LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY

CHALMETTE AREA PLAN

BAYOU BIENVENUE

CONTROL STRUCTURE

PERIODIC INSPECTION REPORT NO. 5

29 MARCH 1988

United States Army
Corps of Engineers
... Serving the Army
... Serving the Nation

New Orleans District

CELMV-ED-GG (CELMN-ED-DG/19 Sep 88) (1105-2-10c) 3d End Mr. Stegall/jl/634-5900
SUBJECT: Lake Pontchartrain, Louisiana and Vicinity, Chalmette Area Plan, Bayou Bienvenue Control Structure, Periodic Inspection No. 5

DA, Lower Mississippi Valley Division, CE, Vicksburg, MS 39181-0080

17 JAN 89

FOR: Commander, New Orleans District, ATTN: CELMN-ED-DG

The actions taken in the preceding 2d End are satisfactory. No further action is required on this chain of correspondence.

FOR THE COMMANDER:

for William R. Hall
FRED H. BAYLEY III
Chief, Engineering Division

CELMN-ED-DG (CELMN-ED-DG/19 Sep 88) 2nd End Mr. Drummond/jaf/2711
SUBJECT: Periodic Inspection No. 5, Bayou Bienvenue Control Structure

DA, New Orleans District, Corps of Engineers, P.O. Box 60267,
New Orleans, Louisiana 70160-0267 28 December 1988

MEMORANDUM FOR: Commander, Lower Mississippi Valley Division,
ATTN: CELMV-ED-GG

The disposition of comments presented in the 1st End follows. Paragraph numbers refer to like numbered paragraphs in the 1st End.

a. Para. 4-03b, page IV-1. The comment has been corrected in our file copy of this report.

b. Para. 6-02a, page VI-1. Upon further investigation, it was concluded that no deficiency exists with regard to riprap design. The riprap has not been replenished since construction in the early 1970's. Based on a comparison to similar structures in the area, this lifespan for forebay/tailbay bank protection is normal. The Orleans Levee Board's schedule for riprap replacement is uncertain. Although they have started plans and specifications for the job, the project has been afforded a low priority because of manpower and fiscal constraints. Since the rock depletion poses no current threat to the structure, it has been categorized as routine maintenance, to be accomplished according to maintenance priorities. The situation will be monitored in the interim period to assure the safety of the structure.

FOR THE COMMANDER:

1 Encl
wd encl 1

FREDERIC M. CHATRY
Chief, Engineering Division

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

CELMN-ED-DG

19 Sep 88

MEMORANDUM FOR: Commander, Lower Mississippi Valley Division, ATTN: CELMV-ED-G

SUBJECT: Lake Pontchartrain, Louisiana and Vicinity, Chalmette Area Plan, Bayou Bienvenue Control Structure, Periodic Inspection No. 5

Subject report is submitted herewith for your approval.

FOR THE COMMANDER:

1 Encl (6 cys)

FREDERIC M. CHATRY
Chief, Engineering Division

S: 30 Dec 88

CELMV-ED-GG (CELMN-ED-DG/19 Sep 88) (1105-2-10c) 1st End Mr. Stegall/jl/634-5900
SUBJECT: Lake Pontchartrain, Louisiana and Vicinity, Chalmette Area Plan, Bayou Bienvenue Control Structure, Periodic Inspection No. 5

DA, Lower Mississippi Valley Division, CE, Vicksburg, MS 39181-0080
22 NOV '88

FOR: Commander, New Orleans District, ATTN: CELMN-ED-DG

1. The enclosed periodic inspection report is approved subject to the following comments:

a. Para 4-03b, page IV-1. Refer to comment marked in red which should be made in your file copies of this report.

b. Para 6-02a, page VI-1. Prior to preparation of plans and specifications, you should determine the reason displacement of the riprap protection occurred and then size (blanket thickness and gradation) the replacement stone to ensure that a similar deficiency does not reoccur at this location. The results of this determination should be documented in this report to help ensure that local interests will adequately repair these deficient areas.

2. The report should be revised in accordance with the comment in para 1b above, and revised pages should be submitted to this office by 30 Dec 88.

FOR THE COMMANDER:

FRED H. BAYLEY III.
Chief, Engineering Division

Encl (6 cys)
wd 2 cys

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY

CHALMETTE AREA PLAN

BAYOU BIENVENUE CONTROL STRUCTURE

PERIODIC INSPECTION REPORT NO. 5

29 MARCH 1988

U. S. ARMY ENGINEER DISTRICT

CORPS OF ENGINEERS

NEW ORLEANS, LA

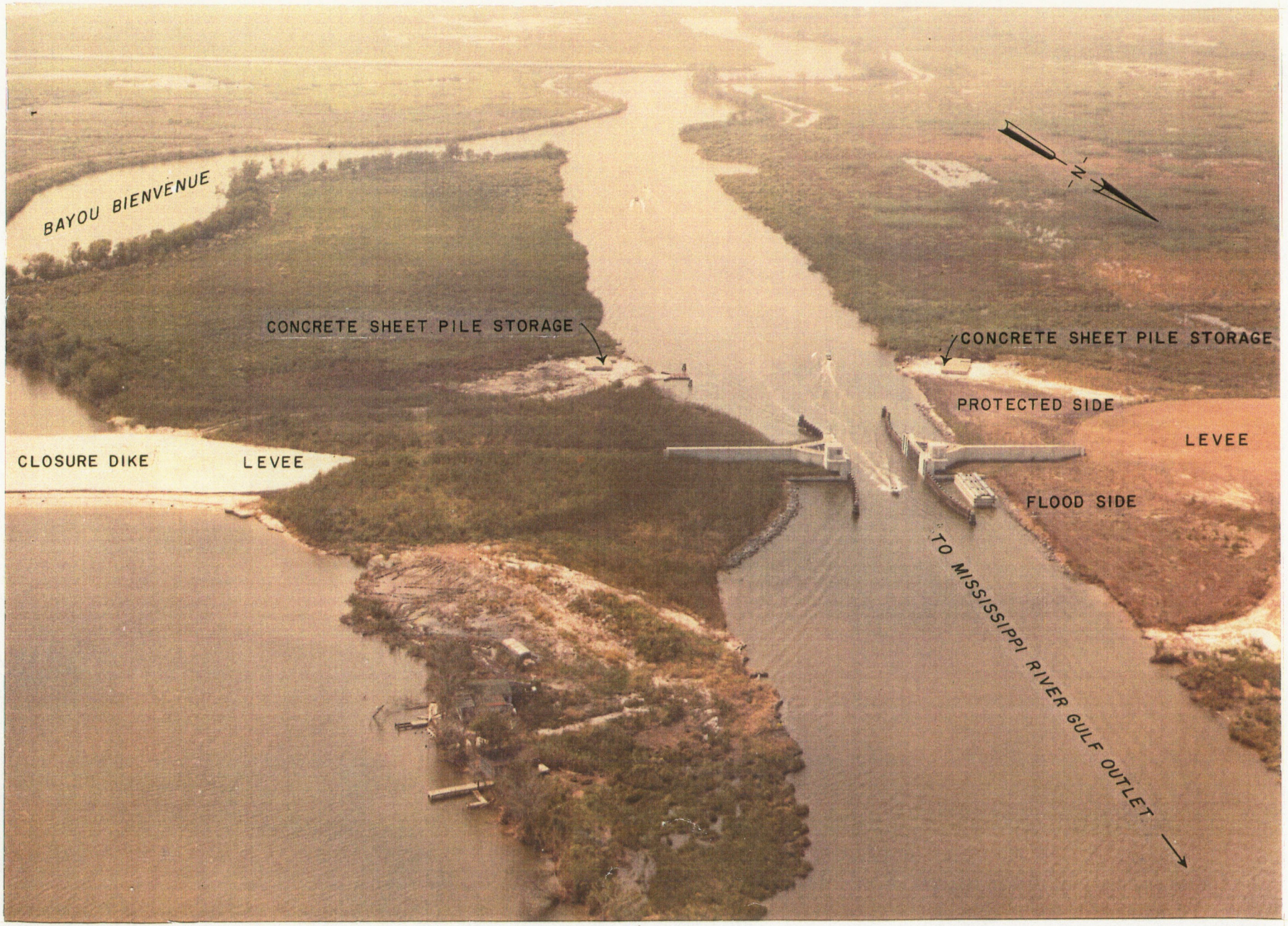


PHOTO TAKEN 27 SEPTEMBER 1974

BAYOU BIENVENUE CONTROL STRUCTURE

SUMMARY

The Bayou Bienvenue Control Structure was inspected on 29 March 1988 by representatives of NOD and the Orleans Levee Board. The structure was found to be stable and in good operating condition. Minor deficiencies are noted within.

BAYOU BIENVENUE CONTROL STRUCTURE

PERIODIC INSPECTION REPORT NO. 5

TABLE OF CONTENTS

SECTION I - INTRODUCTION

1-01 Authority. Authority is provided by ER 1110-2-100 subject "Periodic Inspection and Continuing Evaluation of Completed Civil Works Structures".

1-02 Purpose and Scope. This report presents the results and conclusions of the fifth periodic inspection of the Bayou Bienvenue Control Structure.

1-03 Datum. All elevations in this report, except where otherwise indicated, are in feet and refer to the National Geodetic Vertical Datum of 1929 (NGVD) formally mean sea level (m.s.l.).

1-04 Previous Inspections. Past inspections of the Bayou Bienvenue Control Structure are included in the following reports:

Report No.	Inspection Date
1	31 October 1973
2	27 July 1979
3	31 March 1983
4	7 March 1985 (Dewatered)

SECTION II - PROJECT DESCRIPTION AND BACKGROUND

2-01 General. The description of the structure, historical, and other general background information, are included in report No. 1, which also contains selected construction drawings illustrating typical sections and details. This report is supplementary to previously numbered reports.

SECTION III - OPERATION AND MAINTENANCE

3-01 Operating and Maintenance Problems. There were no accidents nor major operating problems since the previous inspection of the structure on 7 March 1985.

3-02 Actions on Deficiencies from the Last Inspection. The Orleans Levee Board has accomplished all remedial actions listed in Periodic Inspection Report No. 4, Section VI (6-02), except for placing riprap in deficient areas near the guidewalls (para. f).

SECTION IV - REVIEW OF DESIGN AND ANALYSIS OF INSTRUMENTATION

4-01 Review of Design. The original design was made in accordance with standard engineering practice and with criteria as set forth in engineering manuals for civil work construction, published by the Office of the Chief of Engineers. The original design criteria was given in report No. 1, Section III. Therefore a detailed review of the design is not required at this time.

4-02 Design Stress. The original design stress criteria as contained in Engineering Manual No. 1110-1-2101, dated November 1963, have not changed.

4-03 Analysis of Instrumentation.

a. Settlement Survey. Present survey, dated 25 February 1988, indicates no unusual settlement or rebound at any point of the structure. (See Plates 2 thru 7).

b. Scour. In the north approach channel, scour of about 4 feet is indicated for most of the cross sections. No significant changes are indicated for the remaining sections. Stone movement is evident between Stations 8+00 and 9+00 near the west side of the channel. Appreciable scour has occurred in the south approach channel between Stations 16+00 to 19+50. Scour holes of 6 feet and 9 feet are indicated at Stations 16+50 and 17+00 respectively. This scour is far away and does not

endanger the integrity and safety of the structure at this time. The scour will be monitored very closely in future surveys. (See Plates 8 thru 18).

c. Overbank Ranges. Present survey indicates no significant scour or shoaling. (See Plates 19 thru 23).

