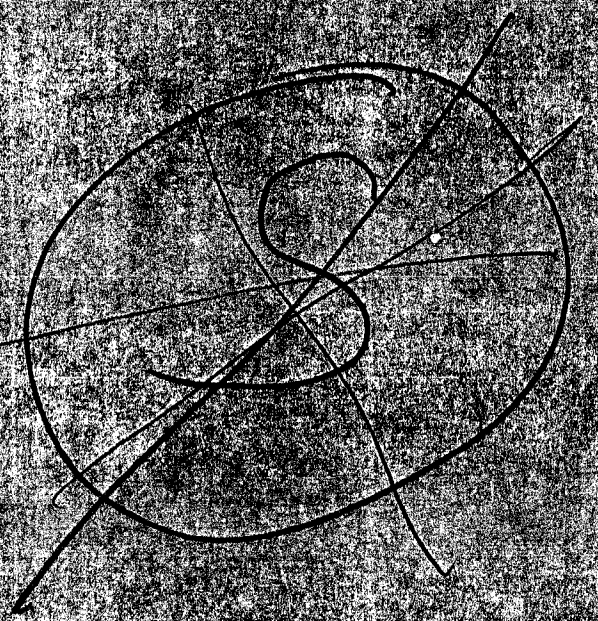
1110-G-n COE Engr & Des Corres Files- '80
Subject: Lake Pont. LA, Vic. , Hurricane Protection Project , HLP, N.O. Lakefront London AVE. Canal to West End Blvd. Orleans Parish LA

A 000 2015



LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 4 (Cont'd) Soil Technician Robert Waldron Date 24 April 1981

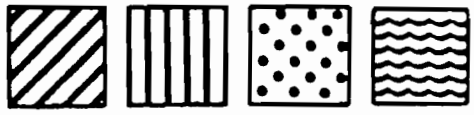
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	SAMPLE Depth — Feet To	DEPTH STRATUM Feet From	DEPTH STRATUM Feet To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
22	78.5	79.0	75.0	80.0	Stiff gray & tan clay		

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

Predominant type shown heavy. Modifying type shown light.

A-AWARD DATE

N-NOTICE TO PROCEED

C-CURRENT CONTRACT COMPLETION DATE

S-SCHED PHYSICAL COMPLETION TO DATE

AT-ACTUAL PHYSICAL COMPLETION TO DATE

AC-ACTUAL COMPLETION DATE

LOWER MISSISSIPPI VALLEY DIVISION
NEW ORLEANS DISTRICT
COL LLOYD K. BROWN, CE
COMMANDING

DATE: 9/30/86
REPORTS CONTROL SYMBOL LMVCO-1

MONTHLY
CONSTRUCTION PROGRESS REPORT
CIVIL

LOCATION SHT GRID	CONTRACT NUMBER	CONTRACT DESCRIPTION	CONTRACT $ AMOUNT	CONTRACTOR	PROJECT	PERCENT COMP	REMARKS
		NEW ORLEANS AREA					
		LEVEES					
XIX-0-32	85-C-0057	LAKE PONT HIGH LEVEL PLAN, CITRUS LAKEFRONT LEVEE & FORESHORE PROTECTION (A) 3/21/85, (N) 5/5/85 (C) 5/28/87	10,360,557	LUHR BROS., INC.	LAKE PONT & VIC	S 69 AT 79	CONTRACTOR INDICATES HE WILL RESUME WORK AT END OF OCT 86.
XIX-0-32	85-C-0104	MRL ITEM M-72.2 - M-66.0L STELLA-BELAIR LEV ENLGT & CONCRETE SLOPE PAVEMENT (A) 6/4/85, (N) 10/22/85 (C) 2/5/87	1,774,804	W. KEELER & CO., INC.	MISS RIVER LEVEES	S 71 AT 27	CONTRACTOR SUBMITTED REVISED PROGRESS PRODUCTION PLAN.
XIX-0-32	85-C-0168	LAKE PONT & VIC, HIGH LEVEL PLAN, N.O. EAST LAKEFRONT LEVEE FORESHORE PROTECTION (A) 9/30/85, (N) 12/2/85 (C) 4/16/87	3,963,264	PONTCHARTRAIN MATERIALS CORP.	LAKE PONT & VIC	S 51 AT 63	
XI[illegible]-32	85-C-0171	[redacted] (C) 11/3/86	2,357,341	S.A. LAURENT, INC.	LAKE PONT & VIC	S 92 AT 99	
XIX-N-32	86-C-0058	LAKE PONT & VIC, HIGH LEVEL PLAN, LAKEFRONT LEVEE, IHNC WEST TO LONDON AVE. CANAL (A) 3/12/86, (N) 4/14/86 (C) 10/11/86	748,495	BAYOU LAND & MARINE CONTRACTORS, INC.	LAKE PONT & VIC	S 97 AT 59	CONTRACTOR PROGRESS SLOW. RETAINAGE BEING WITHHELD.

LMNED-DL

Modification to Contract DACW29-85-C-0171, Lake Pont. LA, & VIC, Hurricane Protection Project, HLP, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd.

C/Const Div

C/Engr Div

2 June 86
Mr. Velez/cc/1944

1. It is requested that a modification be issued on the subject contract.

2. Reference LMNNO DF dated 9 May 1986, subject as above.

3. The following is furnished for your use in preparing Eng. Form 3938 and 3938-B.

a. Description of changes.

(1) The change. The protected side berm between Sta. 289+20 B/L to Sta. 292+40 B/L has been enlarged.

(2) Contract Specifications. Page BF-3, Bidding Schedule, Item No. 3 add 1400 cy to existing estimated quantity column.

(3) Contract Drawings. Drawings 7 & 11 of 19, file no. H-8-29721 dated July 1985 are deleted and revised drawings 7 & 11 of 19 file no. H-8-29721 bearing revision no. 1 is substituted therefor.

b. Necessity for change. The enlarged protected side berm is necessary as a corrective action to embankment slide during construction of levee in this area.

c. Reason for omission from plans and specifications. The necessity for the change was determined subsequent to award of contract.

4. The engineering estimate for the requested modification is $13,000. Adequate funds are available.

5. An official government estimate will be prepared by the Cost Engineering & Specifications Section when requested.

6. An additional R/W request will be forwarded to Real Estate Division for this area. Real Estate Division will notify you when R/W has been acquired.

SMITH
LMNED-DL

SETTOON
LMNED-DE

JUDLIN
LMNED-D

SHELTON for
LMNED-P

CHATRY
LMNED

3 Encls (5 cys ea, encls 1, 2 & 3)
1. Dwg 4 of 19, file no. H-8-29721
2. Dwg 7 of 19, file no. H-8-29721
3. Dwg 11 of 19, file no. H-8-29721
4. DF dtd 9 May 86

FREDERIC M. CHATRY
Chief, Engineering Division

The modification described herein has been reviewed for consistency with design intent as set forth in the appropriate design documents and plans and specifications and its adoption is within the authority of the District.

LOWER MISSISSIPPI VALLEY DIVISION
NEW ORLEANS DISTRICT
COL E. S. WITHERSPOON, CE
COMMANDING

DATE: 6/30/86
REPORTS CONTROL SYMBOL LMVCO-1

MONTHLY
CONSTRUCTION PROGRESS REPORT
CIVIL

LOCATION SHT GRID	CONTRACT NUMBER	CONTRACT DESCRIPTION	CONTRACT $ AMOUNT	CONTRACTOR	PROJECT	PERCENT COMP	REMARKS
		NEW ORLEANS AREA					
		LEVEES					
XIX-O-32	85-C-0168	LAKE PONT & VIC, HIGH LEVEL PLAN, N.O. EAST LAKEFRONT LEVEE FORESHORE PROTECTION (A) 9/30/85, (N) 12/2/85 (C) 4/16/87	3,963,264	PONTCHARTRAIN MATERIALS CORP.	LAKE PONT & VIC	S 29 AT 26	
XIX-N-32	85-C-0171	LAKE PONT & VIC HPL HIGH LEVEL PLAN N.O. LAKEFRONT LEVEE, [redacted] (A) 9/30/85, (N) 10/25/85 (C) 11/3/86	2,298,000	S.A. LAURENT, INC.	LAKE PONT & VIC	S 72 AT 94	
XIX-N-32	86-C-0058	LAKE PONT & VIC, HIGH LEVEL PLAN, LAKEFRONT LEVEE, IHNC WEST TO LONDON AVE. CANAL (A) 3/12/86, (N) 4/14/86 (C) 10/11/86	748,495	BAYOU LAND & MARINE CONTRACTORS, INC.	LAKE PONT & VIC	S 44 AT 27	CHART HAS BEEN ACCEPTED. CONTRACTOR PROGRESS SLOW. RETAINAGE BEING WITHHELD.
XIX-O-33	86-C-0091	N.O. TO VENICE, HPL, REACH C, 3RD ENLGT, H/L STA 552+50 TO STA 834+39 (A) 5/16/86	2,281,471	CIRLOT CO.	N.O. TO VENICE	S 0 AT 0	NOTICE TO PROCEED BEING WITHHELD DUE TO BORROW PIT PROBLEMS.
XIX-O-32	86-C-0109	LAKE PONT & VIC, HIGH LEVEL PLAN, N.O. EAST LAKEFRONT LEVEE, PARIS ROAD TO SO. POINT (A) 5/30/86	5,055,910	ATLAS CONST CO., INC.	LAKE PONT & VIC	S 0 AT 0	
		SUBTOTAL	31,983,927				

POSITION FORM

this form, see AR 340-15; the proponent agency is TAGO.

OR OFFICE SYMBOL	SUBJECT
LMNNO	Contract DACW29-85-C-0171, Lake Pont. LA, & Vic, Hurricane Protection Project, HLP, New Orleans Lakefront London Ave Canal to West End Blvd., Orleans Par, LA

TO RX THRU C/Const Div

FROM R/E, New Orleans

DATE 9 May 86

CMT 1

Mr. Young/gm/1222

TO E/Engr Div

1. Reference is made to levee cracks observed on the crown of the subject project between Sta 289+49 and 293+55.

2. Reference is also made to several field investigations, soil borings and discussion held by representatives from NORO, Const Div and Engr Div while attempting to verify both the cause and corrective actions necessary to repair the crack.

3. It is understood that corrective actions have been determined by your office. However this office has not received any corrective directions as of this date. (None requested)

4. The project is rapidly approaching completion and the contractor has requested information as to the status of this reach.

5. Therefore it is requested that you review this matter and provide NORO with your comments ASAP. (Comments should include both corrective actions and probable cause.)

David A. Kopf CPT, CE

FOR RICHARD HILL
Resident Engineer
New Orleans Resident Office

CF:
Proj Engr (Young)
Ofc Engr (Sheets)

16 May

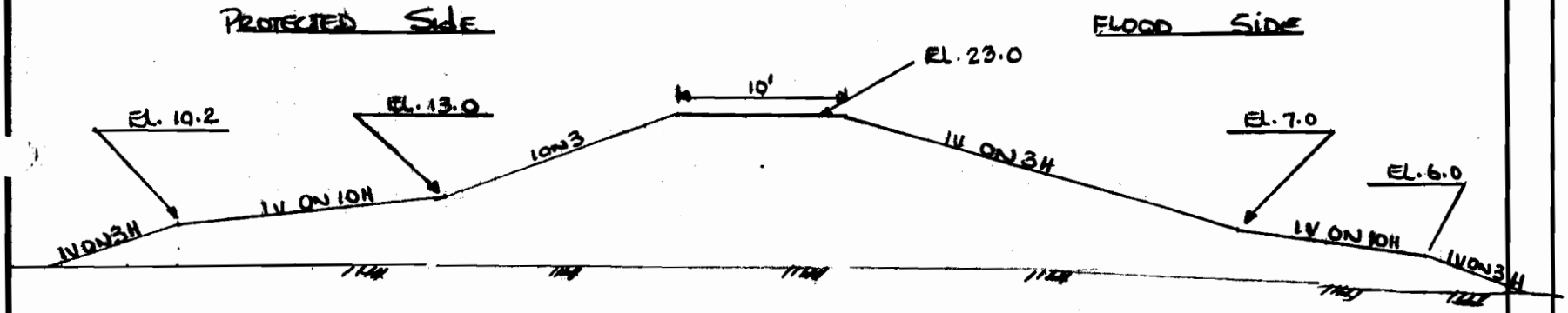
Robert

Tom and Ron Lee will be working on this next week. We gave them a copy of your section and every one agreed on it including the way we determined it.

Jim

Hand Carried by Julio Maldonado
13 May 86
RE.

LMV FORM 1 FEB 79 107e



NOT TO SCALE

LAKE PONTC. LA. & Vicinity
HURRICANE PROJECT, HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
LONDON AVE CANAL to WEST END BLVD.
ORLEANS PARISH, LA.
REPAIR SECTION

28 MAY 86

SUBJECT | PROJECT
PAGE OF
CHECKED BY | COMPUTED BY
DATE | DATE

COMPUTATION SHEET

LAKE PONT. & VIC. ORLEANS
LAKEFRONT LEVEES, REPAIR SECTION
@ APPROX. STA. 290+00 ±.

1) TO DEVELOP this REPAIR SECTION WE COMPUTE the COHESION (195) FOR A FACTOR of SAFETY EQUALS to 1.0 for the LEVEE SECTION that WAS built.

2) WE USE this STRENGTH (c=195) ALONG the FAILURE AND A c=400 for the fill MATERIAL. R_A WAS computed with a c=195, R_B was computed with a cohesion of 195 up to 267.5 AND a c=400 up to 280(±). R_A was computed for a c=400. (Since the program was run for a c=195 we had computed the $\sum R_A$ for a c=400). WE checked different wedges and they look OK. NEXT WE SEE how much we can move the toe toward the levee. (We used the information for a ACTIVE @ distance of 218 & the PASSIVE @ a DISTANCE of 273.7.

3) THE DESIGN SECTION WAS designed for FS = 1.2.

```
LP RE0514 1-100
1 'LAKE PONT  & VIC 'ORLEANS LAKEFRONF LEVEES'
2 'ORIGINAL SECTION AT APPROX  STA  290+00'
3 10 10 0 5 210 1 0
4 11 2 2 2
5 190 227
6 0 62 4 0 0 62 4 0 0
7 0 110 300 300 110 300 300
8 15 117 200 200 117 200 200
9 0 110 800 800 110 125 125
10 0 100 340 340 100 340 340
11 0 100 450 560 100 450 560
12 15 117 200 200 117 200 200
13 0 102 480 480 102 480 480
14 0 102 580 680 102 580 680
15 33 122 0 0 122 0 0
16 0 105 680 680 105 680 680
17 0 12 5 163 12.5 195 83 205 23 247 9 257 8
18 267.5 4 5 400 4 5 9999 9 0
19 0 4 5 132 4 5 137 6 147 7 195 23 400 90
20 9999 9 0
21 0 4 5 135 4 5 150 4 5 157 6 5 174 11.5 185 15
22 195 15 204 12 214 9 227 4.5 237 4.5
23 300 4.5 400 4 5 9999 9 0
24 0 4 5 135 4 5 150 4 5 227 4 5 237 4 5
25 300 4 5 400 4.5 9999.9 0
26 0 1 400 1 9999.9 0
27 0 1 1 400 1 1 9999.9 0
28 0 -13 400 -13 9999.9 0
29 0 -24 400 -24 9999.9 0
30 0 -24 1 400 -24 1 9999.9 0
31 0 -39 400 -39 9999.9 0
32 0 -46 400 -46 9999.9 0
33 0 -46 1 400 -46 1 9999.9 0
34 0 12 5 163.5 12.5 247 9 257 8 267.5 4.5
35 400 4 5 9999 9 0
36 0 0 400 0 9999.9 0
37 1 1 1 1 1 1 2 2 2 2 2 2
38 2 2 2 2 2 2 2 2 2 2 2
39 3 90211 4 5 250 4 5 1
40 291.2
41 6 205 -13 250 -13 1
42 270
43 7 205 -24 300 -24 1
44 310
45 9 205 -39 300 -39 1
46 310
EOT
SDMP$UPLPLOT

JOBCNTRL ER   219 - CAN'T FIND SPECIFIED PROCESSOR
SLIB$UPLPLOT
```

```
                                    HARRIS CONVERSION 03/24/82 - 05/17/82

 ENTER NAME OF INPUT FILE ( FOUR TO EIGHT CHARACTERS )
RE0514

 ENTER NAME OF PLOT FILE ( ONE TO SEVEN CHARACTERS )
RTY

FILE IS =          RTY1


FILE IS =          U1


FILE IS =          U2


                    **** STABILITY WITH UPLIFT ****


                 LAKE PONT  & VIC  ORLEANS LAKEFRONF LEVEES
                 ORIGINAL SECTION AT APPROX  STA  290+00

    11 STRATUM      12 PROFILES       2 VERTICALS

  DATA EDIT  ENTER 0 - BYPASS, 1 - PROFILES, 2 - SOIL PROPERTIES,
3 - ALL

0
```

```
**********************************************************************
      STABILITY ANALYSIS WITH UPLIFT AND PLOT ROUTINES
**********************************************************************


RB CORRECTED 6/03/76, CONVERTED WITH IMPROVED DISPLAY 03/20/81
25 POINTS ON PIEZOMETRIC GRADE LINE ADDED 03/20/81
UPLIFT CORRECTED TO ZERO WITH FLAG FOR RA, RB & RP 04/20/81
SCALE IMPROVED 05/27/81, ERROR DETECTION  06/03/81
AUTOMATIC BORING AND PHREATIC POINT INSERTION  06/29/81
```

DI W1 1-1000

xxxx STABILITY WITH UPLIFT xxxx

LAKE PONT. & VIC. ORLEANS LAKEFRONF LEVEES
ORIGINAL SECTION AT APPROX. STA. 290+00
12 PROFILES
2VERTICALS
UPLIFT WITH 2 PIEZOMETRIC GRADE LINES

x x STRATUM 3 ACT. WEDGE LOC. 90211.0 EL. 4.5 PASS.WEDGE LOC. 250.0 EL. 4.5

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	UT.	UPLIFT	STR 1	STR 2	STR USED
0.0	4.5	499.	500.	200.	800.	200.
132.0	4.5	499.	500.	200.	800.	200.
135.0	4.5	542.	500.	211.	800.	211.
137.0	4.5	571.	500.	219.	800.	219.
147.0	4.5	618.	500.	232.	800.	232.
150.0	4.5	666.	500.	244.	800.	244.
157.0	4.5	791.	500.	278.	800.	278.
163.0	4.5	899.	500.	307.	800.	307.
163.5	4.5	918.	500.	312.	800.	312.
174.0	4.5	1321.	472.	427.	800.	427.
185.0	4.5	1745.	444.	549.	800.	549.
190.0	4.5	1927.	431.	601.	800.	601.
195.0	4.5	2108.	417.	653.	709.	653.
SHEAR STRENGTHS ARE EQUAL 653.3 AT DIST. 198.0						
204.0	4.5	2087.	394.	654.	545.	545.
205.0	4.5	2085.	391.	654.	526.	526.
214.0	4.5	1736.	368.	567.	362.	362.
227.0	4.5	1228.	334.	440.	125.	125.
237.0	4.5	861.	307.	348.	125.	125.
247.0	4.5	496.	281.	257.	125.	125.
257.0	4.5	385.	219.	244.	125.	125.
267.5	4.5	0.	0.	200.	125.	125.
300.0	4.5	0.	0.	200.	125.	125.
400.0	4.5	-0.	0.	200.	125.	125.

ASSUMED CRIT. PASSIVE LOC. 250.0 EL. 4.5 DP 881. RP 8890.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
211.0	4.5	18085.	18894.	0.	7810.	1.30

CRIT. ACTIVE LOC 211.0 EL 4.5 DA 18085 RA 18894.

DIS.	EL.	DP	RP	DB	RB	FS
291.2	4.5	0	-0.	0.	12360.	1.40
268.0	4.5	0	-0.	0	9461.	1.24
267.4	4.5	0.	8	0	9390	1.23
264.0	4.5	55.	518	0	8965.	1.24
260.6	4.5	215.	1028	0.	8540.	1.26
258.9	4.5	335.	1283.	0.	8328.	1.27
256.7	4.5	535.	1622.	0.	8044.	1.29
255.0	4.5	665.	1877.	0.	7832.	1.30
253.3	4.5	749.	2111.	0.	7619.	1.31
248.2	4.5	960.	2389.	0.	6982.	1.30
244.2	4.5	1241.	2606.	0.	6486.	1.31
240.8	4.5	1776.	2953.	0.	6061.	1.34
235.1	4.5	2945.	3803.	0.	5352.	1.45
231.2	4.5	3939.	4397.	0.	4857.	1.57

EOT..
BYE

FOR FS = 1.0

WITHOUT CRACK

$(D_A - D_P)\,1.0 = R_A + R_P + R_B$

$(18085 - 0^{DP}) = 2C(18.3) + 0 + \underbrace{56.4C}_{R_B}$

$C = \frac{18085}{93} = 194.5$

WITH CRACK (4')

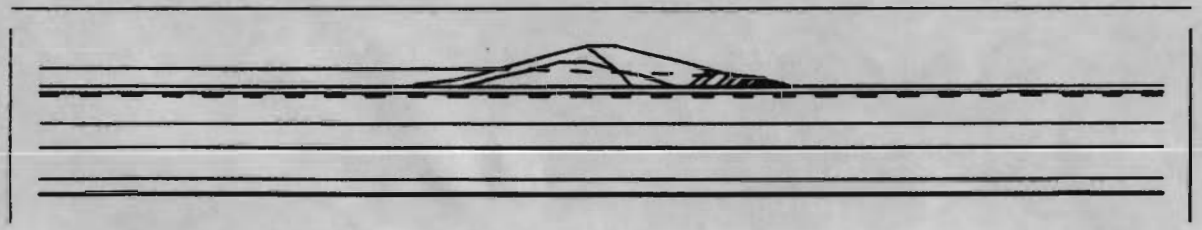
$(18085 - 880^{DA}) = 93C$

$C = 185$

STR 3 EL. 4.5 NO 1

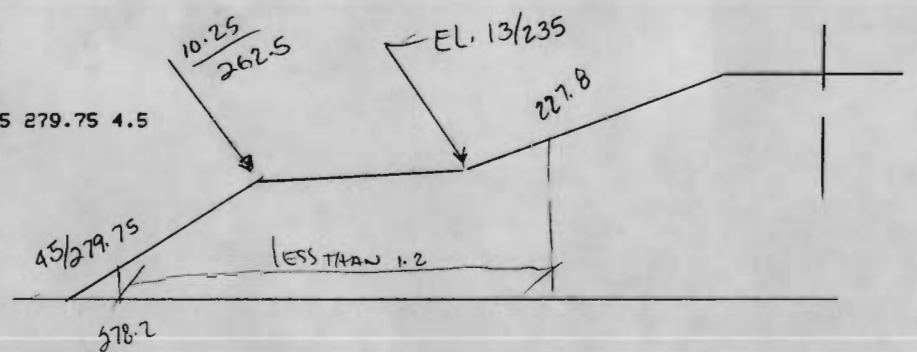
NO	DIST	F.S.	
2	291.2	1.396	E. H.
3	268.	1.236	
4	267.4	1.233	
5	264.	1.241	
6	260.6	1.257	
7	258.9	1.268	
8	256.7	1.286	
9	255.	1.298	
10	253.3	1.305	
11	248.2	1.3	
12	244.2	1.305	
13	240.8	1.343	
14	235.1	1.456	
15	231.2	1.566	

AFTER SELECTED WEDGES, PLACE CROSSHAIRS AT ADDITIONAL P.U. LOCATIONS
(N,S,E = COMPLETE STRATA & D.R = REDRAW)



```
LI PE0514 1-100
1 'LAKE PONT. & VIC. ORLEANS LAKEFRONF LEVEES'
2 'ORIGINAL SECTION AT APPROX. STA. 290+00'
3 10 16 0.5 210 1 0
4 11 2 2 2
5 267.5 268.5
6 0 62.4 0 0 62.4 0 0
7 0 110 195 195 110 300 300
8 0 117 195 195 117 300 300
9 0 110 195 195 110 300 300
10 0 100 340 340 100 340 340
11 0 100 450 560 100 450 560
12 15 117 200 200 117 200 200
13 0 102 480 480 102 480 480
14 0 102 580 680 102 580 680
15 33 122 0 0 122 0 0
16 0 105 680 680 105 680 680
17 0 12.5 163 12.5 195 23 205 23 235 13 262.5 10.25
18 279.75 4.5 400 4.5 9999.9 0
19 0 4.5 132 4.5 137 6 147 7 195 23 400 90
20 9999.9 0
21 0 4.5 135 4.5 150 4.5 157 6.5 174 11.5 185 15
22 195 15 204 12 214 9 227 4.5 237 4.5
23 300 4.5 400 4.5 9999.9 0
24 0 4.5 135 4.5 150 4.5 227 4.5 237 4.5
25 300 4.5 400 4.5 9999.9 0
26 0 1 400 1 9999.9 0
27 0 1.1 400 1.1 9999.9 0
28 0 -13 400 -13 9999.9 0
29 0 -24 400 -24 9999.9 0
30 0 -24.1 400 -24.1 9999.9 0
31 0 -39 400 -39 9999.9 0
32 0 -46 400 -46 9999.9 0
33 0 -46.1 400 -46.1 9999.9 0
34 0 12.5 163 12.5 262.5 10.25 279.75 4.5
35 400 4.5 9999.9 0
36 0 0 400 0 9999.9 0
37 1 1 1 1 1 1 2 2 2 2 2 2
38 2 2 2 2 2 2 2 2 2 2 2 2
39 3 90213 4.5 250 4.5 1
40 291.2
41 6 205 -13 250 -13 1
42 270
43 7 205 -24 300 -24 1
44 310
45 9 205 -39 300 -39 1
46 319
EOT..
SLIB*UPLPLOT
```

```
 ENTER NAME OF INPUT FILE ( FOUR TO EIGHT CHARACTERS )
RE0514

 ENTER NAME OF PLOT FILE ( ONE TO SEVEN CHARACTERS )
ERT

FILE IS =         ERT1

FILE IS =         U1

FILE IS =         U2

                  **** STABILITY WITH UPLIFT ****


        LAKE PONT. & VIC. ORLEANS LAKEFRONF LEVEES
        ORIGINAL SECTION AT APPROX. STA. 290+00

    11 STRATUM      12 PROFILES       2 VERTICALS

  DATA EDIT : ENTER 0 = BYPASS, 1 = PROFILES, 2 = SOIL PROPERTIES,
3 = ALL
```




```
**********************************************************************
      STABILITY ANALYSIS WITH UPLIFT AND PLOT ROUTINES
**********************************************************************

RB CORRECTED 6/03/75; CONVERTED WITH IMPROVED DISPLAY 03/20/81
25 POINTS ON PIEZOMETRIC GRADE LINE ADDED 03/20/81
UPLIFT CORRECTED TO ZERO WITH FLAG FOR RA, RB & RP 04/20/81
SCALE IMPROVED 05/27/81; ERROR DETECTION  06/21/81
AUTOMATIC BORING AND PHREATIC POINT INSERTION  05/23/81

HARRIS CONVERSION 03/24/82 - 05/17/82
```

257

2.75 Δ

DI U1 1-1000

**** STABILITY WITH UPLIFT ****

259.5

LAKE PONT. & VIC. ORLEANS LAKEFRONT LEVEES
ORIGINAL SECTION AT APPROX. STA. 290+00
12 PROFILES
2VERTICALS
UPLIFT WITH 2 PIEZOMETRIC GRADE LINES

* * STRATUM 3 ACT. WEDGE LOC. 90213.0 EL. 4.5 PASS.WEDGE LOC. 250.0 EL. 4.5

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	4.5	499.	500.	195.	195.	195.
132.0	4.5	499.	500.	195.	195.	195.
135.0	4.5	542.	500.	195.	195.	195.
137.0	4.5	571.	500.	195.	195.	195.
147.0	4.5	618.	500.	195.	195.	195.
150.0	4.5	666.	500.	195.	195.	195.
157.0	4.5	791.	500.	195.	195.	195.
163.0	4.5	899.	500.	195.	195.	195.
174.0	4.5	1321.	484.	195.	195.	195.
185.0	4.5	1745.	469.	195.	195.	195.
195.0	4.5	2108.	455.	195.	195.	195.
204.0	4.5	2087.	442.	195.	195.	195.
205.0	4.5	2085.	441.	195.	195.	195.
214.0	4.5	1736.	428.	195.	195.	195.
227.0	4.5	1228.	410.	195.	195.	195.
235.0	4.5	935.	398.	195.	195.	195.
237.0	4.5	913.	395.	195.	195.	195.
262.5	4.5	632.	359.	195.	195.	195.
267.5	4.5	449.	255.	195.	195.	195.
268.5	4.5	412.	234.	300.	300.	300.
279.8	4.5	0.	0.	300.	300.	300.
300.0	4.5	0.	0.	300.	300.	300.
400.0	4.5	-0.	0.	300.	300.	300.

ASSUMED CRIT. PASSIVE LOC. 250.0 EL. 4.5 DP 2448. RP 2481.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
213.0	4.5	17759.	7166.	0.	7215.	1.10

CRIT. ACTIVE LOC 213.0 EL 4.5 DA 17759. RA 7166.

DIS.	EL.	DP	RP	DB	RB	FS
281.2	4.5	-0.	-0.	0.	17685.	1.40

		DP	RP		RB	
218.7	4.5	8022.	4274.	0.	1[illegible]3.	1.27
224.9	4.5	5794.	3467.	0.	2329.	1.08
227.8	4.5	4921.	3269.	0.	2881.	1.04
232.3	4.5	3937.	3109.	0.	3765.	1.02
236.8	4.5	3456.	2948.	0.	4649.	1.03
241.9	4.5	3045.	2767.	0.	5644.	1.06
245.3	4.5	2785.	2646.	0.	6307.	1.08
248.7	4.5	2537.	2526.	0.	6970.	1.09
252.7	4.5	2262.	2385.	0.	7743.	1.12
257.2	4.5	1965.	2194.	0.	8627.	1.14
260.1	4.5	1697.	1917.	0.	9180.	1.14
262.9	4.5	1298.	1641.	0.	9733.	1.13
266.3	4.5	827.	1655.	0.	10396.	1.13
268.6	4.5	571.	1675.	0.	10898.	1.15
271.4	4.5	318.	1250.	0.	11749.	1.16
273.7	4.5	169.	910.	0.	12429.	1.17
275.4	4.5	88.	656.	0.	12939.	1.17
278.2	4.5	11.	231.	0.	13789.	1.19
278.8	4.5	4.	146.	0.	13959.	1.20
280.5	4.5	0.	-0.	0.	14469.	1.22

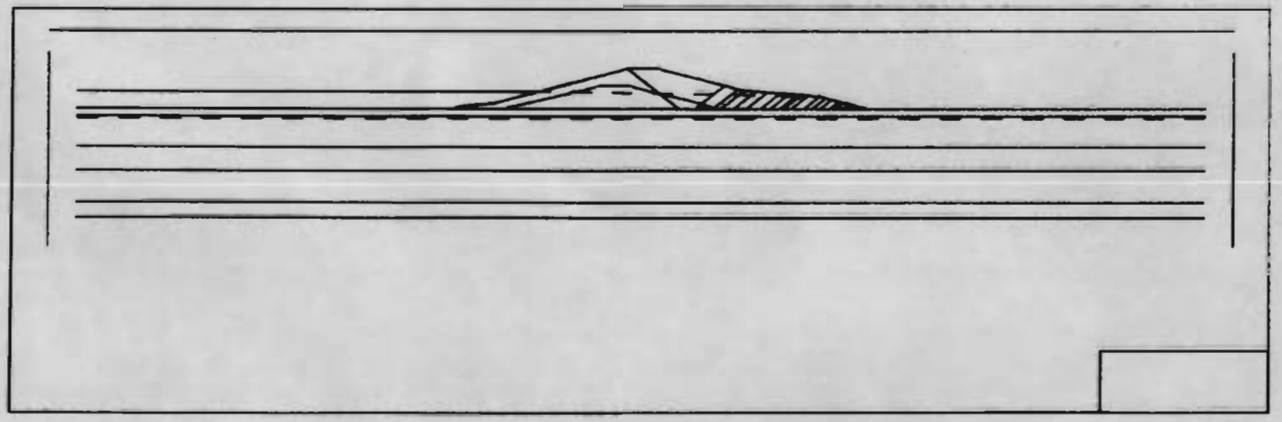
17320 = ER

B

STR 3 EL. 4.5 NO 1

NO	DIST.	F.S.
2	291.2	1.399
3	218.7	1.269
4	224.9	1.083
5	227.8	1.037
6	232.3	1.016
7	236.8	1.032
8	241.9	1.059
9	245.3	1.077
10	248.7	1.095
11	252.7	1.116
12	257.2	1.139
13	260.1	1.137
14	262.9	1.126
15	266.3	1.135
16	268.6	1.149
17	271.4	1.156
18	273.7	1.166
19	275.4	1.175
20	278.2	1.194
21	278.8	1.198
22	280.5	1.218

AFTER SELECTED WEDGES, PLACE CROSSHAIRS AT ADDITIONAL P.W. LOCATIONS
(N,S,E = COMPLETE STRATA & D,R = REDRAW)



```
LI RE05E4 1-1000
1 'LAKE PONT. & VIC. ORLEANS LAKEFRONF LEVEES'
2 'ORIGINAL SECTION AT APPROX. STA. 290+00'
3 10 10 0.5 210 1 0
4 11 2 2 2
5 267.5 268.5
6 0 62.4 0 0 62.4 0 0
7 0 110 195 195 110 300 300
8 0 117 195 195 117 300 300
9 0 110 195 195 110 300 300
10 0 100 340 340 100 340 340
11 0 100 450 560 100 450 560
12 15 117 200 200 117 200 200
13 0 102 480 480 102 480 480
14 0 102 580 680 102 580 680
15 33 122 0 0 122 0 0
16 0 105 680 680 105 680 680
17 0 12.5 163 12.5 195 23 205 23 226 16 261 12.5
18 285 4.5 400 4.5 9999.9 0
19 0 4.5 132 4.5 137 6 147 7 195 23 400 90
20 9999.9 0
21 0 4.5 135 4.5 150 4.5 157 6.5 174 11.5 185 15
22 195 15 204 12 214 9 227 4.5 237 4.5
23 300 4.5 400 4.5 9999.9 0
24 0 4.5 135 4.5 150 4.5 227 4.5 237 4.5
25 300 4.5 400 4.5 9999.9 0
26 0 1 400 1 9999.9 0
27 0 1.1 400 1.1 9999.9 0
28 0 -13 400 -13 9999.9 0
29 0 -24 400 -24 9999.9 0
30 0 -24.1 400 -24.1 9999.9 0
31 0 -39 400 -39 9999.9 0
32 0 -46 400 -46 9999.9 0
33 0 -46.1 400 -46.1 9999.9 0
34 0 12.5 163 12.5 261 12.5 285 4.5
35 400 4.5 9999.9 0
36 0 0 400 0 9999.9 0
37 1 1 1 1 1 1 2 2 2 2 2 2
38 2 2 2 2 2 2 2 2 2 2
39 3 90213 4.5 250 4.5 1
40 291.2
41 6 205 -13 250 -13 1
42 270
43 7 205 -24 300 -24 1
44 310
45 9 205 -39 300 -39 1
46 310
EOT..
SLIB*UPLPLOT
```

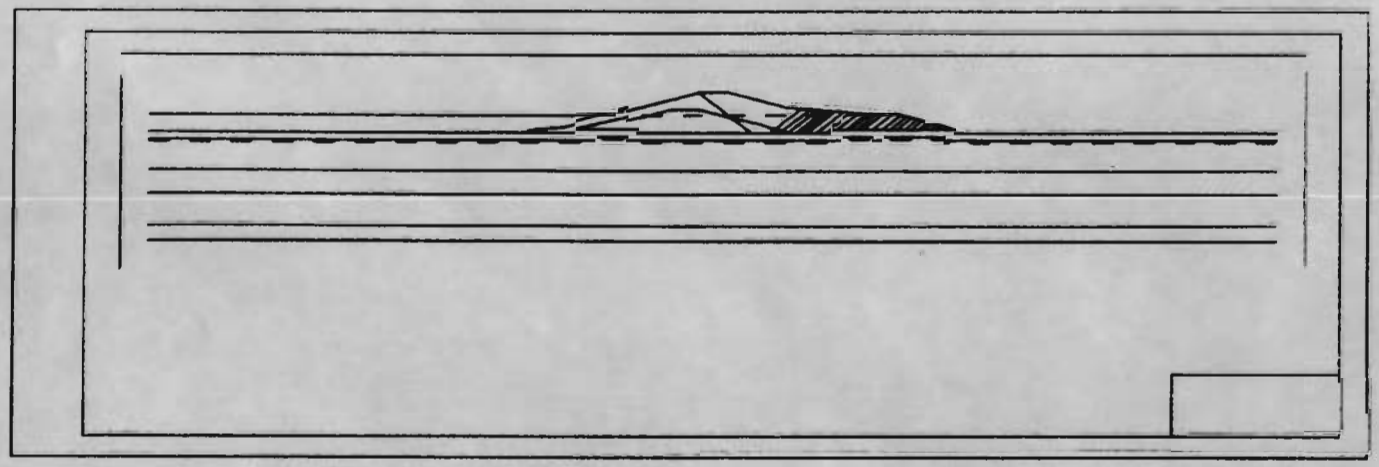
```
 ENTER NAME OF INPUT FILE ( FOUR TO EIGHT CHARACTERS )
RE0514

 ENTER NAME OF PLOT FILE ( ONE TO SEVEN CHARACTERS )
ERT

FILE IS =          ERT1


FILE IS =          U1


FILE IS =          U2

                    **** STABILITY WITH UPLIFT ****


        LAKE PONT. & VIC. ORLEANS LAKEFRONF LEVEES
        ORIGINAL SECTION AT APPROX. STA. 290+00

    11 STRATUM      12 PROFILES       2 VERTICALS

  DATA EDIT : ENTER 0 = BYPASS, 1 = PROFILES, 2 = SOIL PROPERTIES,
3 = ALL
```

```
**********************************************************************************
        STABILITY ANALYSIS WITH UPLIFT AND PLOT ROUTINES
**********************************************************************************


RB CORRECTED 6/03/75; CONVERTED WITH IMPROVED DISPLAY 03/20/81
25 POINTS ON PIEZOMETRIC GRADE LINE ADDED 03/20/81
UPLIFT CORRECTED TO ZERO WITH FLAG FOR RA, RB & RP 04/20/81
SCALE IMPROVED 05/27/81; ERROR DETECTION   06/23/81
AUTOMATIC BORING AND PHREATIC POINT INSERTION  06/23/81

HARRIS CONVERSION 03/24/82 - 06/17/82
```

STR 3 EL. 4.5 NO :

NO	DIST.	F.S.
2	291.2	1.399
3	219.2	1.29
4	223.2	1.244
5	226.1	1.236
6	228.9	1.241
7	230.6	1.244
8	232.9	1.248
9	236.3	1.256
10	239.7	1.264
11	243.1	1.273
12	246.5	1.282
13	247.6	1.285
14	252.1	1.299
15	255.5	1.294
16	258.9	1.269
17	261.8	1.239
18	264.	1.217
19	266.9	1.254
20	269.1	1.241
21	272.	1.239
22	273.7	1.24
23	275.9	1.244
24	277.6	1.25
25	279.3	1.257
26	281.	1.266

AFTER SELECTED WEDGES,PLACE CROSSHAIRS AT ADDITIONAL F.S. LOCATIONS
(N,S,E = COMPLETE STRATA & D,R = REDRAW)



DI W1 1-1000

**** STABILITY WITH UPLIFT ****

LAKE PONT. & VIC. ORLEANS LAKEFRONT LEVEES
ORIGINAL SECTION AT APPROX. STA. 290+00
12 PROFILES
2VERTICALS
UPLIFT WITH 2 PIEZOMETRIC GRADE LINES

* * STRATUM 3 ACT. WEDGE LOC. 90213.0 EL. 4.5 PASS.WEDGE LOC. 250.0 EL. 4.5

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	4.5	499.	500.	195.	195.	195.
130.0	4.5	499.	500.	195.	195.	195.
135.0	4.5	542.	500.	195.	195.	195.
137.0	4.5	571.	500.	195.	195.	195.
147.0	4.5	618.	500.	195.	195.	195.
150.0	4.5	666.	500.	195.	195.	195.
157.0	4.5	791.	500.	195.	195.	195.
163.0	4.5	899.	500.	195.	195.	195.
174.0	4.5	1321.	500.	195.	195.	195.
185.0	4.5	1745.	500.	195.	195.	195.
195.0	4.5	2108.	500.	195.	195.	195.
204.0	4.5	2087.	500.	195.	195.	195.
205.0	4.5	2085.	500.	195.	195.	195.
214.0	4.5	1736.	500.	195.	195.	195.
226.0	4.5	1267.	500.	195.	195.	195.
227.0	4.5	1254.	500.	195.	195.	195.
237.0	4.5	1144.	500.	195.	195.	195.
261.0	4.5	880.	500.	195.	195.	195.
267.5	4.5	841.	365.	195.	195.	195.
268.5	4.5	805.	344.	300.	300.	300.
285.0	4.5	0.	0.	300.	300.	300.
300.0	4.5	0.	0.	300.	300.	300.
400.0	4.5	-0.	0.	300.	300.	300.

ASSUMED CRIT. PASSIVE LOC. 250.0 EL. 4.5 DP 4138. RP 3225.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
213.0	4.5	17759.	7166.	0.	7215.	1.29

CRIT. ACTIVE LOC 213.0 EL 4.5 DA 17759. RA 7156.

DIS.	EL.	DP	RP	DB	RB	FS
291.2	4.5	0.	-0.	0.	17685.	1.48
219.8	4.5	7840.	4295.	0.	1334.	1.29
223.2	4.5	7034.	4175.	0.	1997.	1.24
226.1	4.5	6603.	4074.	0.	2590.	1.24
228.9	4.5	6281.	3974.	0.	3102.	1.24
230.6	4.5	6092.	3913.	0.	3434.	1.24
232.9	4.5	5844.	3833.	0.	3876.	1.25
236.3	4.5	5482.	3712.	0.	4539.	1.26
239.0	4.5	5132.	3592.	0.	5202.	1.26
243.1	4.5	4793.	3471.	0.	5869.	1.27
246.5	4.5	4465.	3350.	0.	6528.	1.28
247.6	4.5	4359.	3310.	0.	6745.	1.29
252.1	4.5	3945.	3149.	0.	7633.	1.30
255.5	4.5	3592.	2871.	0.	8296.	1.29
258.9	4.5	3055.	2540.	0.	8959.	1.27
261.8	4.5	2470.	2263.	0.	9513.	1.24
264.0	4.5	2011.	2042.	0.	9954.	1.22
266.9	4.5	1504.	2717.	0.	10506.	1.25
269.1	4.5	1161.	2377.	0.	11069.	1.24
272.0	4.5	777.	1953.	0.	11919.	1.24
273.7	4.5	587.	1698.	0.	12429.	1.24
275.9	4.5	376.	1358.	0.	13109.	1.24
277.6	4.5	248.	1103.	0.	13619.	1.25
279.3	4.5	146.	848.	0.	14129.	1.26
281.0	4.5	72.	593.	0.	14639.	1.27

EOT..

* The one used

$\Sigma R = 22523$ $\Sigma D = 17172$ $= 1.$

$\Delta LB = -5.0$ C=400.

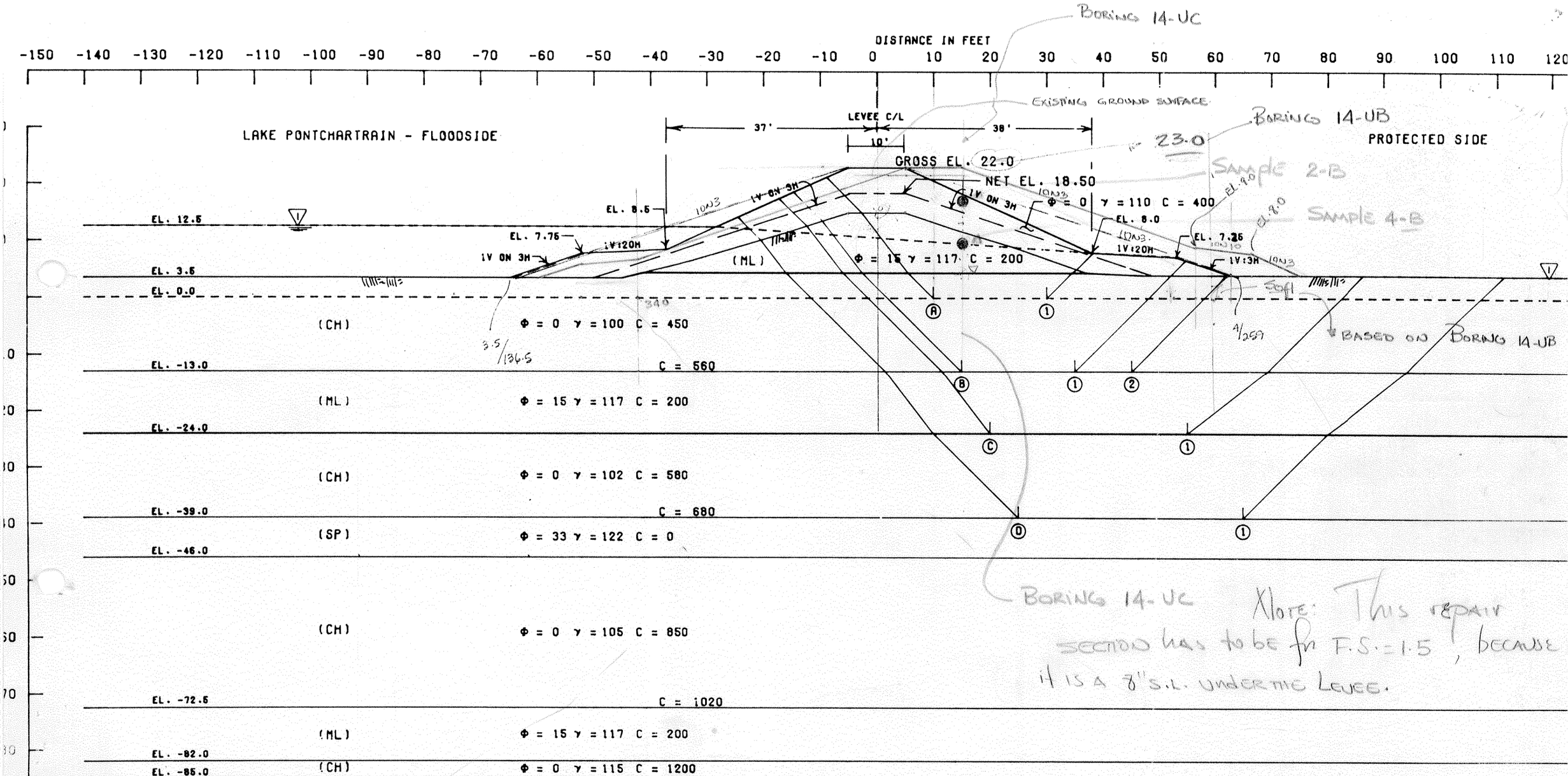
$400 - 195 = 205$

$(5.2 \times 205) + 2 = 2132 = 4174$

$1.29 \times 3235 = 4172$

$\Sigma R = 21294 / \Sigma DA\ 15748 = 1.35$

$\Delta LB = 12.28$



ASSUMED FAILURE SURFACE		RESISTING FORCES			DRIVING FORCES		SUMMATION OF FORCES		FACTOR OF SAFETY
NO.	ELEV.	R_A	R_B	R_P	D_A	$-D_P$	RESISTING	DRIVING	
Ⓐ ①	0.0	18712	11200	6867	28619	5041	36779	23478	1.570

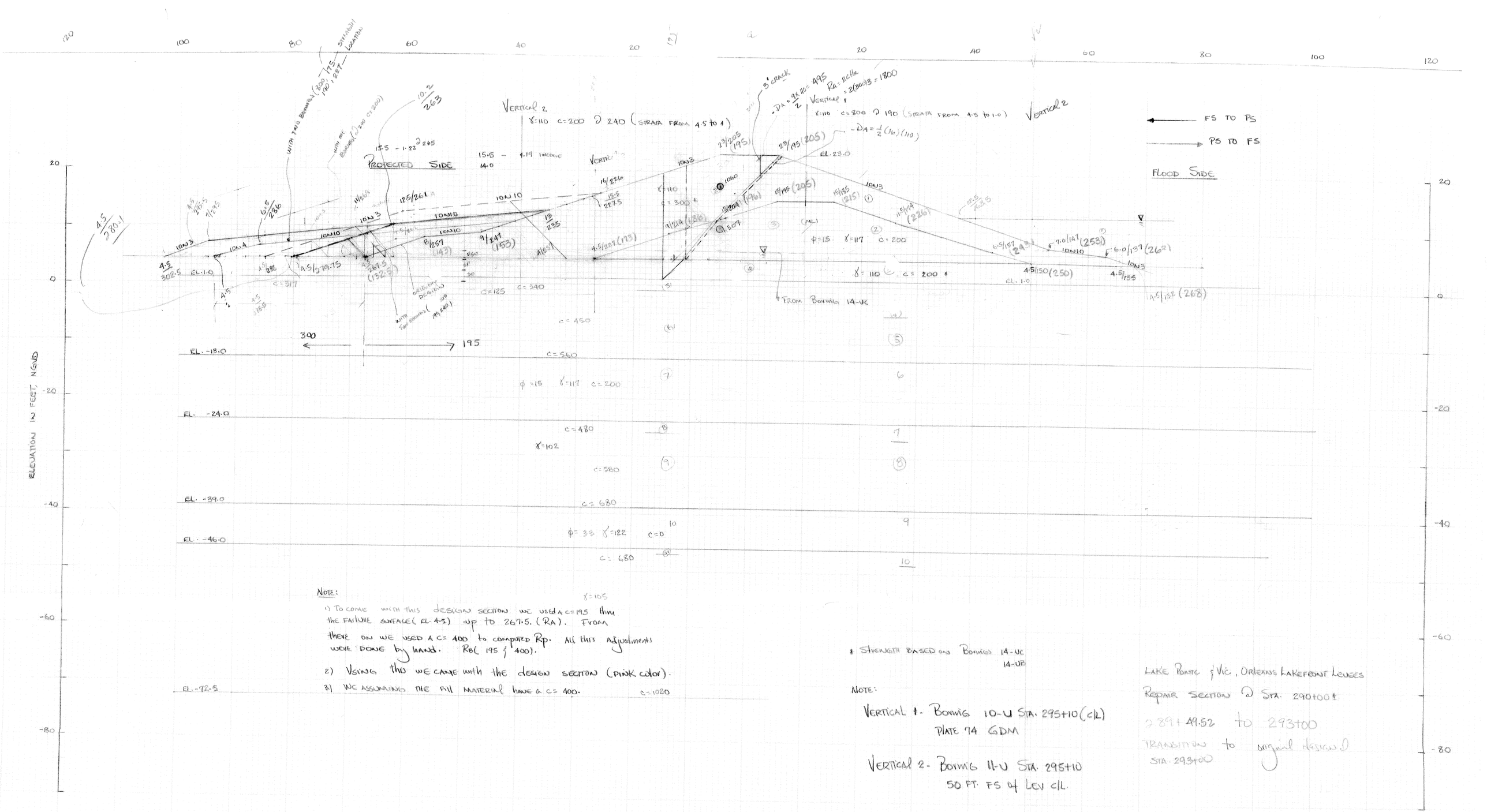
ANALYSIS FOR TYPICAL LEVEE SECTION 9

ADDITIONAL NOTES

1. CLASSIFICATION, STRATIFICATION, SHEAR STRENGTHS AND UNIT WEIGHTS FOR THE

NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.



NOTE:

1) TO COME WITH THIS DESIGN SECTION WE USED A C=195 thru THE FAILURE SURFACE (EL. 4.5) up TO 267.5. (RA). FROM THERE ON WE USED A C= 400 to computed Rp. All this Adjustments WERE DONE by hand. Rb(195 & 400).

2) USING this WE CAME with the design SECTION (PINK color).

3) WE ASSUMING THE Fill MATERIAL have a C= 400.

* STRENGTH BASED ON BORINGS 14-UC
14-UB

NOTE:

VERTICAL 1 - BORING 10-U STA. 295+10 (c/l)
PLATE 74 GDM

VERTICAL 2 - BORING 11-U STA. 295+10
50 FT. FS of LEV c/l.

LAKE PONTC & VIC., ORLEANS LAKEFRONT LEVEES
REPAIR SECTION (a) STA. 290+00 t.
289+49.52 to 293+00
TRANSITION to original design
STA. 293+00

ACTIVE @ 211 PASSIVE @ 267.4

F.S. = 1.0 ,

1) WITHOUT CRACK & c = 300 up to 227
c = ? FOR FS = 1.0

$D_A = 18085$

$R_A = 2[300]18.3 = 10980$

$D_p = 0$

$R_p = 0$

$R_B = [(16 \times 300) + 40.4(c)]$

$$(18085 - 0) = 10980 + 0 + [(16 \times 300) + 40.4c]$$

(D_p, R_p, R_B)

$$c = \frac{18{,}085 - 15{,}780}{40.4} = 57$$

2) WITH CRACK

$$(18085 - 880) = 10980 + 0 + 16 \times 300 + 40.4c$$

$$c = 35$$

LMV FORM 107e 1 FEB 79

COMPUTATION SHEET

PROJECT | PAGE OF | COMPUTED BY | DATE

SUBJECT | CHECKED BY | DATE

LAKE PONTC LA. & VICINITY
HURRICANE PROJECT, HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
LONDON AVE. CANAL TO WESTEND BLVD
ORLEANS PARISH, LA.
REPAIR SECTION
BIL STA. 289+49.52 TO BIL STA. 298+00

```
LI RE0515 1-100
1 'LAKE PONT. & VIC. ORLEANS LAKEFRONF LEVEES'
2 'ORIGINAL SECTION AT APPROX. STA. 290+00'
3 10 10 0.5 210 1 1
4 10 2 2 1
5 210 250
6 0 110 300 300 110 300 300
7 15 117 200 200 117 200 200
8 0 110 800 800 110 175 175
9 0 100 340 340 100 340 340
10 0 100 450 560 100 450 560
11 15 117 200 200 117 200 200
12 0 102 480 480 102 480 480
13 0 102 580 680 102 580 680
14 33 122 0 0 122 0 0
15 0 105 680 680 105 680 680
16 0 4.5 132.5 4.5 143 8 153 9 195 23 205 23
17 253 7 263 6 268 4.5 400 4.5 9999.9 0
18 0 4.5 173 4.5 186 9 196 12 205 15 215 15
19 226 11.5 243 6.5 250 4.5 400 4.5 9999.9 0
20 0 4.5 400 4.5 9999.9 0
21 0 1 400 1 9999.9 0
22 0 1.1 400 1.1 9999.9 0
23 0 -13 400 -13 9999.9 0
24 0 -24 400 -24 9999.9 0
25 0 -24.1 400 -24.1 9999.9 0
26 0 -39 400 -39 9999.9 0
27 0 -46 400 -46 9999.9 0
28 0 -46.1 400 -46.1 9999.9 0
29 0 0 400 0 9999.9 0
30 1 1 1 1 1 1 1 1 1 1 1 1
31 1 1 1 1 1 1 1 1 1
32 3 205 1 250 1 1
33 260
34 5 205 -13 250 -13 1
35 270
36 6 205 -24 300 -24 1
37 310
38 8 205 -39 300 -39 1
39 310
EOT..
SLIB$UPLPLOT
```

```
FILE IS =        U1

FILE IS =        U2

                 **** STABILITY WITH UPLIFT ****


          LAKE PONT. & VIC. ORLEANS LAKEFRONF LEVEES
          ORIGINAL SECTION AT APPROX. STA. 290+00

   10 STRATUM      11 PROFILES      2 VERTICALS

 DATA EDIT : ENTER 0 = BYPASS, 1 = PROFILES, 2 = SOIL PROPERTIES,
 3 = ALL
```

```
                  ********************************************************************************
                        STABILITY ANALYSIS WITH UPLIFT AND PLOT ROUTINES
                  ********************************************************************************


                  RB CORRECTED 6/03/75; CONVERTED WITH IMPROVED DISPLAY 03/20/81
                  25 POINTS ON PIEZOMETRIC GRADE LINE ADDED 03/20/81
                  UPLIFT CORRECTED TO ZERO WITH FLAG FOR RA, RB & RP 04/20/81
                  SCALE IMPROVED 05/27/81; ERROR DETECTION   06/23/81
                  AUTOMATIC BORING AND PHREATIC POINT INSERTION   06/23/81

                  HARRIS CONVERSION 03/24/82 - 05/17/82

 ENTER NAME OF INPUT FILE ( FOUR TO EIGHT CHARACTERS )
RESIN

 ENTER NAME OF PLOT FILE ( ONE TO SEVEN CHARACTERS )
RGU

FILE IS =        RGU1
```

STR 3 EL. 1. NO 1

NO	DIST.	F.S.
2	260.	1.416
3	227.	1.979
4	221.3	2.328
5	221.3	2.328
6	219.1	2.52
7	230.4	1.831
8	237.2	1.622
9	246.3	1.447
10	252.5	1.412
11	260.4	1.414
12	268.4	1.41
13	279.1	1.483

STR 5 EL. -13. NO 14

NO	DIST.	F.S.
15	270.	1.415
16	242.3	1.329
17	236.6	1.367
18	233.8	1.402
19	231.	1.462
20	244.6	1.322
21	249.1	1.31
22	253.1	1.315
23	257.	1.33
24	262.1	1.355
25	265.5	1.377
26	271.8	1.431
27	276.3	1.472
28	285.4	1.555
29	302.9	1.714

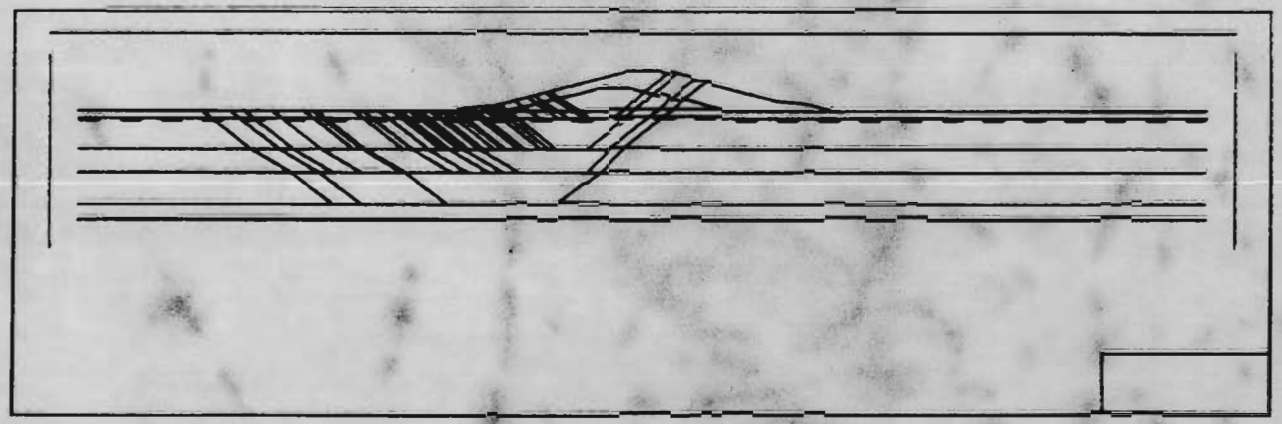
STR 6 EL. -24. NO 30

NO	DIST.	F.S.
31	310.	1.71
32	267.8	1.417
33	262.1	1.39
34	254.8	1.376
35	249.7	1.376
36	244.	1.402
37	285.4	1.539

STR 8 EL. -39. NO 38

NO	DIST.	F.S.
39	310.	1.811
40	269.5	1.506

AFTER SELECTED WEDGES, PLACE CROSSHAIRS AT ADDITIONAL F.W. LOCATIONS
(N,S,E = COMPLETE STRATA & D,R = REDRAW)
1 = END, 2 = PLOT SECTION, 3 = NEW SECTION
4 = CK. MORE, 5 = SPOOL DETAIL DATA



DI U1 1-1000

**** STABILITY WITH UPLIFT ****

LAKE PONT. & VIC. ORLEANS LAKEFRONF LEVEES
ORIGINAL SECTION AT APPROX. STA. 290+00
11 PROFILES
2VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 3 ACT. WEDGE LOC. 205.0 EL. 1.0 PASS.WEDGE LOC. 250.0 EL. -13.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	1.0	385.	0.	800.	340.	340.
132.5	1.0	385.	0.	800.	340.	340.
143.0	1.0	770.	0.	800.	340.	340.
153.0	1.0	880.	0.	800.	340.	340.
173.0	1.0	1614.	0.	800.	340.	340.
186.0	1.0	2122.	0.	800.	340.	340.
195.0	1.0	2470.	0.	800.	340.	340.
196.0	1.0	2473.	0.	800.	340.	340.
205.0	1.0	2493.	0.	800.	340.	340.
210.0	1.0	2310.	0.	800.	340.	340.
215.0	1.0	2126.	0.	722.	340.	340.
226.0	1.0	1699.	0.	550.	340.	340.
SHEAR STRENGTHS ARE EQUAL 340.0 AT DIST. 239.4						
243.0	1.0	1040.	0.	284.	340.	284.
250.0	1.0	770.	0.	175.	340.	175.
253.0	1.0	660.	0.	175.	340.	175.
263.0	1.0	550.	0.	175.	340.	175.
268.0	1.0	385.	0.	175.	340.	175.
400.0	1.0	385.	0.	175.	340.	175.

