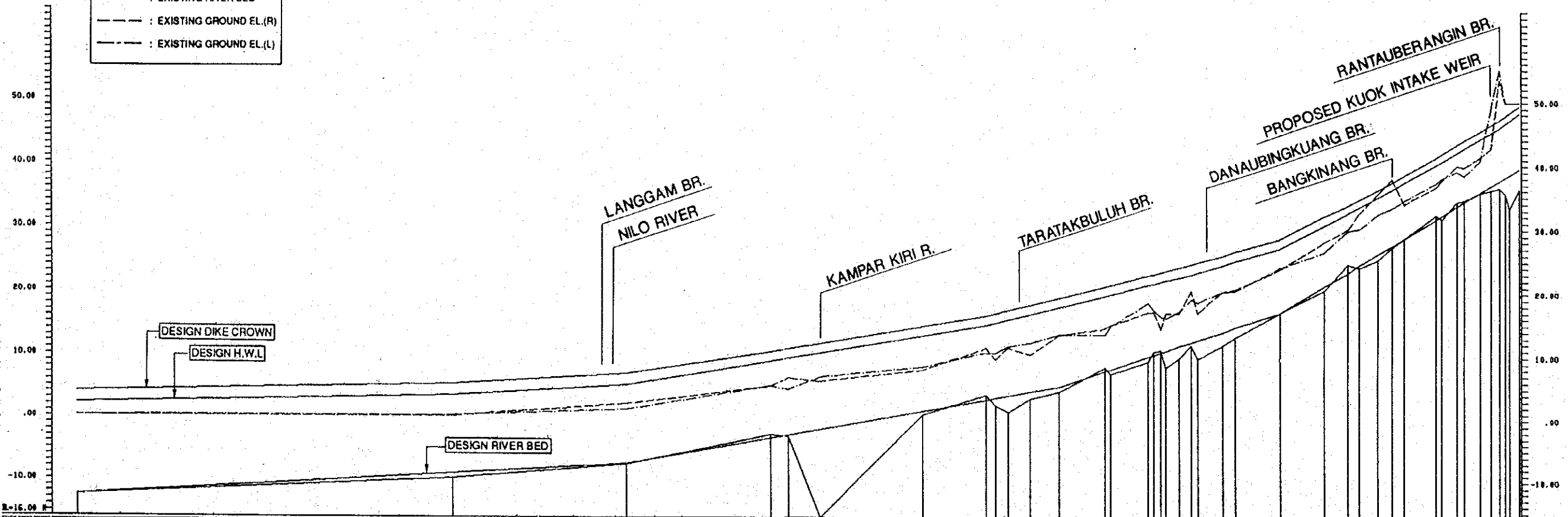


KAMPAR KANAN RIVER

LEGEND	
	: EXISTING RIVER BED
	: EXISTING GROUND EL.(R)
	: EXISTING GROUND EL.(L)



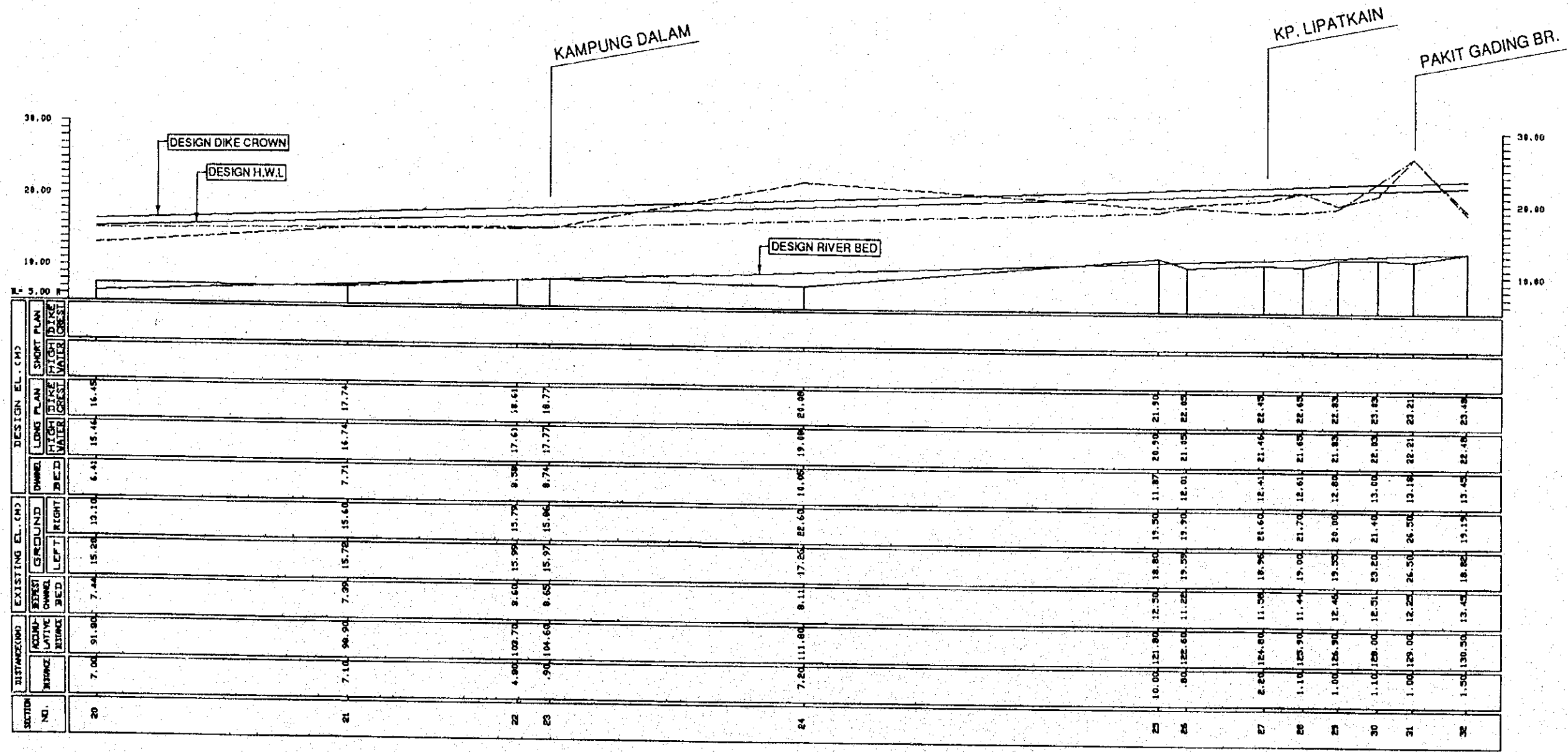
SECTION NO.	DISTANCE (M)		EXISTING EL. (M)		DESIGN EL. (M)	
	START	END	LEFT	RIGHT	LOW	HIGH
1-01	0+00	0+00	-12.36	0.89	-12.36	4.94
-51	60+00	64+00	-9.75	.39	-9.02	5.29
-63	87+86	87+86	-7.32	1.26	-7.39	6.79
8	22+20	111+00	-2.57	5.20	-0.17	9.64
1	2+00	113+85	-2.95	4.60	-2.66	9.21
2	3+00	116+80	-13.94	6.60	-1.75	16.34
3	16+30	125+10	.58	8.20	7.70	13.06
11	16+80	145+30	3.00	10.50	11.20	3.07
12	1+00	146+80	2.04	10+40	9.40	3.34
13	2+00	148+80	1.21	11+50	11.30	3.71
17	3+50	138+30	3.27	12+10	10.20	4.34
20	4+30	136+80	4+48	13+40	13.30	5.15
22	7+00	145+30	9.33	12+80	14.35	7.88
23	6+00	147+80	8.18	12+40	13.80	8.12
24	1+00	149+80	11.22	12+00	14.30	8.39
25	2+00	151+80	11.92	12+00	14.80	8.56
26	3+00	153+80	11.07	20+30	24.30	24.30
27	2+00	155+80	13.05	20+40	24.60	25.00
29	6+00	138+20	16.94	24.00	23.80	16.94
30	7+10	139+30	20+40	26.50	28.00	21.14
36	3+70	203+00	24.30	29.80	30.00	23.31
37	1+50	204+50	23.99	30+10	26.50	24.43
38	3+00	207+50	25.88	32+40	30.50	26.20
39	2+20	210+10	27.24	33+30	37.50	27.45
39	2+00	212+10	28+60	34+50	33.50	28.67
39	5+00	217+50	37.50	36+50	39.50	31.51
39	5+10	221+70	34+61	38+40	37.80	24.31
37	2+00	224+30	35.62	40+90	41.40	35.84
37	1+70	225+00	36.18	48+80	42.80	36.84
37	1+50	225+80	36.52	50+80	38.80	37.81
37	1+00	229+80	34.31	50+80	39.50	39.25

THE STUDY ON
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Fig. VI.5.9 PROPOSED LONGITUDINAL PROFILE (1/2) FOR KAMPAR RIVER SYSTEM

KAMPAR KIRI RIVER

LEGEND	
	: EXISTING RIVER BED
	: EXISTING GROUND EL.(R)
	: EXISTING GROUND EL.(L)

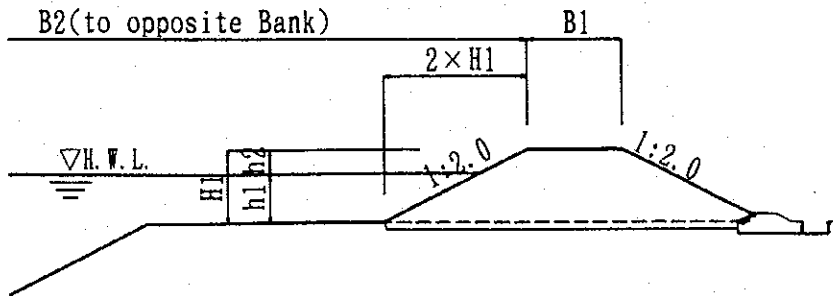


SECTION NO.	DISTANCE (KM)	EXISTING EL. (M)		DESIGN EL. (M)			
		CHANNEL BED	GROUND	CHANNEL BED	LONG PLAN HIGH WATER CREST	SHORT PLAN HIGH WATER CREST	
20	7.00	91.80	15.26	7.44	6.41	15.44	16.45
21	7.10	96.90	15.72	7.39	7.71	16.74	17.74
22	4.80	102.70	15.92	8.60	8.38	17.61	18.61
23	9.00	104.60	15.97	8.65	8.74	17.77	18.77
24	7.20	111.80	17.26	8.11	10.05	19.04	20.05
25	10.00	121.80	18.80	12.50	11.87	20.90	21.90
26	8.00	122.60	19.37	11.25	12.01	21.05	22.05
27	2.20	124.80	18.96	11.36	12.41	21.46	22.45
28	1.10	125.90	19.00	11.44	12.61	21.65	22.65
29	1.00	126.90	19.33	12.46	12.80	21.83	22.83
30	1.10	129.00	19.50	12.51	13.00	22.03	23.03
31	1.00	129.00	19.22	12.22	13.18	22.21	23.21
32	1.50	130.30	19.45	13.45	13.45	23.45	23.45

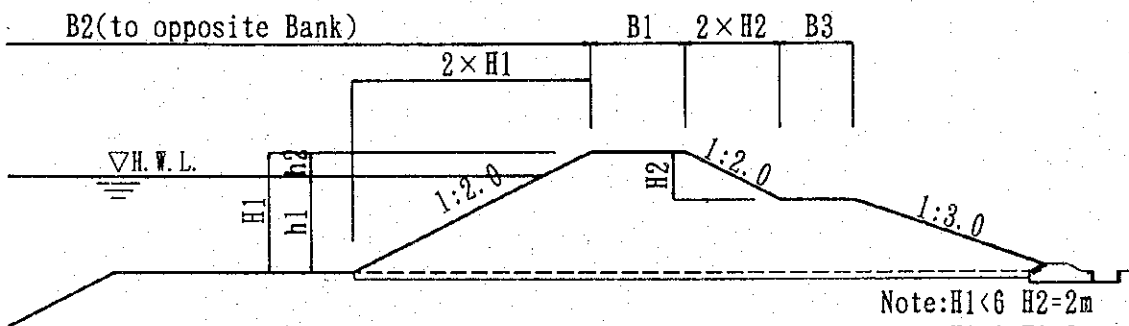
THE STUDY ON
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Fig. VI.5.9 PROPOSED LONGITUDINAL PROFILE (2/2) FOR KAMPAR RIVER SYSTEM

