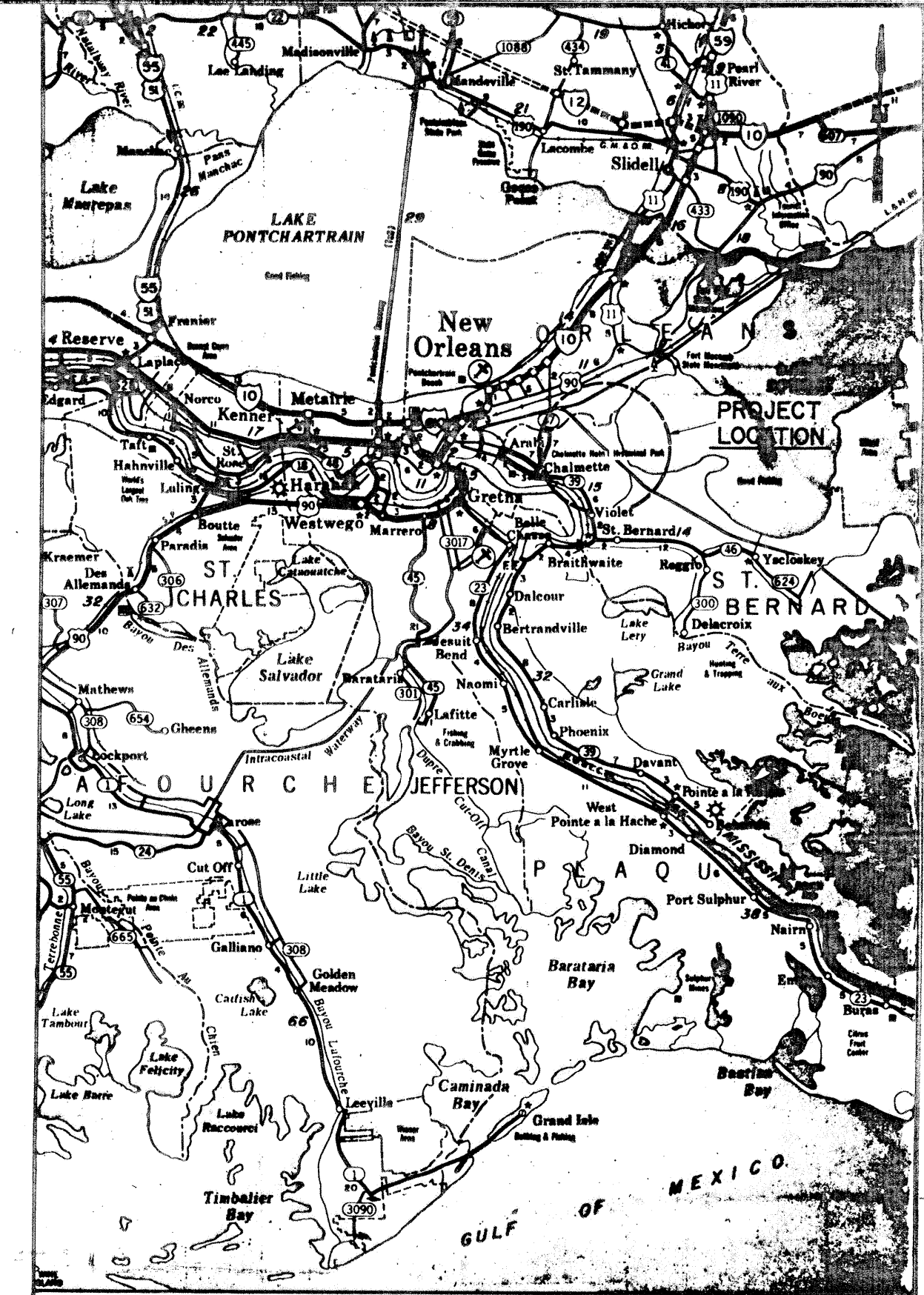


LOCATION SITE MAP

SCALE 1:31,680



VICINITY MAP

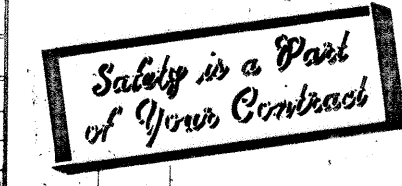
SCALE IN MILES

TABULATION OF BENCH MARKS

B.M.	ELEVATION	LOCATION AND DESCRIPTION
P.B.M. 383-00 (1970)	6.113 M.S.L.	MARK IS TOP OF CAP SET ON 1-INCH GALVANIZED PIPE DRIVEN 71 FEET IN GROUND WITH 1 1/2 INCH PLASTIC CASING ON SOUTH BANK OF MISSISSIPPI RIVER GULF OUTLET; APPROXIMATELY 700 FEET LANDSIDE OF STATION 383+00 MISS. RIVER GULF OUTLET BASE LINE. APPROXIMATELY 1000 FEET EAST OF BAYOU BIENVENUE. TOP OF CAP IS 1.8 FEET ABOVE GROUND. THREE CREOSOTED POSTS SET AROUND MARK AND PAINTED YELLOW.
P.B.M. 502-35 (1970)	7.384 Ft. M.S.L.	MARK IS TOP OF CAP SET ON 1-INCH GALVANIZED PIPE DRIVEN 75.8 FEET INTO GROUND WITH 1 1/2 INCH PLASTIC CASING ON SOUTH BANK MISSISSIPPI RIVER GULF OUTLET; APPROX 764 FEET LANDSIDE OF STATION 502+35 MISSISSIPPI RIVER GULF OUTLET BASE LINE. TOP OF CAP IS 2.0 FEET ABOVE GROUND. THREE CREOSOTED POSTS SET AROUND MARK AND PAINTED YELLOW.
P.B.M. 677-30 (1970)	11.049 Ft. M.S.L.	MARK IS TOP OF CAP SET ON 1-INCH GALVANIZED PIPE DRIVEN 104 FEET IN GROUND WITH 1-1/2 INCHES PLASTIC CASING ON SOUTH BANK OF MISSISSIPPI RIVER - GULF OUTLET; 748 FEET LANDSIDE STATION 677-30 MISSISSIPPI RIVER - GULF OUTLET BASELINE; APPROX. 1,000 FEET WEST OF BAYOU DUPRE. THREE CREOSOTED POSTS SET AROUND MARK PAINTED YELLOW.

INDEX TO DRAWINGS

DWG.	DESCRIPTION
1.	LOCATION MAP, VICINITY MAP, AND INDEX
2.	PLAN AND PROFILE STA. 360+70 TO STA. 436+00
3.	PLAN AND PROFILE STA. 436+00 TO STA. 522+00
4.	PLAN AND PROFILE STA. 522+00 TO STA. 605+00
5.	PLAN AND PROFILE STA. 605+00 TO STA. 699+00
6.	TYPICAL DESIGN SECTIONS
7.	STRUCTURE BACKFILL, BAYOU BIENVENUE
8.	STRUCTURE BACKFILL, BAYOU DUPRE
9.	SOIL BORINGS
10.	SOIL BORING LEGEND



# LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN

# HURRICANE PROTECTION LEVEE

## FIRST ENLARGEMENT

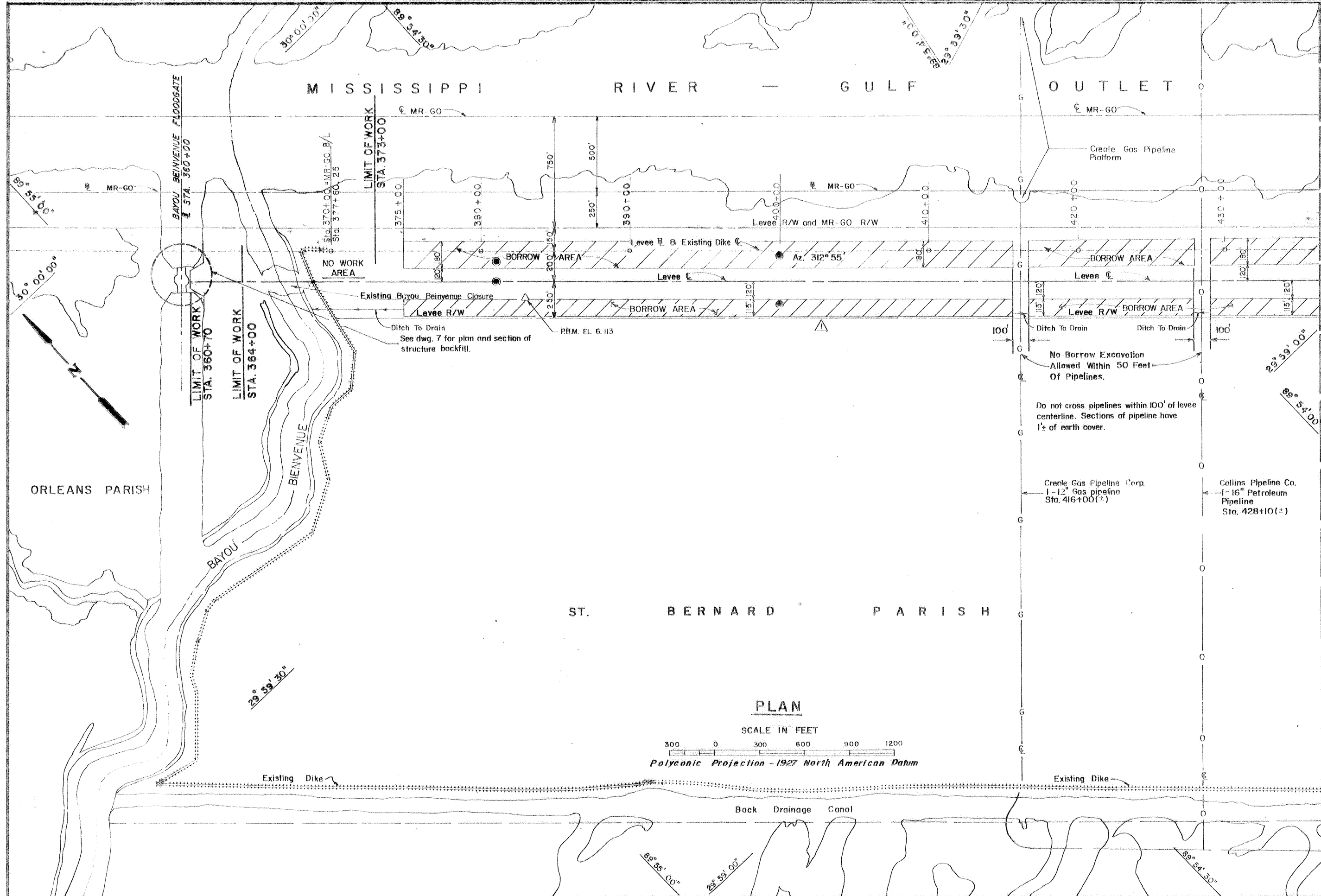


NOTE: DRAWING REDUCED TO ONE HALF SCALE

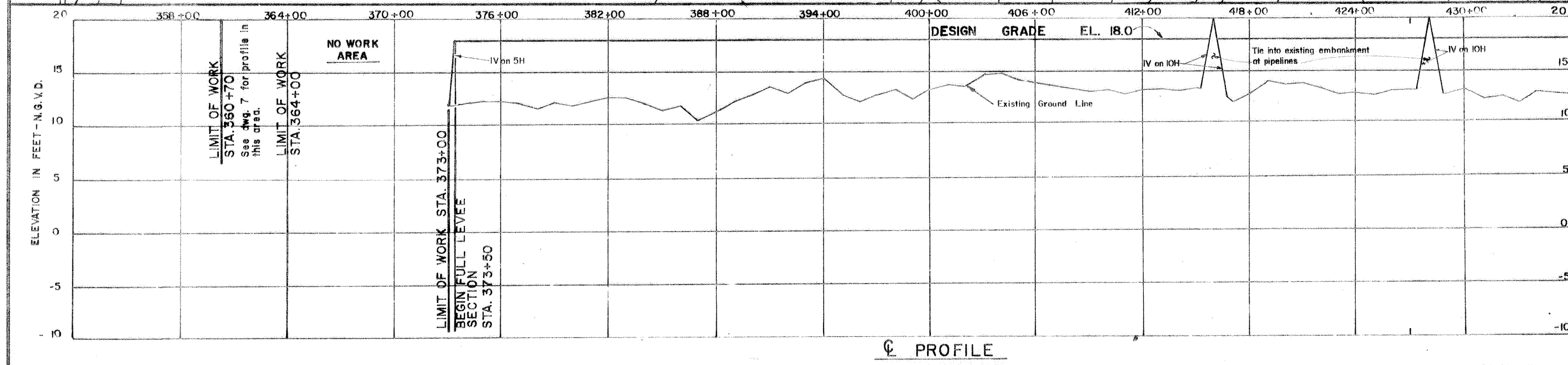
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS  
CORPS OF ENGINEERS  
NEW ORLEANS, LA.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN  
HURRICANE PROTECTION LEVEE  
FIRST ENLARGEMENT  
STA. 360+70 TO STA. 699+00 (NON CONT.)  
ORLEANS & ST. BERNARD PARISHES, LA.  
LOCATION MAP, VICINITY MAP AND INDEX TO DRAWINGS

DESIGNED BY T.B.	DRAWN BY L.J.T.	CHECKED BY T.J.C.	DATE JUL 1980	SCALE AS SHOWN	FILE NO. H-8-28796
SUBMITTED BY R. J. Lee			SPEC NO. DACW29-80-B-0151	PAGE 1 OF 10	



PLAN  
SCALE IN FEET  
300 0 300 600 900 1200  
Polyconic Projection - 1927 North American Datum



- NOTES:
1. Unless otherwise noted, all elevations are expressed in feet and refer to national geodetic vertical datum (N.G.V.D.)
  2. All azimuths are turned in a clockwise direction from 0° (Due South).
  3. See dwg. 1 for the description of bench marks.
  4. All the R/W and borrow area lines are parallel to or perpendicular with the levee centerline, unless otherwise indicated.
  5. All stations are levee baseline stations unless otherwise noted.
  6. MR-GO R/W stations equals the levee R/W stations plus 7+60.25 in the reach between Bayou Bienvenue and Bayou Dupre flood control structures.
  7. Borrow area dimensions are not to scale.

