

社会開発調査部報告書

No. 4

REPUBLIC OF THE PHILIPPINES

THE STUDY
ON
FLOOD CONTROL AND DRAINAGE PROJECT
IN METRO MANILA

VOLUME 4
DATA BOOK (2)

MARCH 1990

JAPAN INTERNATIONAL COOPERATION AGENCY

SSS

90-34(4/4)

REPUBLIC OF THE PHILIPPINES

THE STUDY

ON

FLOOD CONTROL AND DRAINAGE PROJECT

IN METRO MANILA

VOLUME 4

DATA BOOK (2)

JICA LIBRARY



1083472[9]

2 1336

MARCH 1990

JAPAN INTERNATIONAL COOPERATION AGENCY



DATA BOOK (2)

TOPOGRAPHIC SURVEY RESULTS

A. MASTER PLAN STUDY STAGE

A-1 LOCATION MAP (1 SHEET)

— BENCH MARK NETWORK —



LAGUNA DE BAY

LEGEND:

Geographic grid ticks

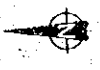
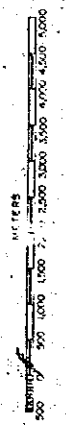
Neighborhood road



- LEGEND:**
- GEODESIC GRID TYP.
 - UTM GRID TYP.
 - MUNICIPAL CITY BOUNDARY
 - MAJOR ARTERIAL ROAD
 - MINOR ARTERIAL ROAD
 - DEVELOPMENT ROAD
 - NEIGHBORHOOD ROAD
 - RAILROAD
 - ELEVATED RAILROAD/LRT
 - MAJOR WATERCOURSE
 - MINOR WATERCOURSE
 - SHORELINE

NOTES:

HORIZONTAL DATUM: UTM 50N 114
 VERTICAL DATUM: MEAN SEA LEVEL
 CONTROL METHOD: 1974 ZONE 51
 PROJECTIONS: UTM
 MAPS PRODUCED BY MAPS FROM 1:50,000 STEREOPLOTTED AERIAL PHOTO MAP MANUSCRIPTS BASED ON 1982 PHOTOS (1:50,000) WITH UPDATES BASED ON 1988 AERIAL PHOTOS (1:25,000)
 CITY/MUNICIPAL BOUNDARIES ARE BASED ON AVAILABLE BUREAU OF LANDS DATA AND OTHER OFFICIAL SOURCES.
 USER'S NOTING ERRORS IN BOUNDARY DELINEATIONS ARE ADVISED TO CONTACT MAPS OFFICE.