TYPE-A CROSS SECTION



TYPE-B CROSS SECTION



Note: $H1 < 6$ $H2 = 2m$
 $H1 < 8$ $H2 = 3m$
 $H1 > 8$ $H2 = 4m$

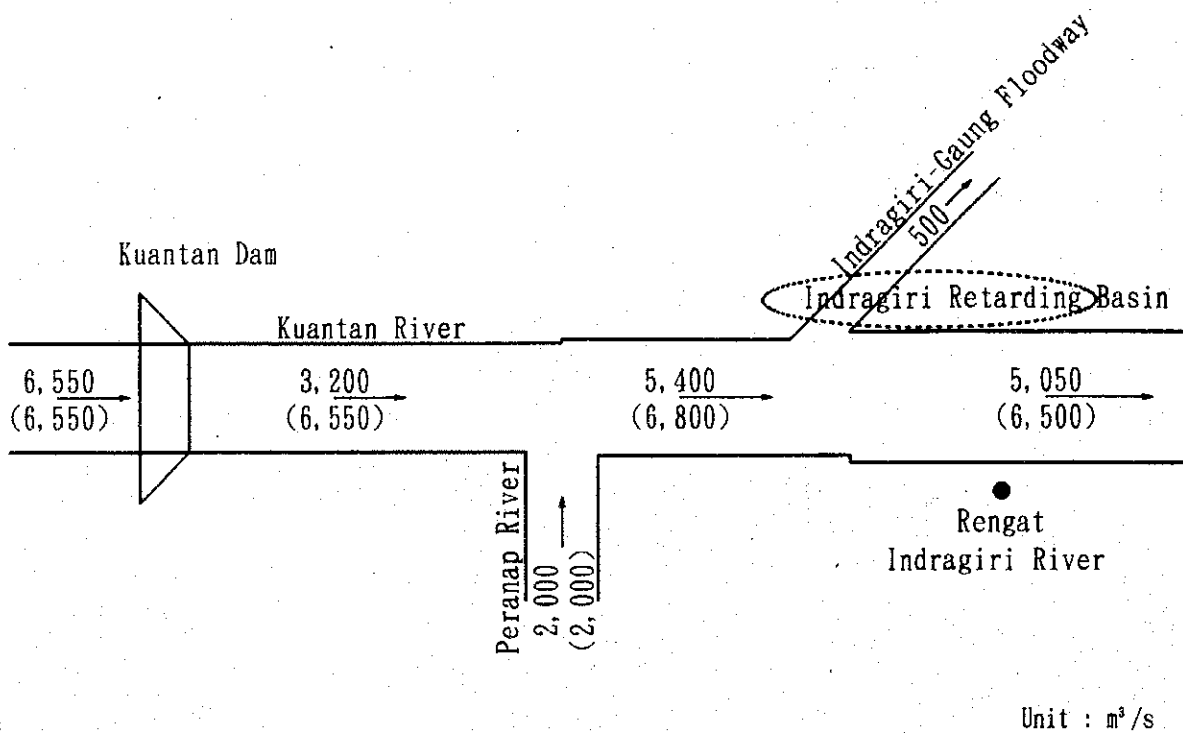
Unit: m

River	No.	Accm. Distance (km)	Type	B1	B2	B3	h2
Kampar Kanan	No. -101	0.0					
	No. -23	87.8	B	6.0	-	3.0	1.8
	No. 0	111.0	B	5.0	600	3.0	1.5
	No. 2	118.8	B	5.0	400	3.0	1.5
	No. 17	152.3	B	5.0	300	3.0	1.5
	No. 46	198.7	A	5.0	300	-	1.2
Kampar Kiri	No. 20	91.8					
	No. 32	130.5	A	4.0	-	-	1.0

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Fig. VI.5.10 PROPOSED CROSS SECTIONS FOR KAMPAR RIVER SYSTEM

Middle and Lower Reaches of Indragiri River



Note : Design Scale: 50-year Return Period
 Figures in Parentheses are standard design discharges.

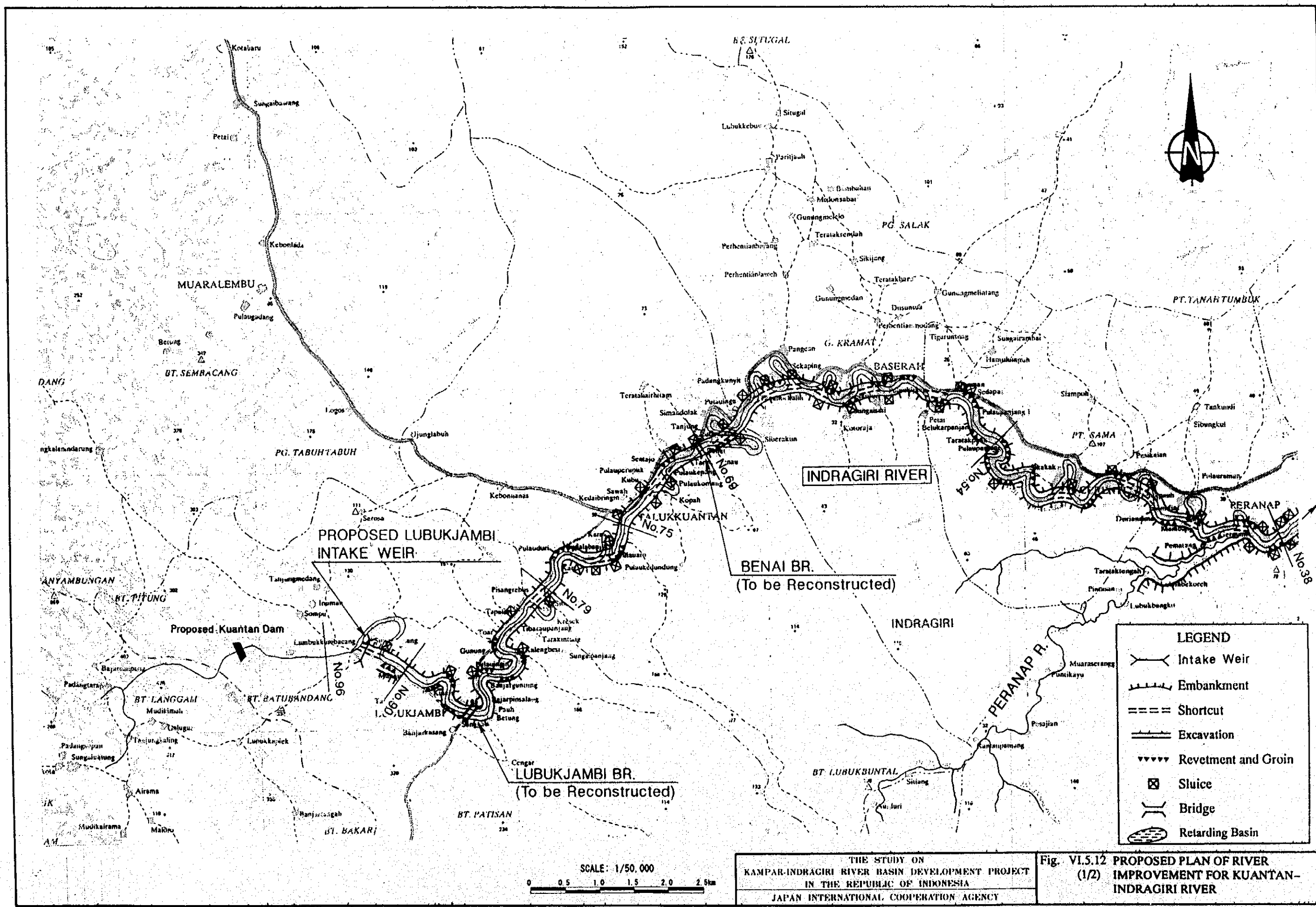
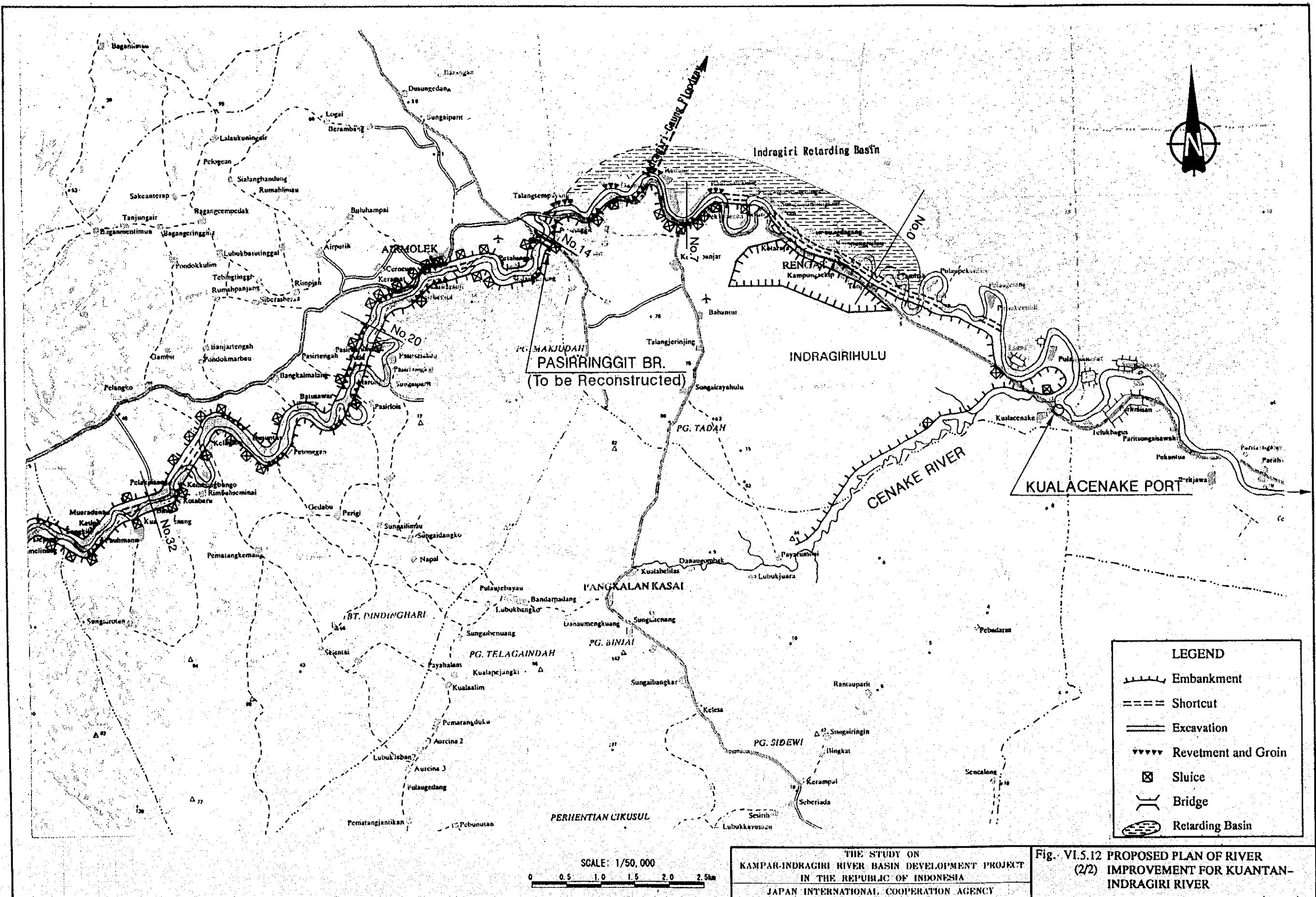