- BORING LEGEND
- General type boring
  - Undisturbed boring

THIS PLAN ACCOMPANIES  
MODIFICATION P00001  
TO CONTRACT NUMBER  
DACW29-80-C-0343

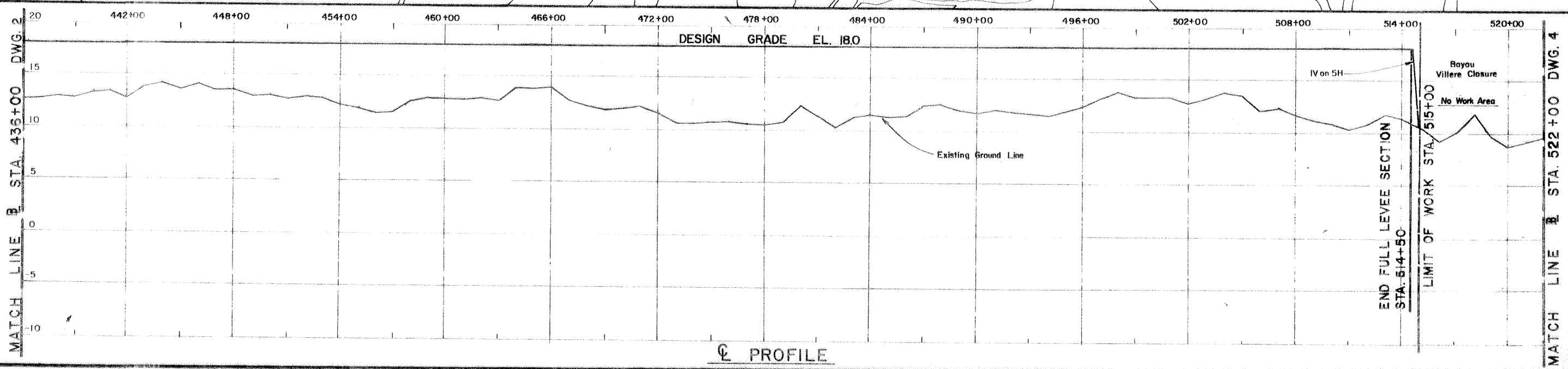
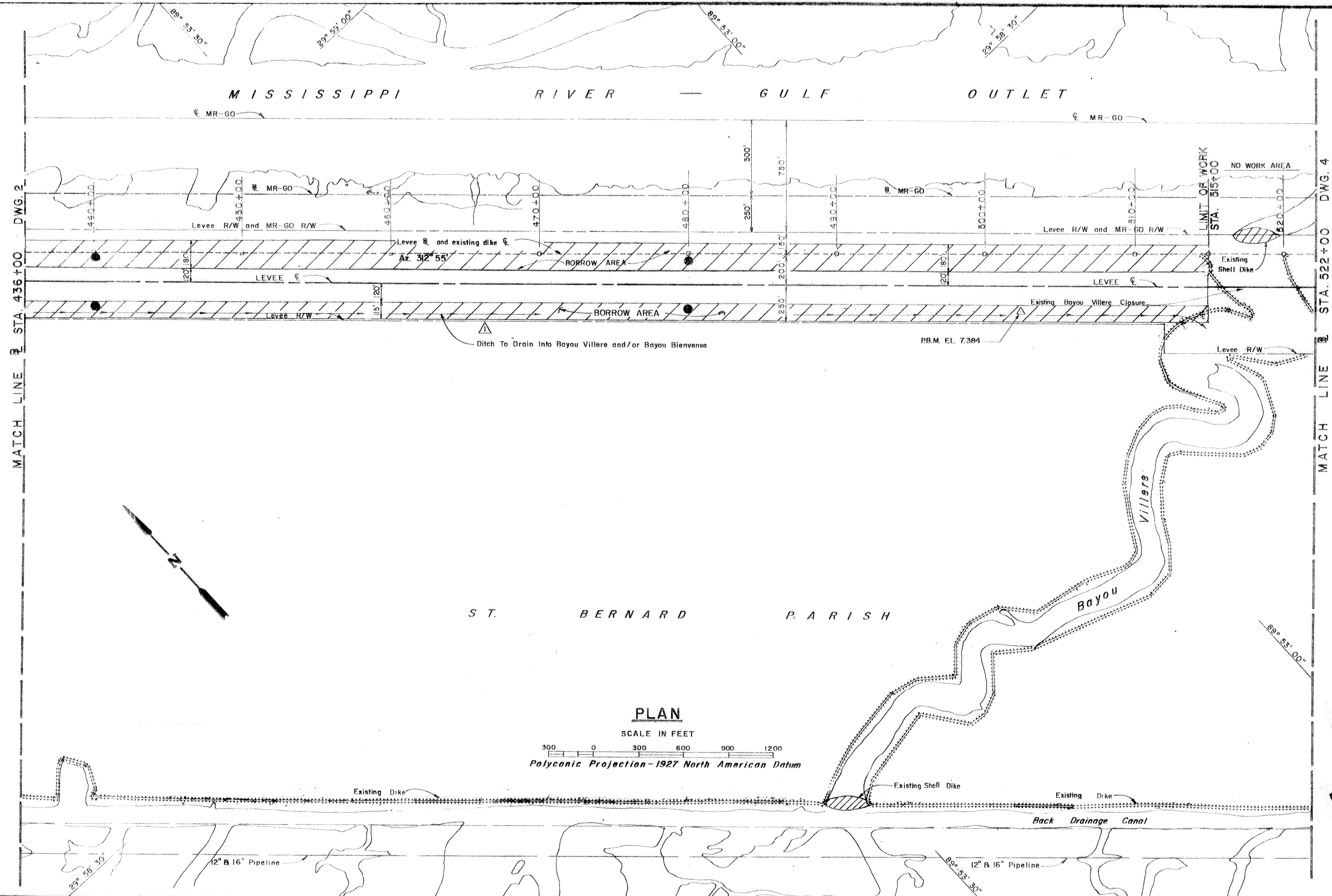
YOUR KEY TO  
HIGHER PROFITS  
INSURANCE  
CLAIMS  
WINNERS

Safety is a Part  
of Your Contract

NOTE:  
DRAWING REDUCED  
TO ONE HALF SCALE

DESIGNED:	DRAWN:	CHECKED:	DATE:	SCALE:	FILE NO.:
T.B.	T.J.C.	R.P.L.	JUL 1980	AS SHOWN	H-8-28796
SUBMITTED: <i>[Signature]</i>					
APPROVED: <i>[Signature]</i>					
SPEC. NO. DACW29-80-B-0151					
DWS 2 OF 10					

MATCH LINE @ STA. 436+00 DWG. 3



THIS PLAN ACCOMPANIES  
MODIFICATION P00001  
TO CONTRACT NUMBER  
DACW29-80-C-0343

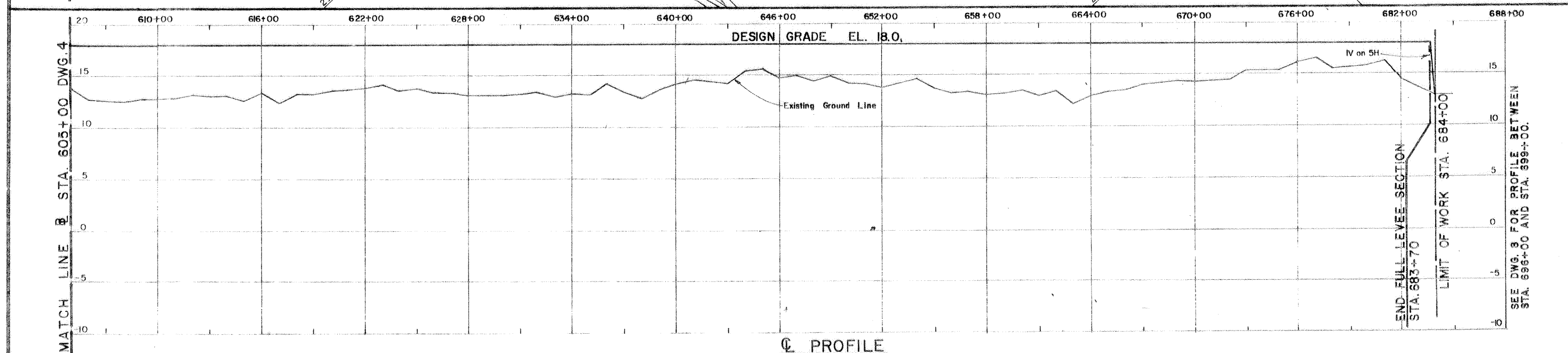
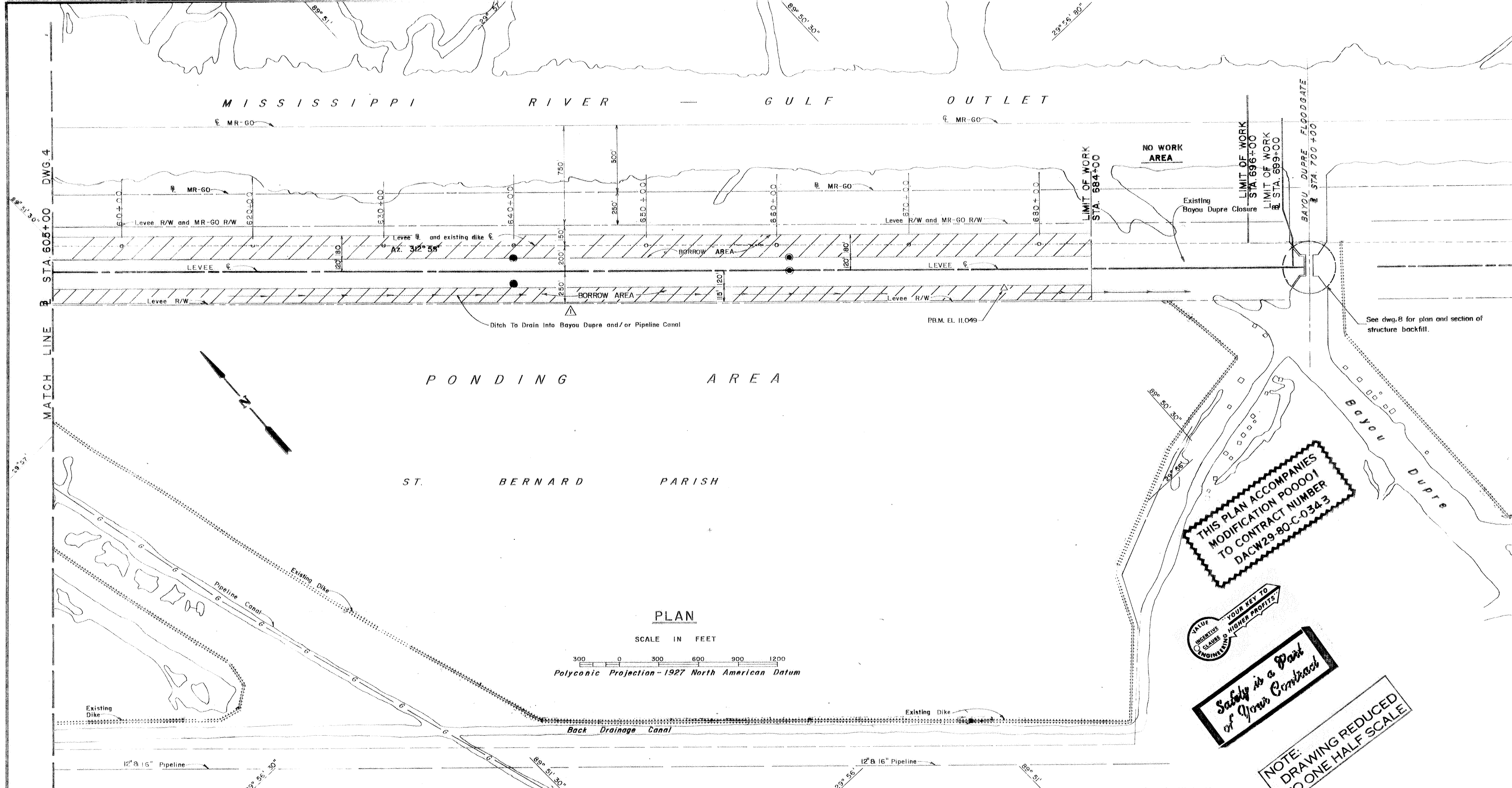
YOUR KEY TO  
HIGHER PROFITS  
VALUE  
ENGINEERING  
CLOSURE