ASSUMED CRIT. PASSIVE LOC. 250.0 EL. 1.0 DP 2099. RP 2561.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
205.0	1.0	25655.	18054.	0.	14429.	1.49
210.0	1.0	26398.	19098.	0.	12729.	1.42
215.0	1.0	25186.	19269.	0.	11029.	1.42
220.0	1.0	22432.	17986.	0.	9329.	1.47
225.0	1.0	18684.	16488.	0.	7629.	1.61
230.0	1.0	14052.	13866.	0.	5929.	1.76
236.0	1.0	11494.	11511.	0.	4229.	1.95

CRIT. ACTIVE LOC 210.0 EL 1.0 DA 26398. RA 19098.

DIS.	EL.	DP	RP	DB	RB	FS
260.0	1.0	1373.	1847.	0.	14479.	1.42
227.0	1.0	8864.	9822.	0.	5777.	1.98
221.3	1.0	11278.	12251.	0.	3851.	2.33
221.3	1.0	11278.	12251.	0.	3851.	2.33
219.1	1.0	12326.	13280.	0.	3080.	2.52
230.4	1.0	7555.	8460.	0.	6933.	1.83
237.2	1.0	5248.	5951.	0.	9245.	1.62
248.0 EL. 1.0.0		2816.	3061.	0.	11965.	1.45
252.5	1.0	1833.	2424.	0.	13165.	1.41
260.4	1.0	1336.	1788.	0.	14553.	1.41
268.4	1.0	674.	1225.	0.	15942.	1.41
279.1	1.0	674.	1225.	0.	17826.	1.48

* * STRATUM 5 ACT. WEDGE LOC. 205.0 EL. -13.0 PASS.WEDGE LOC. 250.0 EL. -13.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-13.0	1785.	813.	560.	461.	461.
132.5	-13.0	1785.	813.	560.	461.	461.
SHEAR STRENGTHS ARE EQUAL 560.0 AT DIST. 142.6						
143.0	-13.0	2170.	813.	560.	564.	560.
153.0	-13.0	2280.	813.	560.	593.	560.
173.0	-13.0	3014.	813.	560.	790.	560

186.0	-13.0	3522.	813.	560.	926.	560.
195.0	-13.0	3870.	813.	560.	1019.	560.
196.0	-13.0	3873.	813.	560.	1020.	560.
205.0	-13.0	3893.	813.	560.	1025.	560.
210.0	-13.0	3710.	813.	560.	976.	560.
215.0	-13.0	3526.	813.	560.	927.	560.
226.0	-13.0	3099.	813.	560.	813.	560.
243.0	-13.0	2440.	813.	560.	636.	560.
250.0	-13.0	2170.	813.	560.	564.	560.
SHEAR STRENGTHS ARE EQUAL 560.0 AT DIST. 250.4						
253.0	-13.0	2060.	813.	560.	534.	534.
263.0	-13.0	1950.	813.	560.	505.	505.
268.0	-13.0	1785.	813.	560.	461.	461.
400.0	-13.0	1785.	813.	560.	461.	461.

ASSUMED CRIT. PASSIVE LOC. 250.0 EL. -13.0 DP 19459. RP 13888.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	F
205.0	-13.0	62357.	26831.	0.	25200.	1.54
210.0	-13.0	65484.	28257.	0.	22400.	1.40
215.0	-13.0	66941.	29712.	0.	19600.	1.33
220.0	-13.0	66513.	30872.	0.	16800.	1.31
225.0	-13.0	64236.	31862.	0.	14000.	1.33
230.0	-13.0	59939.	31644.	0.	11200.	1.40
235.0	-13.0	54258.	30315.	0.	8400.	1.51
240.0	-13.0	47652.	28512.	0.	5600.	1.70
245.0	-13.0	41219.	25981.	0.	2800.	1.96

CRIT. ACTIVE LOC 220.0 EL -13.0 DA 66513. RA 30872. RP 89332.

DIS.	EL.	DP	RP	DB	RB	FS
270.0	-13.0	15863.	13825.	0.	26975.	1.42
242.3	-13.0	22744.	14817.	0.	12484.	1.33
236.6	-13.0	26044.	15126.	0.	9310.	1.37
233.8	-13.0	28039.	15331.	0.	7724.	1.40
231.0	-13.0	30217.	16044.	0.	6137.	1.46
244.6	-13.0	21680.	14647.	0.	13753.	1.32
249.1	-13.0	19802.	14020.	0.	16292.	1.31
253.1	-13.0	18457.	13825.	0.	18478.	1.31
257.0	-13.0	17456.	13825.	0.	20573.	1.33
262.1	-13.0	16423.	13825.	0.	23199.	1.36
265.5	-13.0	15964.	13825.	0.	24888.	1.38
271.8	-13.0	15863.	13825.	0.	27786.	1.43
276.3	-13.0	15863.	13825.	0.	29874.	1.47
285.4	-13.0	15863.	13825.	0.	34050.	1.55
302.9	-13.0	15863.	13825.	0.	42141.	1.71

* * STRATUM 6 ACT. WEDGE LOC. 205.0 EL. -24.0 PASS.WEDGE LOC. 300.0 EL. -24.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-24.0	3072.	1500.	621.	480.	480.
132.5	-24.0	3072.	1500.	621.	480.	480.
143.0	-24.0	3457.	1500.	724.	480.	480.
153.0	-24.0	3567.	1500.	754.	480.	480.
173.0	-24.0	4301.	1500.	950.	480.	480.
186.0	-24.0	4809.	1500.	1087.	480.	480.
195.0	-24.0	5157.	1500.	1180.	480.	480.
196.0	-24.0	5160.	1500.	1181.	480.	480.
205.0	-24.0	5180.	1500.	1186.	480.	480.
210.0	-24.0	4997.	1500.	1137.	480.	480.
215.0	-24.0	4813.	1500.	1088.	480.	480.
226.0	-24.0	4386.	1500.	973.	480.	480.
243.0	-24.0	3727.	1500.	797.	480.	480.
250.0	-24.0	3457.	1500.	724.	480.	480.
253.0	-24.0	3347.	1500.	695.	480.	480.
263.0	-24.0	3237.	1500.	665.	480.	480.
268.0	-24.0	3072.	1500.	621.	480.	480.
400.0	-24.0	3072.	1500.	621.	480.	480.

ASSUMED CRIT. PASSIVE LOC. 300.0 EL. -24.0 DP 42575. RP 89332.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	F
205.0	-24.0	104544.	43246.	0.	45600.	1.91
210.0	-24.0	108770.	44308.	0.	43200.	1.77
215.0	-24.0	111080.	44979.	0.	40800.	1.68
220.0	-24.0	111642.	45582.	0.	38400.	1.64
225.0	-24.0	110409.	46097.	0.	36000.	1.64
230.0	-24.0	107265.	46321.	0.	33600.	1.69
235.0	-24.0	102237.	46215.	0.	31200.	1.79
240.0	-24.0	95269.	44600.	0.	28800.	1.95
245.0	-24.0	87152.	42375.	0.	26400.	2.20

CRIT. ACTIVE LOC 220.0 EL -24.0 DA 111642. RA 45582.

DIS.	EL.	DP	RP	DB	RB	FS
310.0	-24.0	42575.	29332.	0.	43200.	1.71
267.8	-24.0	42576.	29333.	0.	22941.	1.42
262.1	-24.0	43006.	29632.	0.	20221.	1.39
254.8	-24.0	44221.	30481.	0.	16685.	1.38
249.7	-24.0	45502.	31191.	0.	14236.	1.38
244.0	-24.0	47949.	32176.	0.	11516.	1.40
285.4	-24.0	42576.	29332.	0.	31373.	1.54

CRIT. ACTIVE LOC 230.0 EL -39.0 DA 190381. RA 62359.

DIS.	EL.	DP	RP	DB	RB	FS
310.0	-39.0	100128.	46712.	0.	54400.	1.81
269.5	-39.0	100128.	46712.	0.	26855.	1.51

BOT..

* * STRATUM 8 ACT. WEDGE LOC. 205.0 EL. -39.0 PASS.WEDGE LOC. 300.0 EL. -39.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-39.0	4602.	2438.	680.	1406.	680.
132.5	-39.0	4602.	2438.	680.	1406.	680.
143.0	-39.0	4987.	2438.	680.	1656.	680.
153.0	-39.0	5097.	2438.	680.	1727.	680.
173.0	-39.0	5831.	2438.	680.	2204.	680.
186.0	-39.0	6339.	2438.	680.	2534.	680.
195.0	-39.0	6687.	2438.	680.	2760.	680.
196.0	-39.0	6690.	2438.	680.	2761.	680.
205.0	-39.0	6710.	2438.	680.	2775.	680.
210.0	-39.0	6527.	2438.	680.	2656.	680.
215.0	-39.0	6343.	2438.	680.	2537.	680.
226.0	-39.0	5916.	2438.	680.	2259.	680.
243.0	-39.0	5257.	2438.	680.	1831.	680.
250.0	-39.0	4987.	2438.	680.	1655.	680.
253.0	-39.0	4877.	2438.	680.	1584.	680.
263.0	-39.0	4767.	2438.	680.	1513.	680.
268.0	-39.0	4602.	2438.	680.	1406.	680.
400.0	-39.0	4602.	2438.	680.	1406.	680.

ASSUMED CRIT. PASSIVE LOC. 300.0 EL. -39.0 DP 100128. RP 46712.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
205.0	-39.0	174281.	56212.	0.	64600.	2.26
210.0	-39.0	181138.	57840.	0.	61200.	2.05
215.0	-39.0	186272.	59296.	0.	57800.	1.90
220.0	-39.0	189566.	60626.	0.	54400.	1.81
225.0	-39.0	190969.	61688.	0.	51000.	1.75
230.0	-39.0	190381.	62359.	0.	47600.	1.74
235.0	-39.0	188031.	62962.	0.	44200.	1.75
240.0	-39.0	183891.	63477.	0.	40800.	1.80
245.0	-39.0	177842.	63701.	0.	37400.	1.90
250.0	-39.0	169911.	63595.	0.	34000.	2.07
255.0	-39.0	160119.	61980.	0.	30600.	2.32

Original Section
Making it fail ; FS = .99
C=125

```
LI RE0514 1-1000
1 'LAKE PONT. & VIC. ORLEANS LAKEFRONF LEVEES'
2 'ORIGINAL SECTION AT APPROX. STA. 290+00'
3 10 10 0.5 210 1 0
4 11 2 2 2
5 190 227
6 0 62.4 0 0 62.4 0 0
7 0 110 300 300 110 300 300
8 15 117 200 200 117 200 200
9 0 110 800 800 110 125 125
10 0 100 340 340 100 340 340
11 0 100 450 560 100 450 560
12 15 117 200 200 117 200 200
13 0 102 480 480 102 480 480
14 0 102 580 680 102 580 680
15 33 122 0 0 122 0 0
16 0 105 680 680 105 680 680
17 0 12.5 163 12.5 195 23 205 23 247 9 257 8
18 267.5 4.5 400 4.5 9999.9 0
19 0 4.5 132 4.5 137 6 147 7 195 23 400 90
20 9999.9 0
21 0 4.5 135 4.5 150 4.5 157 6.5 174 11.5 185 15
22 195 15 204 12 214 9 227 4.5 237 4.5
23 300 4.5 400 4.5 9999.9 0
24 0 4.5 135 4.5 150 4.5 227 4.5 237 4.5
25 300 4.5 400 4.5 9999.9 0
26 0 1 400 1 9999.9 0
27 0 1.1 400 1.1 9999.9 0
28 0 -13 400 -13 9999.9 0
29 0 -24 400 -24 9999.9 0
30 0 -24.1 400 -24.1 9999.9 0
31 0 -39 400 -39 9999.9 0
32 0 -46 400 -46 9999.9 0
33 0 -46.1 400 -46.1 9999.9 0
34 0 12.5 163.5 12.5 247 9 257 8 267.5 4.5
35 400 4.5 9999.9 0
36 0 0 400 0 9999.9 0
37 1 1 1 1 1 1 2 2 2 2 2 2
38 2 2 2 2 2 2 2 2 2 2
39 4 90215 1 250 1 1
40 291.2
41 6 205 -13 250 -13 1
42 270
43 7 205 -24 300 -24 1
44 310
45 9 205 -39 300 -39 1
46 310
EOT..
SLIB$UPLPLOT
```

```
ENTER NAME OF INPUT FILE ( FOUR TO EIGHT CHARACTERS )
RE0514

ENTER NAME OF PLOT FILE ( ONE TO SEVEN CHARACTERS )
RTY

FILE IS =          RTY1

FILE IS =          U1

FILE IS =          U2

                    **** STABILITY WITH UPLIFT ****


          LAKE PONT. & VIC. ORLEANS LAKEFRONF LEVEES
          ORIGINAL SECTION AT APPROX. STA. 290+00

     11 STRATUM      12 PROFILES       2 VERTICALS

  DATA EDIT : ENTER 0 = BYPASS, 1 = PROFILES, 2 = SOIL PROPERTIES,
3 = ALL
```

```
**********************************************************************
        STABILITY ANALYSIS WITH UPLIFT AND PLOT ROUTINES
**********************************************************************

RB CORRECTED 6/03/75; CONVERTED WITH IMPROVED DISPLAY 03/20/81
25 POINTS ON PIEZOMETRIC GRADE LINE ADDED 03/20/81
UPLIFT CORRECTED TO ZERO WITH FLAG FOR RA, RB & RF 04/20/81
SCALE IMPROVED 05/27/81; ERROR DETECTION 06/23/81
AUTOMATIC BORING AND PHREATIC POINT INSERTION 06/23/81

HARRIS CONVERSION 03/24/82 - 05/17/82
```

AFTER SELECTED WEDGES,PLACE CROSSHAIRS AT ADDITIONAL P.W. LOCATIONS
(N,S,E = COMPLETE STRATA & D,R = REDRAW)
1 = END, 2 = PLOT SECTION, 3 = NEW SECTION
4 = CK. MORE, 5 = SPOOL DETAIL DATA

STR 4 EL. 1. NO 1

NO	DIST.	F.S.
2	291.2	1.128
3	226.6	1.502
4	228.9	1.417
5	232.3	1.313
6	235.7	1.229
7	239.1	1.162
8	241.4	1.137
9	243.1	1.123
10	244.8	1.114
11	245.9	1.111
12	248.2	1.108
13	249.9	1.107
14	252.1	1.094
15	254.4	1.077
16	256.1	1.062
17	257.8	1.045
18	260.6	1.021
19	261.8	1.012
20	263.5	.9999
21	265.2	.9974
22	267.4	1.005
23	267.4	1.005
24	270.8	1.023

STR 6 EL. -13. NO 25

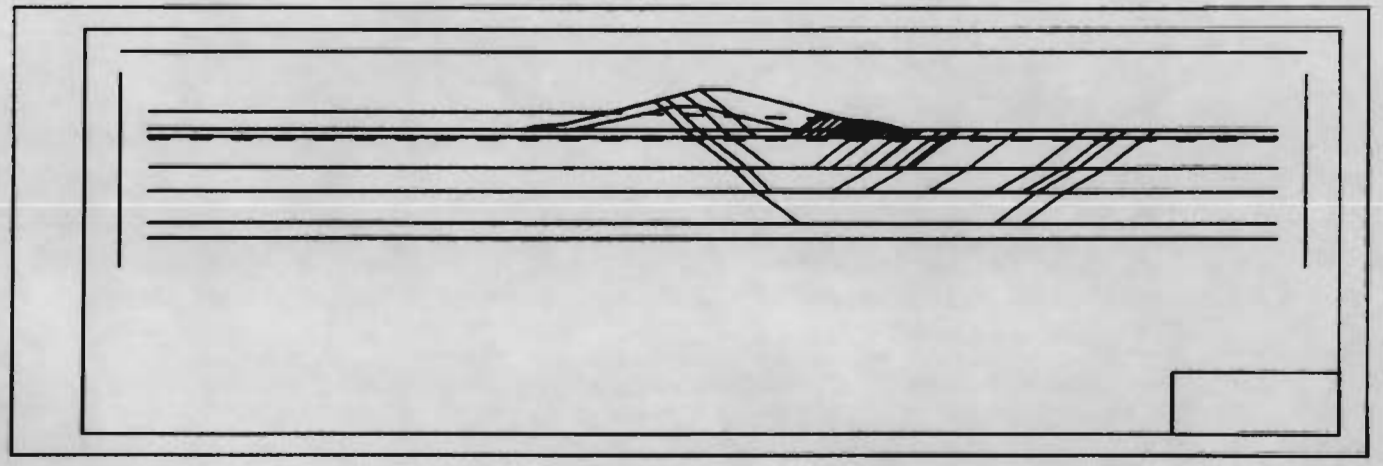
NO	DIST.	F.S.
26	270.	1.387
27	235.1	1.382
28	241.9	1.34
29	256.7	1.31
30	263.5	1.334

STR 7 EL. -24. NO 31

NO	DIST.	F.S.
32	310.	1.695
33	253.8	1.38
34	241.9	1.437
35	276.5	1.462

STR 9 EL. -39. NO 36

NO	DIST.	F.S.
37	310.	1.811



DI W1 1-10000

**** STABILITY WITH UPLIFT ****

LAKE PONT. & VIC. ORLEANS LAKEFRONF LEVEES
ORIGINAL SECTION AT APPROX. STA. 290+00
12 PROFILES
2VERTICALS
UPLIFT WITH 2 PIEZOMETRIC GRADE LINES

* * STRATUM 4 ACT. WEDGE LOC. 90215.0 EL. 1.0 PASS.WEDGE LOC. 250.0 EL. 1.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	1.0	884.	0.	800.	340.	340.
132.0	1.0	884.	0.	800.	340.	340.
135.0	1.0	927.	0.	800.	340.	340.
137.0	1.0	956.	0.	800.	340.	340.
147.0	1.0	1003.	0.	800.	340.	340.
150.0	1.0	1051.	0.	800.	340.	340.
157.0	1.0	1176.	0.	800.	340.	340.
163.0	1.0	1284.	0.	800.	340.	340.
163.5	1.0	1303.	0.	800.	340.	340.
174.0	1.0	1706.	0.	800.	340.	340.
185.0	1.0	2130.	0.	800.	340.	340.
190.0	1.0	2312.	0.	800.	340.	340.
195.0	1.0	2493.	0.	709.	340.	340.
204.0	1.0	2472.	0.	545.	340.	340.
205.0	1.0	2470.	0.	526.	340.	340.
214.0	1.0	2121.	0.	362.	340.	340.
SHEAR STRENGTHS ARE EQUAL 340.0 AT DIST. 215.2						
227.0	1.0	1613.	0.	125.	340.	125.
237.0	1.0	1246.	0.	125.	340.	125.
247.0	1.0	880.	0.	125.	340.	125.
257.0	1.0	770.	0.	125.	340.	125.
267.5	1.0	385.	0.	125.	340.	125.
300.0	1.0	385.	0.	125.	340.	125.
400.0	1.0	385.	0.	125.	340.	125.

ASSUMED CRIT. PASSIVE LOC. 250.0 EL. 1.0 DP 2963. RP 2973.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
215.0	1.0	24794.	15499.	0.	5688.	1.11

CRIT. ACTIVE LOC 215.0 EL 1.0 DA 24794. RA 15499.

DIS.	EL.	DP	RP	DB	RB	FS
291.2	1.0	674.	875.	0.	10838.	1.13
226.6	1.0	9014.	5427.	0.	2767.	1.50
228.9	1.0	8116.	5088.	0.	3052.	1.42
232.3	1.0	6858.	4578.	0.	3477.	1.31
235.7	1.0	5706.	4068.	0.	3902.	1.23
239.1	1.0	4660.	3569.	0.	4327.	1.16
241.4	1.0	4070.	3445.	0.	4610.	1.14
243.1	1.0	3718.	3352.	0.	4823.	1.12
244.8	1.0	3443.	3259.	0.	5035.	1.11
245.9	1.0	3302.	3197.	0.	5177.	1.11
248.2	1.0	3105.	3073.	0.	5460.	1.11
249.9	1.0	2972.	2980.	0.	5673.	1.11
252.1	1.0	2760.	2652.	0.	5956.	1.09
254.4	1.0	2463.	2313.	0.	6239.	1.08
256.1	1.0	2184.	2058.	0.	6452.	1.06
257.8	1.0	1867.	1803.	0.	6664.	1.05
260.6	1.0	1380.	1378.	0.	7019.	1.02
261.8	1.0	1206.	1208.	0.	7160.	1.01
263.5	1.0	966.	953.	0.	7373.	1.00
265.2	1.0	773.	875.	0.	7585.	1.00
267.4	1.0	674.	875.	0.	7869.	1.01
267.4	1.0	674.	875.	0.	7869.	1.01
270.8	1.0	674.	875.	0.	8294.	1.02

* * STRATUM 6 ACT. WEDGE LOC. 205.0 EL. -13.0 PASS.WEDGE LOC. 250.0 EL. -13.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-13.0	2284.	813.	560.	594.	560.
132.0	-13.0	2284.	813.	560.	594.	560.

5.0	-13.0	2327.	813.	560.	606.	560.
137.0	-13.0	2356.	813.	560.	613.	560.
147.0	-13.0	2403.	813.	560.	626.	560.
150.0	-13.0	2451.	813.	560.	639.	560.
157.0	-13.0	2576.	813.	560.	673.	560.
163.0	-13.0	2684.	813.	560.	701.	560.
163.5	-13.0	2703.	813.	560.	707.	560.
174.0	-13.0	3106.	813.	560.	815.	560.
185.0	-13.0	3530.	813.	560.	928.	560.
190.0	-13.0	3712.	813.	560.	977.	560.
195.0	-13.0	3893.	813.	560.	1026.	560.
204.0	-13.0	3872.	813.	560.	1020.	560.
205.0	-13.0	3870.	813.	560.	1019.	560.
214.0	-13.0	3521.	813.	560.	926.	560.
227.0	-13.0	3013.	813.	560.	790.	560.
237.0	-13.0	2646.	813.	560.	691.	560.
247.0	-13.0	2280.	813.	560.	593.	560.
257.0	-13.0	2170.	813.	560.	564.	560.
SHEAR STRENGTHS ARE EQUAL			560.0	AT DIST.	257.4	
267.5	-13.0	1785.	813.	560.	461.	461.
300.0	-13.0	1785.	813.	560.	461.	461.
400.0	-13.0	1785.	813.	560.	461.	461.

ASSUMED CRIT. PASSIVE LOC. 250.0 EL. -13.0 DP 20846. RP 13495.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
205.0	-13.0	63187.	26796.	0.	25200.	1.55
210.0	-13.0	65969.	27722.	0.	22400.	1.41
215.0	-13.0	67001.	28583.	0.	19600.	1.34
220.0	-13.0	66114.	28996.	0.	16800.	1.31
225.0	-13.0	63342.	28741.	0.	14000.	1.32
230.0	-13.0	58920.	27851.	0.	11200.	1.38
235.0	-13.0	53537.	26427.	0.	8400.	1.48
240.0	-13.0	47562.	25202.	0.	5600.	1.66
245.0	-13.0	41394.	23372.	0.	2800.	1.93

CRIT. ACTIVE LOC 220.0 EL -13.0 DA 66114. RA 28996.

DIS.	EL.	DP	RP	DB	RB	FS
270.0	-13.0	15863.	13475.	0.	27248.	1.39
235.1	-13.0	27698.	15620.	0.	8480.	1.38
241.9	-13.0	24360.	14683.	0.	12288.	1.34
256.7	-13.0	18008.	13475.	0.	20539.	1.31
263.5	-13.0	16160.	13475.	0.	24184.	1.33

* * STRATUM 7 ACT. WEDGE LOC. 205.0 EL. -24.0 PASS.WEDGE LOC. 300.0 EL. -24.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	UT.	UPLIFT	STR 1	STR 2	STR USED

2.0	-24.0	3571.	1500.	755.	480.	480.
132.0	-24.0	3571.	1500.	755.	480.	480.
135.0	-24.0	3614.	1500.	766.	480.	480.
137.0	-24.0	3643.	1500.	774.	480.	480.
147.0	-24.0	3690.	1500.	787.	480.	480.
150.0	-24.0	3738.	1500.	800.	480.	480.
157.0	-24.0	3863.	1500.	833.	480.	480.
163.0	-24.0	3971.	1500.	862.	480.	480.
163.5	-24.0	3990.	1500.	867.	480.	480.
174.0	-24.0	4393.	1500.	975.	480.	480.
185.0	-24.0	4817.	1500.	1089.	480.	480.
190.0	-24.0	4999.	1500.	1138.	480.	480.
195.0	-24.0	5180.	1500.	1186.	480.	480.
204.0	-24.0	5159.	1500.	1181.	480.	480.
205.0	-24.0	5157.	1500.	1180.	480.	480.
214.0	-24.0	4808.	1500.	1086.	480.	480.
227.0	-24.0	4300.	1500.	950.	480.	480.
237.0	-24.0	3933.	1500.	852.	480.	480.
247.0	-24.0	3567.	1500.	754.	480.	480.
257.0	-24.0	3457.	1500.	724.	480.	480.
267.5	-24.0	3072.	1500.	621.	480.	480.
300.0	-24.0	3072.	1500.	621.	480.	480.
400.0	-24.0	3072.	1500.	621.	480.	480.

ASSUMED CRIT. PASSIVE LOC. 300.0 EL. -24.0 DP 42576. RP 28982.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	F
205.0	-24.0	105708.	43115.	0.	45600.	1.86
210.0	-24.0	109538.	44138.	0.	43200.	1.74
215.0	-24.0	111420.	44691.	0.	40800.	1.66
220.0	-24.0	111526.	44675.	0.	38400.	1.63
225.0	-24.0	109829.	44552.	0.	36000.	1.63
230.0	-24.0	106185.	43885.	0.	33600.	1.67
235.0	-24.0	100828.	42586.	0.	31200.	1.76
240.0	-24.0	93991.	40610.	0.	28800.	1.91
245.0	-24.0	86400.	38414.	0.	26400.	2.14

CRIT. ACTIVE LOC 220.0 EL -24.0 DA 111526. RA 44675.

DIS.	EL.	DP	RP	DB	RB	FS
310.0	-24.0	42575.	28982.	0.	43800.	1.69
253.8	-24.0	45100.	30745.	0.	16245.	1.38

310.0 -39.0 100128. 46362. 0. 54400. 1.81

EOT..

9 ACT. WEDGE LOC. 205.0 EL. -39.0 PASS.WEDGE LOC. 300.0 EL. -39.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-39.0	5101.	2438.	680.	1730.	680.
132.0	-39.0	5101.	2438.	680.	1730.	680.
135.0	-39.0	5144.	2438.	680.	1758.	680.
137.0	-39.0	5173.	2438.	680.	1776.	680.
147.0	-39.0	5220.	2438.	680.	1807.	680.
150.0	-39.0	5268.	2438.	680.	1838.	680.
157.0	-39.0	5393.	2438.	680.	1919.	680.
163.0	-39.0	5501.	2438.	680.	1989.	680.
163.5	-39.0	5520.	2438.	680.	2002.	680.
174.0	-39.0	5923.	2438.	680.	2264.	680.
185.0	-39.0	6347.	2438.	680.	2539.	680.
190.0	-39.0	6529.	2438.	680.	2657.	680.
195.0	-39.0	6710.	2438.	680.	2775.	680.
204.0	-39.0	6689.	2438.	680.	2761.	680.
205.0	-39.0	6687.	2438.	680.	2760.	680.
214.0	-39.0	6338.	2438.	680.	2533.	680.
227.0	-39.0	5830.	2438.	680.	2203.	680.
237.0	-39.0	5463.	2438.	680.	1965.	680.
247.0	-39.0	5097.	2438.	680.	1727.	680.
257.0	-39.0	4987.	2438.	680.	1655.	680.
267.5	-39.0	4602.	2438.	680.	1406.	680.
300.0	-39.0	4602.	2438.	680.	1406.	680.
400.0	-39.0	4602.	2438.	680.	1406.	680.

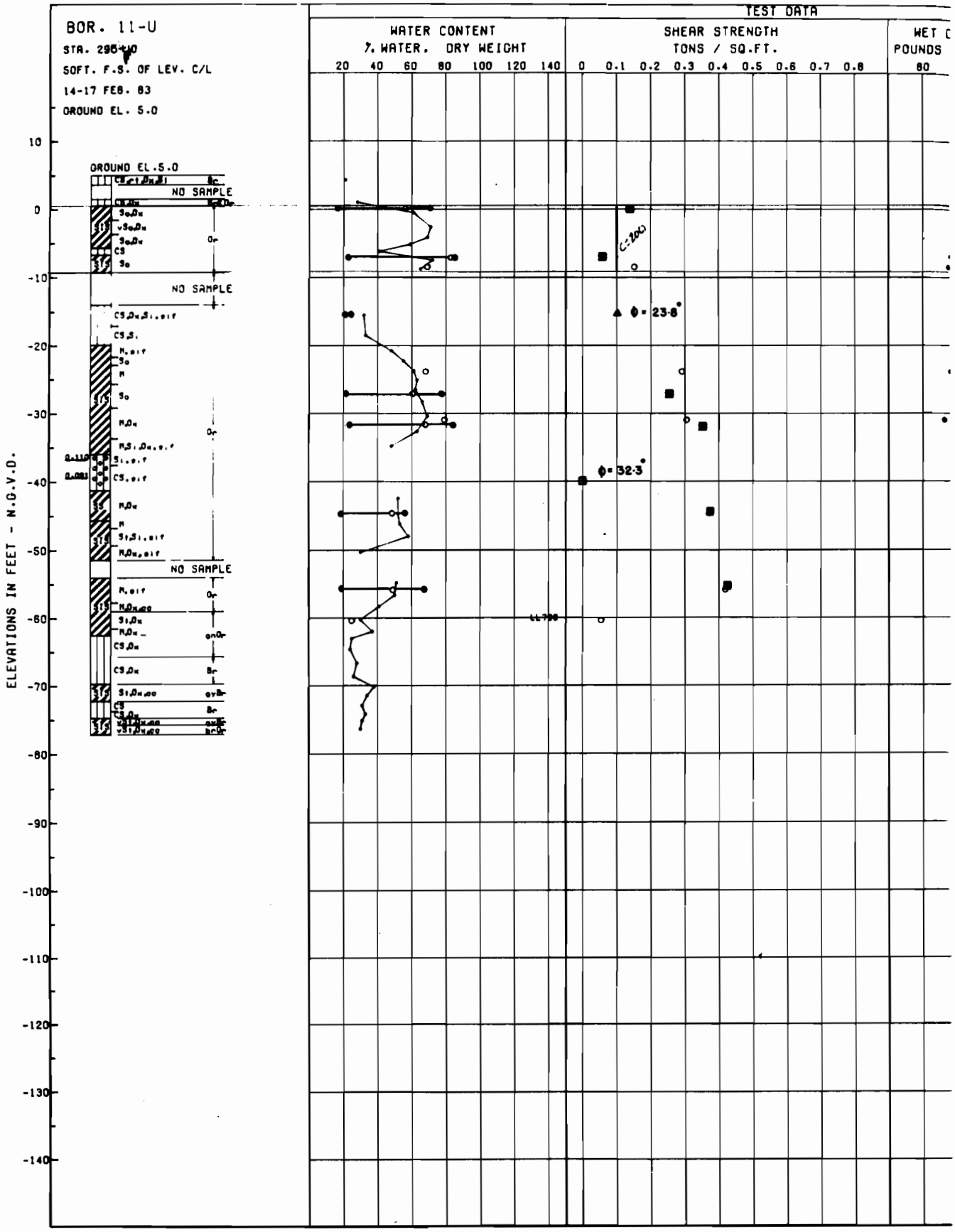
ASSUMED CRIT. PASSIVE LOC. 300.0 EL. -39.0 DP 100129. RP 46362.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
205.0	-39.0	176319.	55976.	0.	64600.	2.19
210.0	-39.0	182615.	57662.	0.	61200.	2.00
215.0	-39.0	187369.	59249.	0.	57800.	1.87
220.0	-39.0	190169.	60495.	0.	54400.	1.79
225.0	-39.0	191078.	61518.	0.	51000.	1.75
230.0	-39.0	190042.	62071.	0.	47600.	1.74
235.0	-39.0	187283.	62055.	0.	44200.	1.75
240.0	-39.0	182781.	61932.	0.	40800.	1.80
245.0	-39.0	176383.	61265.	0.	37400.	1.90
250.0	-39.0	168393.	59966.	0.	34000.	2.06
255.0	-39.0	159512.	57990.	0.	30600.	2.27

CRIT. ACTIVE LOC 230.0 EL -39.0 DA 190042. RA 62071.

DIS.	EL.	DP	RP	DB	RB	FS


BOR. 11-U
STA. 295+40
SOFT. F.S. OF LEV. C/L
14-17 FEB. 83
GROUND EL. 5.0
GROUND EL.5.0
NO SAMPLE
NO SAMPLE
NO SAMPLE
ELEVATIONS IN FEET - N.G.V.D.
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
-110
-120
-130
-140
TEST DATA
WATER CONTENT
% WATER. DRY WEIGHT
20 40 60 80 100 120 140
SHEAR STRENGTH
TONS / SQ.FT.
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8
WET
POUNDS
80
C=1000
ϕ = 23.8°
ϕ = 32.3°
LL=90

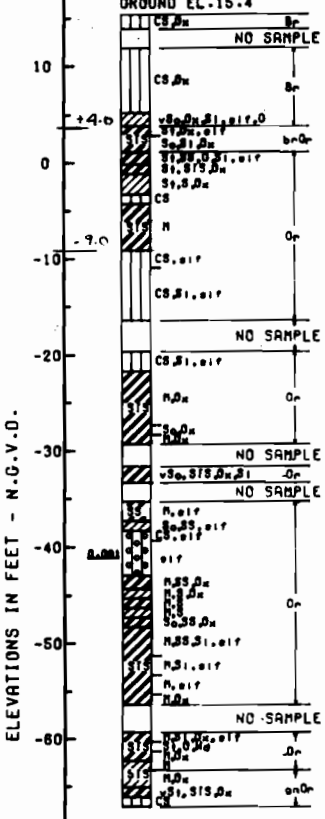
BOR. 10-U

STA. 25+40

ON LEV. C/L

9-10 FEB. 83

GROUND EL. 15.4



ELEVATIONS IN FEET - N.G.V.D.

20 10 +4.6 0 -9.0 -10 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130

TEST DATA

WATER CONTENT
% WATER, DRY WEIGHT
20 40 60 80 100 120 140

SHEAR STRENGTH
TONS / SQ.FT.
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8

WET
POUNDS
80

DISPOSITION FORM

For use of this form, see AR 340-15, the proponent agency is TAGCEN.

REFERENCE OR OFFICE SYMBOL: LMNED-FS

SUBJECT: Request for Undisturbed Borings on Lake Pont., LA & Vic. Hurricane Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd Orleans Parish, LA

TO: C/Geol Sec (w/incl) (QUAD)
C/Soils & Mats Test Sec (w/incl)

FROM: C/F&M Br

DATE: 8 April 86 CMT 1

Mr. Estrada/1035

1. It is requested that the borings listed below and shown on the inclosed map be made at the subject project no later than 15 April 86.

Boring No.	Station	Long.	Lat.	Location ?	Depth	Grnd Elev	Water Table
14-UC	290+00			ON LEVEE ℄ CL	20'	*	*
14-UB	290+00			50 FEET P.S.	10'	*	*
14A-UC	– 3 tubes – rebore	because		BIL.			
	14-UC recovered very little						
	sample						
	NOTE: EXTRA UCT'S MAY BE			REQUIRED. PLEASE			
	NOTIFY Mr. ESTRADA WHEN			SAMPLES BEEN			
	PUSHED.						

"U" denotes 5" undisturbed boring * Obtain elevation

2. Copies of rights-of-entry will be furnished by the Real Estate Division.

3. Charge all costs to the following charge numbers, not to exceed listed amounts:

Field Investigation	BEC 21304 L10 P220	$3500
NOD Testing	" "	$ 975
Geology		$ 400
Computer		
WES Testing	FURNISHED AT A LATER DATE	$1155.0

7000

→ BEC 21305 L30 P220
Given by Beth Cottone on 9 April

4/9 file

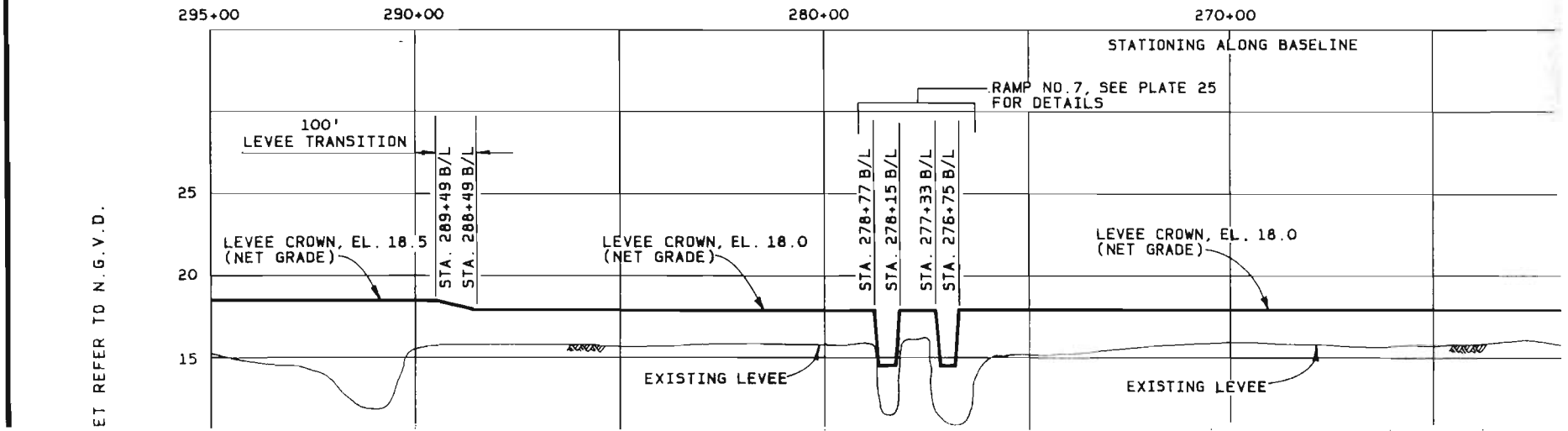
1 Incl
Location Map (QUINT)

RODNEY P. PICCIOLA
Chief, Foundations and Materials Branch

DA FORM 2496 REPLACES DD FORM 96, WHICH IS OBSOLETE.

* U.S. GPO: 1979-0-311


LAKE PONTCHARTRAIN
BOR. 14-DC
8" SEWER LINE
LAKESHORE DR.
9-SW
1-LO
MATCH LINE STA. 295+00 B/L
FLOOD SIDE
BASELINE
R/W
6-ULO
3-LO
9-U
PROTECTED SIDE
RAMP NO.7
ENLARGEMENT
SEE PLATE 25
FOR DETAILS
CANAL BLVD.


295+00
290+00
280+00
270+00
STATIONING ALONG BASELINE
RAMP NO.7, SEE PLATE 25
FOR DETAILS
100'
LEVEE TRANSITION
STA. 289+49 B/L
STA. 288+49 B/L
STA. 278+77 B/L
STA. 278+15 B/L
STA. 277+33 B/L
STA. 276+75 B/L
25
20
15
LEVEE CROWN, EL. 18.5
(NET GRADE)
LEVEE CROWN, EL. 18.0
(NET GRADE)
LEVEE CROWN, EL. 18.0
(NET GRADE)
EXISTING LEVEE
EXISTING LEVEE
ET REFER TO N.G.V.D.

LAKE PONTCHARTRAIN, LA. & VIC.
HURICANE PROJECT, HIGH LEVEL PLAN,
NEW ORLEANS LAKEFRONT LEVEES,
LONDON AVE. CANAL to WEST END
BLVD, ORLEANS PARISH, LA.

8 April 86

COST ESTIMATE

A. WES :

BORINGS :

1 BORING @ 20 FEET DEEP
1 BORING @ 10 FEET DEEP

TESTS

1) Q's - EVERY 10 FEET = (3 Q's) @ $385 = $1155.0

WES TESTING = $1155.0

B. NEW ORLEANS DISTRICT :

1) VISUAL CLASSIFICATION - 30 FET X $30.00/FT = $900

2) HANDLING CHARGE - 3 SAMPLES X $25/SAMPLE = 75

NEW ORLEANS DISTRICT = $975

DEPARTMENT OF THE ARMY
WATERWAYS EXPERIMENT STATION, CORPS OF ENGINEERS
P.O. BOX 631
VICKSBURG, MISSISSIPPI 39180-0631

REPLY TO
ATTENTION OF

WESGE-ST

16 May 86

SUBJECT: Transmittal of Results of Soil Tests, Lake Pontchartrain Louisiana & Vicinity New Orleans Lakefront Levee Borings: 14-UC, 14-UB

Commander
US Army Engineer District, New Orleans
ATTN: LMNED-F
PO Box 60267
New Orleans, LA 70160-0267

Reference Intra-Army Order for Reimbursable Services No. LMNED-FT-86-20 dated 17 Apr 86 which authorized the subject testing. Enclosed are test report sheets for 2 Q triaxial compression tests. The assigned Q triaxial compression test, for boring 14-UB, sample 3B was not performed. The sample contained roots and shell fragments and test specimens could not be trimmed.

FOR THE DIRECTOR:

Jessie C. Oldham

JESSIE C. OLDHAM
Soil Mechanics Division

Encl

CF w/encl:
LMVD (LMVED-G)

Rec'd.
F & M Br.
5/19/86

WESGE-ST 16 May 86

SUBJECT: Transmittal of Results of Soil Tests, Lake Pontchartrain Louisiana & Vicinity New Orleans Lakefront Levee Borings: 14-UC, 14-UB

Commander
US Army Engineer District, New Orleans
ATTN: LMNED-F
PO Box 60267
New Orleans, LA 70160-0267

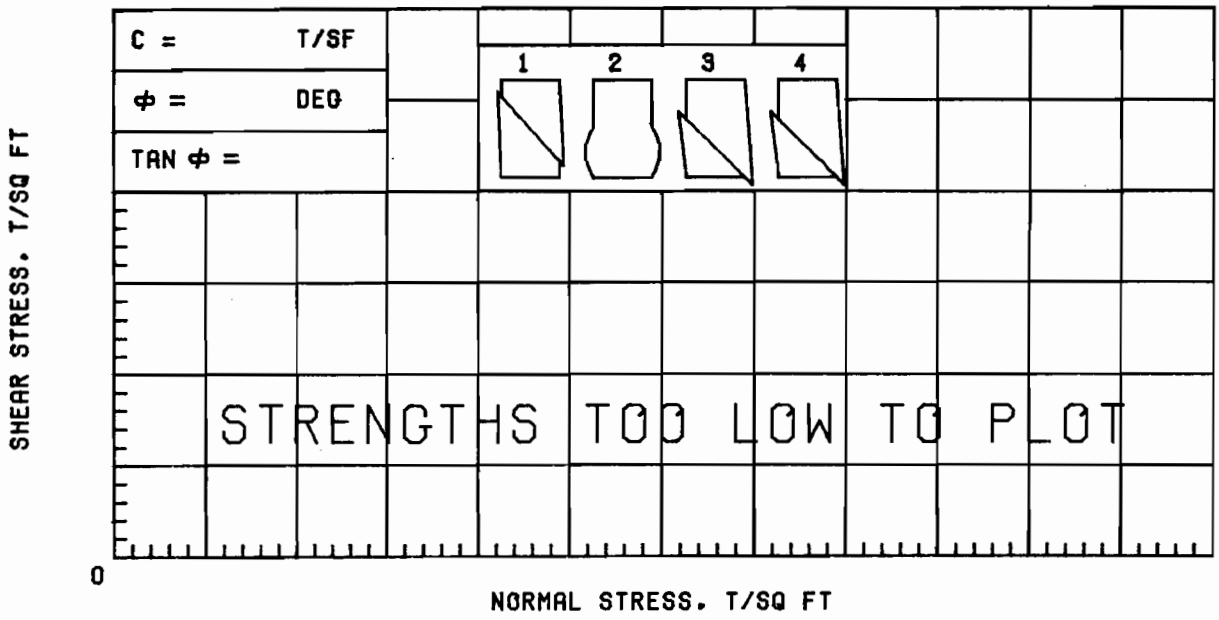
Reference Intra-Army Order for Reimbursable Services No. LMNED-FT-86-20 dated 17 Apr 86 which authorized the subject testing. Enclosed are test report sheets for 2 Q triaxial compression tests. The assigned Q triaxial compression test, for boring 14-UB, sample 3B was not performed. The sample contained roots and shell fragments and test specimens could not be trimmed.

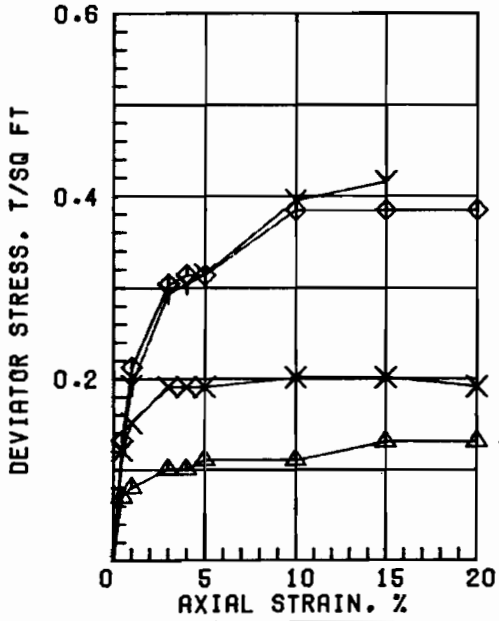
FOR THE DIRECTOR:

Encl

JESSIE C. OLDHAM
Soil Mechanics Division

CF w/encl:
LMVD (LMVED-G)





SPECIMEN NO.		△1	Y2	X3	◇4
INITIAL	WATER CONTENT. %	49.7	29.6	44.6	34.7
	DRY DENSITY. PCF	70.5	89.5	75.1	83.8
	SATURATION. %	96.5	90.4	96.8	92.6
	VOID RATIO	1.391	0.884	1.244	1.012
BEFORE SHEAR	WATER CONTENT. %				
	DRY DENSITY. PCF				
	SATURATION. %				
	VOID RATIO				
	BACK PRESS.. TSF				
MIN PRIN. STRESS. TSF		0.5	1.5	3.0	0.5
MAX. DEV. STRESS. TSF		0.10	0.42	0.19	0.31
TIME TO FAILURE. MIN.		6	30	6	24
RATE OF STRAIN INCR.%					6
INITIAL DIAMETER. IN.		1.39	1.39	1.39	1.39
INITIAL HEIGHT. IN.		3.00	3.00	3.00	3.00

CONTROLLED-STRAIN TEST

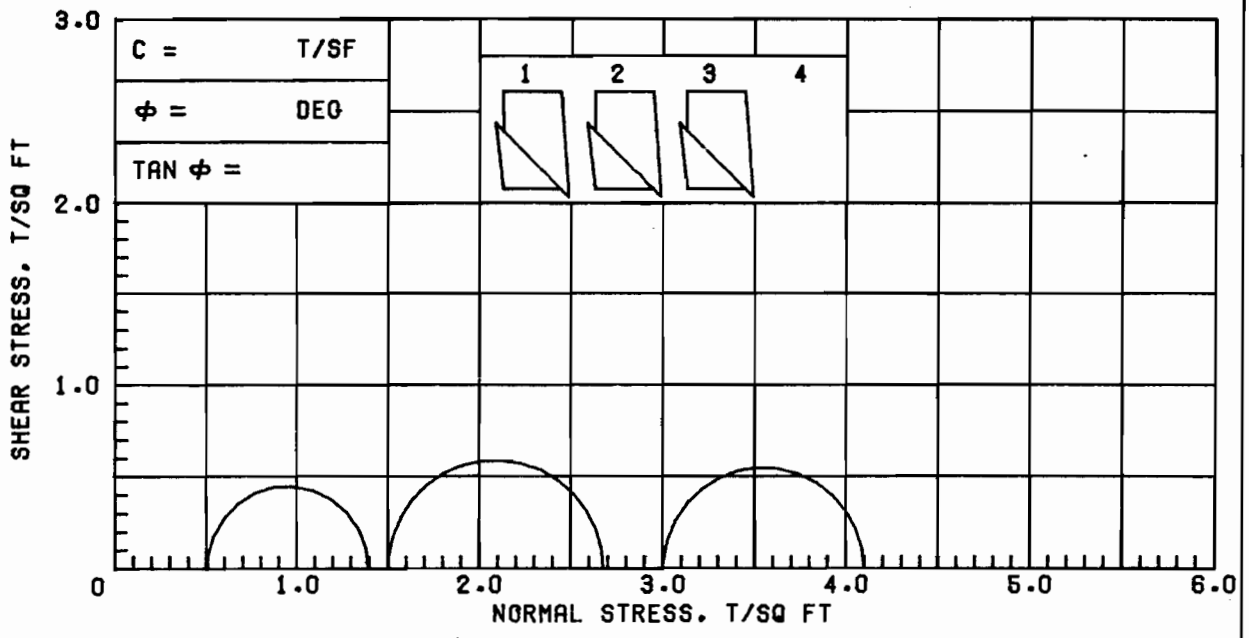
DESCRIPTION OF SPECIMENS: CLAY (CL). GRAY: SILT POCKETS

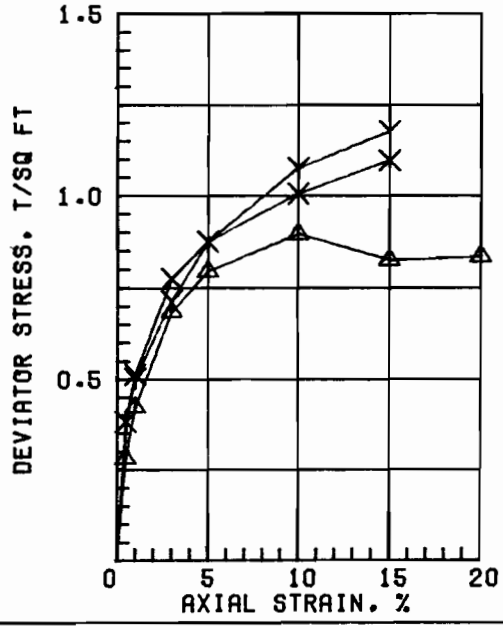
LL 41	PL 15	PI 26	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT LAKE PONTCHARTRAIN LA. & VIC.
NEW ORLEANS LAKEFRONT LEVEE
BORING NO. 14-UC
SAMPLE NO. 4-B
DEPTH/ELEV 12.0
TECH. KOC
LABORATORY USAE WES
DATE 21 APR 86

TRIAXIAL COMPRESSION TEST REPORT





SPECIMEN NO.		△1	Y2	X3	4
INITIAL	WATER CONTENT, %	23.8	24.6	24.3	
	DRY DENSITY, PCF	97.8	98.5	96.1	
	SATURATION, %	88.8	93.4	87.1	
	VOID RATIO	0.724	0.711	0.753	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESS., TSF				
MIN PRIN. STRESS, TSF		0.5	1.5	3.0	
MAX. DEV. STRESS, TSF		0.90	1.18	1.10	
TIME TO FAILURE, MIN.		20	30	30	
RATE OF STRAIN INCR.%					
INITIAL DIAMETER, IN.		1.40	1.40	1.40	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: PLASTIC CLAY (CH), GRAY; 1/4" SILT LAYERS AND POCKETS

LL 47	PL 17	PI 30	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

LIMITS ON MIXTURE OF MATERIAL.

PROJECT LAKE PONTCHARTRAIN LA. & VIC.
NEW ORLEANS LAKEFRONT LEVEE

BORING NO. 14-UC | SAMPLE NO. 2-B
DEPTH/ELEV 4.5 | TECH. KOC
LABORATORY USAE WES | DATE 21 APR 86

TRIAXIAL COMPRESSION TEST REPORT

$c = \frac{0.42 + .19 + .31}{6} = 307$

FRN R0GE31/Q.DRAFT,R
DATA FILE
-QD38
AUTOMATIC LOG-OFF (YES OR NO?)
-Y

LAKE PONTCHARTRAIN LA. & VIC.
NEW ORLEANS LAKEFRONT LEVEE

BORING: 14-UC SAMPLE: 2-B DEPTH: 4.5
DATE: 21 APR 86 TECH: KOC

DESCRIPTION OF SPECIMEN:
PLASTIC CLAY (CH), GRAY; 1/4" SILT LAYERS AND POCKETS

LL = 47. PL = 17. PI = 30. GRAVITY 2.70 (ESTIMATED)

SPECIMEN NO.	1	2	3	AVR.
WATER CONTENT, % =	23.8	24.6	24.3	24.23
DRY DENSITY, PCF =	97.8	98.5	96.1	97.5
SATURATION, % =	88.8	93.4	87.1	90.0
VOID RATIO =	0.724	0.711	0.753	

CONFINING PRESSSURE, TSF =	0.50	1.50	3.00
MAX. DEV. STRESS, TSF =	0.90	1.18	1.10
TIME TO FAILURE, MIN =	20	30	30
INITIAL DIAMETER =	1.40	1.40	1.40
INITIAL HEIGHT =	3.00	3.00	3.00

STRAIN	- - DEVIATOR STRESS - -		
0.5	0.28	0.38	0.38
1.0	0.42	0.50	0.51
3.0	0.68	0.71	0.77
5.0	0.79	0.87	0.87
10.0	0.90	1.08	1.01
15.0	0.82	1.18	1.10
20.0	0.83	0.	0.

LINE TERMINATED - CP
DESTINATION?

LAKE PONTCHARTRAIN LA. & VIC.
NEW ORLEANS LAKEFRONT LEVEE

BORING: 14-UC SAMPLE: 4-B DEPTH: 12.0
DATE: 21 APR 86 TECH: KOC

DESCRIPTION OF SPECIMEN:
CLAY (CL), GRAY; SILT POCKETS

LL = 41. PL = 15. PI = 26. GRAVITY 2.70 (ESTIMATED)

SPECIMEN NO.	1	2	3	4
WATER CONTENT, % =	40.7	39.6	44.6	34.7
DRY DENSITY, PCF =	78.5	80.5	75.1	83.8
SATURATION, % =	96.5	98.4	96.8	98.6
VOID RATIO =	1.101	0.984	1.244	1.012

CONFINING PRESSSURE, TSF =	0.50	1.50	3.00	0.50
MAX. DEV. STRESS, TSF =	0.10	0.42	0.19	0.31
TIME TO FAILURE, MIN =	6	30	6	24
INITIAL DIAMETER =	1.39	1.39	1.39	1.39
INITIAL HEIGHT =	3.00	3.00	3.00	3.00

STRAIN	- - DEVIATOR STRESS - -			
0.5	0.07	0.12	0.12	0.13
1.0	0.08	0.19	0.15	0.21
3.0	0.10	0.29	0.19	0.30
4.0	0.10	0.30	0.19	0.31
5.0	0.11	0.31	0.19	0.31 *
10.0	0.11	0.40	0.20	0.38
15.0	0.13	0.42	0.20	0.38
20.0	0.13	0.	0.19	0.38

* LAST POINT BEFORE STRAIN RATE WAS INCREASED
**cost: $ 0.75 to date: $ 11.33- 0%
**on at 11.821 - off at 11.862 on 04/30/86

$c = \frac{0.90 + 1.18 + 1.10}{3(2)} = 1060$ PSF

$\gamma_{SAT} = \left[1 + \frac{.2423}{.9}\right] 97.5$

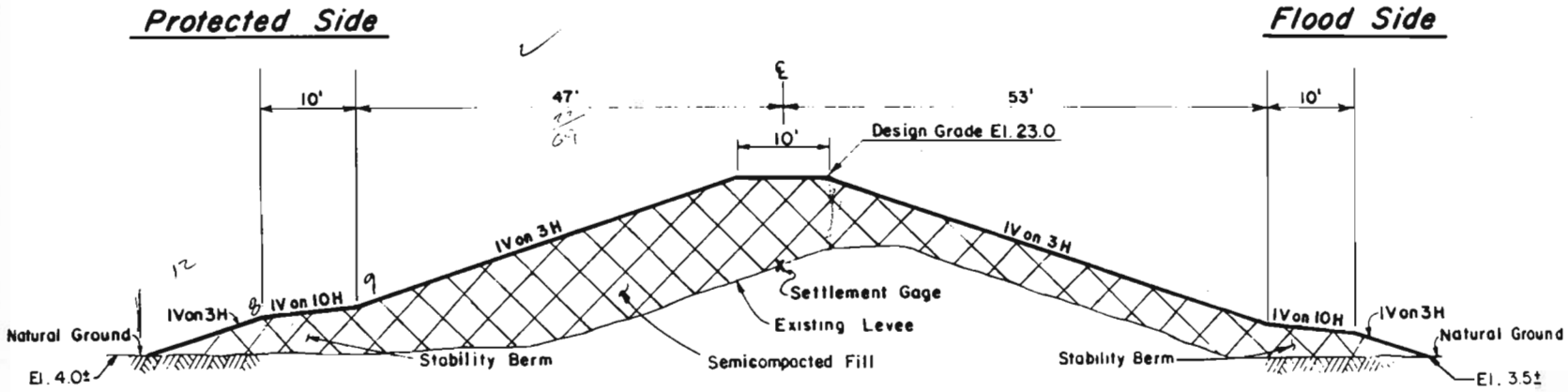
$\gamma_{SAT} = 124$ PCF

$W_{AVR} = 43\%$
$\gamma_{dry} = 76.5$
95.30

$(1 + .43)\gamma_{dry} =$

$\gamma_{SAT} = \left[1 + \frac{.43}{.953}\right] 76.5 = 111$ PCF

TO BE DONE on MONDAY:
1) CHECK if WE CAN TAKE a UCT on bonus 14-UB
2) Start designing the REPAIR SECTION.
W.S. @ el. 6.0

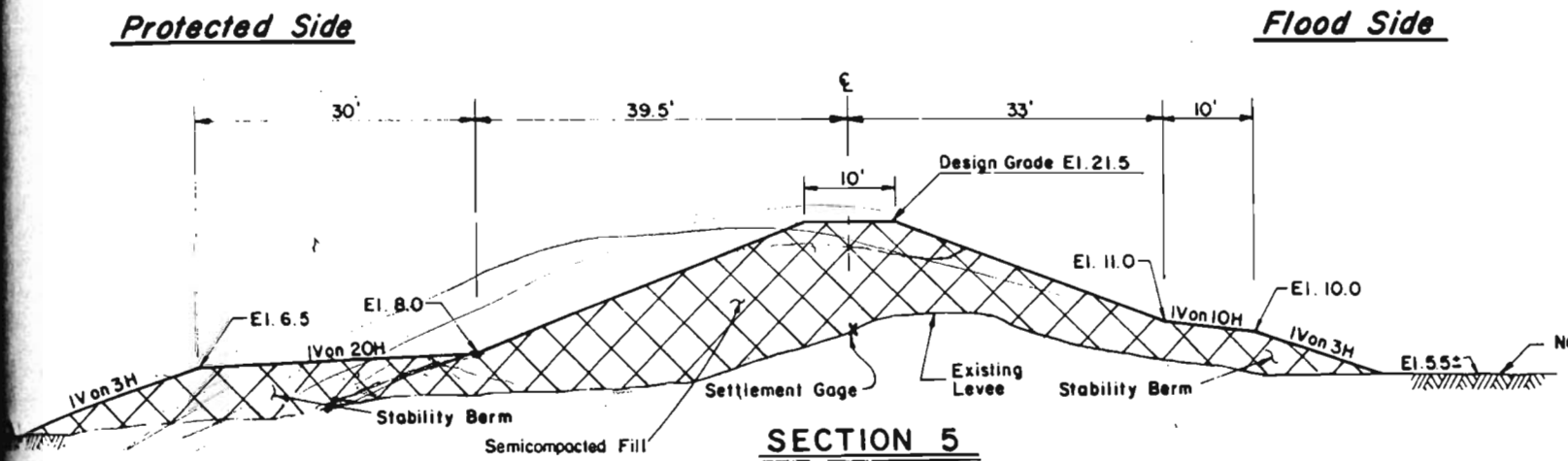


SECTION 4

NOT TO SCALE

P.I. STA 289 + 49.52 B/L TO STA. 303 + 51.39 B/L

NOTE: STA. 303+51.39 B/L TO STA. 304+51.39 B/L (TRANSITION BETWEEN SECTIONS 4 & 5)
PI. STA. 285 + 04.11 B/L TO PI. STA. 289 + 49.52 B/L (TRANSITION BETWEEN SECTIONS 3 & 4)



SECTION 5

NOT TO SCALE

STA. 304 + 51.39 B/L TO STA. 305 + 31.90 B/L

INTRA-ARMY ORDER FOR REIMBURSABLE SERVICES

For use of this form, see AR 37-108 and AR 37-110: the proponent agency is USAFAC.

1. RECEIVING OFFICE CONTROL NUMBER

☐ FUNDED ☐ AUTOMATIC

ORDER

a. NUMBER: LMNED-FT-86-20

b. DATE: 17 Apr.'86

3. CHANGE ORDER

a. NUMBER

b. DATE

ORDERED BY *(Command, Installation or Activity)*, ADDRESS *(Include zip code)*, AND AUTOVON NUMBER

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
P.O. BOX 60267
NEW ORLEANS, LA. 70160

TO BE PERFORMED BY *(Command, Installation or Activity)*, ADDRESS *(Include zip code)*, AND AUTOVON NUMBER

DIRECTOR: WATERWAYS EXPERIMENT STATION
ATTN: WESGE-3

6. DESCRIPTION OF SERVICES TO BE PERFORMED

LAKE PONTCHARTRAIN LOUISIANA & VICINITY NEW ORLEANS LAKEFRONT LEVEE
BORINGS: 14-UC, 14-UB

Soil samples to be tested as per WES form 880 attached.