BAYOU BIENVENUE CONTROL STRUCTURE
INSTRUMENTATION DRAWINGS

Plate No.	Title	File No.
1	Location Map	H-4-24326
2	Settlement Reference Marks-Plan and Profile	H-4-26857
3	Settlement Reference Marks-Differential Settlement Chart	H-4-26857
4	Settlement Reference Marks-Differential Settlement Chart	H-4-26857
5	Settlement Reference Marks-Wingwall Plans and Tabulation	H-4-26857
6	Settlement Reference Marks-Wingwall Differential Settlement Chart	H-4-26857
7	Settlement Reference Marks-Wingwall Differential Settlement Chart	H-4-26857
8	Scour and Overbank Survey - Approach Channels - Closure Dam and Levees	
9	Comparative Profile	
10	Comparative Section	
11	Comparative Section	
12	Comparative Section	
13	Comparative Section	
14	Comparative Section	
15	Comparative Section	
16	Comparative Section	
17	Comparative Section	
18	Comparative Section	
19	Overbank Ranges	
20	Northwest Wingwall	
21	Northeast Wingwall	
22	Southwest Wingwall	
23	Southeast Wingwall	

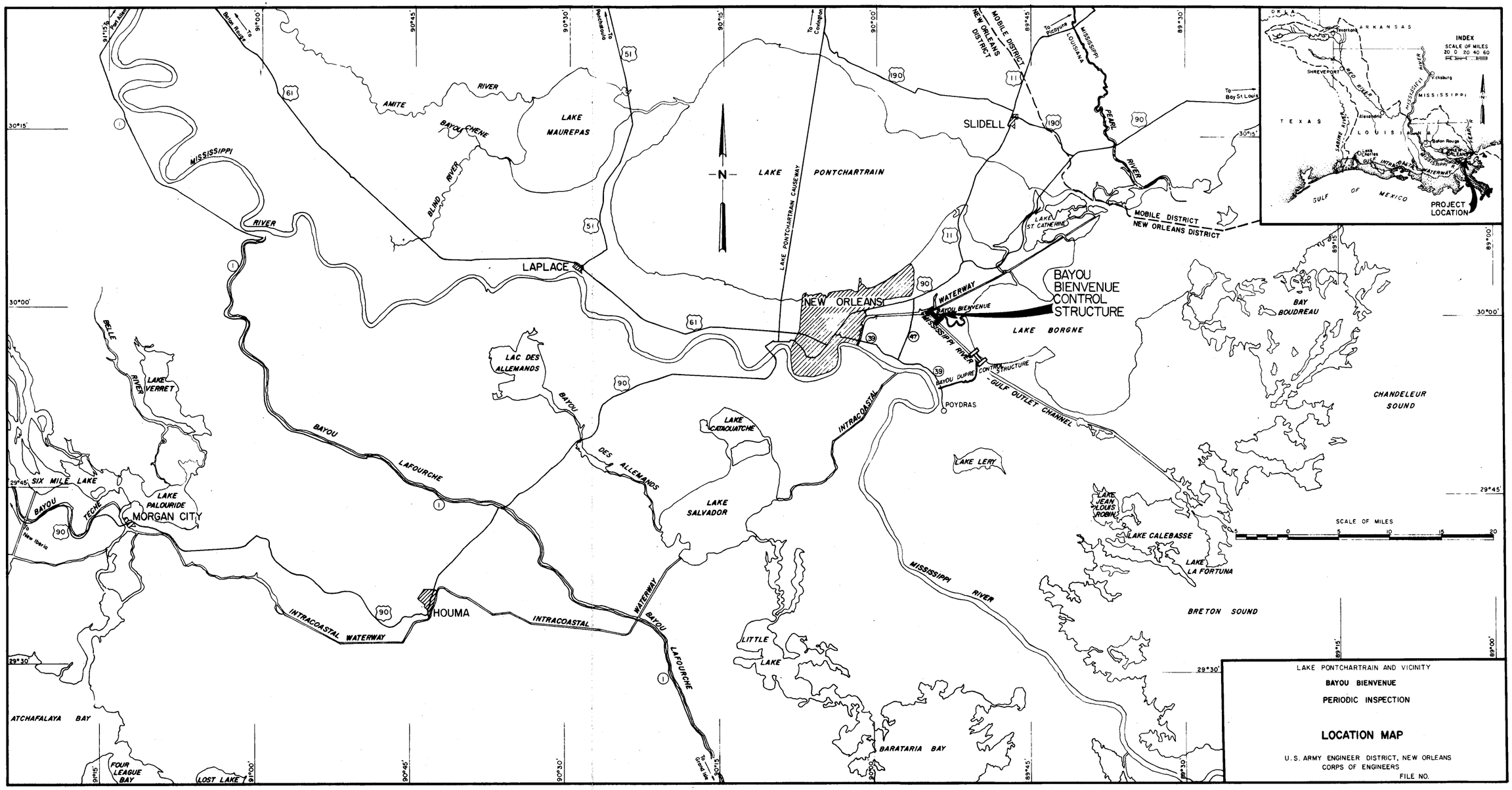
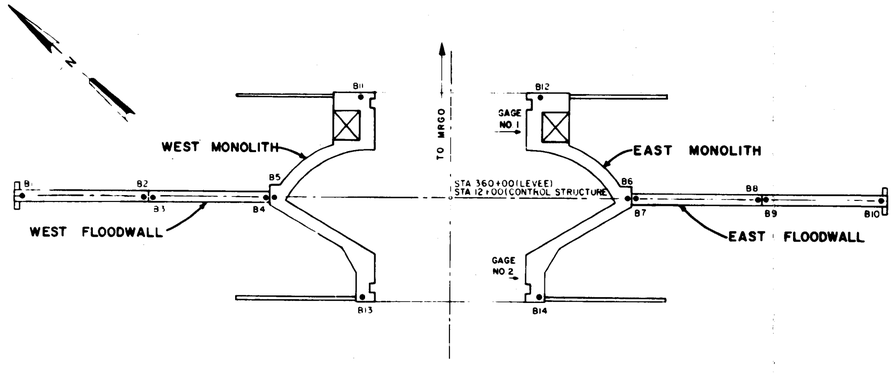

LAKE PONTCHARTRAIN AND VICINITY
BAYOU BIENVENUE
PERIODIC INSPECTION
LOCATION MAP
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
FILE NO.
INDEX
SCALE OF MILES
PROJECT LOCATION
MOBILE DISTRICT
NEW ORLEANS DISTRICT
BAYOU BIENVENUE CONTROL STRUCTURE
LAKE PONTCHARTRAIN CAUSEWAY
INTRACOASTAL WATERWAY
GULF OUTLET CHANNEL
MISSISSIPPI RIVER
NEW ORLEANS
LAPLACE
SLIDELL
HOUMA
MORGAN CITY
POYDRAS
LAKE PONTCHARTRAIN
LAKE MAUREPAS
LAKE VERRET
LAKE PALOURIDE
LAKE CATAOUATCHE
LAKE SALVADOR
LAC DES ALLEMANDS
LAKE BORGNE
BAY BOUDREAU
CHANDELEUR SOUND
BRETON SOUND
BARATARIA BAY
ATCHAFALAYA BAY
LAKE CALEBASSE
LAKE LA FORTUNA
LAKE LERY
LITTLE LAKE
FOUR LEAGUE BAY
LOST LAKE
SCALE OF MILES

PLATE 1



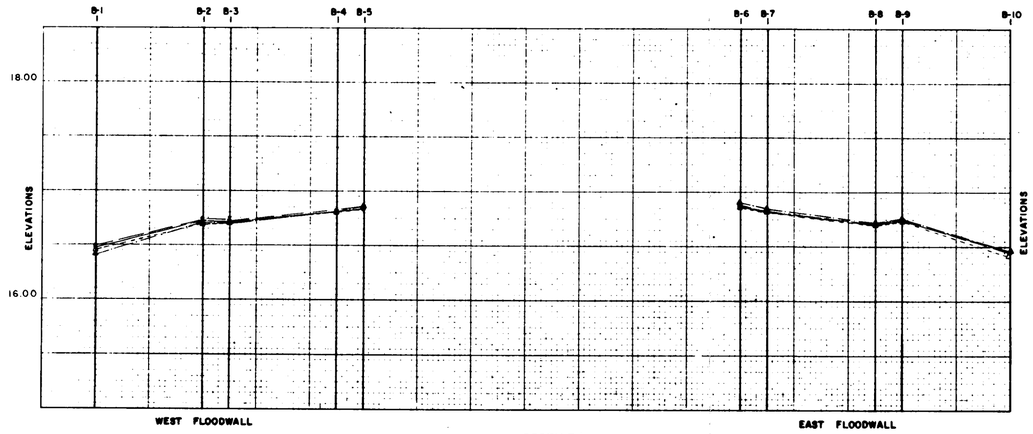
PLAN

20 0 20 40 60

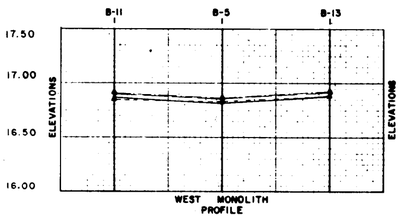
SCALE IN FEET

SETTLEMENT REFERENCE MARKS

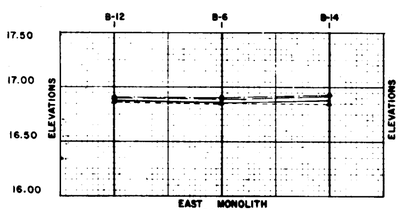
NO OF REFERENCE MARK	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	TEMP	GAGE 1	GAGE 2
INITIAL DATE	6-25-74	6-25-74	6-25-74	6-25-74	6-25-74	6-25-74	6-25-74	6-25-74	6-25-74	6-25-74	6-25-74	6-25-74	6-25-74	6-25-74			
ORIGINAL READINGS	16.85	16.88	16.87	16.87	16.89	16.86	16.84	16.80	16.81	16.75	16.87	16.86	16.91	16.98	79°	1.9	1.9
OBSERVATIONS 22 OCT 1984	16.46	16.70	16.69	16.78	16.82	16.86	16.81	16.70	16.73	16.46	16.86	16.87	16.88	16.88	80°	2.5	2.5
OBSERVATIONS 11 AUG 1986	16.48	16.72	16.71	16.81	16.86	16.88	16.82	16.71	16.74	16.45	16.89	16.90	16.92	16.91	78°	1.1	1.0
OBSERVATIONS 3 MAR 1987	16.45	16.69	16.68	16.78	16.83	16.85	16.80	16.68	16.71	16.42	16.86	16.87	16.89	16.85	60°	1.9	1.7
OBSERVATIONS 25 FEB 1988	16.42	16.71	16.70	16.82	16.86	16.90	16.85	16.72	16.76	16.46	16.90	16.92	16.93	16.93	50°	-0.3	0.1



PROFILE



WEST MONOLITH
PROFILE



EAST MONOLITH
PROFILE

LEGEND

- 22 OCT 1984
- 11 AUG 1986
- 3 MAR 1987
- 25 FEB 1988

LAKE PONTCHARTRAIN AND VICINITY
BAYOU BIENVENUE
PERIODIC INSPECTION

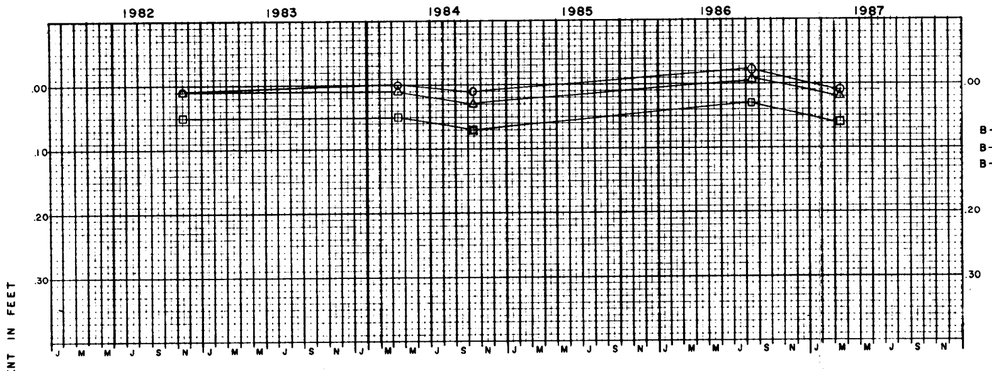
SETTLEMENT REFERENCE MARKS
PLAN AND PROFILE