**THE STUDY ON FLOOD CONTROL AND DRAINAGE PROJECT
 IN METRO MANILA**

JAPAN-INTERNATIONAL COOPERATION AGENCY

LOCATION MAP

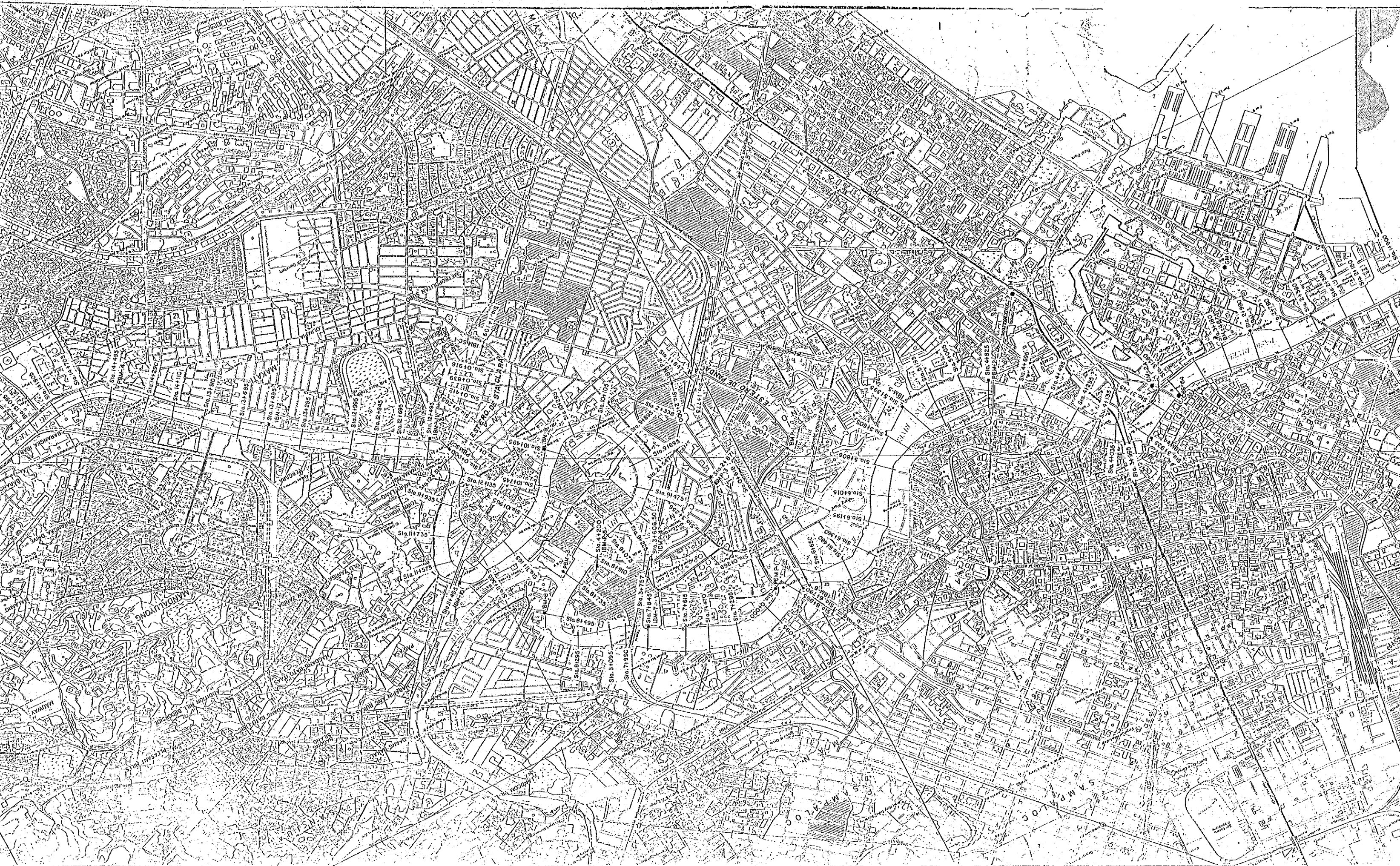
SCALE 1:50,000

SHEET NO. 1

A-2 PASIG RIVER

INDEX MAP	(1 SHEET)
LONGITUDINAL PROFILE	(3 SHEET)
CROSS SECTION	(13 SHEET)





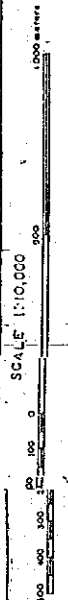


NOTE:
 A. Datum Line (D.L.) 10.00 m. below MLLW.
 B. MLLW = 0.462 m. below M.S.L.
 C. Bench Marks used.

B.M.	D.L. ELEV.	B.M.	D.L. ELEV.
1. PBM-1	14.398	16. PBM-4	14.894
2. IBM-1	13.403	17. IBM-13	13.400
3. IBM-2	11.715	18. IBM-14	14.892
4. IBM-3	12.209	19. IBM-15	14.890
5. IBM-4	11.830	20. PBM-5	15.435
6. PBM-2	11.941	21. BM GM-1A	14.028
7. IBM-5	13.825	22. BM 4B	13.247
8. IBM-6	12.188	23. BM COS-54	12.188
9. IBM-7	12.430	24. BM R-2	14.738
10. IBM-8	12.430	25. GM R-1	44.983
11. IBM-9	13.133	26. GM R-2	27.530
12. IBM-10	13.736	27. GM U-9	21.745
13. IBM-11	13.133	28. BM GM-2A	13.133
14. IBM-12	13.133		

D. Bench Marks Descriptions:
 BM GM-1A : Old BCAGS BM in Port area, Metro Manila, at the concrete base of the Ronda Fountain at the intersection of Bonifacio Drive & Adorno St. mark is a 5/8" brass rod embedded in the base & protruding 4 m. from the surface & S corner of the occupational plot.
 BM GM-2A : Old BCAGS BM in Ermita, Manila at the concrete base of Philippine National College flag pole, mark is 5/8" dia. brass rod protruding about 3 m. above its surface.
 BM COS-54 : Old BCAGS BM in Intramuros, Metro Manila, at the SE end of Jones Bridge about 0.15 m. NW edge of the S E parapet of the bridge mark is a 5/8" dia. brass rod protruding about 3 m. from its surface.
 BM GM R-1 : Old BCAGS BM in Marikina, Metro Manila, at the NW end of a concrete foundation of the overpass about 3.3 m. NE of corner of concrete foundation of the overpass about 3.3 m. NE of corner of EDSA @ S Super Highway marks on the top of 1/2" dia. brass rod with inscriptions on cement putty around the mark that BCAGS GM U-8 1977.
 BM GM U-9 : Old BCAGS BM in Marikina, Metro Manila, at the SE end of the floorline mark on the top of 1/2" dia. brass rod with inscriptions on cement putty around the mark that BCAGS GM U-8 1977.
 BM -4 B : Old BCAGS BM in Intramuros, Metro Manila, at the piece marking of the 4th Century B.C. on the concrete base of the Malacañan power plant almost opposite of the backdoor, mark is 5/8" dia. brass rod embedded on the cor. base of masonry power out let.