Fig. VI.5.12 PROPOSED PLAN OF RIVER IMPROVEMENT FOR KUANTAN-INDRAGIRI RIVER

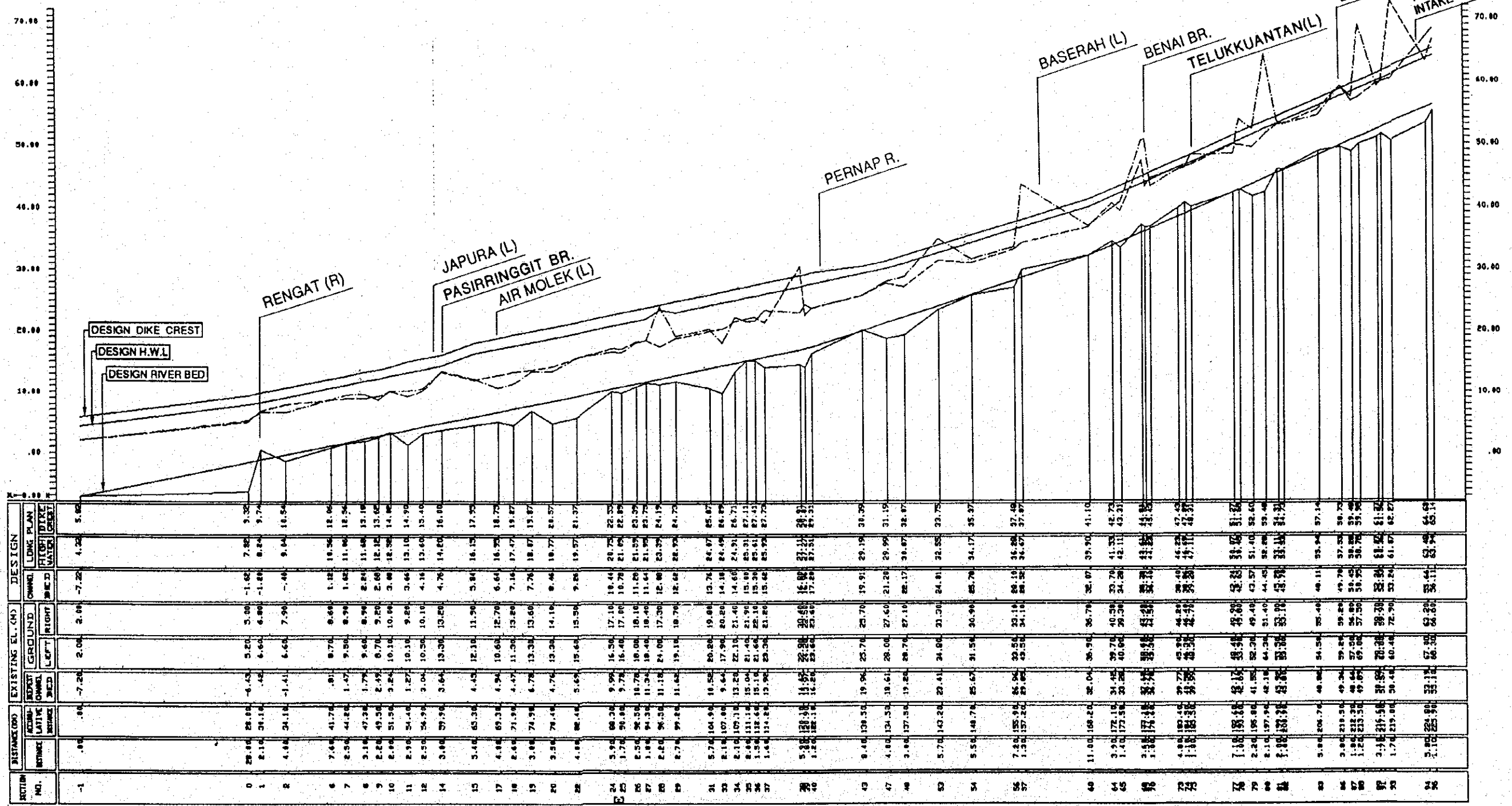


THE STUDY ON
 KAMPAR-INDRAGIRI RIVER BASIN DEVELOPMENT PROJECT
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Fig. VI.5.12 PROPOSED PLAN OF RIVER
 (2/2) IMPROVEMENT FOR KUANTAN-
 INDRAGIRI RIVER

Kuantan - Indragiri River

LEGEND	
	: EXISTING RIVER BED
	: EXISTING GROUND EL.(R)
	: EXISTING GROUND EL.(L)

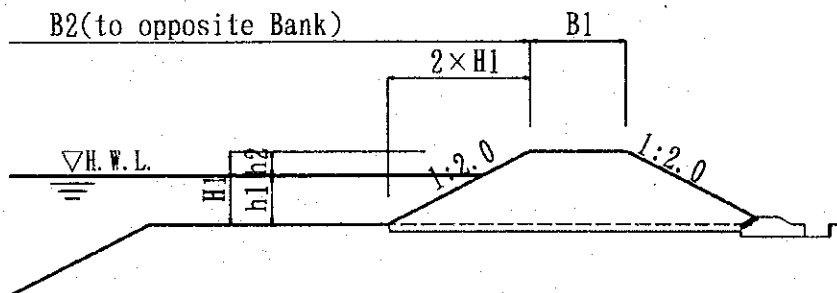


STATION NO.	DISTANCE (KM)		EXISTING EL. (M)		DESIGN	
	INTAKE	EXIT	RIGHT	LEFT	CHANNEL BED	DIKE CREST
-1	0.00	0.00	-7.20	2.00	-7.20	4.20
0	25.10	25.00	-6.43	5.20	-1.60	7.30
1	2.10	26.10	-4.6	6.60	-1.80	9.70
2	4.10	24.10	-1.41	6.60	-0.6	10.50
6	7.40	41.70	0.1	8.70	1.10	12.00
7	2.10	44.20	1.47	9.50	1.60	12.50
8	3.10	47.30	1.70	9.60	2.20	13.10
9	2.20	49.30	2.90	9.70	2.60	13.60
10	2.00	51.30	3.20	10.10	3.00	14.00
11	2.30	54.40	1.27	10.10	3.40	14.90
12	2.30	56.30	3.00	10.30	4.10	15.40
14	3.00	59.50	3.60	10.30	4.70	16.00
15	3.40	65.30	4.40	12.30	5.80	17.50
17	4.40	69.30	4.90	10.60	6.60	18.70
18	2.40	71.90	4.47	11.30	7.10	19.87
19	3.40	74.90	6.70	13.30	7.70	19.87
20	3.40	78.40	4.70	13.30	8.40	19.77
22	4.40	88.40	5.60	15.60	9.80	19.37
24	5.20	104.90	9.90	16.50	18.40	22.30
25	1.70	107.00	9.70	16.40	18.70	21.80
26	2.50	109.50	18.70	18.10	11.00	21.30
27	1.80	111.30	11.30	18.40	11.60	21.70
28	2.40	112.40	11.10	21.00	12.00	23.30
29	2.70	114.20	11.60	19.70	12.60	24.70
31	5.70	104.90	10.50	20.20	13.70	24.87
32	2.10	107.00	9.60	17.90	14.10	24.90
33	2.10	109.10	13.20	22.10	14.60	24.91
34	2.40	111.10	15.00	21.40	15.80	25.31
35	1.50	112.40	15.10	21.60	15.30	25.41
36	1.40	114.20	15.90	23.30	15.60	25.90
37	1.40	116.20	15.90	23.30	15.60	27.70
39	5.30	130.40	11.90	23.80	16.00	27.31
40	1.20	132.10	12.80	23.80	17.20	27.31
43	9.40	138.50	19.90	25.70	19.91	29.30
47	4.00	134.50	19.60	28.00	21.20	29.90
48	3.00	137.50	19.20	28.70	22.17	30.87
53	5.70	143.20	23.41	34.00	24.81	32.70
54	5.50	148.70	25.67	31.50	25.70	34.17
56	7.60	155.00	26.00	33.10	26.10	35.40
57	1.30	157.20	25.80	34.10	26.50	37.07
60	11.00	168.20	32.00	36.90	32.07	39.90
64	3.30	172.10	34.20	40.20	33.70	41.30
65	1.40	173.50	33.20	39.30	34.20	42.11
68	1.80	177.40	33.20	39.30	34.20	42.11
73	4.00	183.40	39.70	43.90	38.40	44.20
75	1.80	184.50	39.50	43.90	38.40	44.20
76	1.00	186.10	42.10	43.80	38.80	44.20
79	2.20	196.80	41.80	49.40	43.57	51.40
80	2.10	197.90	42.10	44.20	44.40	52.20
81	1.80	200.30	43.00	53.10	43.90	53.10
83	5.00	206.70	48.00	54.50	48.11	55.90
84	3.00	213.50	49.30	59.20	49.70	57.30
87	1.20	213.50	49.60	69.00	51.90	58.70
89	3.40	215.50	51.80	70.30	53.80	61.90
90	1.70	219.00	50.40	60.40	53.20	61.87
94	3.80	224.90	53.10	63.10	53.40	64.90
95	1.10	224.90	53.10	63.10	53.40	64.90

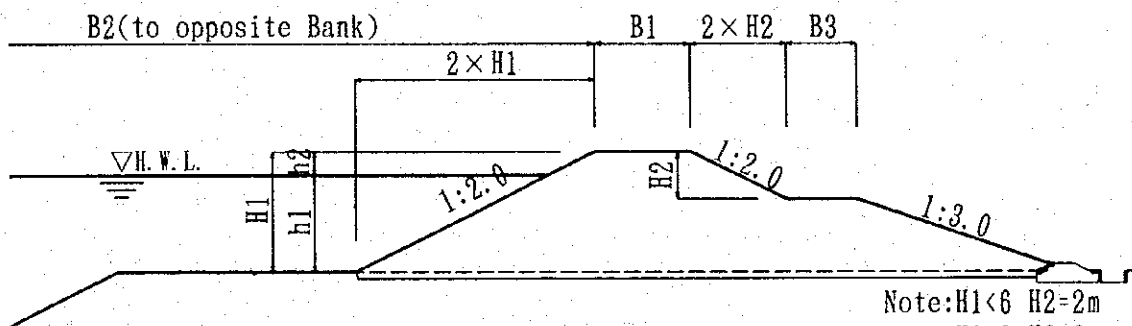
THE STUDY ON
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Fig. VI.5.13 PROPOSED LONGITUDINAL PROFILE FOR Kuantan-Indragiri River

TYPE-A CROSS SECTION



TYPE-B CROSS SECTION



Note: H1 < 6 H2 = 2m
 H1 < 8 H2 = 3m
 H1 > 8 H2 = 4m

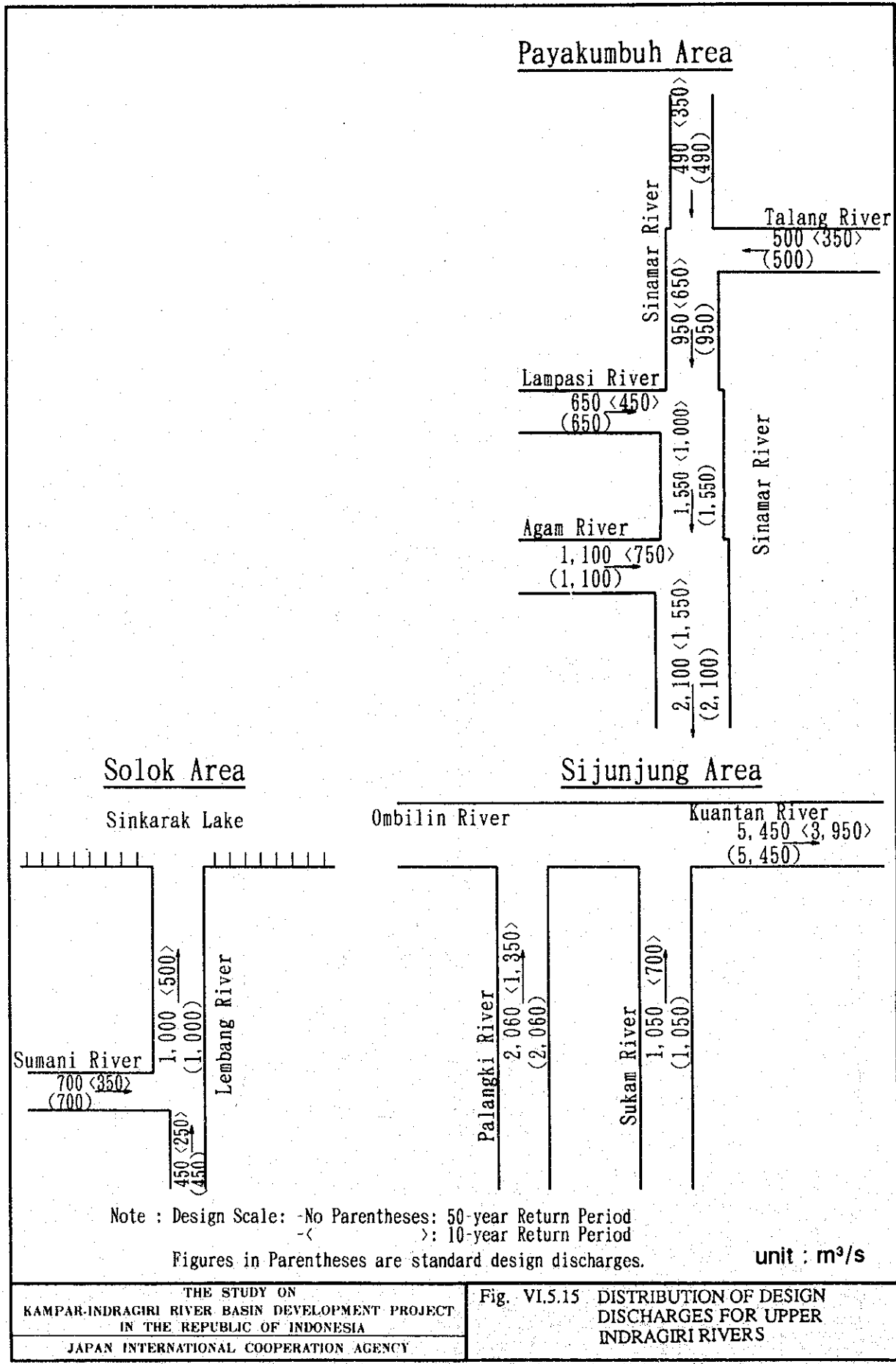
Unit: m

River	No.	Accm. Distance (km)	Type	B1	B2	B3	h2
Indragiri	-1	0.0					
	No. 14	59.9	B	6.0	-	3.0	1.8
	No. 40	122.1	B	6.0	600	3.0	1.8
	No. 93	219.0	A	5.0	300	-	1.2