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

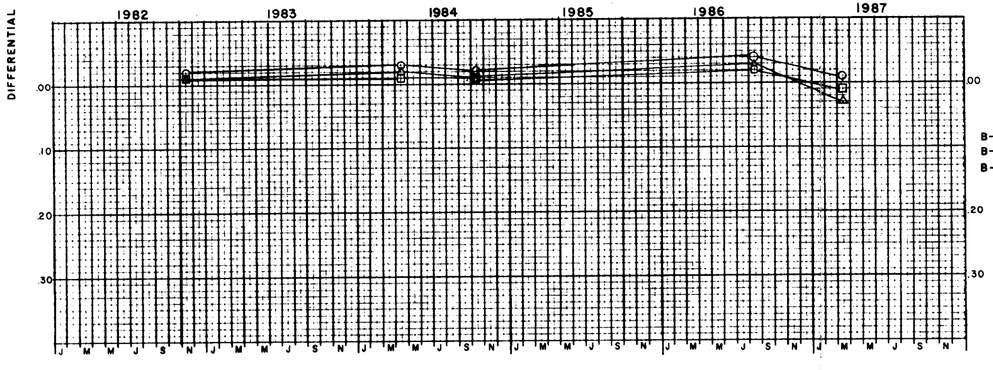
FILE NO. H-4-28887

PLATE 2

WEST MONOLITH



EAST MONOLITH



DIFFERENTIAL SETTLEMENT IN FEET

LEGEND

B-11 ——○
B-5 ——□
B-13 ——△

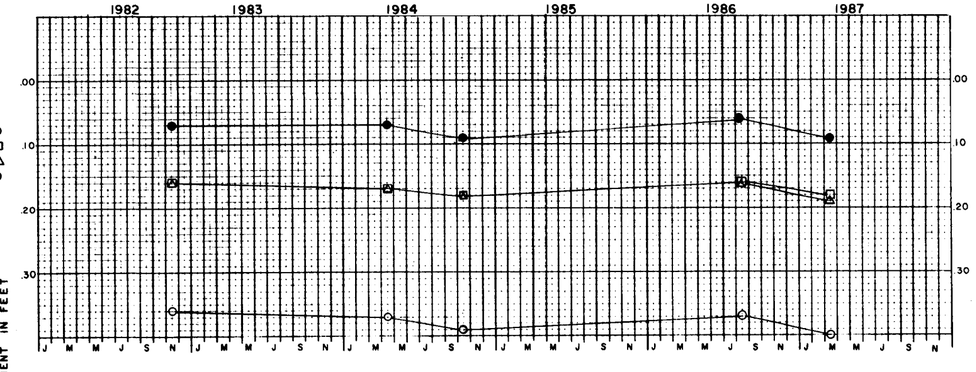
B-1 ——○
B-2 ——□
B-3 ——△
B-4 ——●

LEGEND

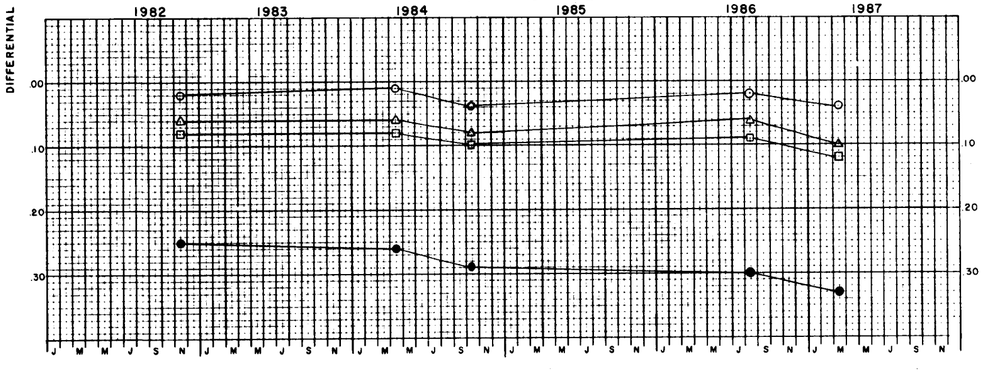
B-12 ——○
B-6 ——□
B-14 ——△

B-7 ——○
B-8 ——□
B-9 ——△
B-10 ——●

WEST FLOODWALL



EAST FLOODWALL



DIFFERENTIAL SETTLEMENT IN FEET

NO. OF REFERENCE MARKS		DISTANCES BETWEEN REFERENCE MARKS						
INITIAL DATE		B2 TO B3 4-11-74	B4 TO B5 4-11-74	B5 TO B6 4-11-74	B1 TO B11 4-11-74	B13 TO B14 4-11-74	B6 TO B7 6-11-74	B8 TO B9 4-11-74
ORIGINAL READINGS (IN.)		4.97	3.98	131.35	64.17	64.19	2.48	5.00
OBSERVATIONS	29 NOV. 1982	5.04	4.02	—	64.25	64.25	2.54	5.08
	13 APR. 1984	5.02	4.02	—	—	—	2.55	5.08
	22 OCT. 1984	5.02	4.02	—	—	—	2.54	5.08
	10 AUG. 1986	5.02	4.02	—	—	—	3.58 ①	5.08
	3 MAR. 1987	5.02	4.03	—	—	—	2.55	5.08

NOTE:
For location and tabulation of settlement reference marks see plate

①Appears to be a survey error.

LAKE PONTCHARTRAIN AND VICINITY
BAYOU BIENVENUE
PERIODIC INSPECTION

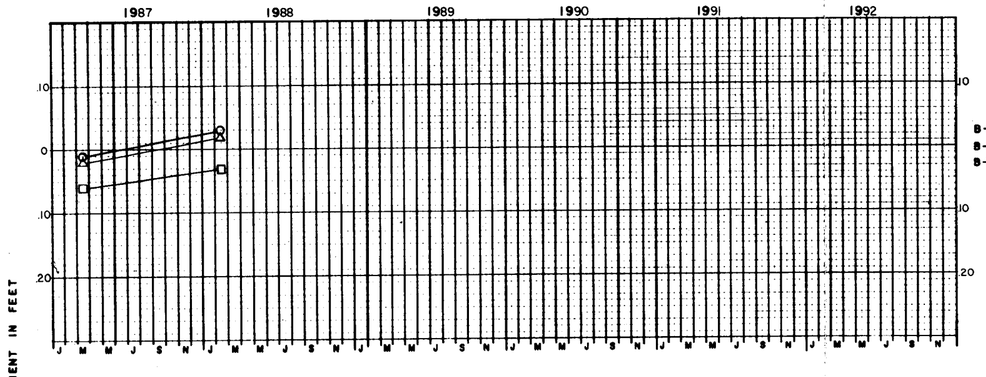
SETTLEMENT REFERENCE MARKS DIFFERENTIAL SETTLEMENT CHART

U S ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS

FILE NO. H-4-26857

PLATE 3

WEST MONOLITH

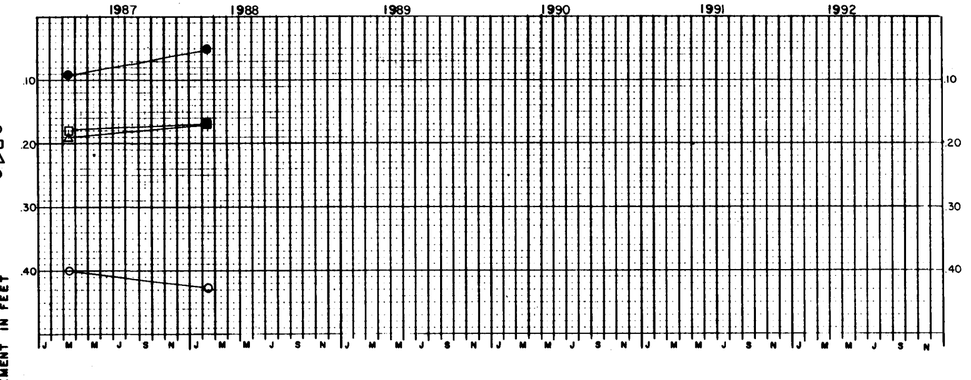


LEGEND

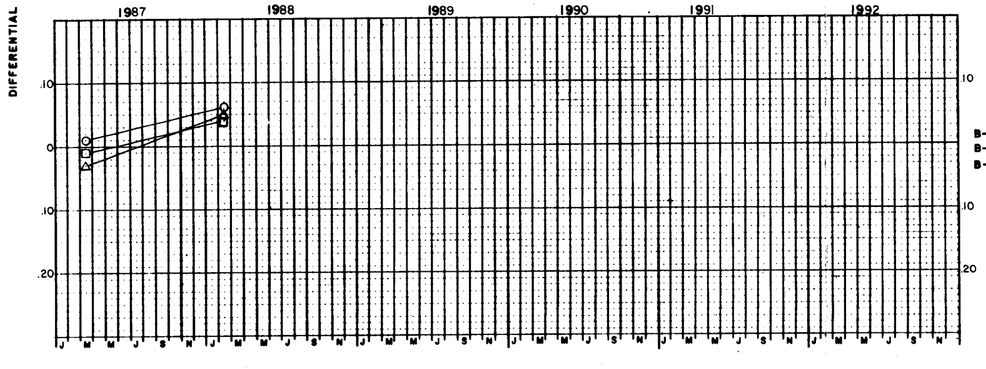
B-11 ——○
B-5 ——□
B-13 ——△

B-1 ——○
B-2 ——□
B-3 ——△
B-4 ——●

WEST FLOODWALL



EAST MONOLITH

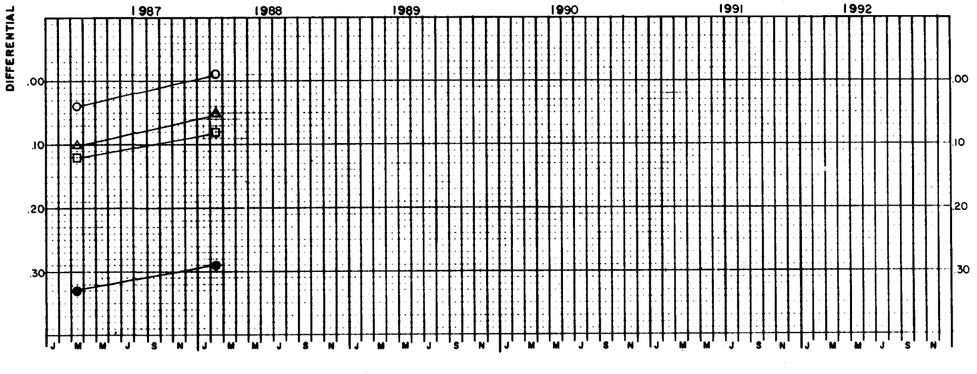


LEGEND

B-12 ——○
B-6 ——□
B-14 ——△

B-7 ——○
B-8 ——□
B-9 ——△
B-10 ——●

EAST FLOODWALL



DISTANCES BETWEEN REFERENCE MARKS								
NO. OF REFERENCE MARKS	B2 TO B3	B4 TO B5	B5 TO B6	B11 TO B12	B13 TO B14	B6 TO B7	B8 TO B9	
INITIAL DATE	4-11-74	4-11-74	4-11-74	4-11-74	4-11-74	4-11-74	4-11-74	
ORIGINAL READINGS (IN.)	4.97	3.98	131.35	64.17	64.19	2.48	5.00	
OBSERVATIONS	3 MAR 1987	5.02	4.03	—	—	—	2.55	5.08
	25 FEB 1988	5.04	4.03	—	—	—	2.56	5.08