Safety is a Part  
of Your Contract

NOTE:  
DRAWING REDUCED  
TO ONE HALF SCALE

REVISION	DATE	DESCRIPTION	R.P.L.
1	12Dec.80	Added protected side borrow area Mod. #1	
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LA.			
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN HURRICANE PROTECTION LEVEE FIRST ENLARGEMENT STA. 360+70 TO STA. 699+00 (NON CONT.) ORLEANS & ST. BERNARD PARISHES, LA. PLAN & PROFILE STA. 436+00 TO STA. 522+00			
DESIGNED:	DRAWN:	CHECKED:	DATE:
T.R.	T.J.C.	R.P.L.	JUL. 1980
SCALE:		FILE NO.	
AS SHOWN		H-8-28796	
SPEC. NO.		DACW29-80-B-0151	
DWG. 3		OF 10	





DESIGNED	DRAWN	CHECKED	DATE	SCALE	FILE NO.
T.B.	T.J.C.	R.P.L.	JUL. 1980	AS SHOWN	H-8-28796
SUBMITTER			PROJECT NO.	PAGE	
[Signature]			DACW29-80-B-0151	DWG. 5 OF 10	

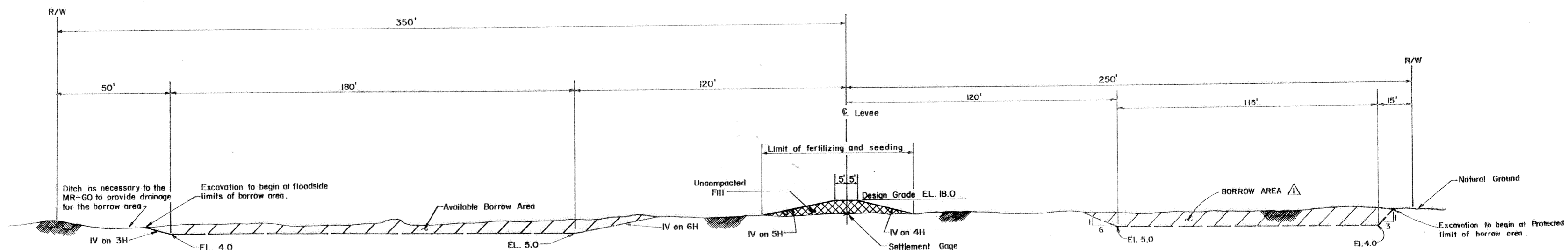
REVISION	DATE	DESCRIPTION	R.P.L.
1	22 Dec 80	Added protected side borrow area Mod #1	

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS  
CORPS OF ENGINEERS  
NEW ORLEANS, LA.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY  
CHALMETTE AREA PLAN  
HURRICANE PROTECTION LEVEE  
FIRST ENLARGEMENT  
STA. 360+70 TO STA. 699+00 (NON CONT.)  
ORLEANS & ST. BERNARD PARISHES, LA.  
PLAN & PROFILE  
STA. 605+00 TO STA. 699+00

FLOODSIDE

PROTECTED SIDE



DESIGN SECTION  
 NOT TO SCALE  
 STA. 373+50 TO STA. 514+50  
 STA. 523+50 TO STA. 572+30  
 STA. 596+50 TO STA. 683+70

NOTE

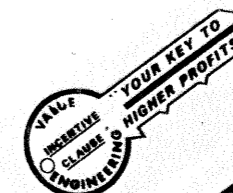
1. Make smooth transitions at each limit of work.
2. Make smooth transitions between all changes in borrow section.
3. No borrow excavation allowed within 50 feet of pipelines.
4. See dwgs 2, 7, 8, and 10 for other notes.
5. The protected side borrow area shall be used only after the borrow on the Floodside has been depleted for any given station.

SETTLEMENT GAGE SPECIFICATIONS

Should the contractor desire payment for placing additional fill due to foundation settlement during construction, he shall furnish and install settlement gages at the locations shown on the design section in conformance with the provisions of Section 3, of the specifications.

The settlement measurement range for each settlement gage shall be for a distance of 250 feet in each direction from each settlement gage measured along the centerline of the levee, except where settlement gages are placed at less than 500 feet intervals, in which case, the settlement measurement range shall be to a point 1/2 the distance between settlement gages.

1/4" Steelplate  
 Minimum 4' X 4'