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Fig. VI.5.14 PROPOSED CROSS SECTIONS FOR
 KUANTAN-INDRAGIRI RIVER



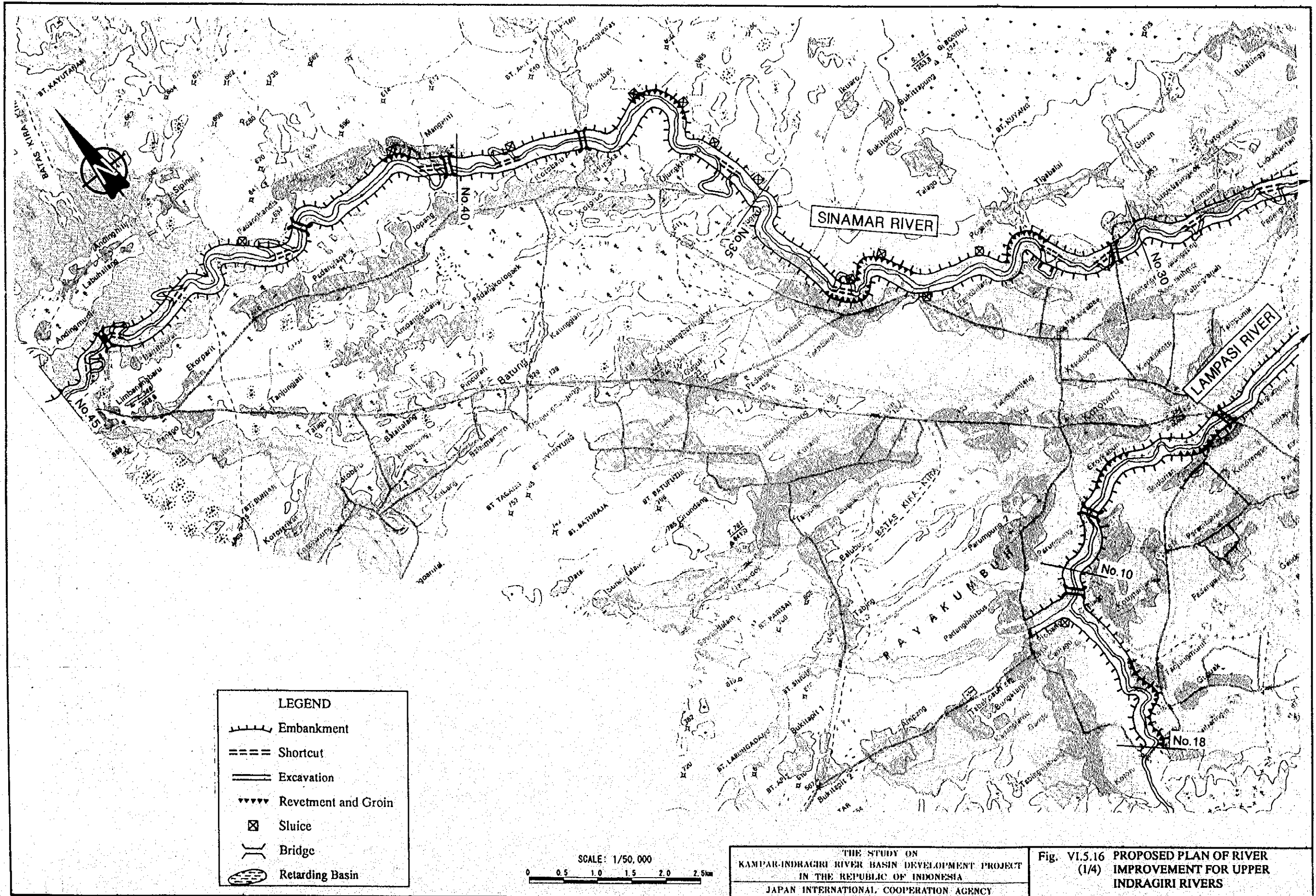
Note : Design Scale: -No Parentheses: 50-year Return Period
 -< >: 10-year Return Period

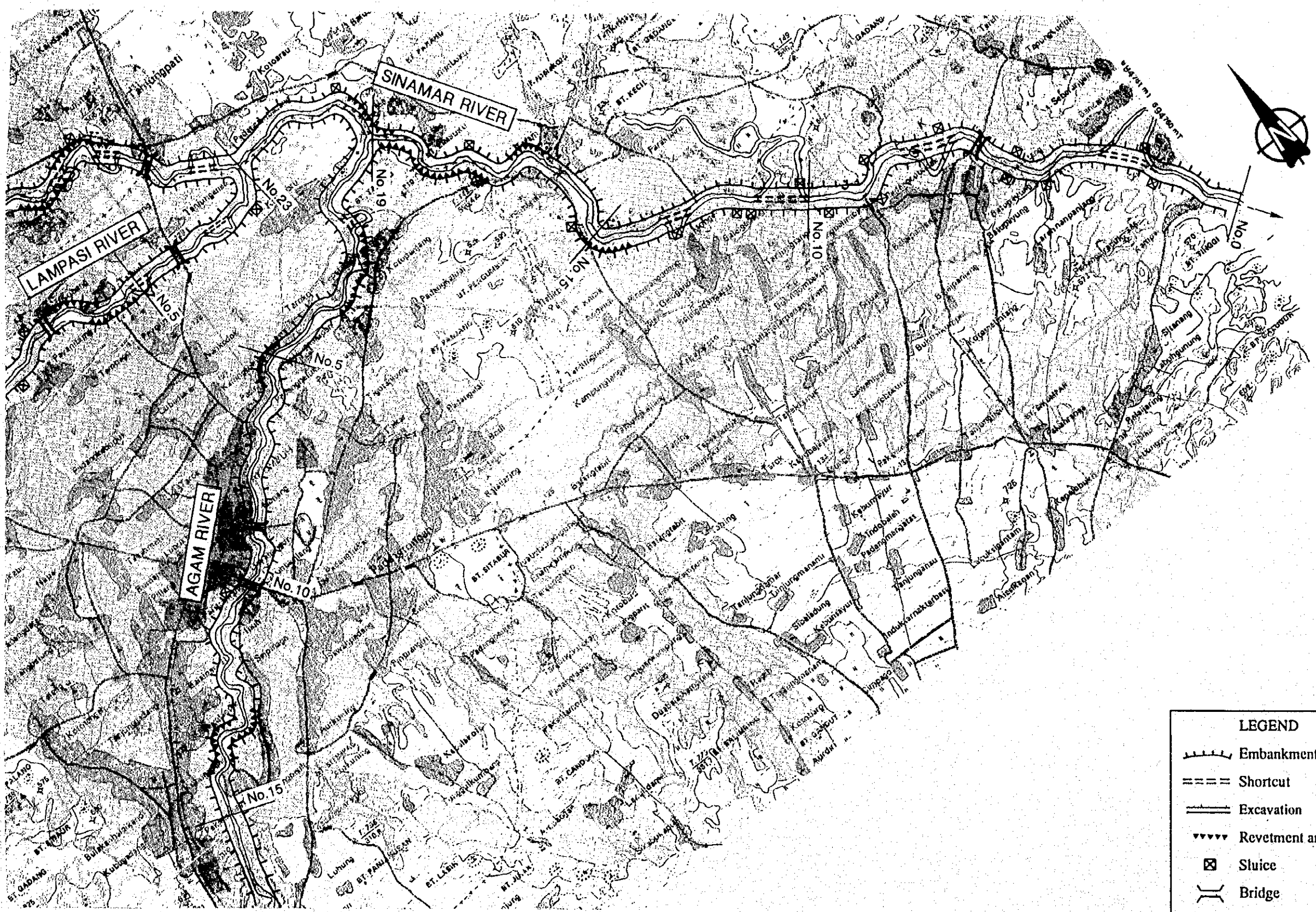
Figures in Parentheses are standard design discharges.

unit : m³/s

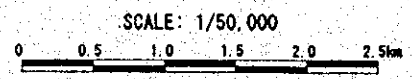
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Fig. VI.5.15 DISTRIBUTION OF DESIGN DISCHARGES FOR UPPER INDRAGIRI RIVERS



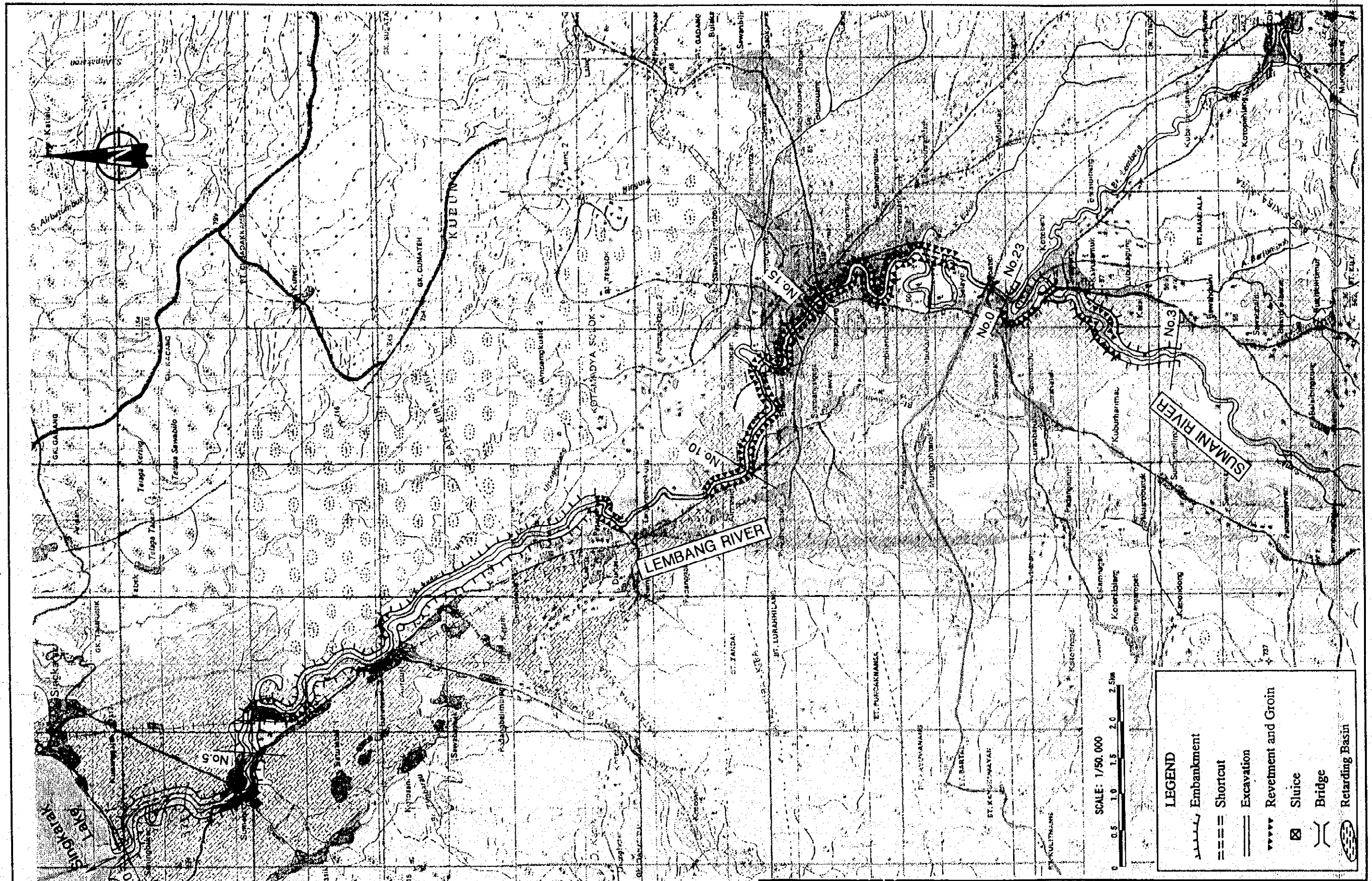


LEGEND	
	Embankment
	Shortcut
	Excavation
	Revetment and Groin
	Sluice
	Bridge
	Retarding Basin