NOTE:
For location and tabulation of settlement reference marks see plate

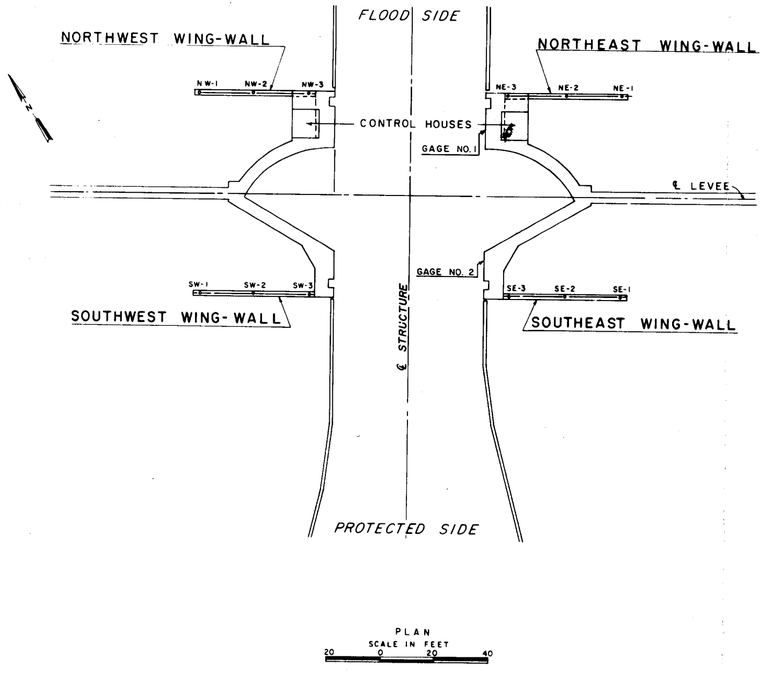
LAKE PONTCHARTRAIN AND VICINITY
BAYOU BIENVENUE
PERIODIC INSPECTION

SETTLEMENT REFERENCE MARKS DIFFERENTIAL SETTLEMENT CHART

U S ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS

FILE NO. H-4-26857

PLATE 4



PLAN
SCALE IN FEET
20 0 20 40

NO. OF REFERENCE MARK	SETTLEMENT REFERENCE MARKS																
INITIAL DATE	NW-1 3-29-78	NW-2 3-29-78	NW-3 3-29-78	NE-1 3-29-78	NE-2 3-29-78	NE-3 3-29-78	SW-1 3-29-78	SW-2 3-29-78	SW-3 3-29-78	SE-1 3-29-78	SE-2 3-29-78	SE-3 3-29-78	TEMP.	GAGE 1	GAGE 2	B.M.	ELEV.
ORIGINAL READINGS	5.02	5.17	5.32	4.83	5.00	5.23	5.02	5.12	5.26	4.86	4.99	5.32	61°	0.4	0.3	BB 2	6.279
29 FEB 1980	4.87	5.04	5.18	4.68	4.86	5.11	4.89	5.02	5.16	4.71	4.85	5.21	58°	-0.3	0.1	BB 2	6.279
11 NOV 1980	4.86	5.02	5.22	4.67	4.84	5.13	4.86	4.98	5.13	4.70	4.85	5.19	69°	1.5	1.4	BB 2	6.278
31 MAY 1982	4.81	4.99	5.16	4.62	4.80	5.07	4.81	4.94	5.09	4.66	4.80	5.17	85°	1.8	1.9	BB 2	6.281
29 NOV 1982	4.85	5.02	5.17	4.65	4.84	5.13	4.84	4.98	5.14	4.68	4.83	5.21	66°	1.1	1.6	BB 3	6.210
13 APRIL 1984	4.84	5.02	5.21	4.65	4.84	5.12	4.84	4.98	5.15	4.68	4.83	5.22	67°	——	1.0	BB 3	6.210
22 OCT 1984	4.84	5.03	5.21	4.64	4.83	5.11	4.84	4.97	5.15	4.68	4.83	5.21	80°	2.5	2.5	BB 3	6.210
11 AUG 1986	4.81	5.03	5.20	4.62	4.83	5.07	4.82	4.97	5.15	4.65	4.75	5.19	78°	1.1	1.0	BB 3	6.210
3 MAR 1987	4.81	5.00	5.20	4.59	4.79	5.08	4.80	4.94	5.12	4.62	4.78	5.18	60°	1.9	1.7	BB 3	6.210
25 FEB. 1988	4.82	5.00	5.21	4.64	4.85	5.14	4.80	4.95	5.15	4.64	4.82	5.22	30°	-0.3	0.10	BB 3	6.210

DATE OF OBSERVATIONS

LAKE PONTCHARTRAIN AND VICINITY
BAYOU BIENVENUE
PERIODIC INSPECTION

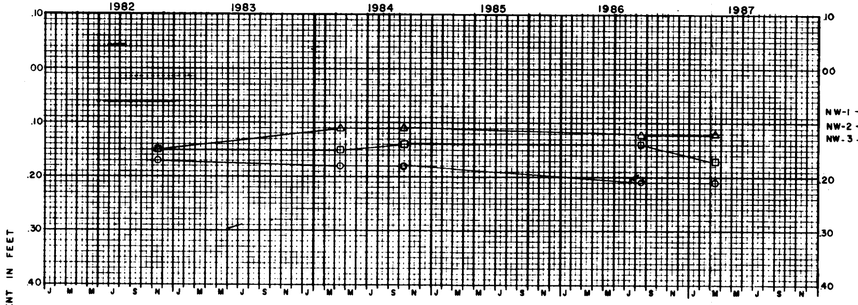
WING-WALL
SETTLEMENT REFERENCE MARKS
PLAN AND TABULATION

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

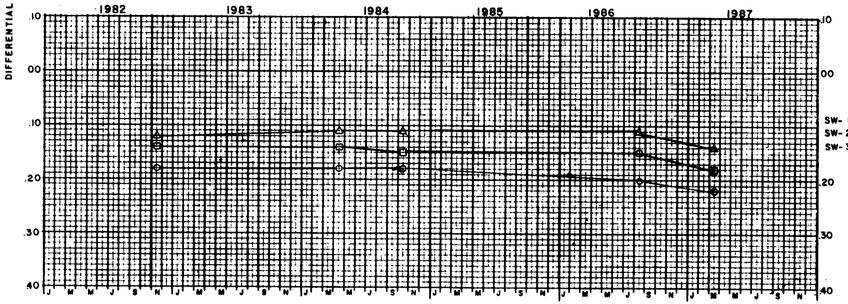
FILE NO. H-4-26857

PLATE 5

NORTHWEST WING-WALL



SOUTHWEST WING-WALL



LEGEND

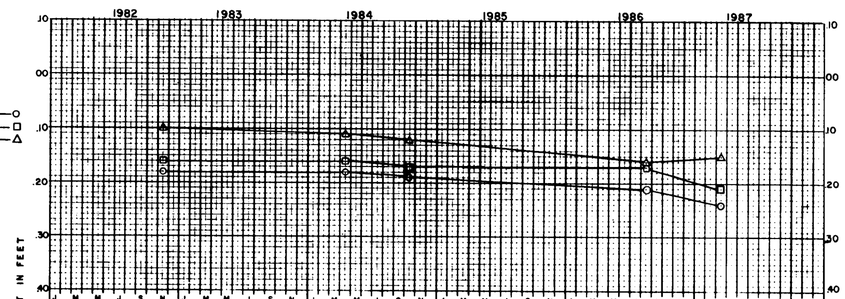
NW-1 ——○
NW-2 ——□
NW-3 ——△

NE-1 ——○
NE-2 ——□
NE-3 ——△

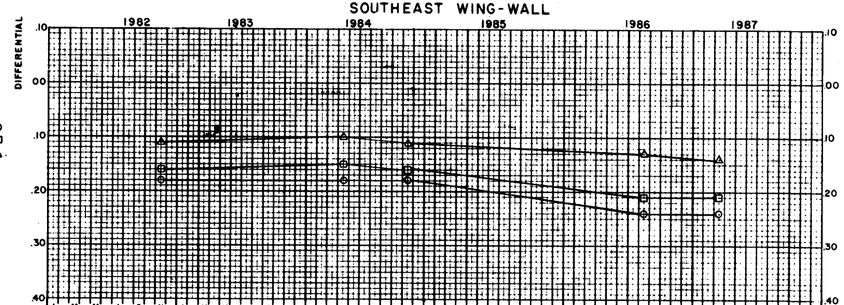
SW-1 ——○
SW-2 ——□
SW-3 ——△

SE-1 ——○
SE-2 ——□
SE-3 ——△

NORTHEAST WING-WALL



SOUTHEAST WING-WALL



NOTE:
For location and tabulation of settlement reference marks see plate

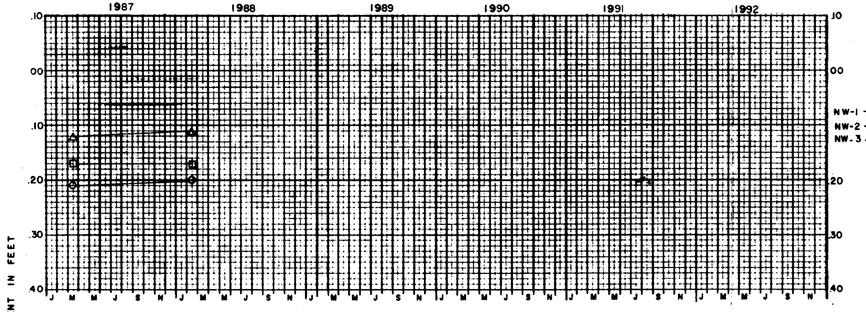
LAKE PONTCHARTRAIN AND VICINITY
BAYOU BIENVENUE
PERIODIC INSPECTION
WING-WALL
SETTLEMENT REFERENCE MARKS
DIFFERENTIAL SETTLEMENT CHART

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

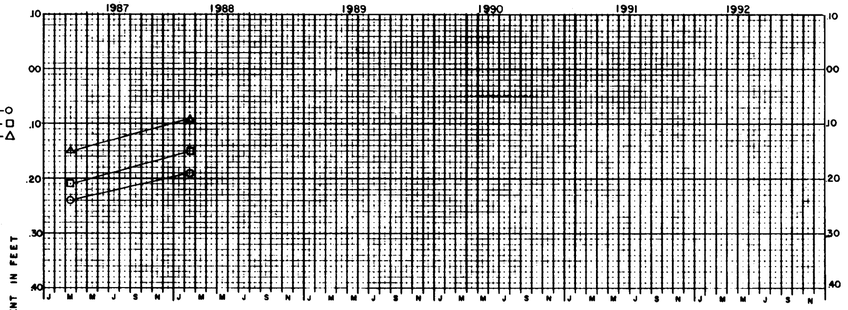
FILE NO. H-4-28857

PLATE 6

NORTHWEST WING-WALL



NORTHEAST WING-WALL



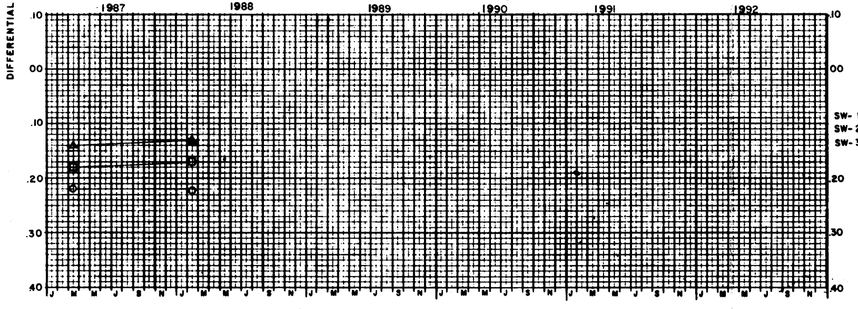
DIFFERENTIAL SETTLEMENT IN FEET

LEGEND

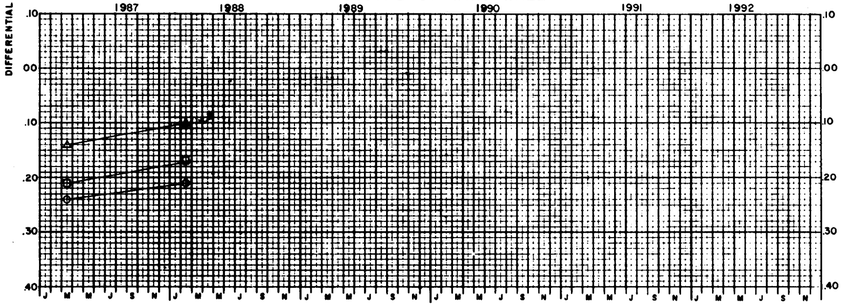
NW-1 ——○
NW-2 ——□
NW-3 ——△

NE-1 ——○
NE-2 ——□
NE-3 ——△

SOUTHWEST WING-WALL



SOUTHEAST WING-WALL



DIFFERENTIAL SETTLEMENT IN FEET

LEGEND

SW-1 ——○
SW-2 ——□
SW-3 ——△

SE-1 ——○
SE-2 ——□
SE-3 ——△

NOTE:
For location and tabulation of settlement reference marks see plate

LAKE PONTCHARTRAIN AND VICINITY
BAYOU BIENVENUE
PERIODIC INSPECTION
WING-WALL
SETTLEMENT REFERENCE MARKS
DIFFERENTIAL SETTLEMENT CHART