ESTERO DE PANDACAN		ESTERO DE STA. CLARA	
B. M.	D.L. ELEV.	B. M.	D.L. ELEV.
1. PBM-P1	11.356	1. PBM SC-1	11.959
2. IBM-P1	12.007	2. IBM SC-1	11.907
3. IBM-P2	11.984		
4. IBM-P3	11.950		
5. IBM-P4	12.220		
6. IBM-P5			



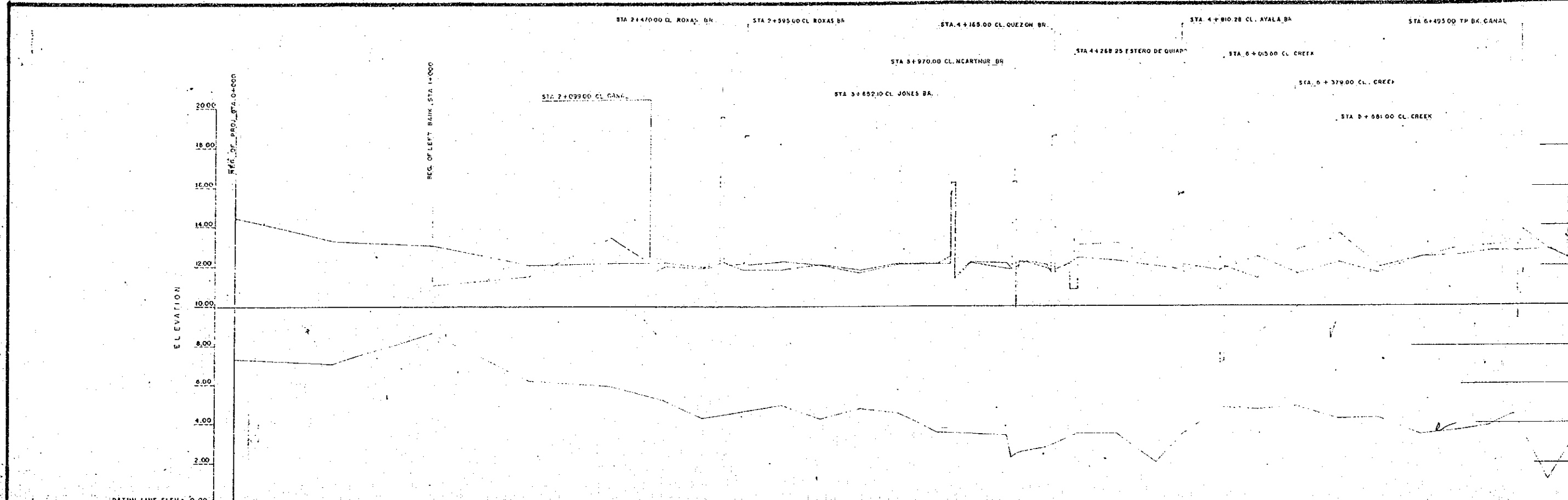
ACRE SURVEYING & DEVELOPMENT

CONSULTANT'S SIGNATURE
 DATE: 11-18-83
 SURVEYED BY: [Signature]
 CHECKED BY: [Signature]
 PROJECT MANAGER: [Signature]

**INDEX MAP
 ESTERO DE PANDACAN
 ESTERO DE STA. CLARA
 PASIG RIVER**

DEPARTMENT OF PUBLIC WORKS & HIGHWAYS
 PROJECT ENGINEER: [Signature]
 PROJECT ENGINEER: [Signature]
 DATE: [Signature]
 SIGNATURE: [Signature]
 SHEET NO. 1/1