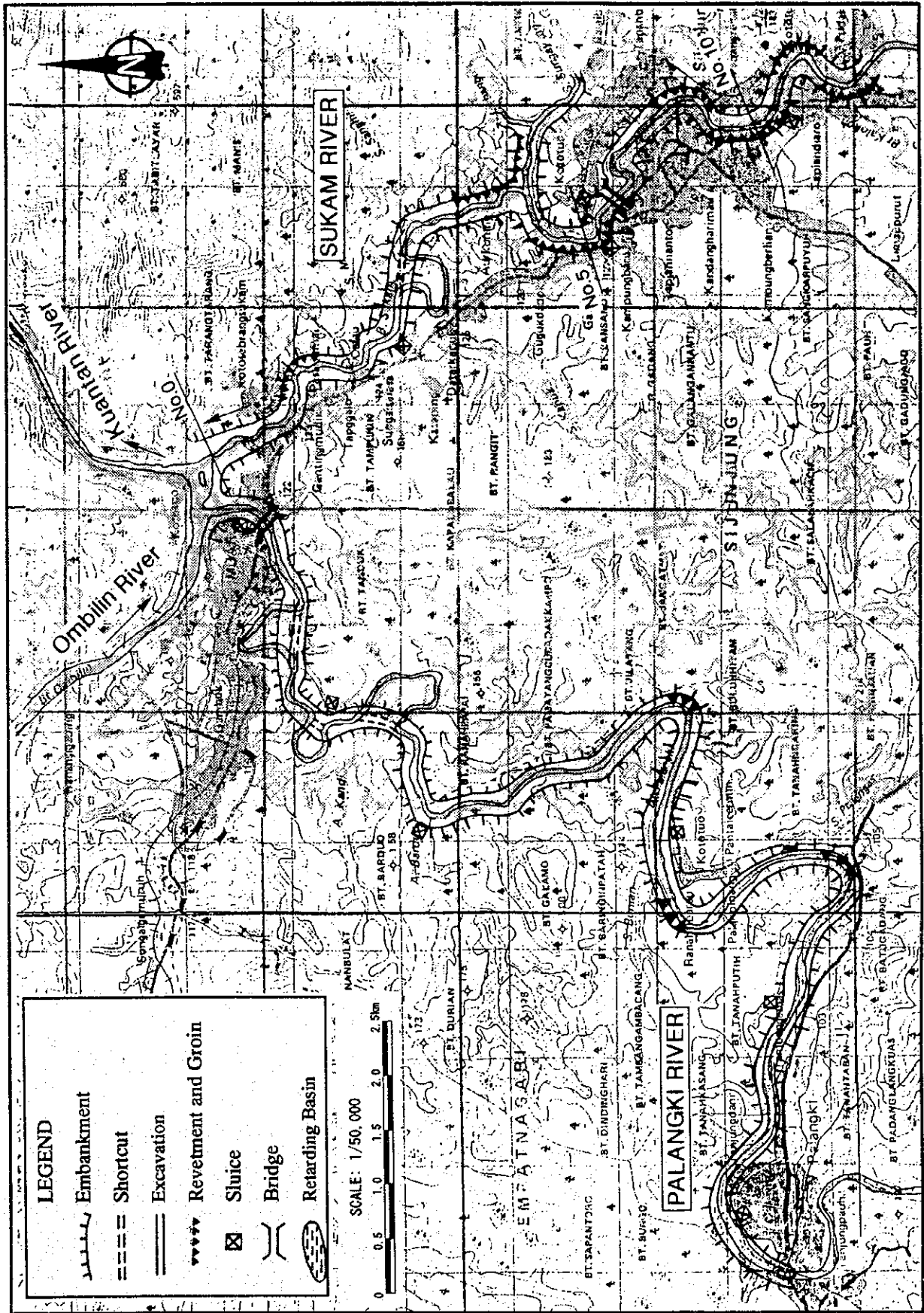
THE STUDY ON
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Fig. VI.5.16 PROPOSED PLAN OF RIVER
 IMPROVEMENT FOR UPPER
 INDRAGIRI RIVERS



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Fig. VI.5.16 PROPOSED PLAN OF RIVER
 IMPROVEMENT FOR UPPER
 INDRAGIRI RIVERS
 (3/4)



LEGEND	
	Embankment
	Shortcut
	Excavation
	Revetment and Groin
	Sluice
	Bridge
	Retarding Basin

SCALE: 1/50,000
 0 0.5 1.0 1.5 2.0 2.5km

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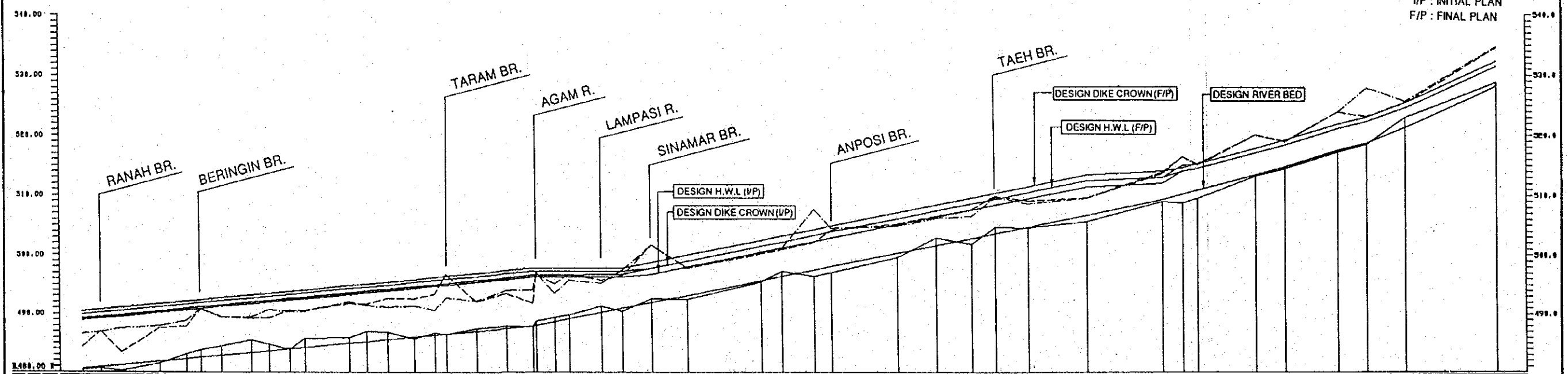
Fig. VI.5.16 PROPOSED PLAN OF RIVER IMPROVEMENT FOR UPPER INDRAGIRI RIVERS (4/4)

SINAMAR RIVER

LEGEND

- : EXISTING RIVER BED
- - - : EXISTING GROUND EL. (R)
- - - : EXISTING GROUND EL. (L)

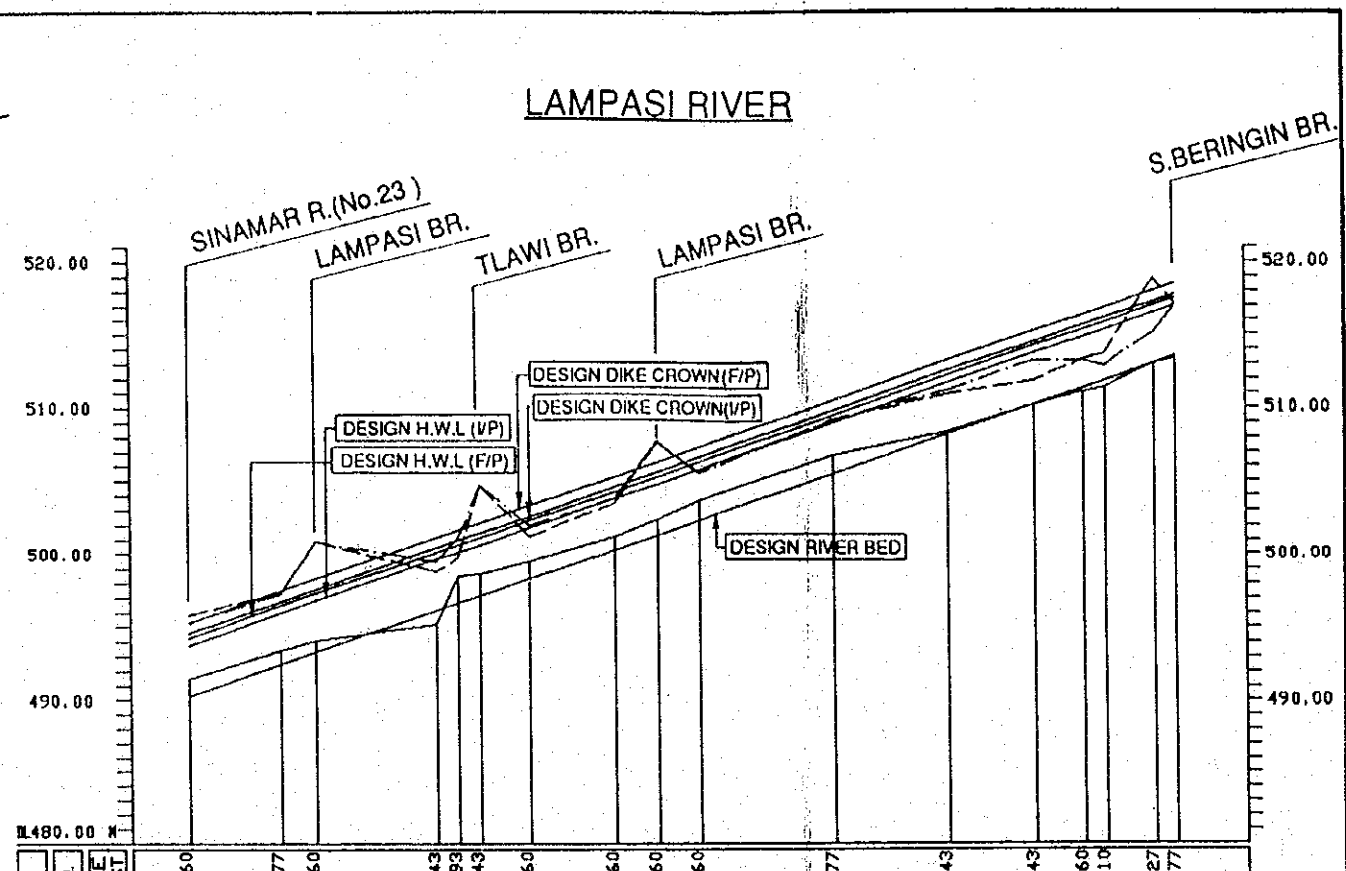
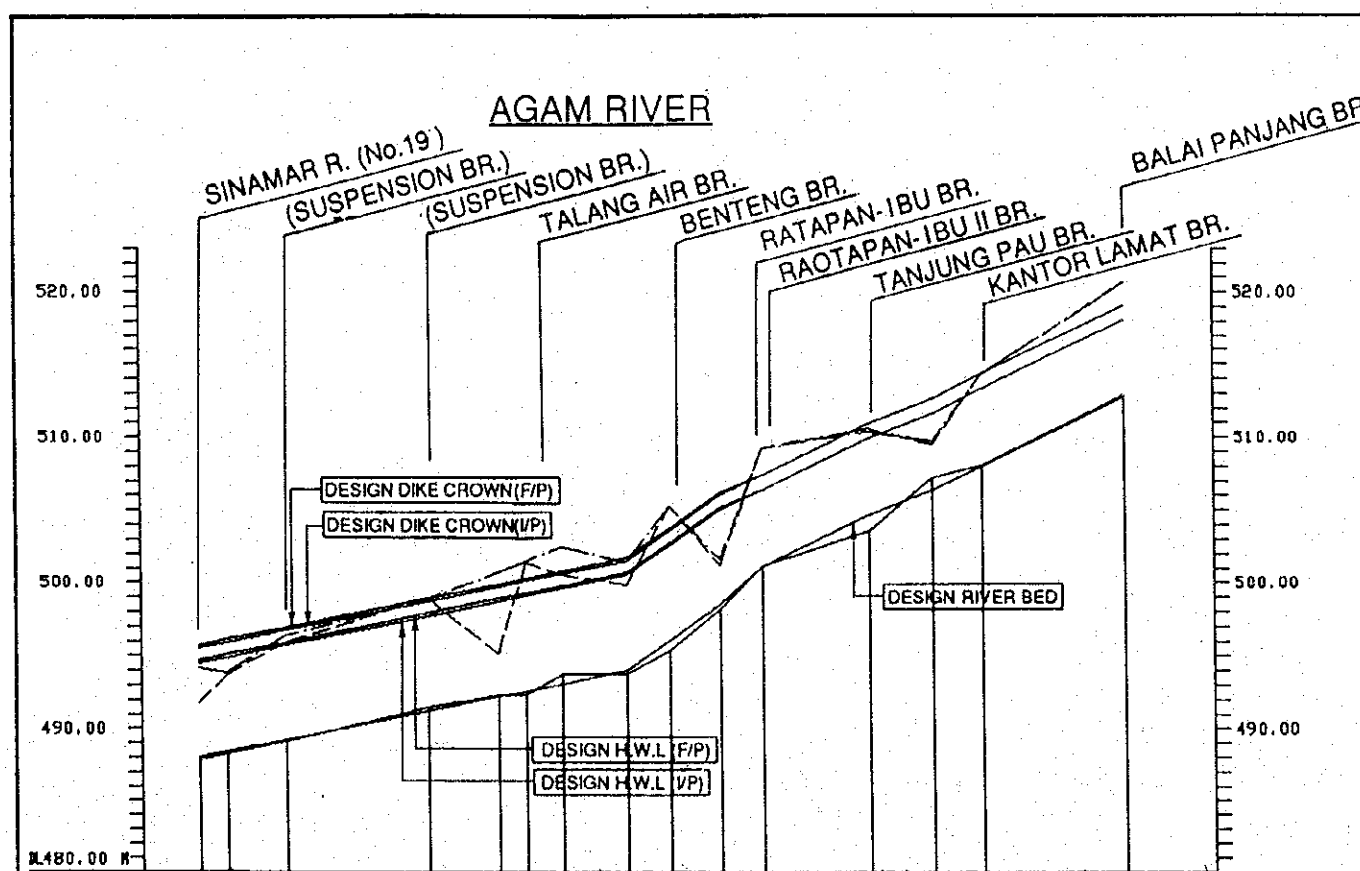
NOTE
 I/P : INITIAL PLAN
 F/P : FINAL PLAN