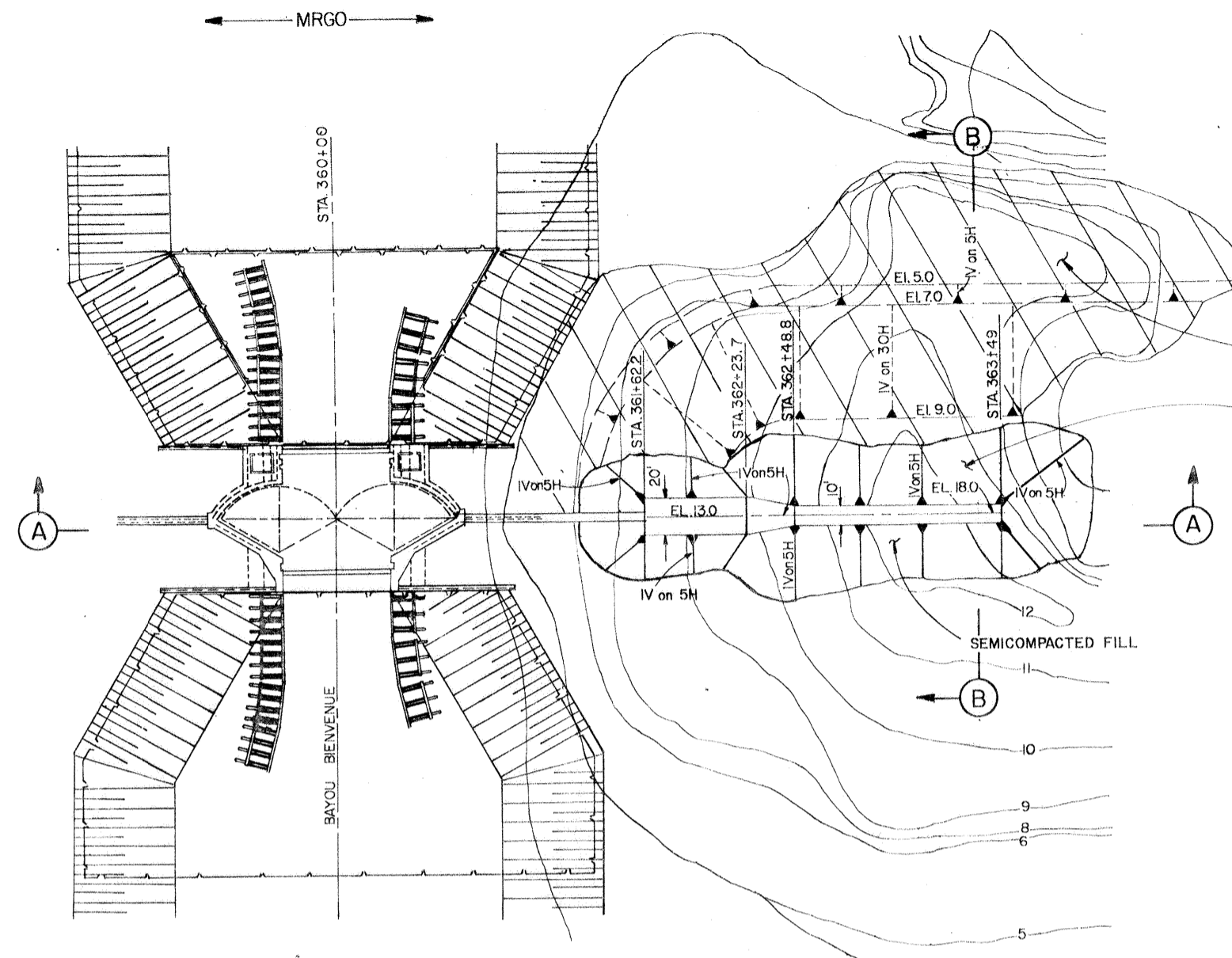
*Safety is a Part of Your Contract*

THIS PLAN ACCOMPANIES  
 MODIFICATION 000001  
 TO CONTRACT NUMBER  
 DACW29-80-C-0343

NOTE:  
 DRAWING REDUCED  
 TO ONE HALF SCALE

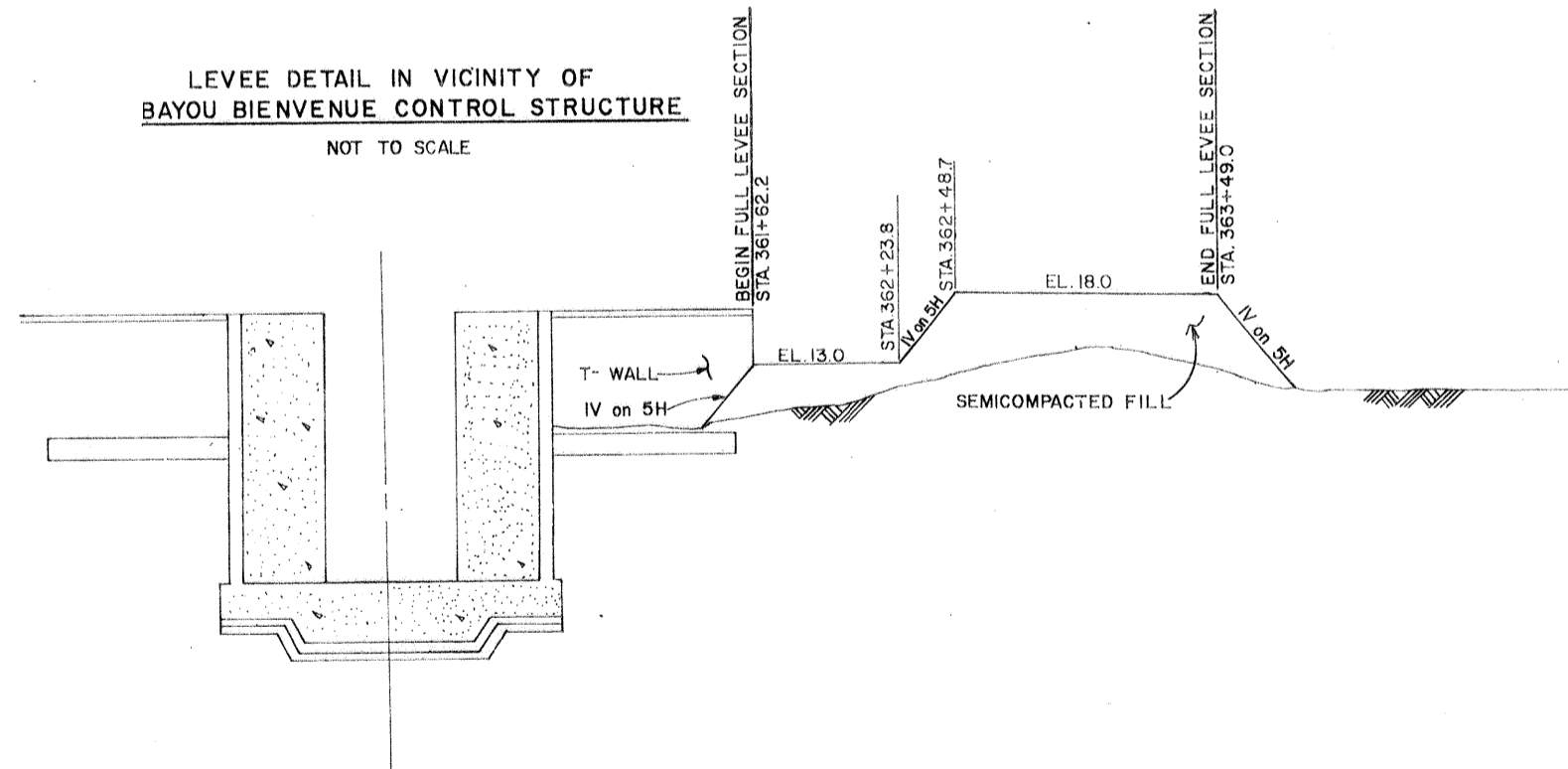
REVISION	DATE	DESCRIPTION	BY
1	12 Dec. 80	Added protected side borrow area Mod. #1	
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LA. LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN <b>HURRICANE PROTECTION LEVEE</b> FIRST ENLARGEMENT STA. 360+70 TO STA. 699+00 (NON CONT.) ORLEANS & ST. BERNARD PARISHES, LA. TYPICAL DESIGN SECTIONS			
DESIGNED: T. B. L. J. T.	DRAWN: E. E. J.	CHECKED: R. P. L.	DATE: JUL. 1980
SCALE: AS SHOWN		FILE NO. H-8-28796	
SUBMITTED: Donald R. Lee		SPEC. NO. DACW29-80-B-0151	
		SHEET 6 OF 10	