U S ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS

FILE NO. H-4-26857

PLATE 7

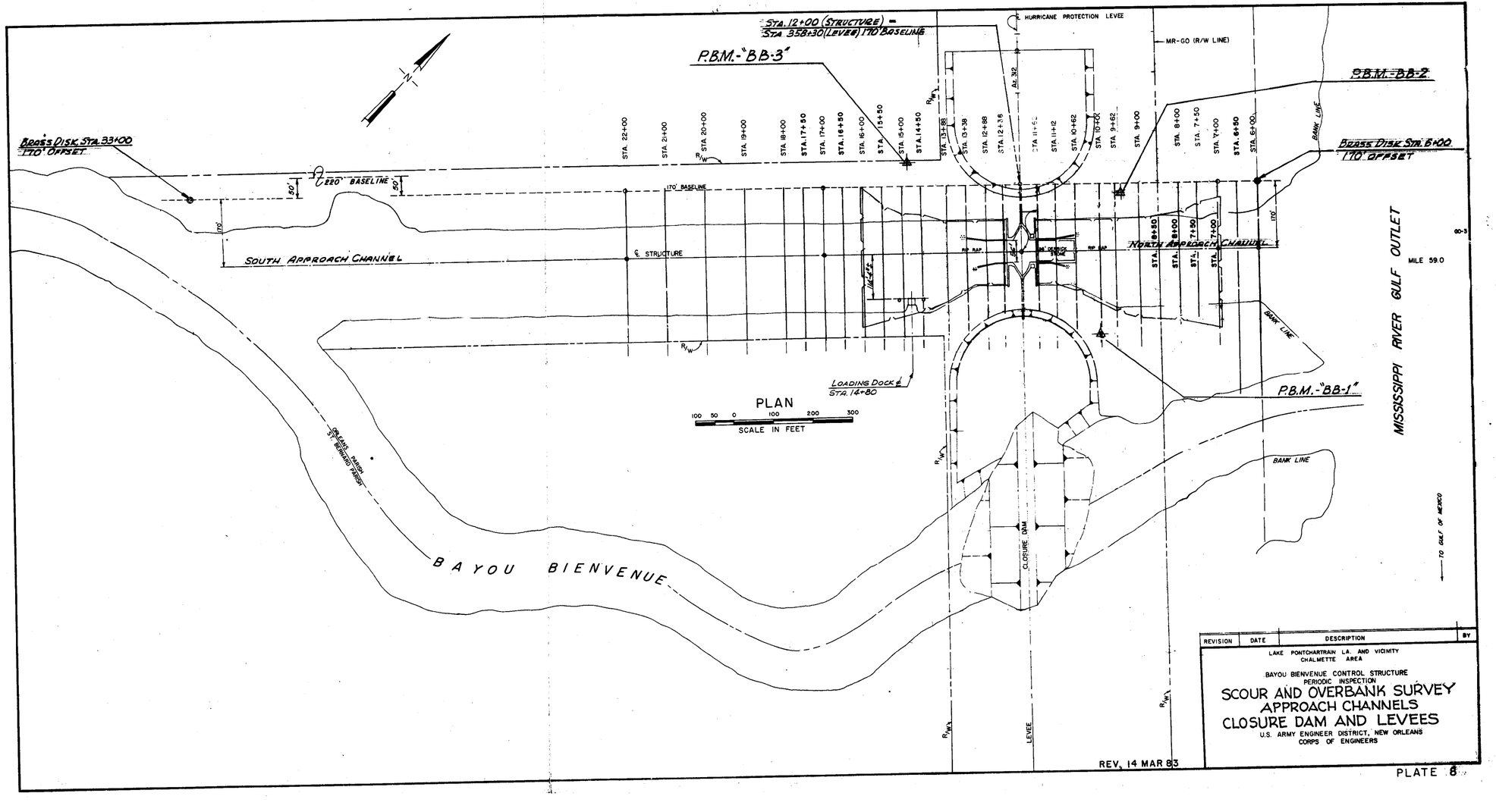
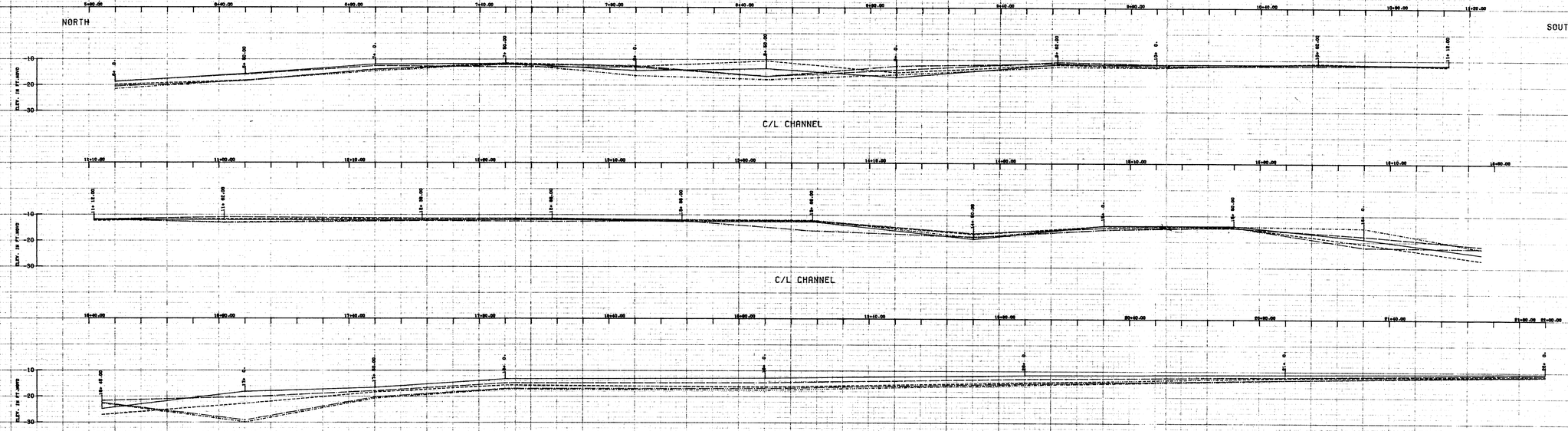

STA. 12+00 (STRUCTURE) =
STA 358+30 (LEVEE) 170' BASELINE
HURRICANE PROTECTION LEVEE
MR-GO (R/W LINE)
P.B.M.-"BB-3"
P.B.M.-BB-2
BRASS DISK STA. 33+00
170' OFFSET
BRASS DISK STA. 8+00
170' OFFSET
260' BASELINE
170' BASELINE
℄ STRUCTURE
SOUTH APPROACH CHANNEL
NORTH APPROACH CHANNEL
RIP RAP
38' DEPTH
BANK LINE
LOADING DOCK
STA. 14+80
P.B.M.-"BB-1"
PLAN
SCALE IN FEET
ORLEANS PARISH
ST. BERNARD PARISH
BAYOU BIENVENUE
CLOSURE DAM
LEVEE
MISSISSIPPI RIVER GULF OUTLET
MILE 59.0
TO GULF OF MEXICO
REVISION
DATE
DESCRIPTION
BY
LAKE PONTCHARTRAIN LA. AND VICINITY
CHALMETTE AREA
BAYOU BIENVENUE CONTROL STRUCTURE
PERIODIC INSPECTION
SCOUR AND OVERBANK SURVEY
APPROACH CHANNELS
CLOSURE DAM AND LEVEES
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
REV. 14 MAR 83

PLATE 8



LAKE PONTCHARTRAIN LA. AND VICINITY

BAYOU BIENVENUE CONTROL STRUCTURE

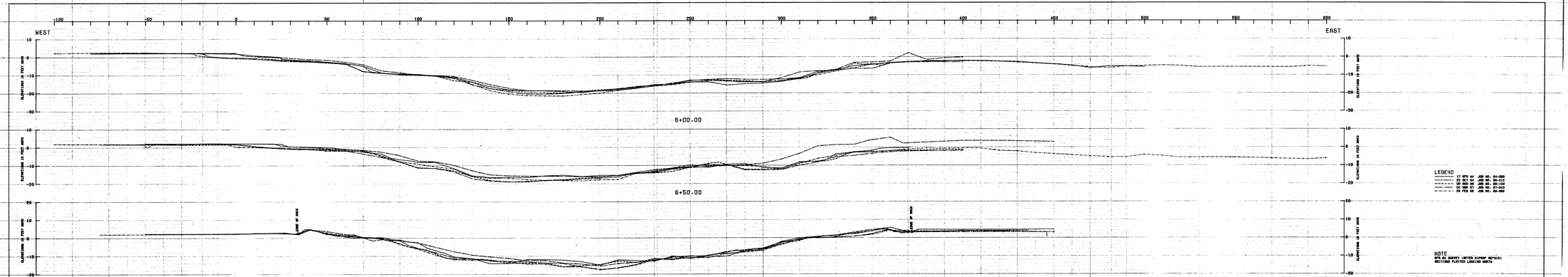
PERIODIC INSPECTION

COMPARATIVE PROFILE (FY 88)

U.S. ARMY ENGINEERS NEW ORLEANS CORPS OF ENGINEERS

FEBRUARY 1988

PLATE 9



NOTE
APR 84 SURVEY (AFTER SUMP REPAIR)
SECTIONS PLOTTED LOOKING NORTH

STATION
6+00.00
6+50.00
7+00.00

LAKE PONCHARTRAIN LA. AND VICINITY

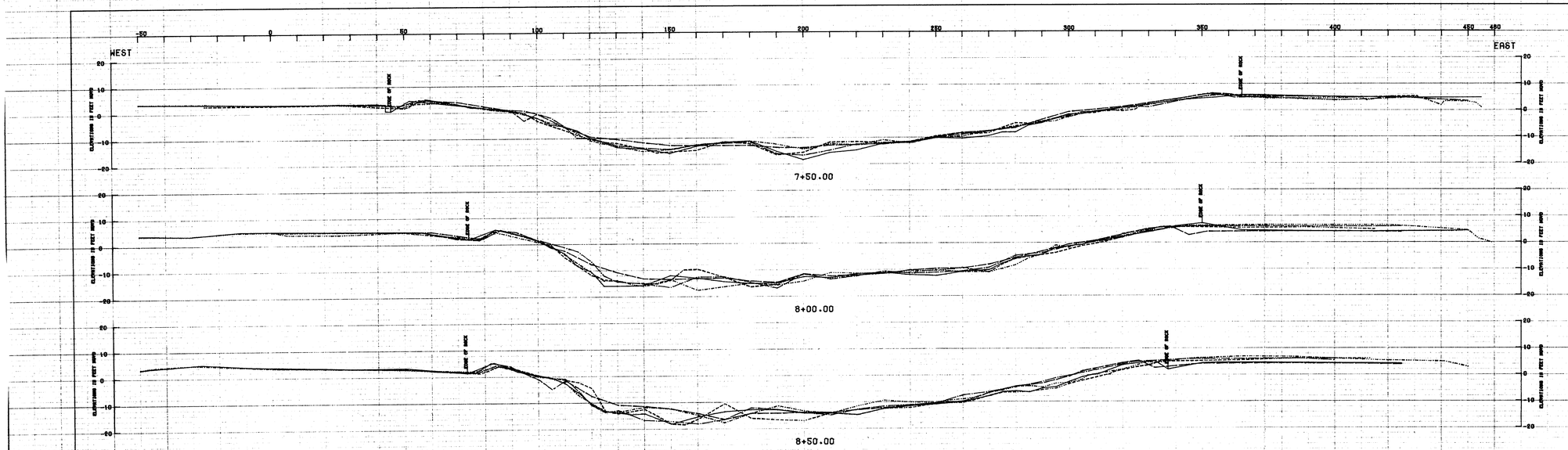
BAYOU BIENVENUE CONTROL STRUCTURE

PERIODIC INSPECTION

COMPARATIVE SECTIONS (FY 88)

U.S. ARMY ENGINEER DIV NEW ORLEANS CORPS OF ENGINEERS

FEBRUARY 1988



LEGEND

17 APR 84 JOB NO. 84-088
22 OCT 84 JOB NO. 86-012
08 NOV 88 JOB NO. 88-102
04 MAR 87 JOB NO. 87-043
25 FEB 86 JOB NO. 86-088

NOTE
APR 84 SURVEY (AFTER RIPRAP REPAIR)
SECTIONS PLOTTED LOOKING NORTH

STATION
7+50.00
8+00.00
8+50.00

LAKE PONCHARTRAIN LA. AND VICINITY
BAYOU BIEBYENUE CONTROL STRUCTURE
PERIODIC INSPECTION
COMPARRATIVE SECTIONS (FY 88)
U.S. ARMY ENGINEERS NEW ORLEANS CORPS OF ENGINEERS
FEBRUARY 1988