Please forward your acceptance of this order within 10 days. When billing for this order please indicate "ORDERING SYMBOL LMNED-FT".

NOTE: Please send the results via teletype upon completion.

Date samples sent to W.E.S. 17 April 1986.

It is requested that the results be forwarded by 17 July 1986, to U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS.

cc: LMVD ATTN: LMVED-G
Prog. Dev.
F&A Br.
F&M Br. Mr. Richardson x-1031

Edward W. Coleman
Ext. 1868

7a. NAME AND TITLE OF ORDERING OFFICER	b. SIGNATURE	c. DATE
DENISE GIEGER BUDGET ASSISTANT		

ORIGINATING FINANCE AND ACCOUNTING OFFICE APPROVAL

8a. ACCOUNTING CLASSIFICATION	b. AMOUNT
BEC 21 305L 30 P220	$1,204.50

c. CHANGE

INCREASE AMOUNT _____ DECREASE AMOUNT _____ REVISED AMOUNT _____

9. Services to be performed pursuant to this order are properly chargeable to the appropriations or other accounts indicated above until _____ *(Day - Month - Year)* the expiration date of this order.

10a. TYPED NAME AND TITLE OF APPROVING OFFICER	b. SIGNATURE	c. DATE
JUDY DEBOSE F&A OFFICER		

ACCEPTING OFFICER

11. THE ABOVE TERMS AND CONDITIONS ARE SATISFACTORY AND ARE ACCEPTED.

a. TYPED NAME AND TITLE OF ACCEPTING OFFICER	b. SIGNATURE	c. DATE ACCEPTED

DA FORM 1 JUN 77 2544

EDITION OF 1 DEC 75 WILL BE USED UNTIL EXHAUSTED.

☆U.S.GPO:1979-296/859

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-FS	Lake Pontchartrain, LA & Vicinity, Hurricane Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd., Orleans Parish, LA

THRU: C/Const Div FROM C/Engr Div DATE 23 Apr 86 CMT 1

Mr. Estrada/mlm/1035

TO: C/NORO

1. Reference is made to our LMNED-FS DF dated 7 Apr 86 (encl 1) subject as above, where an interim section intended to stop the progression of the failure was furnished. This DF should be rescinded.

2. Results of testing taken on the failure area will be available in approximately 2 weeks. At that time a repair section, based on the tests results, will be furnished.

PICCIOLA
LMNED-F

1 Encl

FREDERIC M. CHATRY
Chief, Engineering Division

JUDLIN
LMNED-D

4/23/86

FILE

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-FS	Lake Pontchartrain, LA & Vicinity, Hurricane Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, LA

~~TO~~ XX THRU: C/Const Div FROM C/Engr Div DATE 7 Apr 86 CMT 1

Mr. Estrada/mlm/1035

TO C/NORO

1. Furnished as enclosure 1 is an interim section intended to stop the progression of the existing failure in the vicinity of B/L sta 290+40 to the vicinity of B/L sta 293+55.

2. A revised final design section will be furnished after cross sections of the failure area are furnished.

PICCIOLA
LMNED-F

JUDLIN
LMNED-D

1 Encl

FREDERIC M. CHATRY
Chief, Engineering Division

FILE

DA FORM AUG 80 2496 PREVIOUS EDITIONS WILL BE USED

☆ U.S. Government Printing Office: 1983—406-862

COMPUTATION SHEET

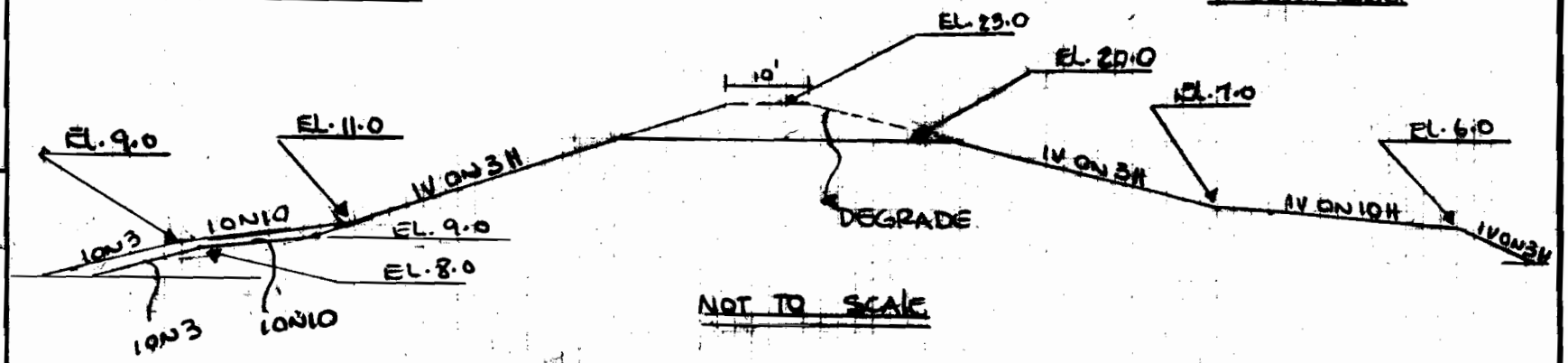
PROJECT

SUBJECT

COMPUTED BY | DATE

CHECKED BY | DATE

PAGE OF



NOT TO SCALE

Vicinity of Sta. 290+40 (TIE-IN WITH Typical Utility Crossing) TO THE Vic. of Sta. 293+55

LAKE PONTC., LA. & VICINITY
HURRICANE PROJECT, HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE, LONDON AVE. CANAL to WEST END BLVD, ORLEANS PARISH, LA.
REVISED SECTION

4 Apr 86

Encl. 1

LMV FORM 1 FEB 79 107e

```
LI RE0404
1 'LAKE FONT.'
2 'STA. 290+00'
3 10 10 0.5 110 1 0
4 3 1 2 1
5 100
6 0 110 225 225
7 0 110 225 225
8 0 110 225 225
9 0 5.45 35.35 5.45 37 6 47 7 86 20 114 20
10 141 11 161 9 174.65 4.45 300 4.45 9999.9 0
11 0 5.45 35.35 5.45 174.65 4.45 300 4.45 9999.9 0
12 0 4 300 4 9999.9 0
13 0 -10 300 -10 9999.9 0
14 0 0 302 0 9999.9 0
15 1 1 1 1 1
16 2 105 4 150 4 1
17 150
EOT..
SLIDUPLPLOT
```

Vic. of Sta. 290+40 to the Vic. of Sta. 293+55

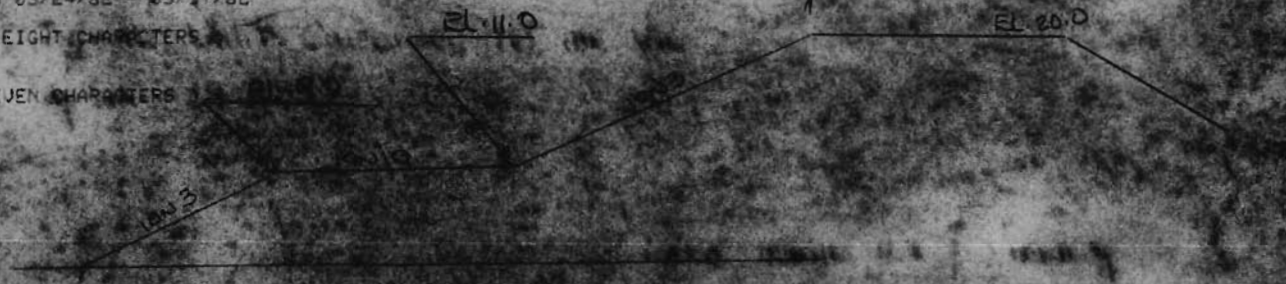
NOTE Repair Section for ~~the~~ A Failure

Between these two Stations.

RE

April 86

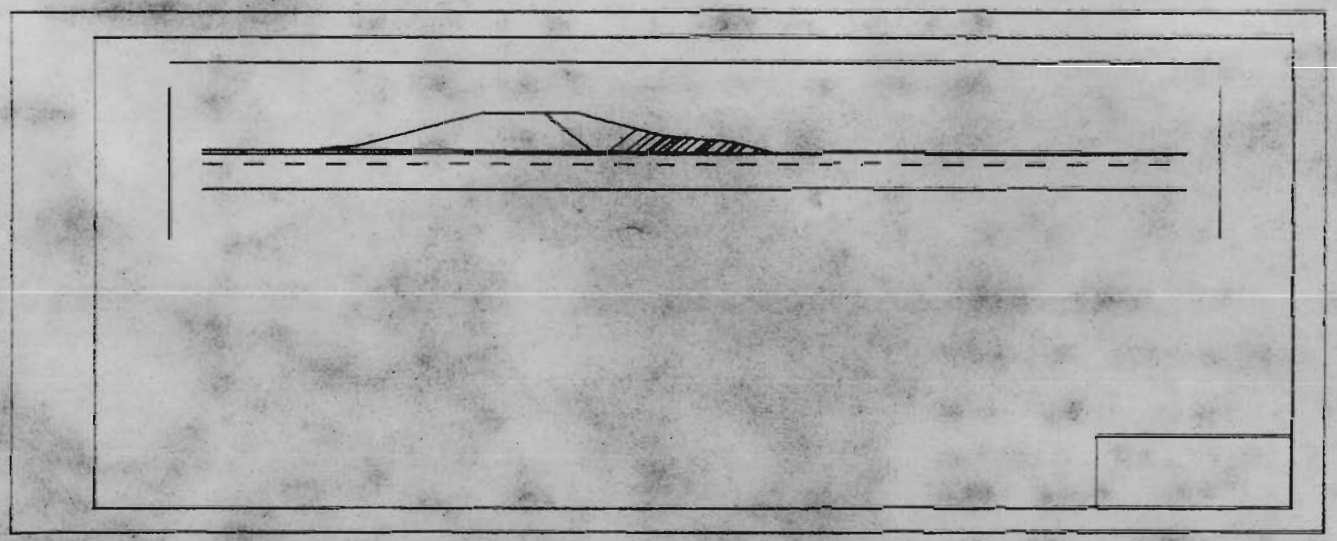
```
*****************************************************************************
        STABILITY ANALYSIS WITH UPLIFT AND PLOT ROUTINES
*****************************************************************************

RB CORRECTED 6/03/75; CONVERTED WITH IMPROVED DISPLAY 03/20/81
25 POINTS ON PIEZOMETRIC GRADE LINE ADDED 03/20/81
UPLIFT CORRECTED TO ZERO WITH FLAG FOR RA, RB & PP 04/20/81
SCALE IMPROVED 05/27/81; ERROR DETECTION  06/23/81
[illegible] AND PHREATIC POINT INSERTION  08/23/81

HARRIS CONVERSION 03/24/82 - 05/17/82

 ENTER NAME OF INPUT FILE ( FOUR TO EIGHT CHARACTERS )
RE0404

 ENTER NAME OF PLOT FILE ( ONE TO SEVEN CHARACTERS )
RTY

FILE IS -        RTY1

FILE IS -        W1

FILE IS -        W2

     **** STABILITY WITH UPLIFT ****

        LAKE FONT
        STA. 290+00

   3 STRATUM      4 PROFILES      1 VERTICALS

 DATA EDIT ? ENTER 0 ; BYPASS 1 ; PROFILES, 2 ; SOIL PROPERTIES, 3 ; ALL
```



STR 2 EL. 4. NO 1

NO	DIST.	F.S.
2	150.	1.423
3	122.6	1.939
4	128.	1.581
5	130.9	1.464
6	139.7	1.34
7	135.3	1.356
8	134.3	1.369
9	137.7	1.339
10	140.2	1.343
11	142.6	1.362
12	145.6	1.386
13	149.	1.414
14	151.9	1.439
15	155.8	1.472
16	158.7	1.474
17	162.7	1.452
18	167.5	1.44

AFTER SELECTED WEDGES, PLACE CROSSHAIRS AT ADDITIONAL P.W. LOCATIONS
(N,S,E = COMPLETE STRATA & D,R = REDRAW)



DI W1 1-1000

xxxx STABILITY WITH UPLIFT xxxx

LAKE PONT.
STA. 290+00
4 PROFILES
1VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

x x STRATUM 2 ACT. WEDGE LOC. 105.0 EL. 4.0 PASS. WEDGE LOC. 160.0 EL. 4.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	UT.	UPLIFT	STR 1	STR 2	STR USED
0.0	4.0	159.	0.	225.	225.	225.
35.3	4.0	160.	0.	225.	225.	225.
37.0	4.0	220.	0.	225.	225.	225.
47.0	4.0	330.	0.	225.	225.	225.
86.0	4.0	1760.	0.	225.	225.	225.
100.0	4.0	1760.	0.	225.	225.	225.
114.0	4.0	1760.	0.	225.	225.	225.
141.0	4.0	770.	0.	225.	225.	225.
161.0	4.0	550.	0.	225.	225.	225.
174.6	4.0	49.	0.	225.	225.	225.
300.0	4.0	49.	0.	225.	225.	225.

ASSUMED CRIT. PASSIVE LOC. 160.0 EL. 4.0 DP 1159. RP 1799.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
105.0	4.0	14079.	7200.	0.	12375.	1.65
110.0	4.0	14078.	7200.	0.	11250.	1.57
115.0	4.0	14059.	7200.	0.	10125.	1.48
120.0	4.0	13416.	7200.	0.	9000.	1.47
125.0	4.0	11857.	7199.	0.	7875.	1.58
130.0	4.0	9382.	7198.	0.	6750.	1.82
135.0	4.0	6679.	6071.	0.	5625.	2.45
140.0	4.0	4435.	4949.	0.	4500.	3.43
145.0	4.0	2853.	3824.	0.	3375.	5.31

CRIT. ACTIVE LOC 120.0 EL 4.0 DA 13416. RA 7200.

DIS.	EL.	DP	RP	DB	RB	FS
150.0	4.0	1859.	2494.	0.	6750.	1.42
122.6	4.0	7115.	4433.	0.	583.	1.64
128.0	4.0	5307.	3828.	0.	1792.	1.58
130.9	4.0	4432.	3489.	0.	2452.	1.46
133.7	4.0	2564.	2917.	0.	4430.	1.34
135.3	4.0	3283.	3057.	0.	3441.	1.38
134.3	4.0	3512.	3137.	0.	3221.	1.37
137.7	4.0	2820.	2997.	0.	3391.	1.34
140.2	4.0	2516.	2897.	0.	4540.	1.34
142.6	4.0	2337.	2797.	0.	5090.	1.36
145.6	4.0	2140.	2677.	0.	5749.	1.39
149.0	4.0	1922.	2537.	0.	6519.	1.41
151.9	4.0	1745.	2416.	0.	7178.	1.44
155.8	4.0	1521.	2256.	0.	8058.	1.47
158.7	4.0	1298.	1941.	0.	8717.	1.47
162.7	4.0	816.	1501.	0.	9597.	1.45
167.5	4.0	328.	952.	0.	10696.	1.44

EOT..

FAILURE SECTION:

USING A C=400 RUN A SECTION, then SOLVE FOR A F.S.=1.0, AND SOLVE for the C=?

```
LI RE0404
1 'LAKE PONT.'
2 'STA. 290+00'
3 10 10 0.5 110 1 0
4 3 1 2 1
5 100
6 0 110 400 400
7 0 110 400 400
8 0 110 400 400
9 0 5.45 35.35 5.45 37 6 47 7 95 23 105 23
10 147 9 157 8 167.65 4.45 300 4.45 9999.9 0
11 0 5.45 35.35 5.45 167.65 4.45 300 4.45 9999.9 0
12 0 4 300 4 9999.9 0
13 0 -10 300 -10 9999.9 0
14 0 0 300 0 9999.9 0
15 1 1 1 1 1 1
16 2 105 4 160 4 1
17 150
EOT..
SLIB$UPLPLOT


                  ********************************************************************************
                         STABILITY ANALYSIS WITH UPLIFT AND PLOT ROUTINES
                  ********************************************************************************


                  RB CORRECTED 6/03/75; CONVERTED WITH IMPROVED DISPLAY 03/20/81
                  25 POINTS ON PIEZOMETRIC GRADE LINE ADDED 03/20/81
                  UPLIFT CORRECTED TO ZERO WITH FLAG FOR RA, RB & RP 04/20/81
                  SCALE IMPROVED 05/27/81; ERROR DETECTION   06/23/81
                  AUTOMATIC BORING AND PHREATIC POINT INSERTION  06/23/81

                  HARRIS CONVERSION 03/24/82 - 05/17/82

 ENTER NAME OF INPUT FILE ( FOUR TO EIGHT CHARACTERS )
RE0404

 ENTER NAME OF PLOT FILE ( ONE TO SEVEN CHARACTERS )
RTY

FILE IS =         RTY1

FILE IS =         U1

FILE IS =         U2

                   **** STABILITY WITH UPLIFT ****


        LAKE PONT.
        STA. 290+00

    3 STRATUM       4 PROFILES       1 VERTICALS

  DATA EDIT : ENTER 0 = BYPASS, 1 = PROFILES, 2 = SOIL PROPERTIES, 3 = ALL

0
```

DI W1 1-1000

xxxx STABILITY WITH UPLIFT xxxx

LAKE PONT.
STA. 290+20
4 PROFILES
1VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

144.1	4.0	1508.	3847.	0.	13635.	1.80
147.5	4.0	1224.	3598.	0.	15603.	1.84
150.9	4.0	1060.	3349.	0.	16371.	1.89
153.9	4.0	923.	3027.	0.	17543.	1.92
156.8	4.0	682.	2441.	0.	18716.	1.92
161.7	4.0	246.	1464.	0.	20670.	1.93
162.2	4.0	214.	1307.	0.	20885.	1.93

EOT..

* * STRATUM 3 ACT. WEDGE LOC. 105.0 EL. 4.0 PASS.WEDGE LOC. 160.0 EL. 4.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	4.0	159.	0.	400.	400.	400.
35.3	4.0	160.	0.	400.	400.	400.
37.0	4.0	220.	0.	400.	400.	400.
47.0	4.0	330.	0.	400.	400.	400.
95.0	4.0	2090.	0.	400.	400.	400.
100.0	4.0	2090.	0.	400.	400.	400.
105.0	4.0	2090.	0.	400.	400.	400.
147.0	4.0	550.	0.	400.	400.	400.
157.0	4.0	440.	0.	400.	400.	400.
167.6	4.0	49.	0.	400.	400.	400.
300.0	4.0	49.	0.	400.	400.	400.

ASSUMED CRIT. PASSIVE LOC. 160.0 EL. 4.0 DP 371. RP 1799.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
105.0	4.0	18740.	13400.	0.	22000.	2.03
110.0	4.0	19174.	14400.	0.	20000.	1.93
115.4	4.0	18017.	15200.	0.	18000.	1.98
120.0	4.0	15724.	15200.	0.	16000.	2.15
125.0	4.0	12544.	14706.	0.	14000.	2.51
130.0	4.0	9382.	12797.	0.	12000.	2.95
135.6	4.0	6679.	10797.	0.	10000.	3.58

CRIT. ACTIVE LOC 110.0 EL 4.0 DA 19174. RA 14400.

DIS.	EL.	DP	RP	DB	RB	FS
150.0	4.0	1104.	3416.	0.	16000.	1.87
124.1	4.0	6596.	7587.	0.	5623.	2.24
127.5	4.0	5461.	6904.	0.	6991.	2.46
134.3	4.0	3511.	5536.	0.	9727.	1.89
139.7	4.0	2280.	4461.	0.	11878.	1.82

$FS = \frac{\Sigma R}{\Sigma D}$

Ha = 18

Hp = 5

with cracks

1.0

$1.0 = \frac{75.8\,C}{18789 - 1508}$

C = 228

$R_A = 2CH_a$

$R_P = 2CH_p$

$R_b = C_{LB}$

$1.0 = \frac{2(18)C + 2(5)C + 34\,C}{19174 - 1508}$

(2CHa) (2CHp) LB

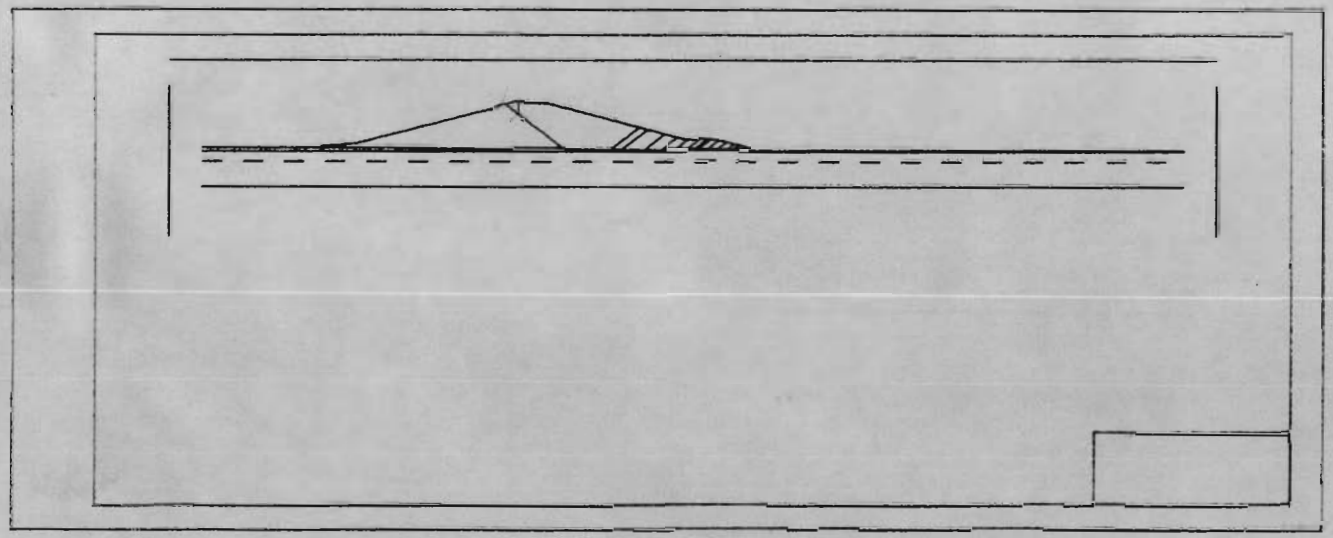
$1 = \frac{80\,C}{17666}$

C = 221 FOR FS = 1.0

STR 2 EL. 4. NO 1

NO	DIST.	F.S.
2	150.	1.871
3	124.1	2.195
4	127.5	2.063
5	134.3	1.894
6	139.7	1.82
7	144.1	1.805
8	147.5	1.839
9	150.9	1.884
10	153.9	1.916
11	156.8	1.923
12	161.7	1.93
13	162.2	1.932

AFTER SELECTED WEDGES, PLACE CROSSHAIRS AT ADDITIONAL P.W. LOCATIONS
(N,S,E = COMPLETE STRATA & D,R = REDRAW)



LMNED-FS

London Ave. to West End Blvd., HPL, Contract No. 85-C-0171, Lake Pontchartrain & Vic.

C/Const Div

C/Engr Div

4 Dec 85
Mr. Richardson/mlm/1031

1. Reference is made to your multiple DF dated 27 Nov 85, subject as above, requesting our review and comment on an alternate borrow source (attached).

2. We have reviewed the alternate source and find the material to be not equal to or better than the government furnished material. We, therefore, recommend this source not be approved for use.

PICCIOLA
LMNED-F

Encl

FREDERIC M. CHATRY
Chief, Engineering Division

JUDLIN
LMNED-D

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNCD-CP	London Ave. to West End Blvd., HPL, Contract No. 85-C-0171, Lake Pontchartrain & Vic.

TO C/Eng Div ✓
C/Ops Div
C/Plan Div

FROM C/Const Div

DATE 27 Nov 85

CMT 1

Mr. Maldonado/ju/2924

1. Forwarded for your review is an alternate borrow source submitted by S. A. Laurent, contractor of the subject contract. This site is located in Harahan, LA.

2. Please provide this office with your comments concerning suitability of material, impacts to environment and cultural resources, etc. in order to determine if this is an acceptable borrow site for use in this contract.

3. If you have any questions on this subject, please call Mr. J. Maldonado at X2924 or Mr. P. Tilly at X2926.

DONALD F. HULL
Chief, Construction Division

Encl

CF:
NORO

* U.S. G.P.O. 1980-665141/288

6719 AIRLINE HWY.. METAIRIE. LA.
MAILING ADDRESS:
P.O. BOX 1206. METAIRIE. LA. 70004

Front End Loader
Dump Truck *Back Hoe* *Bulldozer*
Equipment Rental
River Sand *Shells*
Low Boy Service
Land Clearing *Grading* *Filling*

November 14, 1985

Eugene S. Witherspoon
Colonel, Corps of Engineers
Contracting Officer
P.O. Box 60267
New Orleans, Louisiana 70160

Attention: Mr. Richard T. Hill
Resident Engineer

Re: Contract No. DACW 29-85-C-0171
New Orleans Lakefront Levee
(London Avenue to West End Blvd)
New Orleans, Louisiana

Gentlemen:

In reference to above project, we submit the following soil classification test results for a proposed borrow pit located along the Mississippi River in Harahan, Louisiana for use on the above project.

We propose to excavate the borrow pit maintaining a smooth bottom as we proceed. Depth of excavation will be approx. 10' from existing grade.

We shall implement our "Environmental Protection Plan" in the borrow pit at all times.

Yours truly,

S.A. LAURENT, INC.

S.A. Laurent

S. A. Laurent, President

SAL/lbl

NOV 19

LOUISIANA DOCK

• Louisville, Kentucky
• Wood River, Illinois
• Harahan, Louisiana

Telephone
(504) 733-4190

P.O. Box 23206 • Harahan, Louisiana 70183

November 13, 1985

Mr. George Ackel, Jr.
President
Kenner Dredging Company
P. O. Box 339
St. Rose, LA 70087

RE: Removal and Sale of Dirt

Dear George:

Please consider this letter as your authorization to remove and sell the dredged material located in the sandpit adjacent to the barge slip on Louisiana Dock's property. Since you are renting the pit, you may remove the fill and haul it away to be sold to S. A. Laurant or anyone else who may be interested. Please use the levee crossing at the foot of Brookhollow Boulevard. This levee crossing is concrete and will better stand the increased use than the shell levee crossing at the foot of Evans Street. This crossing is near levee station 6440+88.1.

Should you or any of your potential customers have any questions about the above, please do not hesitate to call me at 733-7870.

Very truly yours,

Sam George
Administrative Assistant
to General Manager

SG/mm

cc: N. S. Ivey

Gulf South Laboratories, Inc.
383 LAKE AVENUE • METAIRIE, LOUISIANA 70005 • (504) 832-5900
TESTING • INSPECTION • RESEARCH

Nov. 13, 1985 GSL 1023-98

SUBJECT	:	Soil (Mechanical Analysis)
PROJECT	:	New Orleans Lakefront Levee London Ave. Canal to West End Blvd. - Orleans Parish, La. Solicitation#DACW29-85-B-0036
GENERAL CONTRACTOR	:	S.A. Laurent Const. Co.
SUB-CONTRACTOR/CLIENT	:	Boh Bros. Const. Co. P. O. Box 53266 New Orleans, La. 70153

This report is concerned with the suitability of twelve (12) material samples. These materials were sampled by representatives of Gulf South Laboratories and a representative of the contractor. The samples were placed in air tight containers in order to maintain the moisture at the time of sampling.

The following ASTM laboratory procedures were employed in the analysis:

1.) ASTM Method D423 Test for Liquid Limit of Soils.
2.) ASTM Method D424 Test for Plastic Limit and Plasticity Index of Soils.
3.) ASTM Method D1140 Test for Amount of Material in Soils Finer Than #200 Sieve.

All tests were performed and checked by qualified technicians.

Test results of the twelve (12) samples are as follows:

Sample Identification	1A	1B	1C
Moisture Content	22.9%	28.0%	29.5%
Liquid Limit	30	28	28
Plastic Limit	22	22	19
Plasticity Index	8	6	9
Unified Soil Classification ASTM D3282-73	CL,ML,	CL,ML,	ML,CL,
Soil Classification	A-4	A-4	A-4
Field Classification	Sandy Clay Loam, Brown Sandy Clay	Sandy Clay Loam, Brown Sandy Clay	Sandy Clay Loam, Grey Sandy Clay

Sample Identification	2A	2B	2C
Moisture Content	25.0%	25.7%	29.4%
Liquid Limit	27	28	26
Plastic Limit	18	21	21
Plasticity Index	9	7	5
Unified Soil Classification	ML,CL	ML,CL	CL,ML
ASTM D3282-73 Soil Classification	A-4 Sandy Clay Loam	A-4 Sandy Clay Loam,	A-4 Sandy Clay Loam
Field Classification	Brown Sandy Clay	Brown Sandy Clay	Grey Sandy Clay

Sample Identification	3A	3B	3C
Moisture Content	26.7%	26.3%	34.4%
Liquid Limit	25	25	30
Plastic Limit	19	21	24
Plasticity Index	6	4	6
Unified Soil Classification	CL,ML,	ML,CL,	CL,ML
ASTM D3282-73 Soil Classification	A-4 Sandy Clay Loam	A4 Sandy Clay Loam	A-4 Sandy Clay Loam
Field Classification	Brown Sandy Clay	Brown Sandy Clay	Grey, Sandy Clay

Sample Identification	4A	4B	4C
Moisture Content	25.0%	36.2%	29.2%
Liquid Limit	27	41	26
Plastic Limit	26	33	24
Plasticity Index	1	9	2
Unified Soil Classification	ML,OL,	ML,OL,	ML,OL
ASTM D3282-73 Soil Classification	A-4 Sandy Clay Loam	A-4 Sandy Clay Loam	A-4 Sandy Clay Loam
Field Classification	Brown Sandy Clay	Brown Sandy Clay	Grey Sand

SAMPLE LOCATIONS:

107 Miles above head of passes.
Left Descending Bank, Sample Location #1 and #2 represents 125,000 square feet approx. 250 feet by 500 feet approx. 800 feet from the toe of the Mississippi River Levee.

Sample #1 is approx. 200' from east excavation limit line "A".

Sample #2 is approx. 75' from east excavation limit line "A".

Sample #3 is approx. 210' from east excavation limit line "B".

Sample #4 is approx. 50' from east excavation limit line "B".

TECHNICIANS: P. Mire - Field & Laboratory Tests
A. Pfiffner - Assistant Field
and Laboratory Tests

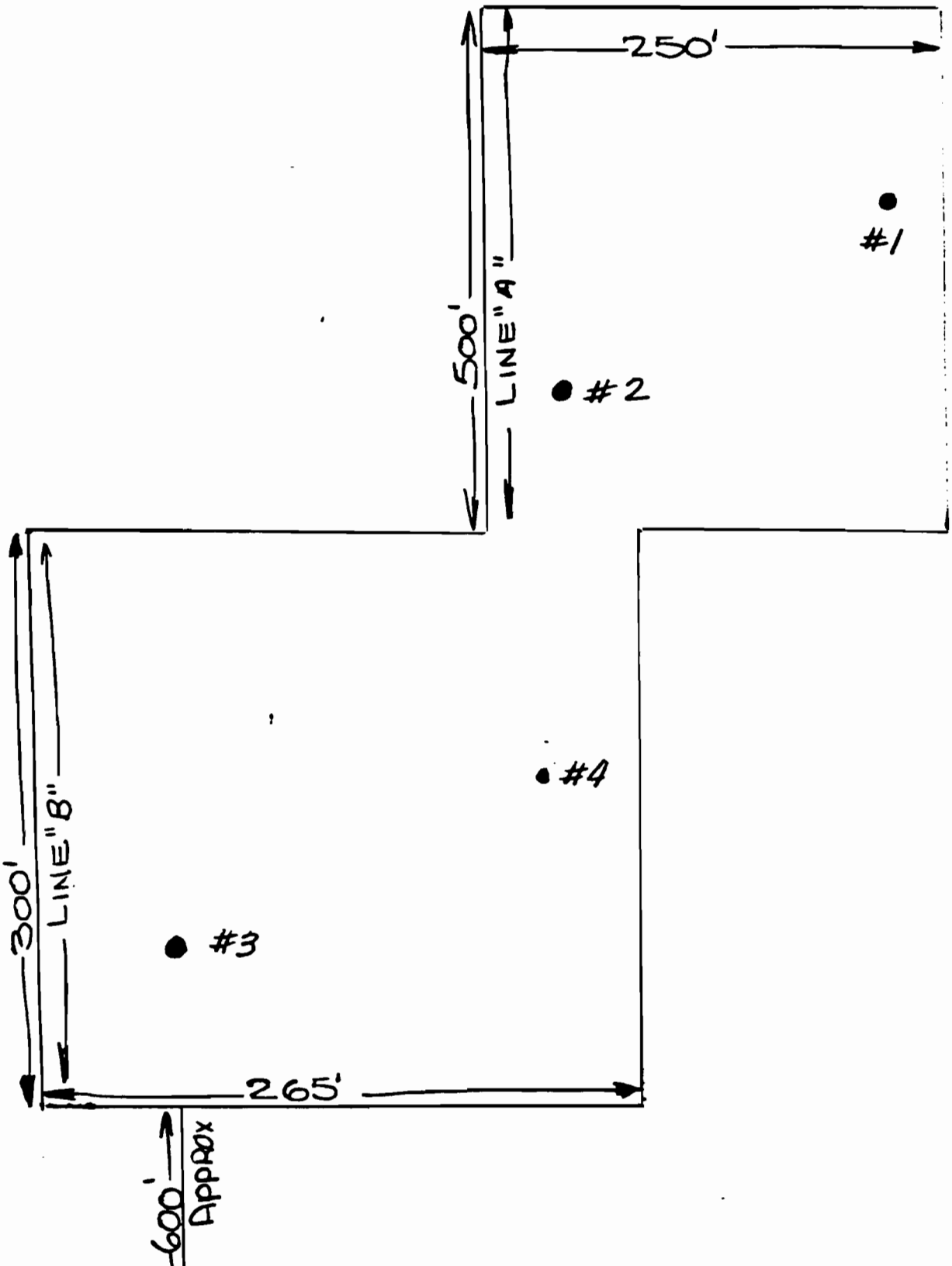
Respectfully submitted,
GULF SOUTH LABORATORIES, INC.

Edward C. Cronic,
President

ECC/st

enclosures

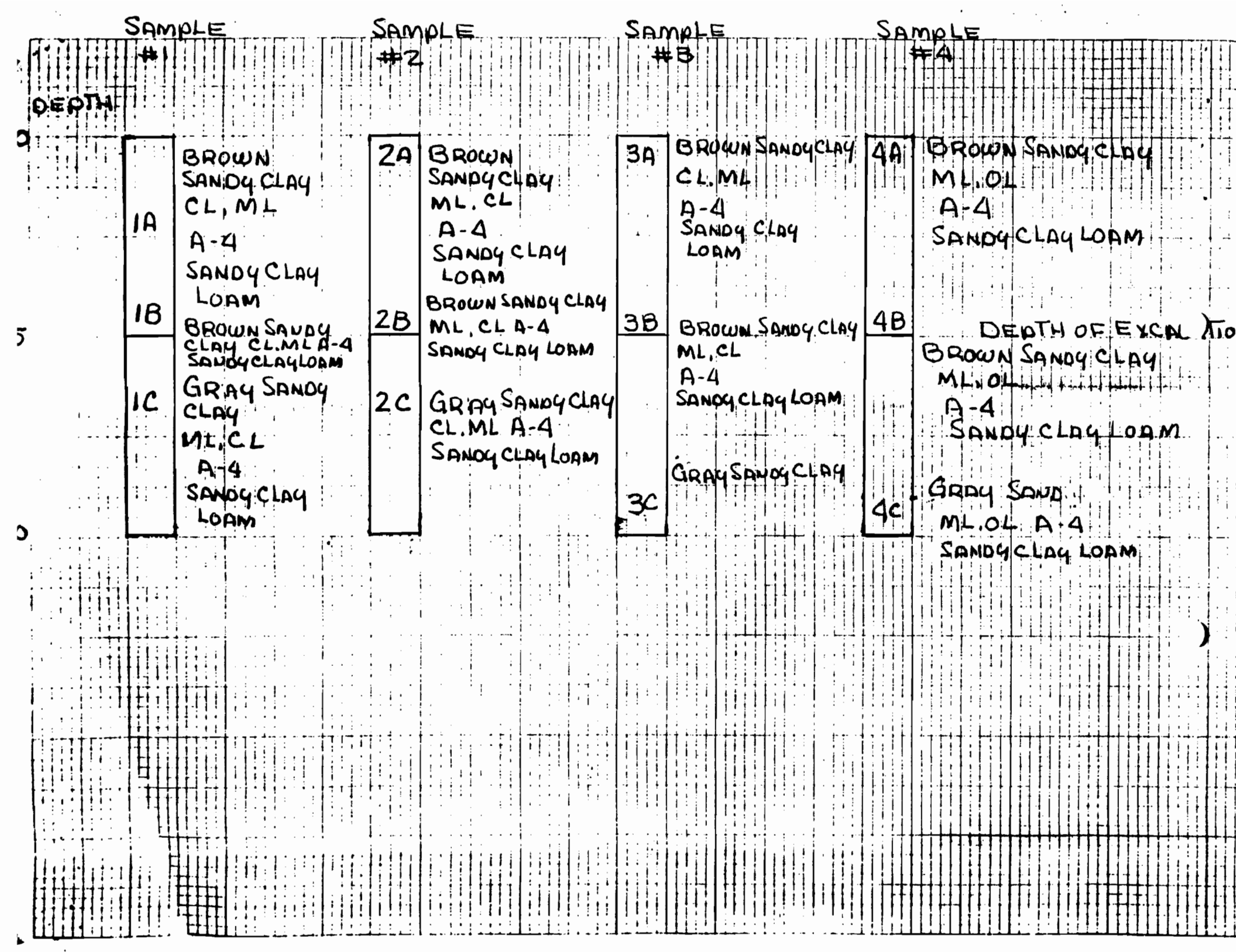
MISSISSIPPI RIVER FLOW



107 MILES ABOVE HEAD OF PASSES

MISSISSIPPI RIVER LEVEE

LEFT DESCENDING BANK


SAMPLE #1
SAMPLE #2
SAMPLE #3
SAMPLE #4
DEPTH
1A
BROWN SANDY CLAY CL, ML
A-4
SANDY CLAY LOAM
1B
BROWN SANDY CLAY CL.ML A-4 SANDY CLAY LOAM
1C
GRAY SANDY CLAY ML.CL
A-4
SANDY CLAY LOAM
2A
BROWN SANDY CLAY ML.CL
A-4
SANDY CLAY LOAM
2B
BROWN SANDY CLAY ML.CL A-4 SANDY CLAY LOAM
2C
GRAY SANDY CLAY CL.ML A-4 SANDY CLAY LOAM
3A
BROWN SANDY CLAY CL.ML
A-4
SANDY CLAY LOAM
3B
BROWN SANDY CLAY ML.CL
A-4
SANDY CLAY LOAM
3C
GRAY SANDY CLAY
4A
BROWN SANDY CLAY ML.OL
A-4
SANDY CLAY LOAM
4B
DEPTH OF EXCAL TO
BROWN SANDY CLAY ML.OL
A-4
SANDY CLAY LOAM
4C
GRAY SAND ML.OL A-4
SANDY CLAY LOAM

ROUTING AND TRANSMITTAL SLIP

Date: 21 Nov 85

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. [illegible]	[illegible]	21 NOV
2. RODNEY P. PICCUTA for	[illegible]	
3. DAN JUDKIN		
4. BARNEY SMITH		
5.		

1	Action		File	Note and Return
✓	Approval		For Clearance	Per Conversation
	As Requested		For Correction	Prepare Reply
	Circulate		For Your Information	See Me
	Comment		Investigate	Signature
	Coordination		Justify	

REMARKS

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
James Richardson	116
	Phone No. X-1031

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

☆ U.S. GOVERNMENT PRINTING OFFICE : 1982 O - 361-529 (215)

LONDON AVE TO WEST END BLVD.
F&M COMMENTS ON CONTRACTOR
FURNISHED BORROW PIT.

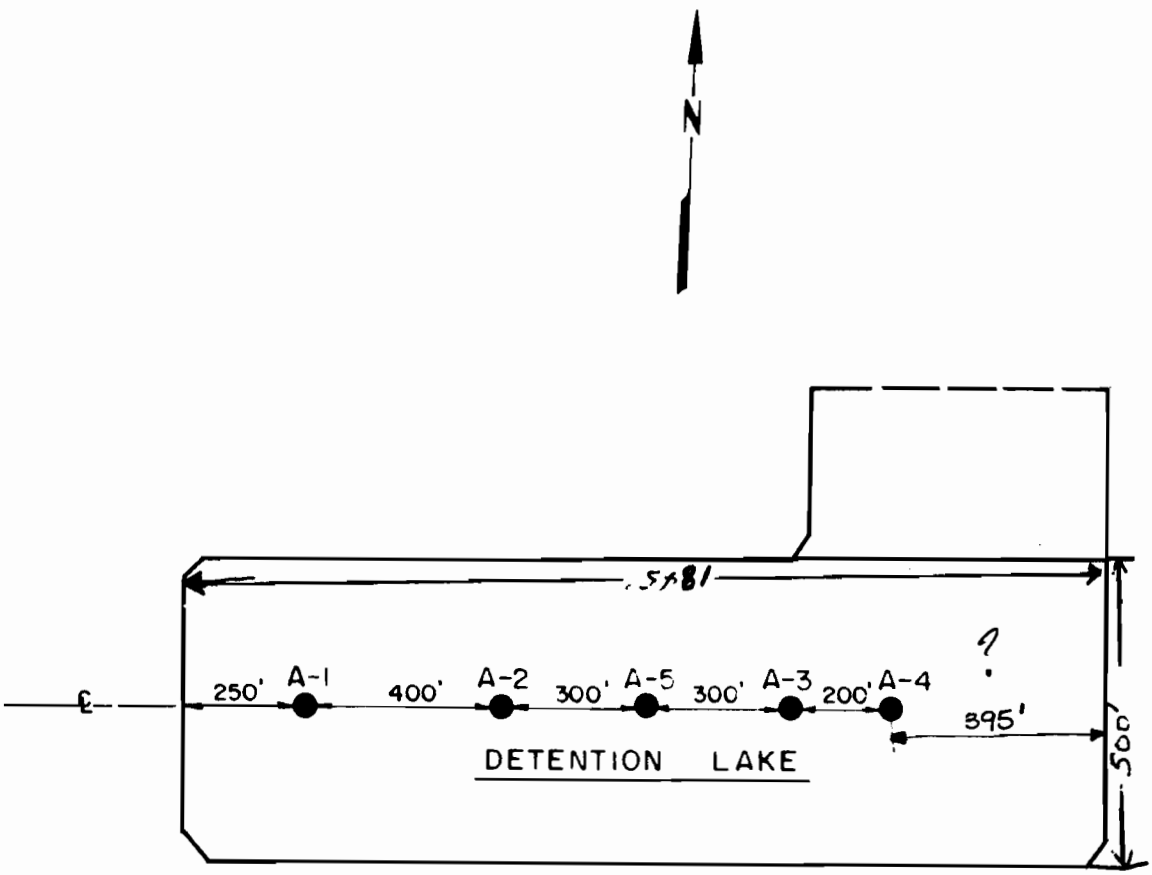
21 NOV 85
MR. ESTRADA 1035

WE HAVE NO OBJECTIONS PROVIDED:

1. THE UNSUITABLE MATERIAL found at the top of the borrow pit should be removed and wasted as specified on para. 2-3.3.2 and 3.5.2 of the specs.

2. THE EXCAVATION of the borrow pit will be no deeper than 10 feet. (To avoid using sandy material below elevation -10.0).

NOTE:
These comments are based on additional information (soil samples) hand carried to this office by Construction Division on 20 Nov. 85.



BORING LOCATIONS

Scale: 1"=400'

BORROW INVESTIGATION
CONTRACT NO. DACW-29-85-C-0171
NEW ORLEANS LAKEFRONT LEVEE
(LONDON AVENUE TO WEST END BOULEVARD)
NEW ORLEANS, LOUISIANA

FOR
BOH BROTHERS CONSTRUCTION CO.
NEW ORLEANS, LOUISIANA

J-3654

Fig. 1

GORE ENGINEERING, INC. J-3654

SOIL AND FOUNDATION INVESTIGATIONS
METAIRIE LOUISIANA

Auger Boring No. A-1

LOG OF BORING AND TEST RESULTS

Date of Boring 19 NOVEMBER 1985

Project CONTRACT NO. DACW-29-85-C-0171 - NEW ORLEANS LAKEFRONT LEVEE - (LONDON AVE. TO WEST END BLVD.) - NEW ORLEANS, LOUISIANA

FOR: BOH BROTHERS CONSTRUCTION CO. - NEW ORLEANS, LOUISIANA

Recorded By STEPHEN WALE

Sample No.	SAMPLE Depth Feet From	SAMPLE Depth Feet To	STRATUM Depth Feet	VISUAL CLASSIFICATION	Blows per ft.	Symbol Log	Scale feet	UNCONF COMP (qu) (lbs / sq ft)	WATER CONTENT (percent)	UNIT WEIGHT (lbs / cu ft) DRY	UNIT WEIGHT (lbs / cu ft) WET	ATTERBERG LIMITS LL	PL	PI
			0.0				0							
1	0.0	0.5		SOFT TO MEDIUM STIFF BROWNISH GRAY SILTY CLAY W/SOME ROOTS (CL)					29.8					
2	1.0	1.5	1.0											
				SOFT BROWNISH GRAY SILTY CLAY (CL)					36.8			46	24	22
3	2.0	2.5	2.5						40.2					
4	2.5	3.0		VERY SOFT TO SOFT GRAY SILTY CLAY (CL)					25.5			31	14	17
5	3.5	4.0	3.5	SOFT TO MEDIUM STIFF LIGHT GRAY & REDDISH TAN CLAY W/SILT (CH)					33.0					
			5.0				5							
6	5.5	6.0		MEDIUM STIFF TO STIFF REDDISH TAN & LIGHT GRAY CLAY W/SILT (CH)					16.9			50	14	36
			7.0											
7	7.5	8.0		STIFF REDDISH TAN & LIGHT GRAY SILTY CLAY (CL)					16.2			31	12	19
			9.0											
8	9.5	10.0	10.0	SOFT LIGHT GRAY & REDDISH TAN SANDY CLAY (CL)			10		22.4					
9	10.5	11.0		LOOSE LIGHT GRAY CLAYEY FINE SAND (SC)										
10	11.5	12.0	12.0						29.1					
							15		FREE WATER AT 6.0'					
				AUGER BORING A-2			0							
1	0.0	0.5	0.0											
2	0.5	1.0		MEDIUM STIFF BROWN SILTY CLAY W/SOME ROOTS (CL)					26.5					
			2.0											
3	2.5	3.0		SOFT TO MEDIUM STIFF GRAY SILTY CLAY W/FEW ROOTS (CL)					23.3			36	15	21
4	3.5	4.0	3.5	MEDIUM STIFF TO STIFF LIGHT GRAY & REDDISH TAN CLAY W/SOME SILT (CH)					32.4			60	19	41
			5.0				5							
5	5.5	6.0		STIFF REDDISH TAN & LIGHT GRAY CLAY W/SOME SILT (CH)					23.6					
6	7.5	8.0	7.5	STIFF LIGHT GRAY & REDDISH TAN SILTY CLAY (CL)					18.5			38	13	25
			10.0				10							
7	10.5	11.0	11.0	SOFT LIGHT GRAY SANDY CLAY W/SAND LAYERS (CL)					20.9			22	10	12
8	11.5	12.0	12.0	LOOSE GRAY CLAYEY FINE SAND (SC)					23.8					
							15		FREE WATER AT 6.0'					

CLAY SILT SAND ORGANIC

Precon. (140 lb. hammer, 30" drop, 3" or 2 in. splitspoon sampler after first being seated 6 in.)

REMARKS: Symbols in () indicate Unified Soils Classification

Fig. 2

GORE ENGINEERING, INC.

SOIL AND FOUNDATION INVESTIGATIONS
METAIRIE LOUISIANA

J-3654

LOG OF BORING AND TEST RESULTS

Auger Boring No. A-3

Date of Boring 19 NOVEMBER 1985

Project CONTRACT NO. DACE-29-85-C-0171 - NEW ORLEANS LAKEFRONT LEVEE - (LONDON AVE. TO WEST END BLVD.) - NEW ORLEANS, LOUISIANA

FOR: BOH BROTHERS CONSTRUCTION CO. - NEW ORLEANS, LOUISIANA

Recorded By STEPHEN WALE

Sample No.	Sample Depth – Feet From	Sample Depth – Feet To	Stratum Depth in Feet	Visual Classification	*Blows per Foot	Scale feet	Uncomp. Comp. (qu) (lbs/sq ft)	Water Content percent	Unit Weight (lbs/cu ft) Dry	Unit Weight (lbs/cu ft) Wet	Atterberg Limits LL	Atterberg Limits PL	Atterberg Limits PI
			0.0			0							
1	0.0	0.5		MEDIUM COMPACT BROWNISH GRAY SANDY SILT W/SOME CLAY & ROOTS (ML)									
			1.5										
2	1.5	2.0		MED. COMP. RED. TAN & LIGHT GRAY CLAYEY SILT (ML)				18.4			20	18	2
			2.0										
3	2.5	3.0		SOFT TO MEDIUM STIFF LIGHT GRAY & REDDISH TAN SILTY CLAY (CL)				23.3					
			3.5										
4	3.5	4.0		SOFT TO MEDIUM STIFF REDDISH TAN & LIGHT GRAY SILTY CLAY (CL)				22.6			42	16	26
						5							
5	5.5	6.0											
			6.0										
6	6.5	7.0		MEDIUM STIFF TO STIFF REDDISH TAN & LIGHT GRAY SILTY CLAY (CL)				17.1					
7	7.5	8.0											
			8.5										
8	8.5	9.0		MEDIUM STIFF TO STIFF LIGHT GRAY & REDDISH TAN SILTY CLAY W/SAND (CL)				16.3			33	11	22
						10							
9	10.5	11.0											
			11.5										
10	11.5	12.0		SOFT LIGHT GRAY & REDDISH TAN SANDY CLAY (CL)				17.6			23	11	12
11	12.5	13.0	13.0										
						15	FREE WATER AT 12.0'						

AUGER BORING A-4

Sample No.	Sample Depth – Feet From	Sample Depth – Feet To	Stratum Depth in Feet	Visual Classification	*Blows per Foot	Scale feet	Uncomp. Comp. (qu) (lbs/sq ft)	Water Content percent	Unit Weight (lbs/cu ft) Dry	Unit Weight (lbs/cu ft) Wet	Atterberg Limits LL	Atterberg Limits PL	Atterberg Limits PI
			0.0			0							
1	0.0	0.5		MEDIUM COMPACT BROWNISH GRAY SANDY SILT W/SOME CLAY (ML)				18.6					
			1.0										
2	1.5	2.0		MEDIUM STIFF REDDISH TAN & LIGHT GRAY SILTY CLAY (CL)				20.6					
			2.5										
3	2.5	3.0											
4	3.5	4.0		SOFT TO MEDIUM STIFF REDDISH TAN & LIGHT GRAY SILTY CLAY (CL)				25.8			35	17	18
						5							
			5.5										
5	5.5	6.0											
6	7.5	8.0		MEDIUM STIFF TO STIFF REDDISH TAN & LIGHT GRAY SILTY CLAY (CL)				19.7			35	11	24
			9.5										
7	9.5	10.0		STIFF LIGHT GRAY & REDDISH TAN SANDY CLAY W/SILT SAND POCKETS (CL)		10		19.4					
			10.5										
8	10.5	11.0		MEDIUM STIFF TO STIFF LIGHT GRAY & REDDISH TAN SILTY CLAY (CL)									
9	11.5	12.0						18.1			36	9	27
10	12.5	13.0	13.0										
11	13.5	14.0		LOOSE TO MEDIUM DENSE TAN FINE SAND (SP)				27.5					
			14.0			15	FREE WATER AT 12.0'						

CLAY SILT SAND ORGANIC

Predominant type bold. Modifying type light

*140 lb. hammer dropped 30 in. on 2 in. splitspoon sampler after first being seated 6 in.

REMARKS: Symbols in () indicate Unified Soils Classification

Fig. 3

GORE ENGINEERING, INC. J-3654

SOIL AND FOUNDATION INVESTIGATIONS
METAIRIE LOUISIANA

Auger Boring No. A-5

LOG OF BORING AND TEST RESULTS

Date of Boring 19 NOVEMBER 1985

Project CONTRACT NO. DACW-29-85-C-0171 - NEW ORLEANS LAKEFRONT LEVEE - (LONDON AVE. TO WEST END BLVD.) - NEW ORLEANS, LOUISIANA
FOR: BOH BROTHERS CONSTRUCTION CO. - NEW ORLEANS, LOUISIANA

Recorded By STEPHEN WALE

Sample No.	Sample Depth - Feet From	Sample Depth - Feet To	Stratum Depth in Feet	Visual Classification	Blows per Foot	Symbol Log	Scale feet	Unconf. Comp. (qu) (lbs/sq ft)	Water Content (percent)	Unit Weight (lbs/cu ft) Dry	Unit Weight (lbs/cu ft) Wet	Atterberg Limits LL	Atterberg Limits PL	Atterberg Limits PI
1	0.0	0.5	0.0				0							
2	0.5	1.0		SOFT TO MEDIUM STIFF BROWN SILTY CLAY W/ORGANIC & SOME ROOTS (CL)					23.1					
3	1.5	2.0												
4	2.5	3.0	3.0						25.8			30	17	13
5	3.5	4.0	4.0	SOFT TO MEDIUM STIFF REDDISH TAN & LIGHT GRAY SILTY CLAY (CL)					29.7					
6	4.5	5.0					5							
7	5.5	6.0		MEDIUM STIFF TO STIFF REDDISH TAN & LIGHT GRAY CLAY W/SAND POCKETS (CH)					25.1			61	18	43
8	6.5	7.0												
9	7.5	8.0							19.5					
10	8.5	9.0	9.0											
11	9.5	10.0		STIFF LIGHT GRAY & REDDISH TAN SILTY CLAY W/SOME SAND (CL)			10		18.8			45	12	33
12	10.5	11.0	10.5	LOOSE TO MEDIUM DENSE LIGHT GRAY CLAYEY FINE SAND (SC)					18.8					
13	11.5	12.0	11.5 / 12.0	LOOSE LIGHT GRAY FINE SAND W/SOME CLAY (SP)					26.5					
							15		FREE WATER AT 8.0'					

CLAY SILT SAND ORGANIC

Predominant type bold. Modifying type ...

*140 lb. hammer dropped 30 in. on 2 in. splitspoon sampler after first being seated 6 in.

REMARKS: Symbols in () indicate Unified Soils Classification

Fig. 4

JUDLIN

MARSALONE

CINDY

DD

DE

DG

DL

DR

DW

E-2266

21 Nov SUSPENSE

RELEASE

FILE

DESTROY

ROUTING OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE FOR APPROVAL

(Used to route ENG Form 4025 with items attached. Not to become a part of the Contractor's record.)

	TO:	FROM:	DATE
1	C/Const Div	NORO	11/12/85

The attached items listed on ENG Form 4025 are forwarded for approval action.

CONTRACT NUMBER	CONTRACTOR
DACW29-85-C-0117	S.A. Laurent Inc.
TRANSMITTAL NUMBERS	**PROJECT TITLE AND LOCATION**
1 Additional Borrow Pit	London Ave. to W. End Levee, Orleans Pa.

COMMENTS (Attach additional sheet, if necessary.) Please forward to E. Div for review Due to the location the material is being placed and past problems Associated with silvell obtained clay in regards to establishing turf It is requested that the material be studied prior to acceptance.

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE
1	Scott E. Young Proj. Engr.	Scott E Young

	TO:	FROM:	DATE
2	C/ENG DIV	C/CONST DIV	12 NOV 85

COMMENTS (Attach additional sheet, if necessary.)
PLEASE REVIEW & FORWARD YOUR RESPONSE TO THIS OFFICE ON THE ACCEPTABILITY OF THIS BORROW AREA

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE
	DONALD F. HULL Chief, Construction Division	Donald F. Hull

	TO:	FROM:	DATE
3			

COMMENTS (Attach additional sheet, if necessary.)

5:11/21

NO. OF INCL.	TYPED NAME AND TITLE	SIGNAT

	TO:	FROM:
4		

The following action codes are given to items listed on ENG Form 4025:

ACTION CODES

A - APPROVED AS SUBMITTED.

B - APPROVED, EXCEPT AS NOTED ON DRAWINGS. RESUBMISSION NOT REQUIRED.

C - APPROVED, EXCEPT AS NOTED ON DRAWINGS. REFER TO ATTACHED SHEET. RESUBMISSION REQUIRED.

D - WILL BE RETURNED BY SEPARATE CORRESPONDENCE.

E - DISAPPROVED (SEE ATTACHED)

F - RECEIPT ACKNOWLEDGED

G - OTHER (specify)

ACTION CODES TO BE INSERTED IN COLUMN G, SECTION I, ENG FORM 4025 *(Attach sheets, when required.)*

ITEM NO. (Taken from ENG Form 4025)								
CODE GIVEN								

REMARKS

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE

ENG FORM 1 NOV 74 4026 EDITION OF NOV 66 MAY BE USED.

☆ U.S. Government Printing Office: 1983—413-853

6719 AIRLINE HWY., METAIRIE, LA.
MAILING ADDRESS:
P.O. BOX 1206, METAIRIE, LA. 70004

Front End Loader
Dump Truck *Back Hoe* *Bulldozer*
Equipment Rental
River Sand *Shells*
Low Boy Service
Land Clearing *Grading* *Filling*

November 11, 1985

Eugene S. Witherspoon
Colonel, Corps of Engineers
Contracting Officer
P.O. Box 60267
New Orleans, Louisiana 70160

Attention: Mr. Richard T. Hill
Resident Engineer

Re: Contract No. DACW 29-85-C-0171
New Orleans Lakefront Levee
(London Avenue to West End Blvd)
New Orleans, Louisiana

Gentlemen:

In reference to above project we submit the following proposed borrow site located Slidell, Louisiana for your approval.

1) Enclosed is our proposed secondary site location plan with soil boring results indicating classification of material to be excavated.

2) We propose to excavate the borrow pit maintaining a smooth bottom as we proceed. Depth of excavation will be approx. 10' from existing ground.

3) We shall implement our "Environmental Protection Plan" in the borrow pit at all times.

Yours truly,

S. A. Laurent, Inc.
S. A. Laurent
S. A. Laurent, President

SAL/lbl g

JOGS, INC.

P. O. BOX 566

PEARL RIVER, LOUISIANA 70452

October 24, 1985

Boh Brothers
P. O. Drawer 53266
New Orleans, Louisiana 70150

Attention: Mr. Steve Tujaque

Re: Hurricane Protection Project-High level plan
New Orleans lakefront levee
London Avenue canal to westend boulevard
Solicitation #DACW2985B0036

Dear Mr. Tujaque:

This letter confirms our borrow pit location and access of right of way in and out of borrow pit.

The attached letter contains legal description of property and access agreement.

Sincerely,

Olen Bryant
President

OB:jb

SERVITUDE OF WAY FOR PUBLIC ROAD

BY: THE LAKES SUBDIVISION, INC. AND
LEON LOWE & SONS, INC.

TO: THE PUBLIC

UNITED STATES OF AMERICA

STATE OF LOUISIANA

PARISH OF ST. TAMMANY

BE IT KNOWN, That on this 15th day of February, 1985,

BEFORE ME, DENISE D. LINDSEY, a Notary Public, duly commissioned and qualified, in and for the Parish of St. Tammany, State of Louisiana, therein residing, and in the presence of the witnesses hereinafter named and undersigned:

PERSONALLY CAME AND APPEARED:

THE LAKES SUBDIVISION, INC., a Louisiana corporation, domiciled in the Parish of St. Tammany, represented by the undersigned, duly authorized, by virtue of a Resolution of its Board of Directors. Its permanent mailing address being:

Route 7, Box 7019
Slidell, Louisiana 70458

AND

LEON LOWE & SONS, INC., a Louisiana corporation organized under the laws of Louisiana, herein represented by LEON L. LOWE, its President, duly authorized by virtue of a resolution recorded at COB 903, folio 400 of the official records of St. Tammany Parish, Louisiana.

who declared that under the covenants, conditions and stipulations hereinafter recited, appearers do hereby grant, donate, confirm, transfer and deliver to the public for the establishment of a public road, a servitude and right of way over and across the following described properties in the Parish of St. Tammany, Louisiana:

PARCEL I - Owned by The Lakes Subdivision, Inc.

ALL THAT CERTAIN PARCEL OF LAND being designated as part of Lot 6, situated in the North half of the Southwest Quarter of Section 14, Township 8 South, Range 14 East, Ward 8, District 10, St. Tammany Parish, Louisiana, being more fully described as follows:

From the Quarter Corner common to Sections 14 and 15 in said Township and Range, go South 89 degrees, 38 minutes, 00 seconds East 2,154.6 feet to the Point of Beginning.

Thence continue South 89 degrees, 38 minutes, 00 seconds East 60.0 feet; thence South 00 degrees, 15 minutes, 00 seconds East 599.0 feet; thence North 89 degrees, 38 minutes, 00 seconds West 60.0 feet; thence North 00 degrees 15 minutes, 00 seconds West 599.0 feet to the Point of Beginning.

Containing in all 0.83 acres of land, more or less.

PARCEL II - Owned by Leon Lowe & Sons, Inc.