FLOOD SIDE

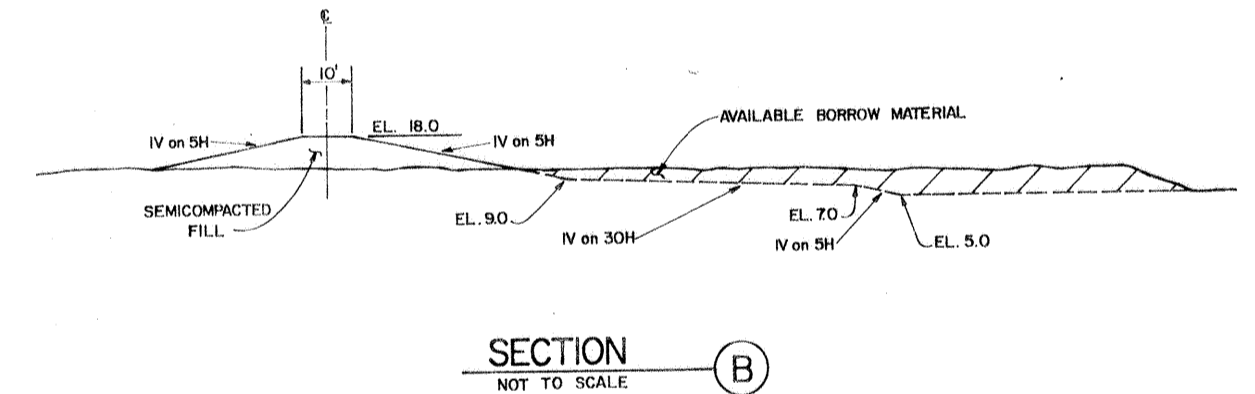


PROTECTED SIDE

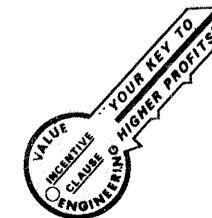
LEVEE DETAIL IN VICINITY OF  
BAYOU BIENVENUE CONTROL STRUCTURE  
NOT TO SCALE



SECTION A  
NOT TO SCALE



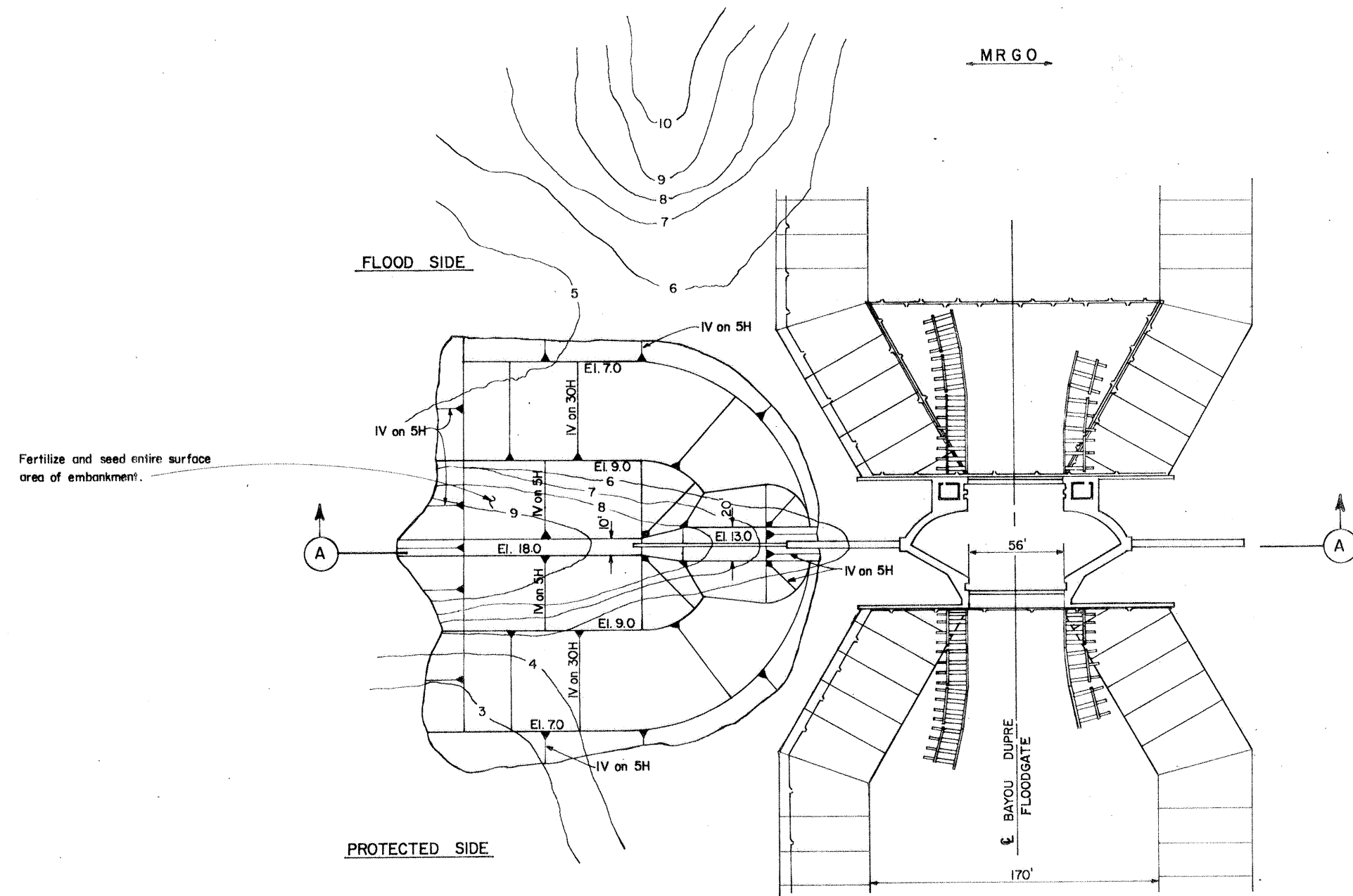
- NOTES:
- EXISTING CONTOUR LINES ARE BASED ON 1976 SURVEY INFORMATION.
  - SEE DWGS. 2, 6, 8, AND 10 FOR OTHER NOTES.



*Safety is a Part of Your Contract*

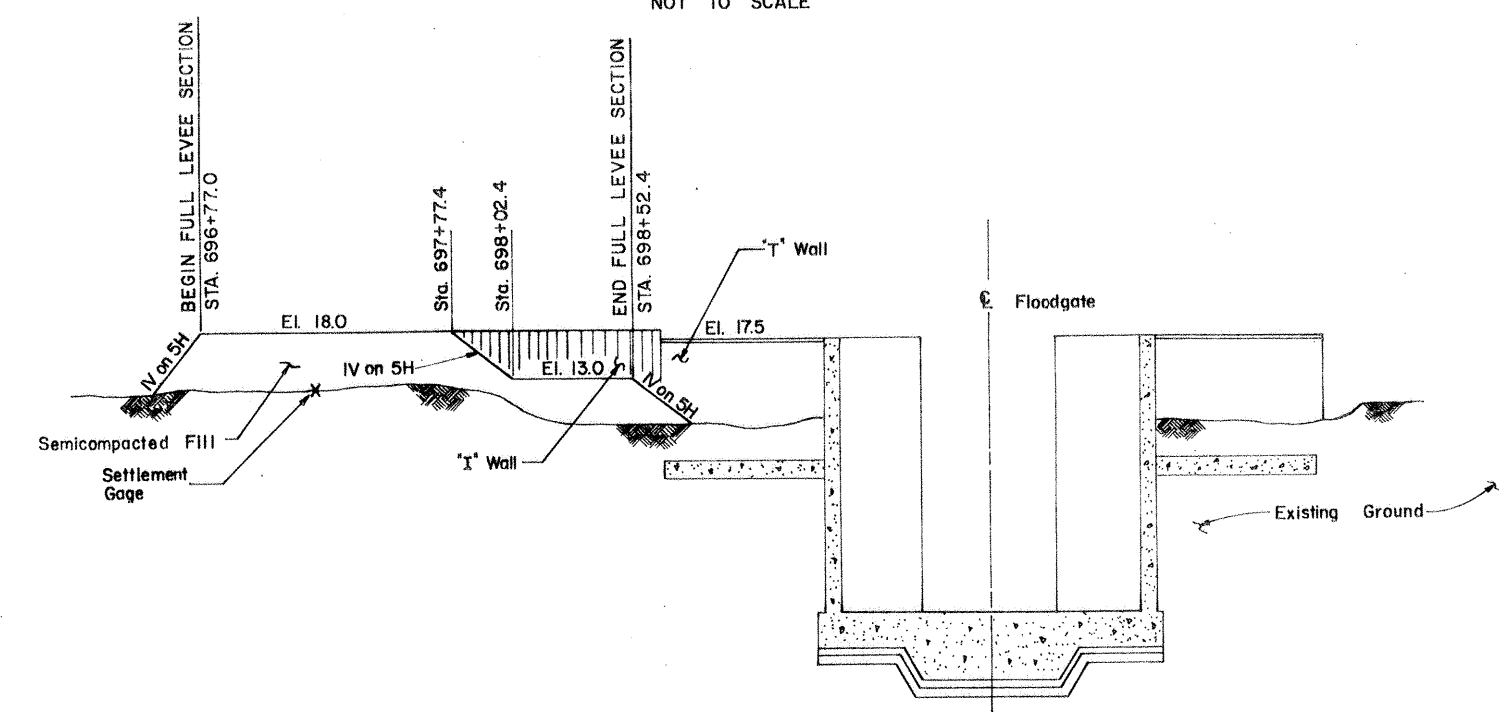
NOTE: DRAWING REDUCED TO ONE HALF SCALE

REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LA.			
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN HURRICANE PROTECTION LEVEE FIRST ENLARGEMENT STA. 360+70 TO STA. 699+00 (NON CONT) ORLEANS & ST. BERNARD PARISHES, L.A.			
LEVEE DETAIL IN VICINITY OF BAYOU BIENVENUE CONTROL STRUCTURE			
DESIGNED: T. B. L. J. T.	DRAWN: L. H.	CHECKED: R. P. L.	DATE: JUL. 1980
SCALE: AS SHOWN		FILE NO. H-8-28796	
SUBMITTED: <i>[Signature]</i>		SPEC. NO. DACW29-80-B-0151	
		DWG. 7 OF 10	

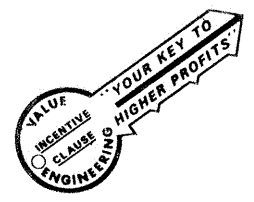


- NOTES:**
- Existing contour lines are based on 1976 survey information.
  - There is no borrow material adjacent to bayou dupe structure.
  - Borrow material is available at the borrow area which ends at station 684+00.
  - See dwgs 2, 6, 7, and 10 for other notes.

LEVEE DETAIL IN VICINITY OF  
BAYOU DUPRE CONTROL STRUCTURE  
NOT TO SCALE



SECTION A  
NOT TO SCALE



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NOTE:  
DRAWING REDUCED  
TO ONE HALF SCALE

REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LA.  LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN <b>HURRICANE PROTECTION LEVEE</b> FIRST ENLARGEMENT ORLEANS & ST. BERNARD PARISHES, LA.  LEVEE DETAIL IN VICINITY OF BAYOU DUPRE CONTROL STRUCTURE			
DESIGNED: T. B. L. J. T.	DRAWN: E. E. J.	CHECKED: R. P. L.	DATE: JUL. 1980
SCALE: AS SHOWN		FILE NO. H-8-28796	
SPEC. NO. DACW29-80-B-0151		Dwg. 8 of 10	



ELEVATIONS IN FEET NGVD.