PLATE 11

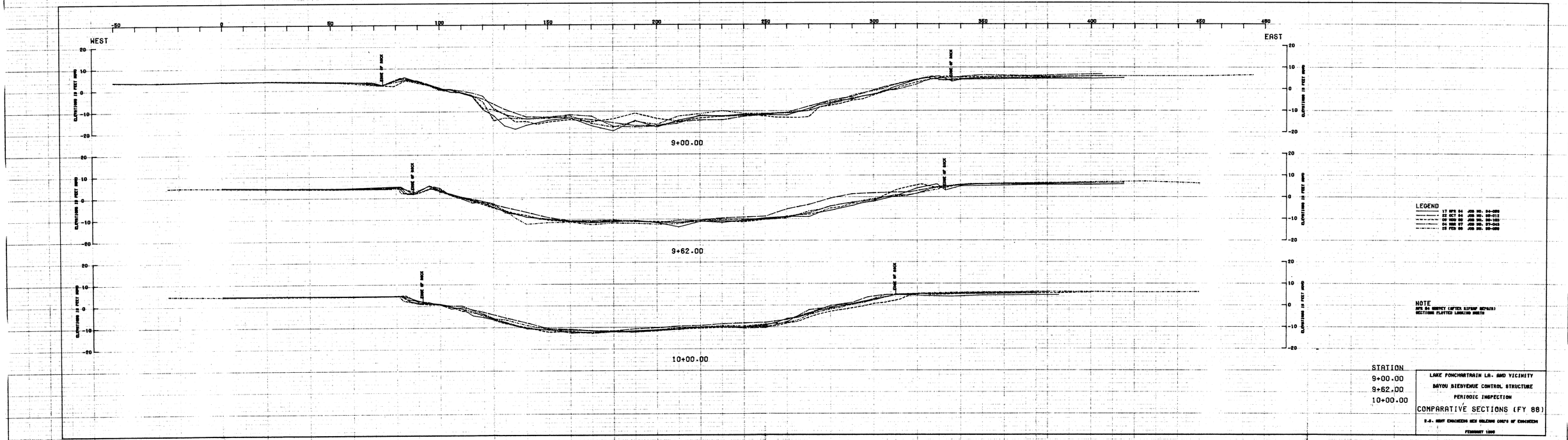

WEST
EAST
-50
0
50
100
150
200
250
300
350
400
450
500
20
10
0
-10
-20
ELEVATIONS IN FEET NGVD
ZONE OF ROCK
9+00.00
9+62.00
10+00.00
LEGEND
17 APR 84 JOB NO. 84-088
22 OCT 84 JOB NO. 85-011
09 MAR 88 JOB NO. 88-183
24 MAR 97 JOB NO. 97-043
25 FEB 98 JOB NO. 98-088
NOTE
APR 84 SURVEY (AFTER RIPRAP REPAIR)
SECTIONS PLOTTED LOOKING SOUTH
STATION
9+00.00
9+62.00
10+00.00
LAKE PONCHARTRAIN LA. AND VICINITY
BAYOU BIENVENUE CONTROL STRUCTURE
PERIODIC INSPECTION
COMPARATIVE SECTIONS (FY 88)
U.S. ARMY ENGINEER DIV NEW ORLEANS CORPS OF ENGINEERS
FEBRUARY 1998

PLATE 12

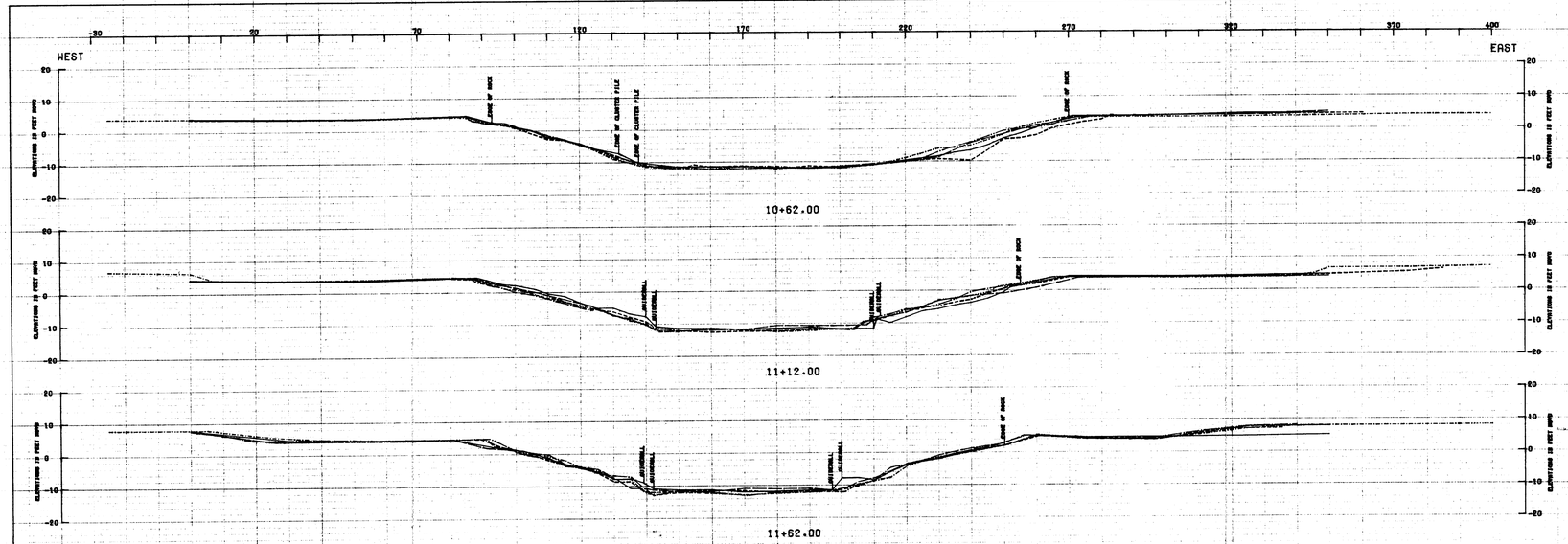

WEST
EAST
-30
20
70
120
170
220
270
320
370
400
ELEVATIONS IN FEET NGVD
20
10
0
-10
-20
ZONE OF ROCK
ZONE OF CLUSTER PILE
10+62.00
11+12.00
11+62.00
LEGEND
17 NOV 94 JOB NO. 94-069
22 OCT 94 JOB NO. 94-012
30 NOV 90 JOB NO. 90-102
04 FEB 87 JOB NO. 87-043
15 FEB 88 JOB NO. 88-006
NOTE
NOV 94 SURVEY (AFTER RIPRAP REPAIR)
SECTIONS PLOTTED LOOKING NORTH
STATION
10+62.00
11+12.00
11+62.00
LAKE PONCHARTRAIN LA. AND VICINITY
BAYOU BIENVENUE CONTROL STRUCTURE
PERIODIC INSPECTION
COMPARATIVE SECTIONS (FY 88)
U.S. ARMY ENGINEER DIS TRICT, NEW ORLEANS CORPS OF ENGINEERS
FEBRUARY 1995

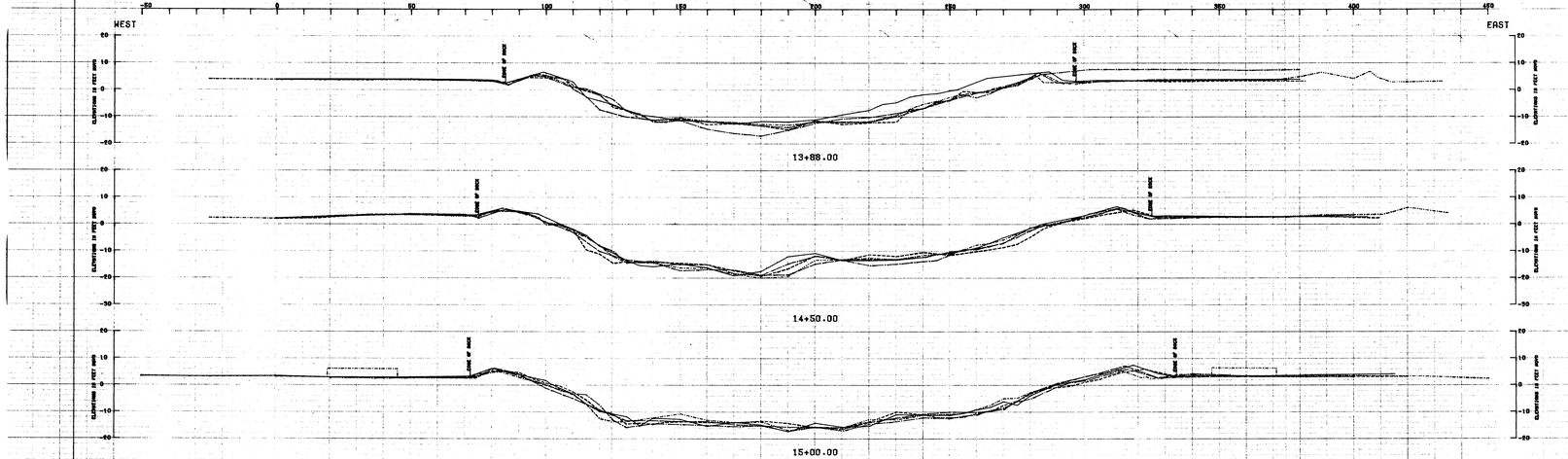
PLATE 13

LEGEND
17 APR 84 JOB NO. 84-059
22 OCT 84 JOB NO. 85-012
06 AUG 86 JOB NO. 86-105
04 MAR 87 JOB NO. 87-043
25 FEB 88 JOB NO. 88-058

NOTE
APR 84 SURVEY (AFTER RIPRAP REPAIR)
SECTIONS PLOTTED LOOKING NORTH

STATION
12+38.00
12+88.00
13+38.00

LAKE PONCHARTRAIN LA. AND VICINITY
BAYOU BIEBVENUE CONTROL STRUCTURE
PERIODIC INSPECTION
COMPARATIVE SECTIONS (FY 88)
U.S. ARMY ENGINEERS NEW ORLEANS CORPS OF ENGINEERS
FEBRUARY 1988



LEGEND

NOTE

STATION
13+88.00
14+50.00
15+00.00

LAKE PONCHARTRAIN LA. AND VICINITY
BAYOU BIENVENUE CONTROL STRUCTURE
PERIODIC INSPECTION
COMPARATIVE SECTIONS (FY 88)

PLATE 15

LEGEND
17 APR 84 JOB NO. 84-059
22 OCT 84 JOB NO. 85-012
06 AUG 86 JOB NO. 86-103
04 MAR 87 JOB NO. 87-043
26 FEB 88 JOB NO. 88-058

NOTE
APR 84 SURVEY (AFTER RIPRAP REPAIR)
SECTIONS PLOTTED LOOKING NORTH

STATION
15+50.00
16+00.00
16+50.00

LAKE PONCHARTRAIN LA. AND VICINITY
BAYOU BIENVENUE CONTROL STRUCTURE
PERIODIC INSPECTION
COMPARATIVE SECTIONS (FY 88)
U.S. ARMY ENGINEERS NEW ORLEANS CORPS OF ENGINEERS
FEBRUARY 1988

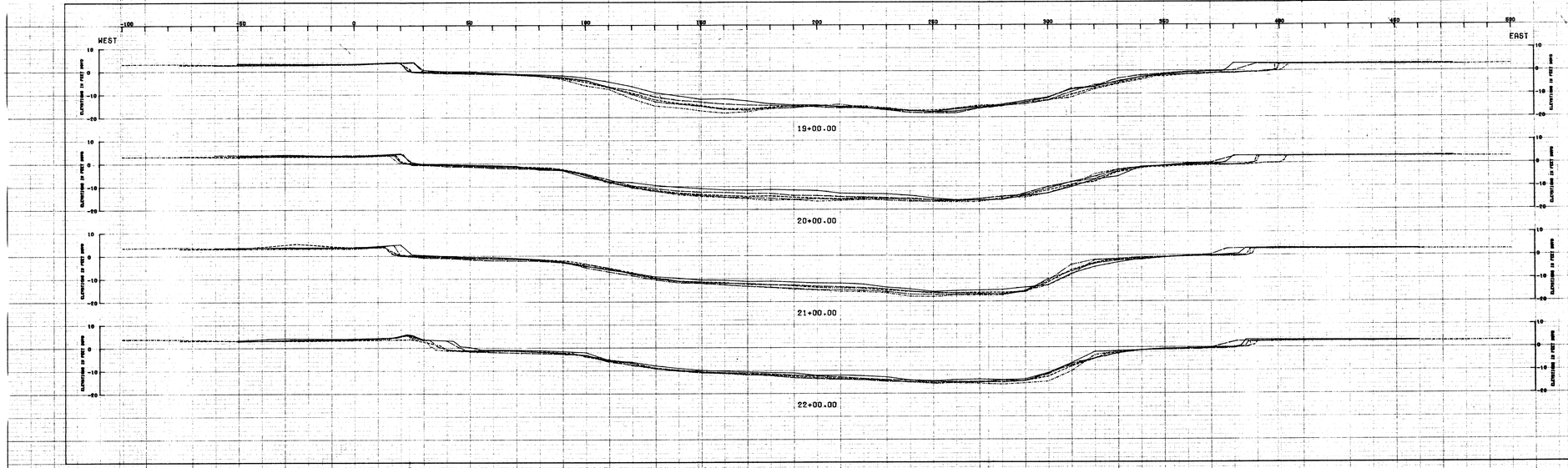
LEGEND

17 APR 84 JOB NO. 84-059
22 OCT 84 JOB NO. 85-012
06 AUG 86 JOB NO. 86-103
04 MAR 87 JOB NO. 87-043
25 FEB 88 JOB NO. 88-058

NOTE
APR 84 SURVEY (AFTER RIPRAP REPAIR)
SECTIONS PLOTTED LOOKING NORTH

STATION
17+00.00
17+50.00
18+00.00

LAKE PONCHARTRAIN LA. AND VICINITY
BAYOU BIEBVENUE CONTROL STRUCTURE
PERIODIC INSPECTION
COMPARATIVE SECTIONS (FY 88)
U.S. ARMY ENGINEERS NEW ORLEANS CORPS OF ENGINEERS
FEBRUARY 1988

