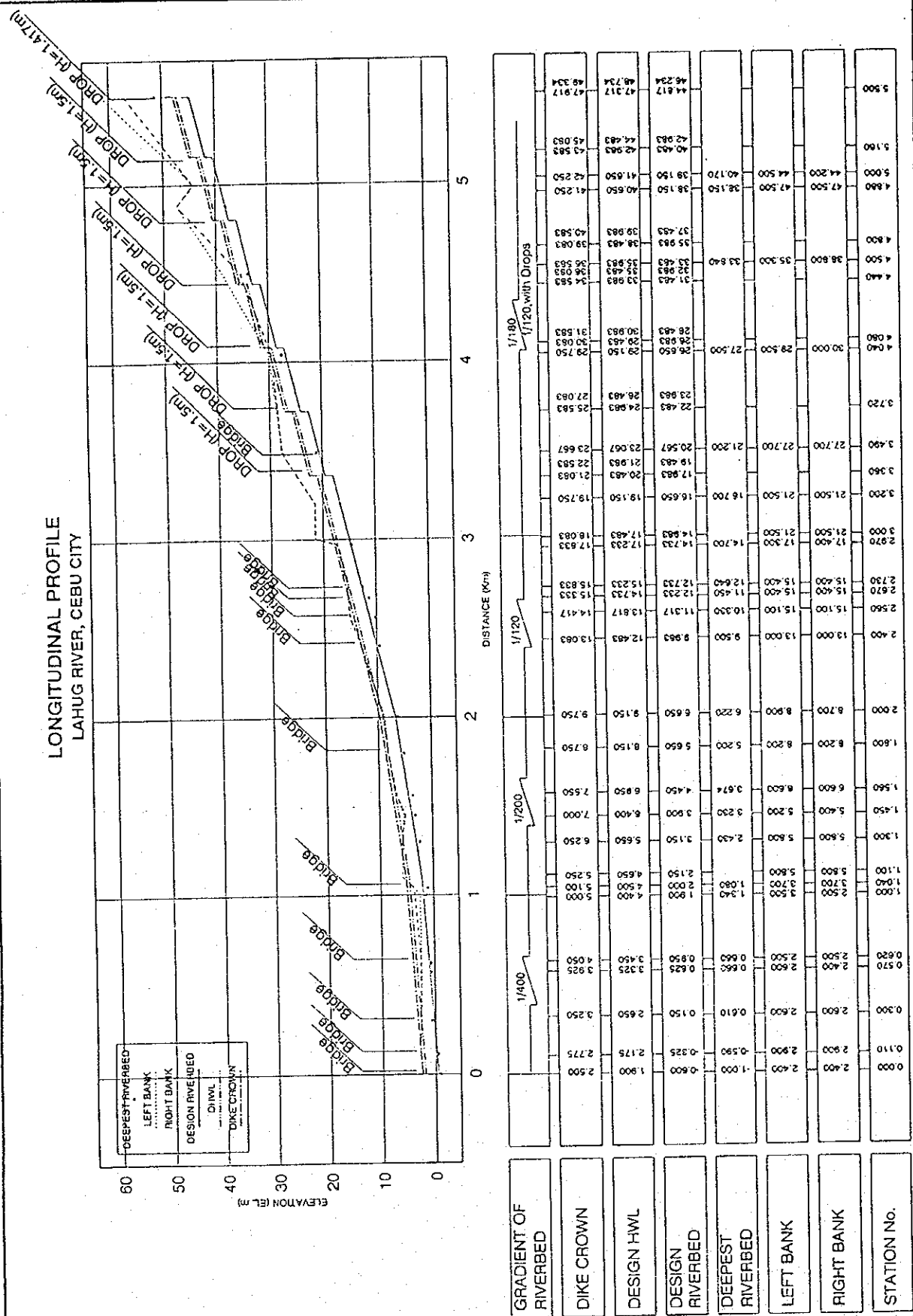


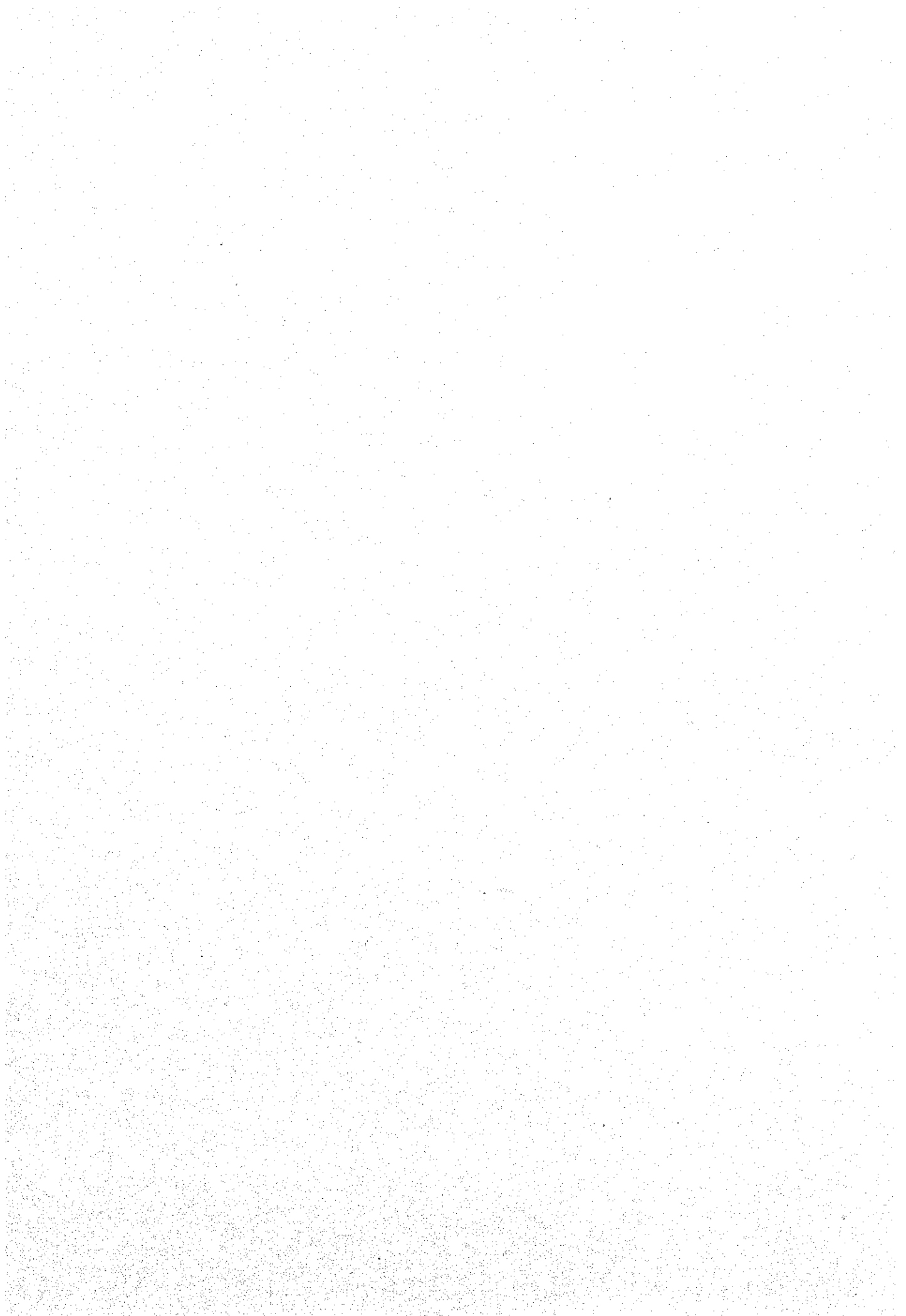
図 4.17 ラフグ川 河川改修計画平面図及び横断面図

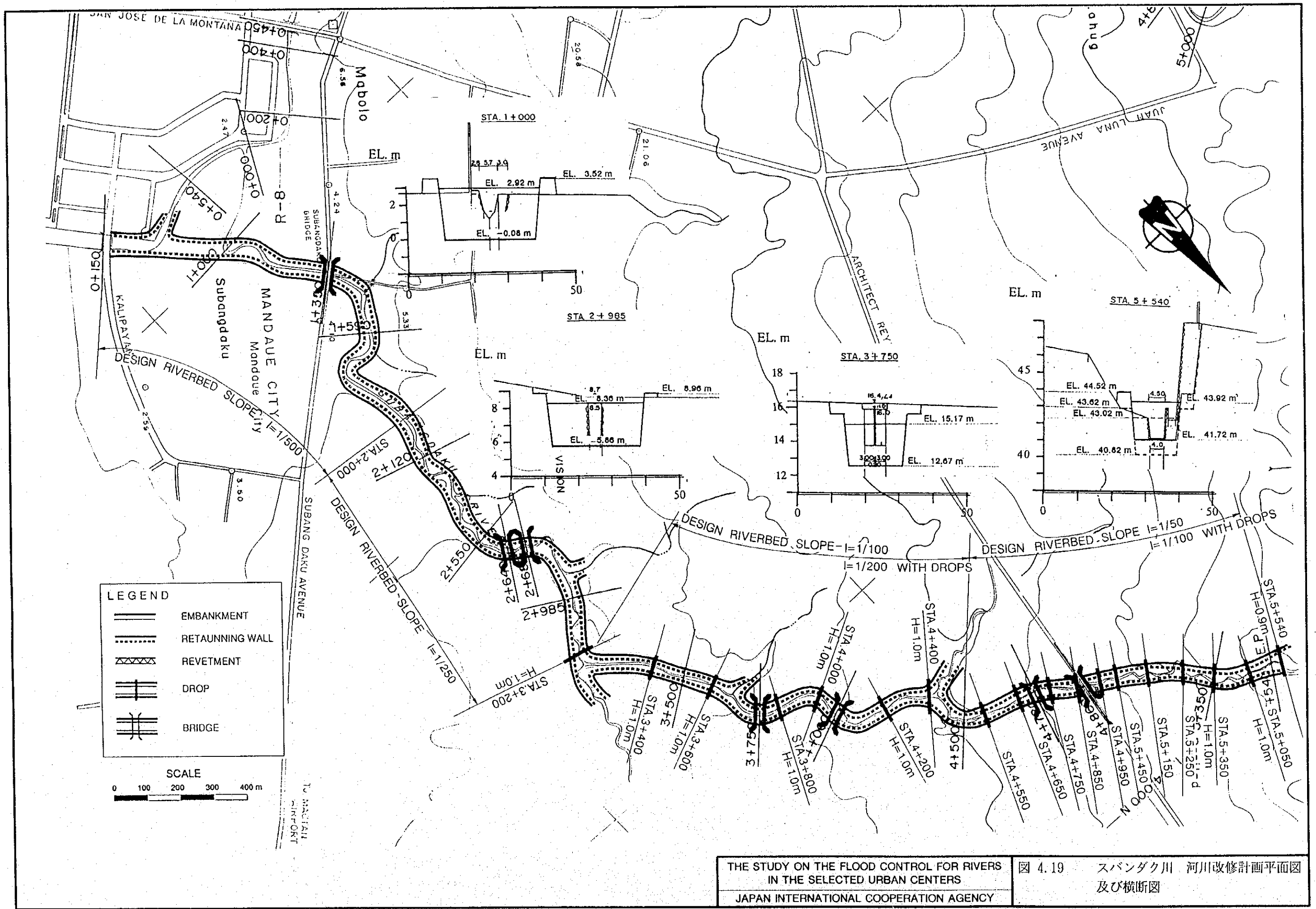
LONGITUDINAL PROFILE
LAHUG RIVER, CEBU CITY



THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

図 4.18 ラフグ川 計画縦断面図

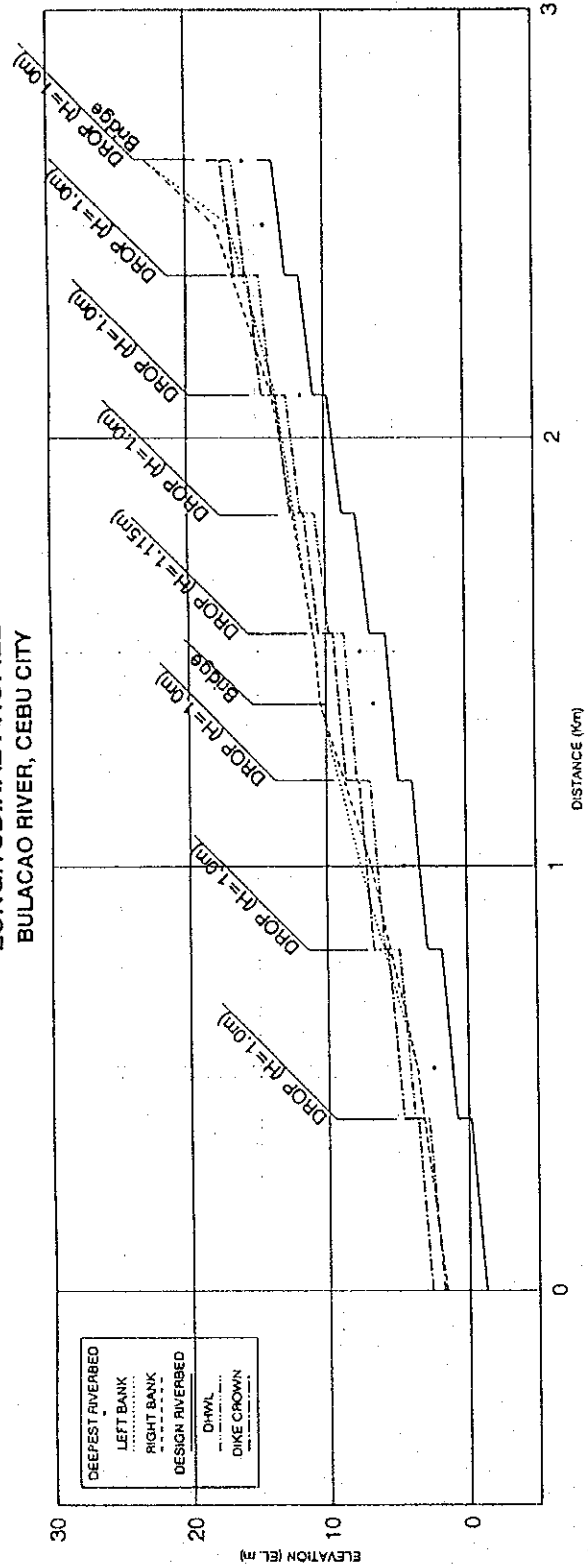




THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

図 4.19 スバングク川 河川改修計画平面図
及び横断面図

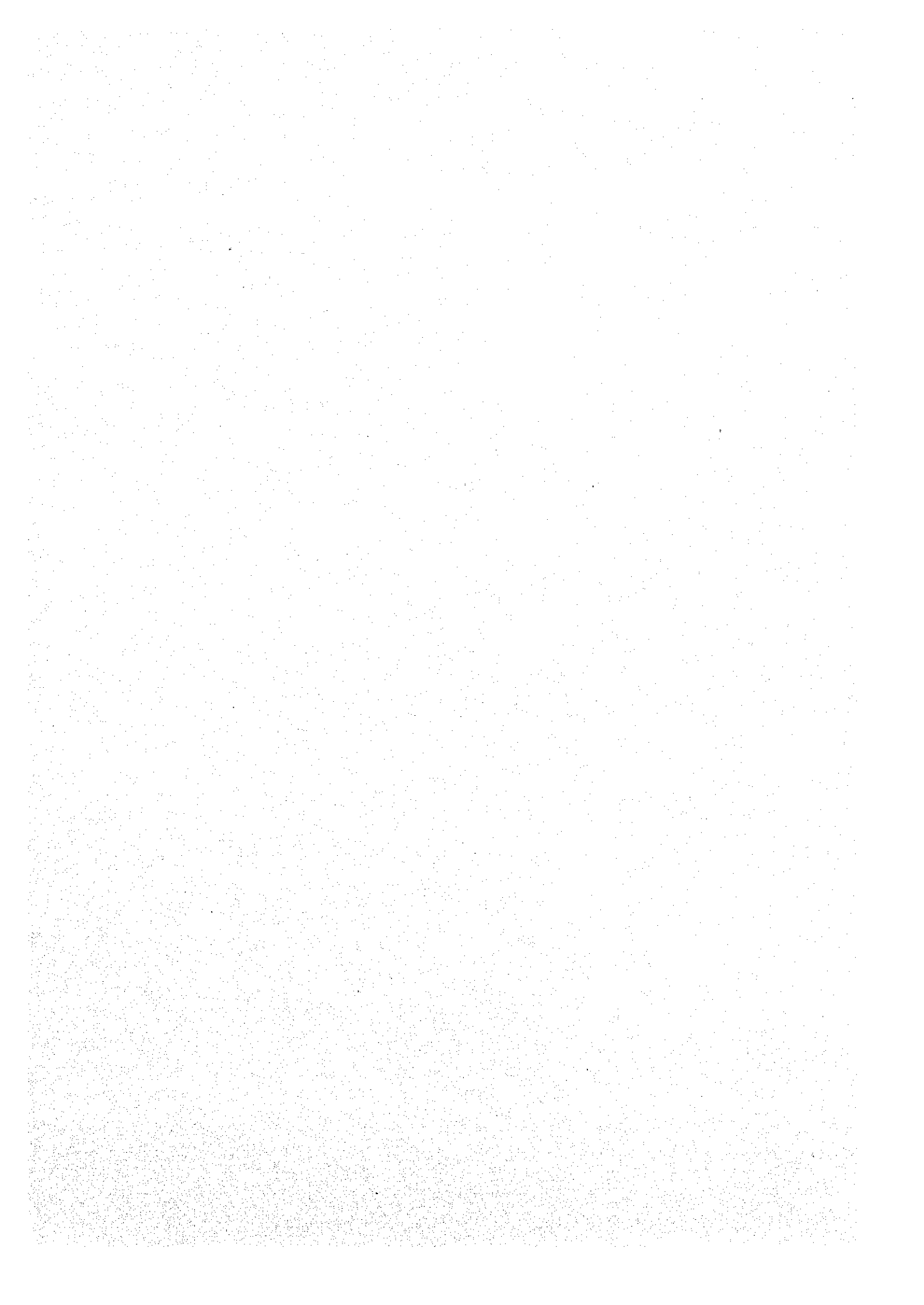
LONGITUDINAL PROFILE
BULACAO RIVER, CEBU CITY