ALL THAT CERTAIN PARCEL OF LAND being designated as a proposed 60 foot road Right-of-Way being situated in "Lakes Subdivision", Section 14, Township 8 South, Range 14 East, Ward 8, St. Tammany Parish, Louisiana, being more fully described as follows:

From the Quarter corner common to Sections 14 & 11, in said Township and Range, thence South 1331.34 feet; thence South 89 degrees, 56 minutes, 51 seconds West 1318.97 feet; thence South 00 degrees, 36 minutes, 53 seconds East 1323.37 feet; thence South 89 degrees, 50 minutes, 19 seconds East 852.7 feet to the Point of Beginning.

Thence along the Westerly Right-of-Way line of said proposed street North 00 degrees, 09 minutes, 41 seconds East 150.0 feet; thence South 89 degrees, 50 minutes, 19 seconds East 60.0 feet to the Easterly Right-of-Way line of said proposed street; thence along said Easterly Right-of-Way line South 00 degrees, 09 minutes, 41 seconds West 150.0 feet; thence along the Southerly Right-of-Way line of said street North 89 degrees, 50 minutes, 19 seconds West 60.0 feet to the Point of Beginning.

Appearers hereby acknowledge that part of the consideration given to Leon Lowe & Sons, Inc. for the dedication of their portion of the Servitude is the obligation of The Lakes Subdivision, Inc. and or its heirs or assigns to develop Phase I of the Lakes Subdivision prior to the development of any other portions of the larger tract of which the Servitude forms a part and that The Lakes Subdivision, Inc. will use the Servitude to haul fill material excavated from the Lakes Subdivision.

At such time as The Lakes Subdivision, Inc., its heirs, successors or assigns dedicate said servitude to the St. Tammany Parish Police Jury, Leon Lowe & Sons, Inc. hereby grants unto The Lakes Subdivision, Inc., its heirs, successors or assigns, a power of attorney to grant and dedicate that portion of the servitude owned by Leon Lowe & Sons, Inc. to the St. Tammany Parish Police Jury for the public use.

The Lakes Subdivision, Inc. herein declares that it is not in the dirt hauling business and it will not operate a dirt hauling or selling business in competition with Leon Lowe & Sons, Inc.

The Lakes Subdivision, Inc. herein grants to Leon Lowe & Sons, Inc. a right of first refusal on any and all contracts for the hauling of dirt. The Lakes Subdivision, Inc. shall provide a copy of the proposal contract to Leon Lowe & Sons, Inc. and Leon Lowe & Sons, Inc. shall have three (3) days from receipt to accept the contract. If Leon Lowe & Sons, Inc. has not accepted said contract within that time period, The Lakes Subdivision, Inc. shall have the right to enter into a dirt hauling contract with any other company for substantially the same terms and The Lakes Subdivision, Inc. shall not be held liable for any loss incurred by Leon Lowe & Sons, Inc. as a result thereof.

THUS DONE AND PASSED in my office in Slidell, Louisiana on the day, month and year herein first above written, in the presence of the undersigned witnesses, who hereunto sign their names with the said appearers and me, Notary, after reading of the whole.

WITNESSES:

_____

_____

THE LAKES SUBDIVISION, INC.

BY: _____

GLEN W. RAINE, PRESIDENT

LEON LOWE & SONS, INC.

BY: _____

LEON L. LOWE, PRESIDENT

_____

DENISE D. LINDSEY, NOTARY PUBLIC

9685 clm

Gulf South Laboratories, Inc.
383 LAKE AVENUE • METAIRIE, LOUISIANA 70005 • (504) 832-5900
TESTING • INSPECTION • RESEARCH

Nov. 11, 1985 GSL 1023-98

SUBJECT : Soil (Mechanical Analysis)

PROJECT : New Orleans Lakefront Levee
London Ave. Canal to West End
Blvd. - Orleans Parish, La.
Solicitation#DACW29-85-B-0036

GENERAL CONTRACTOR : S.A. Laurent Const. Co.

SUB-CONTRACTOR/CLIENT : Boh Bros. Const. Co.
P. O. Box 53266
New Orleans, La. 70153

This report is concerned with the suitability of twelve (12) material samples. These materials were sampled by a representative of Gulf South Laboratories and a representative of the contractor. The samples were placed in air tight containers in order to maintain the moisture at the time of sampling.

The following ASTM laboratory procedures were employed in the analysis:

1.) ASTM Method D423 Test for Liquid Limit Soils.
2.) ASTM Method D424 Test for Plastic Limit and Plasticity Index of Soils.

All tests were performed and checked by qualified technicians.

Test results of the twelve (12) samples are as follows:

Sample Identification	1A	1B	1C
Moisture Content	35.2%	27.8%	17.1%
Liquid Limit	35	40	21
Plastic Limit	22	24	17
Plasticity Index	13	16	4
Unified Soil Classification ASTM D3282-73	C-L (CH)	C-L (CL)	M-L
Soil Classification	A-6	A-6	A-4
Field Classification	Dark Silty Brown Clay	Orange & Grey, Sandy Clay	White Silty Sand

Sample Identification	2A	2B	2C	2D
Moisture Content	30.5%	26.2%	17.9%	21.3%
Liquid Limit	26	33	20	29
Plastic Limit	22	24	18	21
Plasticity Index	4	9	2	8
Unified Soil Classification	M-L	M-L	M-L	M-L
ASTM D3282-73 Soil Classification	A-4	A-4	A-4	A-4
Field Classification	Dark Brown Silty Clay	Organic & Grey Sandy Clay	Grey, Silty Sandy, Clay	Grey Sandy Clay

Sample Identification	3A	3B	3C
Moisture Content	24.4%	19.1%	17.6%
Liquid Limit	21	30	23
Plastic Limit	18	25	18
Plasticity Index	3	5	5
Unified Soil Classification	M-L	ML	M-L-C-L
ASTM D3282-73 Soil Classification	A-4	A4	A-4
Field Classification	Organic & Brown Sandy Clay	Organic & Grey Sandy Clay	Grey, Silty Sandy Clay

Sample Identification	4A	4B	4C
Moisture Content	21.%	19.0%	18.7%
Liquid Limit	21	27	26
Plastic Limit	17	20	21
Plasticity Index	4	7	5
Unified Soil Classification	M-L	ML- CL	M-L, C-L
ASTM D3282-73 Soil Classification	A-4	A-4	A-4
Field Classification	Organic & Brown Silty Sandy Clay	Organic & Grey Silty Clay	Grey Silty Clay

SAMPLE LOCATIONS:

Sample #1
Approx. 500' from west property line

Sample #2
Approx. 1000' from west property line

Sample #3
Approx. 1400' from west property line

Sample #4
Approx. 1700' from west property line.

The location of the borrow pit is:
Lake Subdivision
Section 14-T8S-R14E
St. Tammany Parish, Louisiana
Ward 8 District 6

TECHNICIANS: J. Alchin - Field Sampler
P. Mire - Laboratory Tests
A. Pfiffner - Assistant-Laboratory Tests

Respectfully submitted,
GULF SOUTH LABORATORIES, INC.

Edward C. Cronic,
President

ECC/st

enclosures

LAKES SUBDIVISION
SECTION-14-T8S-R14E
ST TAMMANY PARISH, LA.
WARD 8 DISTRICT 6

MATCH LINE

N

294.27'

58.25'

1217.50'

70.36'

509.66'

925.45'

Pw 30.3

#2

#3

#1

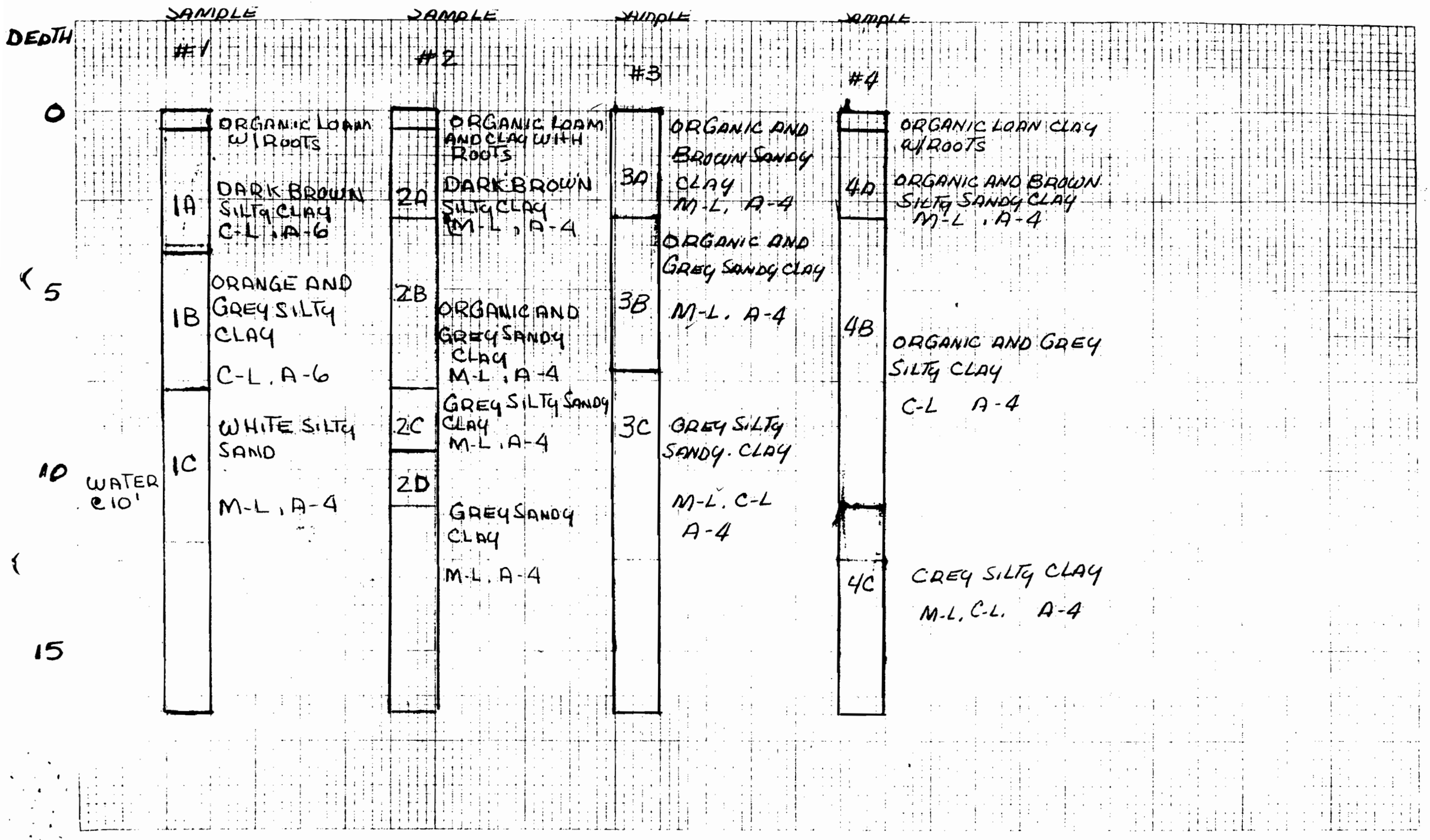
DETENTION LAKE

#4

71.19'

1812.90'

70.60'


DEPTH
SAMPLE #1
SAMPLE #2
SAMPLE #3
SAMPLE #4
0
5
10
15
WATER @ 10'
1A
DARK BROWN SILTY CLAY C-L, A-6
1B
ORANGE AND GREY SILTY CLAY C-L, A-6
1C
WHITE SILTY SAND M-L, A-4
2A
ORGANIC LOAM AND CLAY WITH ROOTS
DARK BROWN SILTY CLAY M-L, A-4
2B
ORGANIC AND GREY SANDY CLAY M-L, A-4
2C
GREY SILTY SANDY CLAY M-L, A-4
2D
GREY SANDY CLAY M-L, A-4
3A
ORGANIC AND BROWN SANDY CLAY M-L, A-4
3B
ORGANIC AND GREY SANDY CLAY M-L, A-4
3C
GREY SILTY SANDY CLAY M-L, C-L A-4
4A
ORGANIC LOAM CLAY W/ROOTS
ORGANIC AND BROWN SILTY SANDY CLAY M-L, A-4
4B
ORGANIC AND GREY SILTY CLAY C-L A-4
4C
GREY SILTY CLAY M-L, C-L, A-4

Schwegmann, 2 others drop levee suit

[redacted]
Staff Writer

Grocery chain owner John Schwegmann and two other residents of an exclusive New Orleans lakefront subdivision are dropping their suit to stop authorities from adding 3 feet to a 16-foot hurricane-protection levee behind their homes.

Schwegmann said Friday that he, surgeon Robert Azar and developer Wilson P. Abraham have asked that the suit be withdrawn as an expression of good faith to the Orleans Levee Board.

"We have had discussions with several members, and we believe that if we demonstrated trust in the Levee Board by dropping our lawsuit, that they would act accordingly, I think, in demonstrating their compassion for our situation," Schwegmann said.

Schwegmann and his two Lake Terrace subdivision neighbors filed suit in Civil District Court late last month against the Levee Board and the Army Corps of Engineers. They said raising the levee behind their homes would lower the value of their homes and cause security and privacy problems.

Schwegmann said the levee, once "nothing more than a mole hill," already is so high that people can toss things into his back yard from its top.

But, he said, "I think the arguments we have made addressing the privacy issue have been well received by the Levee Board. I think that they have demonstrated a willingness to work this out with us, at our expense — at greatly our expense."

The least expensive solution, Schwegmann said, is to build a fence on the lake side of the levee to prevent people from climbing on the levee. The Levee Board has said it would provide a chain-link fence and that residents could build something fancier if they wanted to pay. "We are frankly inclined to do that," Schwegmann said.

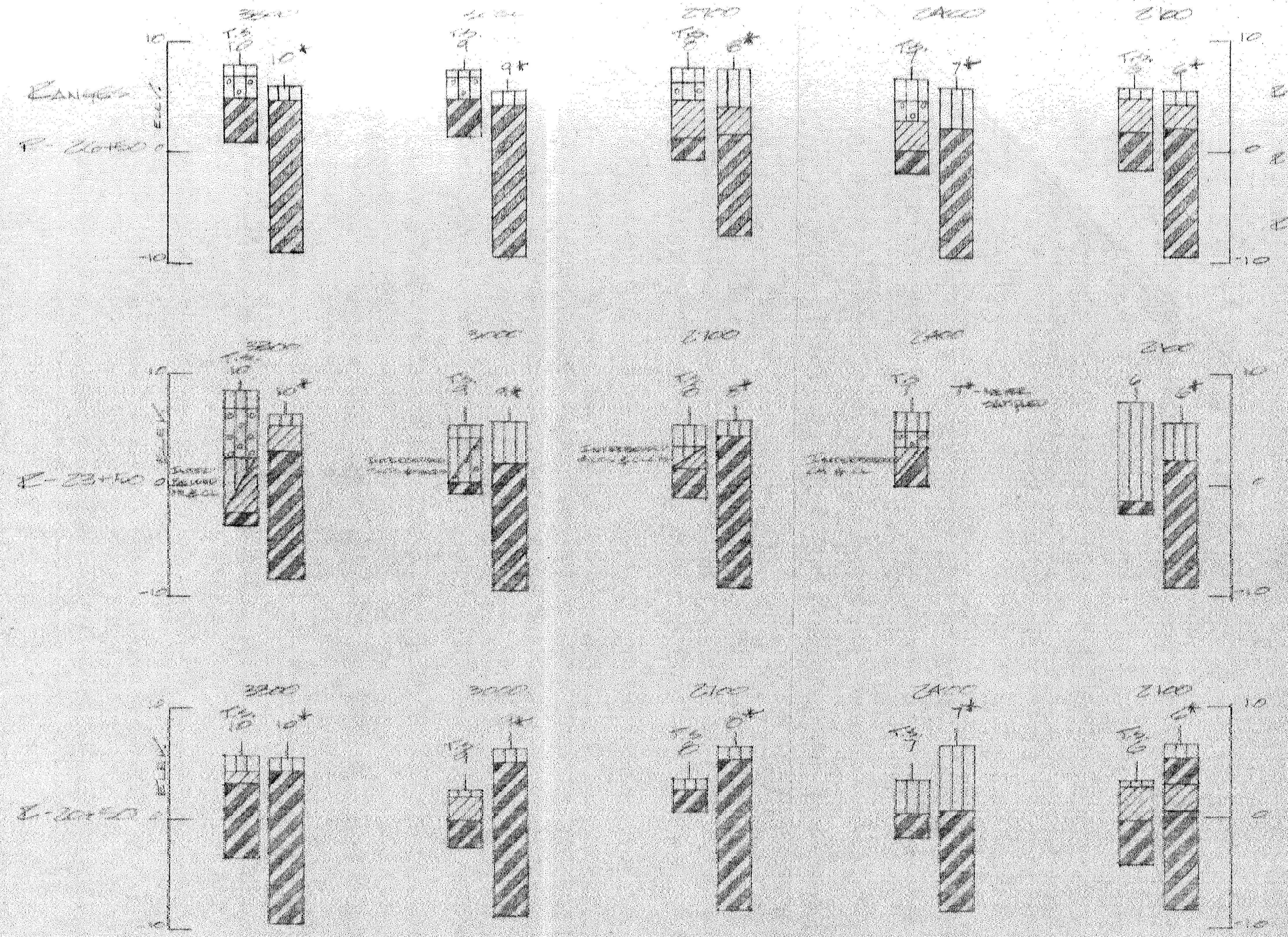
"We never wanted to interfere with whatever measures needed to be taken to properly protect the citizens of New Orleans from flood," he said. "We were addressing the adverse impact to our residences from the aftermath, so to speak, of this thing (the levee) being raised."

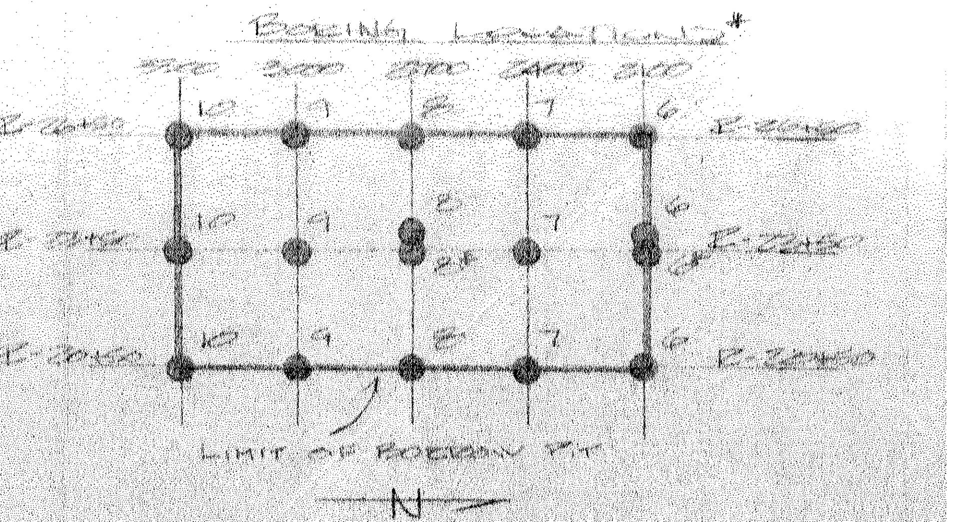
Levee Board President Emile Schneider was out of town Friday and could not be reached.

At its Wednesday meeting, the board refused to discuss the issue raised by Schwegmann and his neighbors because their suit, transferred to federal court earlier this month by the Corps of Engineers, was still pending.

The court said Friday it has received but not acted on the request from Schwegmann and his two neighbors to dismiss the suit.

23 Nov 85





*BORING LOCATIONS & TEST PIT SITES AGREE EXCEPT WHERE INDICATED

*-ORIGINAL SAMPLING-1972

T.S.-TEST SITE-PIT EXCAVATED BY BACKHOE

NOTE: T.S. NO. 6 (CHECK BORING) MOVED TO R-23+50 DUE TO PONDING OF WATER & POOR EXCAVATION

T.S. NO. 8 (CHECK BORING) MOVED TO R-23+50 DUE TO PONDING OF WATER & POOR EXCAVATION.

TOP OF CLAY

BOR. # RANGE 26+50 — BOR. ELEV. − PIT ELEV. = VARIANCE*

6. 4.4	-4.5	= -0.1
7. 2.6	-2.8	= -0.3
8. 4.2	-4.7	= -0.5
9. 4.3	-4.8	= -0.5
10. 4.8	-4.9	= -0.1
		-0.30 MEAN Δ

BOR. # R-23+50 — BOR. ELEV. − PIT ELEV. = VARIANCE

6. 2.6	-(1.5)	= 4.1
7. NO SAMPLE	-3.4	= N.A.
8. 5.7	-1.4	= 4.3
9. 2.6	-0.3	= 2.3
10. 5.3	-(2.5)	= 7.8
		4.63 MEAN Δ

BOR. # R-20+50 — BOR. ELEV. − PIT ELEV. = VARIANCE

6. 5.5	-2.7	= 2.8
7. 0.7	-0.4	= 0.3
8. 5.2	-2.6	= 2.6
9. 4.9	-1.9	= 3.0
10. 4.4	-4.2	= 0.2
		1.78 MEAN Δ

*NEG. NUMBER INDICATES TOP OF CLAY ELEV. HIGHER IN TEST SITES THAN BORINGS

20 NOV 1985

Schwegmann, 2 others sue over raising levee

By SUSAN FINCH
Staff writer

Grocery chain owner John Schwegmann and two other homeowners in an exclusive New Orleans lakefront subdivision have asked a court to stop levee work they say is unnecessary and will lower the value of their property.

Schwegmann, eye surgeon Dr. Robert F. Azar and developer Wilson P. Abraham filed suit Friday in Civil District Court to keep the Orleans Levee Board and the Army Corps of Engineers from raising a one-mile stretch of levee that abuts their Lakeshore Drive homes from its present 16-foot height to 19 feet.

The work, which began Oct. 21, is part of a plan to elevate levees along the lakefront to protect against flooding from hurricane-driven tides in Lake Pontchartrain, corps spokesman Bruce Sossaman said Tuesday.

Schwegmann said Tuesday that the suit is not aimed at hampering efforts to protect the city. "If it (the levee) needs to be raised to 30 feet, I support it 1,000 percent," he said.

But he said he believes that if the levee is raised it should be moved farther toward Lake Pontchartrain from his property or, if that isn't possible, a fence should be installed to keep people off the levee.

Schwegmann, who has not yet moved into his home, said he will lose what privacy there is if the already-high levee is raised. "It's as if this levee is my rear fence, and people are allowed to walk along my rear fence," he said.

The three homeowners, whose houses are between Bayou St. John and the London Avenue Canal, say the levee work will increase their property's drainage problems and security risks and lower its value.

The three also contend that, because there are no flood-control structures in those waterways, just raising the levee will not improve flood protection.

Floodwaters, their suit says, will go around the levee and into the city via the bayou and the canal.

But Levee Board President Emile Schneider called that argument ridiculous. "That would be the same as saying no levees should be built unless they could all be built simultaneously," he said.

Flood-protection measures for the London Avenue Canal are on the drawing board, and designs for similar protection for Bayou St. John have been completed, he said.

Levee Board spokesman Jean LaPlace said there is a flood-control structure at Robert E. Lee Boulevard and Bayou St. John, where two valves regulate the flow of water into the bayou.

Schneider said raising the levee will put no more of a drainage burden on the neighboring property than the present levee does.

30 Oct. 85

Date

ROUTING AND TRANSMITTAL SLIP

19 Nov 85

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. SMITH		
2. JUDLIN		
3. Picciola		
4. Chatry		
5.		

	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate		For Your Information		See Me
	Comment		Investigate	✓	Signature
	Coordination		Justify		

REMARKS

N.O. Lakefront Levee
London Ave Canal to West End Blvd,
Contractor furnished Borrow Pit.
Earhart Blvd. Sewer Treatment
Plant.

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Thomas Graff Levee Sec	327 Phone No. X2772

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

☆ U. S. Government Printing Office: 1979—281-184/8

ROUTING OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE FOR APPROVAL

(Used to route ENG Form 4025 with items attached. Not to become a part of the Contractor's record.)

	TO:	FROM:	DATE
1	CONST. DIV.	N.O.R.O.	10-25-85

The attached items listed on ENG Form 4025 are forwarded for approval action.

CONTRACT NUMBER	CONTRACTOR
DACW29-85-C-0171	S. A. LAURENT, INC
TRANSMITTAL NUMBERS ALT BORROW SOURCE LTR DTD 23OCT85	**PROJECT TITLE AND LOCATION** Loudon Ave - W. END Blvd. N.O.L.L.

COMMENTS *(Attach additional sheet, if necessary.)*

EXCAVATION PLAN FOR YOUR REVIEW & APPROVAL &/OR COMMENTS. REQUEST BACK IN N.O.R.O. A.S.A.P. BUT N.L.T. 11-22-85 (INCL ARE BORING LOGS.)

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE
26	Richard Hill	Richard T. Hill Jr.

	TO:	FROM:	DATE
2	C/ENG DIV	C/CONST DIV	28OCT85

COMMENTS *(Attach additional sheet, if necessary.)*

PLEASE REVIEW THE ABOVE STATED SUBMITTAL & FURNISH YOUR CMTS & RECOMS TO THIS OFFICE

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE
	DONALD F. HULL Chief Construction Division	Donald F. Hull

	TO:	FROM:	DATE
3	C/Const Div	C/Engr Div	19 Nov 85

COMMENTS *(Attach additional sheet, if necessary.)*

see attached sheet for comments.

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE
NC	FREDERIC CHATRY, Chief Engineering Div	For RBF

	TO:	FROM:	DATE
4			

The following action codes are given to items listed on ENG Form 4025:

ACTION CODES

A - APPROVED AS SUBMITTED.

B - APPROVED, EXCEPT AS NOTED ON DRAWINGS. RESUBMISSION NOT REQUIRED.

C - APPROVED, EXCEPT AS NOTED ON DRAWINGS. REFER TO ATTACHED SHEET. RESUBMISSION REQUIRED.

D - WILL BE RETURNED BY SEPARATE CORRESPONDENCE.

E - DISAPPROVED (SEE ATTACHED)

F - RECEIPT ACKNOWLEDGED

G - OTHER *(specify)*

ACTION CODES TO BE INSERTED IN COLUMN G, SECTION I, ENG FORM 4025 *(Attach sheets, when required.)*

ITEM NO. *(Taken from ENG Form 4025)*								
CODE GIVEN								

REMARKS

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE

ENG FORM 1 NOV 74 4026 EDITION OF NOV 66 MAY BE USED.

☆ U.S. Government Printing Office: 1983—413-053

19 Nov 85
Mr Graff / 2772

N.O. Lakefront Levee, London Ave to West End
Comments on Contractor furnished Borrow Pit

1. As required in para. 2-3.1 of the specifications, borings must be taken within 250 feet of all borrow boundaries. Therefore that portion of the proposed borrow area not within the 250 feet limit shall not be used for borrow without additional boring coverage.

2. Soil borings indicate a large amount of roots are present. Therefore strict quality control must be maintained to restrict unsuitable materials as stated in para. 3-5.2.

5

3. Soil must be tested for establishment of turf as stated in Section 4 of the specifications.

If the contractor follows the specifications and the above comments, Engineering Division has no objection to this contractor furnished borrow source.

6719 AIRLINE HWY., METAIRIE, LA.
MAILING ADDRESS:
P.O. BOX 1206, METAIRIE, LA. 70004

Front End Loader
Dump Truck *Back Hoe* *Bulldozer*
Equipment Rental
River Sand *Shells*
Low Boy Service
Land Clearing *Grading* *Filling*

October 23, 1985

Mr. Eugene S. Witherspoon
Contracting Officer
Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160

Attention: Mr. Richard T. Hill
N. O. Resident Engineer

RE: Contract No. DACW 29-85-C-0171
New Orleans Lakefront Levee
(London Avenue to West End Blvd)
New Orleans, Louisiana

Gentlemen:

In reference to above project we submit the following excavation plan for the proposed embankment material.

1) We propose to use a Contractor furnished borrow pit as a secondary source for embankment(clay)material.

2) Enclosed is our proposed secondary site location plan with soil boring results indicating classification of material to be excavated.

3) We propose to excavate the borrow pit maintaining a smooth bottom as we proceed. Depth of excavation will be approx. 12 feet from existing ground.

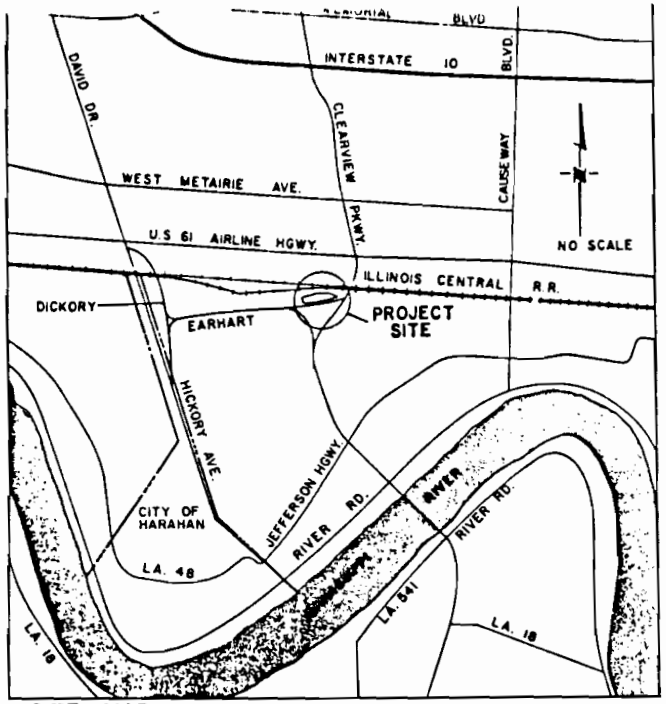
4) We shall implement our "Environmental Protection Plan" in the borrow pit at all times.

Yours very truly,

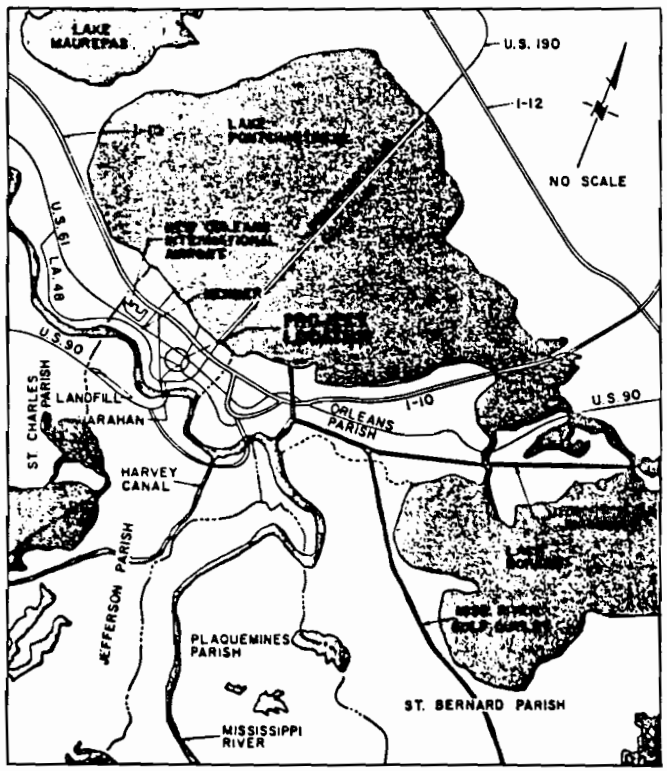
S. A. LAURENT, INC

S. A. Laurent

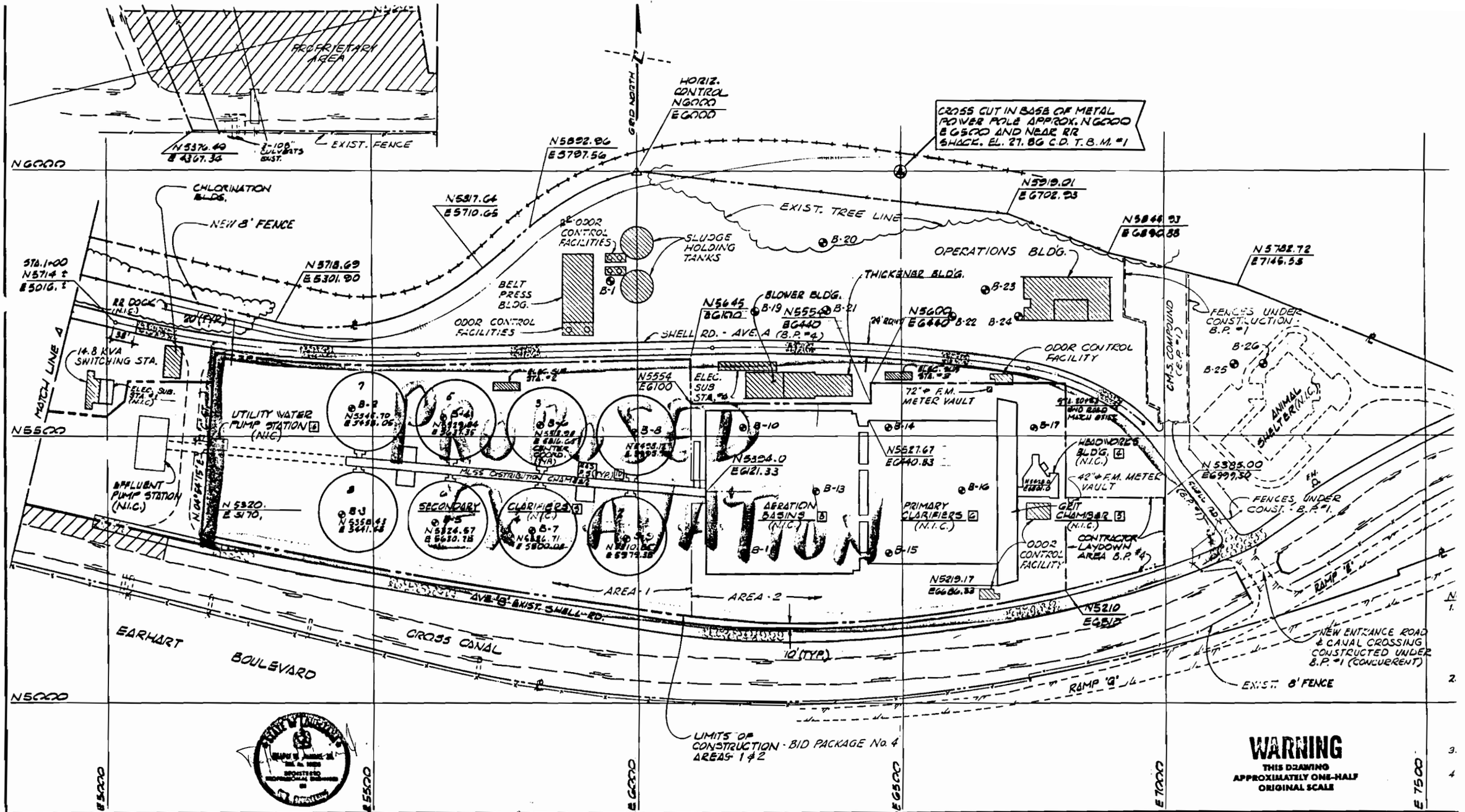
S. A. Laurent, President



SITE MAP



VICINITY MAP



REV	DATE	BY	DESCRIPTION

SCALE: 1"=100'

DESIGNED J.W.S.
DRAWN M. Pierre
CHECKED W. Sullivan

SUBMITTED
PROJECT ENGINEER — 14093 R.C.E. NO. — 9-23-85 DATE

RECOMMENDED
JAMES M. MONTGOMERY CONSULTING ENGINEERS, INC. — 19961 R.C.E. NO. — 25 Sept 85 DATE

JAMES M. MONTGOMERY CONSULTING ENGINEERS, INC.
1001 HOWARD AVENUE, SUITE 3001, NEW ORLEANS, LOUISIANA 70113

APPROVED _____ DATE _____
APPROVED _____ DATE _____

JEFFERSON PARISH
EAST BANK WASTEWATER

SITE PLAN, SOIL BORING LOCATIONS

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

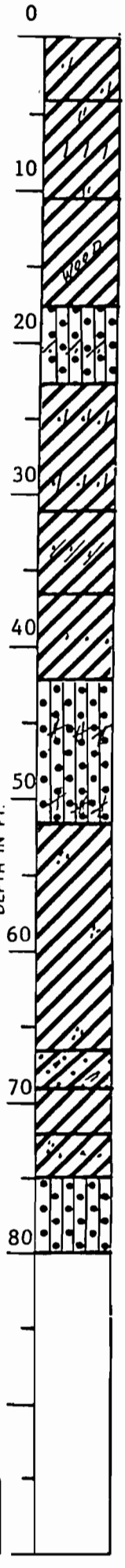
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 1 Soil Technician Robert Waldron Date 27 April 1981

Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0	4.0	Medium stiff tan & gray clay w/sandy		
					silt pockets		
2	5.0	5.5	4.0		Medium stiff gray & tan clay w/silt		
					lenses & pockets		
3	8.0	8.5		10.5	Ditto		
4	11.0	11.5	10.5		Soft to medium stiff gray clay		
					w/decayed wood		
5	14.0	14.5		17.5	Ditto		
6	18.5	19.0	17.5	22.5	Loose gray silty sand w/clayey sand		
					layers		
7	23.5	24.0	22.5		Soft gray clay w/sandy silt lenses &		
					layers		
8	28.5	29.0		31.0	Ditto		
9	33.5	34.0	31.0	36.5	Very soft gray clay w/sandy clay layers		
10	38.5	39.0	36.5	42.0	Very soft gray clay w/sand lenses		
11	43.5	44.0	42.0		Medium dense gray silty sand w/clayey		
					silt layers		
12	48.5	49.0		51.5	Ditto		
13	53.5	54.0	51.5		Soft to medium stiff gray clay w/sand		
					pockets		
14	58.5	59.0			Ditto		
15	63.5	64.0		66.5	Ditto		
16	67.0	67.5	66.5	68.0	Soft gray sandy clay w/clay pockets		
17	68.5	69.0	68.0	72.0	Very stiff greenish-gray & tan clay		
18	73.5	74.0	72.0	75.0	Very stiff gray & tan clay w/sand		
					layers & pockets		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS

Remarks: _____

Predominant type shown heavy. Modifying type shown light

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 1 (cont'd) Soil Technician Robert Waldron Date 27 April 1981

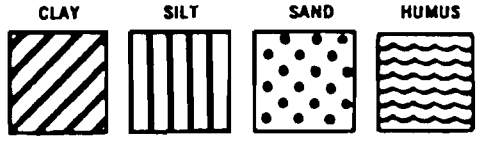
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
19	75.0	76.5	75.0		Medium dense gray silty sand	7	29
20	78.5	80.0		80.0	Ditto	7	19

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

Predominant type shown heavy. Modifying type shown light

LOG OF BORING

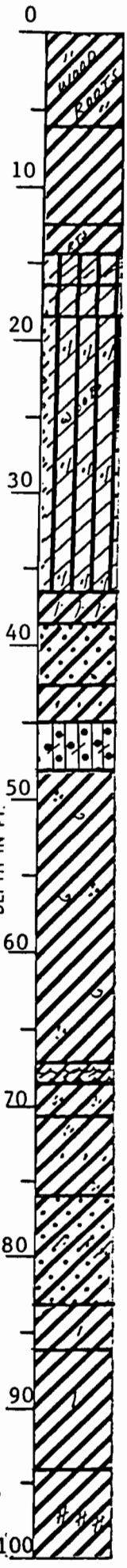
EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana
For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 2 Soil Technician Robert Waldron Date 21 April 1981

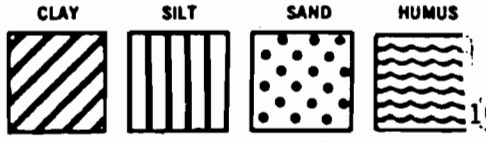
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Medium stiff gray & tan clay w/decayed		
					wood, roots & silt pockets		
2	5.0	5.5		6.0	Ditto		
3	8.0	8.5	6.0		Soft gray clay		
4	11.0	11.5		12.5	Ditto		
5	14.0	14.5	12.5	14.5	Very soft gray clay w/roots		
6	16.0	16.5	14.5	16.5	Medium compact gray clayey silt w/clay		
					lenses		
7	16.5	18.0	16.5	18.5	Compact gray clayey silt	9	23
8	19.0	20.5	18.5		Very loose to loose gray clayey silt	1	2
					w/sandy silt layers & trace of wood		
9	23.5	24.0			Ditto		
10	28.5	29.0			Ditto		
11	30.0	31.5			Ditto	2	6
12	33.5	35.0		36.5	Ditto	2	7
13	36.5	38.0	36.5	38.5	Soft gray clay w/silty sand layers	2	6
14	39.0	39.5	38.5	42.5	Very soft gray sandy clay		
15	43.5	44.0	42.5	45.0	Soft gray clay w/sand layers & lenses		
16	45.0	46.5	45.0	48.0	Medium dense gray silty sand w/clay	4	17
					layers		
17	47.5	49.0	48.0		Medium stiff gray clay w/sand pockets &	7	7
					shell fragments		
18	53.5	54.0			Ditto		
19	58.5	59.0			Ditto		
20	63.5	64.0		67.0	Ditto		
					(continued)		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 2 (cont'd) Soil Technician Robert Waldron Date 21 April 1981

Ground Elev. ________ Datum ________ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	SAMPLE Depth — Feet To	DEPTH STRATUM Feet From	DEPTH STRATUM Feet To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
21	67.5	68.0	67.0	68.5	Medium stiff gray organic clay w/clay		
					layers & decayed wood		
22	69.0	69.5	68.5	70.5	Stiff gray clay w/sand pockets		
23	73.5	74.0	70.5	76.0	Stiff greenish-gray clay w/sand		
					lenses & pockets		
24	78.5	79.0	76.0	83.0	Stiff gray & tan sandy clay w/clayey		
					sand layers		
25	83.5	84.0	83.0	86.0	Stiff gray & tan clay w/trace of silt		
26	88.5	89.0	86.0		Stiff greenish-gray & tan clay w/trace		
					of silt		
27	93.5	94.0		94.0	Ditto		
28	98.5	99.0	94.0	100.0	Stiff gray clay w/clayey sand layers		

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS

Remarks: ________

Predominant type shown heavy. Modifying type shown light.

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

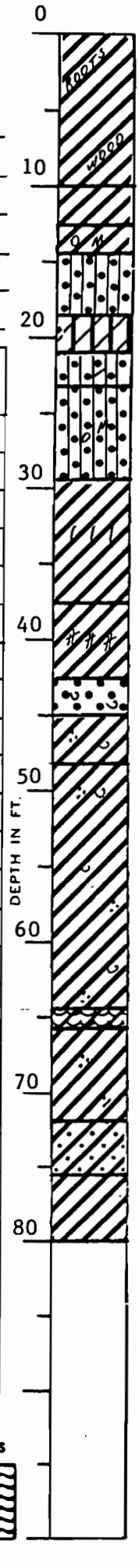
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 3 Soil Technician Robert Waldron Date 22 April 1981

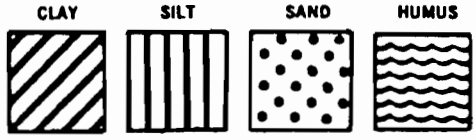
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Soft to medium stiff gray & tan clay		
					w/roots		
2	5.0	5.5			Soft to medium stiff gray & tan clay		
					w/decayed wood		
3	8.0	8.5		10.0	Ditto		
4	11.0	11.5	10.0	12.5	Soft gray clay		
5	14.0	14.5	12.5	14.5	Soft gray clay w/organic matter		
6	17.5	18.0	14.5	18.5	Medium dense gray silty sand		
7	18.5	20.0	18.5	21.0	Medium compact gray clayey silt	6	18
8	21.0	22.5	21.0	23.0	Very loose gray silty sand w/trace of	3	3
					clay		
9	23.5	25.0	23.0		Loose gray silty sand w/organic matter	3	8
10	27.0	28.5		29.5	Ditto	4	6
11	30.0	31.5	29.5		Soft gray clay w/silt lenses	1	3
12	33.0	34.5		37.5	Ditto	2	4
13	38.5	39.0	37.5		Soft gray clay w/clayey sand layers		
14	41.5	42.0		42.5	Ditto		
15	42.5	44.0	42.5	45.0	Dense gray fine sand w/shell fragments	11	38
16	46.0	47.5	45.0	48.0	Soft gray clay w/sand pockets & shell	1	4
					fragments		
17	53.5	54.0	48.0		Medium stiff gray clay w/sand pockets &		
					shell fragments		
18	58.5	59.0			Ditto		
19	63.5	64.0		64.5	Ditto		
20	64.5	65.0	64.5	65.5	Medium stiff brown & gray organic clay		
					(continued)		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 3 (cont'd) Soil Technician Robert Waldron Date 22 April 1981

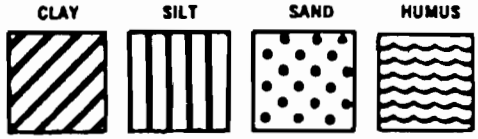
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
21	68.5	69.0	65.5	72.0	Very stiff greenish-gray & tan clay		
					w/sand pockets		
22	73.5	74.0	72.0	75.5	Stiff greenish-gray & tan sandy clay		
23	78.5	79.0	75.5	80.0	Stiff greenish-gray & tan clay		

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Sheet 1 of 2

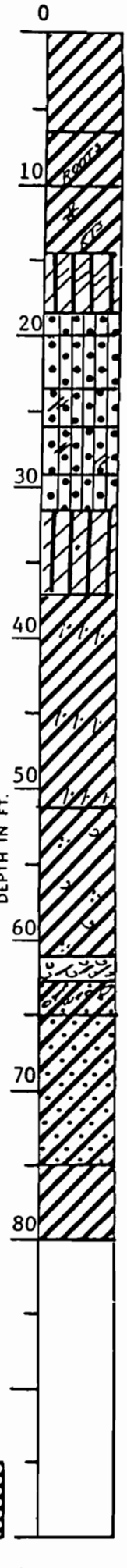
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 4 Soil Technician Robert Waldron Date 24 April 1981

Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Medium stiff gray & tan clay		
2	5.0	5.5		6.5	Ditto		
3	8.0	8.5	6.5	10.0	Medium stiff gray clay w/roots		
4	11.0	11.5	10.0		Soft gray clay w/clayey silt pockets &		
					roots		
5	14.0	14.5		14.5	Ditto		
6	17.5	18.0	14.5	18.5	Loose gray clayey silt w/clay layers &		
					roots		
7	18.5	20.0	18.5	20.0	Medium dense gray silty sand	5	13
8	21.0	22.5	20.0	23.5	Loose gray silty sand	2	5
9	23.5	25.0	23.5	26.0	Medium dense gray silty sand w/clay	2	22
					pockets		
10	27.0	28.5	26.0	29.0	Loose gray silty sand w/clay pockets	2	6
11	30.0	31.5	29.0	31.5	Very loose gray silty sand	2	4
12	33.5	34.0	31.5	37.0	Loose gray clayey silt w/trace of sand		
13	38.5	39.0	37.0		Soft gray clay w/silty sand layers		
14	43.5	44.0			Ditto		
15	48.5	49.0		51.0	Ditto		
16	53.5	54.0	51.0		Medium stiff to stiff gray clay w/sand		
					pockets & shell fragments		
17	58.5	59.0		61.0	Ditto		
18	62.0	62.5	61.0	62.5	Loose gray shells w/clay layers		
19	63.5	64.0	62.5	65.0	Soft gray sandy clay w/decayed wood		
					& organic matter		
20	68.5	69.0	65.0		Stiff greenish-gray & tan sandy clay		
21	73.5	74.0		75.0	Ditto		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS

Remarks: _____

Predominant type shown heavy. Modifying type shown light.

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

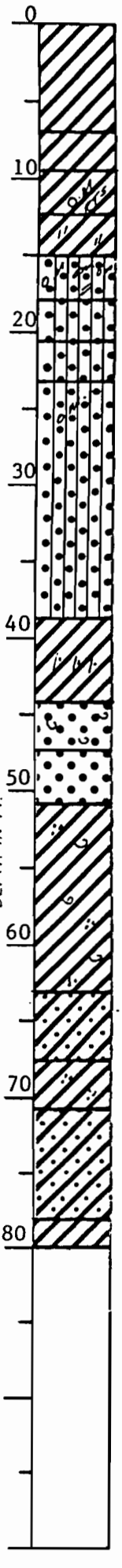
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 5 Soil Technician Robert Waldron Date 23 April 1981

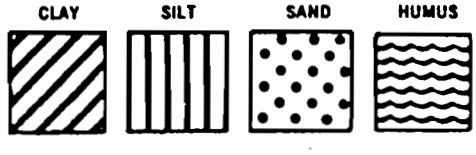
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Soft to medium stiff gray & tan clay		
2	5.0	5.5		7.0	Ditto		
3	8.0	8.5	7.0	9.5	Soft gray clay		
4	11.0	11.5	9.5	12.5	Soft gray clay w/organic matter & roots		
5	14.0	14.5	12.5	15.0	Soft gray clay w/silt pockets		
6	17.0	17.5	15.0	18.0	Loose gray silty sand w/organic matter		
					lenses & clay pockets		
7	18.0	19.5	18.0	20.5	Medium dense gray silty sand	4	11
8	20.5	22.0	20.5	23.0	Loose gray silty sand	3	7
9	23.5	25.0	23.0		Very loose gray silty sand w/organic	1	2
					matter		
10	26.0	27.5			Very loose gray silty sand	1	3
11	28.5	30.0			Ditto	2	4
12	33.5	35.0		38.5	Ditto	2	6
13	38.5	40.0	38.5		Soft gray clay w/silty sand layers	1	2
14	43.0	43.5		44.0	Ditto		
15	45.0	46.5	44.0	47.0	Medium dense gray fine sand w/shell	5	19
					fragments		
16	47.5	49.0	47.0	50.5	Loose gray fine sand	2	7
17	50.5	52.0	50.5		Medium stiff gray clay w/sand pockets &	4	7
					shell fragments		
18	53.5	54.0			Ditto		
19	58.5	59.0			Ditto		
20	61.5	62.0		63.0	Ditto		
21	64.0	64.5	63.0	67.5	Medium stiff gray & tan sandy clay		
					(Continued)		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

Predominant type shown heavy. Modifying type shown light

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Phase II

Name of Project: East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 5 (Cont'd) Soil Technician Robert Waldron Date 23 April 1981

Ground Elev. _____ Datum _____ Gr. Water Depth See Text

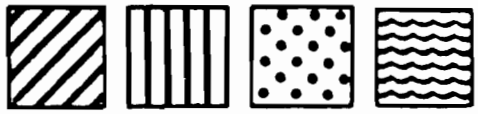
Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
22	68.5	69.0	67.5	70.5	Stiff greenish-gray & tan clay w/sand		
					pockets		
23	73.5	74.0	70.5	78.0	Stiff gray & tan sandy clay		
24	78.5	79.0	78.0	80.0	Very stiff tan & gray clay		

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS



Remarks: _____

Predominant type shown heavy. Modifying type shown light.

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Phase II

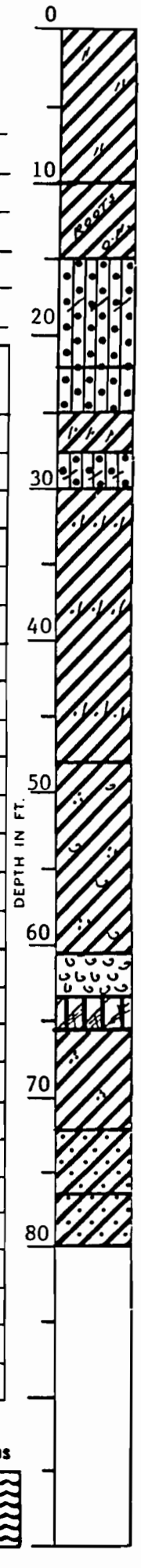
Name of Project: East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 6 Soil Technician Robert Waldron Date 24 April 1981

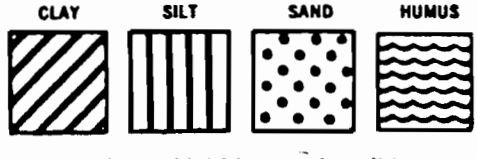
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Medium stiff gray & tan clay w/silt		
					pockets		
2	5.0	5.5			Ditto		
3	8.0	8.5		10.0	Ditto		
4	11.0	11.5	10.0		Soft gray clay w/roots & organic		
					matter		
5	14.0	14.5		15.0	Ditto		
6	18.5	19.0	15.0		Loose gray silty sand w/clay lenses		
7	20.0	21.5		22.0	Loose gray silty sand	2	9
8	22.5	24.0	22.0	25.0	Medium dense gray silty sand	4	15
9	25.5	27.0	25.0	27.5	Soft gray clay w/silty sand lenses &	2	4
					layers		
10	28.5	29.0	27.5	30.0	Loose gray silty sand w/clay lenses		
11	33.5	34.0	30.0		Soft gray clay w/sandy silt lenses		
12	38.5	39.0			Ditto		
13	43.5	44.0		48.0	Ditto		
14	48.5	49.0	48.0		Medium stiff gray clay w/sand pockets		
					& shell fragments		
15	53.5	54.0			Ditto		
16	58.5	59.0		60.5	Ditto		
17	61.5	62.0	60.5	63.5	Loose gray shells		
18	63.5	64.0	63.5	65.5	Loose gray clayey silt w/silty clay		
					layers & decayed wood		
19	68.5	69.0	65.5	72.0	Stiff greenish-gray & tan clay w/sand		
					pockets		
					(Continued)		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Predominant type shown heavy. Modifying type shown light.

Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Phase II

Name of Project: East Bank Wastewater Treatment Plant

Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 6 Soil Technician Robert Waldron Date 24 April 1981

Ground Elev. (Cont'd) Datum Gr. Water Depth See Text

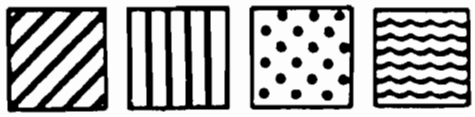
Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
20	73.5	74.0	72.0	76.5	Stiff greenish-gray & tan sandy clay		
21	78.5	79.0	76.5	80.0	Stiff tan & gray sandy clay		

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS



Predominant type shown heavy. Modifying type shown light.

Remarks:

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Phase II

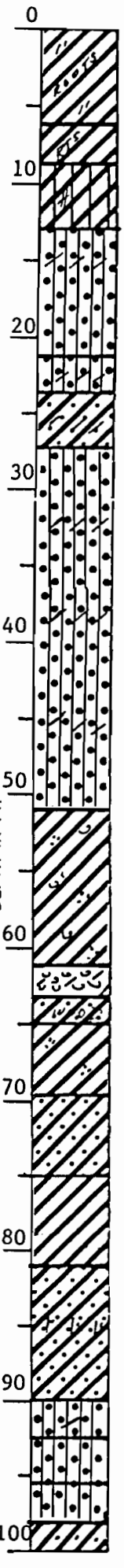
Name of Project: East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 7 Soil Technician Robert Waldron Date 25 April 1981

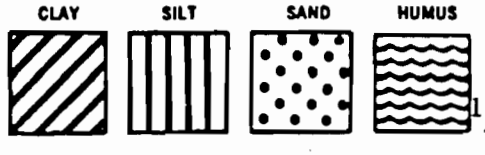
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Soft to medium stiff tan & gray clay		
					w/roots & silt pockets		
2	5.0	5.5		6.0	Ditto		
3	8.0	8.5	6.0	8.5	Soft gray clay w/roots		
4	11.0	11.5	8.5	13.0	Very soft gray silty clay w/clayey		
					silt pockets		
5	14.0	14.5	13.0		Loose gray silty sand w/clay lenses		
6	17.5	18.0			Ditto		
7	19.0	20.5		21.0	Loose gray silty sand	5	9
8	21.5	23.0	21.0	23.5	Very loose gray silty sand w/clay	1	4
					layers		
9	24.0	25.5	23.5	27.0	Soft gray sandy clay w/clay lenses	1	2
10	28.5	29.0	27.0		Loose gray silty sand w/clay lenses		
11	33.5	34.0			Ditto		
12	38.5	39.0			Ditto		
13	43.5	44.0			Ditto		
14	45.0	46.5			Ditto	2	5
15	48.0	49.5		51.0	Ditto	1	8
16	51.0	52.5	51.0		Medium stiff gray clay w/sand pockets	3	4
					& shell fragments		
17	53.5	54.0			Ditto		
18	58.5	59.0		61.0	Ditto		
19	61.5	62.0	61.0	63.0	Medium compact shells w/soft gray clay		
20	63.0	63.5	63.0	65.0	Medium dense gray clayey sand w/decayed		
					wood		
21	68.5	69.0	65.0	69.5	Stiff greenish-gray clay w/sand pockets		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

Predominant type shown heavy. Modifying type shown light.

(Sheet 1)

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Phase II

Name of Project: East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 7 (Cont'd) Soil Technician Robert Waldron Date 25 April 1981

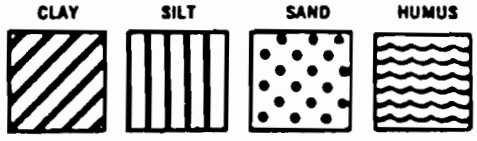
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
22	73.5	74.0	69.5	75.0	Stiff tan & gray sandy clay		
23	78.5	79.0	75.0	81.0	Stiff tan clay		
24	83.5	84.0	81.0		Soft gray sandy clay w/silty sand		
					lenses		
25	88.5	89.0		90.0	Ditto		
26	90.0	91.5	90.0	92.5	Medium dense tan silty sand w/trace	5	17
					of clay		
27	92.5	94.0	92.5	95.5	Dense tan silty sand	12	36
28	96.0	97.5	95.5	98.0	Medium dense tan silty sand	9	26
29	98.5	100.0	98.0	100.0	Medium stiff gray clay w/sand lenses	8	18

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

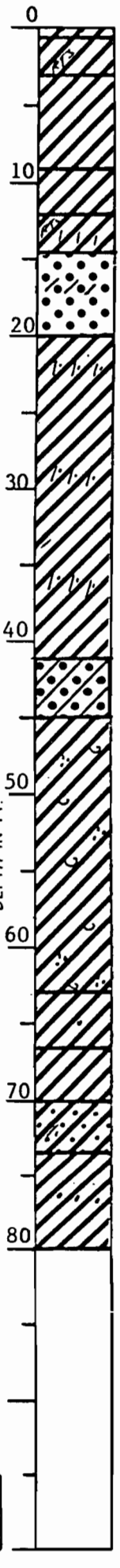
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 8 Soil Technician A. Croal, Jr. Date 27 April 1981

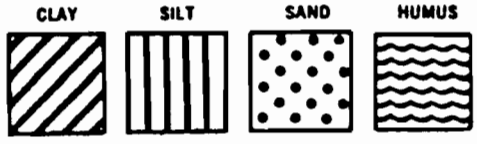
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	0.0	0.5	0.0	0.5	Very stiff gray clay w/roots		
2	2.0	2.5	0.5	3.0	Soft gray clay w/roots		
3	5.0	5.5	3.0		Soft to medium stiff gray & tan clay		
4	8.0	8.5		9.0	Ditto		
5	11.0	11.5	9.0	12.0	Soft gray clay		
6	14.0	14.5	12.0	14.5	Very soft gray clay w/silt lenses &		
					roots		
7	18.5	19.0	14.5	20.0	Very loose to loose gray fine sand		
					w/clay layers		
8	23.5	24.0	20.0		Soft gray clay w/silty sand lenses		
9	28.5	29.0			Ditto		
10	33.5	34.0			Ditto		
11	38.5	39.0		41.0	Ditto		
12	43.5	44.0	41.0	45.0	Loose gray clayey sand		
13	48.5	49.0	45.0		Medium stiff gray clay w/sand pockets		
					& shell fragments		
14	53.5	54.0			Ditto		
15	58.5	59.0		63.0	Medium stiff gray clay w/sand pockets		
					& shell fragments		
16	63.5	64.0	63.0	66.5	Medium stiff gray & tan clay w/trace		
					of sand		
17	67.0	67.5	66.5	70.0	Stiff greenish-gray & tan clay		
18	72.0	72.5	70.0	73.5	Stiff gray & tan sandy clay w/clayey		
					sand pockets		
19	77.0	77.5	73.5	80.0	Stiff gray & tan clay w/sand lenses		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Predominant type shown heavy. Modifying type shown light.

Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Sheet 1 of 2

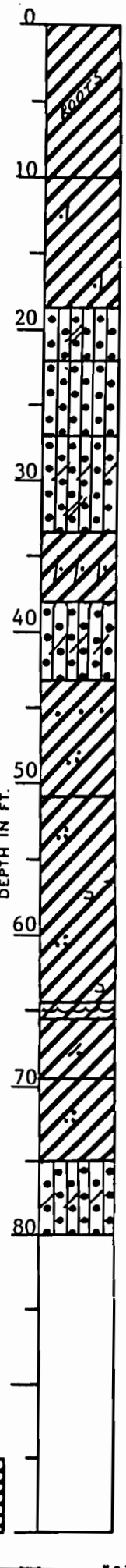
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 9 Soil Technician Robert Waldron Date 27 April 1981

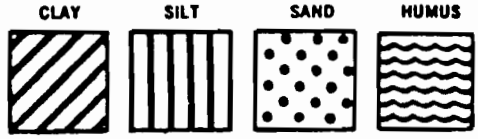
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Medium stiff gray & tan clay w/roots		
2	5.0	5.5			Ditto		
3	8.0	8.5		10.0	Ditto		
4	11.0	11.5	10.0		Very soft to soft gray clay w/sandy silt pockets		
5	14.0	14.5		18.5	Ditto		
6	19.0	19.5	18.5		Loose gray silty sand w/clay pockets		
7	20.0	21.5		22.0	Ditto	2	10
8	22.5	24.0	22.0		Very loose gray silty sand	2	5
9	25.0	26.5		27.0	Ditto	1	4
10	27.5	29.0	27.0		Loose gray silty sand w/clay lenses & pockets	6	7
11	30.0	31.5		33.5	Ditto	2	5
12	35.0	36.5	33.5	38.0	Soft gray clay w/silty sand lenses	1	4
13	38.5	40.0	38.0	43.0	Loose gray silty sand w/clay lenses & layers	2	6
14	43.5	44.0	43.0		Soft gray clay w/sand lenses & pockets		
15	48.5	49.0		51.0	Ditto		
16	53.5	54.0	51.0		Medium stiff gray clay w/sand pockets & shell fragments		
17	58.5	59.0			Ditto		
18	63.5	64.0		64.5	Ditto		
19	64.5	65.0	64.5	65.5	Stiff brown & gray organic clay		
20	68.5	69.0	65.5	69.5	Stiff greenish-gray & tan clay w/clayey sand pockets		
					(Continued)		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Predominant type shown heavy. Modifying type shown light.

Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 9 (Cont'd) Soil Technician Robert Waldron Date 27 April 1981

Ground Elev. _____ Datum _____ Gr. Water Depth See Text

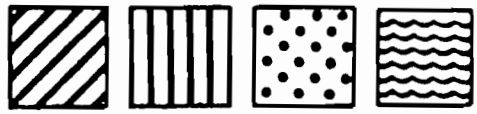
Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
21	73.5	74.0	69.5	75.0	Stiff greenish-gray & tan clay w/sand pockets		
22	78.5	79.0	75.0	80.0	Loose gray & tan silty sand w/clay lenses		

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS



type shown heavy. Modifying type

Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Sheet 1 of 2

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 10 Soil Technician Robert Waldron Date 30 April 1981

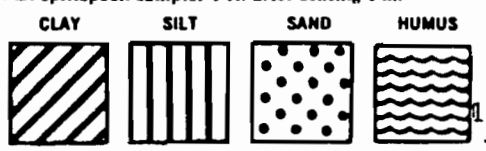
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Medium stiff tan & gray clay w/roots		
					& trace of organic matter		
2	5.0	5.5		6.5	Medium stiff gray & tan clay		
3	8.0	8.5	6.5		Soft to medium stiff gray clay		
4	11.0	11.5		13.0	Soft to medium stiff gray clay w/clayey		
					silt layers & roots		
5	14.0	14.5	13.0	17.0	Soft gray clay w/trace of organic matter		
6	18.5	19.0	17.0		Soft gray clay w/silt lenses		
7	23.5	24.0			Soft gray clay w/silty sand layers		
8	28.5	29.0			Soft gray clay w/silt lenses		
9	33.5	34.0			Soft gray clay w/sandy silt layers		
10	38.5	39.0		43.0	Soft gray clay w/silty sand lenses		
11	43.5	44.0	43.0	46.0	Loose gray silty sand		
12	48.5	49.0	46.0		Soft to medium stiff gray clay w/sand		
					pockets & shell fragments		
13	53.5	54.0			Ditto		
14	58.5	59.0			Ditto		
15	63.5	64.0		65.0	Ditto		
16	68.5	69.0	65.0		Stiff gray & tan sandy clay		
17	73.5	74.0		75.0	Ditto		
18	77.5	78.0	75.0	78.5	Loose tan & gray clayey sand		
19	79.0	80.5	78.5		Medium dense tan silty sand w/trace of	7	23
					clay		
20	81.5	83.0		84.0	Medium dense tan silty sand	4	17
21	84.0	85.5	84.0		Dense tan silty sand w/trace of clay	7	38
					(Continued)		

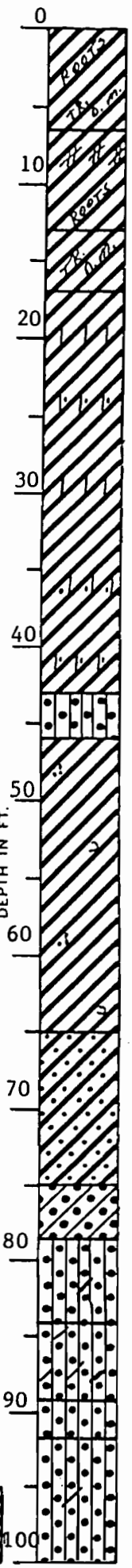
*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Remarks: _____



Predominant type shown heavy. Modifying type shown light.



LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 10 (Cont'd) Soil Technician Robert Waldron Date 30 April 1981

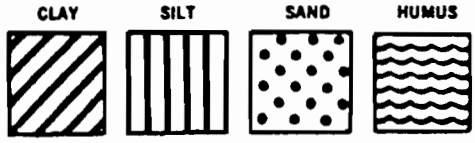
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
22	86.5	88.0		89.0	Dense tan silty sand w/clay layers	3	18
23	89.0	90.5	89.0	91.5	Very dense tan silty sand	14	50=11"
24	91.5	93.0	91.5		Dense tan silty sand w/trace of clay	10	35
25	95.0	96.5			Dense tan silty sand	12	40
26	98.5	100.0		100.0	Ditto		

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Predominant type shown heavy. Modifying type shown light.

Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

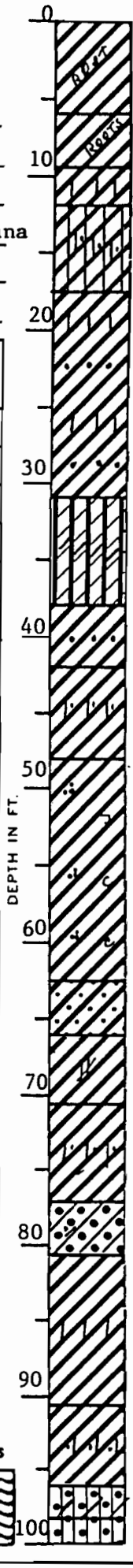
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 11 Soil Technician George Hardee Date 19 May 1981

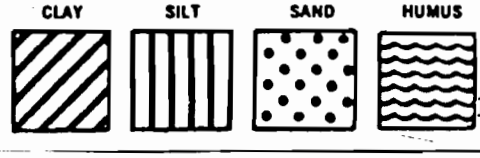
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Soft to medium stiff gray & tan clay w/roots		
2	5.0	5.5		6.0	Ditto		
3	8.0	8.5	6.0	9.5	Soft gray clay w/roots		
4	11.0	11.5	9.5	12.0	Soft gray clay w/silt lenses		
5	14.0	14.5	12.0	17.5	Very soft gray silty clay w/silty sand layers & lenses		
6	18.5	19.0	17.5		Soft gray clay w/silt lenses & sand lenses		
7	23.5	24.0			Ditto		
8	28.5	29.0		31.0	Ditto		
9	33.5	34.0	31.0	38.0	Loose gray clayey silt w/clay layers		
10	38.5	39.0	38.0	42.0	Soft gray clay w/sand layers		
11	43.5	44.0	42.0	48.0	Soft gray clay w/silty sand layers		
12	48.5	49.0	48.0		Soft to medium stiff gray clay w/sand pockets & shell fragments		
13	53.5	54.0			Ditto		
14	58.5	59.0		62.5	Ditto		
15	63.5	64.0	62.5	66.0	Stiff greenish-gray sandy clay		
16	68.5	69.0	66.0	70.5	Stiff greenish-gray & tan clay w/clayey silt pockets		
17	73.5	74.0	70.5	77.0	Medium stiff tan & gray clay w/silty sand layers		
18	78.5	79.0	77.0	80.5	Loose gray clayey sand w/sandy clay layers		
					(Continued)		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 11 (Cont'd) Soil Technician George Hardee Date 19 May 1981

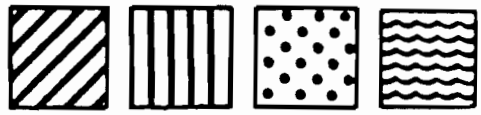
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	SAMPLE Depth — Feet To	DEPTH STRATUM Feet From	DEPTH STRATUM Feet To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
19	83.5	84.0	80.5		Stiff tan & light gray clay w/silt		
					lenses		
20	88.5	89.0		90.5	Ditto		
21	93.5	94.0	90.5	96.0	Medium stiff gray & tan clay w/sandy		
					silt lenses		
22	97.0	97.5	96.0	98.0	Loose gray silty sand w/clay lenses &		
					layers		
23	98.5	100.0	98.0	100.0	Dense gray silty sand	8	32

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II

East Bank Wastewater Treatment Plant

Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 12 Soil Technician Robert Waldron Date 28 April 1981

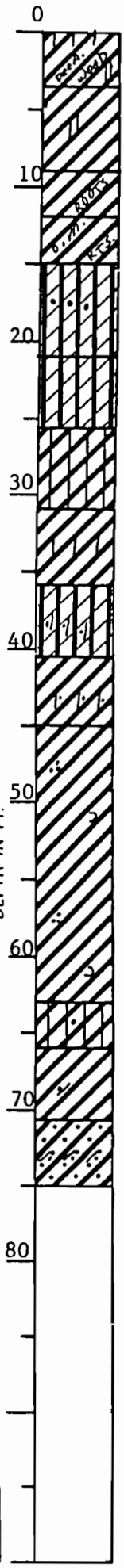
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

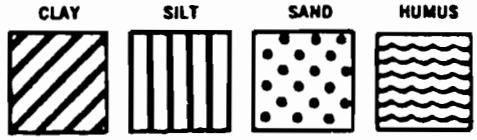
Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0	3.5	Medium stiff gray & tan clay w/silt		
					lenses, pockets & decayed wood		
2	5.0	5.5	3.5		Medium stiff gray & tan clay		
3	8.0	8.5		9.0	Medium stiff gray & tan clay w/silt		
					pockets		
4	11.0	11.5	9.0	12.0	Medium stiff gray clay w/roots		
5	14.0	14.5	12.0	15.0	Soft gray clay w/organic matter & roots		
6	18.5	19.0	15.0	21.0	Medium compact gray clayey silt w/sand		
					lenses		
7	23.5	24.0	21.0	25.5	Loose gray clayey silt		
8	28.5	29.0	25.5	31.0	Soft gray silty clay		
9	33.5	34.0	31.0	36.0	Soft gray clay w/silt lenses & pockets		
10	38.5	39.0	36.0	40.5	Loose gray clayey silt w/sandy silt		
					layers		
11	43.5	44.0	40.5	45.0	Soft gray clay w/silty sand lenses		
12	48.5	49.0	45.0		Medium stiff gray clay w/sand pockets		
					& shell fragments		
13	53.5	54.0			Ditto		
14	58.5	59.0			Ditto		
15	62.0	62.5		63.0	Ditto		
16	64.0	64.5	63.0	66.0	Stiff gray & tan silty clay w/trace of		
					sand		
17	68.5	69.0	66.0	70.5	Very stiff greenish-gray & tan clay		
					w/sandy clay pockets		
18	73.5	74.0	70.5	75.0	Medium stiff gray & tan sandy clay		
					w/clayey sand layers		

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Remarks: _____





Predommant type shown heavy. Modifying type shown light.

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Sheet 1 of 3

Name of Project: Phase II

East Bank Wastewater Treatment Plant

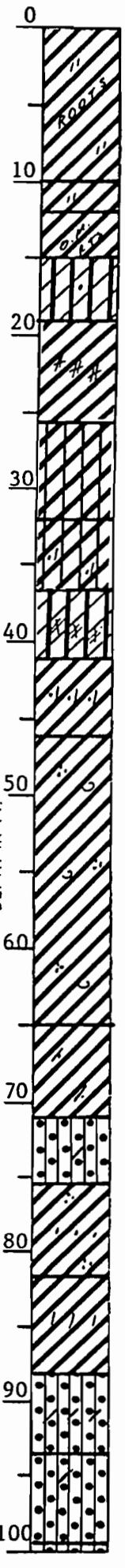
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 13 Soil Technician Robert Waldron Date 1 - 4 May 1981

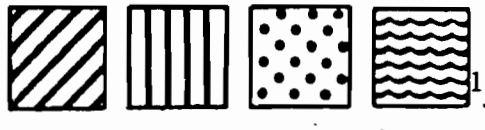
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Medium stiff gray & tan clay w/roots &		
					silt pockets		
2	5.0	5.5			Ditto		
3	8.0	8.5		10.0	Ditto		
4	11.0	11.5	10.0	12.0	Soft gray clay w/silt pockets		
5	14.0	14.5	12.0	15.0	Very soft gray clay w/organic matter &		
					roots		
6	18.5	19.0	15.0	19.0	Loose gray clayey silt w/trace of sand		
7	23.5	24.0	19.0	25.5	Soft gray clay w/clayey silt layers		
8	28.5	29.0	25.5	32.0	Soft gray silty clay		
9	33.5	34.0	32.0	36.5	Extremely soft gray silty clay w/sandy		
					silt pockets		
10	38.5	39.0	36.5	41.0	Loose gray clayey silt w/silty clay		
					layers		
11	43.5	44.0	41.0	46.0	Soft gray clay w/sandy silt layers		
12	48.5	49.0	46.0		Soft to medium stiff gray clay w/sand		
					pockets & shell fragments		
13	53.5	54.0			Ditto		
14	58.5	59.0			Ditto		
15	63.5	64.0		65.0	Ditto		
16	68.5	69.0	65.0	71.0	Stiff greenish-gray & tan clay w/clayey		
					sand pockets		
17	73.5	74.0	71.0	75.5	Medium dense greenish-gray silty sand		
					w/some clay		
18	78.5	79.0	75.5	81.5	Stiff tan & gray clay w/sand lenses &		
					pockets		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

Predominant type shown heavy. Modifying type shown light

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

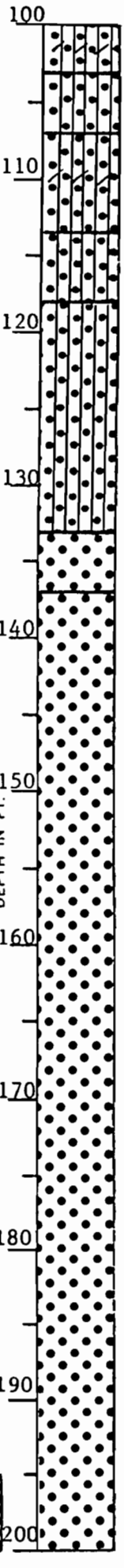
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 13 (Cont'd) Soil Technician Robert Waldron Date 1 - 4 May 1981

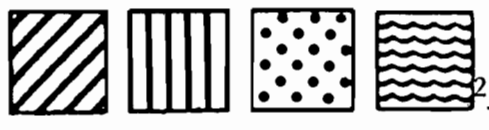
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
19	83.5	84.0	81.5	88.0	Medium stiff gray clay w/silt lenses		
20	88.5	89.0	88.0		Loose tan silty sand w/clay layers		
21	92.5	93.0		93.5	Ditto		
22	94.0	95.5	93.5		Dense tan silty sand w/trace of clay	11	43
23	96.5	98.0		99.5	Dense tan silty sand	10	36
24	99.0	100.5	99.5		Medium dense gray silty sand	18	23
25	101.5	103.0		103.0	Medium dense gray silty sand w/ clay layers	3	20
26	104.0	105.5	103.0	107.0	Dense gray silty sand	15	50
27	108.5	110.0	107.0	113.5	Medium dense gray silty sand w/clay layers	3	15
28	113.5	115.0	113.5	118.0	Dense gray silty sand	10	39
29	118.5	119.0	118.0		Very dense gray silty sand	9	50=11"
30	123.5	125.0			Ditto	18	50=11"
31	128.5	130.0		133.0	Ditto	24	50=7"
32	133.5	135.0	133.0	137.0	Dense gray fine sand	11	37
33	138.5	140.0	137.0		Very dense gray fine sand	25	50=7"
34	143.5	145.0			Ditto	16	50=7"
35	148.5	150.0			Ditto	24	50=6"
36	153.5	155.0			Ditto	26	50=5"
37	158.5	160.0			Ditto	17	50=7"
38	163.5	165.0			Ditto	20	50=8"
39	168.5	170.0			Ditto	30	50=5"
40	173.5	175.0			Ditto	29	50=6"
41	178.5	180.0			Ditto	25	50=6"
42	183.5	185.0			Ditto	28	50=7"



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

Predominant type shown heavy. Modifying type shown light.

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 13 (Cont'd) Soil Technician Robert Waldron Date 1 - 4 May 1981

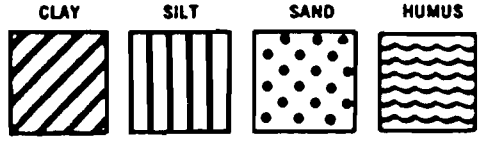
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
43	188.5	190.0			Very dense gray fine sand	26	50=6"
44	193.5	194.0			Ditto	32	50=4"
45	198.5	200.0			Ditto	34	50=3"

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Predominant type shown heavy. Modifying type shown light.

Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Phase II

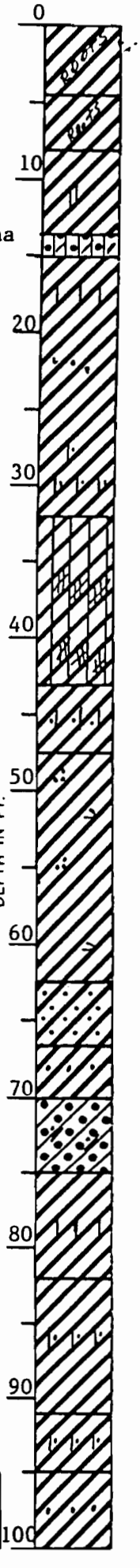
Name of Project: East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 14 Soil Technician Robert Waldron & George Hardee Date 20 May 1981

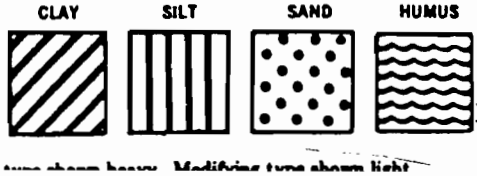
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0	4.5	Soft gray & tan clay w/roots		
2	5.0	5.5	4.5	8.0	Medium stiff gray & tan clay w/roots		
3	8.0	8.5	8.0		Soft gray clay w/silt pockets		
4	11.0	11.5		13.5	Ditto		
5	14.0	14.5	13.5	15.0	Loose gray silty sand w/clay layers		
6	18.5	19.0	15.0		Very soft to soft gray clay w/silt & sand lenses		
7	23.5	24.0			Very soft to soft gray clay w/silty sand pockets & layers		
8	28.5	29.0		32.0	Ditto		
9	33.5	34.0	32.0		Soft to medium stiff gray silty clay w/clayey silt layers		
10	38.5	39.0		43.0	Ditto		
11	43.5	44.0	43.0	47.5	Soft gray clay w/sandy silt lenses		
12	48.5	49.0	47.5		Soft to medium stiff gray clay w/sand pockets & shell fragments		
13	53.5	54.0			Ditto		
14	58.5	59.0		63.5	Ditto		
15	63.5	64.0	63.5	66.5	Stiff greenish-gray & tan sandy clay		
16	68.5	69.0	66.5	70.0	Stiff greenish-gray & tan clay w/sand layers		
17	73.5	74.0	70.0	75.0	Dense greenish-gray & tan clayey sand w/sandy clay pockets		
18	78.5	79.0	75.0	82.0	Stiff gray & tan clay w/silt lenses		
19	83.5	84.0	82.0		Medium stiff tan & gray clay w/large silty sand layers		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

Predominant type shown heavy. Modifying type shown light

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 14 (Cont'd) Soil Technician Robert Waldron & George Hardee Date 20 May 1981

Ground Elev. _____ Datum _____ Gr. Water Depth See Text

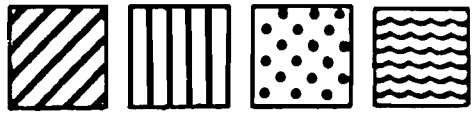
Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
20	89.0	89.5		91.0	Medium stiff tan & gray clay w/large silty sand layers		
21	93.5	94.0	91.0	95.0	Stiff gray & tan clay w/silty sand layers		
22	98.5	99.0	95.0	100.0	Stiff gray clay w/sand lenses		

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS



Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Sheet 1 of 2

Phase II

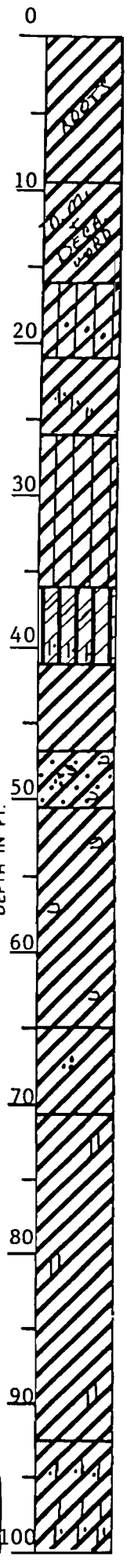
Name of Project: East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 15 Soil Technician R. Courtiade Date 20 May 1981

Ground Elev. _____ Datum _____ Gr. Water Depth See Text

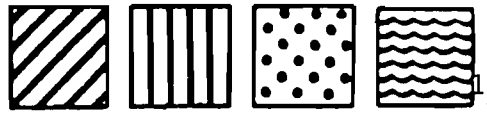
Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Soft to medium stiff gray & tan clay		
					w/roots		
2	5.0	5.5			Ditto		
3	8.0	8.5		9.5	Ditto		
4	11.0	11.5	9.5		Soft gray clay w/organic matter &		
					decayed wood		
5	14.0	14.5		16.0	Ditto		
6	18.5	19.0	16.0	21.0	Soft gray silty clay w/few sand		
					layers		
7	23.5	24.0	21.0	26.0	Soft gray clay w/silty sand lenses		
8	28.5	29.0	26.0		Very soft to soft gray silty clay		
9	33.5	34.0		36.0	Ditto		
10	38.0	38.5	36.0	41.0	Loose gray clayey silt w/clay layers &		
					silty sand layers		
11	43.5	44.0	41.0	47.0	Medium stiff gray clay		
12	48.5	49.0	47.0	50.5	Soft gray sandy clay w/sand pockets &		
					shell fragments		
13	53.0	53.5	50.5		Medium stiff to stiff gray clay with		
					shell fragments		
14	57.5	58.0			Ditto		
15	63.5	64.0		65.0	Ditto		
16	67.5	68.0	65.0	70.5	Very stiff greenish-gray & tan clay		
					w/sand pockets		
17	73.5	74.0	70.5		Stiff to very stiff tan & gray clay		
					w/silt pockets		
18	78.5	79.0			Ditto		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS



Remarks: _____

Predominant type shown heavy. Modifying type shown light.

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 15 Soil Technician R. Courtiade Date 20 May 1981

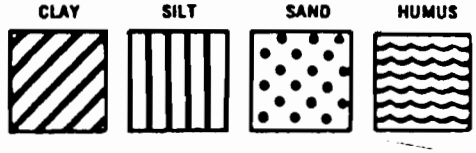
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
19	83.0	83.5			Stiff to very stiff tan & gray clay		
					w/silt pockets		
20	88.5	89.0		92.5	Stiff to very stiff tan & gray clay		
					w/silty sand lenses & many		
					concretions		
21	93.5	94.0	92.5		Medium stiff to stiff gray clay with		
					sandy silt lenses		
22	98.5	99.0		100.0	Medium stiff to stiff gray clay w/silt		
					lenses & silty sand layers		

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Sheet 1 of 3

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 16 Soil Technician Robert Waldron Date 20 & 21 May 1981

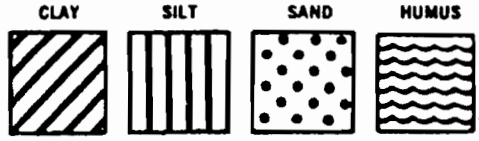
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0	3.5	Soft gray & tan clay		
2	5.0	5.5	3.5	7.5	Soft gray clay w/silt pockets & roots		
3	8.0	8.5	7.5	10.5	Soft gray & tan clay w/silty clay pockets		
4	11.0	11.5	10.5	13.0	Soft gray clay w/organic matter & large roots		
5	14.0	14.5	13.0	16.0	Soft gray silty clay w/silty sand lenses		
6	18.5	19.0	16.0	21.0	Medium dense gray silty sand		
7	23.5	24.0	21.0		Soft gray clay w/silty sand lenses		
8	28.5	29.0			Ditto		
9	33.5	34.0			Ditto		
10	38.5	39.0		43.0	Ditto		
11	43.5	44.0	43.0	47.5	Loose gray clayey sand		
12	48.5	49.0	47.5		Soft to medium stiff gray clay w/sand pockets & shell fragments		
13	53.5	54.0			Ditto		
14	58.5	59.0		62.5	Ditto		
15	62.5	63.0	62.5	64.0	Stiff gray clay w/organic clay layers & shell fragments		
16	64.0	64.5	64.0	67.0	Medium stiff gray & tan clay w/sand pockets		
17	68.5	69.0	67.0		Stiff to very stiff greenish-gray & tan sandy clay		
18	73.5	74.0		76.0	Ditto		
					(Continued)		

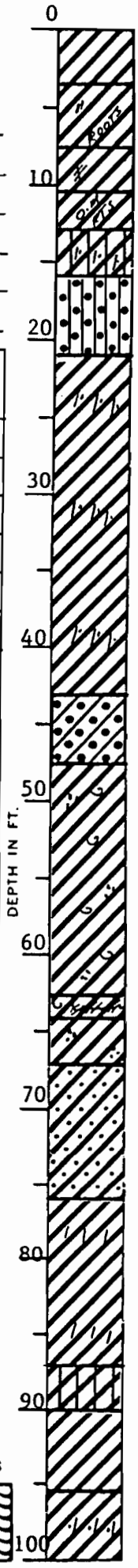
*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Remarks: _____



Predominant type shown heavy. Modifying type shown light.



LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

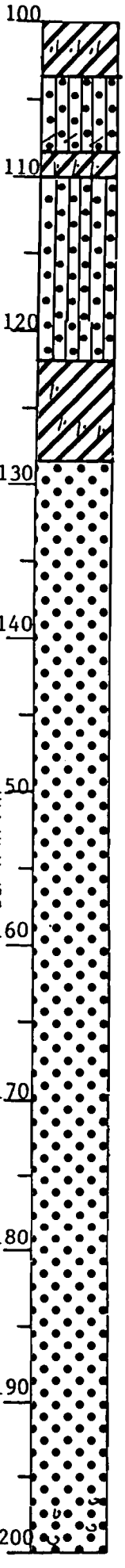
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 16 Soil Technician Robert Waldron Date 20 & 21 May 1981

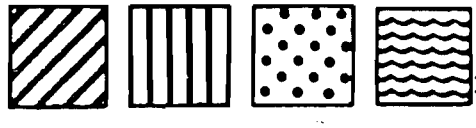
Ground Elev. (Cont'd) Datum Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
19	78.5	79.0	76.0		Stiff to very stiff tan & gray clay		
					w/silt lenses		
20	83.5	84.0		87.0	Ditto		
21	88.5	89.0	87.0	90.0	Stiff gray & tan silty clay		
22	93.5	94.0	90.0	95.5	Very stiff gray & tan clay		
23	98.5	99.0	95.5		Medium stiff to stiff gray clay w/sandy		
					silt lenses & layers		
24	102.5	103.0		103.5	Ditto		
25	103.5	105.0	103.5		Dense gray silty sand	10	36
26	106.0	107.5		108.5	Dense gray silty sand w/clay layers	10	32
27	108.5	110.0	108.5	110.0	Medium stiff gray clay w/silty sand	4	15
					pockets & lenses		
28	111.0	112.5	110.0		Very dense gray silty sand	10	50=9"
29	113.5	115.0			Ditto	30	50=7"
30	118.5	120.0		122.0	Very dense gray silty sand w/decayed	40	50=6"
					vegetation		
31	123.5	125.0	122.0		Medium stiff to stiff gray clay w/silty	5	14
					sand pockets & lenses		
32	127.5	128.0		128.5	Medium stiff to stiff gray clay w/silty		
					sand layers & lenses		
33	128.5	130.0	128.5		Very dense gray fine sand	10	50=11"
34	133.5	135.0			Ditto	22	50=6"
35	138.5	140.0			Ditto	25	50=6"
36	143.5	145.0			Ditto	29	50=5"
37	148.5	150.0			Ditto	23	50=7"
38	153.5	155.0			Ditto	35	50=5"



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks:

Predominant type shown heavy. Modifying type shown light

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 16 (Cont'd) Soil Technician Robert Waldron Date 20 & 21 May 1981

Ground Elev. _____ Datum _____ Gr. Water Depth See Text

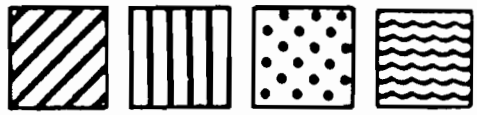
Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
39	158.5	160.0			Very dense gray fine sand	37	50=4"
40	163.5	165.0			Ditto	48	50=4"
41	168.5	170.0			Ditto	35	50=5"
42	173.5	175.0			Ditto	24	50=7"
43	178.5	180.0			Ditto	50	50=4"
44	183.5	185.0			Ditto	50=6"	(Seat)
45	188.5	190.0			Ditto	50=6"	(Seat)
46	193.5	195.0			Ditto	50=6"	(Seat)
47	198.5	200.0		200.0	Very dense gray fine sand w/shells	65=5"	(Seat)

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS



Remarks: _____

driving type shown light

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Sheet 1 of 2

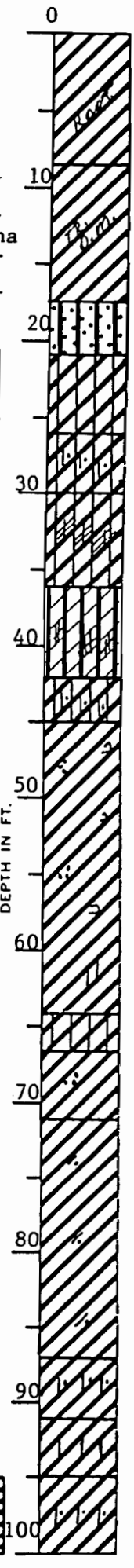
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 17 Soil Technician George Hardee Date 20 & 21 May 1981

Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Soft to medium stiff gray & tan clay		
					w/roots		
2	5.0	5.5			Ditto		
3	8.0	8.5		8.5	Ditto		
4	11.0	11.5	8.5		Soft gray clay w/trace of organic matter		
5	14.0	14.5		17.5	Ditto		
6	18.5	19.0	17.0	21.0	Medium compact gray sandy silt		
7	23.5	24.0	21.0	26.0	Soft gray silty clay		
8	28.5	29.0	26.0	30.0	Very soft gray silty clay w/silty sand		
					layers		
9	33.5	34.0	30.0	36.0	Soft gray silty clay w/clayey silt		
					layers		
10	38.5	39.0	36.0	42.0	Loose gray clayey silt w/silty clay		
					layers		
11	43.5	44.0	42.0	45.0	Very soft gray silty clay w/silty sand		
					layers		
12	48.5	49.0	45.0		Medium stiff to stiff gray clay w/sand		
					pockets & shell fragments		
13	53.5	54.0			Ditto		
14	58.5	59.0		64.0	Medium stiff to stiff gray clay w/silt		
					pockets		
15	64.0	64.5	64.0	66.5	Soft gray silty clay		
16	68.5	69.0	66.5	71.0	Stiff greenish-gray & tan clay w/sand		
					pockets		
17	73.5	74.0	71.0		Stiff tan & gray clay w/clayey sand		
					pockets		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS

Remarks: _____

Predominant type shown heavy. Modifying type shown light. (Sheet 1)

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Phase II

Name of Project: East Bank Wastewater Treatment Plant

Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 17 Soil Technician George Hardee Date 20 & 21 May 1981

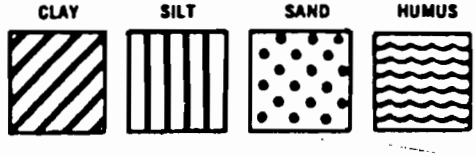
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	SAMPLE Depth — Feet To	DEPTH STRATUM Feet From	DEPTH STRATUM Feet To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
18	78.5	79.0			Stiff tan & gray clay w/clayey sand pockets		
19	83.5	84.0		87.0	Ditto		
20	88.5	89.0	87.0	91.0	Medium stiff tan & gray clay w/silty sand lenses		
21	93.5	94.0	91.0	95.0	Medium stiff greenish-gray clay w/silt lenses		
22	98.5	99.0	95.0	100.0	Medium stiff gray clay w/silty sand lenses & layers		

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

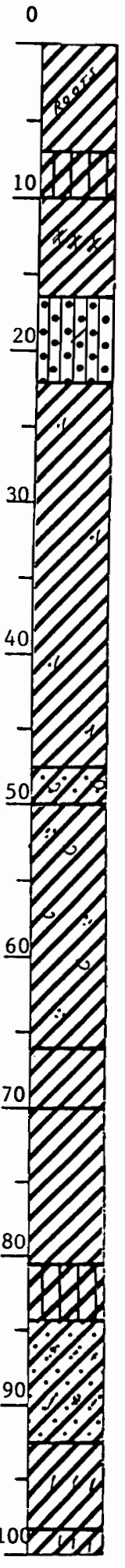
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 18 Soil Technician Robert Waldron Date 13 May 1981

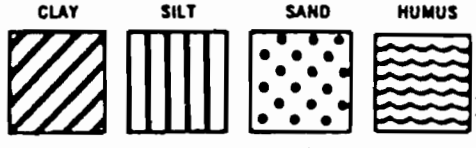
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Soft gray & tan clay w/roots		
2	5.0	5.5		7.0	Ditto		
3	8.0	8.5	7.0	10.0	Soft gray & tan silty clay		
4	11.0	11.5	10.0		Soft to medium stiff gray clay w/silty clay layers & roots		
5	14.0	14.5		16.5	Ditto		
6	18.5	19.0	16.5	22.0	Loose gray silty sand w/trace of clay		
7	23.5	24.0	22.0		Soft gray clay w/sandy silt pockets		
8	28.5	29.0			Ditto		
9	33.5	34.0			Ditto		
10	38.5	39.0			Ditto		
11	43.5	44.0		47.5	Ditto		
12	48.5	49.0	47.5	50.0	Soft gray sandy clay w/shell fragments		
13	53.5	54.0	50.0		Medium stiff gray clay w/sand pockets & shell fragments		
14	58.5	59.0			Ditto		
15	63.5	64.0		66.0	Ditto		
16	68.5	69.0	66.0	70.0	Stiff greenish-gray clay		
17	73.5	74.0	70.0		Stiff greenish-gray & tan clay		
18	78.5	79.0		80.5	Ditto		
19	83.5	84.0	80.5	84.5	Soft tan silty clay		
20	88.5	89.0	84.5	92.5	Stiff tan & gray sandy clay w/sand layers		
21	93.5	94.5	92.5	98.0	Stiff gray & tan clay w/silt lenses		
22	98.5	99.0	98.0	100.0	Medium stiff gray clay w/silt lenses		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

Predominant type shown heavy. Modifying type shown light.

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Sheet 1 of 2

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 19 Soil Technician Robert Waldron Date 28 April 1981

Ground Elev. _____ Datum _____ Gr. Water Depth See Text

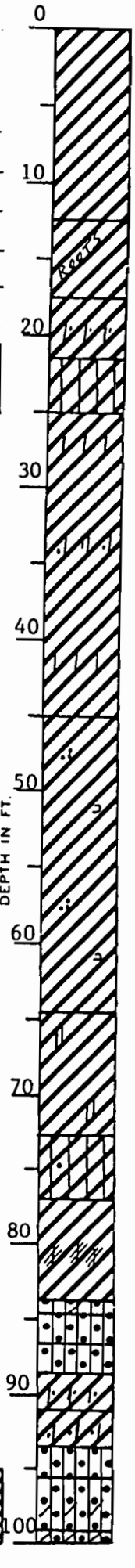
Sample No.	SAMPLE Depth — Feet From	SAMPLE Depth — Feet To	DEPTH STRATUM Feet From	DEPTH STRATUM Feet To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Medium stiff gray & tan clay		
2	5.0	5.5			Ditto		
3	8.0	8.5			Ditto		
4	11.0	11.5		12.5	Ditto		
5	14.0	14.5	12.5	17.5	Soft gray clay w/roots		
6	18.5	19.0	17.5	21.5	Soft gray clay w/silty sand lenses		
7	23.5	24.0	21.5	25.0	Soft gray silty clay		
8	28.5	29.0	25.0		Soft gray clay w/silt & sandy silt lenses		
9	33.5	34.0			Ditto		
10	38.5	39.0			Ditto		
11	43.5	44.0		45.0	Ditto		
12	48.5	49.0	45.0		Medium stiff gray clay w/sand pockets & shell fragments		
13	53.5	54.0			Ditto		
14	58.5	59.0			Ditto		
15	63.5	64.0		64.5	Ditto		
16	68.5	69.0	64.5	72.5	Stiff greenish-gray & tan clay w/silt pockets		
17	73.5	74.0	72.5	77.0	Stiff tan & gray silty clay w/trace of sand		
18	78.5	79.0	77.0	83.5	Medium stiff tan & gray clay w/silty clay lenses & layers		
19	83.5	84.0	83.5	84.5	Medium dense tan silty sand w/trace of clay		
20	84.0	85.5	84.5	86.5	Dense tan silty sand	11	34

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS

Remarks: _____



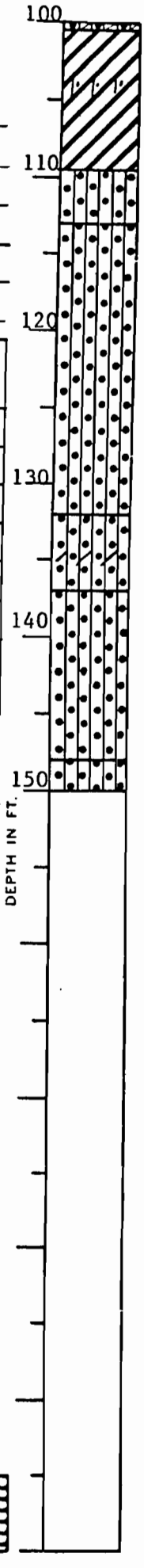
LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana
For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

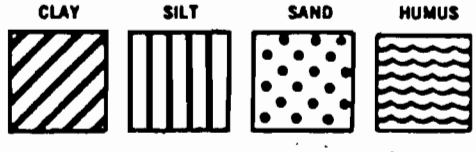
Boring No. 19 Soil Technician Robert Waldron Date 28 April 1981
Ground Elev. (Cont'd) Datum Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
21	86.5	88.0	86.5	88.5	Medium dense tan silty sand	8	21
22	88.5	90.0	88.5	91.0	Stiff tan clay w/silty sand layers	10	38
23	92.5	93.0	91.0	93.5	Medium stiff tan & gray clay w/sandy		
					silt lenses & layers		
24	93.5	95.0	93.5	95.5	Dense tan silty sand	7	32
25	96.0	97.5	95.5	99.0	Medium dense tan silty sand w/clay	5	14
					layers		
26	98.5	100.0	99.0	100.5	Very dense tan silty sand w/clay layers	5	50=10"
27	101.0	102.5	100.5		Medium stiff gray clay w/silty sand	18	41
					layers		
28	103.5	105.0		109.5	Medium stiff gray clay w/silty sand	6	14
					lenses		
29	109.0	109.5	109.5	113.0	Loose gray silty sand		
30	112.5	114.0	113.0		Very dense gray silty sand	9	50=10"
31	115.0	116.5			Ditto	16	50=9"
32	118.5	120.0			Ditto	20	50=8"
33	123.5	125.0			Ditto	24	50=8"
34	128.5	130.0		132.0	Ditto	18	50=11"
35	133.5	135.0	132.0	137.0	Medium dense gray silty sand w/clay	5	15
					layers		
36	138.5	140.0	137.0		Dense gray silty sand	24	50=8"
37	143.5	145.0		148.0	Ditto	20	50=9"
38	148.5	150.0	148.0	150.0	Medium dense gray silty sand	11	27



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks:

Predominant type shown heavy. Modifying type shown light

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Sheet 1 of 3

Phase II

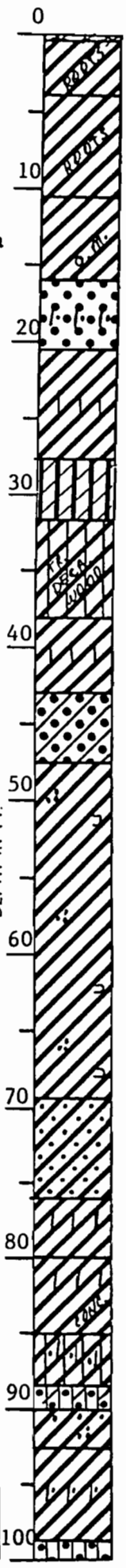
Name of Project: East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 20 Soil Technician A. Croal, Jr. Date 27 & 28 April 1981

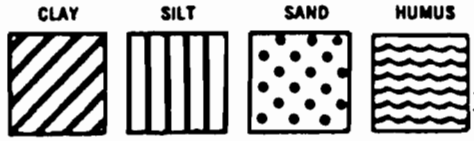
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	SAMPLE Depth — Feet To	DEPTH STRATUM Feet From	DEPTH STRATUM Feet To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	0.0	0.3	0.0	0.3	Stiff black organic clay w/roots		
2	2.0	2.5	0.3	4.0	Soft tan & gray clay w/roots		
3	5.0	5.5	4.0		Medium stiff tan & gray clay w/roots		
4	8.0	8.5		10.5	Ditto		
5	11.0	11.5	10.5		Soft to medium stiff gray clay		
6	14.0	14.5		16.0	Soft to medium stiff gray clay with		
					organic matter		
7	17.5	18.0	16.0		Loose gray fine sand w/silty sand		
					layers		
8	18.0	19.5		20.5	Ditto	6	9
9	20.5	22.0	20.5		Soft gray clay w/silt layers	1	4
10	23.5	24.0		27.5	Ditto		
11	28.5	29.0	27.5	31.5	Loose gray clayey silt		
12	33.5	34.0	31.5	38.0	Soft gray silty clay w/trace of decayed		
					wood		
13	38.5	39.0	38.0	43.0	Soft gray clay w/silt lenses		
14	43.5	44.0	43.0	47.5	Loose gray clayey sand		
15	48.5	49.0	47.5		Soft to medium stiff gray clay with		
					sand pockets & shell fragments		
16	53.5	54.0			Ditto		
17	58.5	59.0			Ditto		
18	63.5	64.0		69.5	Ditto		
19	68.5	69.0	69.5		Stiff to very stiff greenish-gray & tan		
					sandy clay		
20	72.0	72.5		76.0	Stiff to very stiff greenish-gray & tan		
					sandy clay		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

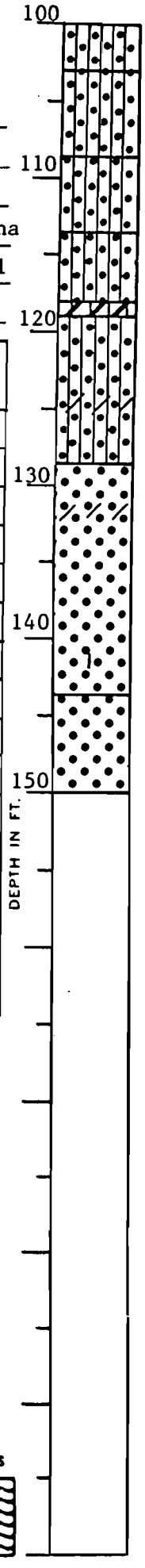
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 20 Soil Technician A. Croal, Jr. Date 27 & 28 April 1981

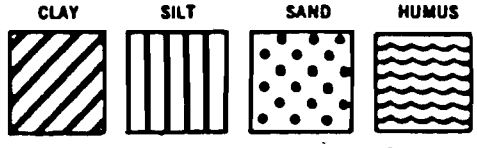
Ground Elev. (Cont'd) Datum Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
21	77.0	77.5	76.0	80.0	Stiff greenish-gray & tan clay w/silt lenses		
22	82.0	82.5	80.0	85.0	Very stiff gray & tan clay w/silt lenses & concretions		
23	87.0	87.5	85.0	88.5	Medium stiff tan & gray silty clay w/sandy silt lenses		
24	88.5	90.0	88.5	90.0	Medium dense tan & gray silty sand w/clay layers	4	13
25	92.0	92.5	90.0	92.5	Stiff tan & gray clay w/sand lenses & pockets		
26	97.0	97.5	92.5	98.5	Stiff greenish-gray clay w/silty sand lenses & layers		
27	98.5	100.0	98.5		Dense gray silty sand	5	33
28	101.0	102.5		103.0	Ditto	11	48
29	103.5	105.0	103.0		Medium dense gray silty sand	8	27
30	106.0	107.5		108.5	Ditto	8	29
31	108.5	110.0	108.5	113.5	Dense gray silty sand	9	34
32	113.5	115.0	113.5	118.0	Very dense gray silty sand	18	50=11½"
			118.0	119.0	Stiff gray silty clay		
33	118.5	120.0	119.0		Dense gray silty sand	7	42
34	123.5	125.0		128.5	Dense gray silty sand w/thin clay layers	5	39
35	128.5	130.0	128.5		Dense gray fine sand w/thin clay layers	17	38
36	133.5	135.0			Dense gray fine sand	17	47
37	138.5	140.0		143.5	Dense gray fine sand w/trace of silt	14	48
38	143.5	145.0	143.5		Very dense gray fine sand	50=5"(Seat)	



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks:

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana
For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

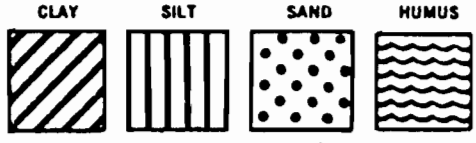
Boring No. 20 Soil Technician A. Croal, Jr. Date 27 & 28 April 1981
Ground Elev. (Cont'd) Datum Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
39	148.5	150.0		150.0	Very dense gray fine sand	30	50=5"

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks:

Predominant type shown bonny. Modifying type shown light

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Phase II

Name of Project: East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 21 Soil Technician A. Croal, Jr. Date 29 & 30 April 1981

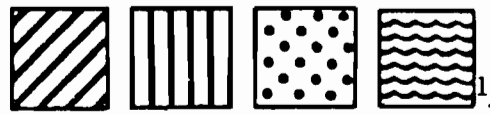
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

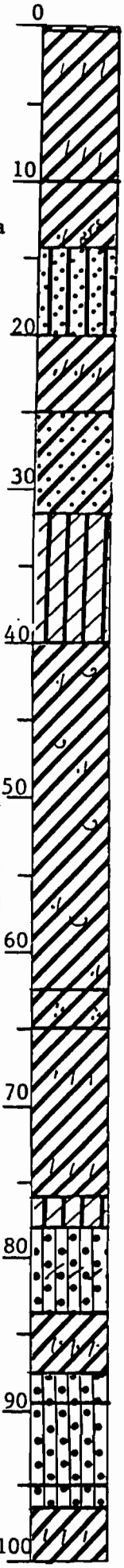
Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	0.0	0.5	0.0	0.2	Very stiff brown clay w/organic matter & roots		
2	2.0	2.5	0.2		Soft to medium stiff tan & gray clay w/silt lenses		
3	5.0	5.5			Ditto		
4	8.0	8.5		10.0	Ditto		
5	11.0	11.5	10.0		Soft gray clay		
6	14.0	14.5		14.5	Soft gray clay w/sandy silt pockets & decayed roots		
7	18.5	19.0	14.5	20.0	Loose gray sandy silt		
8	23.5	24.0	20.0	25.0	Soft gray clay w/sandy silt lenses		
9	28.5	29.0	25.0	31.5	Soft gray sandy clay		
10	33.5	34.0	31.5		Loose gray clayey silt		
11	38.5	39.0		40.0	Ditto		
12	43.5	44.0	40.0		Soft to medium stiff gray clay w/sandy silt pockets & shell fragments		
13	48.5	49.0			Ditto		
14	53.5	54.0			Ditto		
15	58.5	59.0		62.5	Ditto		
16	63.5	64.0	62.5	65.0	Medium stiff gray clay w/sand pockets		
17	67.0	67.5	65.0		Stiff greenish-gray & tan clay w/sand lenses		
18	72.0	72.5		76.0	Ditto		
19	77.0	77.5	76.0	78.0	Loose tan & gray clayey silt		
20	78.5	80.0	78.0		Medium dense tan silty sand	3	18
					(Continued)		

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Remarks: _____





Predominant type shown heavy. Modifying type shown light

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II

East Bank Wastewater Treatment Plant

Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 21 Soil Technician A. Croal, Jr. Date 29 & 30 April 1981

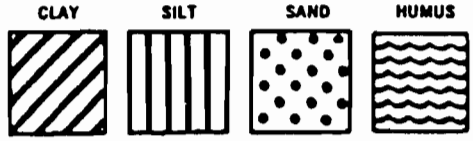
Ground Elev. (Cont'd) Datum Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
45	173.5	175.0		175.0	Very dense gray fine sand	50=5"	(Seat)

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks:

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

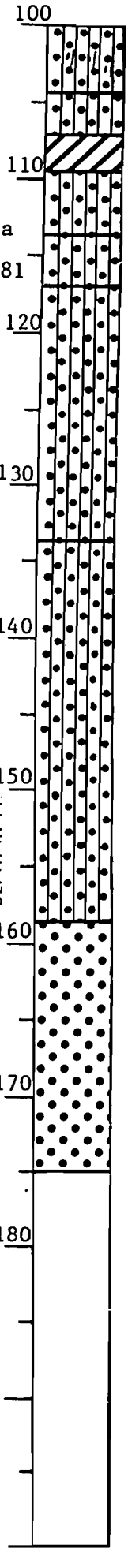
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 21 Soil Technician A. Croal, Jr. Date 29 & 30 April 1981

Ground Elev. (Cont'd) Datum Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
21	81.0	82.5		83.5	Medium dense tan silty sand w/clay layers	4	27
22	83.5	85.0	83.5	87.5	Very stiff tan & gray clay w/silty sand	6	21
					layers		
23	87.5	89.0	87.5	89.5	Very dense tan silty sand	17	50=9"
24	90.0	91.5	89.5		Dense tan silty sand	12	46
25	92.5	94.0		95.0	Ditto	12	46
26	95.0	96.5	95.0	96.5	Medium dense tan silty sand	14	29
27	97.0	97.5	96.5	100.0	Stiff gray clay w/silt lenses		
28	101.5	102.0	100.0		Medium dense gray silty sand w/sandy		
					silt layers		
29	102.0	103.5		104.5	Ditto	8	25
30	104.5	106.0	104.5	107.0	Very dense gray silty sand	15	50=9"
31	107.0	108.5	107.0	109.5	Stiff gray clay	6	12
32	109.5	111.0	109.5	113.5	Dense gray silty sand	7	34
33	113.5	115.0	113.5	117.0	Very dense gray silty sand	13	50=11½"
34	118.5	120.0	117.0		Dense gray silty sand	12	35
35	123.5	125.0			Ditto	16	49
36	128.5	130.0		133.5	Ditto	16	37
37	133.5	135.0	133.5		Very dense gray silty sand	14	50=12"
38	138.5	140.0			Ditto	27	50=8"
39	143.5	145.0			Ditto	27	50=11"
40	148.5	150.0			Ditto	35	50=6"
41	153.5	155.0		158.5	Ditto	50	=5"(Seat)
42	158.5	160.0	158.5		Very dense gray fine sand	30	50=4"
43	163.5	165.0			Ditto	37	50=8"
44	168.5	170.0			Ditto	24	50=6"



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS

Remarks:

Predominant type shown heavy. Modifying type shown light.

(Sheet #2)

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Phase II

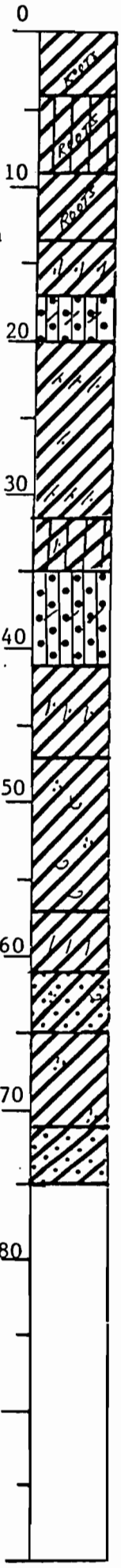
Name of Project: East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 22 Soil Technician George Hardee Date 21 April 1981

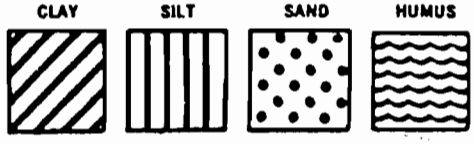
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0	4.0	Medium stiff tan & gray clay w/roots		
2	5.0	5.5	4.0		Soft gray & tan silty clay w/roots		
3	8.0	8.5		9.0	Ditto		
4	11.0	11.5	9.0	13.5	Soft gray clay w/roots		
5	14.0	14.5	13.5	17.0	Very soft gray clay w/sandy silt layers		
6	18.5	19.0	17.0	20.0	Loose gray silty sand w/clay layers		
7	23.5	24.0	20.0		Soft gray clay w/clayey sand lenses & pockets		
8	28.5	29.0		31.5	Ditto		
9	33.5	34.0	31.5	35.0	Soft gray silty clay w/silty sand layers		
10	38.5	39.0	35.0	41.0	Loose gray silty sand w/clay layers		
11	43.5	44.0	41.0	47.0	Soft gray clay w/silty sand lenses & layers		
12	48.5	49.0	47.0		Soft to medium stiff gray clay w/sand pockets & shell fragments		
13	53.5	54.0		57.0	Ditto		
14	58.5	59.0	57.0	61.0	Soft gray clay w/silt lenses		
15	63.5	64.0	61.0	65.0	Soft gray sandy clay w/sand pockets & shell fragments		
16	68.5	69.0	65.0	71.0	Stiff greenish-gray & tan clay w/sand pockets		
17	73.5	74.0	71.0	75.0	Stiff greenish-gray & tan sandy clay		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Sheet 1 of 2

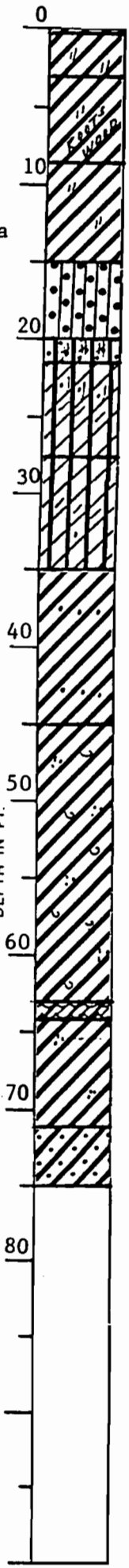
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 23 Soil Technician A. Croal, Jr. Date 30 April 1981

Ground Elev. _____ Datum _____ Gr. Water Depth See Text

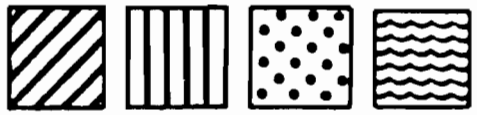
Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	0.0	0.3	0.0	0.3	Very stiff black clay w/roots		
2	2.0	2.5	0.3	3.0	Soft gray & tan clay w/silt pockets		
3	5.0	5.5	3.0		Medium stiff gray & tan clay w/silt pockets, roots & wood		
4	8.0	8.5		8.5	Ditto		
5	11.0	11.5	8.5		Soft to medium stiff gray clay w/silt pockets		
6	14.0	14.5		15.0	Ditto		
7	18.5	19.0	15.0	20.0	Loose gray silty sand		
8	20.0	21.5	20.0	21.5	Very loose gray sandy silt w/clayey silt layers	3	4
9	23.5	25.0	21.5	27.5	Loose gray clayey silt w/clay & sandy silt lenses		
10	28.5	29.0	27.5		Loose gray clayey silt w/clay lenses & trace of sand		
11	33.5	34.0		35.0	Ditto		
12	38.5	39.0	35.0		Soft gray clay w/sand lenses		
13	43.5	44.0		45.0	Ditto		
14	48.5	49.0	45.0		Soft to medium stiff gray clay with many sand pockets & shell fragments		
15	53.5	54.0			Ditto		
16	58.5	59.0		63.0	Ditto		
17	63.0	63.5	63.0	64.0	Stiff gray organic clay w/clay layers, shell fragments & decayed wood		
18	67.0	67.5	64.0	71.0	Very stiff greenish-gray & tan clay w/sand pockets		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS



Remarks: _____

Predominant type shown heavy. Modifying type shown light

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Phase II

Name of Project: East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 23 (Cont'd) Soil Technician A. Croal, Jr. Date 30 April 1981

Ground Elev. _____ Datum _____ Gr. Water Depth See Text

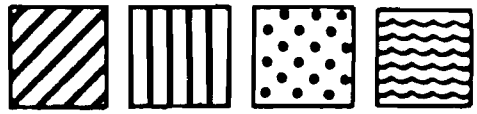
Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
19	72.0	72.5	71.0	75.0	Stiff tan & gray sandy clay		

DEPTH IN FT.

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS



Remarks: _____

Predominant type shown heavy. Modifying type shown light.

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Phase II

East Bank Wastewater Treatment Plant

Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 24 Soil Technician Robert Waldron Date 22 May 1981

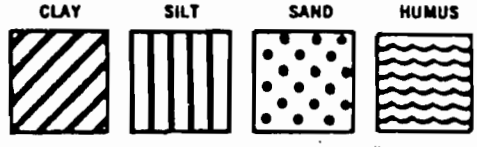
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

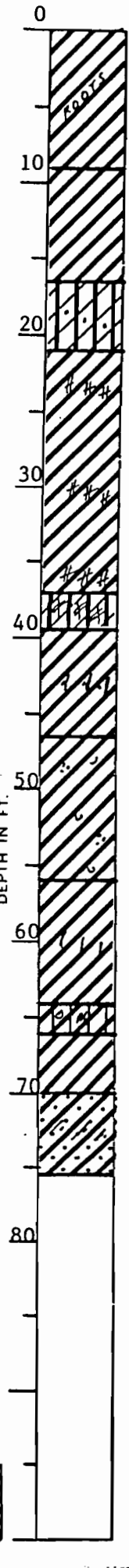
Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0		Soft to medium stiff gray & tan clay		
					w/roots		
2	5.0	5.5			Ditto		
3	8.0	8.5		9.0	Ditto		
4	11.0	11.5	9.0		Soft gray clay		
5	14.0	14.5		16.5	Soft gray clay w/silt lenses		
6	18.5	19.0	16.5	21.0	Loose gray clayey silt w/sand lenses		
7	23.5	24.0	21.0		Soft gray clay w/clayey silt lenses		
8	28.5	29.0			Ditto		
9	33.5	34.0		37.0	Ditto		
10	38.5	39.0	37.0	39.5	Loose gray clayey silt w/silty clay		
					layers & fine sand		
11	43.5	44.0	39.5	46.5	Soft gray clay w/sandy silt lenses		
12	48.5	49.0	46.5		Soft to medium stiff gray clay w/sand		
					pockets & shell fragments		
13	53.5	54.0		56.0	Ditto		
14	58.5	59.0	56.0	64.0	Stiff gray clay w/silt lenses		
15	63.5	64.0	64.0	66.0	Medium stiff brown & gray silty clay		
					w/organic matter		
16	68.5	69.0	66.0	70.0	Stiff greenish-gray & tan clay		
17	73.5	74.0	70.0	75.5	Very stiff greenish-gray & tan sandy		
					clay w/clayey sand layers		

*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Remarks: _____





LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

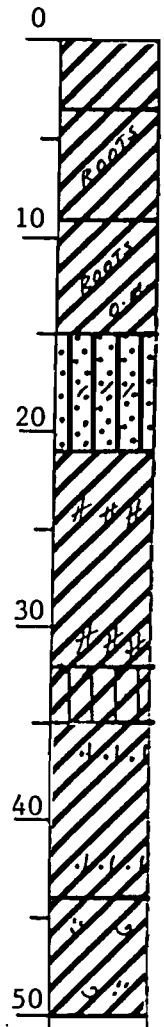
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 25 Soil Technician Robert Waldron Date 22 May 1981

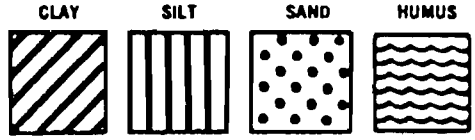
Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	2.0	2.5	0.0	3.5	Medium stiff gray & tan clay		
2	5.0	5.5	3.5		Medium stiff gray & tan clay w/roots		
3	8.0	8.5		9.0	Ditto		
4	11.0	11.5	9.0		Soft to medium stiff gray clay w/roots		
					& organic matter		
5	14.0	14.5		15.0	Ditto		
6	18.5	19.0	15.0	21.0	Loose gray sandy silt w/clay lenses		
7	23.5	24.0	21.0		Soft gray clay w/clayey silt layers		
8	28.5	29.0		32.0	Ditto		
9	33.5	34.0	32.0	35.0	Soft gray silty clay		
10	38.5	39.0	35.0	44.0	Soft gray clay w/sandy silt lenses		
11	44.0	44.5	44.0		Medium stiff gray clay w/sand pockets		
					& shell fragments		
12	48.5	49.0		50.0	Ditto		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



Remarks: _____

LOG OF BORING

EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

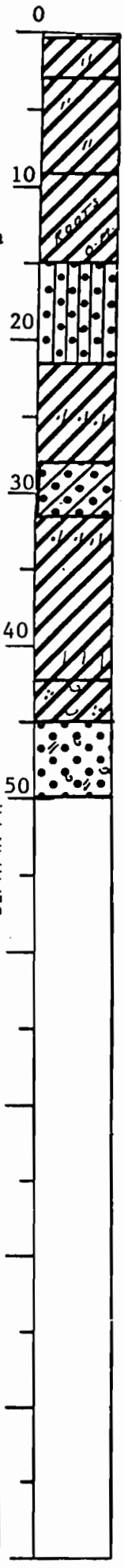
Name of Project: Phase II
East Bank Wastewater Treatment Plant
Jefferson Parish, Louisiana

For: James M. Montgomery, Consulting Engineers, Inc., New Orleans, Louisiana

Boring No. 26 Soil Technician A. Croal, Jr. Date 1 May 1981

Ground Elev. _____ Datum _____ Gr. Water Depth See Text

Sample No.	SAMPLE Depth — Feet From	To	DEPTH STRATUM Feet From	To	VISUAL CLASSIFICATION	*STANDARD PENETRATION TEST	
1	0.0	0.3	0.0	0.3	Very stiff dark gray clay w/roots		
2	2.0	2.5	0.3	3.0	Soft tan & gray clay w/silt pockets		
3	5.0	5.5	3.0		Soft gray & tan clay w/silt pockets		
4	8.0	8.5		9.0	Ditto		
5	11.0	11.5	9.0		Medium stiff gray clay w/roots & organic matter		
6	14.0	14.5		15.0	Ditto		
7	18.5	19.0	15.0	21.5	Loose gray silty sand		
8	23.5	24.0	21.5	28.0	Soft gray clay w/sandy silt lenses		
9	28.5	29.0	28.0	31.5	Loose gray clayey sand		
10	33.5	34.0	31.5		Soft to medium stiff gray clay w/sandy silt lenses		
11	38.5	39.0		42.5	Soft to medium stiff gray clay w/silt lenses		
12	43.5	44.0	42.5	45.0	Soft to medium stiff gray clay w/fine sand pockets & shell fragments		
13	48.5	49.0	45.0	50.0	Loose gray fine sand w/clay pockets & shell fragments		



*Number in first column indicates number of blows of 140-lb. hammer dropped 30 in. required to seat 2-in. O. D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O. D. splitspoon sampler 1 ft. after seating 6 in.