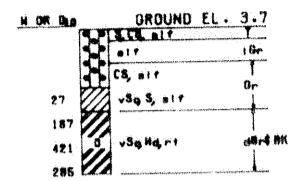
ELEVATIONS IN FEET NGVD.

ELEVATIONS IN FEET NGVD.

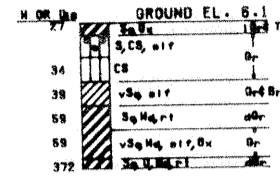
ELEVATIONS IN FEET NGVD.

ELEVATIONS IN FEET NGVD.

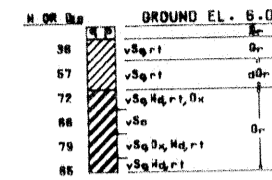
BOR. C-1  
STA. 400+00  
180FT. F. S. C/L  
8 APR 76



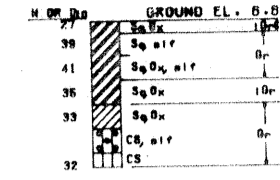
BOR. C-2  
STA. 400+00  
180FT. P. S. C/L  
8 APR 76



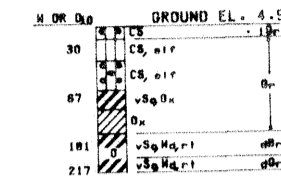
BOR. C-3  
STA. 440+00  
180FT. F. S. C/L  
5 APRIL 76



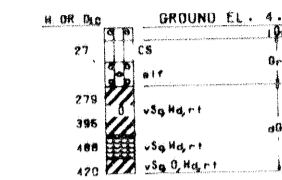
BOR. C-4  
STA. 440+00  
180FT. P. S. C/L  
5 APRIL 76



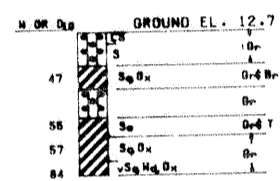
BOR. C-5  
STA. 480+00  
180FT. F. S. C/L  
6 APR 76



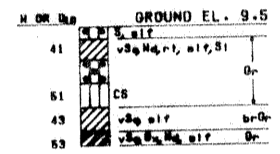
BOR. C-6  
STA. 480+00  
480FT. P. S. C/L  
6 APRIL 76



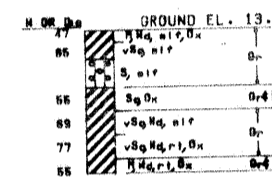
BOR. C-7  
STA. 540+00  
100FT. F. S. C/L  
6 APR 76



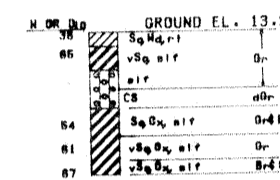
BOR. C-8  
STA. 540+00  
100FT. P. S. C/L  
6 APRIL 76



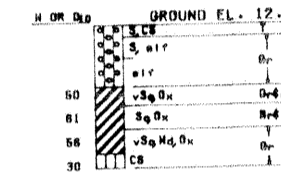
BOR. C-9  
STA. 600+00  
100FT. F. S. C/L  
7 APRIL 76



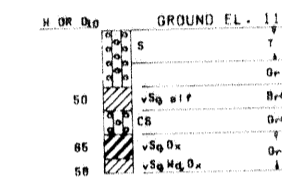
BOR. C-10  
STA. 600+00  
100FT. P. S. C/L  
7 APR 76



BOR. C-11  
STA. 640+00  
100FT. F. S. C/L  
7 APR 76

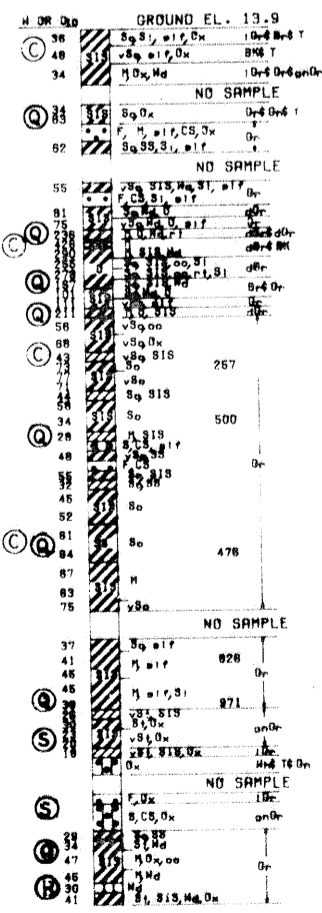


BOR. C-12  
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100FT. P. S. C/L  
7 APR 76

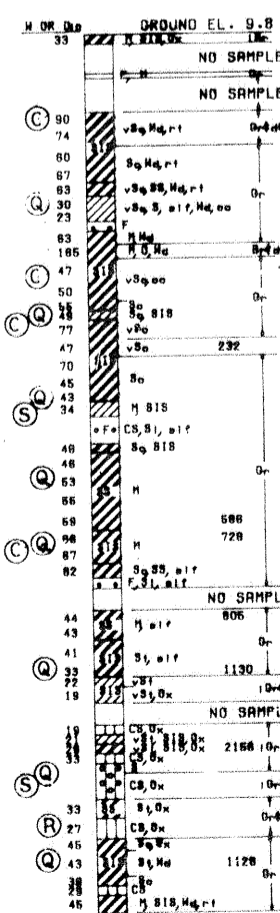


GENERAL TYPE BORINGS

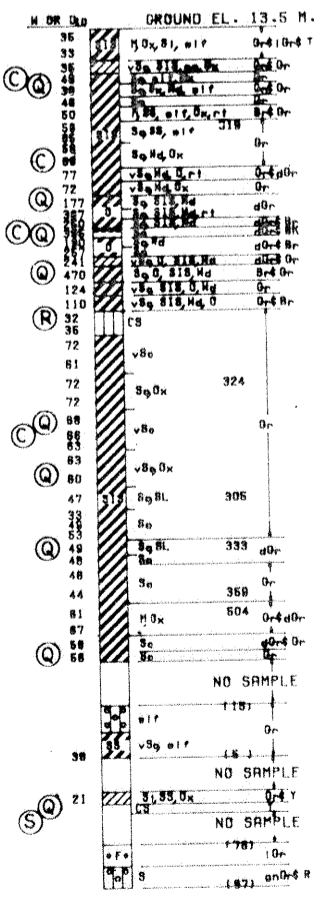
BOR. 1-UBD  
STA. 381+00  
ON C/L LEVEE  
19-23 AUG 76



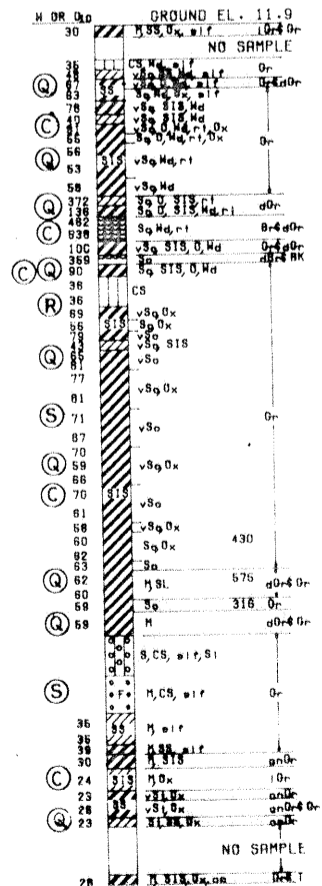
BOR. 2-UBD  
STA. 381+00  
130 FT. F.W.S. LEV. C/L  
25-26 AUG. 76



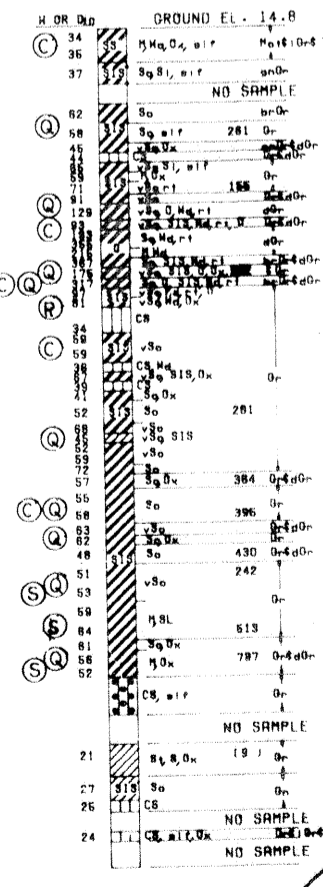
BOR. 3-UBD  
STA. 544+00  
C/L OF LEVEE  
10-11 AUG. 76



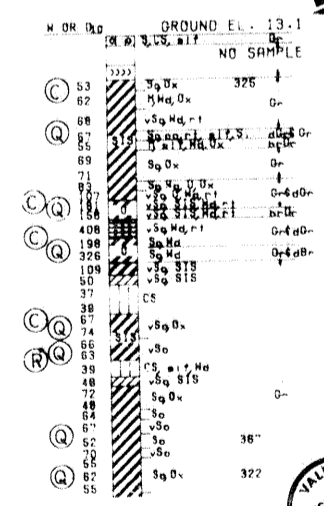
BOR. 4-UBD  
STA. 544+00  
90 FT. F.S.  
LEVEE C/L  
11-17 AUG '76



BOR. 5-UBD  
STA. 661+00  
ON C/L LEVEE  
20-21 JUL 76



BOR. 6-UBD  
STA. 661+00  
90 FT. F.S. C/L  
29-30 JUNE 4 AUG 76



ELEVATIONS IN FEET NGVD.