PASIG RIVER



STATION NO.	EXISTING ELEVATION			PROPOSED ELEVATION		
	RIVER BED	LEFT LEVEL	RIGHT LEVEL	RIVER BED	HIGH WATER LEVEL	RAIL LEVEL
0+000	7.50	8.50	14.00	7.50	8.50	14.00
0+100	7.80	8.80	13.50	7.80	8.80	13.50
0+200	8.20	9.20	13.00	8.20	9.20	13.00
0+300	8.50	9.50	12.50	8.50	9.50	12.50
0+400	8.80	9.80	12.00	8.80	9.80	12.00
0+500	9.10	10.10	11.50	9.10	10.10	11.50
0+600	9.40	10.40	11.00	9.40	10.40	11.00
0+700	9.70	10.70	10.50	9.70	10.70	10.50
0+800	10.00	11.00	10.00	10.00	11.00	10.00
0+900	10.30	11.30	9.50	10.30	11.30	9.50
1+000	10.60	11.60	9.00	10.60	11.60	9.00
1+100	10.90	11.90	8.50	10.90	11.90	8.50
1+200	11.20	12.20	8.00	11.20	12.20	8.00
1+300	11.50	12.50	7.50	11.50	12.50	7.50
1+400	11.80	12.80	7.00	11.80	12.80	7.00
1+500	12.10	13.10	6.50	12.10	13.10	6.50
1+600	12.40	13.40	6.00	12.40	13.40	6.00
1+700	12.70	13.70	5.50	12.70	13.70	5.50
1+800	13.00	14.00	5.00	13.00	14.00	5.00
1+900	13.30	14.30	4.50	13.30	14.30	4.50
2+000	13.60	14.60	4.00	13.60	14.60	4.00
2+100	13.90	14.90	3.50	13.90	14.90	3.50
2+200	14.20	15.20	3.00	14.20	15.20	3.00
2+300	14.50	15.50	2.50	14.50	15.50	2.50
2+400	14.80	15.80	2.00	14.80	15.80	2.00
2+500	15.10	16.10	1.50	15.10	16.10	1.50
2+600	15.40	16.40	1.00	15.40	16.40	1.00
2+700	15.70	16.70	0.50	15.70	16.70	0.50
2+800	16.00	17.00	0.00	16.00	17.00	0.00
2+900	16.30	17.30	-0.50	16.30	17.30	-0.50
3+000	16.60	17.60	-1.00	16.60	17.60	-1.00
3+100	16.90	17.90	-1.50	16.90	17.90	-1.50
3+200	17.20	18.20	-2.00	17.20	18.20	-2.00
3+300	17.50	18.50	-2.50	17.50	18.50	-2.50
3+400	17.80	18.80	-3.00	17.80	18.80	-3.00
3+500	18.10	19.10	-3.50	18.10	19.10	-3.50
3+600	18.40	19.40	-4.00	18.40	19.40	-4.00
3+700	18.70	19.70	-4.50	18.70	19.70	-4.50
3+800	19.00	20.00	-5.00	19.00	20.00	-5.00
3+900	19.30	20.30	-5.50	19.30	20.30	-5.50
4+000	19.60	20.60	-6.00	19.60	20.60	-6.00
4+100	19.90	20.90	-6.50	19.90	20.90	-6.50
4+200	20.20	21.20	-7.00	20.20	21.20	-7.00
4+300	20.50	21.50	-7.50	20.50	21.50	-7.50
4+400	20.80	21.80	-8.00	20.80	21.80	-8.00
4+500	21.10	22.10	-8.50	21.10	22.10	-8.50
4+600	21.40	22.40	-9.00	21.40	22.40	-9.00
4+700	21.70	22.70	-9.50	21.70	22.70	-9.50
4+800	22.00	23.00	-10.00	22.00	23.00	-10.00
4+900	22.30	23.30	-10.50	22.30	23.30	-10.50
5+000	22.60	23.60	-11.00	22.60	23.60	-11.00
5+100	22.90	23.90	-11.50	22.90	23.90	-11.50
5+200	23.20	24.20	-12.00	23.20	24.20	-12.00
5+300	23.50	24.50	-12.50	23.50	24.50	-12.50
5+400	23.80	24.80	-13.00	23.80	24.80	-13.00
5+500	24.10	25.10	-13.50	24.10	25.10	-13.50
5+600	24.40	25.40	-14.00	24.40	25.40	-14.00
5+700	24.70	25.70	-14.50	24.70	25.70	-14.50
5+800	25.00	26.00	-15.00	25.00	26.00	-15.00
5+900	25.30	26.30	-15.50	25.30	26.30	-15.50
6+000	25.60	26.60	-16.00	25.60	26.60	-16.00
6+100	25.90	26.90	-16.50	25.90	26.90	-16.50
6+200	26.20	27.20	-17.00	26.20	27.20	-17.00
6+300	26.50	27.50	-17.50	26.50	27.50	-17.50
6+400	26.80	27.80	-18.00	26.80	27.80	-18.00
6+495	27.10	28.10	-18.50	27.10	28.10	-18.50

<p>ACRE SURVEYING & DEVELOPMENT</p>	CONSULTANTS		REPUBLIC OF THE PHILIPPINES	
	SURVEYED BY: <i>W. J. ...</i>	DATE: <i>12-18-88</i>	SIGNATURE: <i>[Signature]</i>	PROJECT ENGINEER: <i>[Signature]</i>
	CHECKED BY: <i>[Signature]</i>	DATE: <i>12-18-88</i>	SIGNATURE: <i>[Signature]</i>	PROJECT MANAGER: <i>[Signature]</i>
<p>DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>		<p>PROJECT ENGINEER: <i>[Signature]</i></p> <p>PROJECT MANAGER: <i>[Signature]</i></p>		

REC. OF LEFT BANK, STA 1+000

STA 2+470.00 CL. ROXAS BK

STA 2+595.00 CL. ROXAS BK

STA 4+165.00 CL. QUEZON BR.

STA 4+810.28 CL. AYALA BR.

STA 6+495.00 TP BK. CANAL

STA 8+747.31 CL. NAQTANAN BR.

STA 8+930.00 CL. CANAL

STA 7+059.00 CL. PNR BR.

STA 2+099.00 CL. CANAL

STA 3+652.10 CL. JONES BR.

STA 3+970.00 CL. MCARTHUR BR.