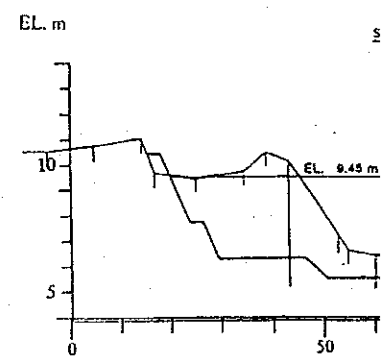
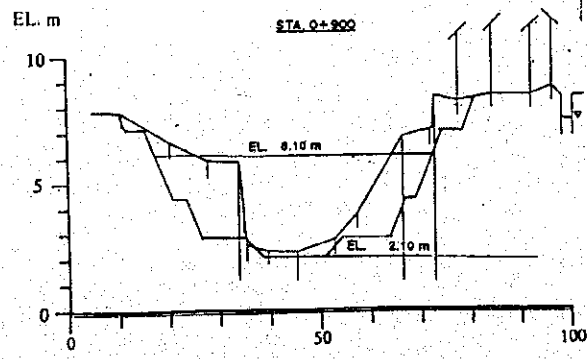
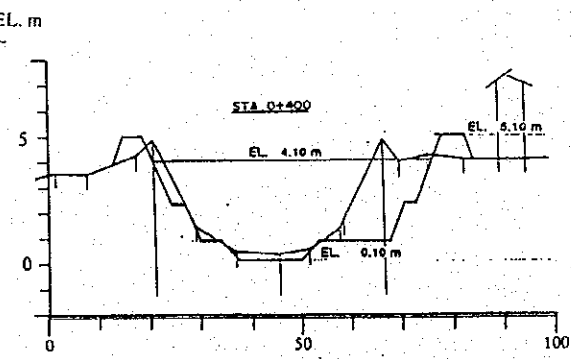
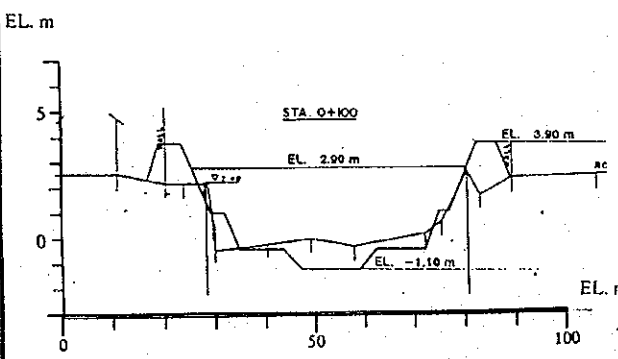
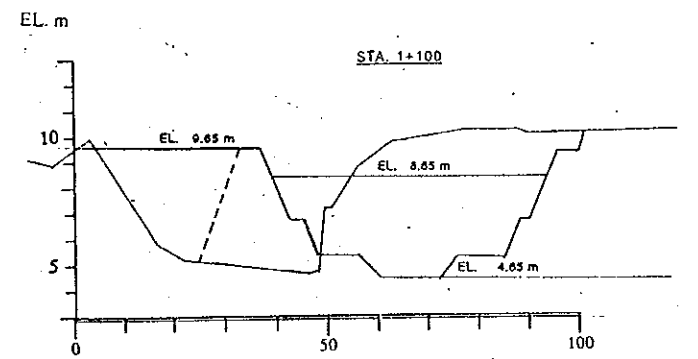
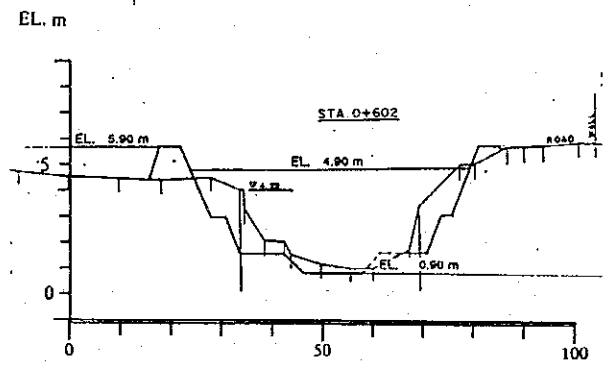
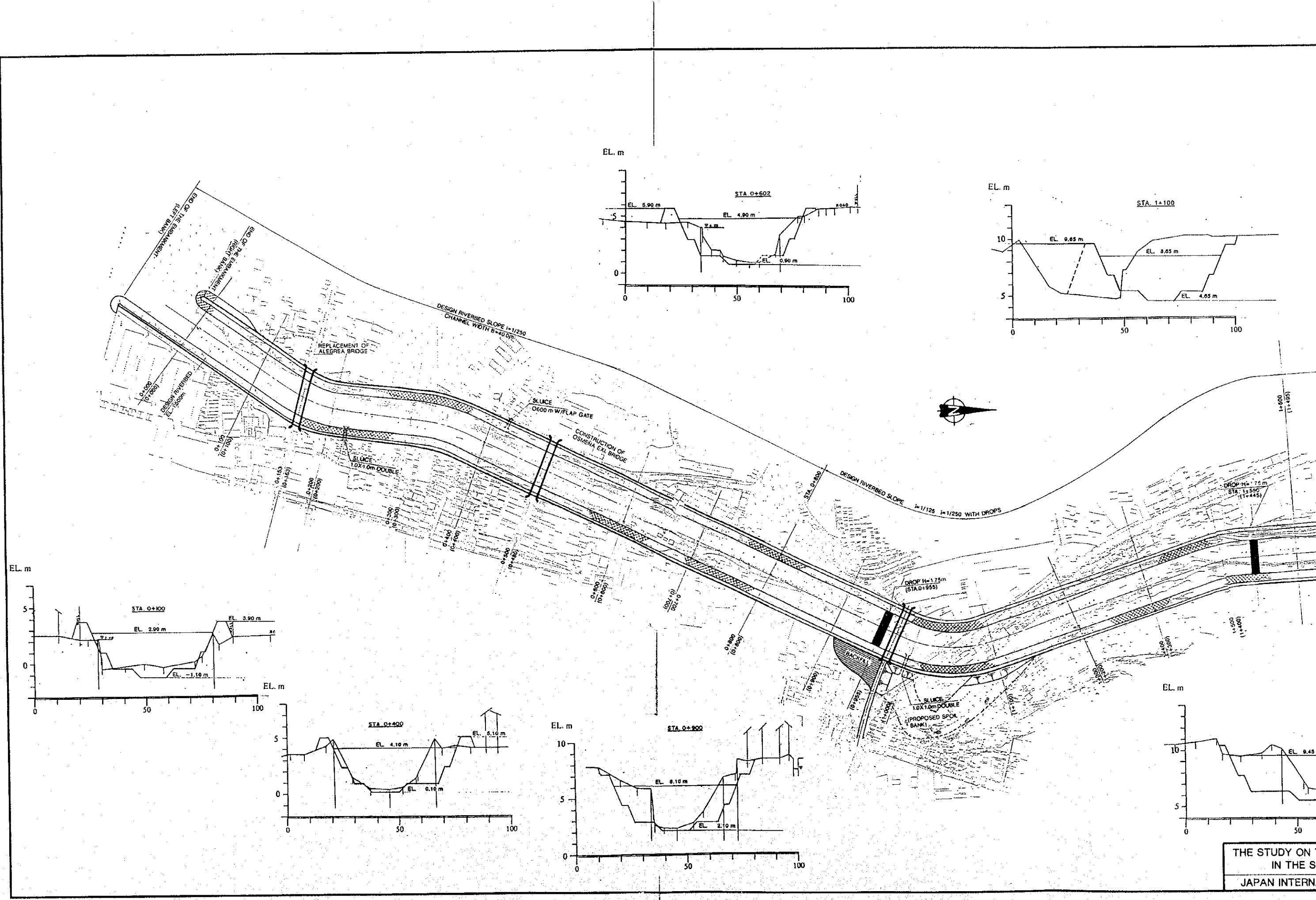


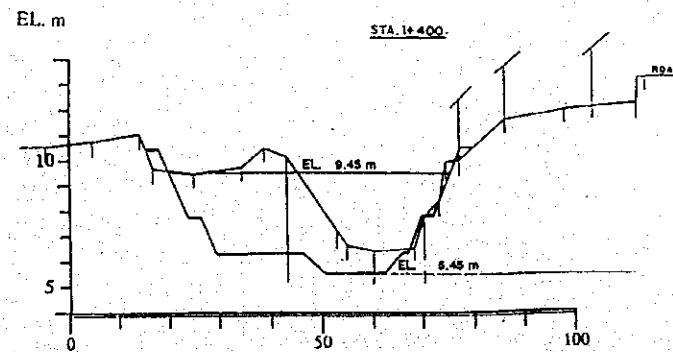
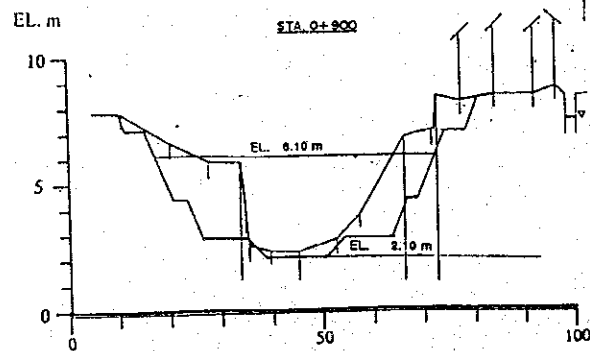
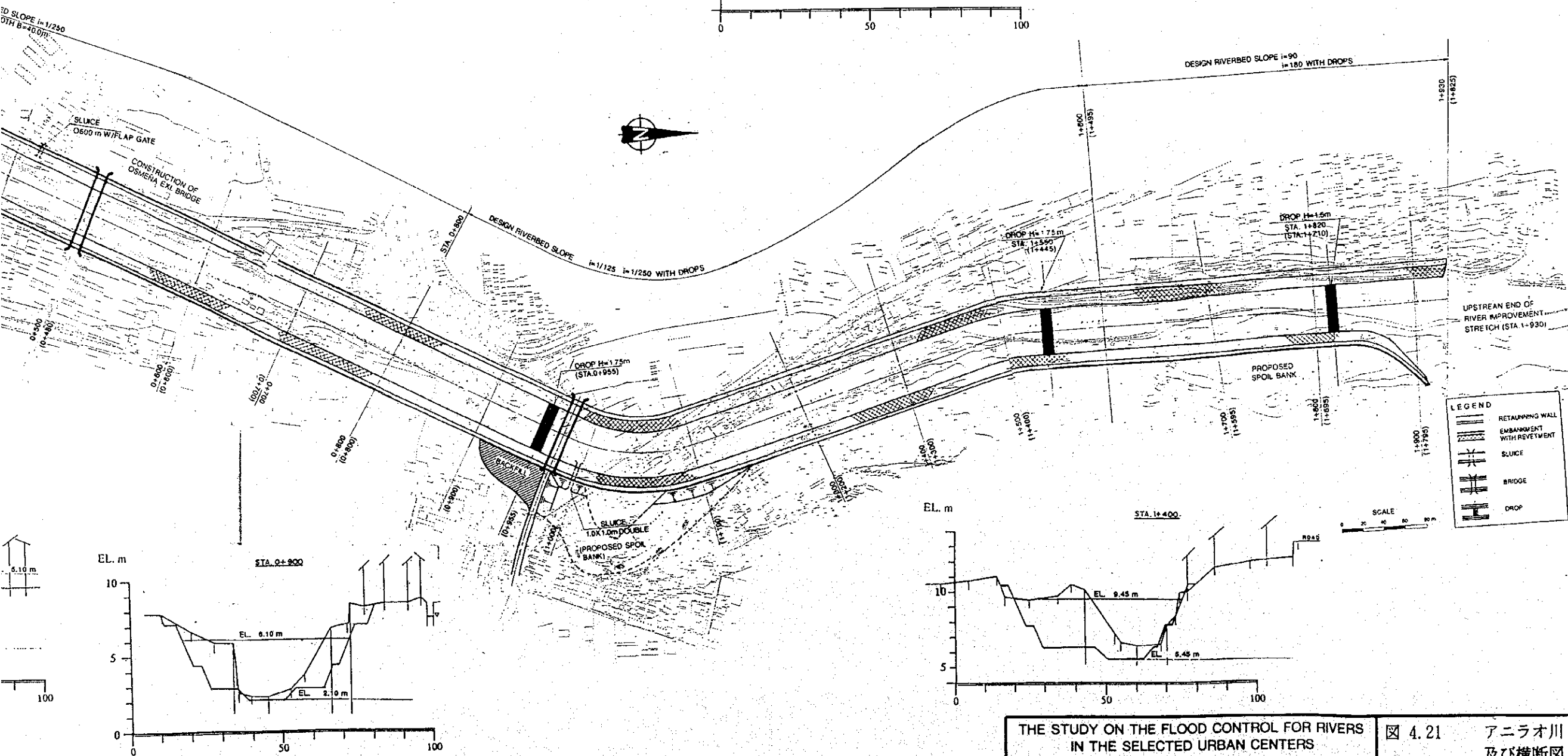
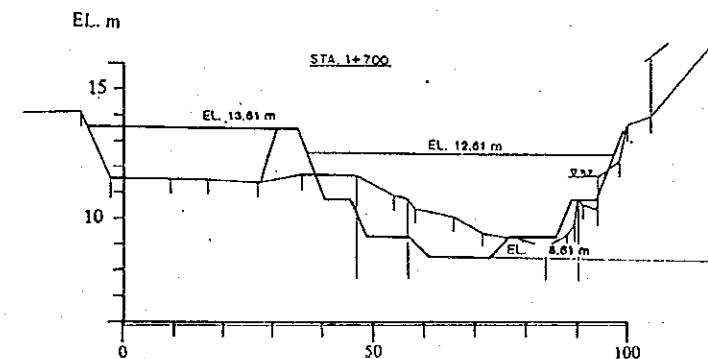
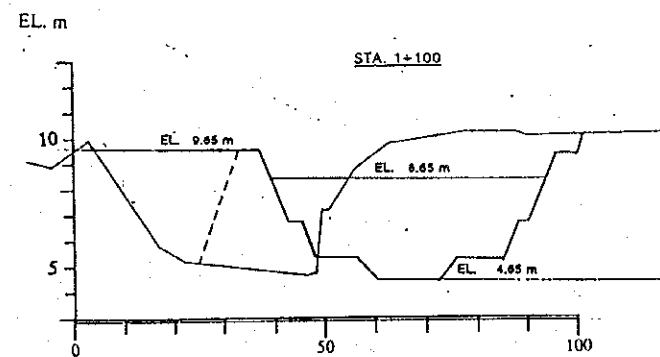
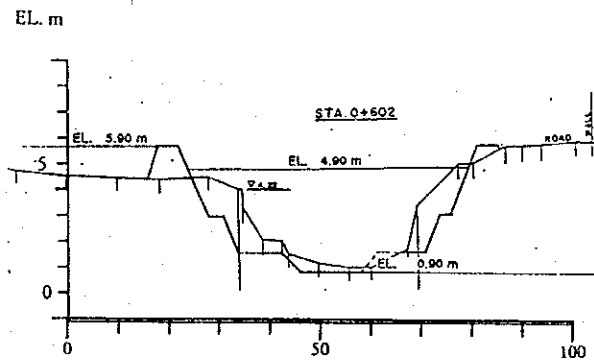
STATION No.	RIGHT BANK	LEFT BANK	DEEPEST RIVERBED	DESIGN RIVERBED	DESIGN HWL	DIKE CROWN	GRADIENT OF RIVERBED
0.00	1.800	1.500	0.000	-1.200	1.800	2.600	
0.400	3.600	3.600	0.800	3.600	3.600	4.600	
0.520	3.600	3.600	2.400	4.100	4.900	4.900	1/200
0.600	7.500	6.700	4.800	5.600	6.000	6.000	1/400, with Drops
1.000	10.400	10.400	8.300	8.300	8.300	7.100	1/140
1.200	10.400	10.400	7.600	7.600	8.500	8.500	
1.380	10.400	10.400	7.500	8.250	9.050	9.050	
1.500	10.700	10.700	8.550	9.450	9.950	9.950	
1.540	10.700	10.700	8.765	10.565	10.565	10.565	
1.820	13.500	13.500	10.765	11.565	12.565	12.565	
2.100	13.800	13.800	10.765	12.765	13.565	13.565	
2.300	15.900	15.900	11.765	14.765	15.565	15.565	
2.500	17.900	17.900	13.194	15.765	16.994	16.994	
2.650	22.900	22.900	14.400	17.29	18.528	18.528	

THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

4.20
スパンダグ川 計画縦断図







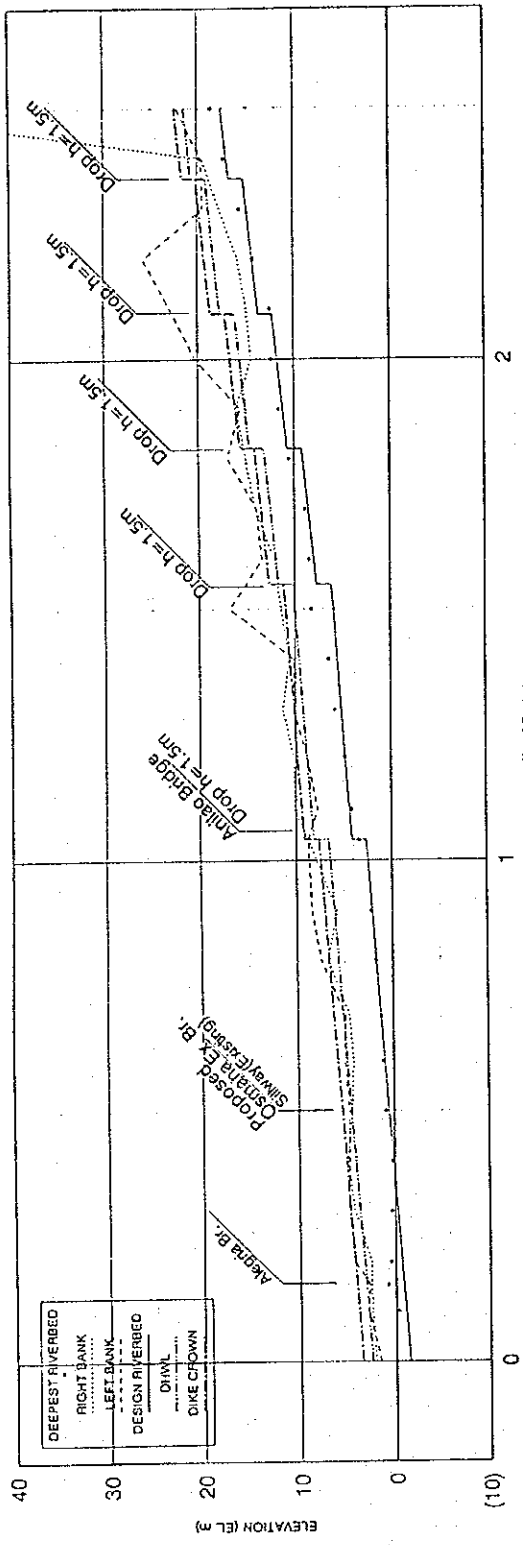
LEGEND

	RETAINING WALL
	EMBANKMENT WITH REVETMENT
	SLUICE
	BRIDGE
	DROP

THE STUDY ON THE FLOOD CONTROL FOR RIVERS IN THE SELECTED URBAN CENTERS
 JAPAN INTERNATIONAL COOPERATION AGENCY

図 4.21 アニラオ川 河川改修計画平面図及び横断面図

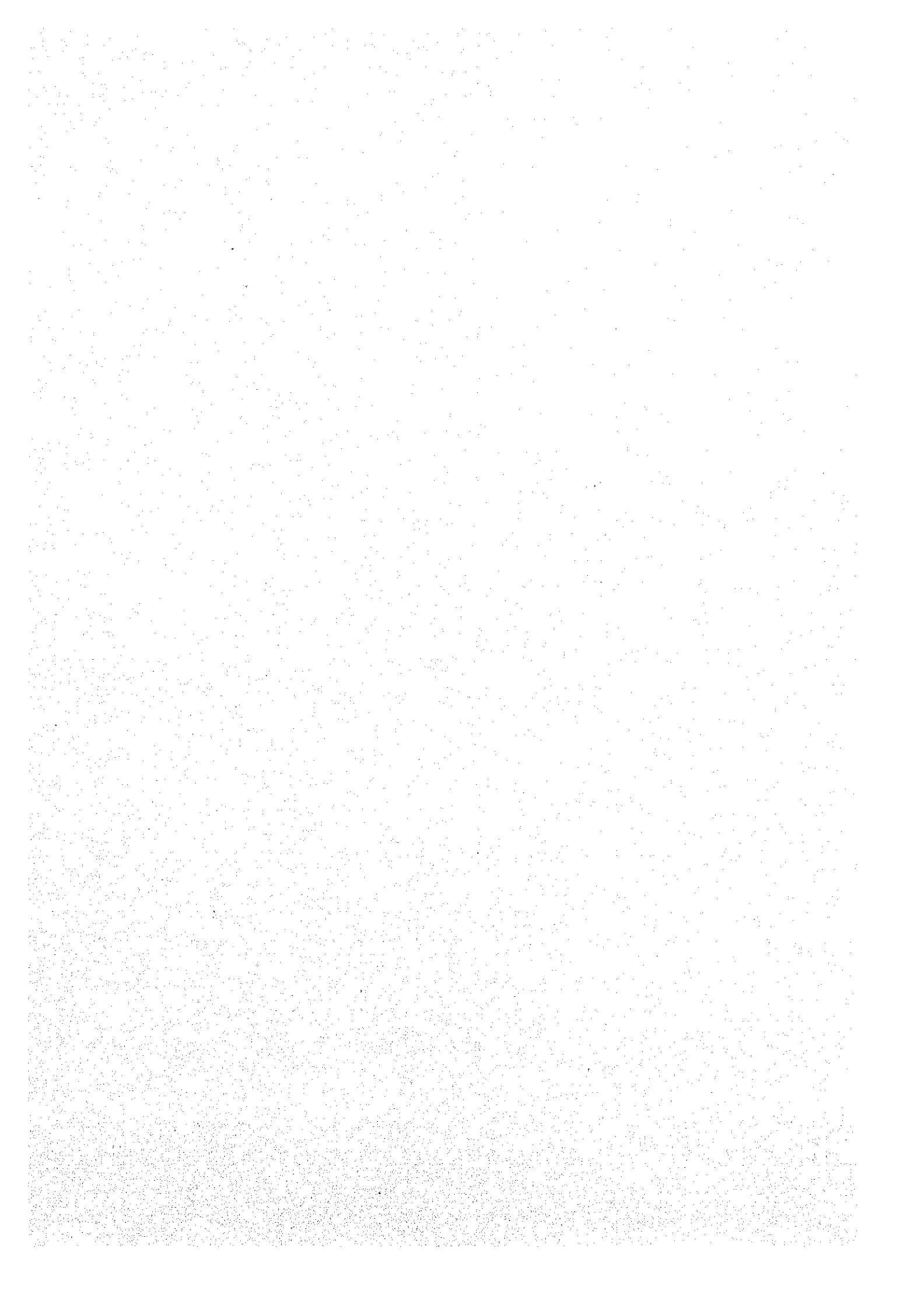
LONGITUDINAL PROFILE
ANILAO RIVER, ORMOC CITY