SECTION NO.	BLITUNGUNO	KAMPAR	EXISTING EL. (M)		DESIGN EL. (M)		SHORT PLAN
			LEFT	RIGHT	WATER	DIKE CREST	
0	1.00	0.00	486.58	484.46	489.59	489.59	489.59
1	1.00	0.00	486.72	487.03	489.62	489.62	489.62
2	1.00	0.00	486.15	487.50	489.52	489.52	489.52
3	1.00	0.00	486.50	487.02	489.52	489.52	489.52
4	1.00	0.00	486.10	487.91	489.59	489.59	489.59
5	1.00	0.00	486.82	486.94	489.54	489.54	489.54
6	1.00	0.00	484.50	489.50	489.50	489.50	489.50
7	1.00	0.00	485.54	489.71	489.71	489.71	489.71
8	1.00	0.00	484.72	489.71	489.71	489.71	489.71
9	1.00	0.00	483.97	489.40	489.40	489.40	489.40
10	1.00	0.00	485.70	489.41	489.41	489.41	489.41
11	1.00	0.00	485.92	489.12	489.12	489.12	489.12
12	1.00	0.00	487.02	489.31	489.31	489.31	489.31
13	1.00	0.00	486.91	489.11	489.11	489.11	489.11
14	1.00	0.00	486.68	489.25	489.25	489.25	489.25
15	1.00	0.00	486.86	489.33	489.33	489.33	489.33
16	1.00	0.00	486.46	489.72	489.72	489.72	489.72
17	1.00	0.00	487.42	489.72	489.72	489.72	489.72
18	1.00	0.00	486.02	489.52	489.52	489.52	489.52
19	1.00	0.00	486.15	489.52	489.52	489.52	489.52
20	1.00	0.00	489.51	489.21	489.21	489.21	489.21
21	1.00	0.00	489.51	489.21	489.21	489.21	489.21
22	1.00	0.00	489.51	489.21	489.21	489.21	489.21
23	1.00	0.00	489.51	489.21	489.21	489.21	489.21
24	1.00	0.00	489.51	489.21	489.21	489.21	489.21
25	1.00	0.00	489.51	489.21	489.21	489.21	489.21
26	1.00	0.00	489.51	489.21	489.21	489.21	489.21
27	1.00	0.00	489.51	489.21	489.21	489.21	489.21
28	1.00	0.00	489.51	489.21	489.21	489.21	489.21
29	1.00	0.00	489.51	489.21	489.21	489.21	489.21
30	1.00	0.00	489.51	489.21	489.21	489.21	489.21
31	1.00	0.00	489.51	489.21	489.21	489.21	489.21
32	1.00	0.00	489.51	489.21	489.21	489.21	489.21
33	1.00	0.00	489.51	489.21	489.21	489.21	489.21
34	1.00	0.00	489.51	489.21	489.21	489.21	489.21
35	1.00	0.00	489.51	489.21	489.21	489.21	489.21
36	1.00	0.00	489.51	489.21	489.21	489.21	489.21
37	1.00	0.00	489.51	489.21	489.21	489.21	489.21
38	1.00	0.00	489.51	489.21	489.21	489.21	489.21
39	1.00	0.00	489.51	489.21	489.21	489.21	489.21
40	1.00	0.00	489.51	489.21	489.21	489.21	489.21
41	1.00	0.00	489.51	489.21	489.21	489.21	489.21
42	1.00	0.00	489.51	489.21	489.21	489.21	489.21
43	1.00	0.00	489.51	489.21	489.21	489.21	489.21
44	1.00	0.00	489.51	489.21	489.21	489.21	489.21
45	1.00	0.00	489.51	489.21	489.21	489.21	489.21

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Fig. VI.5.17 PROPOSED LONGITUDINAL PROFILE FOR UPPER INDRAGIRI RIVERS



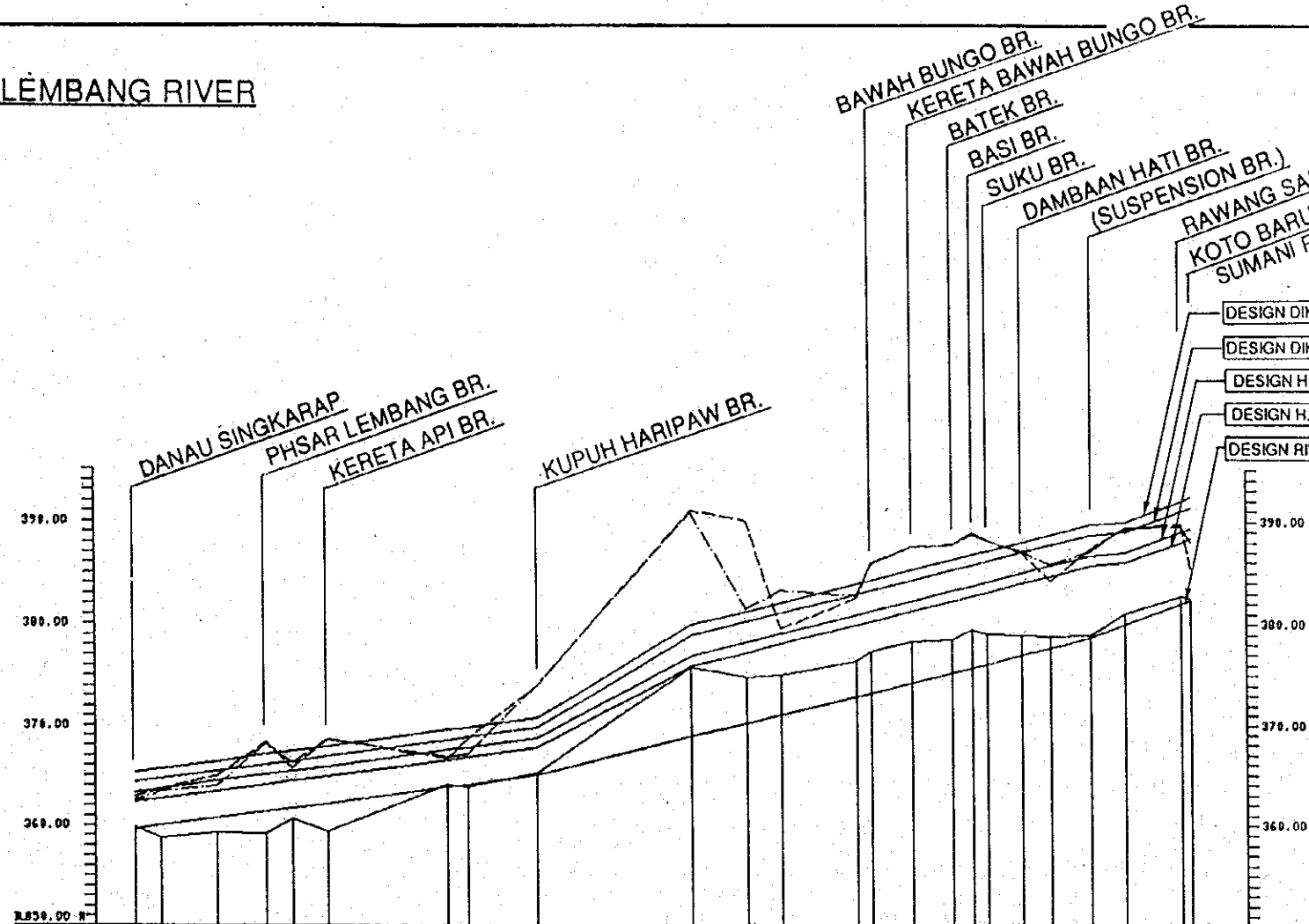
SECTION NO.	DISTANCE (KM)		EXISTING EL. (M)				DESIGN EL. (M)			
	ACCUMULATIVE DISTANCE	DEEPEST CHANNEL BED	GROUND LEFT	GROUND RIGHT	CHANNEL BED	HIGH WATER	DIKE CREST	HIGH WATER	DIKE CREST	
0	.00	487.84	494.15	491.85	488.00	494.70	495.70	494.50	495.50	
1	.40	488.25	493.85	493.68	488.40	495.10	496.10	494.90	495.90	
2	.80	489.09	496.36	495.89	489.20	495.90	496.90	495.70	496.70	
3	2.00	491.50	498.85	498.91	491.20	497.90	498.90	497.70	498.70	
4	1.00	492.37	500.70	499.17	492.20	498.90	499.90	498.70	499.70	
5	.40	492.31	501.50	501.34	492.60	499.30	500.30	499.10	500.10	
6	.50	493.80	502.47	501.50	493.10	499.80	500.80	499.60	500.60	
7	.90	493.74	501.45	499.83	494.00	500.70	501.70	500.50	501.50	
8	.60	495.38	505.31	505.30	496.07	502.77	503.77	502.57	503.57	
9	.70	498.22	501.59	501.20	498.48	505.18	506.18	504.98	505.98	
13	.60	501.16	509.25	509.23	501.10	506.40	507.40	506.40	507.40	
14	1.50	503.55	510.40	510.60	504.67	509.97	510.97	509.97	510.97	
15	.70	507.24	509.73	509.52	506.34	511.64	512.64	511.64	512.64	
16	.70	508.03	514.28	514.34	508.01	513.31	514.31	513.31	514.31	
17	2.00	512.89	520.65	520.65	512.77	518.07	519.07	518.07	519.07	

