unless amount of penetration is shown otherwise

UU • Unconsolidated Undrained triaxial test, ASTM D 2850, compressive strength (kN per sq. meter), of one specimen confined of noted pressure (kN per sq. meter)

C • Soil cohesion (kN per sq. meter)

φ • Soil angle of internal friction (degrees)

Δ • Unconsolidated Undrained triaxial test, ASTM D 2850, three specimens, (c - φ)

φ • Consolidated drained direct shear test, AASHTO T 236, (c - φ)

■ • Pocket penetrometer strength, (kN per sq. meter)

MISCELLANEOUS:

⊗ • Location and identification of thin-walled tube sample, AASHTO T 207

⊗ • Location and identification of thin-walled tube sample, AASHTO T 207, with a portion of the sample saved for consolidation testing

⊗ • Location and identification of SPT sample, AASHTO T 206

N.C. • No Cut, no preliminary 0.15 m driving prior to securing SPT data

NO PENT. • No Penetration, unable to drive split spoon sampler initial 6 inches of the Standard Penetration Test.

NO RECV. • No Recovery, unable to recover sample for testing or classification.

DIST. • Disturbed sample recovered with thin-walled tube sampler.

▽ 24 HRS • Water Table depth below ground surface recorded at noted time after completion of bore hole.

⊗ • SOIL TYPE nomenclature is based on ASTM D 2487

CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES

SOIL	DESIGNATION		"N" (blows per 0.3 m)	Approximate "qu" (kN per sq. meter)
SAND AND SILT	RELATIVE DENSITY	VERY LOOSE	LESS THAN 4	
		LOOSE	4 - 10	
		MEDIUM	10 - 30	
		DENSE	30 - 50	
		VERY DENSE	OVER 50	
CLAY	CONSISTENCY	VERY SOFT	LESS THAN 2	LESS THAN 25
		SOFT	2 - 4	25 - 50
		MEDIUM	4 - 8	50 - 100
		STIFF	8 - 15	100 - 200
		VERY STIFF	15 - 30	200 - 400
		HARD	OVER 30	OVER 400

PILE DATA

LOCATION (BENT)	STATION	PLAN TIP ELEV.	CUT-OFF ELEV.	PLAN PILE LENGTH	ORDER LENGTH	AS BUILT TIP ELEV. MAX. ELEV.	MIN. ELEV.	AVG. ELEV.

NOTE: GROUND ELEVATIONS AT BORINGS ARE TAKEN FROM SURVEY DATA.

STATE OF LOUISIANA
JOHN BERTIN WINTZ
REG. No. 23477
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

1/27/99

THIS SIGNATURE & SEAL IS AFFIXED TO THIS DRAWING AS CERTIFICATION THAT THE LABORATORY TESTING AND ANALYSIS WAS PERFORMED ACCORDING TO THE LISTED PROCEDURES. NO DESIGN COMPUTATIONS WERE PERFORMED OR REVIEWED BY ME.

DATE	DESCRIPTION	BY

REVISIONS

SOIL BORING LOGS AND TEST PILES

'BAYOU LAFOURCHE BRIDGE AND APPROACHES
LA 654

DATE: 1-25-99 FIELD BOOK NO.: SL-9722

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

SQUAD LDR: M. TERRELL | DATA ENTRY: NSH | DETAILED: DMB
CHECKED: | CHECKED: JWW+TN | CHECKED: EAT

MATERIALS & TESTING SECTION REVISED: NOV. 14, 1994