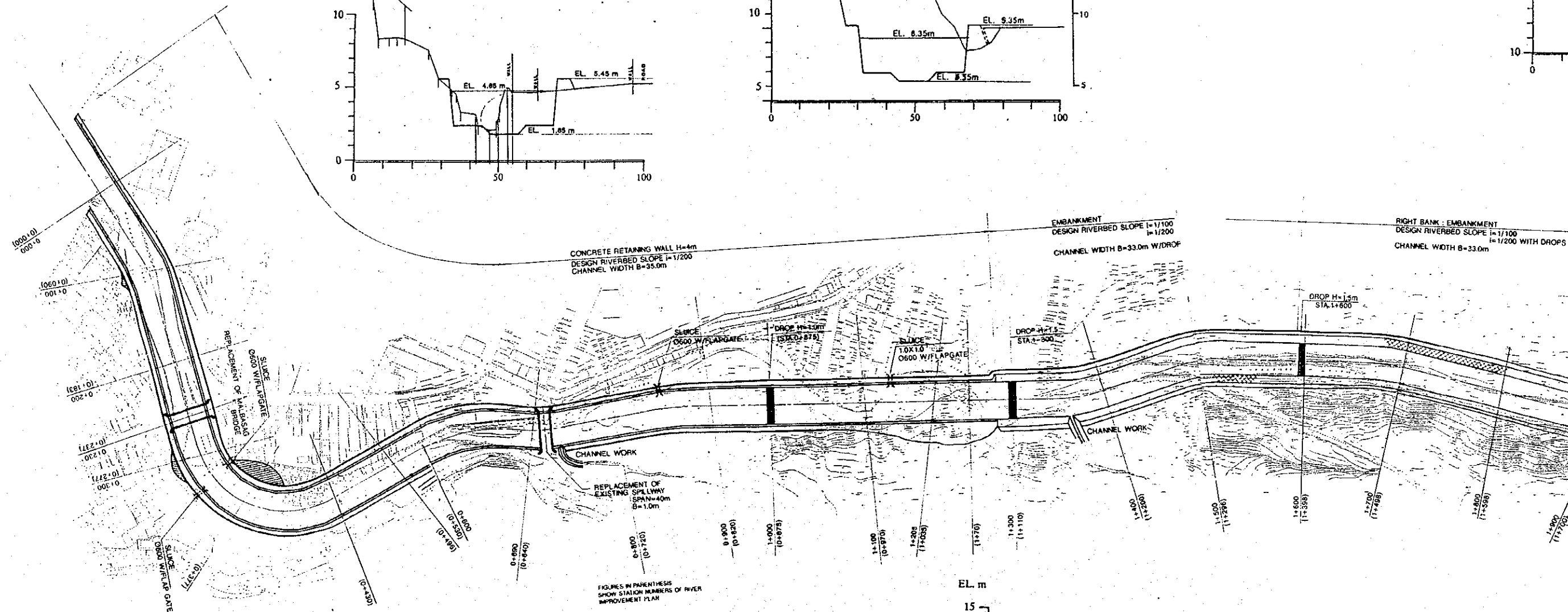
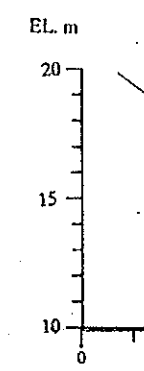
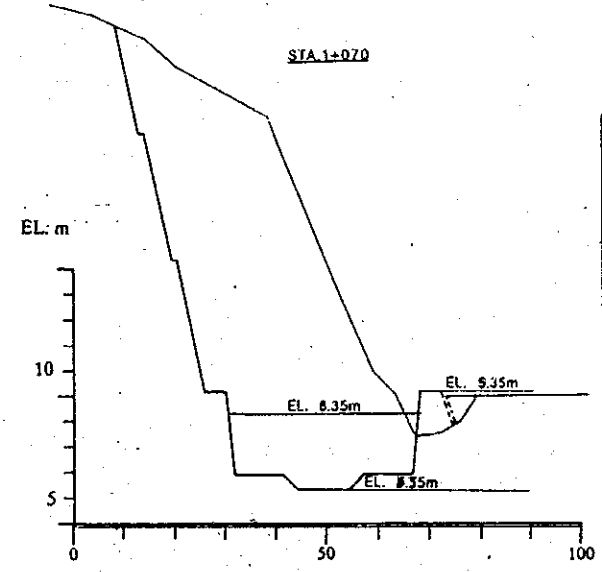
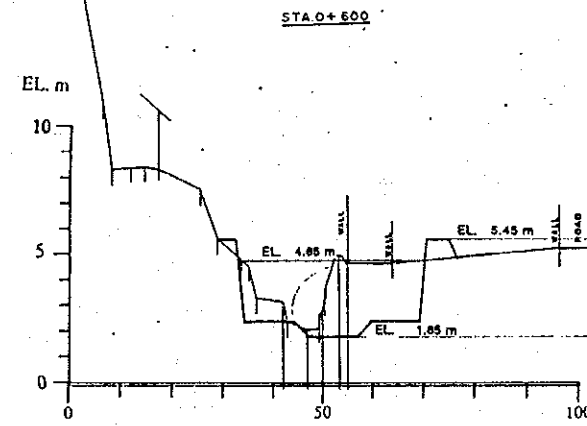
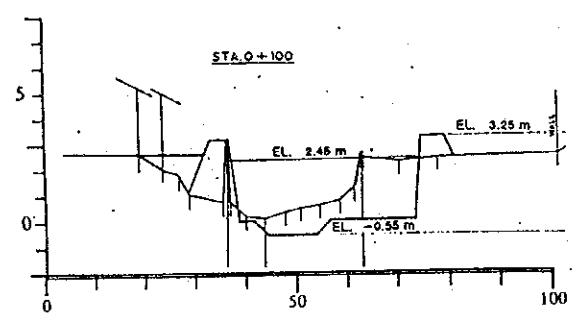
STATION No.	RIGHT BANK	LEFT BANK	DEEPEST RIVERBED	DIKE CROWN	GRADIENT OF RIVERBED
0.000	2.10	2.48	2.66	1.60	1.60
0.100	2.50	2.70	2.88	1.50	1.50
0.150	2.51	2.70	2.88	1.50	1.50
0.200	2.51	2.70	2.88	1.50	1.50
0.300	4.20	4.60	4.74	0.30	0.30
0.400	4.68	4.74	4.74	0.10	0.10
0.500	4.40	4.70	4.90	0.50	0.50
0.600	4.22	5.10	4.90	0.90	0.90
0.650	4.60	5.00	1.24	1.26	1.26
0.700	6.80	7.46	1.79	5.70	5.70
0.800	5.61	8.38	2.22	6.10	6.10
0.900	8.70	6.70	3.47	7.60	7.60
1.000	10.20	7.70	4.20	8.40	8.40
1.100	10.20	7.70	4.40	8.40	8.40
1.205	10.20	6.80	4.820	8.820	8.820
1.300	11.30	10.20	5.93	9.200	9.200
1.400	10.60	10.10	6.53	9.600	9.600
1.500	11.40	16.80	6.90	10.000	10.000
1.550	11.50	12.70	7.200	11.200	11.200
1.600	12.10	13.40	7.978	11.978	11.978
1.700	14.10	14.00	8.94	13.533	13.533
1.800	16.00	15.60	10.56	14.089	14.089
1.820	16.20	14.200	9.200	14.200	14.200
1.850	15.700	15.700	14.700	15.700	15.700
1.900	16.144	15.144	15.144	16.144	16.144
2.000	14.50	20.20	12.41	17.000	17.000
2.050	16.700	17.200	13.200	17.200	17.200
2.080	14.90	17.200	13.756	17.256	17.256
2.100	14.90	22.90	12.91	19.756	19.756
2.200	15.60	25.80	14.29	19.311	19.311
2.300	17.70	19.40	15.66	19.667	19.667
2.350	18.50	16.60	17.30	16.522	16.522
2.400	18.50	18.60	16.700	17.700	17.700
2.450	20.200	20.200	19.200	20.200	20.200
2.500	22.20	18.60	17.478	21.478	21.478

THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

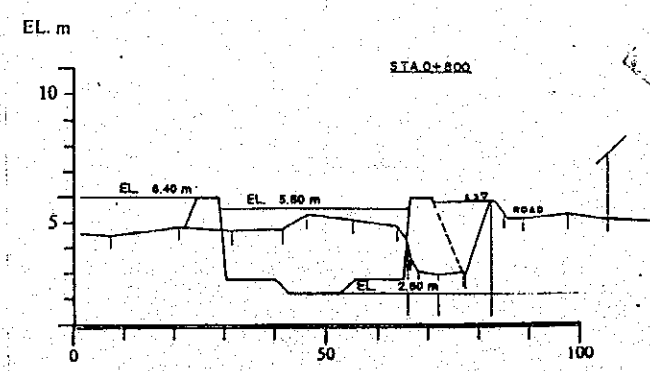
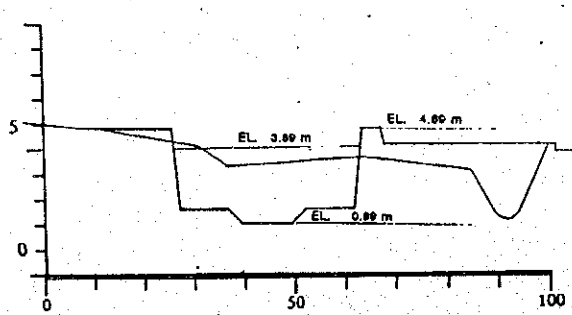
図 4.22 アニラオ川 計画縦断面図



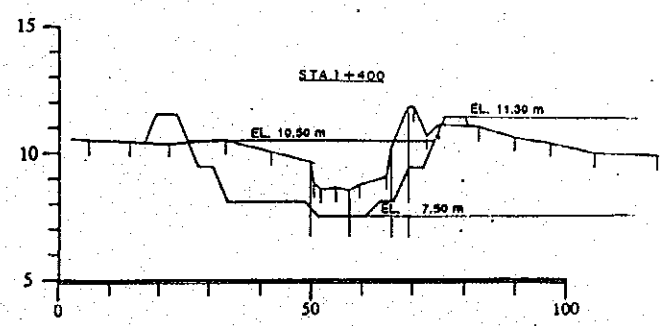
EL. m



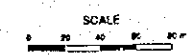
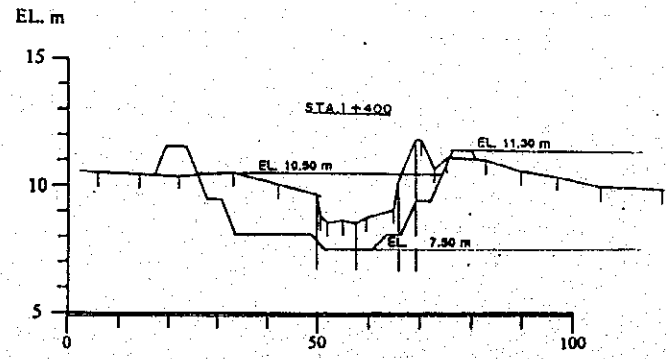
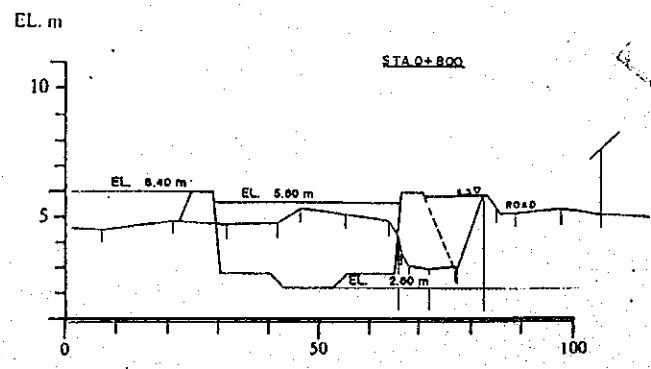
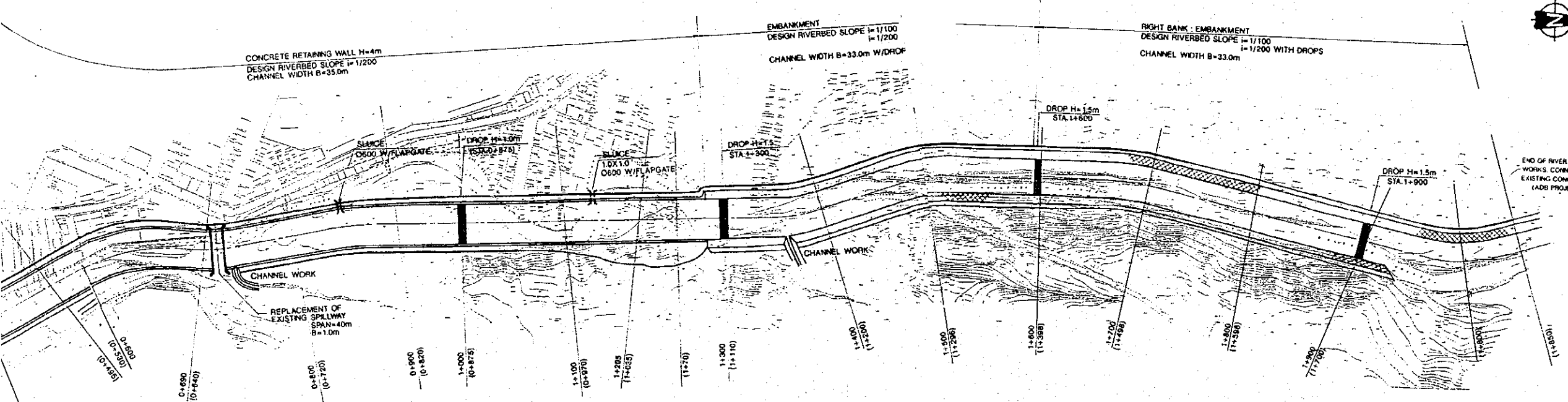
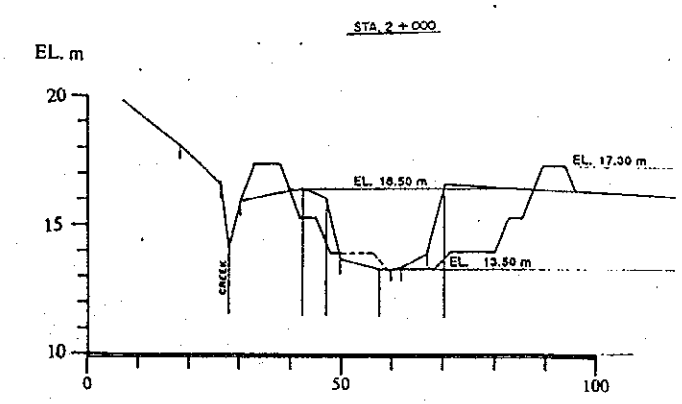
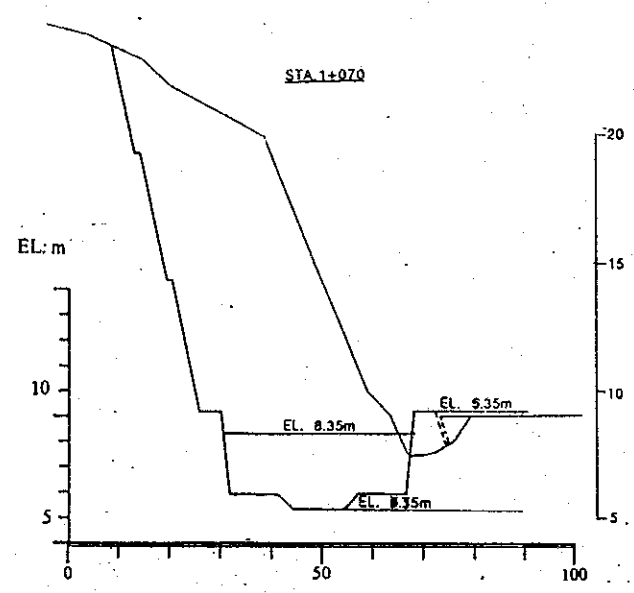
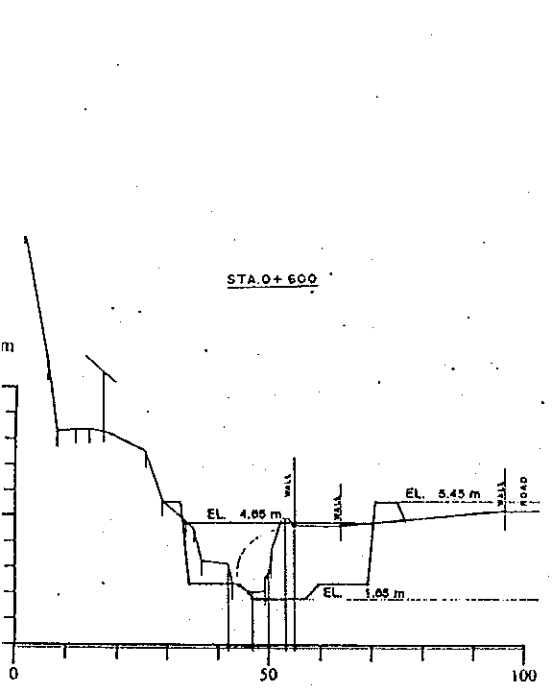
EL. m