STA 4+268.25 ESTERO DE QUIAPO

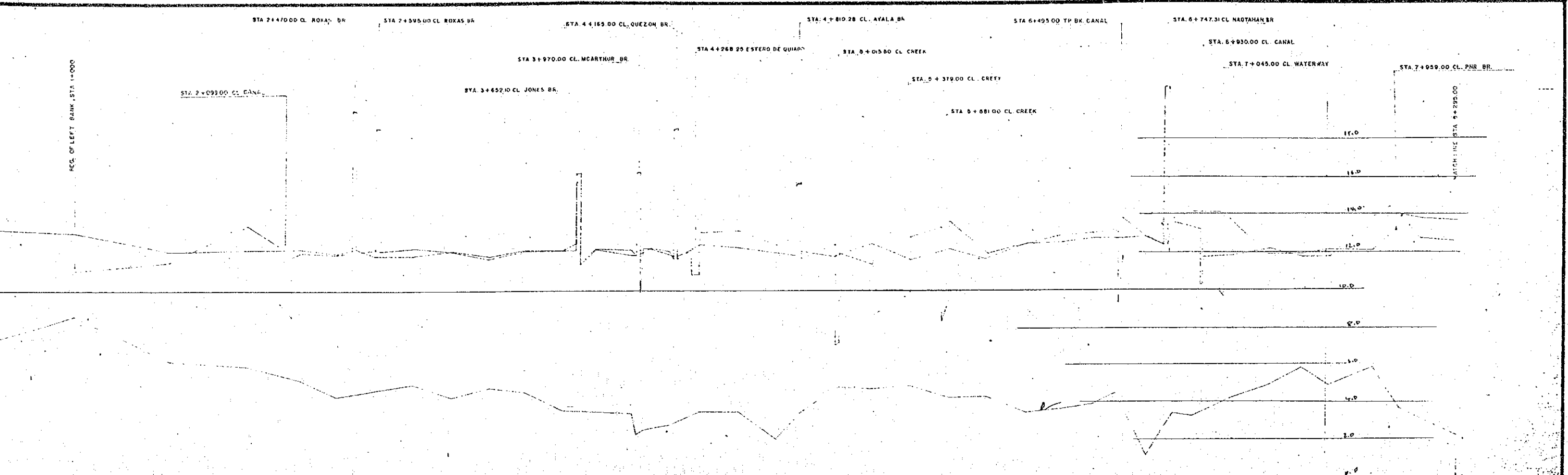
STA 5+015.80 CL. CREEK

STA 5+319.00 CL. CREEK

STA 5+581.00 CL. CREEK

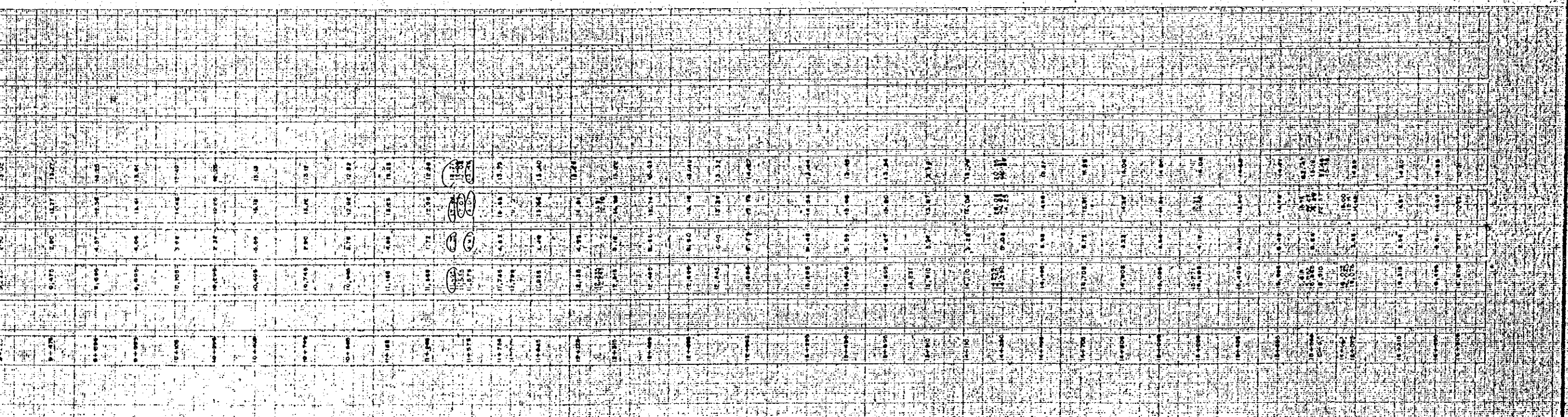
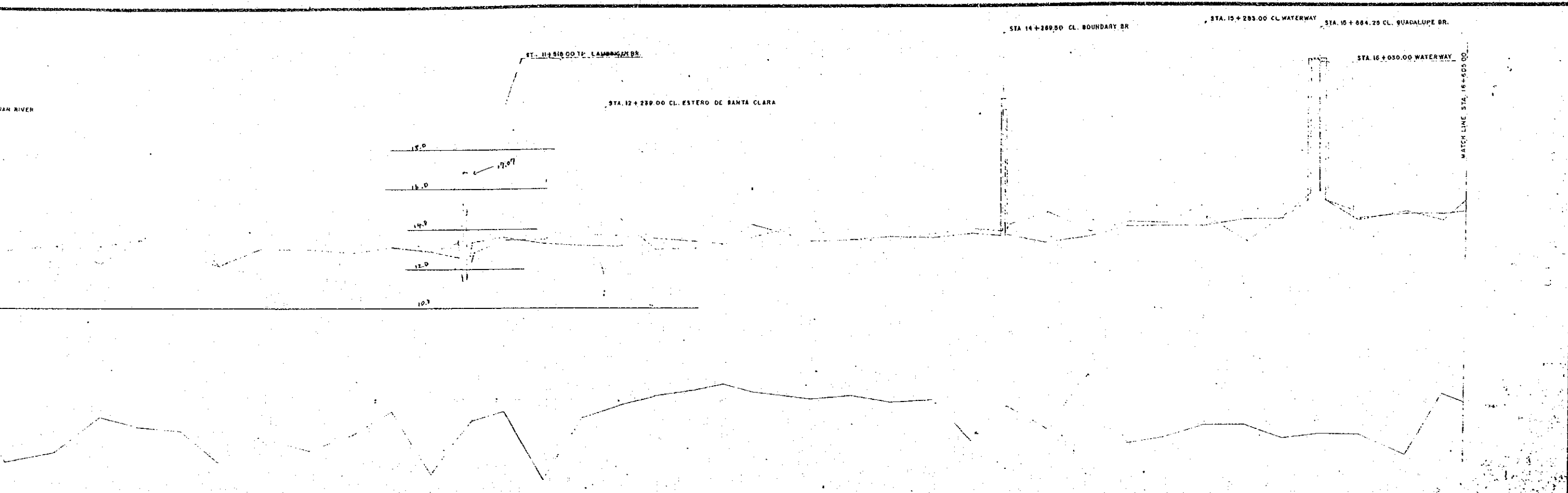
STA 7+045.00 CL. WATERWAY