Safety is a Part of Your Contract

MAKE INVESTING IN ENGINEERING YOUR KEY TO HIGHER PROFITS

NOTE: DRAWING REDUCED TO ONE HALF SCALE

UNDISTURBED TYPE BORINGS

U.S. Army Engineer District New Orleans, Corps of Engineers, New Orleans, LA. Lake Pontchartrain, Louisiana and vicinity Chalmette Area Plan Hurricane Protection Levee. First enlargement Sta. 360+70 to Sta. 699+00 Orleans & St. Bernard Parishes, LA. Soil Borings. Design: T.B. L.J.T. Drawn: T.J.C. R.P.L. Date: JUL. 1980. Scale: AS SHOWN. File No: H-8-28796. Submitted: Donald P. Lee. Spec. No: DACW29-80-B-0151. Draw: 9 of 10.

UNIFIED SOIL CLASSIFICATION					
MAJOR DIVISION	TYPE	LETTER SYMBOL	SYM BOL	TYPICAL NAMES	
COARSE-GRAINED SOILS More than half of material is larger than No. 200 sieve size.	CLEAN GRAVEL (Little or No Fines)	GW	[Symbol]	GRAVEL, Well Graded, gravel-sand mixtures, little or no fines	
		GP		GRAVEL, Poorly Graded, gravel-sand mixtures, little or no fines	
	GRAVEL WITH FINES (Appreciable Amount of Fines)	GM	[Symbol]	SILTY GRAVEL, gravel-sand-silt mixtures	
		GC		CLAYEY GRAVEL, gravel-sand-clay mixtures	
	CLEAN SAND (Little or No Fines)	SW	[Symbol]	SAND, Well-Graded, gravelly sands	
		SP		SAND, Poorly-Graded, gravelly sands	
	SANDS WITH FINES (Appreciable Amount of Fines)	SM	[Symbol]	SILTY SAND, sand-silt mixtures	
		SC		CLAYEY SAND, sand-clay mixtures	
	FINE-GRAINED SOILS More than half the material is smaller than No. 200 sieve size.	SILTS AND CLAYS (Liquid Limit < 50)	ML	[Symbol]	SILT & very fine sand, silty or clayey fine sand or clayey silt with slight plasticity
			CL		LEAN CLAY, Sandy Clay, Silty Clay, of low to medium plasticity
OL			ORGANIC SILTS and organic silty clays of low plasticity		
SILTS AND CLAYS (Liquid Limit > 50)		MH	[Symbol]	SILT, fine sandy or silty soil with high plasticity	
		CH		FAT CLAY, inorganic clay of high plasticity	
		OH		ORGANIC CLAYS of medium to high plasticity, organic silts	
HIGHLY ORGANIC SOILS	Pt	[Symbol]	PEAT, and other highly organic soil		
WOOD	Wd	[Symbol]	WOOD		
SHELLS	SI	[Symbol]	SHELLS		
NO SAMPLE					

NOTE: Soils possessing characteristics of two groups are designated by combinations of group symbols

DESCRIPTIVE SYMBOLS						
COLOR		CONSISTENCY FOR COHESIVE SOILS			MODIFICATIONS	
COLOR	SYMBOL	CONSISTENCY	COHESION IN LBS./SQ. FT. FROM UNCONFINED COMPRESSION TEST	SYMBOL	MODIFICATION	SYMBOL
TAN	T	VERY SOFT	< 250	vSo	Traces	Tr-
YELLOW	Y	SOFT	250-500	So	Fine	F
RED	R	MEDIUM	500-1000	M	Medium	M
BLACK	BK	STIFF	1000-2000	St	Coarse	C
GRAY	Gr	VERY STIFF	2000-4000	vSt	Concretions	cc
LIGHT GRAY	lGr	HARD	> 4000	H	Rootlets	rt
DARK GRAY	dGr				Lignite fragments	lg
BROWN	Br				Shale fragments	sh
LIGHT BROWN	lBr				Sandstone fragments	sds
DARK BROWN	dBr				Shell fragments	slf
BROWNISH-GRAY	br Gr				Organic matter	O
GRAYISH-BROWN	gy Br				Clay strata or lenses	CS
GREENISH-GRAY	gn Gr				Silt strata or lenses	SIS
GRAYISH-GREEN	gy Gn				Sand strata or lenses	SS
GREEN	Gn				Sandy	S
BLUE	Bl				Gravelly	G
BLUE-GREEN	Bl Gn				Boulders	B
WHITE	Wh				Slickensides	SL
MOTTLED	Mot				Wood	Wd
					Oxidized	Ox

PLASTICITY CHART  
For classification of fine-grained soils

NOTES:

FIGURES TO LEFT OF BORING UNDER COLUMN "W OR D<sub>10</sub>"

Are natural water contents in percent dry weight

When underlined denotes D<sub>10</sub> size in mm\*

FIGURES TO LEFT OF BORING UNDER COLUMNS "LL" AND "PL"

Are liquid and plastic limits, respectively

SYMBOLS TO LEFT OF BORING

∇ Ground-water surface and date observed

⊙ Denotes location of consolidation test\*\*

⊙ Denotes location of consolidated-drained direct shear test\*\*

⊙ Denotes location of consolidated-undrained triaxial compression test\*\*

⊙ Denotes location of unconsolidated-undrained triaxial compression test\*\*

⊙ Denotes location of sample subjected to consolidation test and each of the above three types of shear tests\*\*

FW Denotes free water encountered in boring or sample

FIGURES TO RIGHT OF BORING

Are values of cohesion in lbs./sq. ft. from unconfined compression tests

In parenthesis are driving resistances in blows per foot determined with a standard split spoon sampler (1 3/8" I.D., 2" O.D.) and a 140 lb. driving hammer with a 30" drop

Where underlined with a solid line denotes laboratory permeability in centimeters per second of undisturbed sample

Where underlined with a dashed line denotes laboratory permeability in centimeters per second of sample remoulded to the estimated natural void ratio

\*The D<sub>10</sub> size of a soil is the grain diameter in millimeters of which 10% of the soil is finer, and 90% coarser than D<sub>10</sub>

\*\*Results of these tests are available for inspection in the U.S. Army Engineer District Office, if these symbols appear beside the boring logs on the drawings

TYPICAL NOTES:

While the borings are representative of subsurface conditions at their respective locations and for their respective vertical reaches, local variations characteristic of the subsurface materials of the region are anticipated and, if encountered, such variations will not be considered as differing materially within the purview of clause 4 of the contract.

Ground-water elevations shown on the boring logs represents ground-water surfaces encountered on the dates shown. Absence of water surface data on certain borings implies that no ground-water data is available, but does not necessarily mean that ground water will not be encountered at the locations or within the vertical reaches of these borings.

Consistency of cohesive soils shown on the boring logs is based on driller's log and visual examination and is approximate, except within those vertical reaches of the borings where shear strengths from unconfined compression tests are shown.

NOTE: DRAWING REDUCED TO ONE HALF SCALE

REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LA.			
LAKE PONCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN HURRICANE PROTECTION LEVEE FIRST ENLARGEMENT STA. 360+70 TO STA. 699+00 ORLEANS & ST. BERNARD PARISHES, LA. SOIL BORING LEGEND			
DESIGNED T. B. L. J. T.	DRAWN E. M. M.	CHECKED R. P. L.	DATE JUL. 1980
SCALE AS SHOWN	FILE NO. H-8-28796	SPEC. NO. DACW29-80-B-0151	
DRAWN BY Ronald P. Lee		DATE JUL 10 1980	