EL. m



THE STUDY ON THE FLOOD CONTROL FOR RIVER
 IN THE SELECTED URBAN CENTERS
 JAPAN INTERNATIONAL COOPERATION AGENCY



FIGURES IN PARENTHESES SHOW STATION NUMBERS OF RIVER IMPROVEMENT PLAN

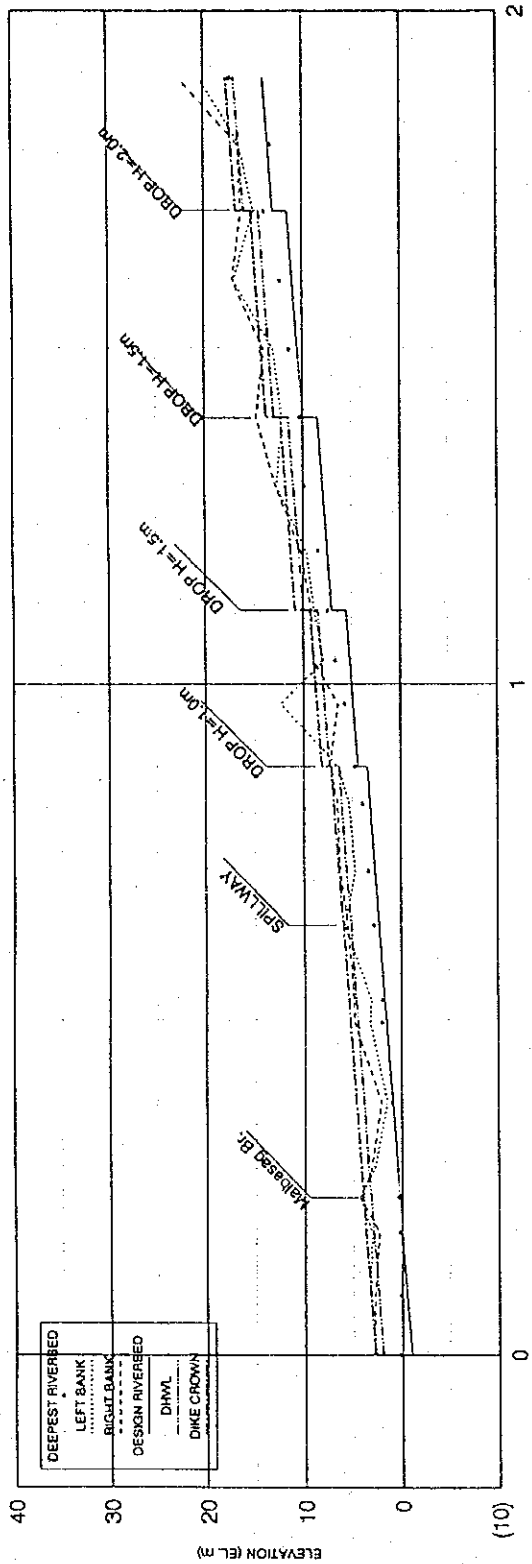
FIGURES IN PARENTHESES SHOW STATION NUMBERS OF RIVER IMPROVEMENT PLAN

Symbol	Description
[Hatched area]	RETAINING WALL
[Dotted area]	EMBANKMENT WITH REVETMENT
[Cross-hatched area]	SLUICE
[Horizontal lines]	BRIDGE
[Vertical lines]	DROP

THE STUDY ON THE FLOOD CONTROL FOR RIVERS IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

図 4.23 マルバサック川 河川改修計画 平面図及び横断面図

LONGITUDINAL PROFILE
MALBASAG RIVER, ORMOC CITY

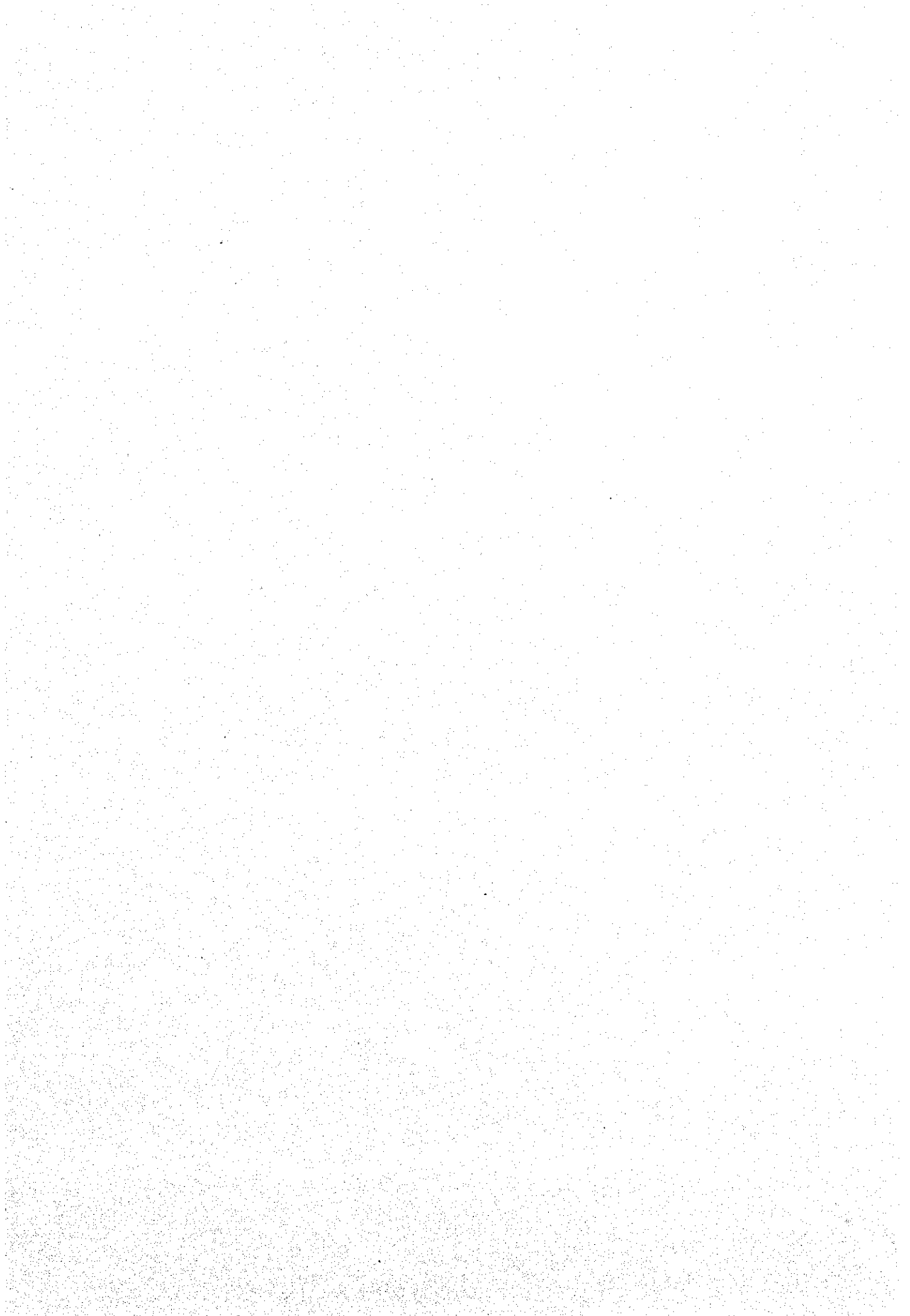


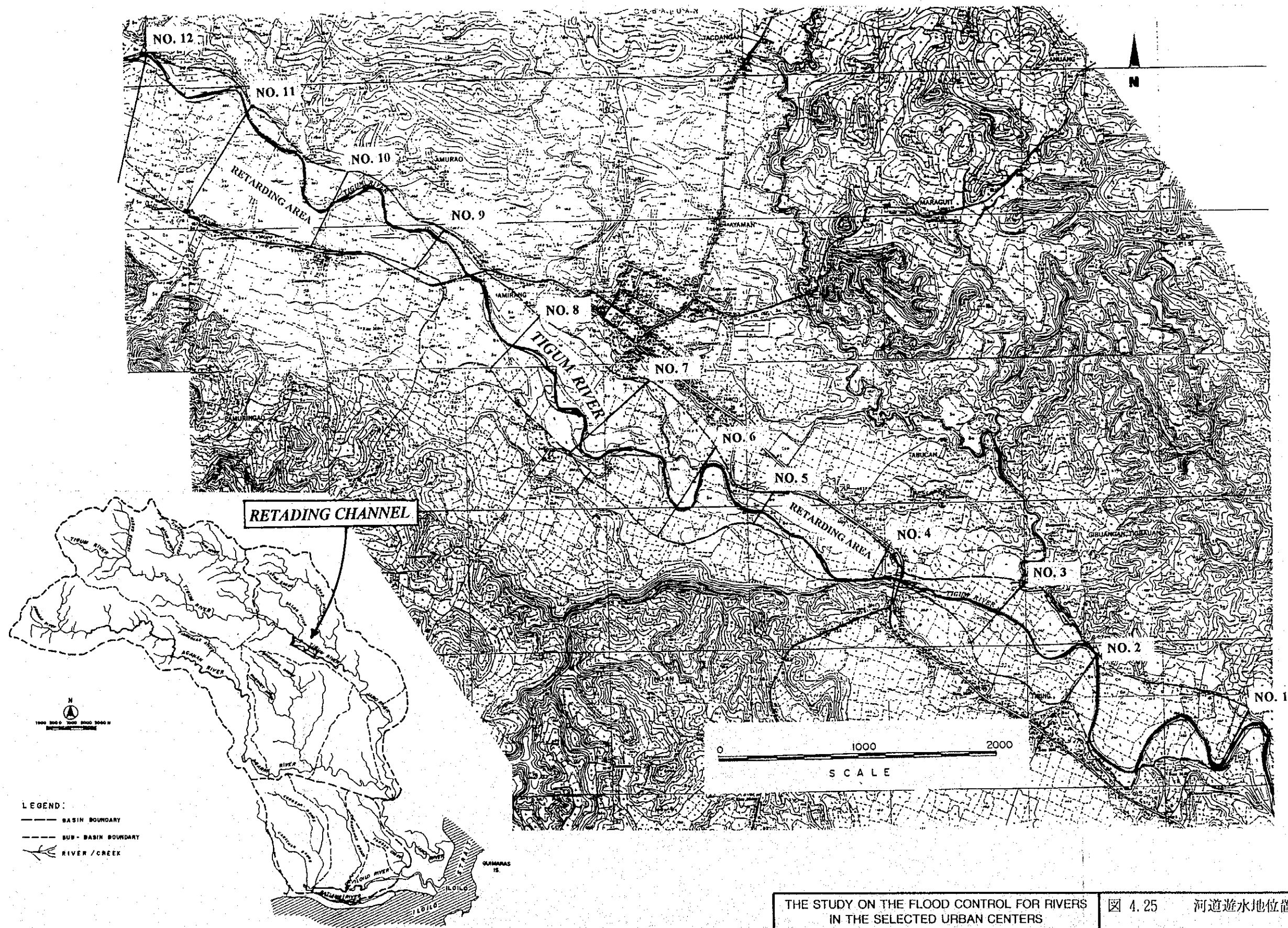
DISTANCE (KM)

STATION No.	RIGHT BANK	LEFT BANK	DEEPEST RIVERBED	DESIGN RIVERBED	DESIGN HWL	DIKE CROWN	GRADIENT OF RIVERBED
0.000	2.00	2.90	0.17	-0.550	2.450	3.250	2.800
0.085	3.07	2.90	0.23	-0.085	2.915	3.715	2.800
0.170	4.30	4.30	0.40	0.185	3.185	3.985	2.800
0.255	2.78	3.09	0.38	0.385	3.385	4.185	2.800
0.340	1.39	2.04	0.37	0.885	3.885	4.685	2.800
0.425	3.15	4.80	2.00	1.480	4.480	5.280	2.800
0.510	3.05	4.87	1.95	1.650	4.650	5.450	2.800
0.595	5.80	5.50	2.80	2.200	5.200	6.000	2.800
0.680	4.66	6.28	3.38	2.600	5.600	6.400	2.800
0.765	5.30	6.51	3.94	3.100	6.100	6.900	2.800
0.850	6.40	7.30	4.70	3.375	6.375	7.175	2.800
0.935	12.34	8.41	5.77	4.850	7.850	8.650	2.800
1.020	7.03	8.80	6.78	5.175	8.175	8.975	2.800
1.105	8.64	8.15	7.54	5.550	8.550	9.350	2.800
1.190	9.69	10.28	8.52	7.500	10.500	11.300	2.800
1.275	12.70	12.80	9.90	7.980	10.980	11.780	2.800
1.360	12.14	14.78	10.32	8.480	11.480	12.280	2.800
1.445	12.99	14.00	11.42	10.480	13.480	14.280	2.800
1.530	17.01	17.11	12.33	10.990	13.990	14.790	2.800
1.615	15.01	18.28	13.95	11.500	14.500	15.300	2.800
1.700	16.40	16.80	13.30	13.500	16.500	17.300	2.800
1.785	17.80	17.30	14.00	14.800	17.800	18.600	2.800
1.870	16.40	16.40	17.41	17.000	17.000	17.000	2.800
1.955	16.40	16.40	17.41	17.000	17.000	17.000	2.800

THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

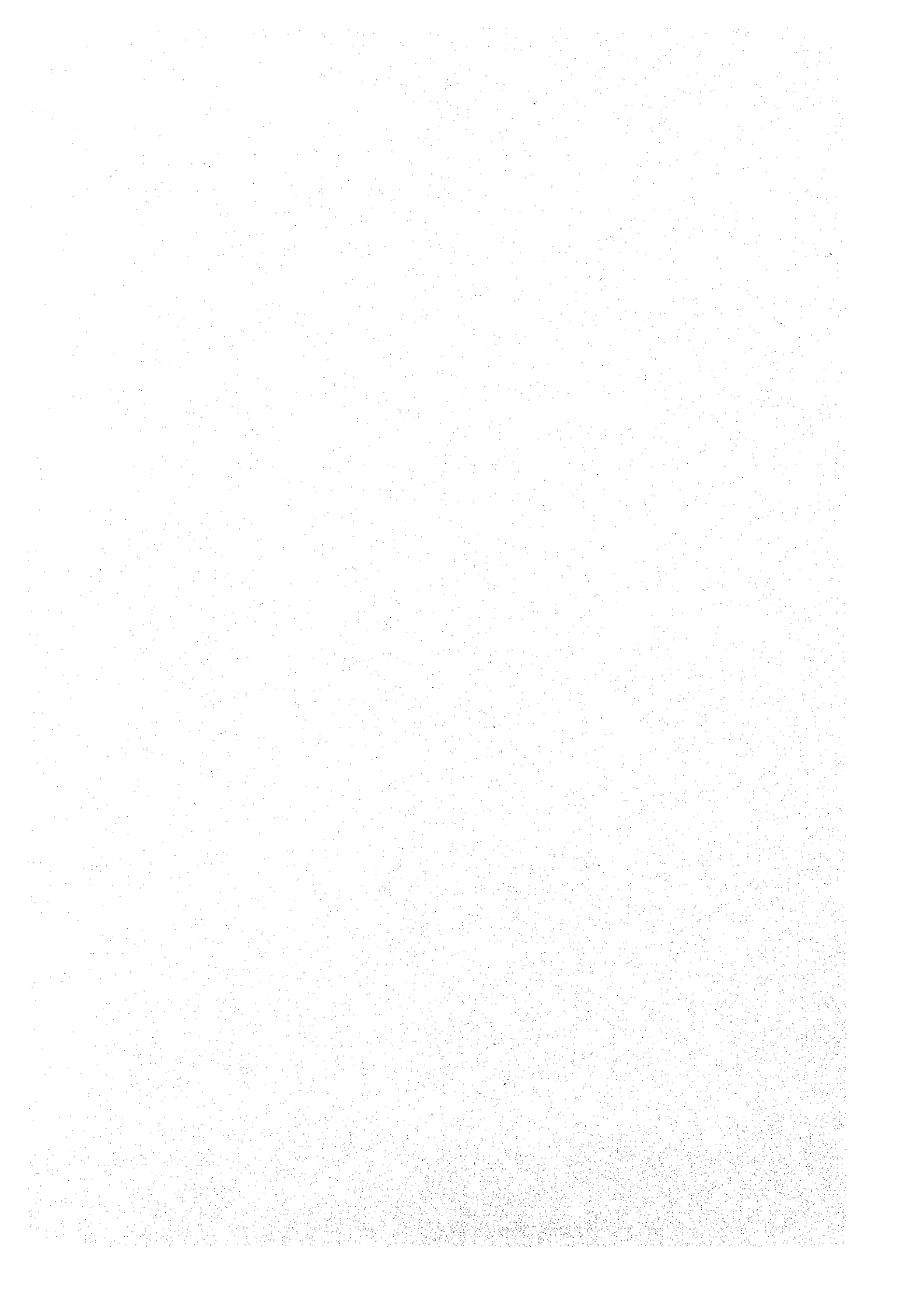
図 4.24
マルバサック川 計画縦断面図





THE STUDY ON THE FLOOD CONTROL FOR RIVERS
 IN THE SELECTED URBAN CENTERS
 JAPAN INTERNATIONAL COOPERATION AGENCY

図 4.25 河道遊水地位置図



Implementation Schedule for Master Plan

	1st year	2nd year	3rd year	4th year	5th year	6th year	7th year	8th year	9th year	10th year	11th year
Iloilo City											
Jaro											
Floodway											
Iloilo											
Mandurriao											
Drainage											
Cebu City											
Bulacao											
Kinalumsan											
Guadalupe											
Lahug											
Subang Daku											
Drainage											
Drainage											
Ormoc City											
Anilao											
Malbasag											
Drainage											
Tacloban City											
Drainage											

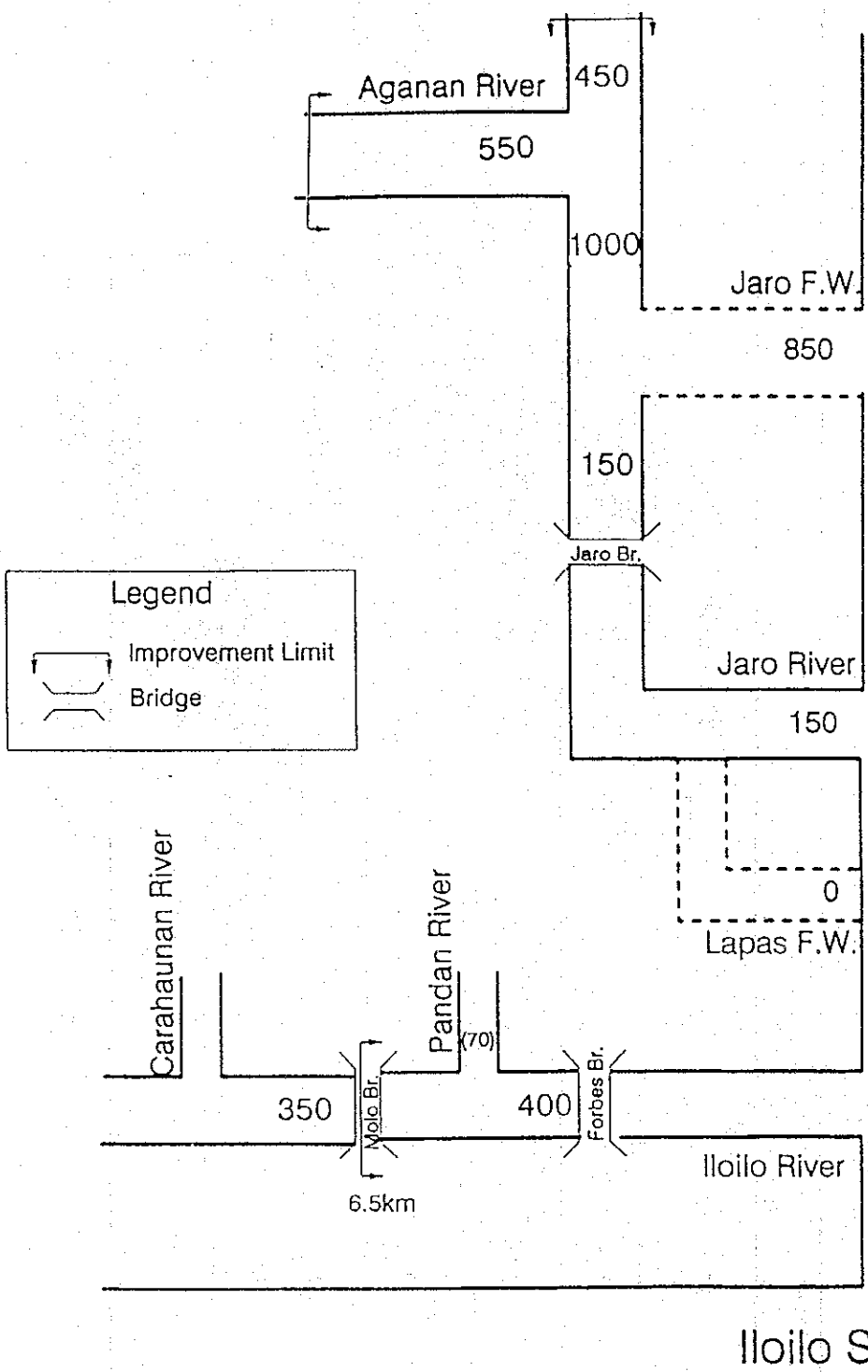
Quantity km	Construction Cost (million Pesos)
	1,964
14.00	1,273
5.90	
6.60	366
4.72	181
8.37	143
	1,620
2.65	129
4.00	244
4.50	253
5.00	301
5.54	352
5.49	170
5.36	171
	381
2.00	215
2.20	145
1.43	21
15.93	247