WHILE THIS LOG OF BORING IS CONSIDERED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ITS RESPECTIVE LOCATION ON THE DATE SHOWN, IT IS NOT WARRANTED THAT IT IS REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

CLAY SILT SAND HUMUS

Predominant type shown heavy. Modifying type shown light.

Remarks: _____

E. Contract Awards Since Last Bulletin

Item No.	Contract/IFB No.	Location	Description	Contractor	Amount and Award Date
1. *	DACW29-85-B-0036 DACW29-85-C-0171 (SBSA)	Lake Pontchartrain, La., & Vic., [illegible]	The work consists of constructing approx. 140,000 cy.yds. of embankment, semicompacted fill, approx. 20 acres of fertilizing and seeding and clearing, placement of approx. 18,000 sq. ft of plastic lining.	*** S.A. Laurent, Inc. Metairie, LA	$2,298,000.00 30 September 1985
2.	DACW29-85-B-0104 DACW29-85-C-0160	Mississippi River-Gulf Outlet, maintenance Dredging, B/L Sta. 2060+00 to B/L Sta. 2262+00 (Mile 27.0 and Mile 23.2) St. Bernard Parish, LA	The work consists of the removal and satisfactory disposal of all material lying above elevation 40.5' MLG over a botton of 500', with side slopes of 1V on 2H between B/L Sta. 2060+00 and 2262+00(Mile 27.0 to Mile 23.2).	Bean Dredging Corp New Orleans, La	$874,000.00 11 September 1985
3.	DACW29-85-B-0105 DACW29-85-C-0158	Mississippi River-Gulf Outlet, Bar Channel, B/L Sta. 3705+00 to B/L Sta. 3950+00 (Mile -4.2 to Mile -8.8) Maintenance Dredging, Plaquemines Parish, LA	The work consists of the removal and satisfactory disposal of approx. 3,900,000 cu.yds. of shoal material from Mississippi River-Gulf Outlet Bar Channel.	Bean Dredging Corp New Orleans, LA	$1,599,500.00 11 September 1985
4.	DACW29-85-B-0107 DACW29-85-C-0166	Flood Control, Miss. River & Trib. Construction of Stone Bank Paving, Mississippi, Atchafalaya, and Red Rivers and Old River Control Channels	The work consists of construction of various types of stone bank paving at several locations within the limits on the banks of the Miss. (Mile 325 to Mile 10), Atchafalaya (Mile 0 to Mile 50) and Red River (Mile 6 to Mile 10 Rivers, and Old River Control Channels	Luhr Bros., Co., Inc. Columbia, Illinois	$2,217,310.00 19 September 1985
5.	DACW29-85-B-0108 DACW29-85-C-0162	Mississippi River, Baton Rouge to Gulf of Mexico, Southwest Pass, Mile 10.2R BHP to Mile 19.80R BHP, Pile Dike Repairs 1985, Plaquemines Parish, LA	The work includes furnishing approx. 85,000 linear ft of timber wales, providing approx. 3,420 lin ft. of timber wales pulling approx. 475 piles; excavation of a flotation channel; providing shell, stone filter fabric. An option to use prestressed concrete piles is also included.	*** Professional Constr. Co., New Orleans, LA	$1,405,286.00 23 September 1985
6.	DACW29-85-B-0113 DACW29-85-C-0165	Old River Control Auxiliary Structure, Outflow Channel, Stone Bank Paving	The work consists of construction of stone bank paving in the outflow channel of the Old River Control Auxiliary Structure.	***McAlister Construction Co., Inc. Memphis, Tennessee	$4,900,750.00 19 September 1985
7.	DACW29-85-B-0054 DACW29-85-C-0167	Grand Isles, La. & Vic., Larose to Golden Meadow, Larose Floodwall, Lafourche Parish, Louisiana	The work consists of construction of approx. 5,000 lin. ft. of concrete I-wall and approx. 1,200 lin. ft. of levee, driving sheet piling, utility modifications, fertilizing and seeding, asphalt paving and shell surfacing,	***R.R.Tway, Inc., Oklahoma City, Oklahoma	$2,359,040.00 25 September 1985
8.	DACW29-85-B-0078 DACW29-86-C-0004	Houma Navigation Canal, Maintenance Dredging, B/L Sta. 60+00 (Mile 35.8) to Cat Island Pass, Terrebonne Parish, LA	The work consists of the removal and satisfactory disposal of all material lying above elevations; -17.5' MLG, Houma Navigation Canal (317 Stations); -19.0" MLG, Terrebonne Bay (511 Stations), and -23.0"MLG, Cat Island Pass (123 Stations) over variable widths.	Great Lakes Dredge & Dock Company New Orleans, LA	$1.459.143.00 8 October 1985
9.	DACW29-85-B-0106 DACW29-85-C-0168	Lake Pontchartrain, La. & Vic., High Level Plan, N. O. Lakefront Levee, Foreshore Protection, Orleans Parish, LA.	The work consists of clearing; construction of a foreshore protection dike with graded stone & a core material of either shell, gravel or crushed stone.	***Pontchartrain Materials Corporation New Orleans, La.	$3,963,264.00 30 September 1985

* Small Business Set-Aside. Bids received from Large Business concerns shall be considered nonresponsive.

** Section 8(a) , Small Business Act (PL 95-507)

*** Contractor certified/represented to be a small business concern.

NOTES: 1. On small business matters, contact Mr. Robert E. Bristow, telephone number (504)862-2885.

2. This bulletin is for information purposes only. In event of a discrepancy between bulletin and individual specification, the specification will govern.

DISTRIBUTION:

"C"

FACSIMILE HEADER SHEET
(ER 105-1-5)

FROM (Name)	OFFICE SYMBOL	TELEPHONE NO.	RELEASER'S SIGNATURE		
MR. GRISHAM	LMVED-TL	634-5929	Mary Mayfield for Mr. Grisham		
TO (Name)	OFFICE SYMBOL	TELEPHONE NO.	# PAGES	PRECEDENCE	DTG
DAN JUDLIN	LMNED-D	2759	5	PP	4/9/85

SUBJECT

ENG FORM 4400, 1 FEB 83

LMVED-TL (LMNED-DL/18 Jul 85) 1st End Mr. Burkhard/jae/5930
SUBJECT: Lake Pontchartrain, Louisiana and Vicinity, Lake Pontchartrain High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, Louisiana

DA, Lower Mississippi Valley Division, CE, Vicksburg, MS 39180-0080

TO: Commander, New Orleans District, ATTN: LMNED-DW

1. The subject plans and specifications are approved subject to the changes in red and to the following comments.

2. Drawings

a. Dwg 4. The location of Boring 13-LO whose log is shown on Dwg 16 cannot be found on Dwg 4. Drawing 4 should clearly show the location of this boring.

b. Dwg 10. The word "Pug" should be replaced with the word "Plug" in the NOPSI utility relocations list.

c. Dwg 13. The abandoned power lines should be confirmed by the Government in order to avoid third party contractual problems. In addition the Government should arrange with the NOPSI to have a line break on all the old abandoned power lines that are in the contract right-of-way.

d. Dwg 19. The hydrograph should be updated to include all available 1984 and 1985 data.

3. Specifications

a. Page I-5, Para 10. The name Norman C. Olson should be changed to Richard Hill.

b. Bidding Schedule. The word "acre" on Item 4 should be deleted and Items 8 and 9 are numbered incorrectly.

c. Para SC-4.1.a. The sixth word in the second sentence should be "for" not "the."

d. Para 1-5.2. A subparagraph should be included to specify grubbing of the borrow areas. This subparagraph should read: Grubbing of borrow areas shall be required to the extent necessary to provide materials free from unsuitable matter as described in 3-5.2.

e. Para 2-2(5) and 2-2(6). The need for these paragraphs is not apparent since no access channels or flotation channels are required on this project nor is there a seawall involved. Therefore, these paragraphs should be deleted.

PRELIMINARY - SUBJECT TO Criminal

f. Para 2-3.3.2. The words "shall be" should be deleted from the fifth line.

g. Para 3-1. The words "placement of plastic lining" should be deleted. No plastic lining is required on this project.

h. Para 3-5.1. In the first sentence, delete all words after "from the borrow area." There are no other excavations required in Section2.

i. Para 3-6.1.2. The specified placement water content of 50 percent for the clay CH borrow material is considered too high for adequate placement and compaction. You should specify a water content at which the material can be adequately placed and compacted and have an adequate shear strength after compaction.

LOWER TO 45 14 AUG 85 RE

* 10% of standard

j. Para 3-6.2. Since this paragraph requires placement of shell surface on the ramp, requirements for the shell material should be included in the plans and specifications.

k. Para 6-3.1. The word "zone" should be added at the end of the first sentence.

l. Para 6-3.8. The time for planting the palm trees should be specified. As the specification is now written the planting operation could extend past permissible seasons.

m. Para 6-7.1. Spillway sand should be defined. We assume that it is referring to sand excavated during removal of the spillway dike.

n. Para 7-6.1. The fourth line should read as follows: ". . . and filling and plugging existing sewer lines abandoned under levee."

o. Para 7-6.2.3. Since this paragraph refers to both jacked and bored installations, a separate paragraph should be included to specify provisions for a bored installation.

p. Para 7-7.2.1. The first sentence leaves the size of the water line to the Contractors choice. The Government should specify the size to be installed.

q. Para 7.7.3.2. This paragraph should read as follows: "The installation of the pvc pipe shall conform to the manufacturers recommendations and the applicable requirements of section F of the S.&W.B. general specifications. The trench bottom shall be relatively smooth and free

PRELIMINARY - SUBJECT TO CHANGE

2

from roots, rocks, etc. The pipe shall be laid on a smooth bed of river sand six inches in depth for the full width of the trench. Sand shall also be placed and compacted to the top of the pipe . . . ."

r. Para 7-9.1. This paragraph should read as follows: "All work on the drainage systems including removing old systems and providing drainage culverts and catch basins will not be measured for payment."

4. Authority to advertise the subject work concurrent with Division review was granted 22 Jul 85 in LMVED-TL letter, subject as above.

FOR THE COMMANDER:

3 Encls
1-2. wd 7 cys
3. wd 8 cys

FRED H. BAYLEY III
Acting Chief, Engineering Division

PRELIMINARY - SUBJECT TO CHANGE

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-FS	Review of Plans & Specifications for the Lake Pontchartrain, LA & Vic Hurricane Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, LA

TO: C/Design Br
FROM: C/F&M Br
DATE: 8 July 1985
CMT 1

Mr. Estrada/mlm/1035
RE, JR

1. Reference is made to our LMNED-FS DF dated 2 Jul 85, subject as above.

2. The following comments should be added to the subject report:

a. Structure Foundations Section:

(1) Page 2-4, para. 2.3.3. Modify this paragraph to include the stripping of the borrow area. The stripping should include the removal of all the sandy or silty material encountered above the clay layer. This material should be placed into the stockpile area.

(2) Dwg. 13 of 18:

(a) A seventh note should be added that reads: "Silty or sandy material encountered on top of the borrow pit should not be used in the levee. It should be removed and placed in the area designated as 'sand stockpile area'."

Rodney P. Picciola
RODNEY P. PICCIOLA
Chief, Foundations & Materials Branch

LMNED-DL
TO C/F&M Br 7/17
FROM C/Des Br
DATE 16 Jul 85
CMT 2

Mr. Graff/dw/2772
16

The comments have been reviewed and we concur with all.

Walter D. Judlin, III 16
WALTER D. JUDLIN, III
Chief, Design Branch

LMNED-FS

Review of Plans & Specifications for the Lake Pontchartrain, LA & Vic Hurricane Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, LA

C/Design Br

C/F&M Br

8 July 1985
Mr. Estrada/mlm/1035

1. Reference is made to our LMNED-FS DF dated 2 Jul 85, subject as above.

2. The following comments should be added to the subject report:

a. Structure Foundations Section:

(1) Page 2-4, para. 2.3.3. Modify this paragraph to include the stripping of the borrow area. The stripping should include the removal of all the sandy or silty material encountered above the clay layer. This material should be placed into the stockpile area.

(2) Dwg. 13 of 18:

(a) A seventh note should be added that reads: "Silty or sandy material encountered on top of the borrow pit should not be used in the levee. It should be removed and placed in the area designated as 'sand stockpile area'."

RODNEY P. PICCIOLA
Chief, Foundations & Materials Branch

LMNED-DL
TO C/F&M Br FROM C/Des Br DATE 16 Jul 85 CMT 2
Mr. Graff/dw/2772

The comments have been reviewed and we concur with all.

WALTER D. JUDLIN, III
Chief, Design Branch

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-FS	LAKE PONTCHARTRAIN, LA. & VICINITY, HURICANE PROTECTION PROJECT, P&S, NEW ORLEANS LAKEFRONT LEVEE, LONDON AVE. CANAL TO WEST END BLVD., ORLEANS PARISH, LA.

TO	FROM	DATE	CMT 1
C/ DESIGN BR.	C/ F&M BR.	12 JULY 85 MR. ESTRADA/1035	

1. REFERENCE IS MADE TO YOUR VERBAL REQUEST FOR THE REVISED Levee AND UTILITY CROSSING SECTIONS.

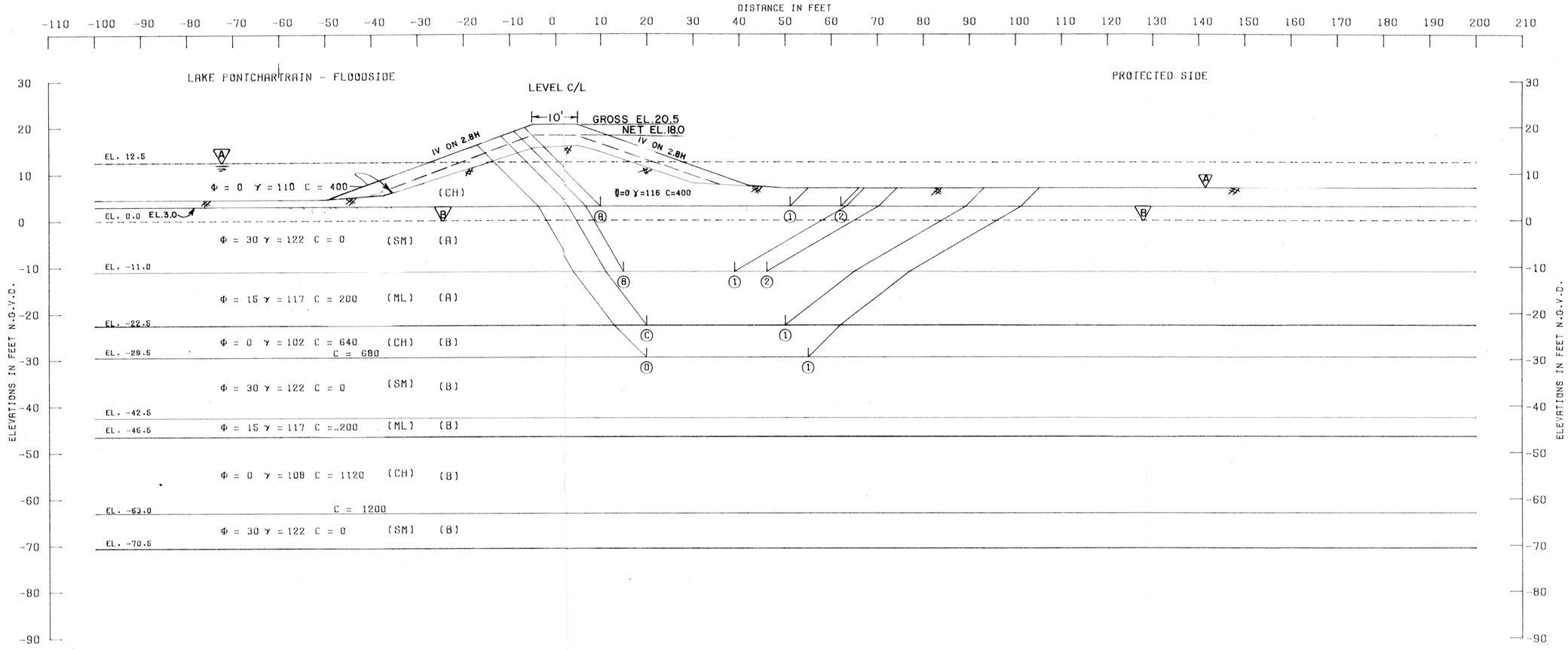
2. THESE STABILITY ANALYSIS PLATES (13 Drawings) HAVE BEEN HAND CARRIED TO YOUR LEVEE SECTION. THESE PLATES SHOULD BE ENCLOSED WITH YOUR LETTER FORWARDING THE P&S to Division.

RODNEY P. PICCIOLA

CHIEF, FOUNDATIONS & MATERIALS BRANCH.

7/15

FILE.



ASSUMED FAILURE SURFACE NO.	ASSUMED FAILURE SURFACE ELEV.	RESISTING FORCES R_A	RESISTING FORCES R_B	RESISTING FORCES R_P	DRIVING FORCES D_A	DRIVING FORCES $-D_P$	SUMMATION OF FORCES RESISTING	SUMMATION OF FORCES DRIVING	FACTOR OF SAFETY
(A) (1)	3.0	13474	8736	3082	16745	860	25292	15885	1.590
(A) (2)	3.0	13474	8736	3111	16745	874	25321	15871	1.600
(B) (1)	-11.0	27618	13497	11478	53432	19495	52593	33937	1.550
(B) (2)	-11.0	27618	16350	10817	53432	19166	54785	34266	1.600
(C) (1)	-22.5	41757	17655	25000	100170	51776	84412	48394	1.740
(D) (1)	-29.5	51445	23800	34131	136659	78914	109376	57745	1.890

ADDITIONAL NOTES

1. CLASSIFICATION, STRATIFICATION, SHEAR STRENGTHS AND UNIT WEIGHTS FOR THE SOIL ARE BASED ON THE BORINGS SHOWN ON PLATE NO.99 *ON GDM NO. 13*
2. PH LINE (A)–(A) USED FOR UPLIFT PRESSURE IN THE (A) STRATUMS
3. PH LINE (B)–(B) USED FOR UPLIFT PRESSURE IN THE (B) STRATUMS

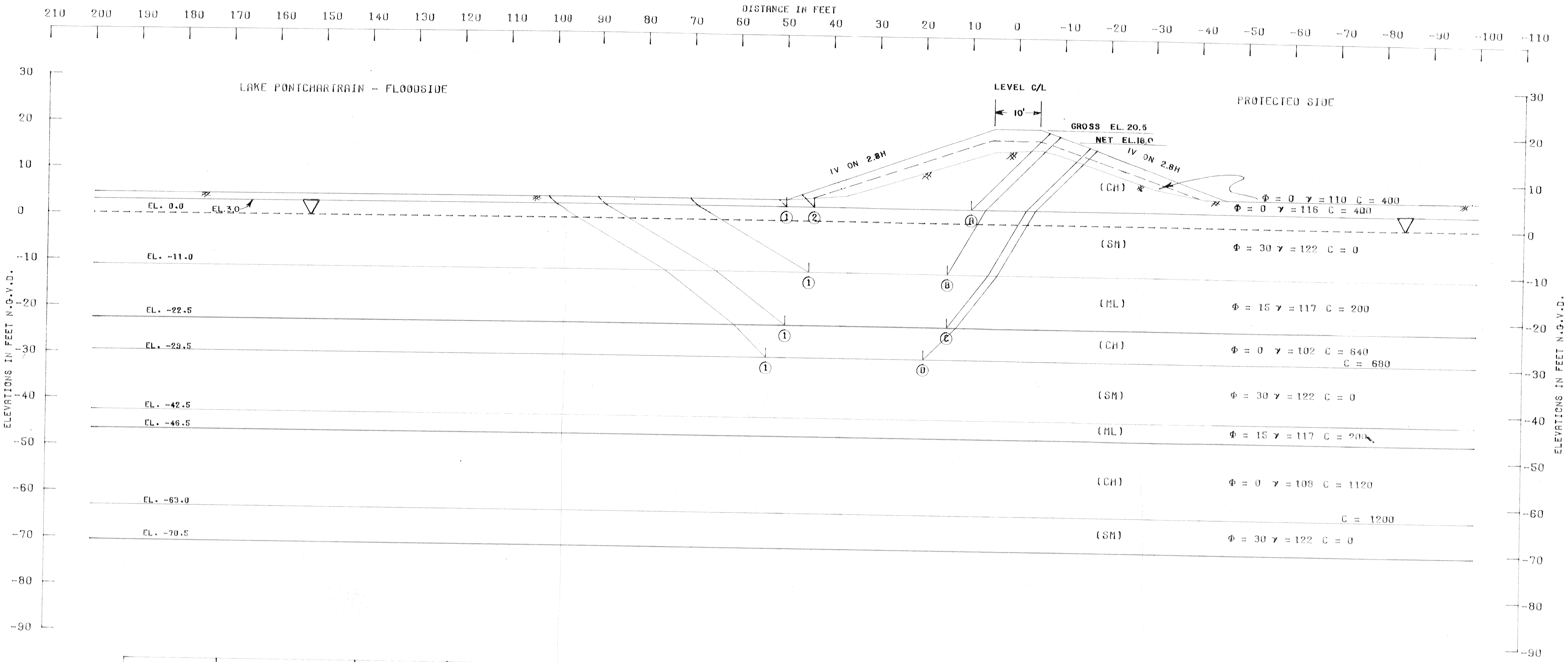
NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

$$\text{FACTOR OF SAFETY} = \frac{R_A + R_B + R_P}{D_A - D_P}$$

LAKE PONTCHARTRAIN, LA & VICINITY
NEW ORLEANS LAKEFRONT LEVEE
Utility Crossings
PROTECTED SIDE STABILITY ANALYSIS
STA. 163+98.15 TO 19[illegible]+50.00 B/L
July 85

Dwg 1 of 13



ASSUMED FAILURE NO.		SURFACE ELEV.	RESISTING FORCES R_A	R_B	R_P	DRIVING FORCES D_A	$-D_P$	SUMMATION OF FORCES RESISTING	DRIVING	FACTOR OF SAFETY
(A)	(1)	3.0	13474	13984	1200	16712	130	28658	16582	1.730
(A)	(2)	3.0	13474	12996	2105	16712	527	28575	16185	1.770
(B)	(1)	-11.0	34648	22018	22948	53316	14786	79614	38530	2.070
(C)	(1)	-22.5	53257	21000	40524	101922	43901	114781	58021	1.980
(D)	(1)	-29.5	62208	23120	49476	136544	68991	134804	67553	2.000

ADDITIONAL NOTE

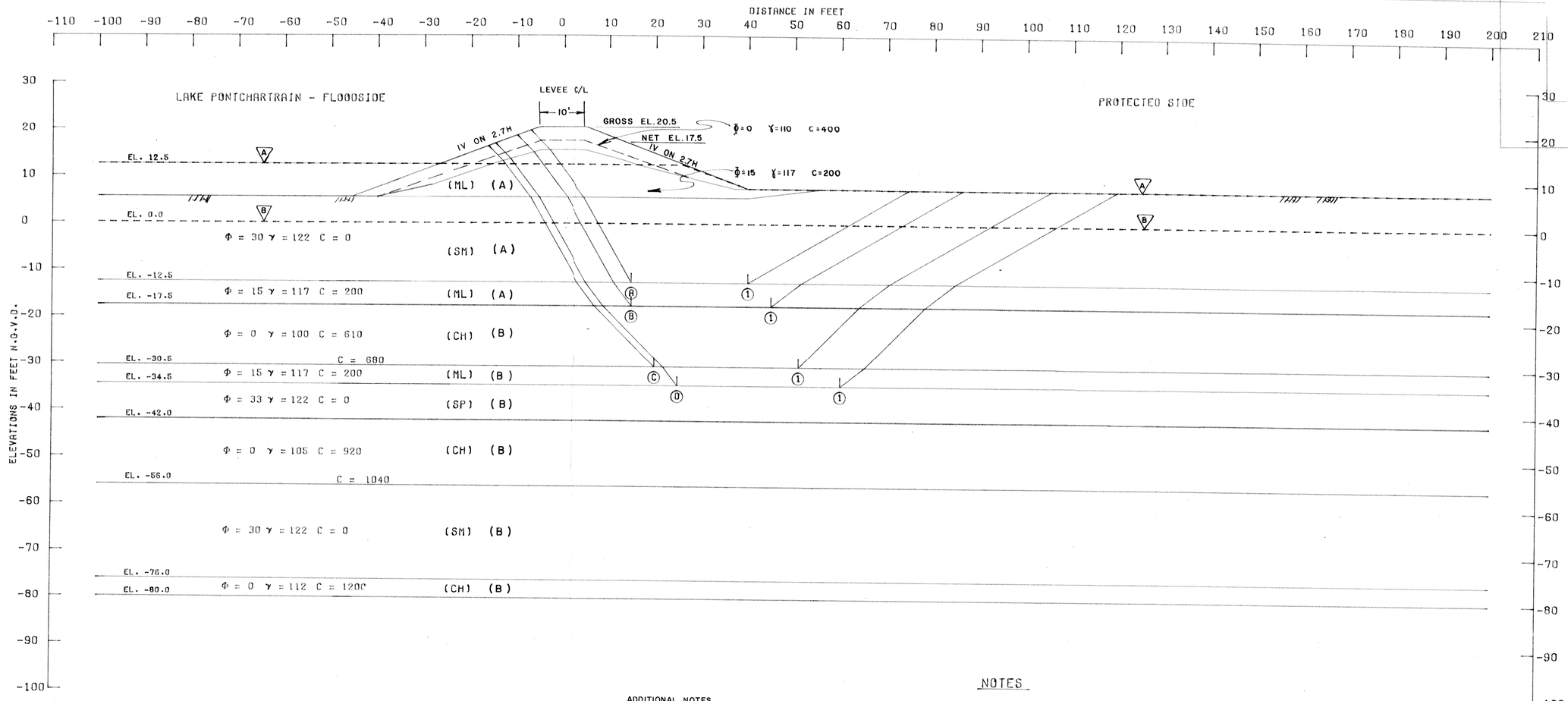
1. CLASSIFICATION, STRATIFICATION, SHEAR STRENGTHS AND UNIT WEIGHTS FOR THE SOIL ARE BASED ON THE BORINGS SHOWN ON PLATE NO. 99 OF GDM NO. 13

NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
∇ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

$$\text{FACTOR OF SAFETY} = \frac{R_A + R_B + R_P}{D_A - D_P}$$

Lake Pontchartrain, La & Vicinity
New Orleans Lakefront Levee
Utility Crossings
Floodside Stability Analysis
Sta 163+98.15 to 196+50.00 B/L
July 85



ASSUMED FAILURE NO.	ASSUMED SURFACE ELEV.	RESISTING FORCES R_A	R_B	R_P	DRIVING FORCES D_A	$-D_P$	SUMMATION OF FORCES RESISTING	DRIVING	FACTOR OF SAFETY
(A) (1)	-12.5	29793	14937	23666	59623	24353	68396	35270	1.940
(B) (1)	-17.5	36505	16200	31011	80623	38033	83716	42590	1.970
(C) (1)	-30.5	51699	21080	46981	142539	86827	119660	56712	2.110
(D) (1)	-34.5	58785	32942	56027	163243	104070	147754	59173	2.500

ADDITIONAL NOTES

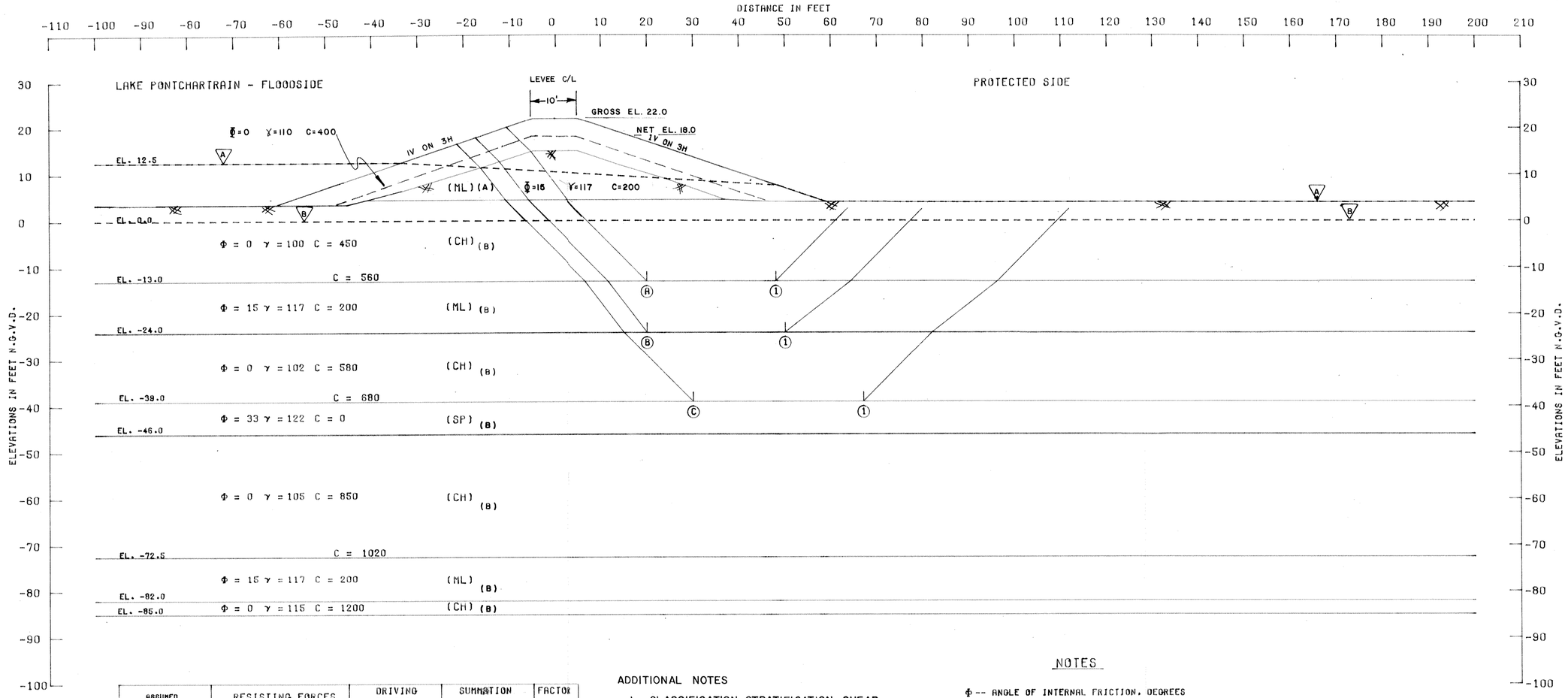
1. CLASSIFICATION, STRAIFICATION, SHEAR STRENGTHS AND UNIT WEIGHTS FOR THE SOIL ARE BASED ON THE BORINGS SHOWN ON PLATE NO. 100 OF GDM NO. 13.
2. PH LINE (A)–(A) USED FOR UPLIFT PRESSURE IN THE (A) STRATUMS
3. PH LINE (B)–(B) USED FOR UPLIFT PRESSURE IN THE (B) STRATUMS

NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

$$\text{FACTOR OF SAFETY} = \frac{R_A + R_B + R_P}{D_A - D_P}$$

LAKE PONTCHARTRAIN LA. & VICINITY
NEW ORLEANS LAKEFRONT LEVEE
UTILITY CROSSINGS
PROTECTED SIDE STABILITY ANALYSIS
STA 201+68.01 to STA 244+59.81 S/L
JULY 85



ASSUMED FAILURE NO.	ASSUMED SURFACE ELEV.	RESISTING FORCES R_A	R_B	R_P	DRIVING FORCES D_A	$-D_P$	SUMMATION OF FORCES RESISTING	DRIVING	FACTOR OF SAFETY
Ⓐ ①	-13.0	28358	15670	15168	62330	16666	59196	45664	1.300
Ⓑ ①	-24.0	42319	14400	30818	106224	41366	87537	64858	1.350
Ⓒ ①	-39.0	59095	25160	47402	182887	96505	131657	86302	1.530

ADDITIONAL NOTES

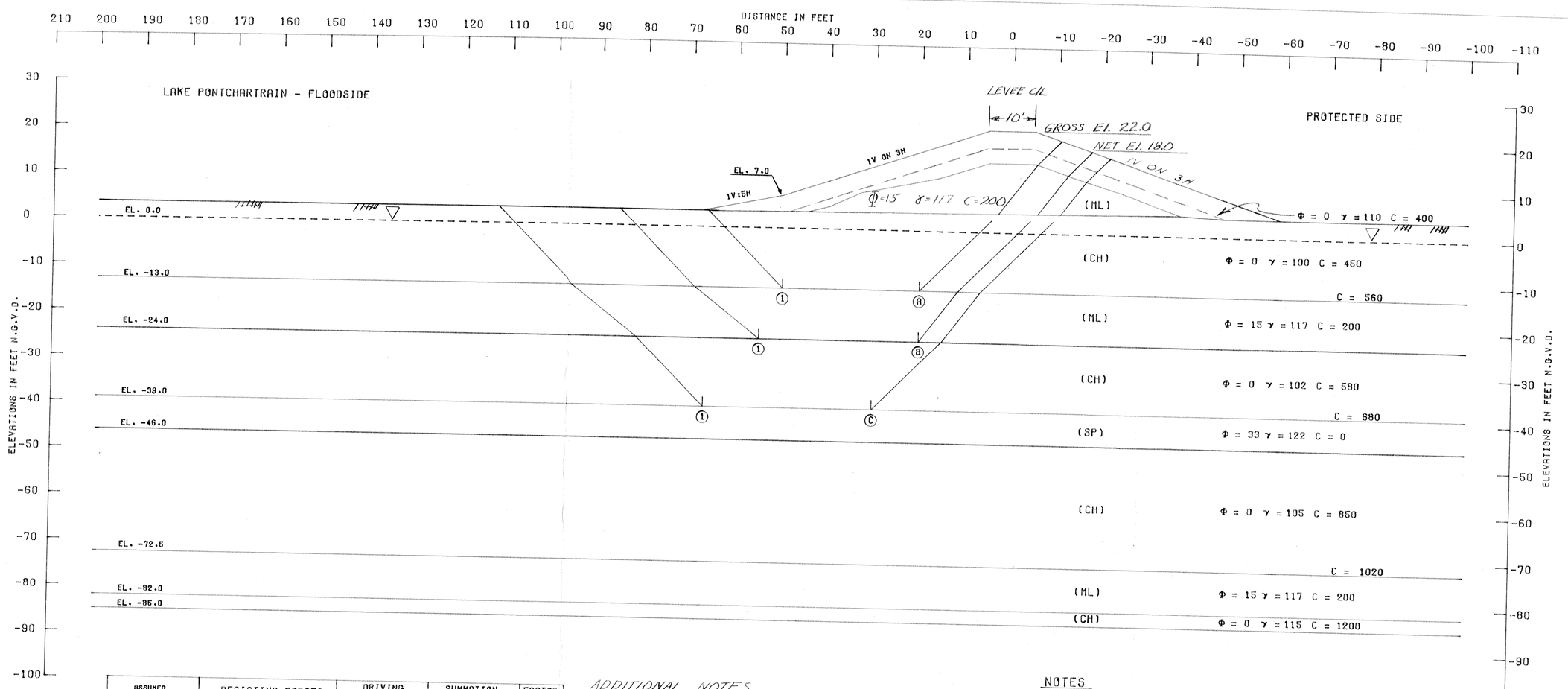
1. CLASSIFICATION, STRATIFICATION, SHEAR STRENGTHS AND UNIT WEIGHTS FOR THE SOIL ARE BASED ON THE BORINGS SHOWN ON PLATE NO. 100 OF GDM NO. 13.
2. PH LINE Ⓐ – Ⓐ USED FOR UPLIFT PRESSURE IN THE (A) STRATUMS
3. PH LINE Ⓑ – Ⓑ USED FOR UPLIFT PRESSURE IN THE (B) STRATUMS

NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY = $\frac{R_A + R_B + R_P}{D_A - D_P}$

LAKE PONTCHARTRAIN, LA. & VICINITY
NEW ORLEANS LAKEFRONT LEVEE
LEVEE
PROTECTED SIDE STABILITY ANALYSIS
STA. 251+50 TO 258+04.11
JULY 85



ASSUMED FAILURE SURFACE NO.	ASSUMED FAILURE SURFACE ELEV.	RESISTING FORCES R_A	RESISTING FORCES R_B	RESISTING FORCES R_P	DRIVING FORCES D_B	DRIVING FORCES $-D_P$	SUMMATION OF FORCES RESISTING	SUMMATION OF FORCES DRIVING	FACTOR OF SAFETY
Ⓐ ①	-13.0	29058	16746	14961	62543	16970	60765	45573	1.330
Ⓑ ①	-24.0	43121	16800	30219	106545	40158	90140	66387	1.360
Ⓒ ①	-39.0	59881	25160	46678	183339	94371	131719	88968	1.480

ADDITIONAL NOTES
1. CLASSIFICATION, STRATIFICATION, SHEAR STRENGHTS AND UNIT WEIGHTS FOR THE SOIL ARE BASED ON THE BORINGS SHOWN ON PLATE NO. 100 OF GDM NO. 13.

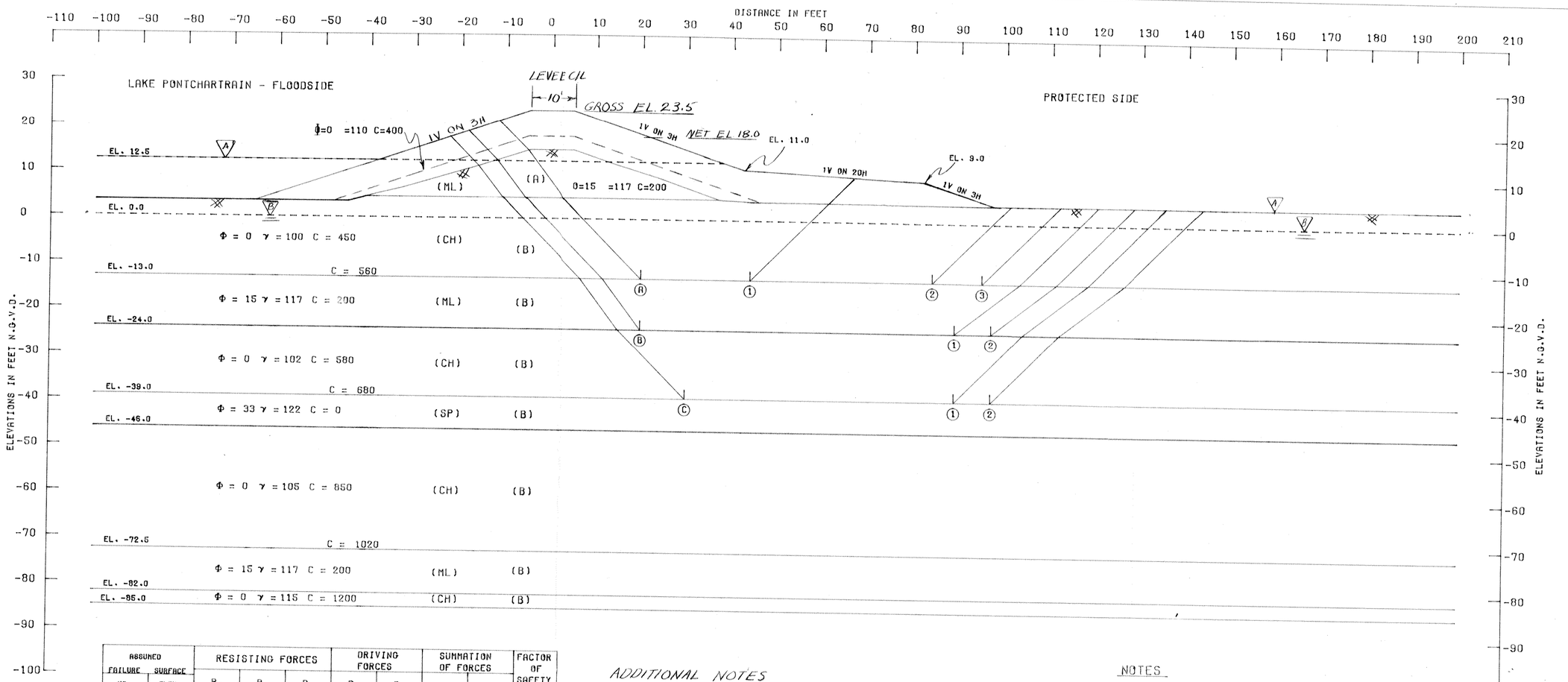
NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

$$\text{FACTOR OF SAFETY} = \frac{R_A + R_B + R_P}{D_B - D_P}$$

LAKE PONTCHARTRAIN, LA. AND VICINITY
NEW ORLEANS LAKEFRONT LEVEE
LEVEE
FLOOD SIDE STABILITY ANALYSIS
STA. 251+50 TO STA. 285+04.11 B/L

July 85



ASSUMED FAILURE SURFACE NO.		ELEV.	RESISTING FORCES R_A	R_B	R_P	DRIVING FORCES D_A	$-D_P$	SUMMATION OF FORCES RESISTING	DRIVING	FACTOR OF SAFETY
Ⓐ	①	-13.0	29593	13440	19795	67885	28533	62828	39352	1.600
Ⓐ	②	-13.0	29593	35840	15168	67885	17789	80601	50096	1.610
Ⓐ	③	-13.0	29593	41515	15168	67885	14564	86276	53321	1.620
Ⓑ	①	-24.0	44237	33120	30732	113225	41243	108089	71982	1.500
Ⓑ	②	-24.0	44237	36960	30025	113225	40231	111222	72994	1.520
Ⓒ	①	-39.0	60995	40120	47402	192064	97829	148517	94235	1.580
Ⓒ	②	-39.0	60995	45560	47402	192064	96510	153957	95554	1.610

ADDITIONAL NOTES

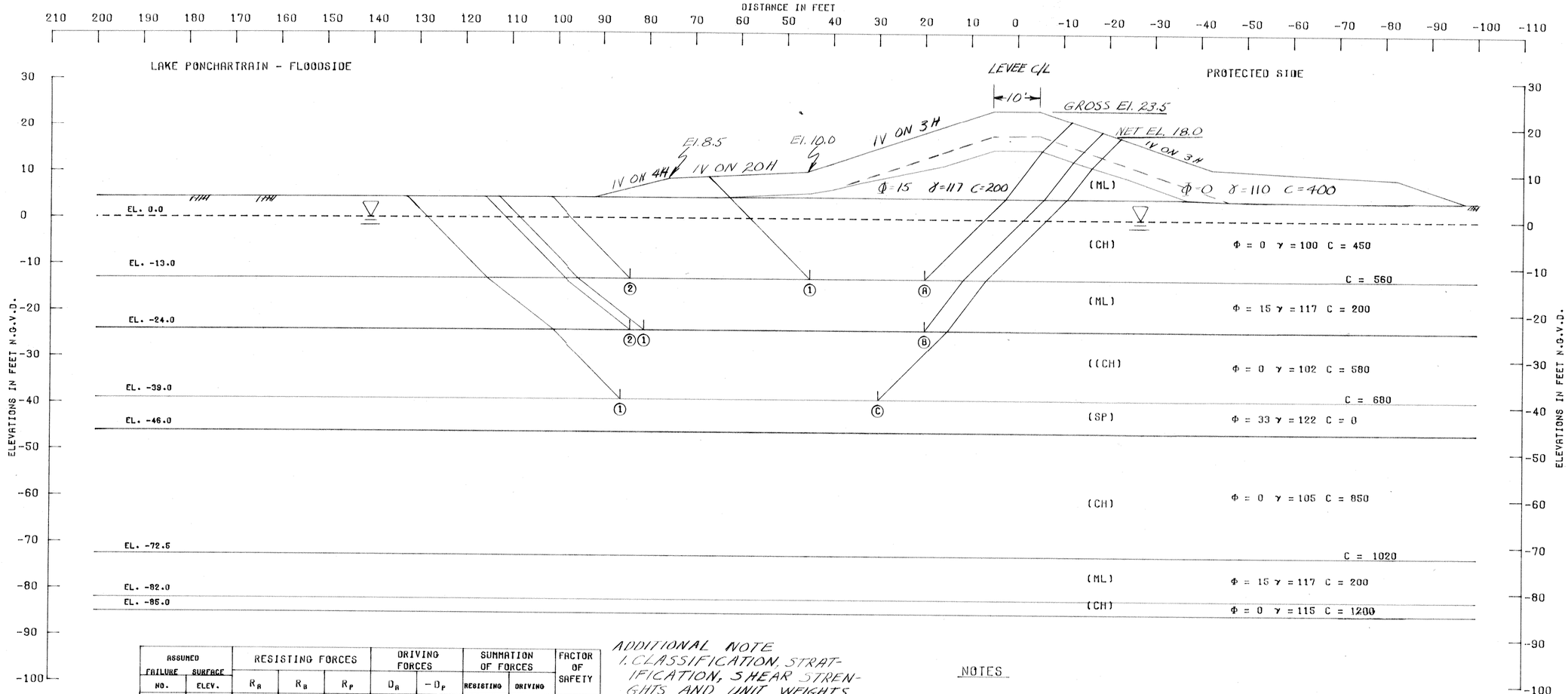
1. CLASSIFICATION, STRATIFICATION, SHEAR STRENGTHS AND UNIT WEIGHTS FOR THE SOIL ARE BASED ON THE BORINGS SHOWN ON PLATE NO. 100 ON GDM NO.13
2. PH LINE Ⓐ-Ⓐ USED FOR UPLIFT PRESSURE IN THE (A) STRATUMS
3. PH LINE Ⓑ-Ⓑ USED FOR UPLIFT PRESSURE IN THE (B) STRATUMS

NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

$$\text{FACTOR OF SAFETY} = \frac{R_A + R_B + R_P}{D_A - D_P}$$

LAKE PONTCHARTRAIN & VICINITY
NEW ORLEANS LAKEFRONT LEVEE
UTILITY CROSSINGS
PROTECTED SIDE STABILITY ANALYSIS
STA 251+50 TO STA 285+04 B/L
JULY 85



ASSUMED FAILURE SURFACE NO.	ASSUMED FAILURE SURFACE ELEV.	RESISTING FORCES R_A	RESISTING FORCES R_B	RESISTING FORCES R_P	DRIVING FORCES D_A	DRIVING FORCES $-D_P$	SUMMATION OF FORCES RESISTING	SUMMATION OF FORCES DRIVING	FACTOR OF SAFETY
Ⓐ ①	-13.0	30426	14000	19065	67907	26315	63491	41592	1.530
Ⓐ ②	-13.0	30426	35646	15467	67907	16031	81539	51876	1.570
Ⓑ ①	-24.0	45080	29280	31509	113246	42685	105869	70561	1.500
Ⓑ ②	-24.0	45080	30720	31101	113246	42101	106901	71145	1.500
Ⓒ ①	-39.0	61816	38080	48039	192158	98860	147935	93298	1.590

ADDITIONAL NOTE
1. CLASSIFICATION, STRATIFICATION, SHEAR STRENGHTS AND UNIT WEIGHTS FOR THE SOIL ARE BASED ON THE BORINGS SHOWN ON PLATE NO. 100 OF GDM NO. 13

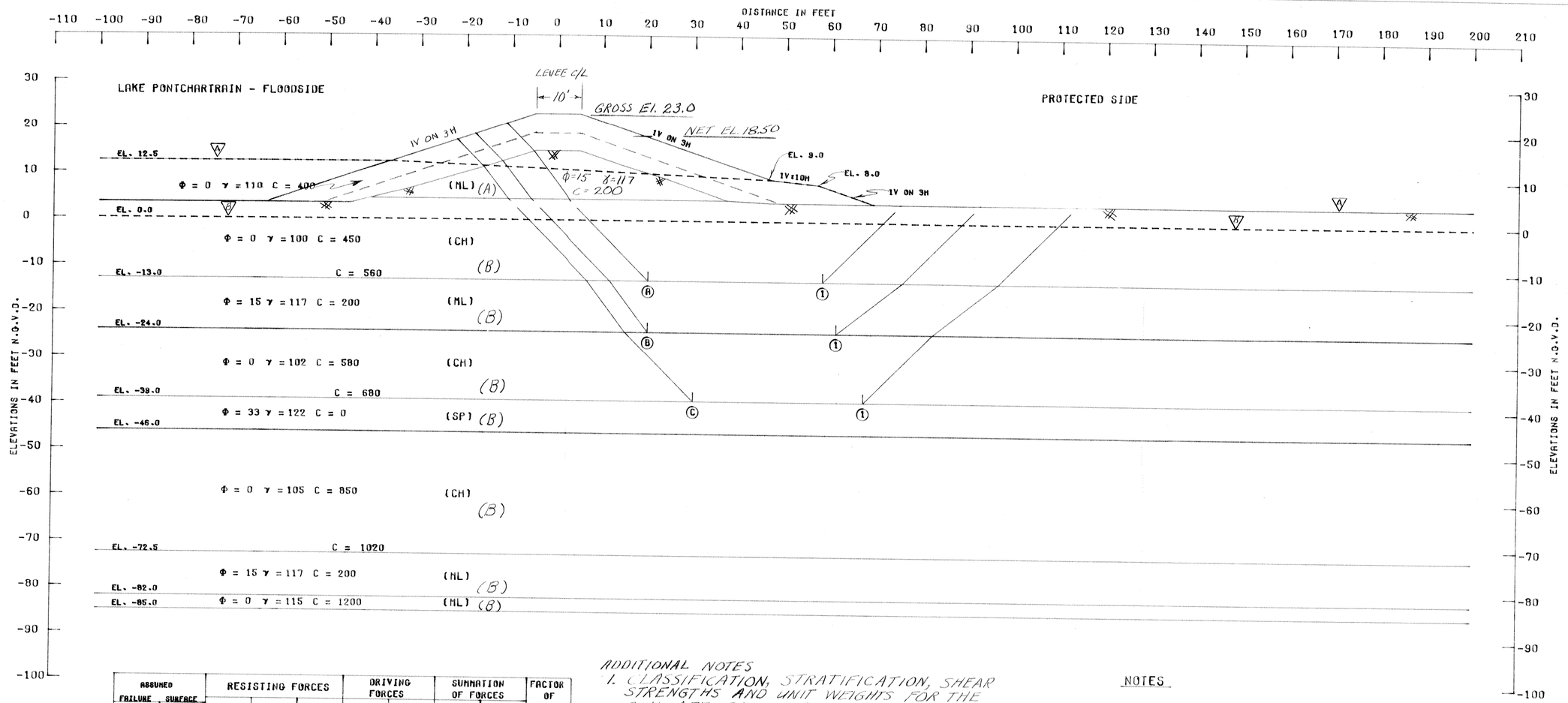
NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY = $\frac{R_A + R_B + R_P}{D_A - D_P}$

LAKE PONTCHARTRAIN, LA AND VICINITY
NEW ORLEANS LAKEFRONT LEVEE
Utility Crossings
FLOODSIDE STABILITY ANALYSIS
STA 251+50 TO 285+04.11 BIL.
July 85

II



ASSUMED FAILURE SURFACE NO.	ASSUMED FAILURE SURFACE ELEV.	RESISTING FORCES R_A	RESISTING FORCES R_B	RESISTING FORCES R_P	DRIVING FORCES D_A	DRIVING FORCES $-D_P$	SUMMATION OF FORCES RESISTING	SUMMATION OF FORCES DRIVING	FACTOR OF SAFETY
(A) (1)	-13.0	29343	21267	15168	66013	16666	65778	49347	1.330
(B) (1)	-24.0	43726	19680	30651	110871	41127	94057	69744	1.350
(C) (1)	-39.0	60460	25160	47402	188958	96579	133022	92379	1.440

ADDITIONAL NOTES

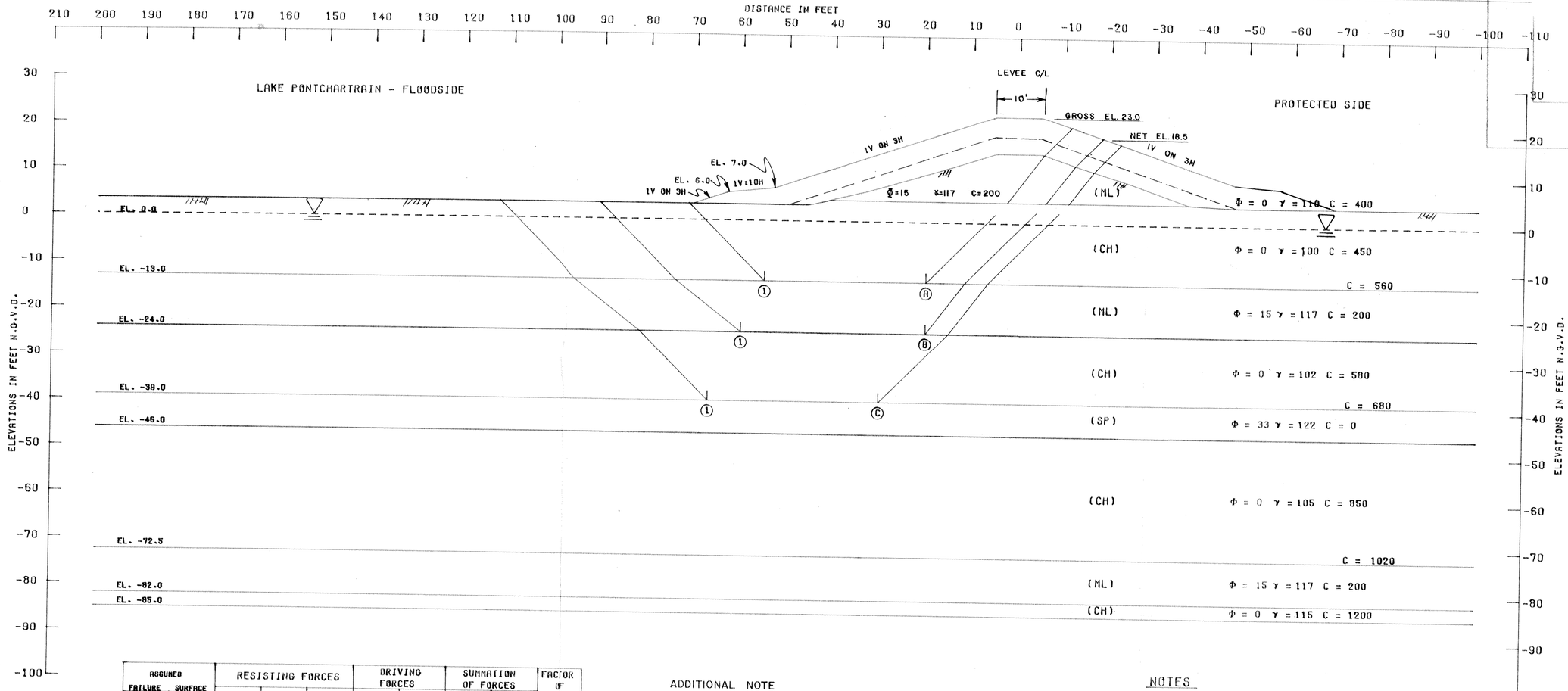
1. CLASSIFICATION, STRATIFICATION, SHEAR STRENGTHS AND UNIT WEIGHTS FOR THE SOIL ARE BASED ON BORINGS SHOWN ON PLATE NO. 100 ON GDM NO. 13
2. PH LINE Ⓐ - Ⓐ USED FOR UPLIFT PRESSURE IN THE (A) STRATUMS
3. PH LINE Ⓑ - Ⓑ USED FOR UPLIFT PRESSURE IN THE (B) STRATUMS

NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY = $\frac{R_A + R_B + R_P}{D_A - D_P}$

LAKE PONTCHARTRAIN LA & VICINITY
NEW ORLEANS LAKEFRONT LEVEE
LEVEE
PROTECTED SIDE STABILITY ANALYSIS
STA 289+49.52 TO 303+51.39 B/L
July 85



ASSUMED FAILURE SURFACE NO.	ASSUMED FAILURE SURFACE ELEV.	RESISTING FORCES R_A	RESISTING FORCES R_B	RESISTING FORCES R_P	DRIVING FORCES D_A	DRIVING FORCES $-D_P$	SUMMATION OF FORCES RESISTING	SUMMATION OF FORCES DRIVING	FACTOR OF SAFETY
Ⓐ ①	-13.0	29882	13476	14828	66022	17132	64186	48890	1.310
Ⓑ ①	-24.0	44335	19200	30318	110874	40301	93853	70573	1.330
Ⓒ ①	-39.0	61105	25160	46678	188974	94592	132943	94382	1.410

ADDITIONAL NOTE

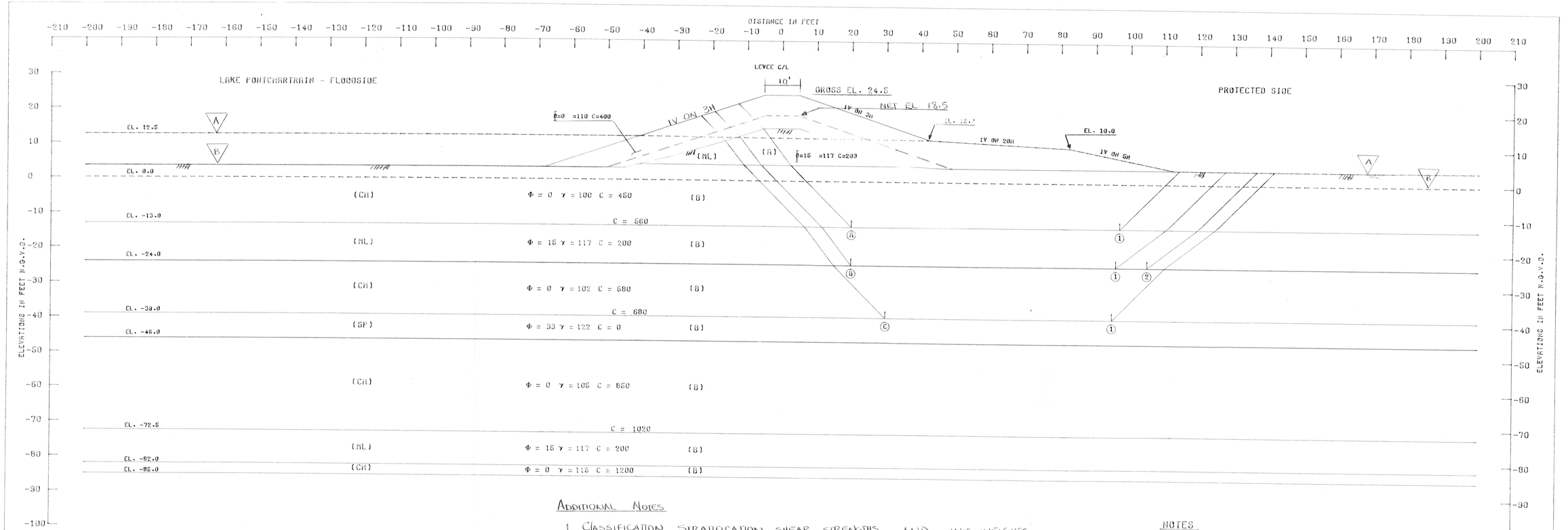
1. CLASSIFICATION, STRATIFICATION, SHEAR STRENGTHS AND UNIT WEIGHTS FOR THE SOIL ARE BASED ON THE BORINGS SHOWN ON PLATE NO. 100 OF GDM NO. 13.

NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY = $\frac{R_A + R_B + R_P}{D_A - D_P}$

LAKE PONTCHARTRAIN, LA. & VICINITY
NEW ORLEANS LAKEFRONT LEVEE
LEVEE
FLOODSIDE STABILITY ANALYSIS
STA 2891+49.52 TO 3031+39 BIL.
JULY 85



ASSUMED FAILURE SURFACE		RESISTING FORCES			DRIVING FORCES		SUMMATION OF FORCES		FACTOR OF SAFETY
NO.	ELEV.	R_A	R_B	R_P	D_A	$-D_P$	RESISTING	DRIVING	
Ⓐ ①	-13.0	30711	43039	18169	71692	17092	91919	54600	1.630
Ⓑ ①	-24.0	45745	36480	31539	117935	42537	113924	75458	1.510
Ⓑ ②	-24.0	45745	40800	30354	117935	40702	116899	77293	1.510
Ⓒ ①	-39.0	62435	44200	47439	136339	39867	154074	96492	1.560

Additional Notes

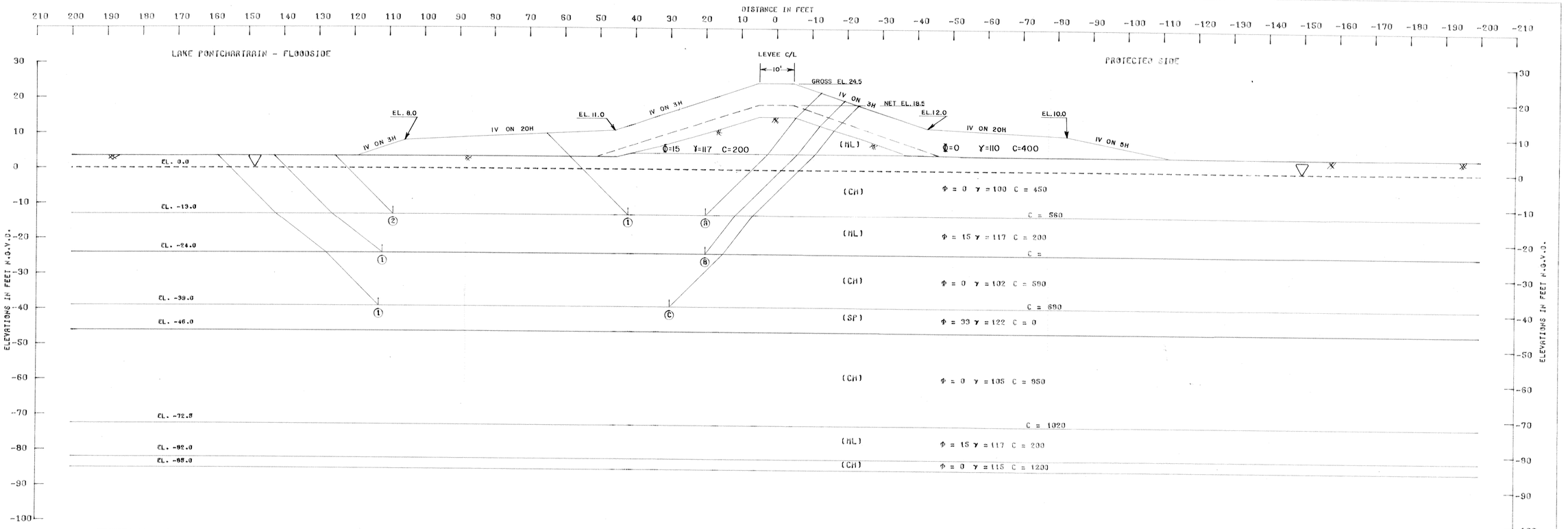
1. Classification, stratification, shear strengths and unit weights for the soil are based on the borings shown on Plate No. 100 of GDM No. 13.
2. PH Line Ⓦ-Ⓦ used for uplift pressure in the (A) stratums
3. PH Line Ⓑ-Ⓑ used for uplift pressure in the (B) stratums

Notes

Φ --- Angle of internal friction, degrees
C --- Unit cohesion, P.S.F.
Ⓦ --- Static water surface
D --- Horizontal driving force in pounds
R --- Horizontal resisting force in pounds
A --- As a subscript, refers to active wedge
B --- As a subscript, refers to central block
P --- As a subscript, refers to passive wedge

Factor of Safety = $\frac{R_A + R_B + R_P}{D_A - D_P}$

Lake Pontchartrain, La. & Vicinity
New Orleans Lakefront Levee
Utility Crossings.
Protected Side Stability Analysis
Sta. 289+49.52 to 303+51.39
July 85



ASSUMED FAILURE NO.	ASSUMED SURFACE ELEV.	RESISTING FORCES R_a	R_a	R_f	DRIVING FORCES D_a	$-D_f$	SUMMATION OF FORCES RESISTING	DRIVING	FACTOR OF SAFETY
Ⓐ ①	-13.0	31496	12320	20046	71709	29429	63862	42291	1.510
Ⓐ ②	-13.0	31496	49766	14825	71709	15444	96090	56265	1.710
Ⓑ ①	-24.0	46859	44160	29779	119030	39529	120498	78501	1.535
Ⓒ ①	-39.0	63252	56440	46679	139407	93027	166370	103380	1.610

ADDITIONAL NOTE

1. CLASSIFICATION, STRATIFICATION, SHEAR STRENGTHS AND UNIT WEIGHTS FOR THE SOIL ARE BASED ON THE BORINGS SHOWN ON PLATE NO. 100 OF GDM NO. 13

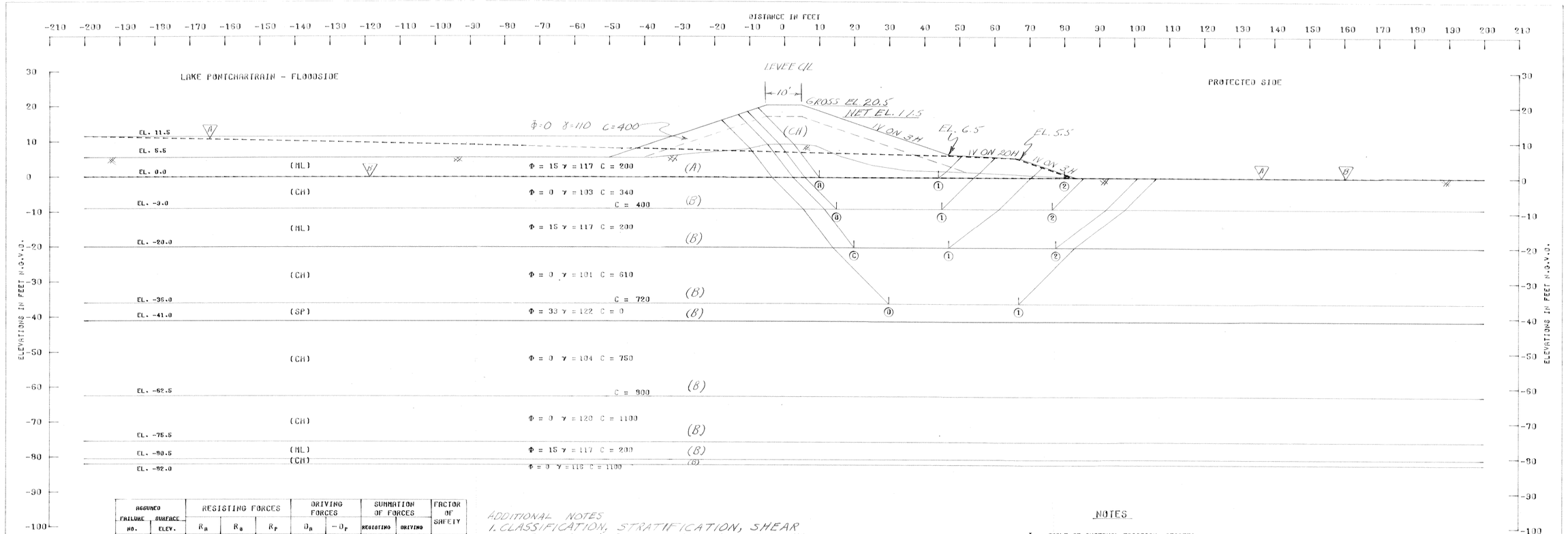
NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
a -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
b -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
f -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY = $\frac{R_a + R_b + R_f}{D_a - D_f}$

LAKE PONTCHARTRAIN, LA & VICINITY
NEW ORLEANS LAKEFRONT LEVEE
UTILITY CROSSINGS
FLOODSIDE STABILITY ANALYSIS
STA. 289+49.52 TO 303+51.39 B/L
JULY 85

Plate 11 of 13



ASSUMED FAILURE NO.	ASSUMED SURFACE ELEV.	RESISTING FORCES R_A	R_B	R_P	DRIVING FORCES D_A	$-D_P$	SUMMATION OF FORCES RESISTING	DRIVING	FACTOR OF SAFETY
(A) (1)	0.0	17060	3520	5002	22660	2421	31582	20239	1.560
(A) (2)	0.0	17060	19165	646	22660	54	36971	22606	1.630
(B) (1)	-9.0	22537	12000	10660	45833	12620	45257	33213	1.360
(B) (2)	-9.0	22537	24545	6109	45833	5077	53250	40756	1.310
(C) (1)	-20.0	36891	13500	24722	94291	35143	75113	49149	1.530
(C) (2)	-20.0	36891	29800	17299	94291	21340	92990	62351	1.330
(D) (1)	-36.0	55900	26640	36445	160091	74931	119985	95260	1.400

ADDITIONAL NOTES

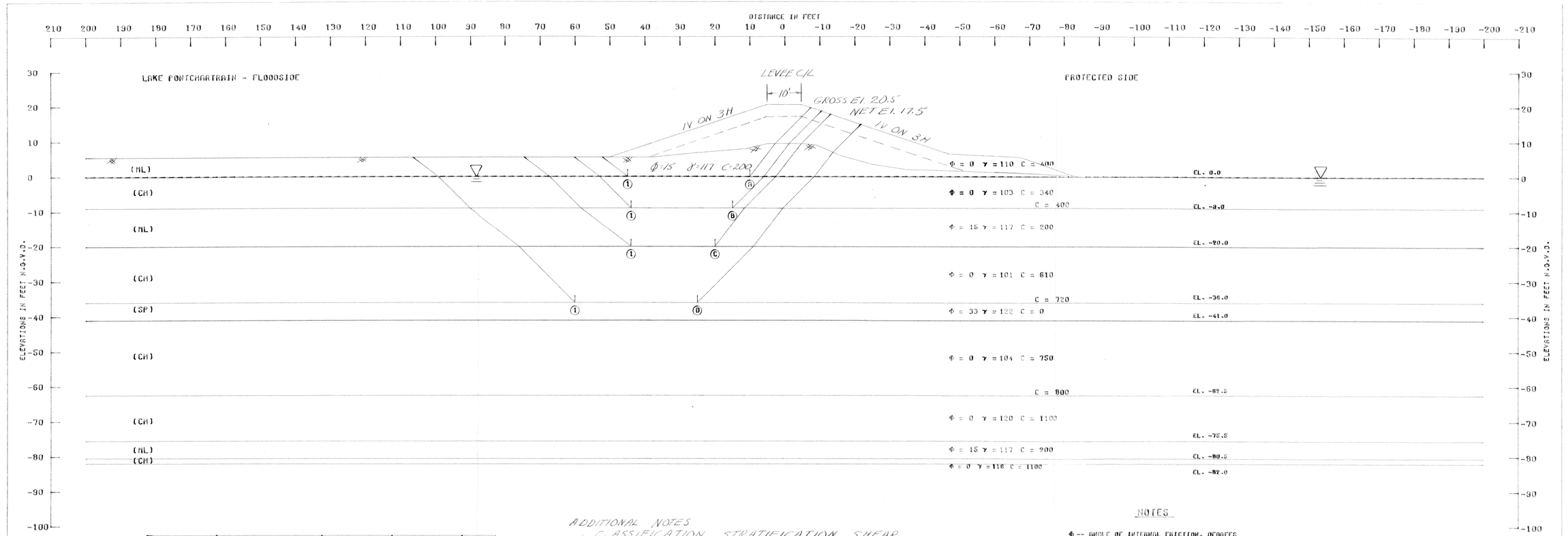
1. CLASSIFICATION, STRATIFICATION, SHEAR STRENGTHS AND UNIT WEIGHTS FOR THE SOIL ARE BASED ON THE BORINGS SHOWN ON PLATE NO. 100 OF GDM NO. 13.
2. PH LINE (A)-(A) USED FOR UPLIFT PRESSURE IN THE (A) STRATUMS
3. PH LINE (B)-(B) USES FOR UPLIFT PRESSURE IN THE (B) STRATUMS

NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
V -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY = $\frac{R_A + R_B + R_P}{D_A - D_P}$

LAKE PONTCHARTRAIN, LA. & VICINITY
NEW ORLEANS LAKEFRONT LEVEE
LEVEE
PROTECTED SIDE - STABILITY ANALYSIS
STA. 307+09.74 TO STA. 308+50.00 B/L
JULY, 85



ASSUMED FAILURE SURFACE		RESISTING FORCES			DRIVING FORCES		SUMMATION OF FORCES		FACTOR OF SAFETY
NO.	ELEV.	R_A	R_B	R_P	D_A	$-D_P$	RESISTING	DRIVING	
(A) (1)	0.0	17693	9800	4348	22648	2121	31841	20525	1.550
(B) (1)	-8.0	23252	11600	10211	45836	12392	45063	33444	1.350
(C) (1)	-20.0	37803	12000	26344	84384	36592	75347	47792	1.590
(D) (1)	-36.0	55635	25200	45489	161815	94731	126324	67084	1.880

ADDITIONAL NOTES
1. CLASSIFICATION, STRATIFICATION, SHEAR STRENGHTS, AND UNIT WEIGHTS OF THE SOIL ARE BASED ON THE BORINGS SHOWN ON PLATE NO. 100 ON GDM NO. 13

NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY = $\frac{R_A + R_B + R_P}{D_A - D_P}$

LAKE PONTCHARTRAIN LA. & VICINITY
NEW ORLEANS LAKEFRONT LEVEE
LEVEE
FLOODSIDE STABILITY ANALYSIS
STA 307+09.74 to STA 308+50.00 S.L.
JULY 85

LMNED-DL

SUBJECT: Review P&S for Lake Pont, LA & Vic Hurr. Prot. Proj., High Level Plan, N.O. Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, LA

TO C/ F&M Br 7/11 FROM C/Des Br DATE 11 Jul 85 CMT 2

Mr. Graff/dw/2772

Your comments have been reviewed and we concur with them all except for the following for which explanation of nonconcurrence is provided:

a. Item (4)(d). The 8-inch water line runs parallel to the levee C/L near the toe of the levee, therefore, it would be inappropriate to show it on the C/L profile.

b. Item (6)(a). The 6-inch water line near Sta. 307+00± B/L is outside of our levee work, therefore, not shown in profile.

c. Item (6)(b). The beginning of the levee has been moved to Sta. 337+00 B/L so a number of utilities would not need to be relocated.

Encl
wd

WALTER D. JUDLIN, III
Chief, Design Branch

LMNED-DL
SUBJECT: Review P&S for Lake Pont, LA & Vic Hurr. Prot. Proj., High Level Plan, N.O. Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, LA

TO C/ F&M Br FROM C/Des Br DATE 11 Jul 85 CMT 2
Mr. Graff/dw/2772

Your comments have been reviewed and we concur with them all except for the following for which explanation of nonconcurrence is provided:

a. Item (4)(d). The 8-inch water line runs parallel to the levee C/L near the toe of the levee, therefore, it would be inappropriate to show it on the C/L profile.

b. Item (6)(a). The 6-inch water line near Sta. 307+00± B/L is outside of our levee work, therefore, not shown in profile.

c. Item (6)(b). The beginning of the levee has been moved to Sta. 337+00 B/L so a number of utilities would not need to be relocated.

Encl
wd

WALTER D. JUDLIN, III
Chief, Design Branch

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-FS	Review of Plans & Specifications for the Lake Pontchartrain, LA & Vic Hurricane Protection Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, LA

TO	FROM	DATE	CMT 1
C/Design Br	C/F&M Br	2 Jul 85	

Messrs. Estrada/Rome/mlm/1035/1194

RE

1. Reference is made to your multiple LMNED-DL DF dated June 85, subject as above, requesting our review and comments on the subject report.

2. We have reviewed the plans and specifications and have the following comments:

a. Structure Foundations Section.

(1) ~~Pg. 2-4, para. 2.3.3.2. Modify this paragraph to include the placing of the sandy or silty material encountered on the top of the borrow area, into the stockpile area~~.

(2) Pg. 3-6, para. 3-6.1.2. Change the maximum moisture content for a CH from 43 to 50.

(3) Dwg. 2 of 18:

(a) The electrical cable around sta. 167+00 should be shown on the profile.

(b) General note No. 5 should be finished.

(4) Dwg. 3 of 18:

(a) The C/L ramp, sta. 72+00 R/L should be changed to sta. 0+72.00 R/L.

(b) Sta. 175+00.00 R/L should be changed to 1+75.00 R/L, or to Sta. 1+82.00, whatever is correct.

(c) The station for the existing 8-inch sewerline is incorrect. It should be changed to sta. 231+10±.

(d) The 8-inch waterline from approx. sta. 227+00 to 245+00 should be shown on the profile.

(5) Dwg. 4 of 18. Borings 1-UOP and 6-OUW should be identified.

(6) Dwg. 5 of 18.

(a) The 6-inch waterline at approx. sta. 307+00± B/L should be shown on the profile.

(b) Sta. 337+00 B/L should be changed to sta. 336+50.71 B/L

(7) Dwg 13 of 18:

(a) The second sentence on note No. 6 should be deleted.

LMNED-FS CMT 1

SUBJECT: Review of Plans and Specifications for the Lake Pontchartrain, LA & Vic. Hurricane Protection Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, LA

(b) ~~A seventh note should be added that reads: "Silty or sand material encountered on top of the borrow pit should not be used in the levee. It should be removed and placed in the area designated as 'Sand Stockpile area'".~~

(8) Dwg. 14 of 18.

(a) The water content table for general borings 10-LO, 6-SW and 11-LO should be deleted. This table is not presented for general type borings.

(b) A third note should be added to read: "General type borings obtained with 1-7/8-inch I.D. X 29-inch sample.

(9) Dwg. 15 of 18:

(a) The water content table for general borings 12-LO, 2-OP and ~~8~~ 13-LO should be deleted.

(b) Boring 6-OUW should be added (Texas dated)

(10) Dwg. 16 of 18. The water content table for general type boring 14-LO should be deleted.

2. Utilities crossings sections and revised typical levee sections 3, 4, and 6 were furnished thru DF dated 20 Jun 85.

3. In reference to para. 2.b of 2nd End, the steep construction slopes were flattened (1V on 3H).

4. Materials Section comments are furnished as Encl 1.

Encl

RODNEY P. PICCIOLA
Chief, Foundations & Materials Branch

CF WO INCL.

C/ MATERIALS SECTION

ROUTING AND TRANSMITTAL SLIP

Date 17 Jun 85

To: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Roberto Estrada		
2.		
3.		
4.		
5.		

Action		File	Note and Return
Approval		For Clearance	Per Conversation
As Requested		For Correction	Prepare Reply
Circulate		For Your Information	See Me
Comment		Investigate	Signature
Coordination		Justify	

REMARKS

Minor Comments and suggestions can be found hilighted in green on the enclosed copy of select pages of the specs for L.P.+V., H.P.P, H.L.P., N.O. Lakefront Levee, London Ave Canal to West End Blvd, Orleans Parish, LA. Furish ED-FM a copy of F+M's reply.

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Charlie Roma	Phone No. 1194

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

☆ GPO : 1981 O - 361-529 (148)

DISPOSITION FORM

For use of this form, see AR 340-15, the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-DL	Review of Plans and Specifications for N.O. Lakefront Levee, London Ave Canal to West End Blvd,

TO C/F&M Br C/H&H Br C/Proj. Mgmt Br

FROM C/Des Br

DATE June 1985

CMT 1 Mr Graff/2772

1. Please review the enclosed plans and specifications in sufficient detail to detect and correct errors or conflicts and return them at the earliest practicable date, but not later than 21 JUNE 85, along with any comments and recommendations you consider necessary or desirable. All major comments on the drawings must be addressed in the responding DF. Only minor comments should be marked on the drawings.

2. Estimated total cost of work, $2,390,000, beginning in fiscal year 85.

3. All review work should be charged to cost account no. BEC21 304L10 P220.

4. In addition to the above:

a.( ). Please send a copy of your review comments to Construction Division (LMNCD-I) in addition to your normal distribution.

b.( ). The Area Engineer will comply with subparagraph e, Inspection of Site, para. 1-7 of CDOM 1180-1-12, titled "Office Memorandum for Supervision, Inspection, and Administration of Contracts" dated September 1981.

c.( ). Construction Division will include liquidated damage information.

d.( ). Construction Division will initiate request (copy to Engineering Division) for authority to use Clause 52.236-16 ALT 1 in accordance with FAR 36.516.

e.( ). (For Maintenance Dredging Projects Only) Operations Division will include the status of compliance with Federal Regulation, Title 33 CPR, Part 209.145.

f.( ). Planning Division's review will include endangered species, cultural resources and EIS pertinent to these plans and specifications.

g.( ). If forwarded to LMVD for review, Planning Division will furnish data prescribed in paragraph 18(f) of LMVD Supplement 1, dated 30 Jun 82 to ER 1110-2-1200.

h.( ). Cost Engineering and Specifications Section will include a statement indicating the use of the Clause in FAR 52.236-7009(b)(1) or FAR 52.236-7009(b)(2) (if Mobilization and Demobilization exceeds $50,000) and provide a cost estimate based on the enclosed plans and specifications.

i.( ). Procurement and Supply Division, Construction Division, and Operations Division review will evaluate the effectiveness of biddability, constructibility, and operability in accordance with ER 415-1-11 and LMVD Suppl 1 to ER 415-1-11.

WALTER B. JUDLIN, III
Chief, Design Branch

~~32~~Encl
~~(3 cys each item for Const Div)~~
~~(3 cys plans and 1 copy spec for Plng Div)~~
~~(5 cys each item for Appropriate Area Office)~~
1. Specifications
2. Plan, file no. H-8-29721
~~3. Data required for FAR 52.236-16 ALT 1 request~~

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-FS	Lake Pontchartrain, La. & Vicinity Hurricane Protection Project, P&S, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, La.

TO: THRU: Engr Div — FROM: C/F&M Br — DATE: 20 Jun 85 — CMT 1

TO: C/Design Br

Mr. Estrada/mlm/1035

1. Furnished as requested by your Tom Graff are the utilities levee crossing sections along the lakefront as shown on enclosures 1 thru 5.

2. The stability analysis of these sections shows shallow failures at these locations. Based on this observation and due to the limitations and costly acquisition of right-of-way, it is the opinion of this branch that these sections should be extended 50 feet in both sides of the utility lines instead of the usual 300 feet.

3. Furnished on encl 6, 7, and 8 are the revised typical levee sections 3, 4, and 6, as requested by the Levee Board to flatten the side slopes.

8 Encl

RODNEY P. PICCIOLA
Chief, Foundations & Materials Branch

LMNED-DL

TO: F&M Br — FROM: C/Des Br — DATE: 10 July 85 — CMT 2

Mr. Graff/cdb/2772

1. The revised typical levee sections 3, 4, and 6 have been incorporated into the plans and specs for this job.

2. The utilities levee crossing sections 1 thru 4 have also been incorporated into the plans and specs for this job. However, the utility levee crossing section 6 can not be used without relocating Lake Shore Parkway on the protected side, removing a parking lot and trees along Lake Shore Drive on the flood side, and more extensive relocation of water and electrical lines which presently run adjacent to the existing levee. For these reasons the 2 inch gas line will be relocated from beneath the existing levee to within one foot of the top of the new gross design section.

8 Encls
wd all encls

WALTER D. JUDLIN, III
Chief, Design Branch

TO: F&M Br FROM: C/Des Br DATE: 10 July 85 CMT 2
Mr. Graff/cdb/2772

1. The revised typical levee sections 3, 4, and 6 have been incorporated into the plans and specs for this job.

2. The utilities levee crossing sections 1 thru 4 have also been incorporated into the plans and specs for this job. However, the utility levee crossing section 6 can not be used without relocating Lake Shore Parkway on the protected side, removing a parking lot and trees along Lake Shore Drive on the flood side, and more extensive relocation of water and electrical lines which presently run adjacent to the existing levee. For these reasons the 2 inch gas line will be relocated from beneath the existing levee to within one foot of the top of the new gross design section.

8 Encls
wd all encls

WALTER D. JUDLIN, III
Chief, Design Branch

LMNED-FS

Review of Plans & Specifications for the Lake Pontchartrain, LA & Vic Hurricane Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, LA

C/Design Br

C/F&M Br

8 July 1985
Mr. Estrada/mlm/1035

1. Reference is made to our LMNED-FS DF dated 2 Jul 85, subject as above.

2. The following comments should be added to the subject report:

a. Structure Foundations Section:

(1) Page 2-4, para. 2.3.3. Modify this paragraph to include the stripping of the borrow area. The stripping should include the removal of all the sandy or silty material encountered above the clay layer. This material should be placed into the stockpile area.

(2) Dwg. 13 of 18:

(a) A seventh note should be added that reads: "Silty or sandy material encountered on top of the borrow pit should not be used in the levee. It should be removed and placed in the area designated as 'sand stockpile area'."

RODNEY P. PICCIOLA
Chief, Foundations & Materials Branch

LMNED-FS

Review of Plans & Specifications for the Lake Pontchartrain, LA & Vic Hurricane Protection Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, LA

C/Design Br

C/F&M Br

2 Jul 85

Messrs. Estrada/Rome/mlm/1025/~~1194~~

1. Reference is made to your multiple LMNED-DL DF dated June 85, subject as above requesting our review and comments on the subject report.

2. We have reviewed the plans and specifications and have the following comments:

a. Structure Foundations Section.

(1) ~~Pg. 2-4, para. 2.3.3.2. Modify this paragraph to include the placing of the sandy or silty material encountered on the top of the borrow area, into the stockpile area.~~

(2) Pg. 3-6, para. 3-6.1.2. Change the maximum moisture content for a CH from 43 to 50.

(3) Dwg. 2 of 18:

(a) The electrical cable around sta. 167+00 should be shown on the profile.

(b) General note No. 5 should be finished.

(4) Dwg. 3 of 18:

(a) The C/L ramp, sta. 72+00 R/L should be changed to sta. 0+72.00 R/L.

(b) Sta. 175+00.00 R/L should be changed to 1+75.00 R/L, or to Sta. 1+82.00, whatever is correct.

(c) The station for the existing 8-inch sewerline is incorrect. It should be changed to sta. 231+10±.

(d) The 8-inch waterline from approx. sta. 227+00 to 245+00 should be shown on the profile.

(5) Dwg. 4 of 18. Borings 1-UOP and 6-OUW should be identified.

(6) Dwg. 5 of 18.

(a) The 6-inch waterline at approx. sta. 307+00± B/L should be shown on the profile.

(b) Sta. 337+00 B/L should be changed to sta. 336+50.71 B/L

(7) Dwg 13 of 18:

(a) The second sentence on note No. 6 should be deleted.

LMNED-FS CMT 1

SUBJECT: Review of Plans and Specifications for the Lake Pontchartrain, LA & Vic. Hurricane Protection Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, LA

(b) ~~A seventh note should be added that reads: "Silty or sand material encountered on top of the borrow pit should not be used in the levee. It should be removed and placed in the area designated as 'Sand Stockpile area'".~~

(8) Dwg. 14 of 18.

(a) The water content table for general borings 10-LO, 6-SW and 11-LO should be deleted. This table is not presented for general type borings.

(b) A third note should be added to read: "General type borings obtained with 1-7/8-inch I.D. X 29-inch sample.

(9) Dwg. 15 of 18:

(a) The water content table for general borings 12-LO, 2-OP and ~~B~~ 13-LO should be deleted.

(b) Boring 6-OUW should be added.

(10) Dwg. 16 of 18. The water content table for general type boring 14-LO should be deleted.

2. Utilities crossings sections and revised typical levee sections 3, 4, and 6 were furnished thru DF dated 20 Jun 85.

3. In reference to para. 2.b of 2nd End, the steep construction slopes were flattened (1V on 3H).

4. Materials Section comments are furnished as Encl 1.

Encl

RODNEY P. PICCIOLA
Chief, Foundations & Materials Branch

CF w/o incl.
cl Materials Section

LMNED-FS

Lake Pontchartrain, La. & Vicinity Hurricane Protection Project, P&S, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd, Orleans Parish, La.

THRU: C/Engr Div C/F&M Br 20 Jun 85
Mr. Estrada/mlm/1033

TO: C/Design Br

1. Furnished as requested by your Tom Graff are the utilities levee crossing sections along the lakefront as shown on enclosures 1 thru 5.

2. The stability analysis of these sections shows shallow failures at these locations. Based on this observation and due to the limitations and costly acquisition of right-of-way it is the opinion of this branch that these sections should be extended 50 feet in both sides of the utility lines instead of the usual 300 feet.

3. Furnished on encl 6, 7, and 8 are the revised typical levee sections 3, 4, and 6, as requested by the Levee Board to flatten the side slopes.

8 Encl

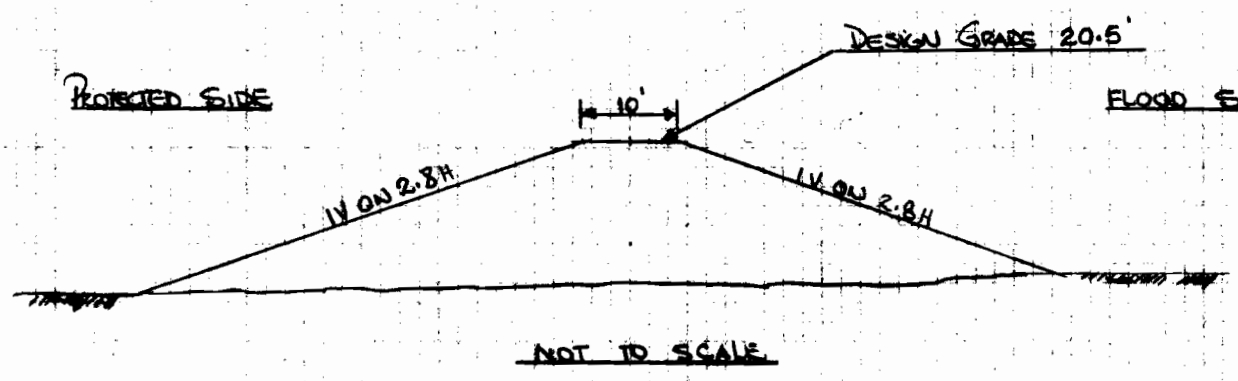
RODNEY P. PICCIOLA
Chief, Foundations & Materials Branch

6/2

COMPUTATION SHEET

PROJECT | PAGE OF | COMPUTED BY | DATE

SUBJECT | | CHECKED BY | DATE



LAKE PONTCHARTRAIN, LA. & VICINITY,
HURRICANE PROTECTION PROJECT, HIGH
LEVEL PLAN, NEW ORLEANS LAKEFRONT
LEVEE, LONDON AVE CANAL TO
WEST END Blvd., ORLEANS PARISH, LA.
Utilities Levee Crossing

1. STA. 164+15.00 B/L TO STA. PI. 192+04.86 B/L.
(SECTION 1)

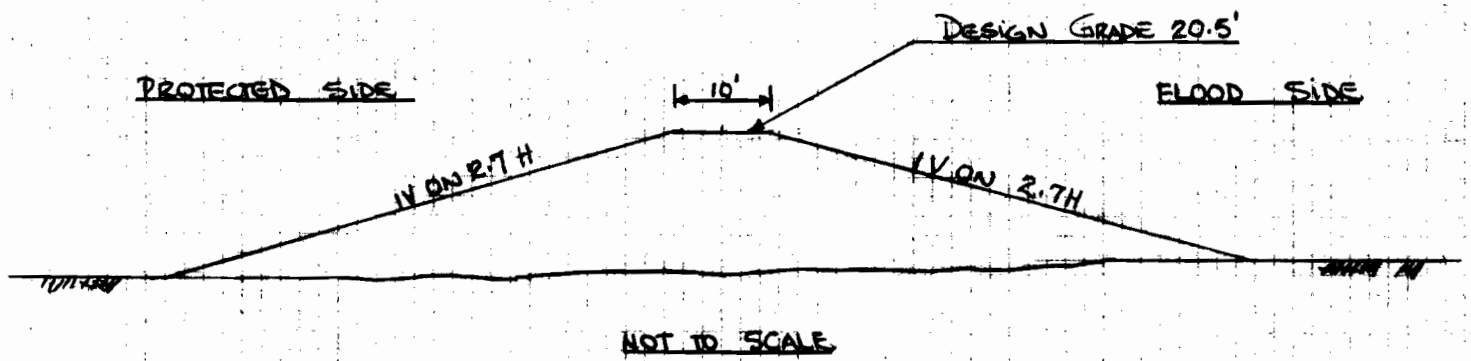
Encl. 1

LMV FORM 1 FEB 79 107e

COMPUTATION SHEET

PROJECT | PAGE OF | COMPUTED BY | DATE

SUBJECT | | CHECKED BY | DATE



LAKE PONTCHARTRAIN, LA & VICINITY
HURRICANE PROTECTION PROJECT
High Level Plan, New Orleans Lakefront
Levee, London Ave. Canal to West
End Blvd, Orleans Parish LA.

Utilities Levee Crossing

PI. STA. 201+68.01 B/L. TO PI STA. 244+59.81 B/L

(Section 2)

Encl. 2

LMV FORM 1 FEB 79 107e

COMPUTATION SHEET

PROJECT

SUBJECT

COMPUTED BY DATE

CHECKED BY DATE

PAGE OF

NOT TO SCALE

LAKE PONTCHARTRAIN, LA. & VICINITY
HURRICANE PROTECTION PROJECT
HIGH LEVEL PLAN, NEW ORLEANS LAKEFRONT
LEVEE, LONDON AVE. CANAL TO WEST END BLVD.
ORLEANS PARISH, LA.
UTILITIES LEVEE CROSSINGS
P.I. STA. 251+50 B/L. TO P.I. STA. 285+04.11 B/L.
(SECTION 3)

ENCL 3

LMV FORM 1 FEB 79 107e

COMPUTATION SHEET

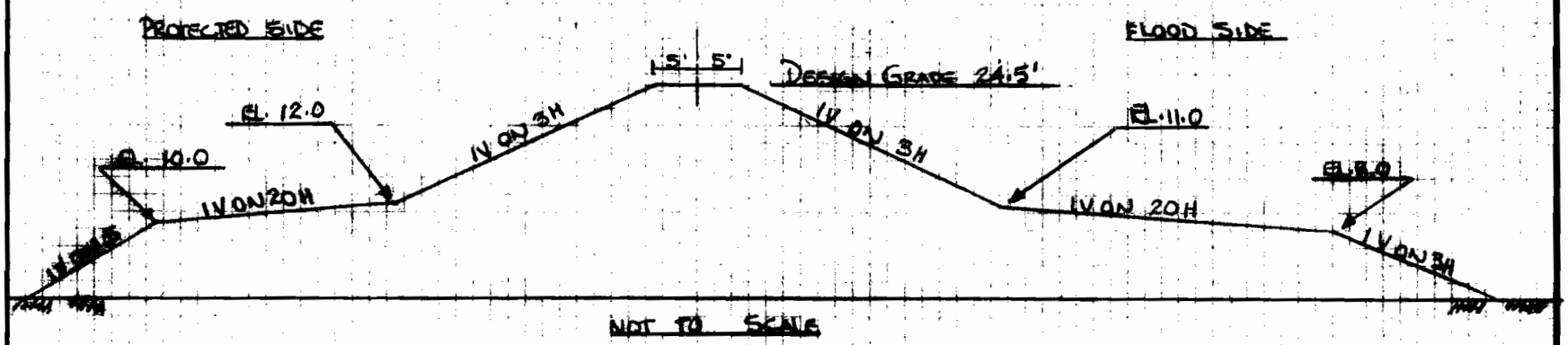
PROJECT

SUBJECT

COMPUTED BY DATE

CHECKED BY DATE

PAGE OF



LAKE PONTCHARTRAIN, LA. & VICINITY
HURRICANE PROTECTION PROJECT
HIGH LEVEL PLAN, NEW ORLEANS LAKEFRONT LEVEE
LONDON AVE. CANAL TO WEST END BLVD.
ORLEANS PARISH, LA.

Utilities Levee Crossings

P.I. Sta. 289+49.52 BL. to Sta. 308+51.39 BL.

(Section 4)

Encl. 4

LMV FORM 1 FEB 79 107e

COMPUTATION SHEET

PROJECT

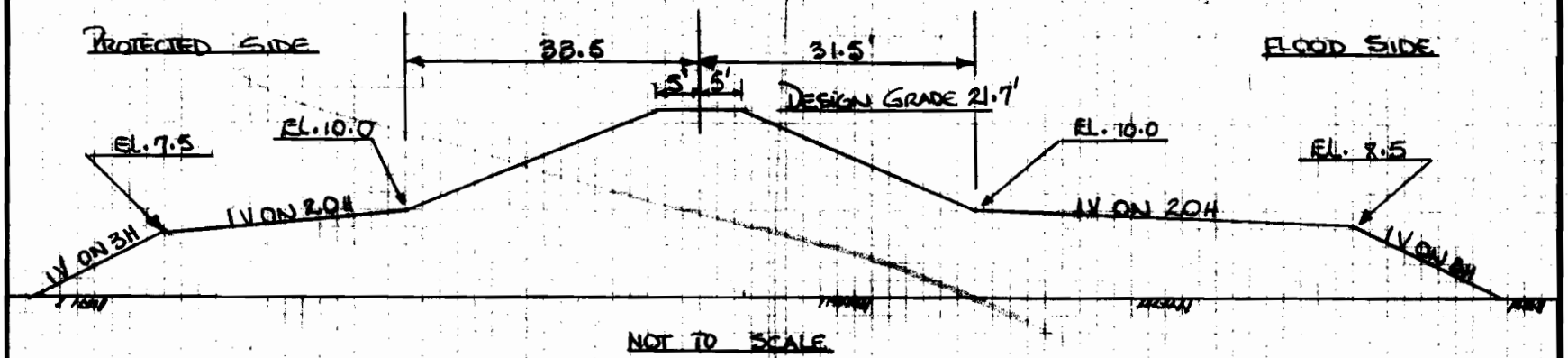
SUBJECT

COMPUTED BY DATE

CHECKED BY DATE

PAGE OF

Not Used



LAKE PONTCHARTRAIN, LA. & VICINITY
HURRICANE PROTECTION PROJECT
HIGH LEVEL PLAN, NEW ORLEANS LAKEFRONT LEVEE
LONDON AVE. CANAL TO WEST END BLVD.
ORLEANS PARISH, LA.

Utilities Levee Crossings

STA. 307+09.74 BL. TO STA. 308+50.00 BL.
(SECTION 6)

Encl. 5

LMV FORM 1 FEB 79 107e

COMPUTATION SHEET

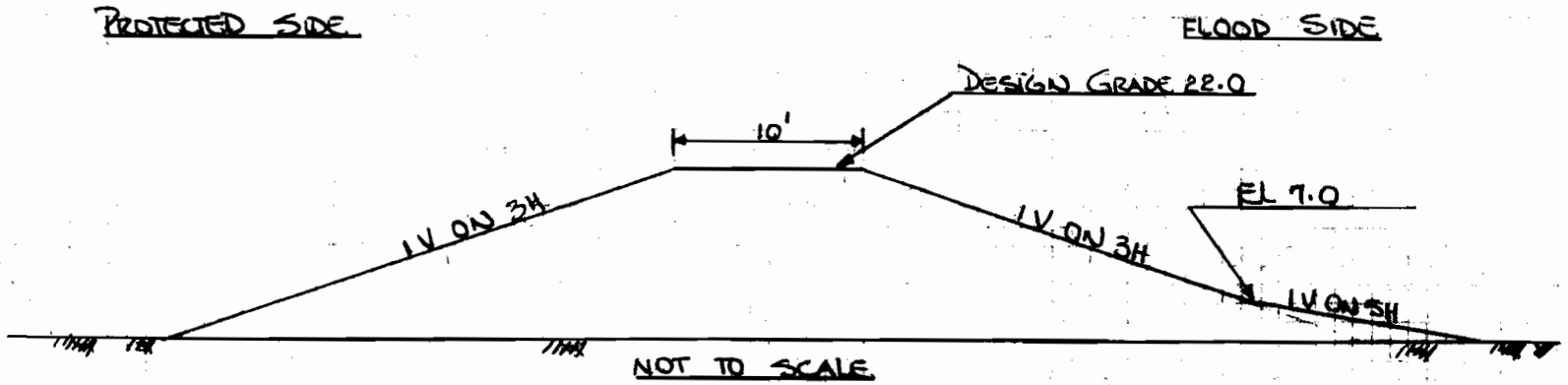
PROJECT

SUBJECT

PAGE OF

COMPUTED BY DATE

CHECKED BY DATE



LAKE PONTCHARTRAIN, LA. & VICINITY
HURRICANE PROTECTION PROJECT
HIGH LEVEL PLAN, NEW ORLEANS LAKEFRONT LEVEE
LONDON AVE. CANAL TO WEST END BLVD.
ORLEANS PARISH, LA.
TYPICAL LEVEE SECTION
PI STA. 251+50 BL. TO PI STA. 285+04.11 BL.
(SECTION 3)

Encl. 6

LMV FORM MAR 82 107e

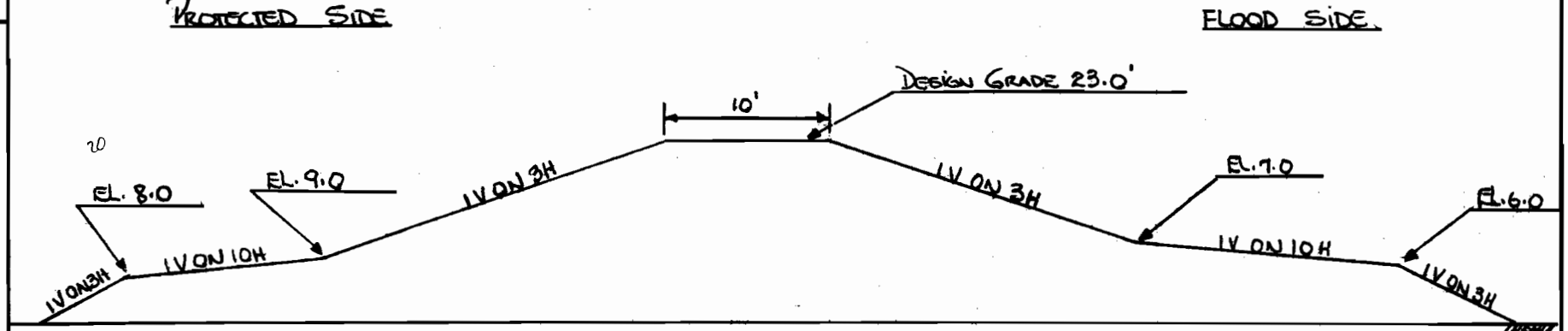
PREVIOUS EDITIONS MAY BE USED

(FOR USE WITH 10 x 10 GRID)

COMPUTATION SHEET

PROJECT | COMPUTED BY | DATE | PAGE OF

SUBJECT | CHECKED BY | DATE



NOT TO SCALE

LAKE PONTCHARTRAIN, LA. & VICINITY
HURRICANE PROTECTION PROJECT
HIGH LEVEL PLAN, NEW ORLEANS LAKEFRONT LEVEE
LONDON AVE. CANAL TO WEST END BLVD.
ORLEANS PARISH, LA.

TYPICAL LEVEE SECTION
P.I. STA. 289+49.52 B/L TO STA. 303+51.39 B/L.
(SECTION 4)

ENCL. 7

LMV FORM MAR 82 107e

PREVIOUS EDITIONS MAY BE USED

(FOR USE WITH 10 x 10 GRID)

COMPUTATION SHEET

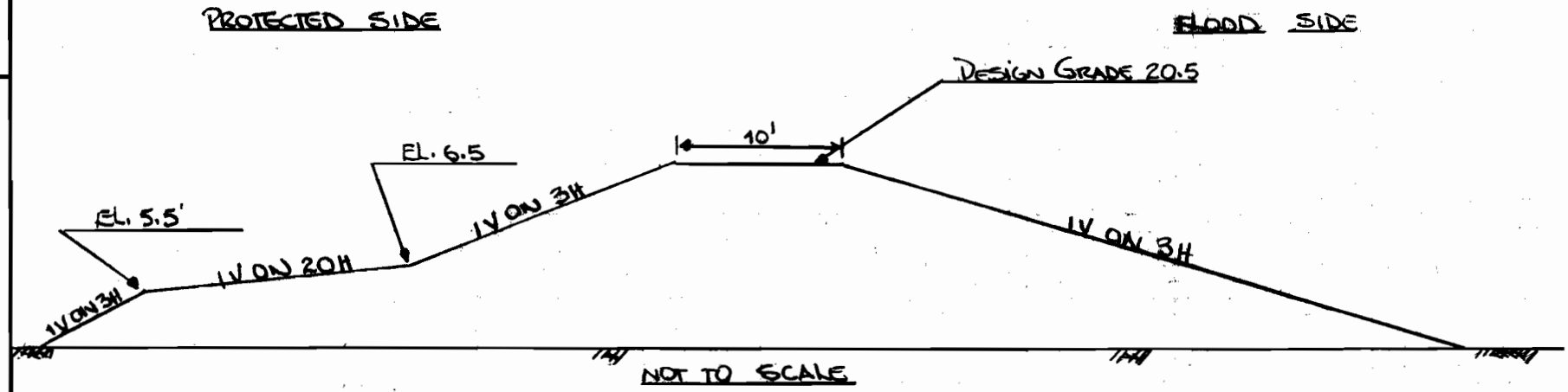
PROJECT

SUBJECT

COMPUTED BY DATE

CHECKED BY DATE

PAGE OF



LAKE PONTCHARTRAIN, LA. & VICINITY
HURRICANE PROTECTION PROJECT
HIGH LEVEL PLAN, NEW ORLEANS LAKEFRONT LEVEE
LONDON AVE. CANAL TO WEST END BLVD.
ORLEANS PARISH, LA.
TYPICAL LEVEE SECTION
STA. 307+09.74 B/L TO STA. 308+50.00 B/L.
(SECTION 6)

1 ENCL. 8

(FOR USE WITH 10 x 10 GRID)

PREVIOUS EDITIONS MAY BE USED

LMV FORM MAR 82 107e

LMNED-DL

Request for Surveys, Borrow Area in Bonnet Carre' Spillway, Lake Pontchartrain & Vicinity, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd.,Orleans Parish, Louisiana

C/Des Svcs Br

C/Des Br

24 May 85
Mr. Kearns/cdb/2718

1. The subject work item requires the construction of the 1st lift of a reach of levee for the Lake Pontchartrain, Louisiana & Vicinity, High Level Plan, London Ave. Canal to West End Blvd. This levee work is scheduled for award in September 1985 (FY 85).

2. We now plan to obtain the borrow material for this levee work from the Bonnet Carre' Spillway in lieu of Howze Beach Borrow Site.

3. In order to accomplish the scheduled award date, it is imperative that all subject survey work be completed and the books on file with Des Br as soon as possible but absolutely NLT 1 July 85. In view of the short time period for completing the work, we request that the subject surveys be handled by an in-house survey party.

4. Should the in-house crew not be available or the date ~~not~~ unable to be met, please contact Tom Graff (ext 2772) or Sam Kearns (ext 2718), both of ~~the~~ Levee Section and so advise.

5. Provide by CMT 2 the cost, duration, and approximate initation date for commencement of work. Charge numbers may be obtained by contacting Project Mgmt Branch, Mr. G.J. Brantley's office at ext 2775.

6. Furnished as Encl 1 are the "DETAILS OF THE REQUESTED SURVEY."

7. Furnished as Encl 2 (6 cys) are copies of the "BONNET CARRE' SPILLWAY SURVEY REQUEST" drawing, sheet 1 of 1.

8. All field notes should conform to the standard notes as Encl 3.

9. By copy of this DF, we are advising F&M Br and Proj Mgmt Branches of Engr Div, Operations Div and Real Est Division that this survey work is pending.

10. Questions and/or comments concerning the requested survey work should be directed at our Des Br coordinator, Sam Kearns at ext 2718.

SMITH
LMNED-DL

JUDLIN
LMNED-D

PICCIOLA
LMNED-F

3 Encl

WALTER D. JUDLIN, III
Chief, Design Branch

CF: w/encl
C/Ops Div
C/Real Est Div
C/Proj Mgmt Br
C/F&M Br

"DETAILS OF REQUESTED SURVEY"

1. Range stations as shown on Encl 2 on the LA and ARK RR should be permanently established in the field. The range station numbers should be clearly marked and flagged in the field.

2. Range station 0+00 should be set at the point in which the center of the RR track crosses the centerline of the lower guide levee. The baseline should then continue along the center of the RR track.

3. Determine the azimuth of the established B/L which runs thru the center of the track.

4. Cross-section should be taken thru the borrow pit and sand stockpile area located between range station 20+50 as shown on Encl 2. The sections should be taken as follows:

a. All X-sections should begin 2100 feet south of and be perpendicular ~~parallel~~ to the RR track B/L.

b. The X-sections thru the 600' x 1200' borrow pit should be taken at 100 foot intervals.

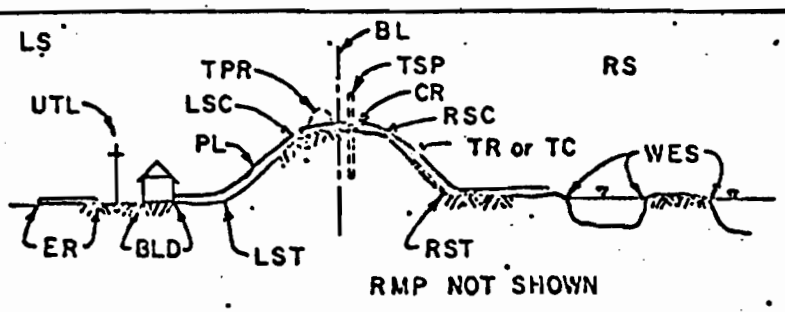
c. The X-sections thru the 600' x 500' sand stockpile area should be taken at 200 foot intervals.

5. Both the borrow pit and sand stockpile limits should be clearly staked and flagged in the field.

6. Identify and indicate on drawing and/or field notes all pipelines, utilities, etc. within the borrow pit and sand stockpile limits. Provide elevations on these items where possible.

ENCL 1

STANDARD SURVEY NOTATIONS FOR LEVEE PROFILES AND CROSS SECTIONS



RS = RIVERSIDE OF LEVEE
LS = LANDSIDE OF LEVEE
BL = LEVEE BASELINE
RSC = RIVERSIDE CROWN (EDGE)
TR = TOP RIPRAP PROTECTION
TC = TOP CONC. PAVEMENT
RST = RIVERSIDE TOE
WES = WATER EDGE & SURFACE
LSC = LANDSIDE CROWN (EDGE)
LST = LANDSIDE TOE
UTL = PARALLELING UTILITIES
PL = PIPELINE CROSSING
RMP = RAMP CENTERLINE
CR = CROWN OR HIGH POINT OF LEVEE
ER = EDGE OF ROAD OR HWY.
BLD = EDGE OF BLDG. OR OBSTR.
TSP = TOP OF SHEET PILING OR WALL
TPR = TOP OF "POTATO RIDGE" LEVEE

Rev. March 1975

ENCL. 3

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-FS	LAKE PONTCHARTRAIN, LA. & VICINITY, HURRICANE PROTECTION PROJECT, P&S, NEW ORLEANS LAKEFRONT LEVEE, LONDON AVE. CANAL to WEST END BLVD., ORLEANS PARISH, LA

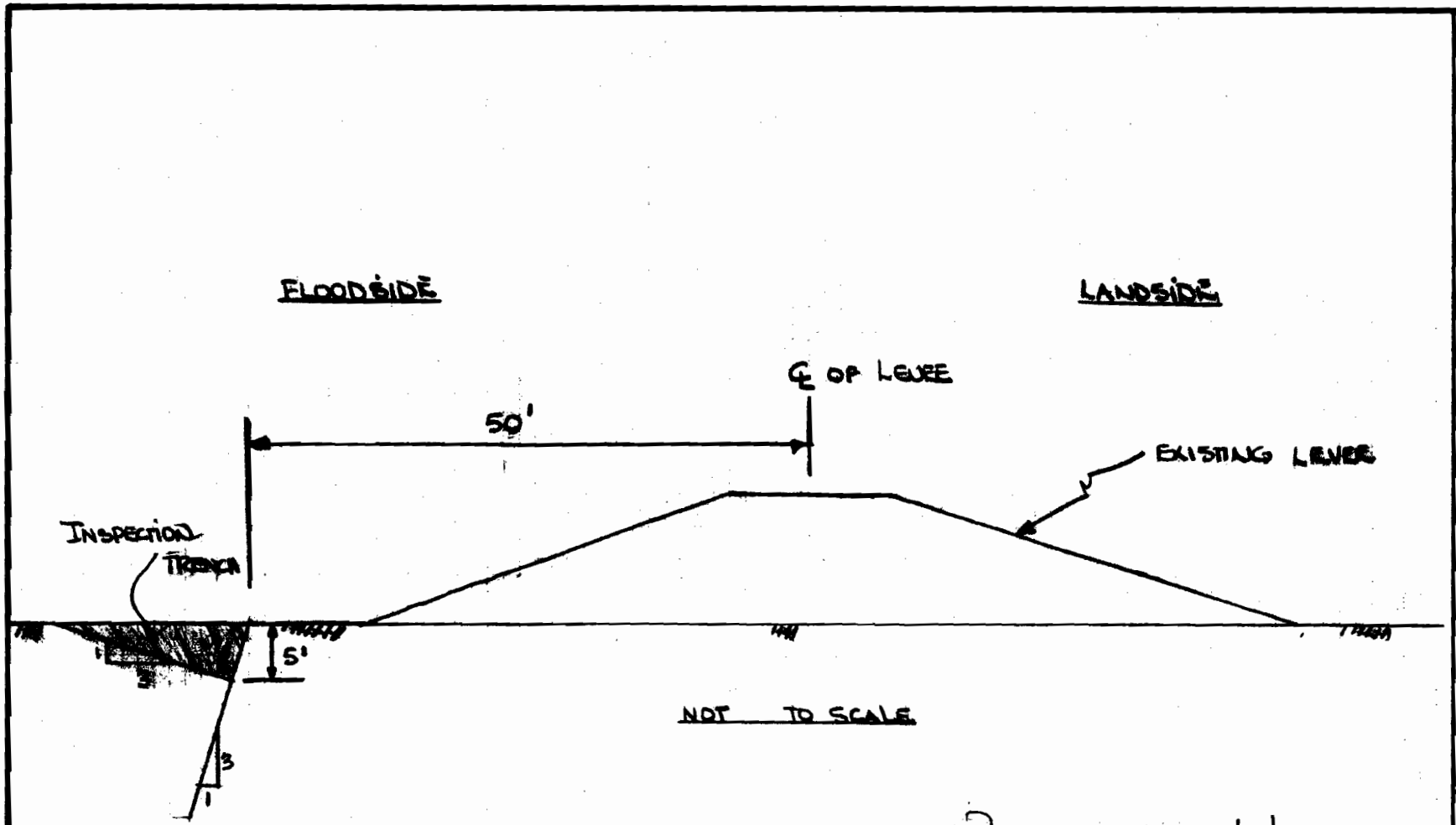
TO	FROM	DATE	CMT 1
C/ DESIGN Br	C/FM Br	25 March 85 Mr. ESTRADA/1035	

FURNISHED AS REQUESTED BY your TOM GRAFF IS THE INSPECTION TRENCH SECTION, SHOWN ON Encl. 1.

1 ENCLOSURE

RODNEY P. PICCIOLA
CHIEF, FOUNDATIONS & MATERIALS BRANCH

RP 3/26
FILE

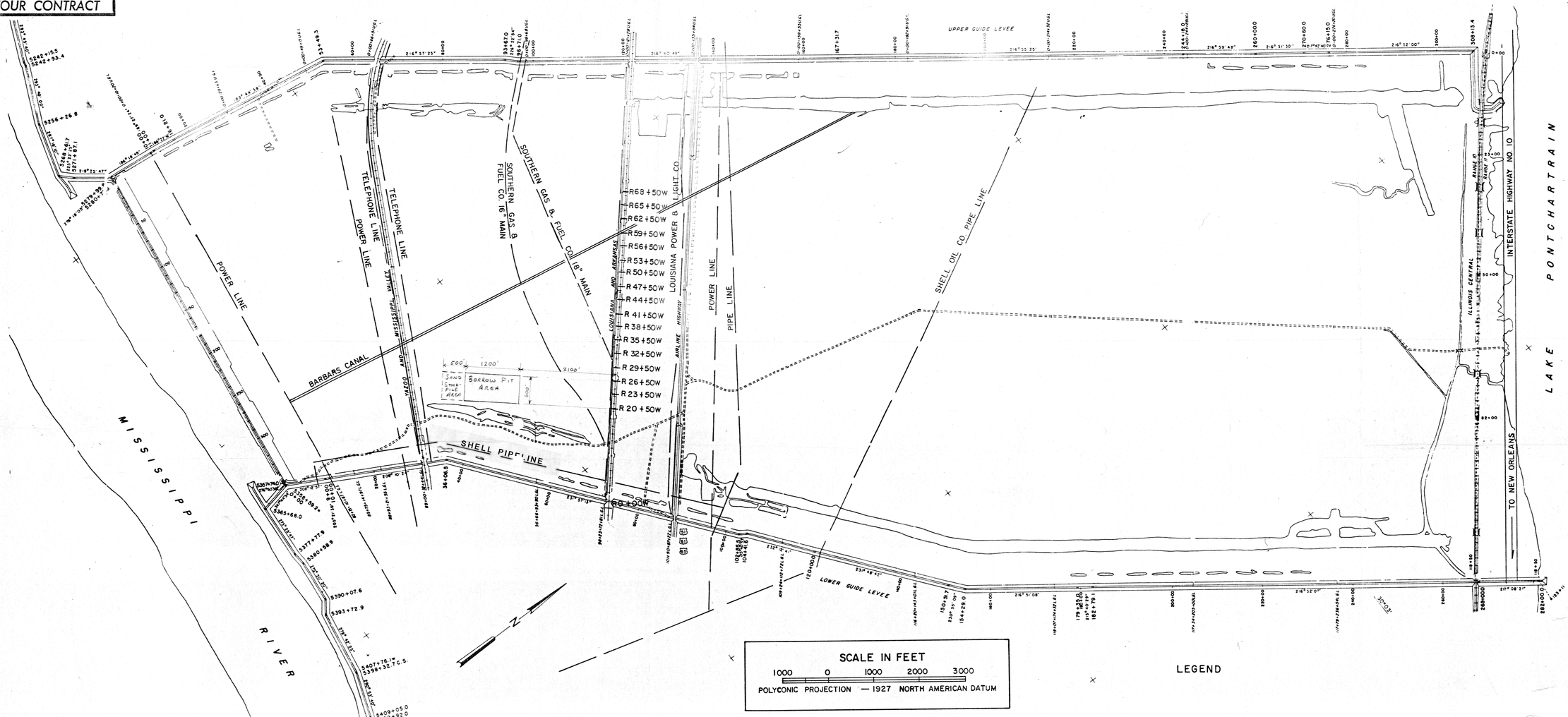


LAKE PONTCHARTRAIN, LA. & VICINITY, HURRICANE PROTECTION PROJECT, HIGH LEVEL PLAN, NEW ORLEANS LAKEFRONT LEVEE, LONDON AVE. CANAL to WEST END BLVD., ORLEANS PARISH, LA.
INSPECTION TRENCH

Encl. 1

PROJECT
SUBJECT
COMPUTATION SHEET
PAGE OF
COMPUTED BY
CHECKED BY
DATE
DATE

SAFETY IS A PART
OF YOUR CONTRACT



BONNET CARRE' SPILLWAY
SURVEY REQUEST

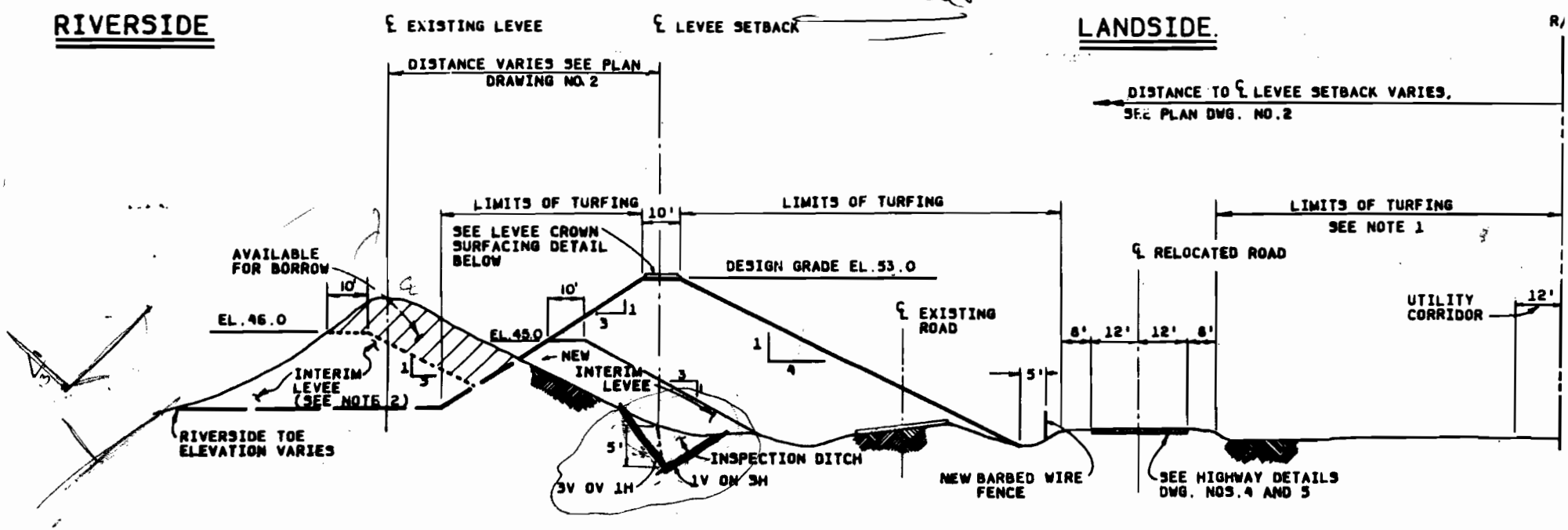
ENCL 2

SH. 1 of 1

A PART
ONTRACT

Atchafalaya.