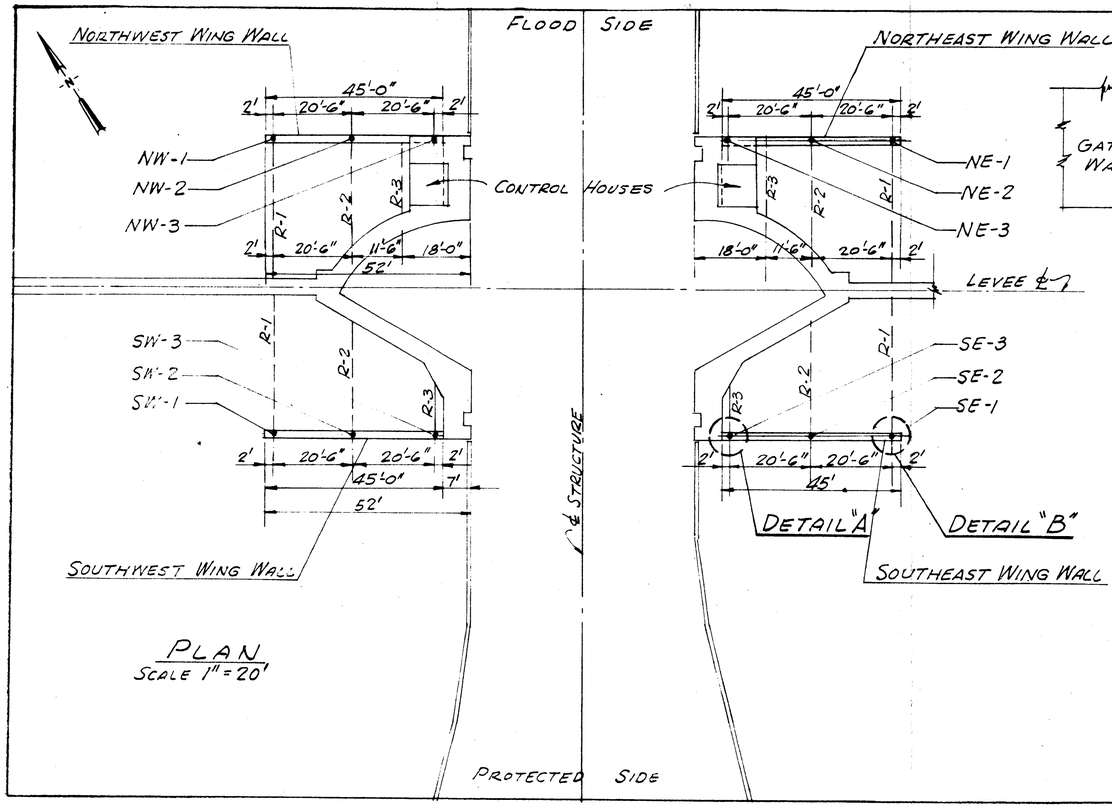


NOTE
SEE AS BUILT (AFTER RIPRAP REPAIR) SECTIONS PLOTTED LOOKING NORTH

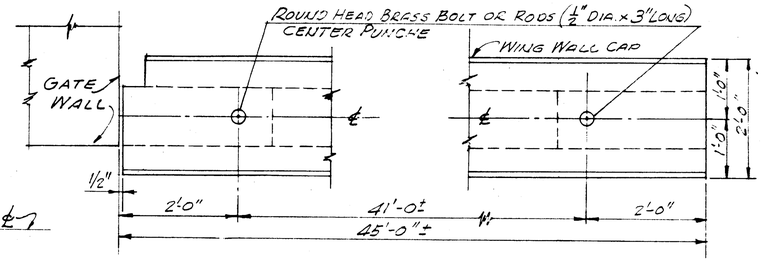
STATION
19+00.00
20+00.00
21+00.00
22+00.00

LAKE PONCHARTRAIN LA. AND VICINITY
BAYOU BIENVENUE CONTROL STRUCTURE
PERIODIC INSPECTION
COMPARATIVE SECTIONS (FY 68)
U.S. ARMY ENGINEER DIST. NEW ORLEANS CORPS OF ENGINEERS
FEBRUARY 1968

PLATE 18



PLAN
SCALE 1" = 20'



DETAIL "A" DETAIL "B"

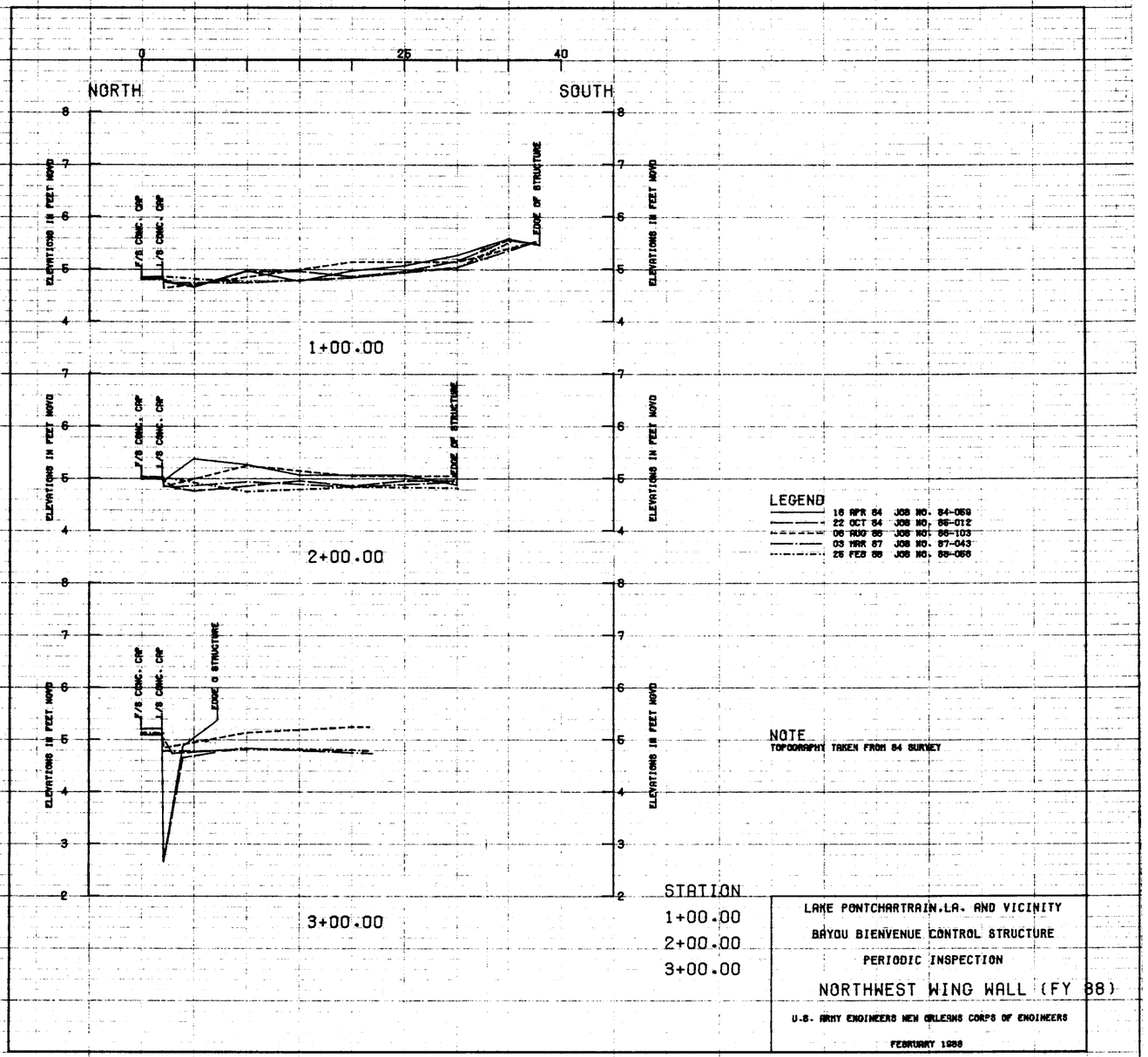
SCALE 3/16" = 1'0"

BAYOU BIENVENUE CONTROL STRUCTURE

PROPOSED LOCATIONS SETTLEMENT REFERENCE MARKS AND OVER BANK RANGES

DEC. 1977 H.W.H.

PLATE 10


0
25
40
NORTH
SOUTH
ELEVATIONS IN FEET NGVD
F/B CONC. CAP
L/B CONC. CAP
EDGE OF STRUCTURE
1+00.00
2+00.00
3+00.00
LEGEND
16 APR 84 JOB NO. 84-059
22 OCT 84 JOB NO. 86-012
06 AUG 86 JOB NO. 86-103
03 MAR 87 JOB NO. 87-043
25 FEB 88 JOB NO. 88-066
NOTE
TOPOGRAPHY TAKEN FROM 84 SURVEY
STATION
1+00.00
2+00.00
3+00.00
LAKE PONTCHARTRAIN,LA. AND VICINITY
BAYOU BIENVENUE CONTROL STRUCTURE
PERIODIC INSPECTION
NORTHWEST WING WALL (FY 88)
U.S. ARMY ENGINEERS NEW ORLEANS CORPS OF ENGINEERS
FEBRUARY 1988