Detail Design
 Construction

THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS

JAPAN INTERNATIONAL COOPERATION AGENCY

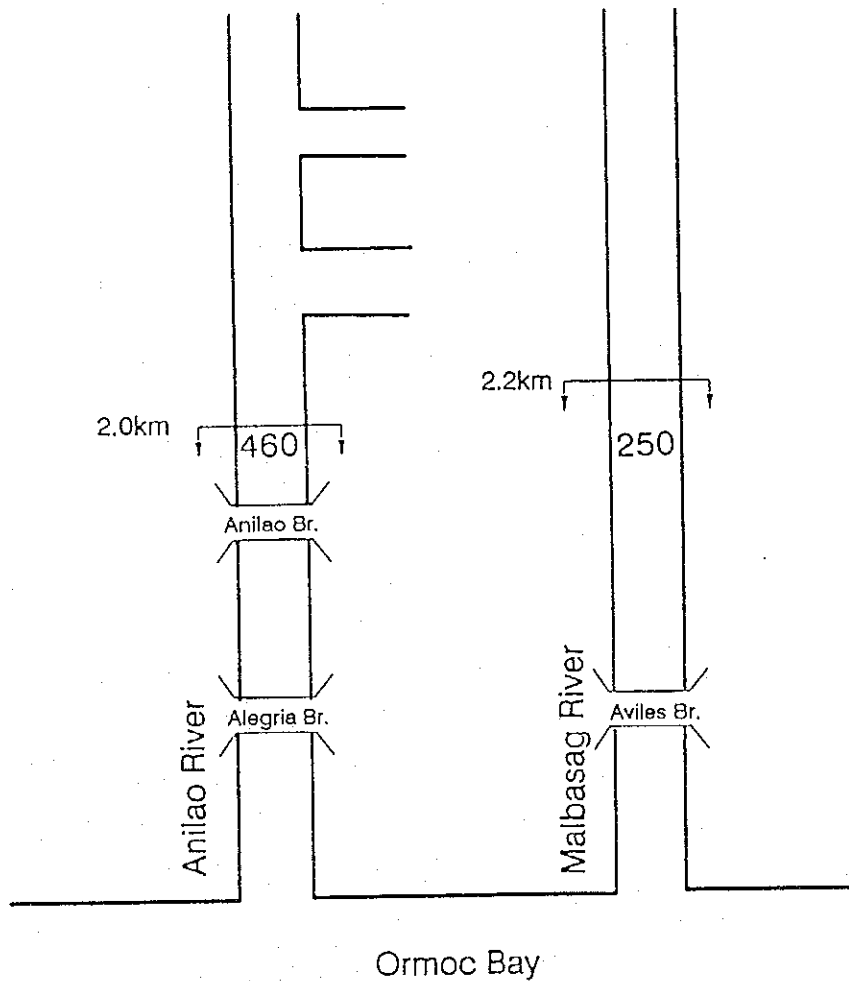
図 4.26 マスタープラン事業実施計画



Note: 1. Unit: m³/s
 2. The Figures show probable Flood Discharge of 50-Year Return Period
 3. (.) shows probable Flood Discharge of 20-Year Return Period

THE STUDY ON THE FLOOD CONTROL FOR RIVERS
 IN THE SELECTED URBAN CENTERS
 JAPAN INTERNATIONAL COOPERATION AGENCY

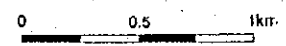
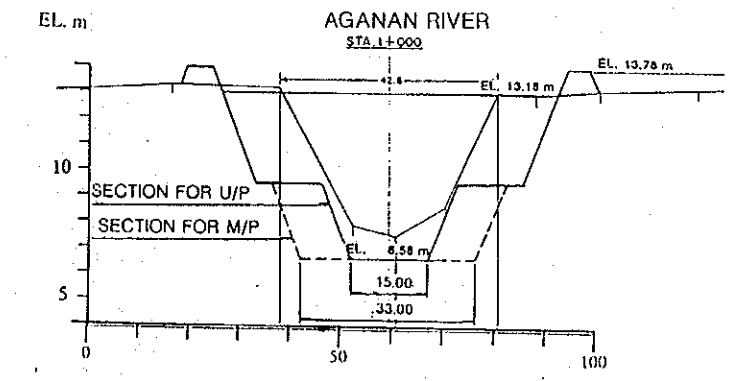
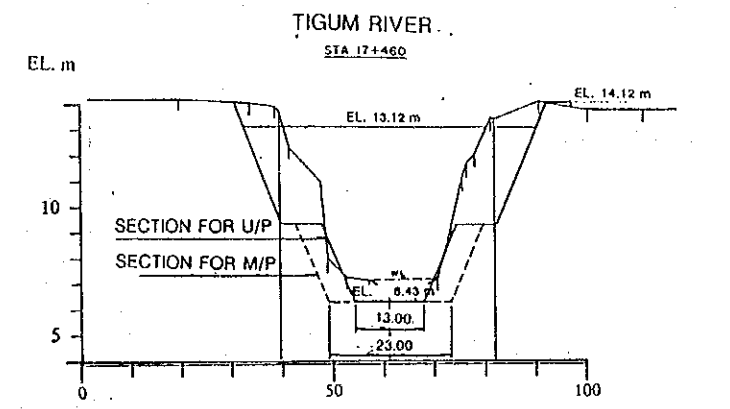
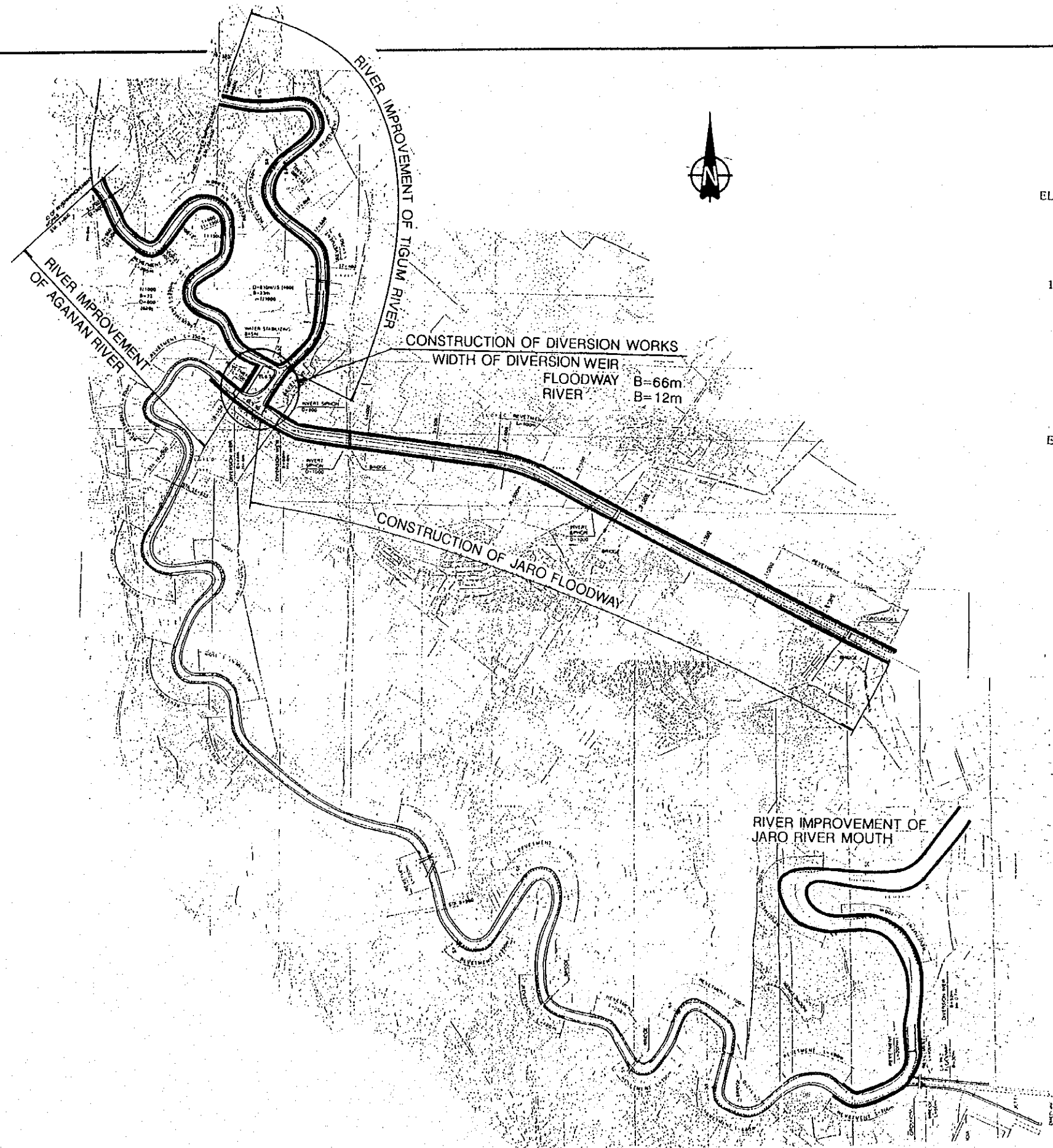
図 5.1(1/2) 緊急計画における計画流量配分図
 : イロイロ市



Legend

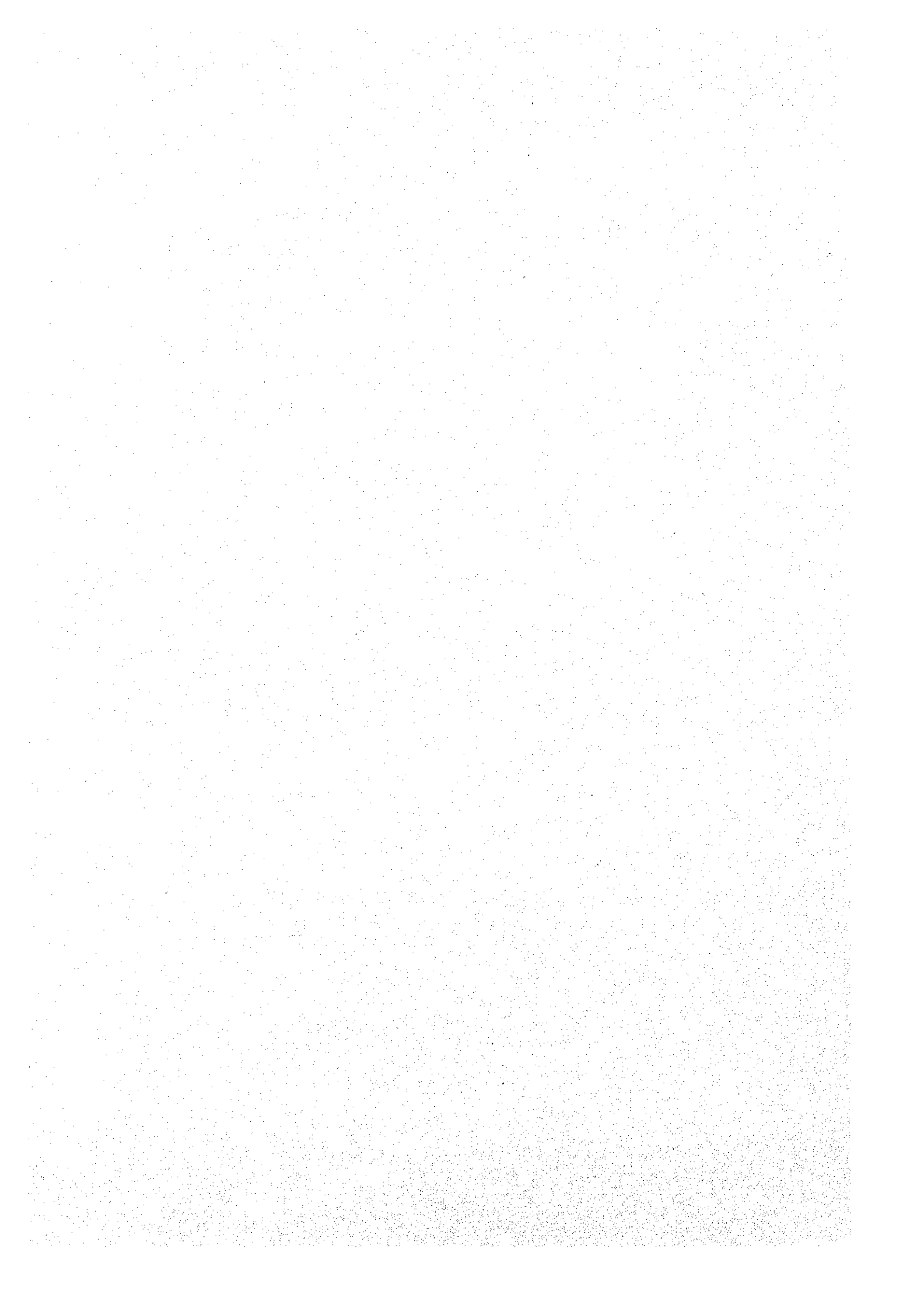
- Improvement Limit
- Bridge

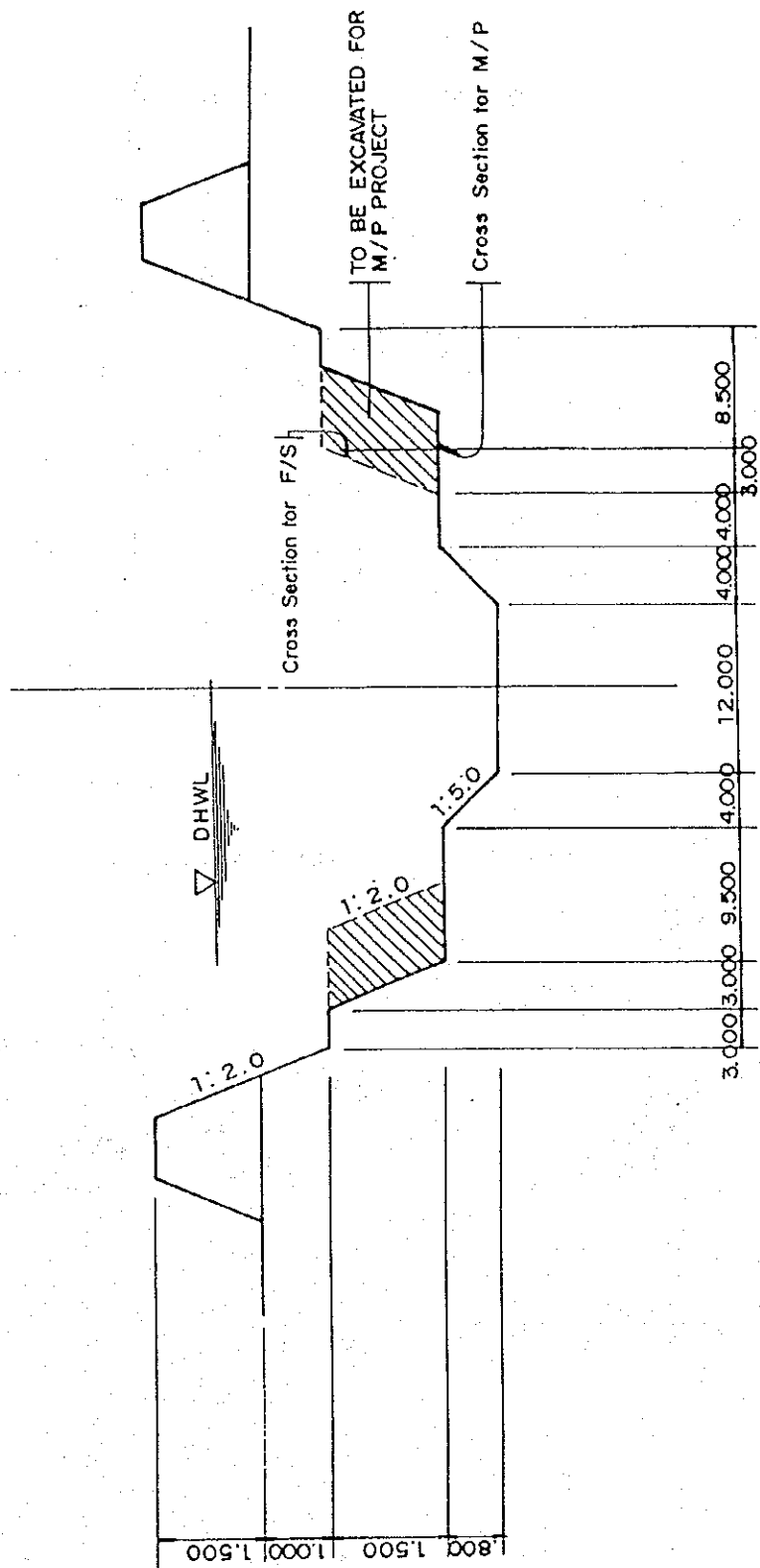
Note: 1. Unit: m³/s
 2. The Figures show probable Flood Discharge of 50-Year Return Period



THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

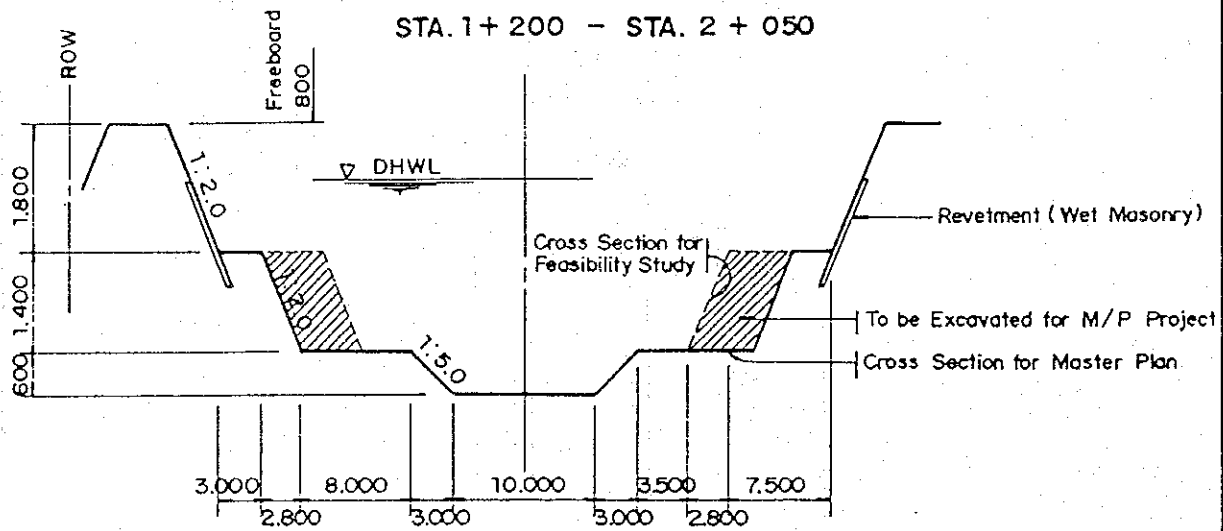
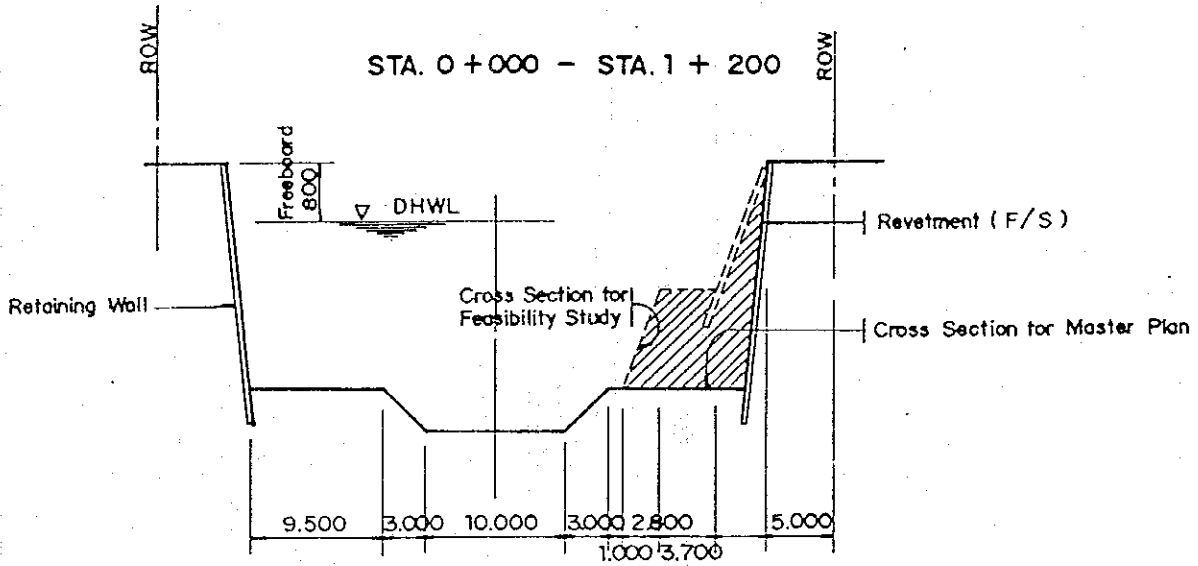
図 5.2 ハロ川緊急河川改修計画

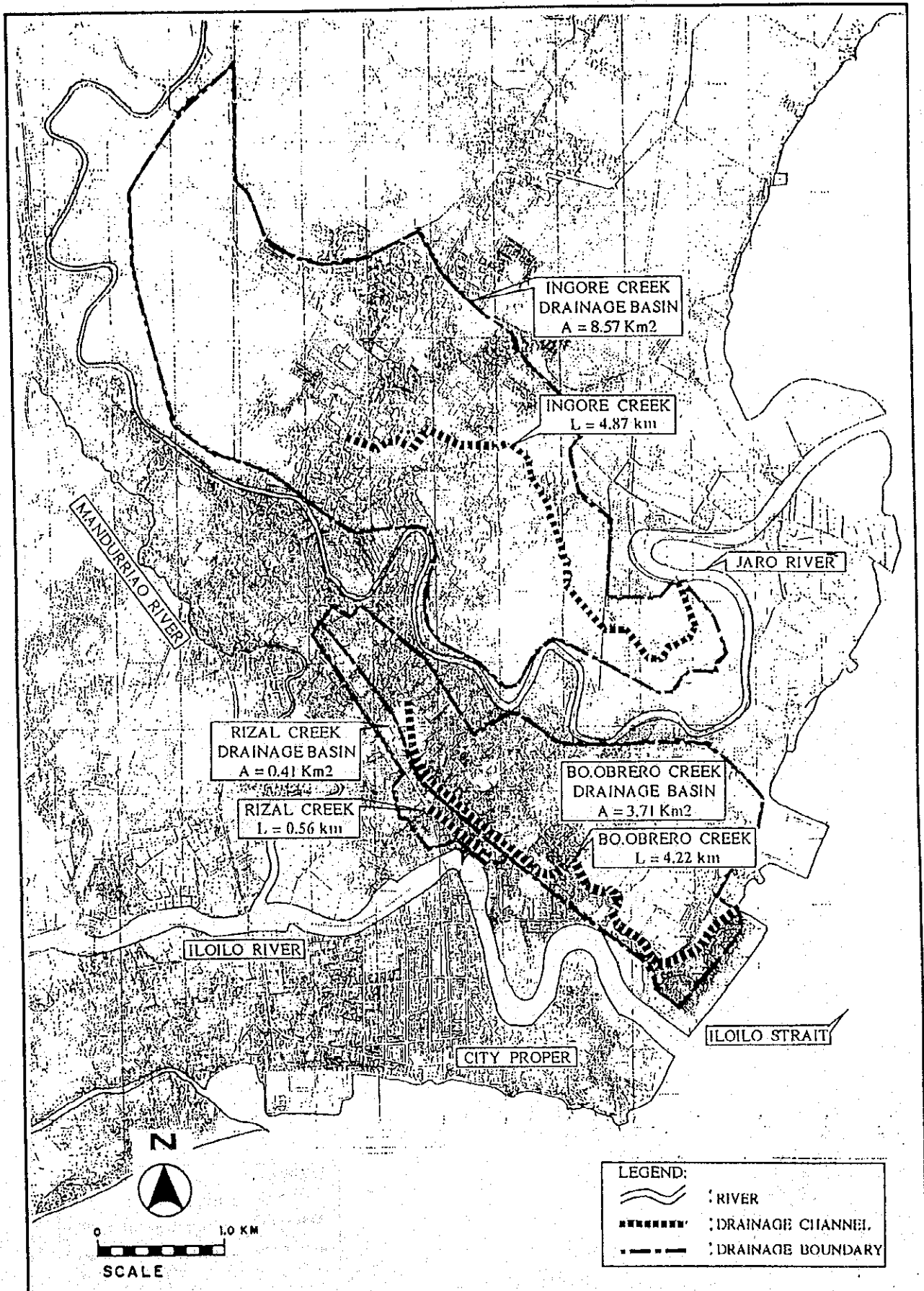




THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

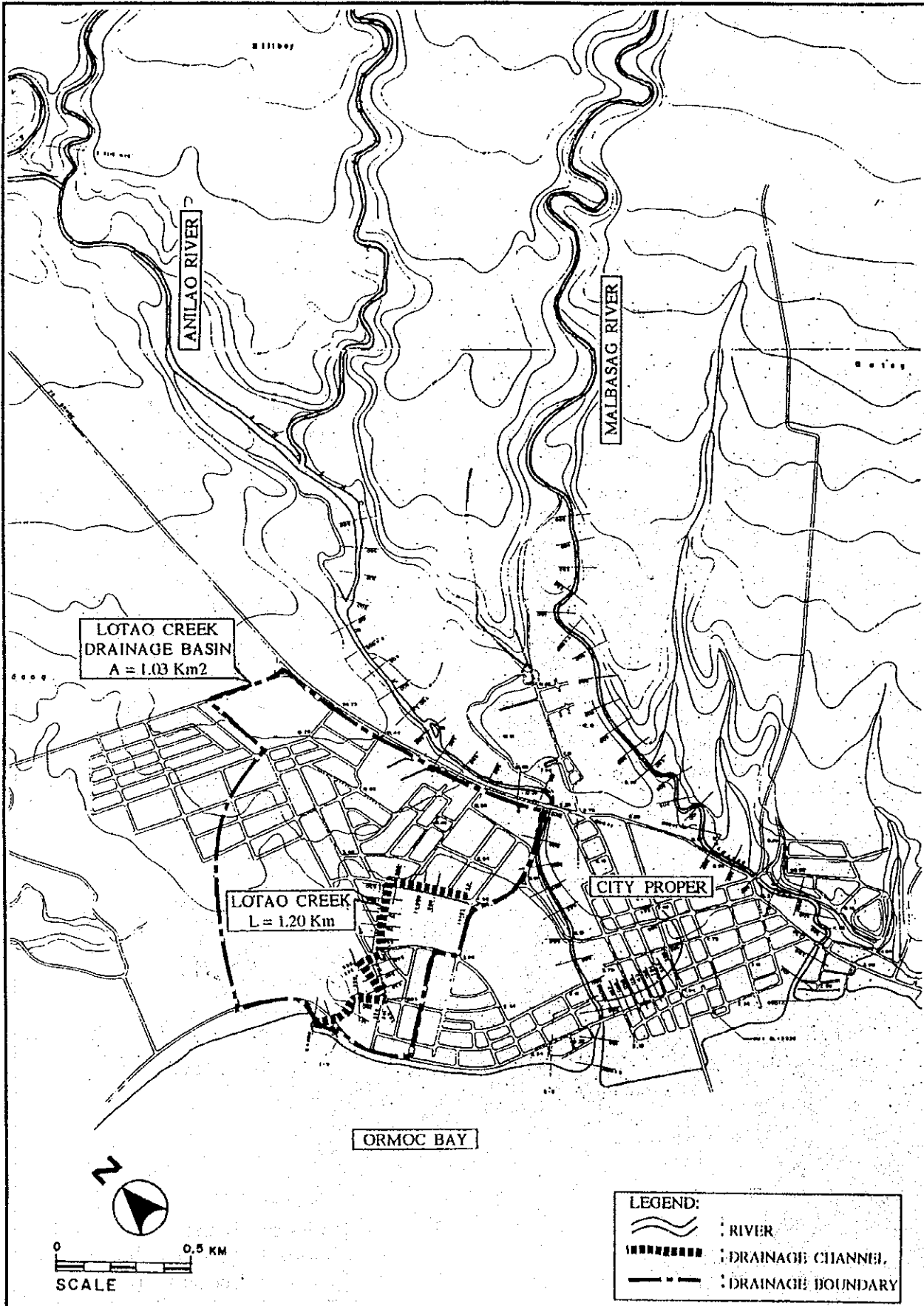
図 5.4 マスタープランと緊急計画の横断面
: アニラオ川





THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

図 5.6 排水対象地域：イロイロ市

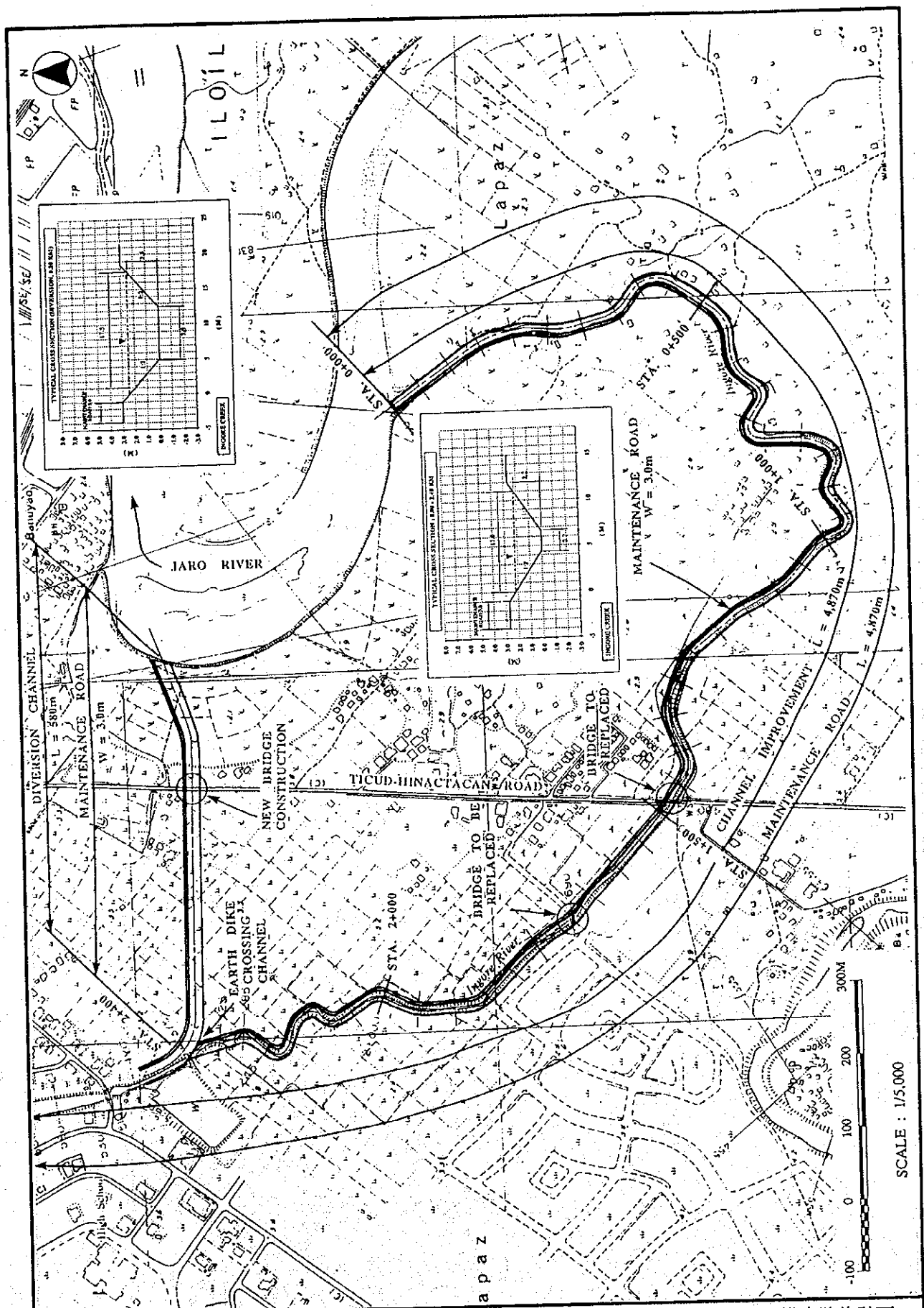


THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS

JAPAN INTERNATIONAL COOPERATION AGENCY

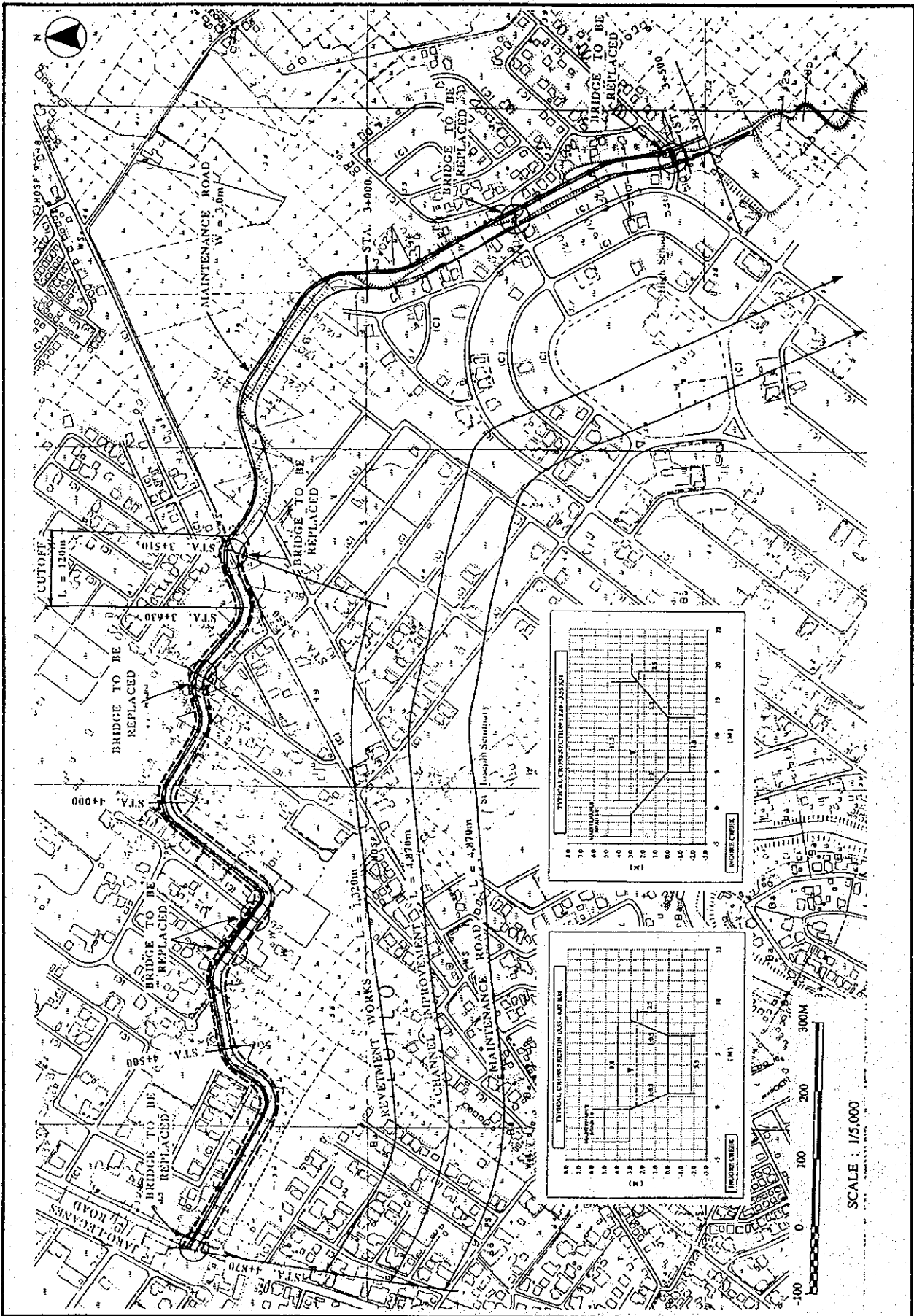
図 5.7

排水対象地域：オルモック市



THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

図 5.8(1/2) インゴレクリーク排水改修計画
平面図及び標準横断面図

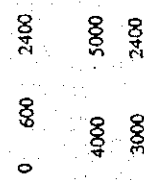
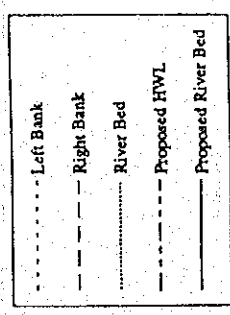
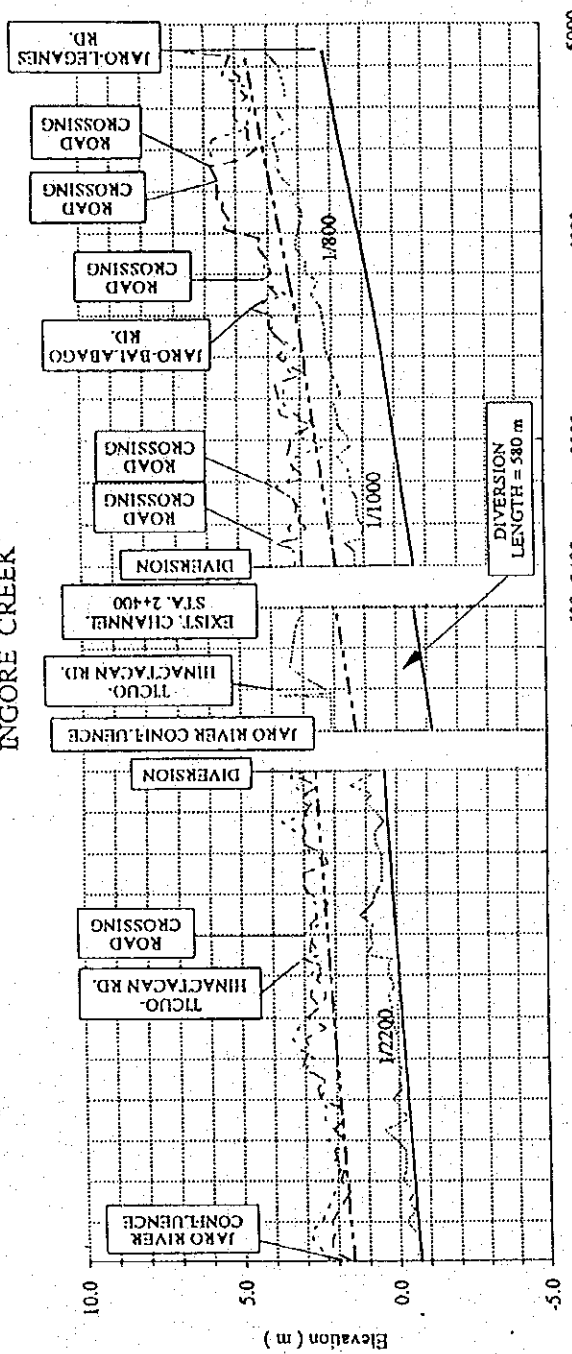