Goodwood



TYPICAL SECTION (TIE-INS)

NOT TO SCALE

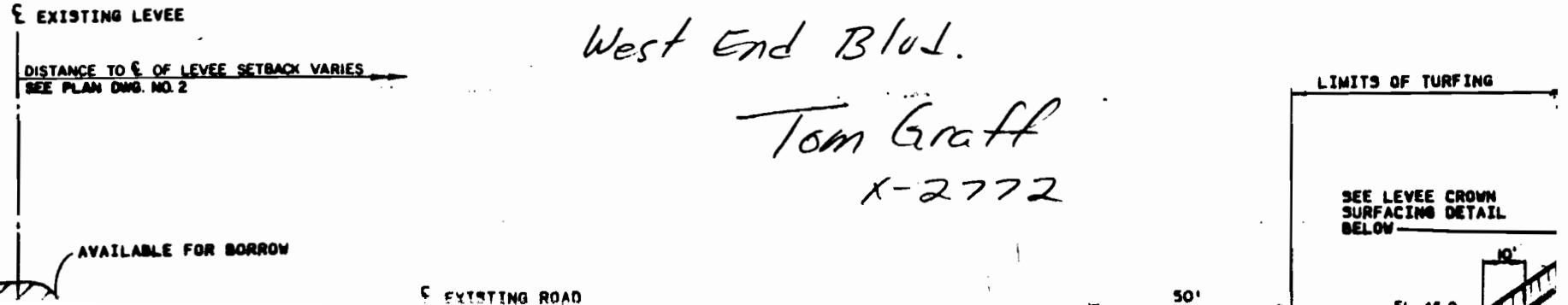
Inf. given by Levee Section(Sm)

1) Floodside
2) 5' DEEP
3)

SIDE

Inspection Trench for
N.O. Lakefront. London Ave to
West End Blvd.

Tom Graff
x-2772



NOTE:

I

INSPECTION DITCH TRENCH.

BL. Sta. 163+98.15 BL to 196+50.00 BL.

Elev. -11.0 WEDGE B-1

$$\Delta -Dp = \left[\left[\frac{8+4}{2}\right] \times 1.5 \times 116 + 1/2(2)(4)\,122\right] \tan(45-30/2) + 1/2(1.5)^2 116$$

$$= -1015$$

$$-Rp = 2\,W_p \tan 30^\circ + 2\,C A_p^{1.5}$$

$$\Delta -Rp = -2969$$

$$F.S. = \frac{32{,}868 + 18{,}930 + (23{,}837 - 2969)}{50{,}076 - [15230 - 2969]} = 1.92$$ (ASSUMING the new LEVEE is on)

OK

Elev. -22.5 WEDGE C-1

$$\Delta -Dp = 1/2[5][1.5]\tan[45-15/2] \times 116 + \left[1/2[11]\,4.5 \times 122 + (11.5 \times 1.5)\,116\right]\tan(45-30/2)$$

$$= 334 + 2899$$

$$-Dp = -3233$$

$$-Rp_1 = 2\,W_p \tan 15^\circ = 2[435]\tan 15^\circ + 2(1.5)(200)\tan(45+15/2) = -1015$$

$$Rp_2 = +2\,W_p \tan\phi = 2[5020.5]\tan 30^\circ = -5797$$

$$\Delta \Sigma Rp = -6812$$

(ASSUMING THE NEW LEVEE IS ON)

$$F.S. = \frac{50035 + 15000 + 40597 - 6812}{95404 - 44005 + 5797} = 1.72 \therefore \text{OK}$$

INSPECTION DITCH. (IT IS DONE IN THE PROT. SIDE BUT APPLIES to THE FLOOD SIDE)

BIL. STA. 199+41.52 to STA. 246+57.17 BIL.

EL. -17.5 WEDGE B-1

$-\Delta D_p = 1/2[14][5]\,122 \tan(45-39/2) = 2465^{\#}$

$-\Delta R_p = 2\,W_p \tan\varphi = 2[4270]\tan 30^{\circ}$

$= 4931^{\#}$

$F.S. = \dfrac{43428 + 13500 + 27703 - 4931}{74315 - 26887 + 2645} = 1.60 \quad \therefore OK$ ✓

BIL. STA. 250+72.09 to BIL. STA. 288+49

ELEV. -13.0 WEDGE B-1

$-D_A = \left[(2.5\times 8) + \left(\frac{8+6}{2}\right)\times 7 + \left(\frac{6+5}{2}\right)8\right]\times 110 = 12{,}430$

$-D_{A2} = (8\times 7)\times 110 \tan(45+15/2) = 8{,}028$

$D_{A3} = 1/2(7)(5)\,110 = 1925$

$-D_A \Sigma = -22{,}383$

$-R_A = 2[400)(5) = -4000$

$-D_p = [(3\times 5) + 1/2(10)(3)]\,110 + 1/2(9)(3.5)\,100 = -4875$

$-R_p = 2[450)(3) = -2700$

Inspection Ditch.

F.S. = $\dfrac{+28729 - 4000 + 13,863 + 14850 - 2700}{61177 - 22,383 - [17336 - 4875]} = 1.92$ OK

BIL. STA. 289+99 to BIL. STA. 303+51.39

SAME AS BIL. STA. 250+72.09 to BIL. STA. 288+99

STA. 305 + 41.96 BIL.
El. -9.0, WEDGE B-1

$-D_{A_1} = \left(\frac{10+12}{2}\right) \times 9 \times 110$

$-D_{A2} = (7 \times 12) \times 110 \tan(45 + 15/2)$

$-D_{A3} = 1/2(14) \times 9 \times 110 =$

$-D_A = \Sigma = 29,862$

$-R_A = 2(9.5)(400) = -7600$

$-D_P = 1/2(8)(5) \tan(45 - 15/2) \times 117 = -1796$

$-R_P = 2(200)(3) + 2[2340] \tan 15°$
$= -2454$

F.S. = $\dfrac{23960 - 7600 + 12000 + 10211 - 2454}{48433 - 29862 - 13286 + 1796}$

$= 5.10$ OK

INSPECTION DITCH

BIL. STA. 306+98.04 to BIL. STA. 308+50 same as STA. 305+41.96 "
" " 310+50 to " " 311+00 " " " "
" " 313+50 " " " 314+05 " " " "

BIL. STA. 336+50.71 to STA. 340+90 BIL.

EL. -13.0 WEDGE B-1

$-D_{A1} = [(2\times7)+(6\times2.5)]110$

$-D_{A2} = (8\times2.5)\,110\times\tan(45+15/2)$

$-D_{A3} = 1/2(9)\,110$

$\Sigma = -D_A = -6552$

$-R_A = 2[400][3] = -2400$

$-D_{p_1} = 1/2(2.5)(8)\,117 =$

$-D_{p_2} = 1/2(2.5)^2\,117\,\tan(45-15/2) = \underline{-281}$

$-D_p = -1451$

$-R_p = 2(1366)\tan 15^\circ + 2[200](2.5)\tan(45+15/2)$

$-R_p = 1499$

$F.S. = \dfrac{18795 - 2400 + 7680 + 11703 - 1499}{40448 - 6552 - 12,870 + 1451} = 1.52$ OK ✓

∴ Inspection Ditch OK @ 50' from ℄ of existing Levee on the floodside

PRE-SOLICITATION NOTICE (CONSTRUCTION CONTRACT)

1. PROJECT NO.	2. DATE NOTICE	3. DATE SOLICITATION DOCUMENTS AVAILABLE (Approx.)
DACW29-85-B-0036	18 January 1985	14 February 1985

NOTE: The project number in Items 1 and 16 may be the same as the Invitation or Proposal Number.

4. OFFERS TO BE OPENED (AT PLACE OF BID (PROPOSAL) OPENING)	A. TIME	B. DATE (Month, day, year)	5. TIME FOR COMPLETION (Calendar days)
▶	11:00 A.M. P.M.	on or about 14 March 1985 *	240 days after receipt of Notice to Proceed*

6A. ISSUING OFFICE (Name, address and ZIP code)

U. S. Army Engineer District, New Orleans
Corps of Engineers
P. O. Box 60267
New Orleans, LA 70160-0267

7. PROJECT TITLE AND LOCATION

Lake Pontchartrain, Louisiana & Vicinity, Hurricane Protection Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd., Orleans Parish, LA

THIS IS A SMALL BUSINESS SET-ASIDE

6B. ROOM NO.	6C. TELEPHONE NO. (Include area code)
	(504) 838-2879 Mrs. Margie B. Drude

INSTRUCTIONS: a. Solicitation Documents will be issued upon receipt of your affirmative response to this Pre-Solicitation Notice by the DUE DATE set forth in Item 15. b. If a charge is required under Item 8A, your affirmative response must include a certified check, cashier's check or money order, in the applicable amount, made payable to Agency (shown in Item 9). Refund (when specified in Item 8B) will be made upon your return of the bid documents in good condition, without marks, notes, or mutilations, within 20 calendar days after bid opening date. c. The Issuing Office, at its discretion, may make bid documents available to plan rooms of the Associated General Contractors, Chambers of Commerce, Dodge Reports, and other similar contractors' commercial service facilities. d. Bid guarantee is required with any bid in excess of $25,000. Bid guarantee shall be in the amount of 20 percent of the amount of the bid, or $3,000,000, whichever is less. For bid guarantee purposes, the amount of the bid is the aggregate of the Lump Sum Base Bid, all Alternates (if any), and the product(s) of each unit price (if any) multiplied by the applicable number of units shown on the Bid Form. e. NOTICE TO SMALL BUSINESS FIRMS: A program for the purpose of assisting qualified small business concerns in obtaining certain bid, payment, or performance bonds that are otherwise not obtainable is available through the Small Business Administration (SBA). For information concerning SBA's surety bond guarantee assistance, contact your SBA District office.

8A. CHARGE FOR SOLICITATION DOCUMENTS	8B. IS THIS CHARGE REFUNDABLE?	9. MAKE CHECK PAYABLE TO:
15 Drawings $13.75 half scale w/spec $30.00 full scale w/spec	☐ YES ☒ NO	FAO, USAED, NEW ORLEANS (Plans and specifications will not be issued until payment is received)

10. ESTIMATED COST RANGE OF PROJECT		11. OFFERS COVERING THE PROJECT RESTRICTED TO SMALL BUSINESS?	12. SUBCONTRACTING PROGRAM REQUIRED?
A. FROM	B. TO		
$ 1,000,000.00	$ 5,000,000.00	☒ YES ☐ NO	☐ YES ☒ NO

13. DESCRIPTION OF WORK (Physical characteristics)

The work consists of constructing approximately 140,000 cubic yards of embankment, semicompacted fill, approximately 29 acres of fertilizing, seeding and clearing, placement of approximately 18,000 square feet of plastic lining and all incidental work.

NOTE: $5.00 charge for specifications only, excluding drawings.

*Issuing and opening dates, as shown on this notice, are tentative only, depending on when specifications are issued. At that time correct bid opening date will be scheduled.

Plans and specifications will be available for inspection at this office and at the Vicksburg District, CE, 1500 Walnut Street, Vicksburg, MS 39180.

REGARDLESS OF THE NOTE BELOW, this form need not be returned unless ordering plans and/or specifications.

IMPORTANT: FAILURE TO COMPLETE AND RETURN THIS PART OF THE NOTICE TO THE ISSUING OFFICE, ON OR BEFORE THE DUE DATE SHOWN IN ITEM 15, MAY RESULT IN YOUR NAME BEING REMOVED FROM OUR MAILING LIST.

14. ACTION REQUESTED (Check applicable box)		15. DUE DATE
A. I AM INTERESTED IN BIDDING ON THIS PROJECT AS A: ☐ PRIME CONTRACTOR ☐ PRINCIPAL SUBCONTRACTOR	B. I AM NOT INTERESTED IN BIDDING ON THIS PROJECT. RETAIN MY NAME ON YOUR MAILING LIST.	on or about 14 March 1985 *
NO. OF SET(S) YOU REQUIRE OF SOLICITATION DOCUMENTS	C. REMOVE MY NAME FROM YOUR MAILING LIST.	16. PROJECT NO.

17. NAME AND ADDRESS OF FIRM (City, State and ZIP code)

18. NAME AND TITLE OF FIRM REPRESENTATIVE	19. SIGNATURE OF REPRESENTATIVE	20. DATE SIGNED

LMNED-FS

Lake Pontchartrain, LA and Vicinity, Hurricane Protection Project, P&S, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd., Orleans Parish, LA

C/Design Br

C/F&M Br

29 Jan 84 85 at
Mr. Estrada/mlm/1035

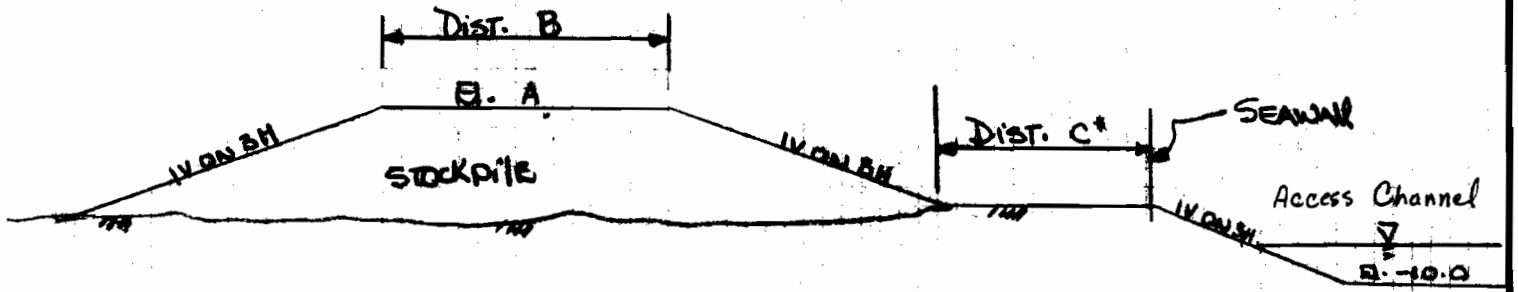
Furnished as requested by your Raul Velez (by phone) are the stockpile and access channel sections, shown on Encl 1 and 2.

2 Enclosures

RODNEY P. PICCIOLA
Chief, Foundations & Materials Branch

COMPUTATION SHEET

PROJECT | SUBJECT | COMPUTED BY | DATE | CHECKED BY | DATE | PAGE OF

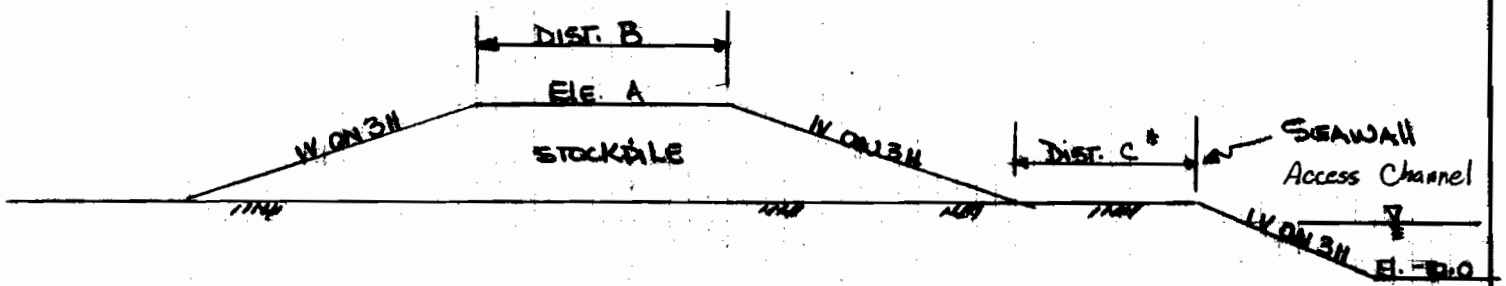


EL. A (NGVD)	DIST. B (FT)	DIST. C (FT)
20	144	74
18	168	55
16	189	40
14	212	25

* NOTE: UNDER NO CIRCUMSTANCES DISTANCE C SHOULD BE LESS THAN 25 FEET.

LAKE PONTCHARTRAIN, LA. AND VICINITY
HURRICANE PROTECTION PROJECT, P&S
NEW ORLEANS LAKEFRONT LEVEE
STOCKPILE AREA AND ACCESS CHANNEL
APPROX. STA. 166+27 (LONDON AVE. OUTFALL CANAL)
ENCL. 1

LMV FORM 107e 1 FEB 79



El. A (NGVD)	Dist. B (FT)	Dist. C (FT)
20	20'	35'
18	43'	25'

* NOTE: UNDER NO CIRCUMSTANCES DISTANCE C SHOULD BE LESS THAN 25 FEET.

LAKE PONTCHARTRAIN, LA. AND VICINITY HURRICANE PROTECTION PROJECT, P&S
NEW ORLEANS LAKEFRONT LEVEE
STOCKPILE AREA AND ACCESS CHANNEL
APPROX. STA. 243+00 B/L (ORLEANS OUTFALL CANAL)

Encl. 2

COMPUTATION SHEET

PROJECT | SUBJECT | PAGE OF | COMPUTED BY | CHECKED BY | DATE | DATE

LMNED-FS

Review of Plans and Specifications for the Lake Pontchartrain, La. & Vic. Hurricane Protection Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd., Orleans Parish, La.

C/Design Br C/F&M Br 27 Dec 84

Mr. Pinner/mlm/1033

1. Reference Design Branch's DF dated 26 Nov 84, subject as above.

2. The subject plans and specifications have been reviewed and the following comments are offered:

a. Specification.

(1) Page 1-2: Throughout the specifications the words "and berm" have been deleted. Does the word "embankment" incorporate the total levee; even though the plans label the levee berm as a stability berm?

(2) Page 1-5: (a) Add the following phrase after the words "contiguous thereto" of the first sentence, ",outside the limits of the embankment but within the right-of-way." ~~shall be grubbed~~". (b) Para 1-5.2.2; note if the word "embankment" includes the levee berm, then there is a conflict between this section stating no grubbing under berm, and para. 1-5.2.1.

(3) Page 1-6: (a) Para 1-5.3; This section states that pipes and drains shall be removed as indicated on the drawings; but no pipes or drains to be removed are shown on the drawings. The plans should be corrected or this section should be revised or deleted. (b) Para 1-5.4; This section also references pipes and drains.

(4) Page 1-10: Para 1-6.3; This section deals with the removal of abandoned drainage structures which are not shown or addressed in the subject plans. Should this section be deleted?

(5) Page 2-1: (a) Para 2-1; Insert the words "and berms", between the word "levees" and "for" of the first sentence. (b) Section 2-2; Change "(6)" to "(7)".

(6) Page to face page 2-1: (a) Change the word "drawings" to "sections" of this paragraph. (b) Para (6); Change "plan on how" to "Contractor's proposal".

(7) Page to face page 2-2: Para Insert 1; (a) In the second sentence of this insert change "in" to "along". (b) In the third sentence of the section delete the phrase "or change in strata".

(8) Page 2-3: Para 2-3.2.1; The second sentence of this section should read "The material necessary for the construction of the embankment shall be procured from borrow areas provided or elsewhere, by haulage or otherwise, and the contract unit price for embankment shall include the cost of such work.

(9) Page 2-6: Para (2); The phrase "and the Contractor's proposals for implementing paragraph 2-3.3" of the first sentence should not be deleted.

(10) Page 2-7: Para 4; (a) Remove the word "arable" from the first sentence. (b) The phrase "including the Contractor's proposed method.... the pits" of the first sentence should not be deleted.

(11) Page 2-8: Para 2-3.3.2; (a) The following phrase should be added to the end of the first sentence "or become the property of the Contractor and shall be removed from the jobsite. (b) In the second sentence of the paragraph add "in the abandoned portions of the borrow pit" between the words "material" and "shall". (c) The phrase "and shall be sloped to drain" should not be deleted from the second sentence.

(12) Page to face page 2-8: Para 2-4.2.2; In the last sentence change the word "are" to "area".

(13) Page 2-13: Para 2-8.2; Change "2-8.2" to "2-6.2".

(14) Page 3-2: Para (6); Change the para statement to read" Temporary stockpile locations, grade and cross sections".

(15) Page 3-7: Para 3-5.1; In the last sentence change the following phrase "where seepage control is needed and where" to "as".

(16) Page 3-8: Under the Embankment Material Section, a paragraph (3-5.4) on the plastic lining should be added. This section should incorporate the spec. of the plastic lining such as but not limited to the following: type, width (25'), thickness, strength, etc. We would recommend a single width lining (approximately 25' wide) to be used for the subject project.

(17) Page 3-10: Para 3-6.1.2; Add the following sentence after the first sentence of the "Note", "The percentages used above apply to the Government furnished borrow pit. If the Contractor elects to use an alternate pit new percentages will be provided by the Contracting Officer".

(18) Page 3-16: Para 3.7; (a) Title of the paragraph should be "Cross Sections and Zoning of Materials:. (b) Para 3-7.1; If embankment does not include berm, then para 3-7.3 should be added. "Para 3-7.3 Berm. Berms shall be constructed at the locations and to the grade and cross section shown on the drawings. (c) Para 7.2, "Zoning of Materials for Levee Construction" should not be deleted. Change "riverside" to "floodside."

(19) Page to face page 3-16: Para 3-6.2 (Plastic Lining); This section should be expanded and rewritten. This section should include a statement specifying that the plastic lining should be installed in accordance with the manufacture installation specification. These specifications on the plastic lining should be coordinated with the F&H Branch.

(20) Page 3-27: Para 3-13.3; Paragraph did not copy clearly (unable to read).

(21) We would recommend adding an index to the following sections: 1, 2, 3, and 5.

b. Plans.

(22) Dwg 3 of 14: In the profile section, the caption "Levee Crown El 18.5 (Design Grade)" should be removed.

(23) Dwg 4 and 5 of 14: In the profile cross section, the levee crown should be El "23.0" not "22.0" for the typical levee section 4.

(24) Dwg 5 of 14: (a) In the profile cross section, change B/L station "366+50.71" to "336+50.71". (b) In the profile section, remove the "foot symbol" from the section numbers 5, 6, 7, and 8. (c) Change station "314+00" to station "314+25".

(25) Dwg 6 of 14: Change the words "Foreshore Dike" to "Levee" under the settlement measurement gage note.

(26) Dwg 6 thru 8 of 14: The embankment and berm fill should be labeled as semicompacted fill.

(27) Dwg 7 of 14: (a) In the levee section 4, change the Design Grade El. from "22.0" to "23.0". (b) Levee Section 5; The Flood Side design section of the levee may be revised to a 1V on 3.5H slope from Design Grade El. 21.5 to natural grade. (c) Levee Section 6; The Flood Side design section of the levee may be revised to a 1V on 3H slope from Design Grade El 20.5 to natural ground.

(28) Dwg 8 of 14: (a) Note the plastic lining under section 8 should be extended between B/L station 311+00 and B/L station 314+25. This should be stated on the drawing. Also in levee section 8, change B/L station "314+00" to B/L station "314+25". (b) In the levee section 9, change B/L station "366+50.71" to "336+50.71".
extend full berm to 312+30, start liner at 312+10 telephone conversation with Raul 2 Jan 85 JR

(29) Dwg 9 of 14: (a) The first note on the drawing should read "1. For Soil Boring Legend Notes, see dwg 13". (b) In the plan view of Lake Pontchartrain, the borrow area square should be labeled "Borrow Area Available for London Avenue Canal to West End Boulevard Levee Construction".

(30) Dwg 5 and 8 of 14: (a) There seems to be a construction problem of installing the plastic lining between station 336+50.71 and 340+70 because of the utility pipelines and the 2-60" ∅ equalizer pipes in the area. In accordance with the specifications, page 2C-26, paragraph SC-25, these utility pipelines and equalizer lines will be relocated by local interest or utility companies to facilitate the installation of the plastic lining and the construction of the levee. (b) On drawing 8 of 14, the levee section (9) should show on the section the location of the 2-60" ∅ equalizer pipes.

LMNED-FS 27 Dec 84

SUBJECT: Review of Plans and Specifications for the Lake Pontchartrain, La. & Vic. Hurricane Protection Project, High Level Plan, New Orleans Lakefront Levee, London Ave. Canal to West End Blvd., Orleans Parish, La.

(31) Dwg 2 thru 5 of 14: The utility lines shown on the plan views of the subject drawings should also be shown on the profile view of the drawings (i.e. sta, depth, size, etc.).

(32) Dwg 6, 7 and 8 of 14: A statement should be made on the transition sections shown on how the transition sections will be constructed (i.e. will the berm design elevation reduce 1 foot for every 1 foot reduction in design grade elevation).

(33) Dwg 10 of 14: The following "Boring Notes" should be added to the subject drawing:

1. Undistrubed soil samples were taken with a 5-inch-diameter steel tube piston type sampler.

2. See Dwg 13 for Soil Boring Legend.

(34) Dwg 11 and 12 of 14: The following note should be added to the subject drawings "For boring notes, see Dwg 10".

3. Please find enclosed (encl 1 and 2) a copy of the stockpile and access channel sections which should be included in the subject plans.

4. Please notify F&M Branch if you do not concur with any of the above comments.

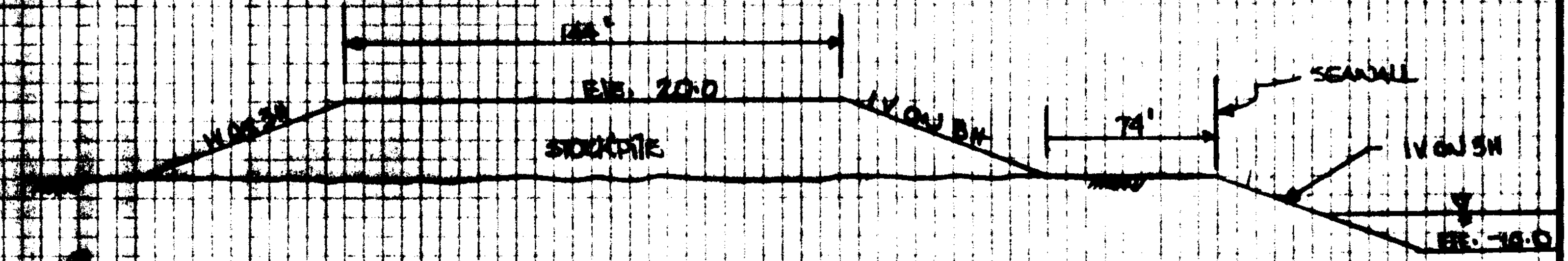
5. Please furnish us an after construction centerline profile.

2 Enclosures

RODNEY P. PICCIOLA
Chief, Foundations & Materials Branch

COMPUTATION SHEET

PROJECT | SUBJECT | PAGE OF | COMPUTED BY | CHECKED BY | DATE | DATE



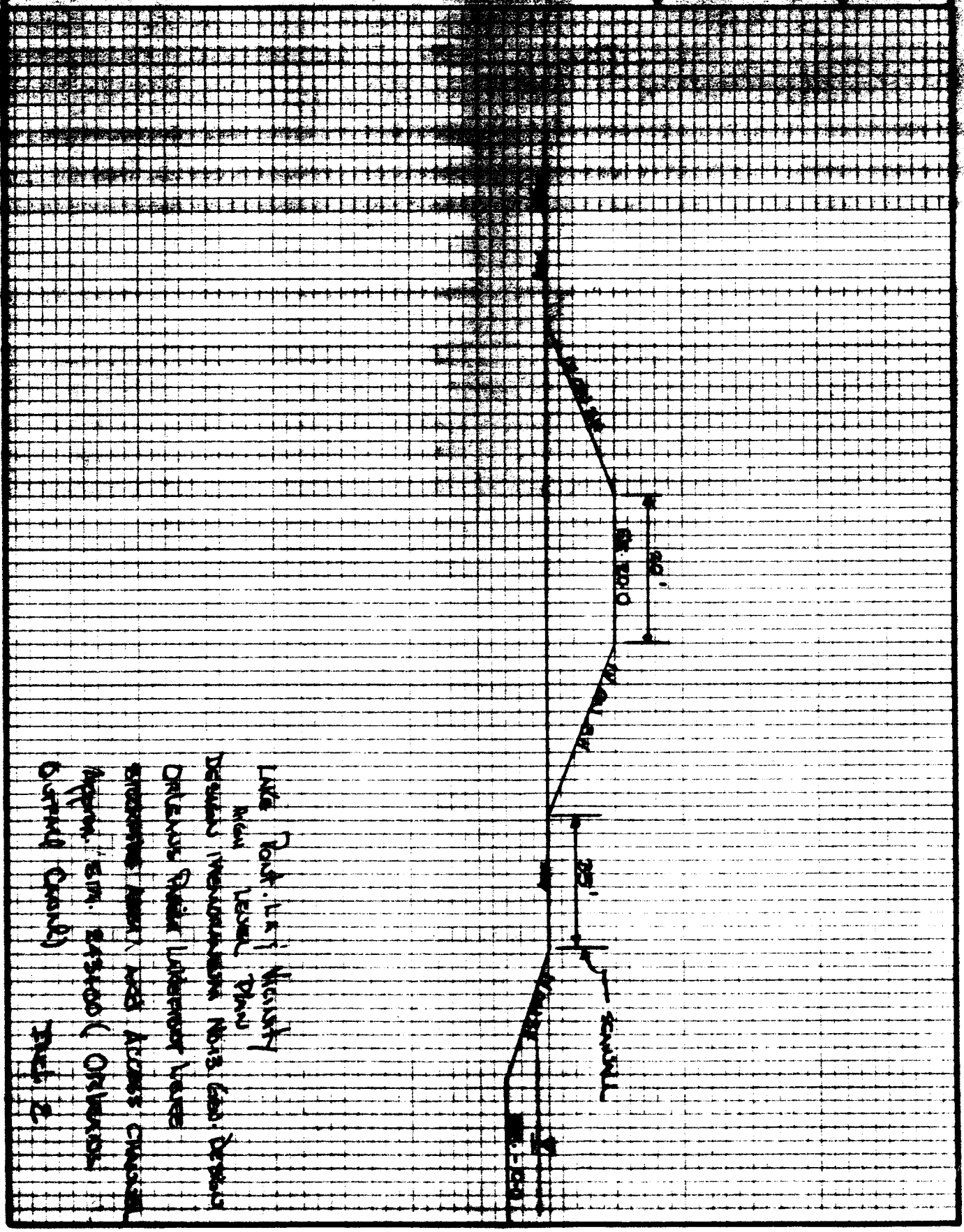
LAKE PONT. LA. & VICINITY
HIGH LEVEL PLAN
DESIGN MEMORANDUM NO. 13 GEN. DESIGN
ORLEANS PARISH LAKEFRONT LEVEE
STOCKPILE AND ACCESS CHANNEL
APPROX. STA. 166+00 (LONDON
AVE OUTFLOW CANAL)

Incl. 1

LMV FORM 1070
1 FEB 78

COMPUTATION SHEET

PROJECT	PAGE OF	COMPUTED BY	DATE
SUBJECT		CHECKED BY	DATE



LMV FORM 1 FEB 79 107e

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-DL	Review of Plans and Specifications for the Lake Pontchartrain, La. and Vic. Huricane Protection Project, High Level Plan, New Orleans Lakefront Levee London Ave. Canal to West End Blvd., Orleans Parish, Louisiana

TO: C/F & M Br
C/H & H Br
C/Proj Mgmt Br

FROM: C/Des Br

DATE: 26 Nov 84

CMT 1: Mr. Velez/gsm/1944

1. Please review the inclosed plans and specifications in sufficient detail to detect and correct errors or conflicts and return them at the earliest practicable date, but not later than 14 Dec 84, along with any comments and recommendations you consider necessary or desirable.

2. Estimated total cost of work, $ 1,900,000.00, beginning in fiscal year 85.

3. All review work shall be charged to cost account no. BEC21 304L 10 AC00.

4. In addition to the above:

a( ). The Area Engineer will comply with subparagraph e, Inspection of Site, para. 1-7, of CDOM 1180-2-12, titled "Office Memorandum for Supervision, Inspection, and Administration of Contracts" dated September 1981.

b( ). Construction Division will include liquidated damage information.

c( ). Construction Division will initiate request (copy to Engineering Division) for authority to use Clause FAR 52.236-16 ALT 1 in accordance with FAR 36.516.

d( ). Operations Division will include the status of compliance with Federal Regulation, Title 33 CPR, Part 209.145.

e( ). Planning Division's review will include endangered species, cultural resources and EIS pertinent to these plans and specifications.

f( ). If forwarded to LMVD for review, Planning Division will furnish data prescribed in paragraph 18(f) of LMVD Supplement 1, dated 16 Apr 1980 to ER 1110-2-1200.

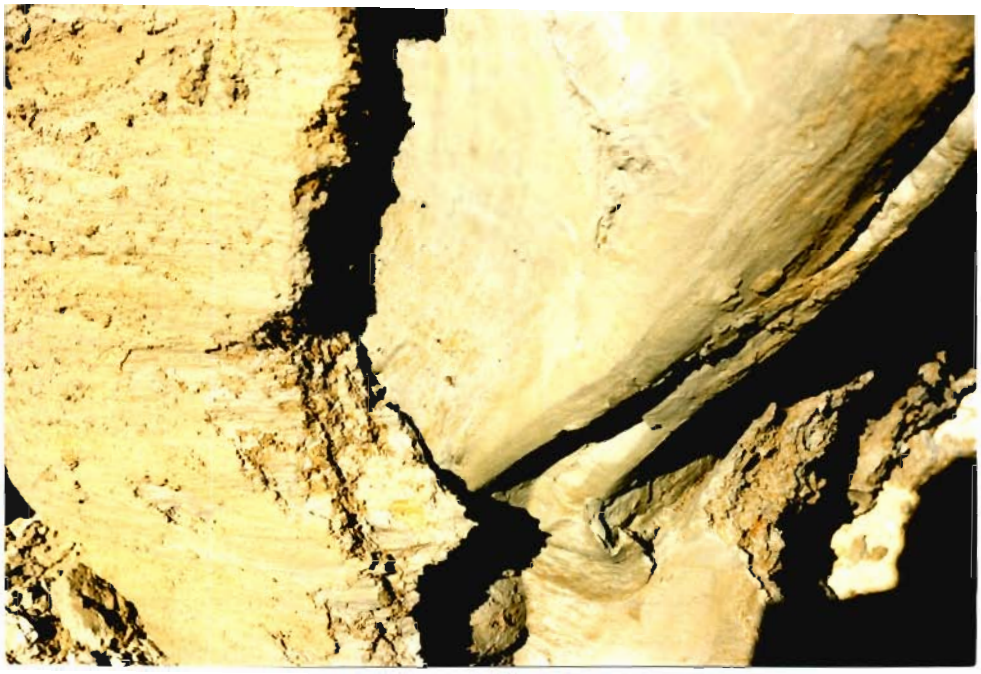
g( ). Cost Engineering and Specifications Section will include a statement indicating the use of the Clause in FAR 52.236-7009(b)(1) or FAR 52.236-7009(b)(2) (if Mobilization and Demobilization exceeds $50,000) and provide a cost estimate based on the inclosed plans and specifications.

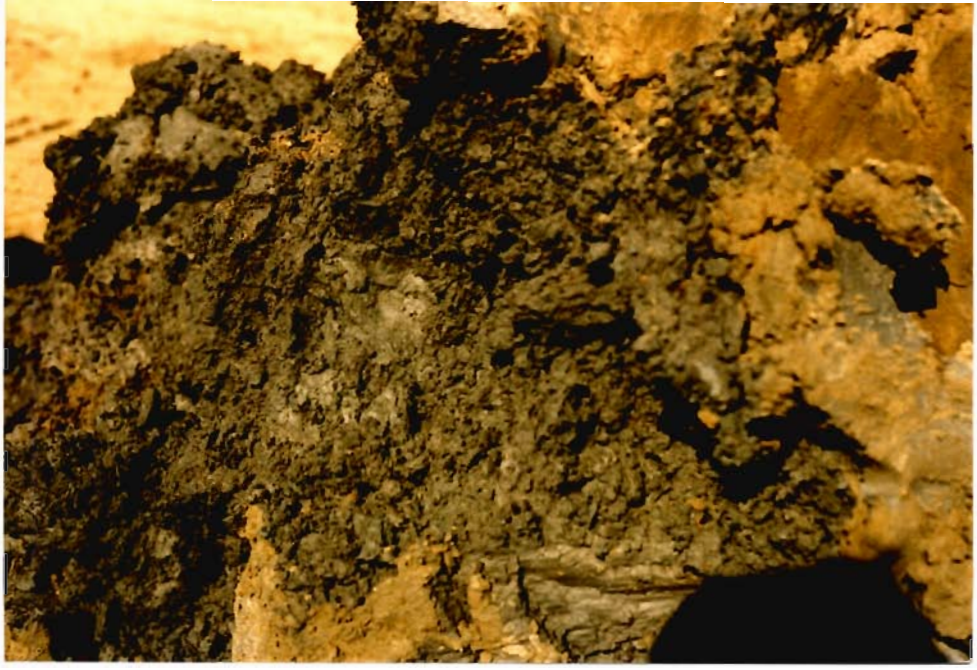
h( ). Procurement and Supply Division, Construction Division, and Operations Division review will evaluate the effectiveness of biddability, constructibility, and operability in accordance with ER 415-1-11 and LMVD Suppl 1 to ER 415-1-11.

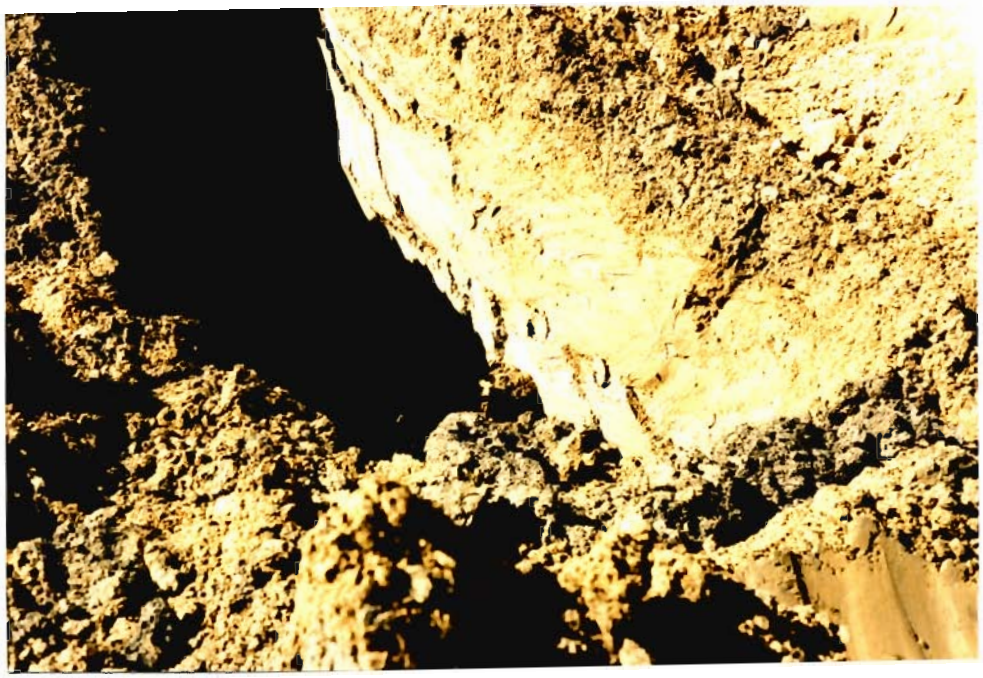
2
3 Incl
~~(2 cys each item for Const Div)~~
~~(3 cys plans and 1 copy spec for Plans Div)~~
~~(5 cys each item for Appropriate Area Office)~~
1. Specifications
2. Plan, file no. H-8-29721
~~3. Data required for FAR 52.236-16 ALT 1 request~~

WALTER D. JUDLIN, III
Chief, Design Branch


KOEHRING








CATERPILLAR

ENGINEERING DIVISION
Permit Review Sheet

MAILTRAX #02-2095

SUSPENSE: *

_____ED-S (Flock)
_____ED-SP
_____ED-SR

SUSPENSE: *

_____ED-H (Thibodeaux)
_____ED-HD
_____ED-HC
_____ED-HH
_____ED-HM

SUSPENSE: * 01/28/2002

__1__ED-F (Caver)
_____ED-FG
_____ED-FD
_✓_ED-FS

SUSPENSE: *

__3__ED-L (Baumy)
_____ED-LW
_____ED-LC
_____ED-LL

SUSPENSE: *

__2__ED-T (Schilling)

SUSPENSE: *

_____ED-G (Matsuyama)

***If a suspense cannot be met, notify secy, ext. 2240, of new suspense date.**

SUBJECT: Req by Bell South Telecommunications, Inc., to Install a Controlled Environment Electronic Cabinet in Orleans Parish,

ED-FS 1/25/02

No Comment.

FJV

CEMVN-OD-T (11-2-240a) 23 January 2002

MEMORANDUM FOR C/ENGR DIV

SUBJECT: Req by Bell South Telecommunications, Inc., to Install a Controlled Environment Electronic Cabinet on the Protected Side of the New Orleans Lakefront Levee, Vic. B/L Sta 316+00, in Orleans Parish, LA.

1. Forwarded for review, comment, and return. It is requested that only Geotechnical Br, Structures Br, and Civil Br review this request in order to expedite a response.

2. Labor charges for this permit review may be charged to L61212. **It is requested that each reviewer use their own organization code and log in their review time on the attached form. Please return this form along with the review comments so that this office can monitor and control project expenditures.**

3. If further assistance is needed, please contact Amy E. Powell, ext 2241.

02-24

Amy E. Powell
for R. H. Schroeder, Jr., P.E.
Chief, Operations Division

Encl

Ltr dtd 22 Jan 02
w/dwgs

APPLICANT: Bell South Telecommunications

PERMIT NO.: 02-24

O&M, GENERAL CHARGE ACCOUNT NO.: L61212

REVIEWER	OFFICE SYMBOL	REVIEW TIME (HOURS)	ORGANIZATION CODE
VOJKOVICH	ED-FS	1	KX

BELLSOUTH
TELECOMMUNICATIONS

Bellsouth Telecommunications, Inc.
Attn: Linda Meiners
205 Holiday Blvd.
Covington, La. 70433

January 22, 2002

Mr. Brian Keller
CEMVN-OD-R
U.S. Army Corp. of Engineers
P.O. Box 60127
New Orleans, La. 70160-0267

Re: West End Blvd. Equipment Servitude

Dear Mr. Keller,

BellSouth is proposing to install a controlled environment electronic cabinet between Lakeshore Dr. & West End Blvd on a servitude shown on the attached survey granted us by the Orleans Levee Board. Note a distance of fifteen feet from the toe of the levee has been maintained, in lieu of the recommended ten feet, to allow additional space between our installation and the levee.

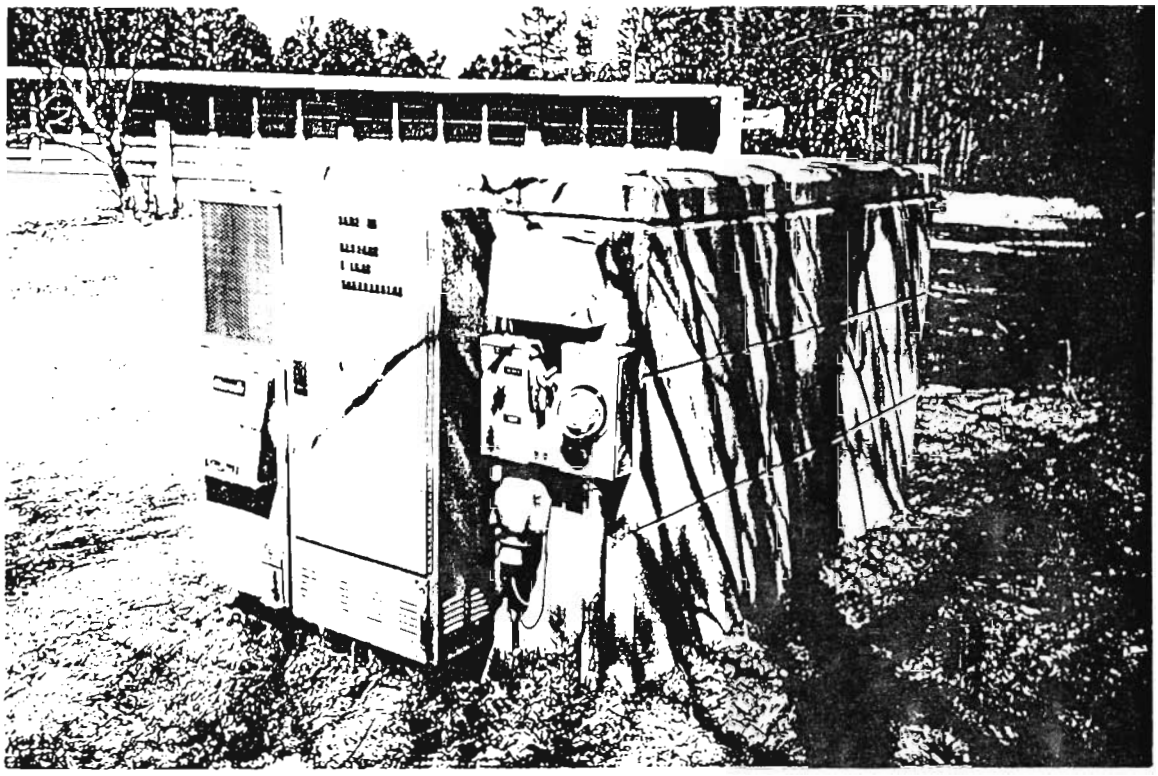
The project designed by our engineer shall install the cabinet approximately twenty-four inches below natural grade on the west side of the servitude and the ground level shall be built up on the east side.

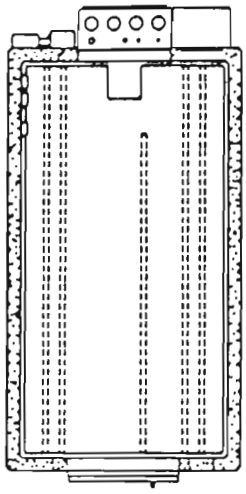
This equipment is essential for telecommunications in the West End area and your immediate consideration of this project would be appreciated. As always, if I have omitted anything necessary for processing, please call and it shall promptly delivered.

Sincerely,

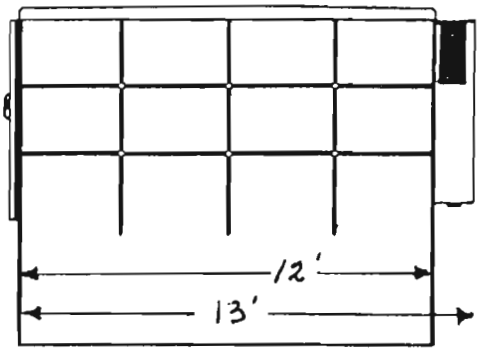
Linda Meiners

Linda Meiners
Authorized Right-of-Way Agent

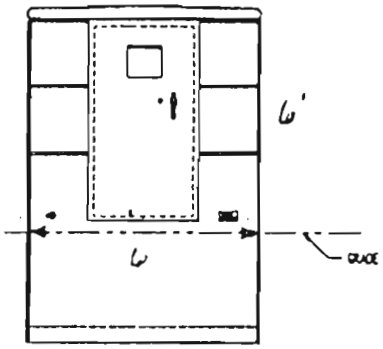




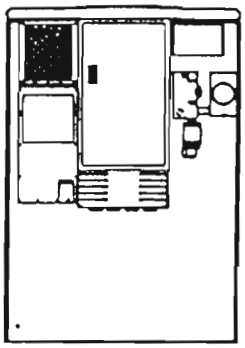
FLOOR PLAN



SIDE WALL
VIEWED FROM OUTSIDE



FRONT WALL
VIEWED FROM OUTSIDE



REAR WALL
VIEWED FROM OUTSIDE

CONTROLLED ENVIRONMENT CABINET

MODEL CEC-2010

SPECIFICATIONS

INTERIOR DIMENSIONS: 5'-4" WIDE x 10'-4" LONG x 8'-0" HEADROOM

INTERIOR AREA: 55 SQ. FT., 440 CU. FT.

BUILDING WEIGHT: 20,800 LBS. (w/o Telco Equipment) 25,000 LBS. ± W/EQUIPMENT

CONCRETE MINIMUM COMPRESSIVE STRENGTH: 5,000 P.S.I. @ 28 DAYS

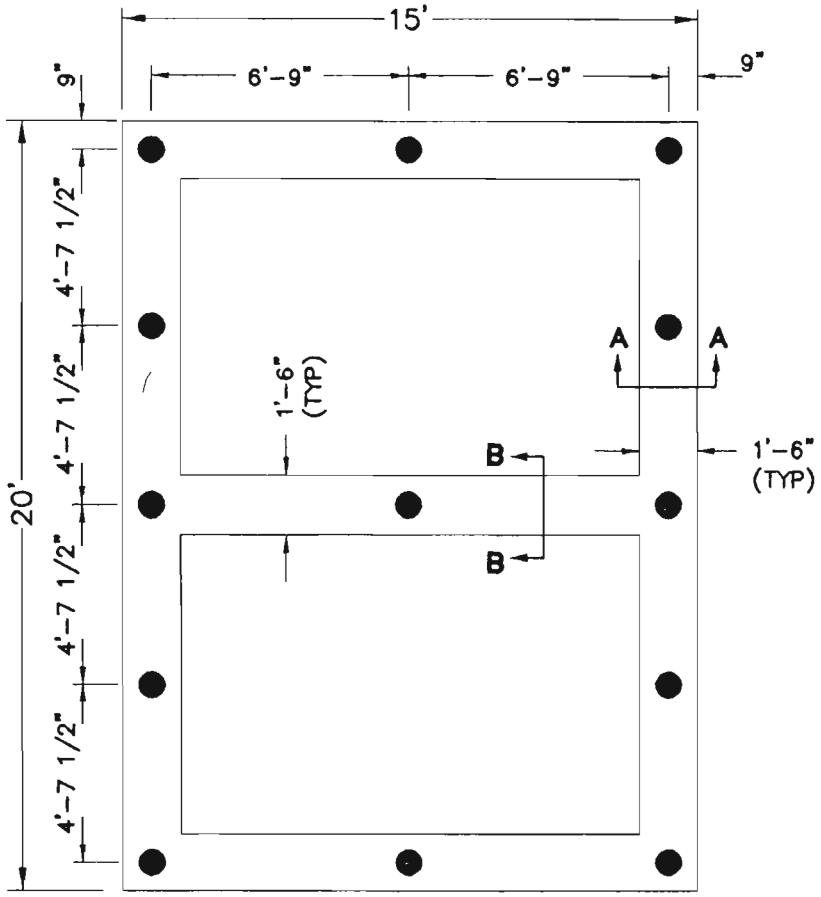
REINFORCING STEEL: A.S.T.M. A615-85, GRADE 60

INSTALLATION: 36" BELOW GRADE, NO TIE DOWNS OR ANTI-FLOAT MEASURES REQUIRED

DESIGN LOADING:

ROOF - 60 P.S.F.
FLOOR - 150 P.S.F.
WALLS - 34 P.S.F.
WIND SPEED - 120 M.P.H.

Oldcastle™
Precast East
4475 GREER CIRCLE TEL (770) 493-9438 P.O. BOX 647
STONE MOUNTAIN, GA 30083 FAX (770) 493-9435 TUCKER, GA 30085-0647



NOTE:

1. ALL PILINGS TO BE TREATED, CLASS "5", HAVING A MINIMUM TIP DIA. OF 6 IN. AND A MINIMUM BUTT DIA. OF 8 IN. WITH A PILING LENGTH OF 40 FEET.
2. TREATED TIMBER PILES SHALL COMPLY WITH WITH THE REQUIREMENTS OF AWPA STANDARDS C1 AND C3.
3. TREATED TIMBER PILES SHALL NOT BE SPLICED.
4. CARE AND HANDLING OF TREATED TIMBER PILES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF AWPA STANDARD M4.
5. PILE LOADING OF 7 TONS / 40' PILE IS BASED UPON SOILS REPORT FROM EUSTIS ENGINEERING.
6. ALL CONCRETE SHALL HAVE A MINUMUM COMPRESSIVE STRENGTH OF 5000 psi @ 28 DAYS.
7. REINFORCING STEEL SHALL COMPLY TO A.S.T.M. A615-85, GRADE 60.

FOUNDATION DESIGN

SCALE 1" = 5'

97-048

F-1

1-15-02

FOUNDATION DESIGN FOR

BELLSOUTH TELECOMMUNICATIONS

LAKESHORE DRIVE / WEST END BOULEVARD

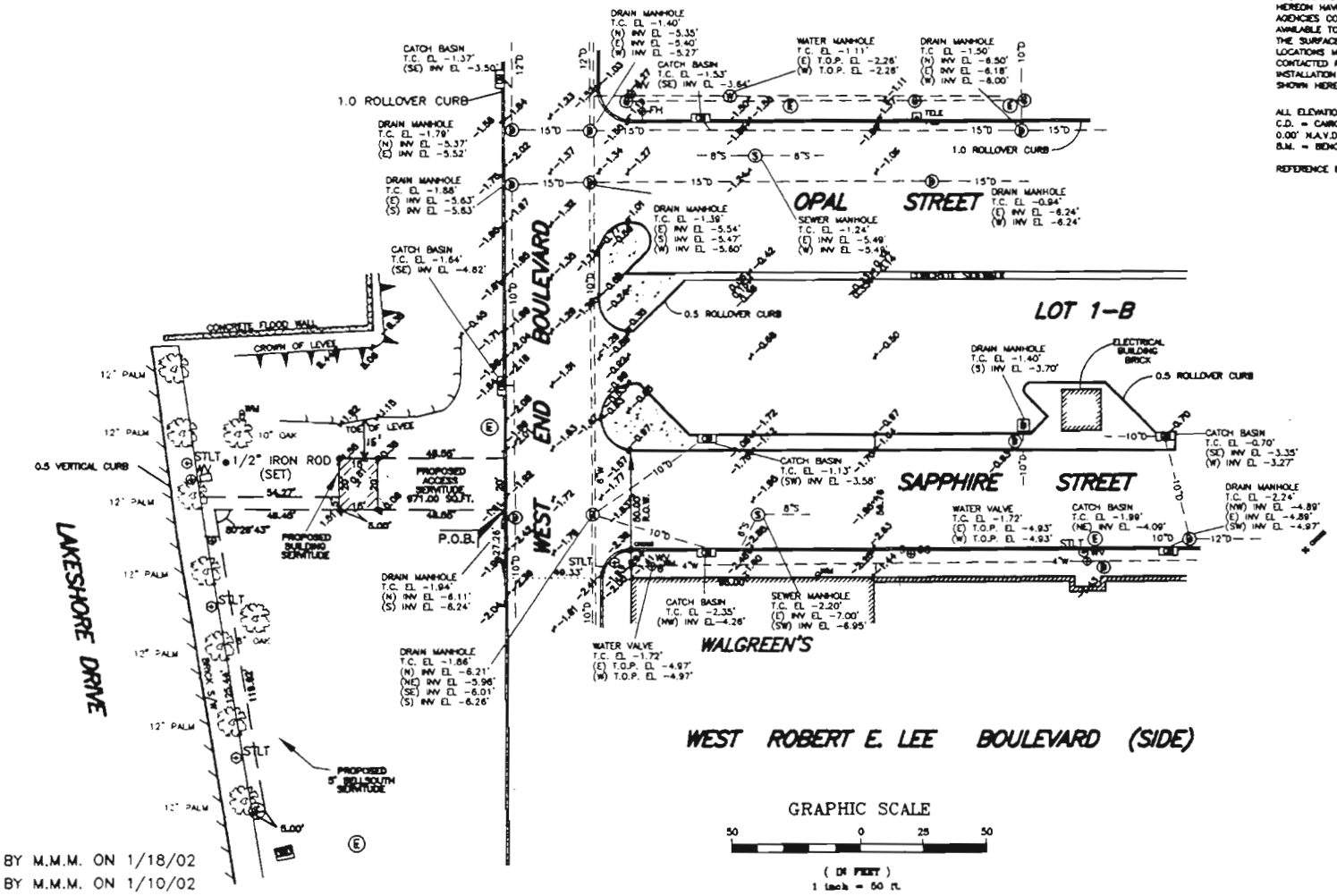
ORLEANS PARISH, LOUISIANA

CEI COOPER ENGINEERING, INC.

CMI Engineering • Planning • Environmental

P.O. Box 1870 Covington, Louisiana 70434 (985) 845-6355

C:\MEINERS\97-048\ORLEANS-LEVEE-BOARD\F-1_FOUNDATION\1-15-02



GENERAL NOTES

THE LOCATIONS OF UNDERGROUND AND OTHER NONVISIBLE UTILITIES SHOWN HEREON HAVE BEEN DETERMINED FROM DATA EITHER FURNISHED BY THE AGENCIES CONTROLLING SUCH DATA AND/OR EXTRACTED FROM RECORDS MADE AVAILABLE TO US BY THE AGENCIES CONTROLLING SUCH RECORDS. WHERE FOUND THE SURFACE FEATURES OF LOCATIONS ARE SHOWN. THE ACTUAL NONVISIBLE LOCATIONS MAY VARY FROM THOSE SHOWN HEREON. EACH AGENCY SHOULD BE CONTACTED RELATIVE TO THE PRECISE LOCATION OF ITS UNDERGROUND INSTALLATION PRIOR TO ANY RELIANCE UPON THE ACCURACY OF SUCH LOCATIONS SHOWN HEREON, INCLUDING PRIOR TO EXCAVATION AND DIGGING.

ALL ELEVATIONS SHOWN REFER TO N.A.V.D DATUM.
C.D. = CAIRO DATUM, N.A.V.D. = NORTH AMERICAN VERTICAL DATUM
0.00' N.A.V.D. = 20.43' CAIRO DATUM
B.M. = BENCH MARK, EL. = -2.29

REFERENCE B.M. = N.O. Serial 12, EL. = -2.29 (NAVD88)

LEGEND

- SEWER MANHOLE , SEWER LINE
- WATER MANHOLE , WATER LINE
- DRAIN MANHOLE , DRAIN LINE
- DRAIN INLET , DRAIN LINE
- GAS MANHOLE , GAS LINE
- SCB MANHOLE , SCB LINE
- POWER POLE / OVERHEAD LINES ELECTRIC,TELEPHONE,CABLE TV
- ELEC TOWER / OVERHEAD LINES
- CATCH BASIN
- GAS METER
- GAS VALVE
- WATER METER
- SEWER CLEANOUT
- DRAIN CLEANOUT
- FIRE HYDRANT
- WATER VALVE
- ANCHOR
- SIGN
- GUARD POST
- STREET LIGHT
- TRAFFIC LIGHT
- TEL. PEDESTAL
- TREE
- BUSH
- FENCE

REV. BY M.M.M. ON 1/18/02
REV. BY M.M.M. ON 1/10/02
REV. BY M.M.M. ON 1/2/02

SCALE:	1" = 50'
DATE:	08/20/01
DRAWN BY:	S.H.G.
CHECKED BY:	*.*.*
DRAWING NO:	B-3568-2001
SHEET	1
OF	1

The Servitudes and Restrictions shown on this survey are limited to those set forth in the description furnished us and there is no representation that all applicable Servitudes and Restrictions are shown hereon. The surveyor has made no title search or public record search in compiling the data for this survey.

I have consulted the Federal Insurance Administration Flood Hazard Boundary Maps and found this property is in a Special Flood Hazard Area.

F. I. A. ZONE: AO
BASE FLD. ELEV. = 1.5
COMMUNITY PANEL NO. 225203 0095 E
REVISED: MARCH 1, 1984

PROPOSED ACCESS AND BUILDING SERVITUDE LOCATED IN THE MEDIAN BETWEEN LAKESHORE DRIVE AND WEST END BOULEVARD ORLEANS PARISH, LOUISIANA

I certify that this plat represents an actual ground survey made by me or under my direct supervision, and it does not conform to the requirements for the Minimum Standards for Property Boundary Surveys as found in Louisiana Administrative Code TITLE 46: LXI, Chapter 25.

BELLSOUTH TELECOMMUNICATIONS

BFM CORPORATION, L.L.C.
Professional Land Surveyors
534 WILLIAMS BOULEVARD
E-mail: bfmcorp@bfmcorporation.com
(504) 468-8800
Fax No. (504) 467-0065
CITY OF KENNER
JEFFERSON PARISH, LOUISIANA, 70062

STATE OF LOUISIANA
STANLEY K. TURNER
REG. No. 4753
REGISTERED PROFESSIONAL LAND SURVEYOR

Stanley K. Turner

REGISTERED
PROFESSIONAL LAND SURVEYOR