SECTION NO.	DISTANCE (KM)		EXISTING EL. (M)				DESIGN EL. (M)			
	ACCUMULATIVE DISTANCE	DEEPEST CHANNEL BED	GROUND LEFT	GROUND RIGHT	CHANNEL BED	HIGH WATER	DIKE CREST	HIGH WATER	DIKE CREST	
0	.00	491.49	495.30	495.80	490.30	494.30	495.30	493.80	494.60	
1	1.30	493.45	497.24	497.37	492.47	496.47	497.47	495.97	496.77	
2	.50	494.06	500.87	500.87	493.30	497.30	498.30	496.80	497.60	
3	1.70	495.18	499.48	498.80	496.13	500.13	501.13	499.63	500.43	
4	.30	498.51	501.08	499.78	496.63	500.63	501.63	500.13	500.93	
5	.30	498.64	504.68	504.69	497.13	501.13	502.13	500.63	501.43	
6	.70	499.49	501.94	501.23	498.30	502.30	503.30	501.80	502.60	
7	1.20	501.18	503.82	503.51	500.30	504.30	505.30	503.80	504.60	
8	.60	502.38	507.70	507.64	501.30	505.30	506.30	504.80	505.60	
9	.60	503.70	505.49	505.63	502.30	506.30	507.30	505.80	506.60	
10	1.90	506.75	509.14	509.08	505.47	509.47	510.47	508.97	509.77	
11	1.60	508.32	511.10	510.91	508.13	512.13	513.13	511.63	512.43	
12	1.20	510.17	513.17	511.78	510.13	514.13	515.13	513.63	514.43	
13	.70	510.98	513.14	513.20	511.30	515.30	516.30	514.80	515.60	
14	.30	511.39	512.86	513.65	511.80	515.80	516.80	515.30	516.10	
15	.70	512.98	515.11	518.88	512.97	516.97	517.97	516.47	517.27	
16	.30	513.32	516.96	517.12	513.47	517.47	518.47	516.97	517.77	

THE STUDY ON KAMPAR-INDRAGIRI RIVER BASIN DEVELOPMENT PROJECT IN THE REPUBLIC OF INDONESIA
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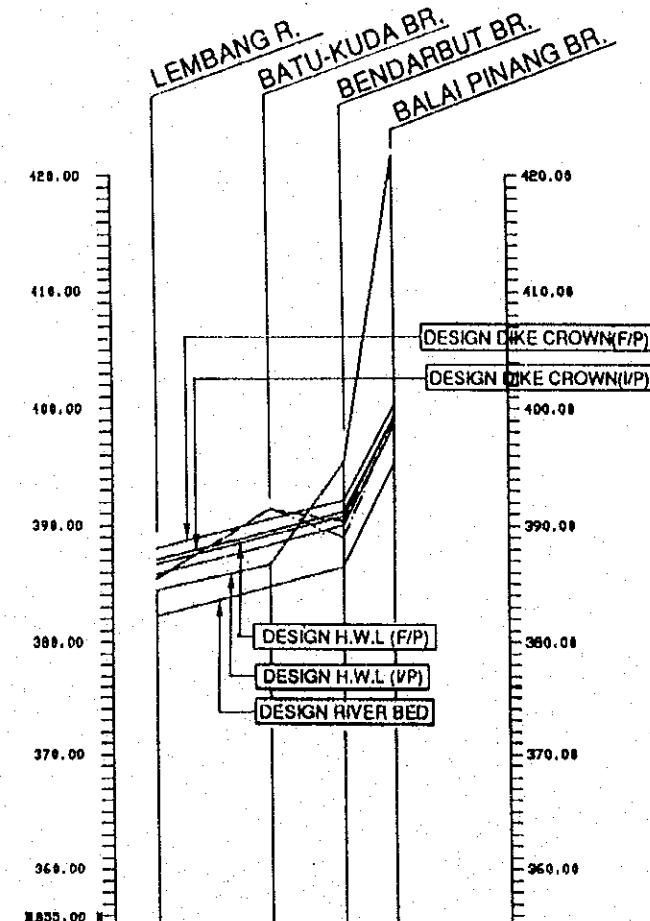
Fig. VI.5.17 PROPOSED LONGITUDINAL PROFILE FOR UPPER INDRAGIRI RIVERS (2/4)

LEMBANG RIVER



SECTION NO.	DISTANCE (KM)		EXISTING EL. (M)		DESIGN EL. (M)					
	START	END	CHANNEL BED	RIGHT	CHANNEL BED	HIGH WATER	DIKE CROWN	SHORT PLAN WATER		
0	0.00	0.00	359.80	362.50	342.87	359.60	364.30	365.30	362.30	363.26
1	0.50	0.50	358.70	363.42	363.68	359.50	364.53	365.63	362.63	363.63
2	1.10	1.10	359.25	363.88	364.70	366.60	365.36	366.36	363.36	364.36
3	1.60	1.60	359.14	368.21	368.23	361.35	366.05	367.05	364.05	365.05
4	2.10	2.10	360.36	366.20	365.78	361.65	366.39	367.39	364.39	365.39
5	2.70	2.70	359.41	366.55	366.59	361.16	366.86	367.86	364.86	365.86
6	2.40	6.20	364.05	366.81	366.67	363.78	368.48	369.48	366.48	367.48
7	2.40	6.60	363.80	367.10	368.60	364.05	368.75	369.75	366.75	367.75
8	1.40	8.00	365.22	373.99	373.96	365.00	369.70	370.70	367.70	368.70
9	2.10	11.10	375.81	390.80	391.00	368.80	378.80	379.80	375.80	376.80
10	1.10	12.20	374.79	381.47	399.00	378.19	388.19	391.19	377.19	378.19
11	0.70	12.90	375.05	383.23	379.56	371.05	382.05	378.05	379.05	379.05
12	1.30	14.40	376.45	382.80	382.30	372.90	383.90	379.90	380.90	380.90
13	1.30	14.70	377.40	385.97	385.80	373.27	384.27	381.27	382.27	382.27
14	0.80	15.50	378.30	387.50	387.50	374.26	384.26	383.26	381.26	382.26
15	0.80	16.30	378.51	387.73	387.69	375.23	385.23	386.23	382.23	383.23
16	0.40	16.70	379.44	388.85	388.70	375.74	386.74	387.74	383.74	384.74
17	0.30	17.00	379.06	388.13	388.16	376.11	387.11	388.11	384.11	385.11
18	0.70	17.70	378.90	387.06	386.99	376.96	387.96	388.96	384.96	385.96
19	0.60	18.30	378.80	385.79	384.27	377.72	388.72	389.72	385.72	386.72
20	0.80	19.10	378.90	387.17	387.35	378.70	389.70	390.70	386.70	387.70
21	0.70	19.80	381.05	389.39	389.30	388.00	389.00	390.00	386.00	387.00
22	1.60	21.40	388.67	393.66	393.60	388.90	393.90	394.90	389.90	390.90

SUMANI RIVER



SECTION NO.	DISTANCE (KM)		EXISTING EL. (M)		DESIGN EL. (M)					
	START	END	CHANNEL BED	RIGHT	CHANNEL BED	HIGH WATER	DIKE CROWN	SHORT PLAN WATER		
0	0.00	0.00	364.47	395.51	395.44	382.32	387.12	388.12	385.92	386.72
1	2.00	2.00	386.70	391.51	391.45	384.86	389.65	388.42	389.22	389.22
2	1.30	3.30	395.95	389.01	390.34	386.46	391.25	392.25	391.05	391.85
3	0.90	4.20	481.77	399.27	398.72	395.46	399.26	418.26	398.65	399.45

LEGEND

- : EXISTING RIVER BED
- - - : EXISTING GROUND EL.(R)
- - - : EXISTING GROUND EL.(L)

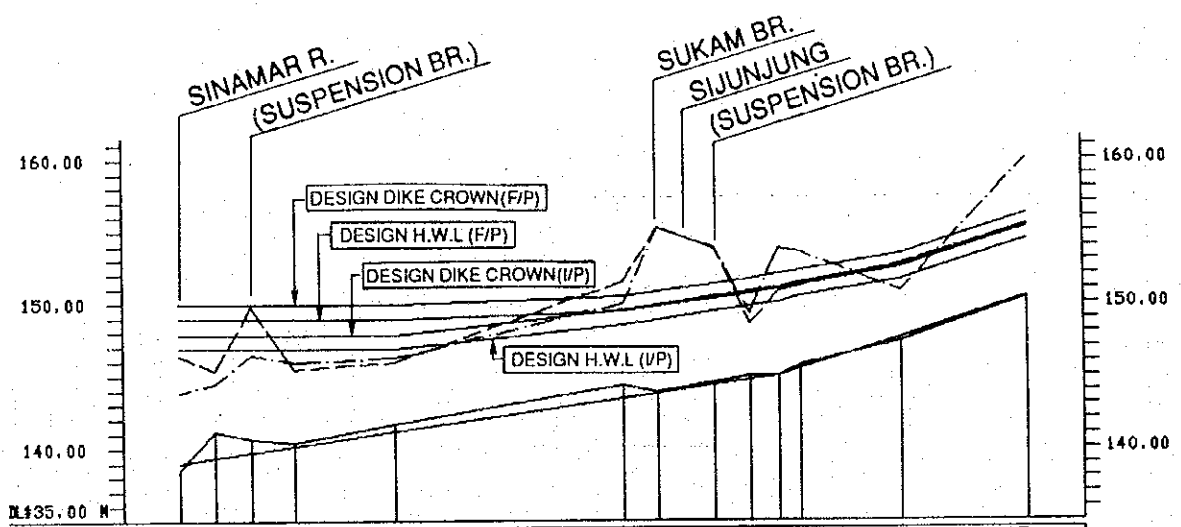
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Fig. VI.5.17 PROPOSED LONGITUDINAL PROFILE FOR UPPER INDRAGIRI RIVERS (3/4)

SUKAM RIVER

LEGEND

- : EXISTING RIVER BED
- - - : EXISTING GROUND EL.(R)
- - - : EXISTING GROUND EL.(L)



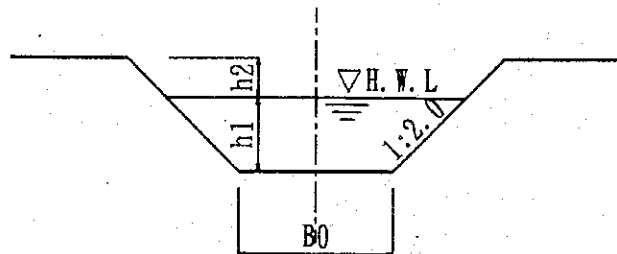
SECTION NO.	DISTANCE (KM)		EXISTING EL. (M)		DESIGN EL. (M)		
	DISTANCE	ACCUMULATIVE DISTANCE	DEEPEST CHANNEL BED	GROUND (LEFT / RIGHT)	CHANNEL BED	LONG PLAN (HIGH WATER / DIKE CREST)	SHORT PLAN (HIGH WATER / DIKE CREST)
0	.00	.00	138.49	143.90 / 146.40	139.00	149.00 / 150.00	146.90 / 147.90
1	.50	.50	141.20	144.50 / 145.40	139.36	149.00 / 150.00	146.90 / 147.90
2	.50	1.00	140.71	146.50 / 149.80	139.71	149.00 / 150.00	146.90 / 147.90
3	.60	1.60	140.38	146.00 / 145.50	140.14	149.00 / 150.00	146.90 / 147.90
4	1.40	3.00	141.71	146.30 / 146.00	141.14	149.00 / 150.00	146.90 / 147.90
5	3.20	6.20	144.38	150.00 / 151.50	143.43	149.43 / 150.43	148.53 / 149.53
6	.50	6.70	143.91	155.20 / 155.20	143.79	149.79 / 150.79	148.89 / 149.89
7	.80	7.50	144.53	153.90 / 153.80	144.36	150.36 / 151.36	149.46 / 150.46
8	.50	8.00	144.99	149.30 / 148.60	144.71	150.71 / 151.71	149.81 / 150.81
9	.40	8.40	144.99	153.80 / 150.80	145.00	151.00 / 152.00	150.10 / 151.10
10	.30	8.70	145.76	153.50 / 151.20	145.46	151.26 / 152.26	150.46 / 151.46
11	1.40	10.10	147.36	150.80 / 152.70	147.62	152.42 / 153.42	151.62 / 152.62
12	1.80	11.90	150.33	160.00 / 155.30	150.39	155.19 / 156.19	154.39 / 155.39