MATCH LINE STA 9+295.00

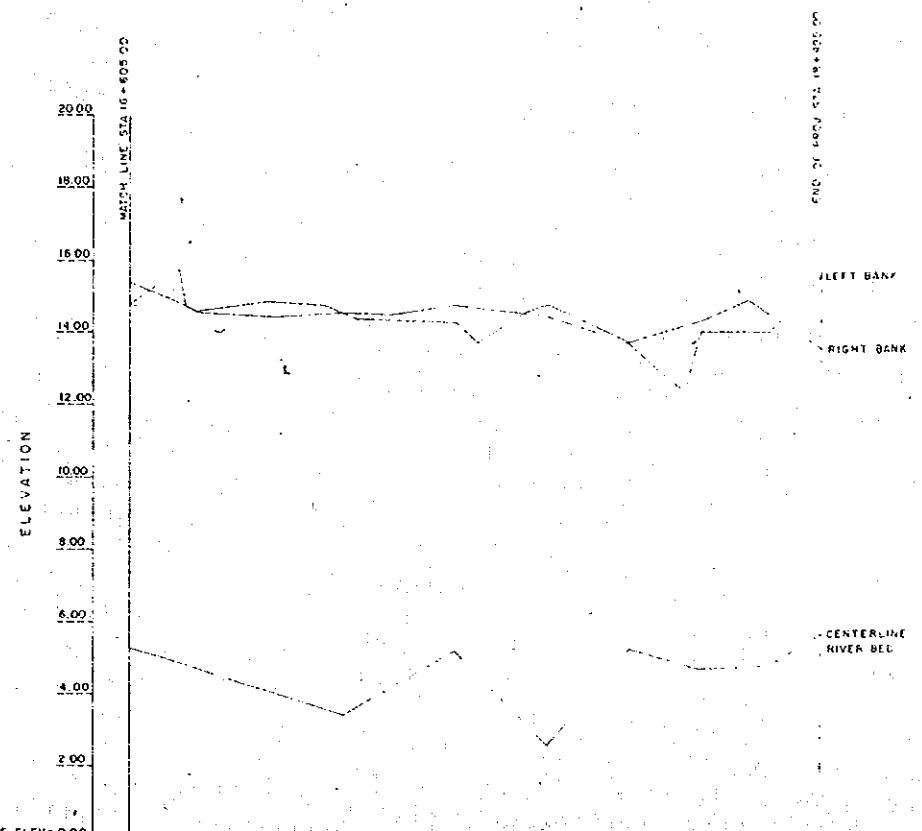


10000	9900	9800	9700	9600	9500	9400	9300	9200	9100	9000	8900	8800	8700	8600	8500	8400	8300	8200	8100	8000	7900	7800	7700	7600	7500	7400	7300	7200	7100	7000	6900	6800	6700	6600	6500	6400	6300	6200	6100	6000	5900	5800	5700	5600	5500	5400	5300	5200	5100	5000	4900	4800	4700	4600	4500	4400	4300	4200	4100	4000	3900	3800	3700	3600	3500	3400	3300	3200	3100	3000	2900	2800	2700	2600	2500	2400	2300	2200	2100	2000	1900	1800	1700	1600	1500	1400	1300	1200	1100	1000	900	800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000	4100	4200	4300	4400	4500	4600	4700	4800	4900	5000	5100	5200	5300	5400	5500	5600	5700	5800	5900	6000	6100	6200	6300	6400	6500	6600	6700	6800	6900	7000	7100	7200	7300	7400	7500	7600	7700	7800	7900	8000	8100	8200	8300	8400	8500	8600	8700	8800	8900	9000	9100	9200	9300	9400	9500	9600	9700	9800	9900	10000
-------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------



CONSULTANTS		REPUBLIC OF THE PHILIPPINES		DATE		SIGNATURE		SCALE		DRWG. NO.	
BY	DATE	DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT ENGINEER	PROJECT MANAGER	SIGNATURE		HORIZONTAL		VERTICAL	
BY	DATE	DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT ENGINEER	PROJECT MANAGER	SIGNATURE		1:50,000		1:100	
MANAGER	DATE	DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT ENGINEER	PROJECT MANAGER	SIGNATURE		PLAN AND PROFILE		RABIG RIVER STA 0+000 - STA 8+295.00	



CONTRACTANTS DATE: 11/29/88 SIGNATURE: [Signature] DATE: 11/29/88 SIGNATURE: [Signature]		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT ENGINEER: [Signature] PROJECT MANAGER: [Signature]		DATE: 11/29/88 SIGNATURE: [Signature] ENGINEER: [Signature]		PLAN AND PROFILE PASIG RIVER STA. 14+269.50 - STA. 16+605.00		SCALE: HORIZONTAL: 1"=100.00' VERTICAL: 1"=10.00' DRWG. NO.: 2/3
--	--	--	--	---	--	---	--	---	--	---



STATION NO.	EXISTING ELEVATION		PROPOSED ELEVATION	
	RIGHT LEVEL	LEFT LEVEL	RIVER BED	BANK LEVEL
16+00	14.00	4.00	14.00	14.00
16+05	14.00	4.00	14.00	14.00
16+10	14.00	4.00	14.00	14.00
16+15	14.00	4.00	14.00	14.00
16+20	14.00	4.00	14.00	14.00
16+25	14.00	4.00	14.00	14.00
16+30	14.00	4.00	14.00	14.00