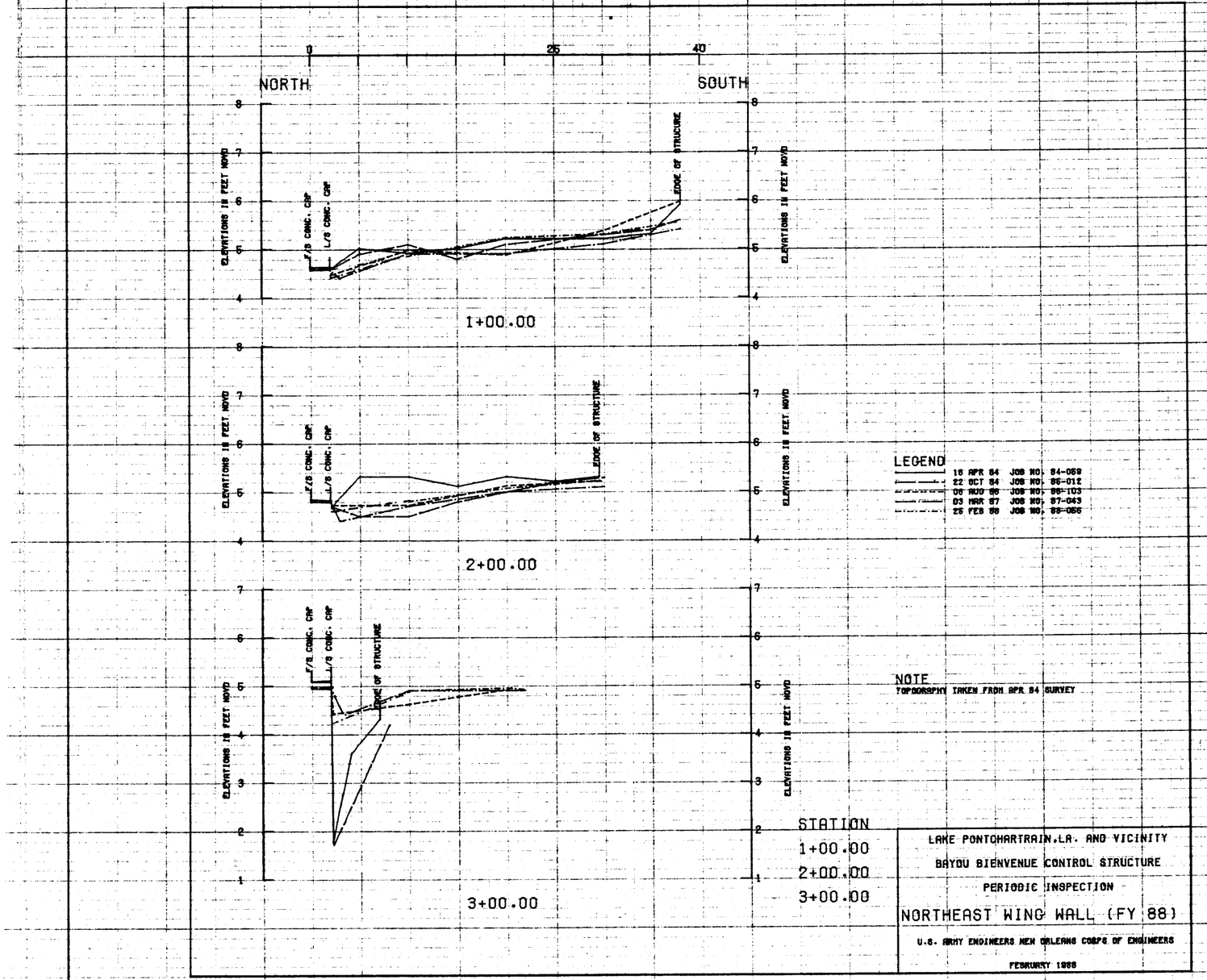
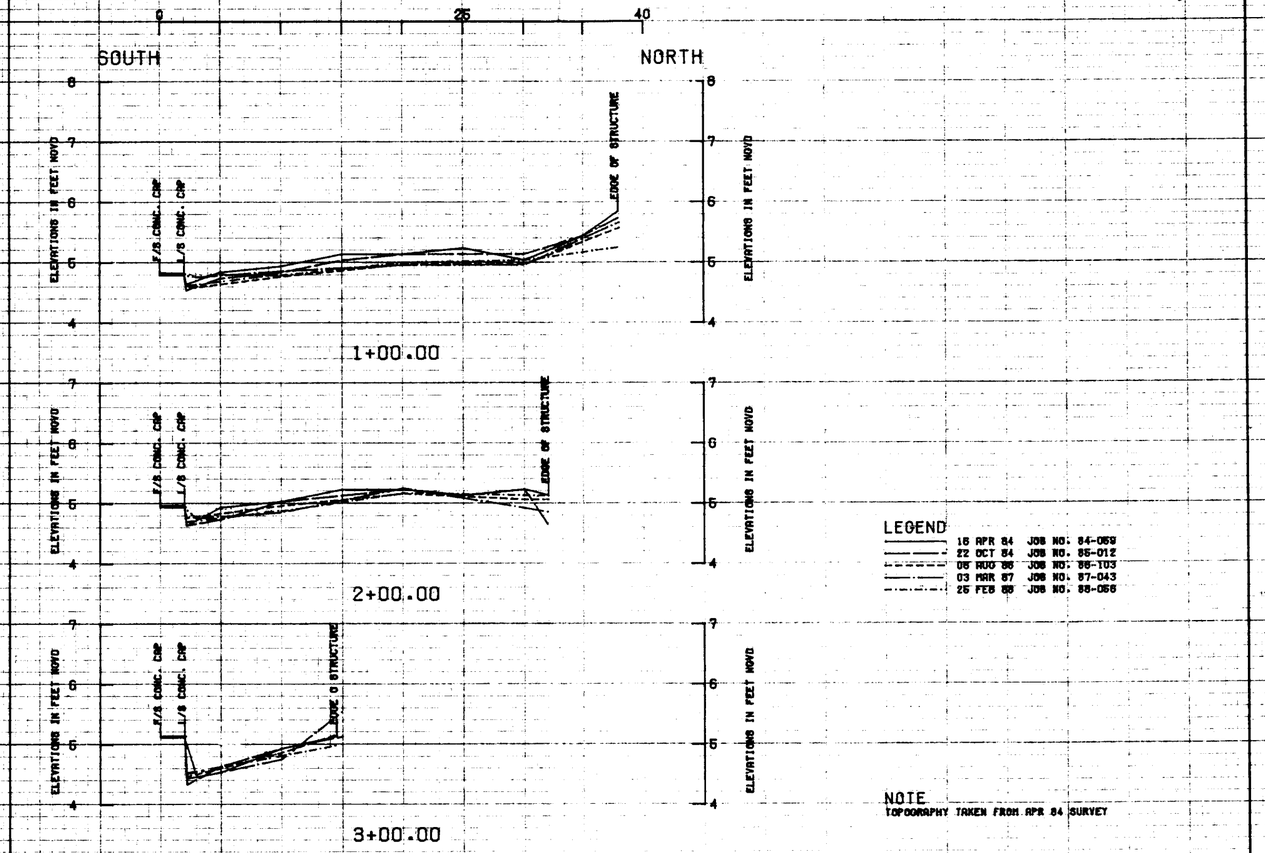

0
25
40
NORTH
SOUTH
ELEVATIONS IN FEET NGVD
F/S CONC. CAP
L/S CONC. CAP
EDGE OF STRUCTURE
1+00.00
2+00.00
3+00.00
LEGEND
16 APR 84 JOB NO. 84-059
22 OCT 84 JOB NO. 85-012
06 NOV 86 JOB NO. 86-103
03 MAR 87 JOB NO. 87-043
25 FEB 88 JOB NO. 88-056
NOTE
TOPOGRAPHY TAKEN FROM APR 84 SURVEY
STATION
1+00.00
2+00.00
3+00.00
LAKE PONTCHARTRAIN,LA. AND VICINITY
BAYOU BIENVENUE CONTROL STRUCTURE
PERIODIC INSPECTION
NORTHEAST WING WALL (FY 88)
U.S. ARMY ENGINEERS NEW ORLEANS CORPS OF ENGINEERS
FEBRUARY 1988

PLATE 21



STATION
1+00.00
2+00.00
3+00.00

LAKE PONTCHARTRAIN,LA. AND VICINITY

BAYOU BIENVENUE CONTROL STRUCTURE

PERIODIC INSPECTION

SOUTHWEST WING WALL (FY 88)

U.S. ARMY ENGINEERS NEW ORLEANS CORPS OF ENGINEERS

FEBRUARY 1988

PLATE 22

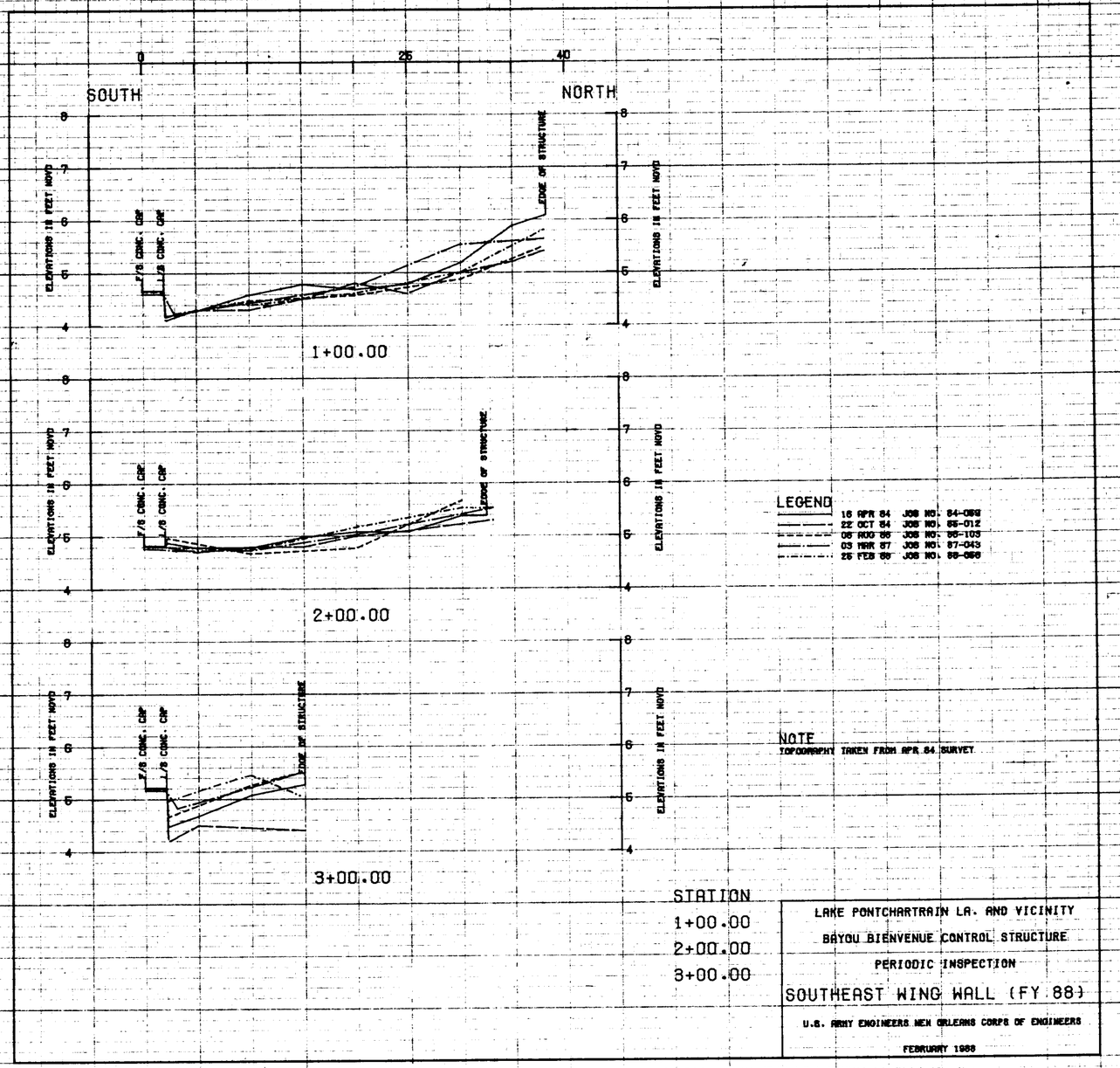

0
25
40
SOUTH
NORTH
ELEVATIONS IN FEET NGVD
F/S CONC. CAP
F/S CONC. CAP
EDGE OF STRUCTURE
1+00.00
2+00.00
3+00.00
LEGEND
16 APR 84 JOB NO. 84-064
22 OCT 84 JOB NO. 86-012
06 NOV 86 JOB NO. 86-103
03 MAR 87 JOB NO. 87-043
25 FEB 88 JOB NO. 88-060
NOTE
TOPOGRAPHY TAKEN FROM APR 84 SURVEY
STATION
1+00.00
2+00.00
3+00.00
LAKE PONTCHARTRAIN LA. AND VICINITY
BAYOU BIENVENUE CONTROL STRUCTURE
PERIODIC INSPECTION
SOUTHEAST WING WALL (FY 88)
U.S. ARMY ENGINEERS NEW ORLEANS CORPS OF ENGINEERS
FEBRUARY 1988

PLATE 23

SECTION V - INSPECTION

5-01 Inspection Team. The inspection of the Bayou Bienvenue Control Structure was conducted on 29 March 1988 by the following personnel:

NOD

Johnny Drummond	Gen Engr Sec
Charles Laborde	Struc Des Sec
Gerard Jesclard	Gen Engr Sec (Elec)
Dennis Strecker	Gen Engr Sec (Mech)
Troy Constance	H&H Br
Roberto Estrada	F&M Br (Struc)
Charles Rome	F&M Br (Materials)
Jerry Colletti	O&R Div
Colette Duffour	O&R Div

Orleans Levee Board

Tony Bertucci

Guy Dutsch

Frank Vicidomina

5-02 Orientation. Prior to the inspection, team members were given a brief orientation of the following features of the structure: Structural Considerations, Hydraulics and Hydrology, Foundations and Materials, and Operating Machinery.

5-03 Observations. The inspection was limited to those portions of the structure visible above the water surface. Staff gage readings were 1.5 feet NGVD on the protected side and 1.2 feet NGVD on the MRGO side. The structure was found to be in good condition.

a. The riprap along the banks of the north and south approach channels behind the guidewalls is deficient. See Photo No. 1.

b. A navigation light on the northeast timber guide was broken.

c. The ladder attached to the west sector gate was corroded at the tidal zone.

d. Rust spots were found at the tidal zone on the structural steel members of the east sector gate.

e. The steel plates attached to the needle girder recesses were corroded.

f. All staff gages on the structure need to be cleaned and repaired.

g. The differential settlement between reference marks B8 & B9 has not increased since the last inspection. This was a point of previous concern.

h. The gates and electrical equipment were in good operating condition.

Photo 1-Deficient Riprap(Typical for the banks along the north and south approach channels)

SECTION VI-CONCLUSIONS AND REMEDIAL ACTIONS

6-01 Conclusions. It is concluded that the Bayou Bienvenue Control Structure is safe, structurally stable and in satisfactory operating condition.

6-02 Remedial Actions. The following work will be accomplished by local interest, the Orleans Levee Board, during periodic maintenance repairs to the structure.

a. Plans and specifications are being prepared to install riprap along the banks of the north and south approach channels behind the guidewalls. This work is estimated for completion in the 4th Quarter of FY 89.

b. Navigation lights are repaired or replaced shortly after problems are noted. Due to the isolated location of the structure, broken lights resulting from gun shots are a continuous problem.

c. Rust and corrosion on steel members, ladders and steel plates will be repaired periodically when tidal conditions permit.

d. Staff gages will be cleaned, repaired or replaced periodically.

6-03 Next Inspection. The next inspection of the Bayou Bienvenue Control Structure is scheduled for March 1991.