SCALE : 1/5,000

THE STUDY ON THE FLOOD CONTROL FOR RIVERS
 IN THE SELECTED URBAN CENTERS
 JAPAN INTERNATIONAL COOPERATION AGENCY

図 5.8(2/2) インゴレクリーク排水改修計画
 平面図及び標準横断面図

INGORE CREEK

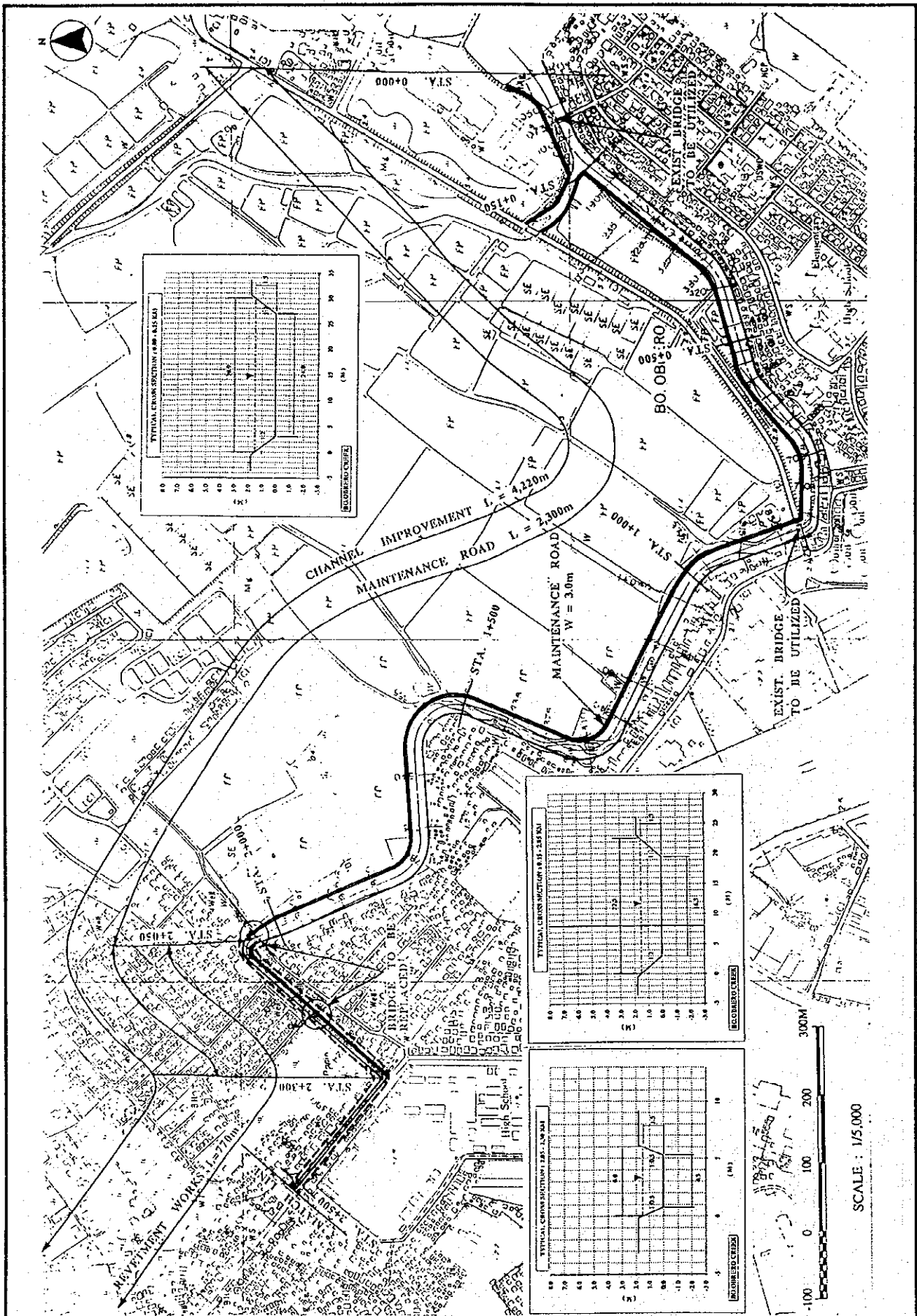


Distance (m)

Station No.	PROPOSED	EXISTING
0+000	1.50	2.30
0+200	-0.61	2.50
0+400	-0.52	2.20
0+600	-0.43	2.30
0+800	-0.34	2.50
1+000	-0.25	3.00
1+200	-0.15	2.90
1+400	-0.06	2.80
1+600	0.03	2.70
1+800	0.12	2.90
2+000	0.21	2.80
2+200	0.30	2.90
2+400	0.39	2.90
2+600	0.48	3.00
2+800	0.57	3.10
3+000	0.66	3.20
3+200	0.75	3.30
3+400	0.84	3.40
3+600	0.93	3.50
3+800	1.02	3.60
4+000	1.11	3.70
4+200	1.20	3.80
4+400	1.29	3.90
4+600	1.38	4.00
4+800	1.47	4.10
5+000	1.56	4.20
5+200	1.65	4.30
5+400	1.74	4.40
5+600	1.83	4.50
5+800	1.92	4.60
6+000	2.01	4.70
6+200	2.10	4.80
6+400	2.19	4.90
6+600	2.28	5.00
6+800	2.37	5.10
7+000	2.46	5.20
7+200	2.55	5.30
7+400	2.64	5.40
7+600	2.73	5.50
7+800	2.82	5.60
8+000	2.91	5.70
8+200	3.00	5.80
8+400	3.09	5.90
8+600	3.18	6.00
8+800	3.27	6.10
9+000	3.36	6.20
9+200	3.45	6.30
9+400	3.54	6.40
9+600	3.63	6.50
9+800	3.72	6.60
10+000	3.81	6.70
10+200	3.90	6.80
10+400	3.99	6.90
10+600	4.08	7.00
10+800	4.17	7.10
11+000	4.26	7.20
11+200	4.35	7.30
11+400	4.44	7.40
11+600	4.53	7.50
11+800	4.62	7.60
12+000	4.71	7.70
12+200	4.80	7.80
12+400	4.89	7.90

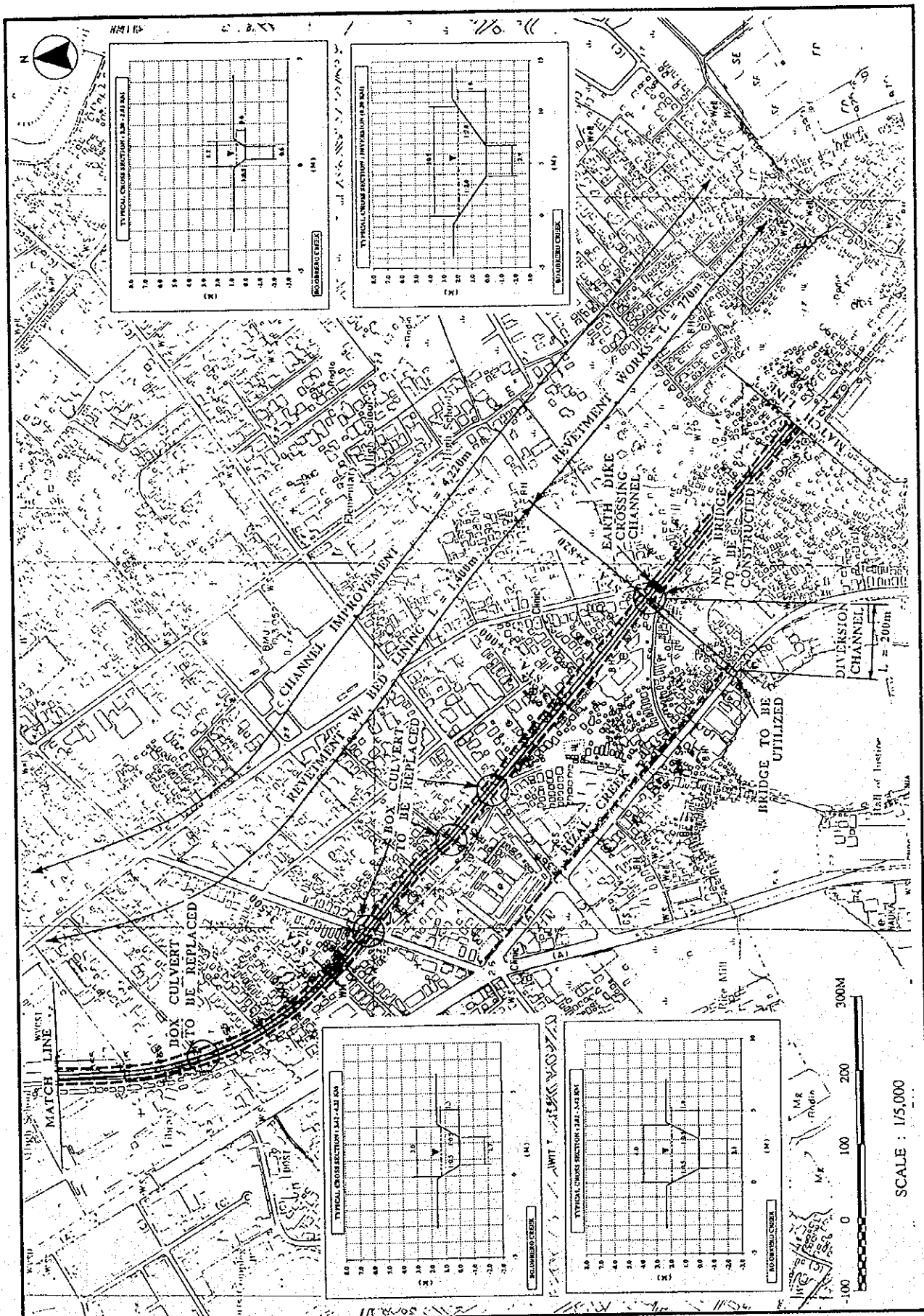
THE STUDY ON THE FLOOD CONTROL FOR RIVERS IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

図 5.9 インゴレクリーク改修縦断面図



THE STUDY ON THE FLOOD CONTROL FOR RIVERS
 IN THE SELECTED URBAN CENTERS
 JAPAN INTERNATIONAL COOPERATION AGENCY

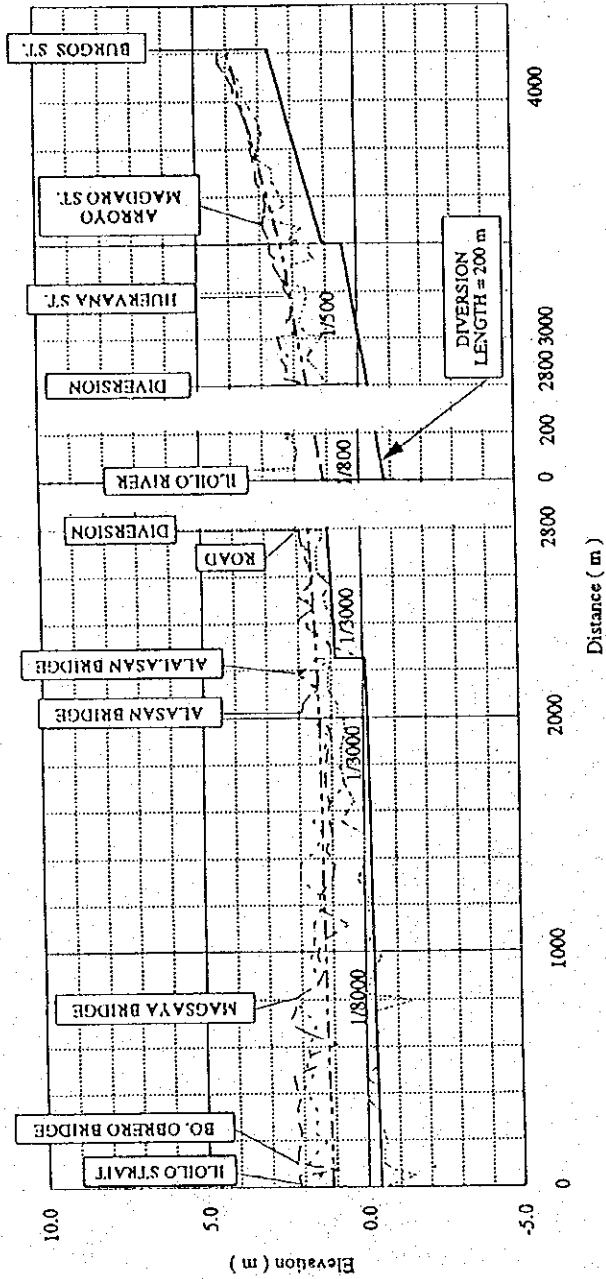
図 5.10(1/3) ボ. オブレロクリーク排水改修
 計画平面図及び標準横断面図



THE STUDY ON THE FLOOD CONTROL FOR RIVERS
 IN THE SELECTED URBAN CENTERS
 JAPAN INTERNATIONAL COOPERATION AGENCY

図 5.10(2/3) ポ. オブレクreek排水改修
 計画平面図及び標準横断面図

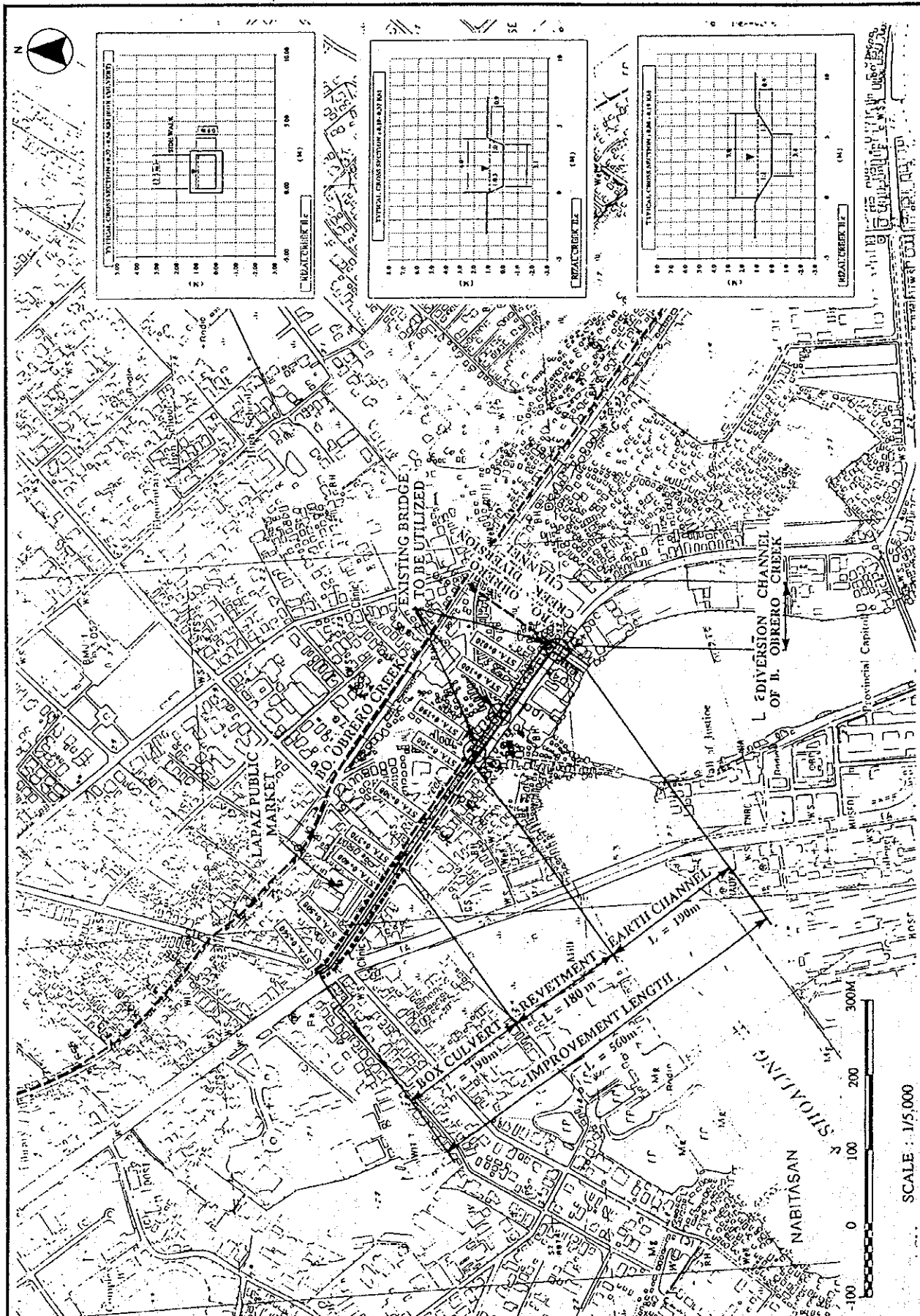
B. OBRERO CREEK



Station No.	River Bed (m)	Left Bank (m)	Right Bank (m)	River Bed (m)	HWL (m)	Bed Slope
0+000	0.70	1.30	2.10	1.12	1.10	1/800
0+190	-0.60	1.30	2.10	1.12	1.12	1/800
0+380	0.00	1.80	2.10	1.15	1.15	1/800
0+610	-0.10	1.80	0.90	1.18	1.18	1/800
0+795	-1.50	2.30	2.20	1.20	1.20	1/800
1+040	-0.10	1.60	1.40	1.23	1.23	1/800
1+180	-0.10	1.40	1.40	1.25	1.25	1/800
1+375	0.00	2.00	0.90	1.27	1.27	1/800
1+640	0.30	1.00	1.10	1.31	1.31	1/800
1+780	0.70	0.70	1.20	1.32	1.32	1/800
2+000	0.80	1.90	1.90	1.35	1.35	1/800
2+240	1.00	1.00	1.50	1.43	1.43	1/3000
2+390	0.80	1.70	1.80	1.48	1.48	1/3000
2+618	1.40	1.50	0.96	1.56	1.56	1/3000
2+820	1.20	1.90	1.90	1.61	1.61	1/3000
0+000	2.00	2.00	2.00	1.10	1.10	1/800
0+200	2.00	2.00	2.00	1.35	1.35	1/800
2+820	1.20	1.90	1.90	1.38	1.38	1/800
3+010	1.10	2.50	2.50	1.61	1.61	1/800
3+215	1.60	2.10	2.30	1.86	1.86	1/800
3+400	1.50	2.70	2.70	2.09	2.09	1/800
3+615	2.40	2.90	2.90	2.52	2.52	1/500
3+815	3.00	3.30	3.30	2.92	2.92	1/500
4+015	3.50	3.70	3.80	3.32	3.32	1/500
4+220	3.80	4.20	4.10	3.72	3.72	1/500

THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

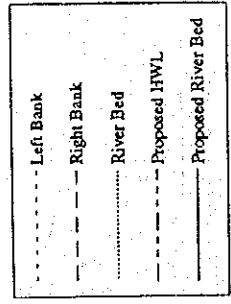
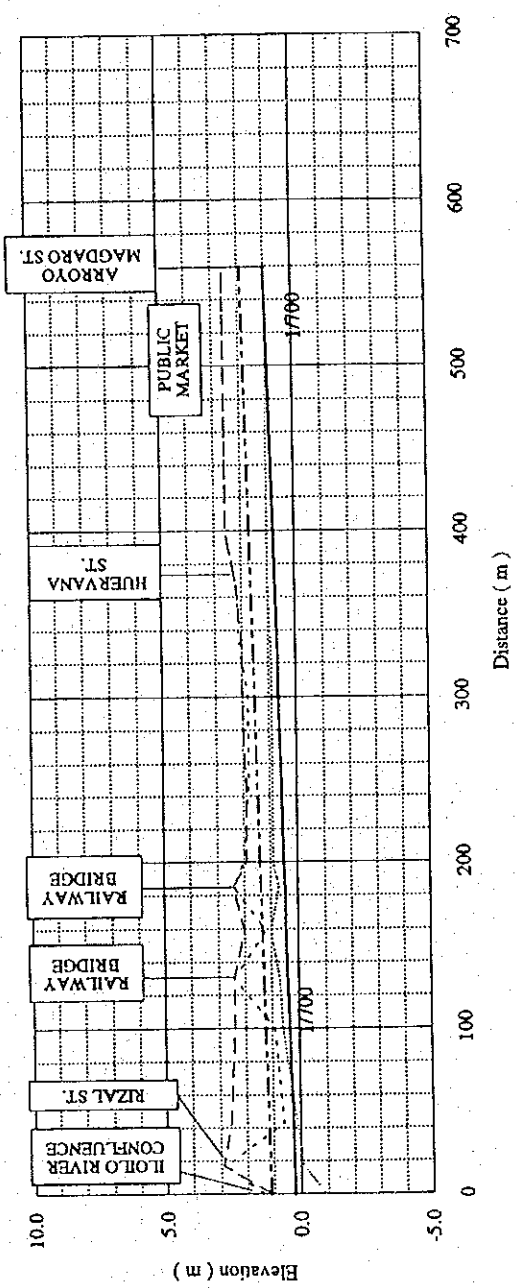
図 5.11 ボ. オブレロクリーク改修縦断面図



THE STUDY ON THE FLOOD CONTROL FOR RIVERS
 IN THE SELECTED URBAN CENTERS
 JAPAN INTERNATIONAL COOPERATION AGENCY

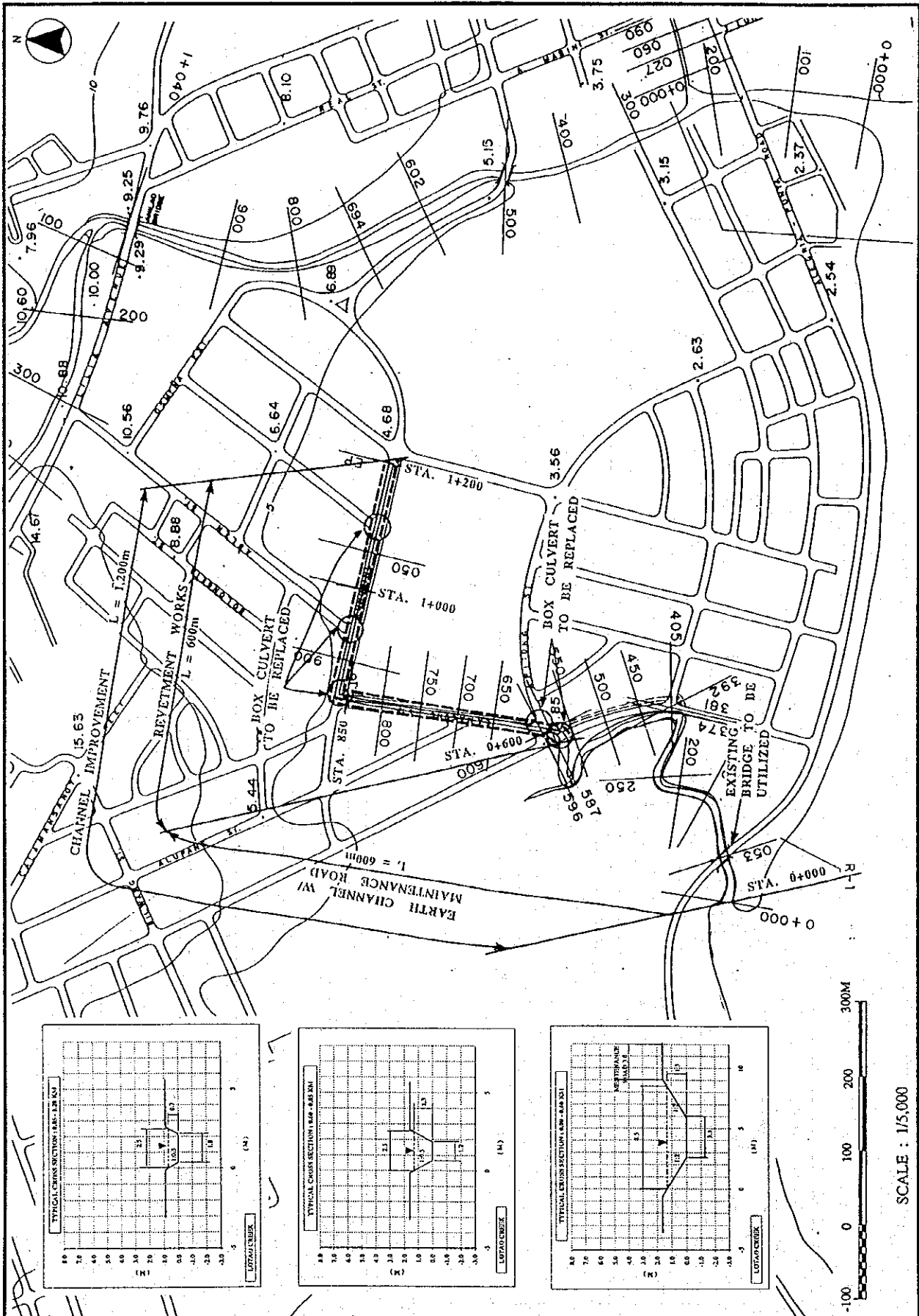
図 5.12 リザールクリーク排水改修計画
 平面図及び標準横断面図

RIZAL CREEK



Station No.	River Bed (m)	Left Bank (m)	Right Bank (m)	River Bed (m)	HWL (m)	Bed Slope
0+000	-0.90	1.40	1.10	0.20	1.10	PROSED
0+100	0.60	0.90	2.40	0.34	0.24	
0+200	0.90	2.00	1.90	0.49	1.39	EXISTING
0+302	0.99	1.80	2.00	0.63	1.53	
0+400	-	2.60	2.60	0.77	1.67	PROSED
0+500	-	2.60	2.60	0.91	1.81	
0+560	-	2.60	2.60	1.00	1.90	

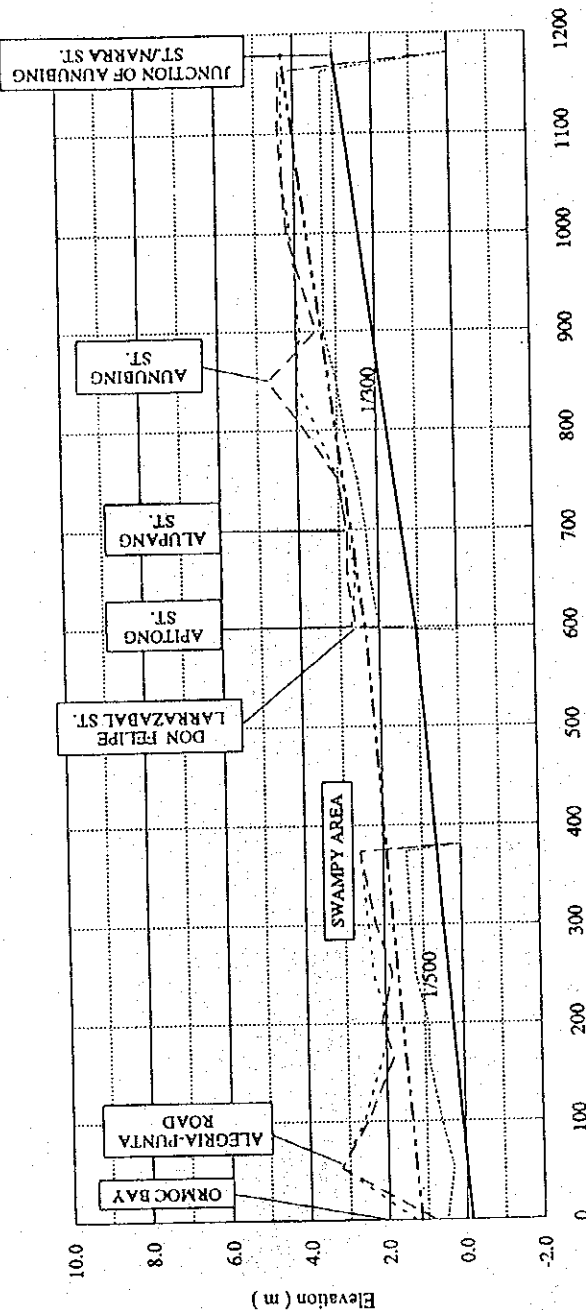
図 5.13 リザールクreek改修縦断図



THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS
JAPAN INTERNATIONAL COOPERATION AGENCY

図 5.14 ロタオクリーク排水改修計画平面図
及び標準横断面図

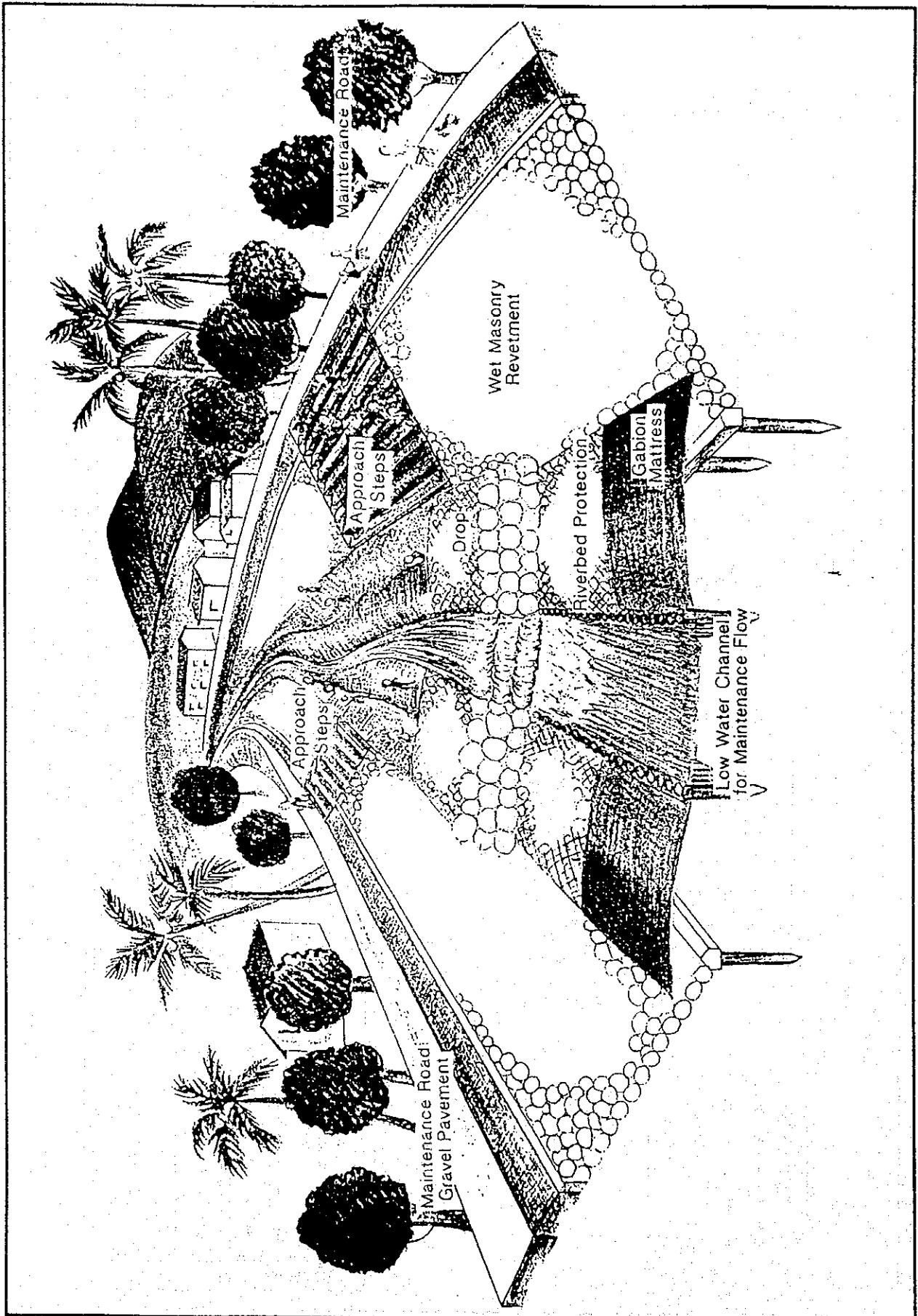
LOTAO CREEK



Station No.	PROPOSED	EXISTING
Bed Slope	1/500	1/500
HWL (m)	1.15	1.15
River Bed (m)	0.80	0.80
Right Bank (m)	2.50	2.60
Left Bank (m)	2.10	1.90
River Bed (m)	0.25	0.90
	1.55	0.90
	1.75	1.40
	0.45	2.80
	2.20	2.20
	0.66	0.66
	1.96	1.96
	2.15	0.85
	2.36	1.06
	2.69	2.80
	1.39	2.80
	2.80	2.80
	1.72	2.30
	3.02	2.70
	3.36	3.30
	2.06	3.30
	3.50	3.30
	2.39	3.90
	3.69	3.30
	4.20	4.10
	4.30	4.30
	2.72	4.30
	4.02	3.30
	4.36	4.30
	3.06	4.40
	4.40	4.40
	4.30	4.30

THE STUDY ON THE FLOOD CONTROL FOR RIVERS IN THE SELECTED URBAN CENTERS
 JAPAN INTERNATIONAL COOPERATION AGENCY

図 5.15 ロタオクreek改修縦断面図

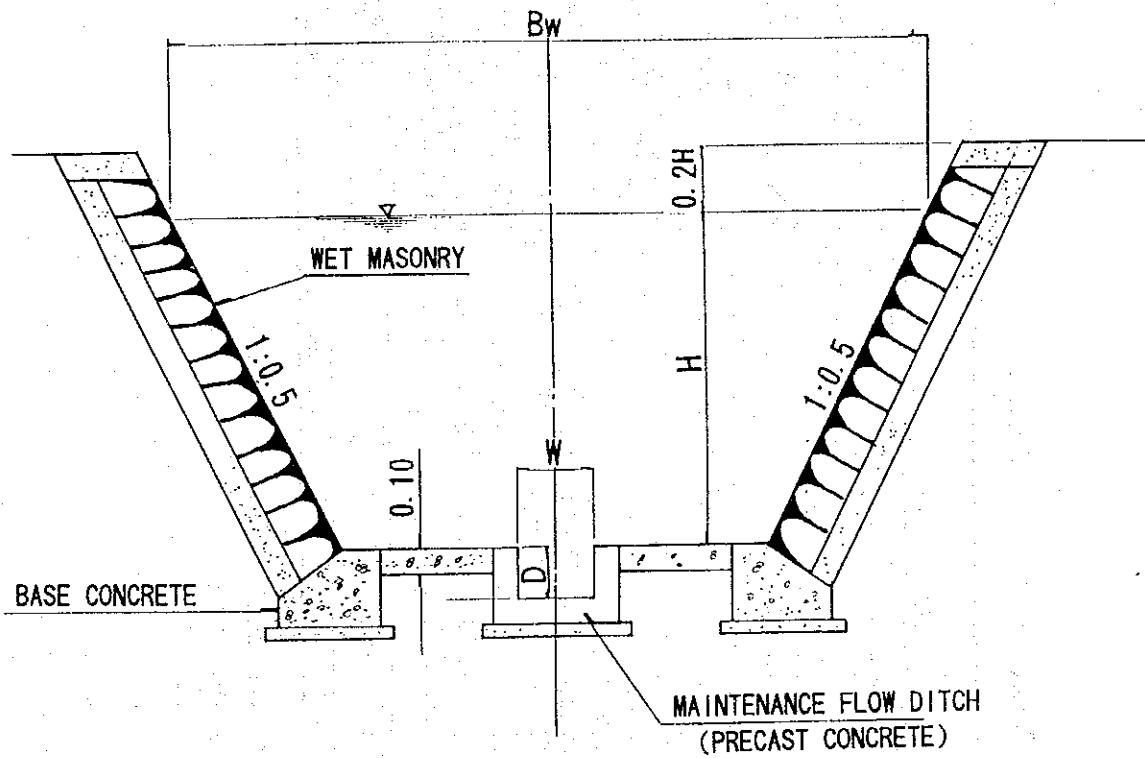


THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS

図 5.16

河川環境護岸イメージ図

JAPAN INTERNATIONAL COOPERATION AGENCY



	Bw (m)	H (m)	Ditch	
			W(m)	D(m)
Type 1	3.0	1.3	0.3	0.2
Type 2	4.0	1.9	0.4	0.3

THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS

JAPAN INTERNATIONAL COOPERATION AGENCY

図 5.17 維持排水用溝

Implementation Schedule for Urgent Plan

	Quantity (km)	Construction Cost (million Pesos)	Year										Construction Period				
			1994	1995	1996	1997	1998	1999	2000	2001							
Iloilo City																	
Jaro	14.00	1,175.6															2.00
Floodway	4.80	614.1															2.00
Iloilo	6.50	241.4															2.00
Mandurriao	4.20	180.7															1.75
Ormoc City																	
Drainage	10.51	139.5															1.75
Anilao	2.00	321.3															1.75
Malbasag	2.20	182.2															1.50
Drainage	1.20	9.3															0.50
			F/S			D/D				Compensation						Construction	

- 1) Construction period is including mobilization, demobilization and other preparation works.
- 2) Implementation schedule is based on the loan agreement contracts.

THE STUDY ON THE FLOOD CONTROL FOR RIVERS
IN THE SELECTED URBAN CENTERS

JAPAN INTERNATIONAL COOPERATION AGENCY

図 5.18 緊急計画の事業実施図