16+35	14.00	4.00	14.00	14.00
16+40	14.00	4.00	14.00	14.00
16+45	14.00	4.00	14.00	14.00
16+50	14.00	4.00	14.00	14.00
16+55	14.00	4.00	14.00	14.00
16+60	14.00	4.00	14.00	14.00
16+65	14.00	4.00	14.00	14.00
16+70	14.00	4.00	14.00	14.00
16+75	14.00	4.00	14.00	14.00
16+80	14.00	4.00	14.00	14.00
16+85	14.00	4.00	14.00	14.00
16+90	14.00	4.00	14.00	14.00
16+95	14.00	4.00	14.00	14.00
17+00	14.00	4.00	14.00	14.00
17+05	14.00	4.00	14.00	14.00
17+10	14.00	4.00	14.00	14.00
17+15	14.00	4.00	14.00	14.00
17+20	14.00	4.00	14.00	14.00
17+25	14.00	4.00	14.00	14.00
17+30	14.00	4.00	14.00	14.00
17+35	14.00	4.00	14.00	14.00
17+40	14.00	4.00	14.00	14.00
17+45	14.00	4.00	14.00	14.00
17+50	14.00	4.00	14.00	14.00
17+55	14.00	4.00	14.00	14.00
17+60	14.00	4.00	14.00	14.00
17+65	14.00	4.00	14.00	14.00
17+70	14.00	4.00	14.00	14.00
17+75	14.00	4.00	14.00	14.00
17+80	14.00	4.00	14.00	14.00
17+85	14.00	4.00	14.00	14.00
17+90	14.00	4.00	14.00	14.00
17+95	14.00	4.00	14.00	14.00
18+00	14.00	4.00	14.00	14.00
18+05	14.00	4.00	14.00	14.00
18+10	14.00	4.00	14.00	14.00
18+15	14.00	4.00	14.00	14.00
18+20	14.00	4.00	14.00	14.00
18+25	14.00	4.00	14.00	14.00
18+30	14.00	4.00	14.00	14.00
18+35	14.00	4.00	14.00	14.00
18+40	14.00	4.00	14.00	14.00
18+45	14.00	4.00	14.00	14.00
18+50	14.00	4.00	14.00	14.00
18+55	14.00	4.00	14.00	14.00
18+60	14.00	4.00	14.00	14.00
18+65	14.00	4.00	14.00	14.00
18+70	14.00	4.00	14.00	14.00
18+75	14.00	4.00	14.00	14.00
18+80	14.00	4.00	14.00	14.00
18+85	14.00	4.00	14.00	14.00
18+90	14.00	4.00	14.00	14.00
18+95	14.00	4.00	14.00	14.00
19+00	14.00	4.00	14.00	14.00
19+05	14.00	4.00	14.00	14.00
19+10	14.00	4.00	14.00	14.00
19+15	14.00	4.00	14.00	14.00
19+20	14.00	4.00	14.00	14.00
19+25	14.00	4.00	14.00	14.00
19+30	14.00	4.00	14.00	14.00
19+35	14.00	4.00	14.00	14.00
19+40	14.00	4.00	14.00	14.00
19+45	14.00	4.00	14.00	14.00
19+50	14.00	4.00	14.00	14.00
19+55	14.00	4.00	14.00	14.00
19+60	14.00	4.00	14.00	14.00
19+65	14.00	4.00	14.00	14.00
19+70	14.00	4.00	14.00	14.00
19+75	14.00	4.00	14.00	14.00
19+80	14.00	4.00	14.00	14.00
19+85	14.00	4.00	14.00	14.00
19+90	14.00	4.00	14.00	14.00
19+95	14.00	4.00	14.00	14.00
20+00	14.00	4.00	14.00	14.00

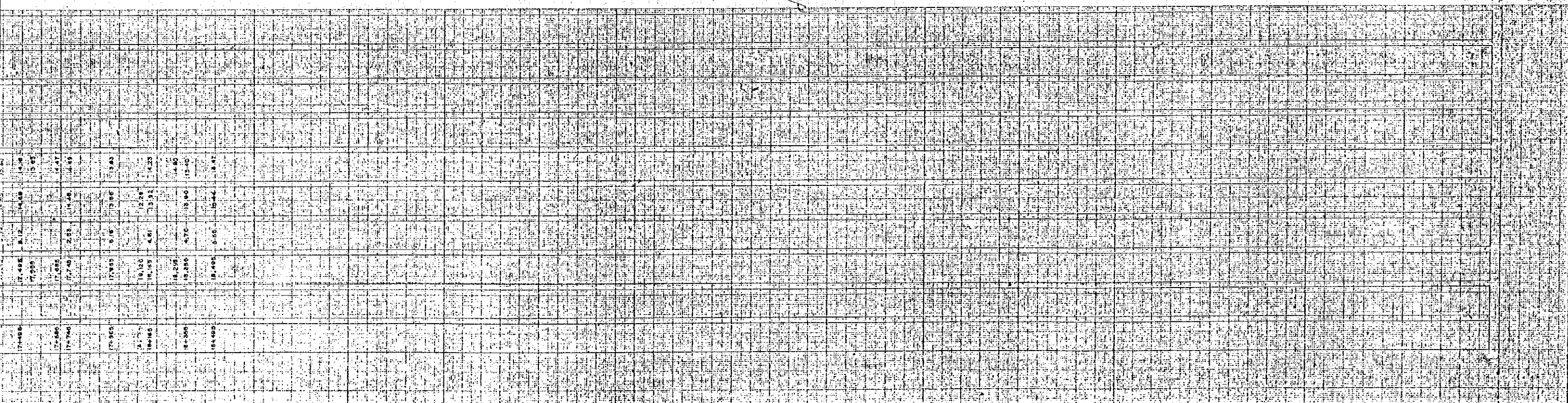
 ACRE SURVEYING & DEVELOPMENT	CONSULTANTS			REPUBLIC OF THE PHILIPPINES		DATE: SIGNATURE: MONTE P. PANG ENGR. 2002. 00100010	
	SURVEYED BY:	DATE:	SIGNATURE:	 DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT ENGINEER	PROJECT MANAGER	
	CHECKED BY:	8/10/88	[Signature]				
	PROJECT MANAGER:	8/14/88	[Signature]				

END OF BRIDGE STA. 18+400.00

LEFT BANK

RIGHT BANK

CENTERLINE RIVER DEL.



CONSULTANTS		REPUBLIC OF THE PHILIPPINES		DATE		SIGNATURE		SCALE		DWG. NO.	
DATE	SIGNATURE	DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT ENGINEER	DATE	SIGNATURE	PLAN AND PROFILE		HORIZONTAL	3/3	
8/13/88	<i>[Signature]</i>	PROJECT MANAGER		MONTE F. FAND		<i>[Signature]</i>	PASIG RIVER		1:10,000		
8/14/88	<i>[Signature]</i>			EDUARDO MANALO			STA. 16+800.00 - STA. 18+400.00		VERTICAL		
									1:100		