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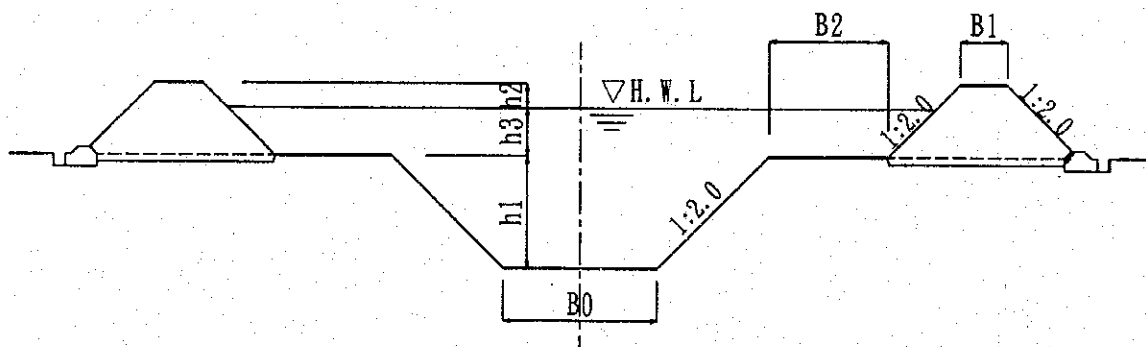
Fig. VI.5.17 PROPOSED LONGITUDINAL PROFILE FOR UPPER INDRAGIRI RIVERS (4/4)

Payakumbuh Area

TYPE-A CROSS SECTION



TYPE-B CROSS SECTION



Unit: m

River	No.	Accm. Distance (km)	Type	B0	B1	B2	h1	h2	h3
Sinamar	No. 0	0.0							
	No. 19	15.2	B	80	4.0	10	6.0	1.2	2.6
	No. 23	17.5	B	70	4.0	10	5.5	1.0	1.3
	No. 37	36.5	B	50	4.0	10	4.5	1.0	1.3
	No. 43	43.5	A	50	—	—	3.6	0.8	—
	No. 45	47.8	A	45	—	—	3.3	0.8	—
Agam	No. 0	0.0							
	No. 10	7.5	A	40	—	—	5.7	1.0	—
	No. 17	13.3	A	40	—	—	4.3	1.0	—
Lampasi	No. 0	0.0							
	No. 16	14.6	B	30	4.0	10	3.5	1.0	1.5

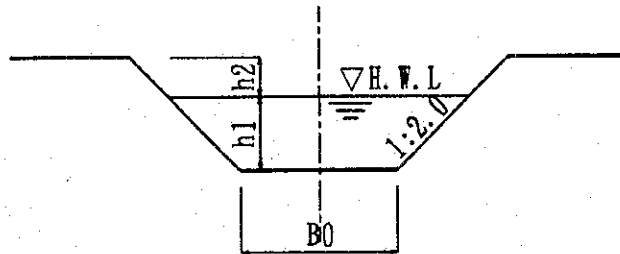
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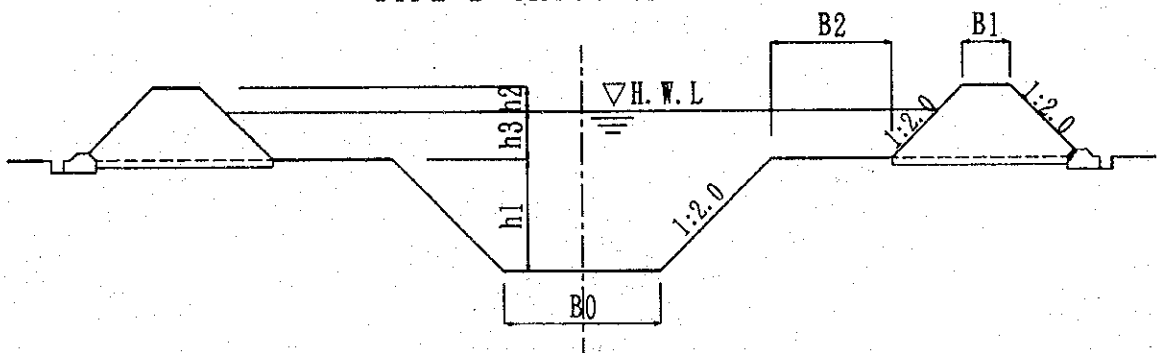
Fig. VI.5.18 PROPOSED CROSS SECTIONS FOR
(1/3) UPPER INDRAGIRI RIVERS

Solok Area

TYPE-A CROSS SECTION



TYPE-B CROSS SECTION



Unit: m

River	No.	Accm. Distance (km)	Type	B0	B1	B2	h1	h2	h3
Lembang	No. 0	0.0							
	No. 8	8.0	B	70	4.0	10	4.5	1.0	1.2
	No. 23	22.2	A	20	-	-	7.7	1.0	-
Sumani	No. 0	0.0							
	No. 3	4.2	A	25	4.0	10	3.5	1.0	1.3

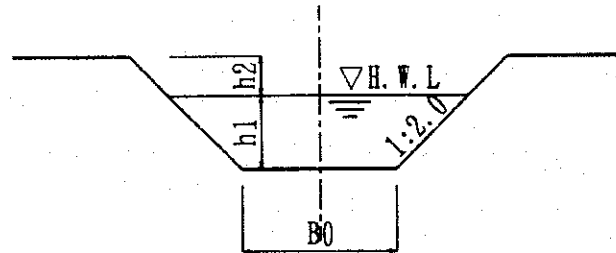
THE STUDY ON
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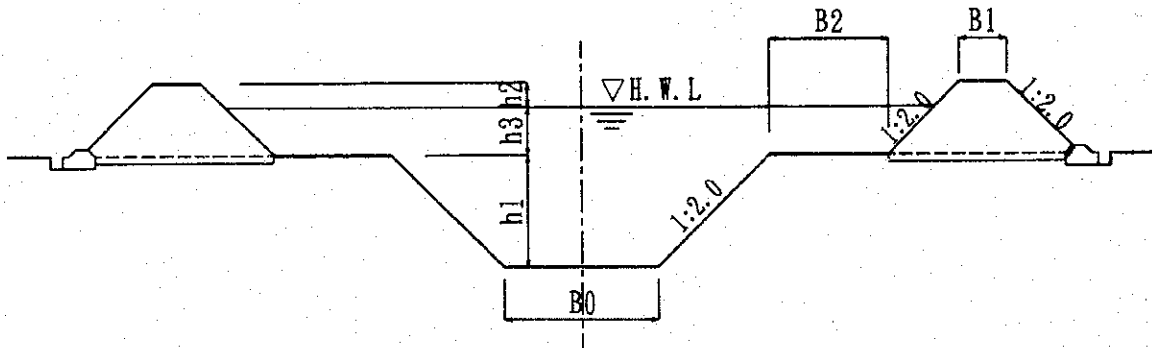
Fig. VI.5.18 PROPOSED CROSS SECTIONS FOR
(2/3) UPPER INDRAGIRI RIVERS

Sijunjung Area

TYPE-A CROSS SECTION

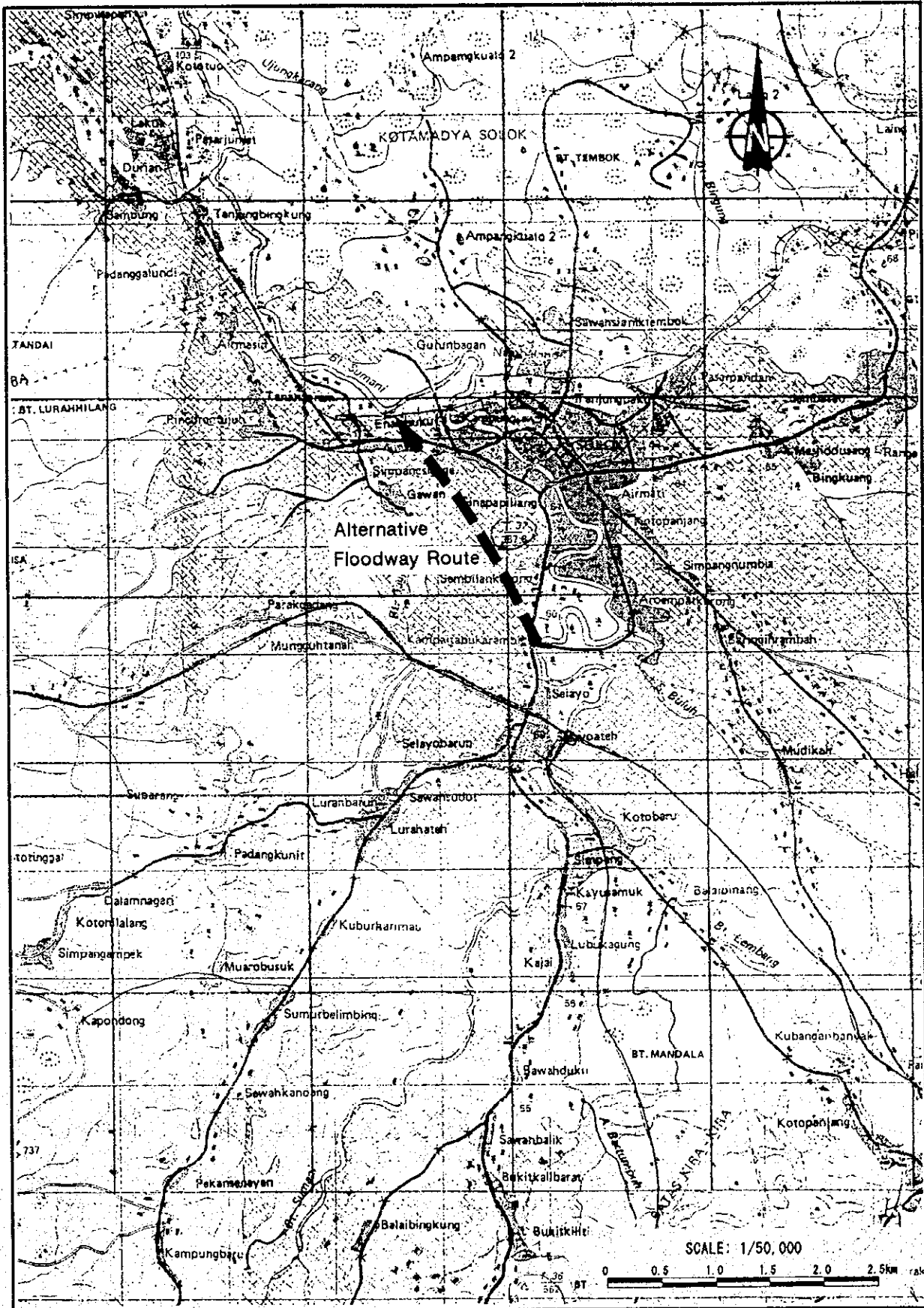


TYPE-B CROSS SECTION



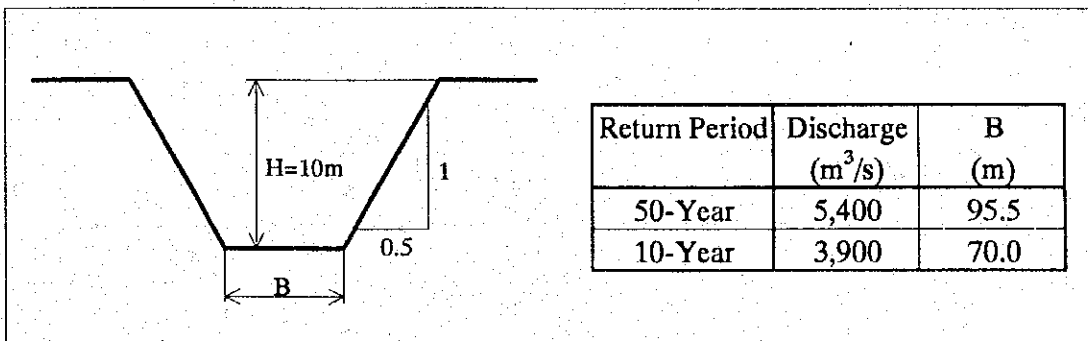
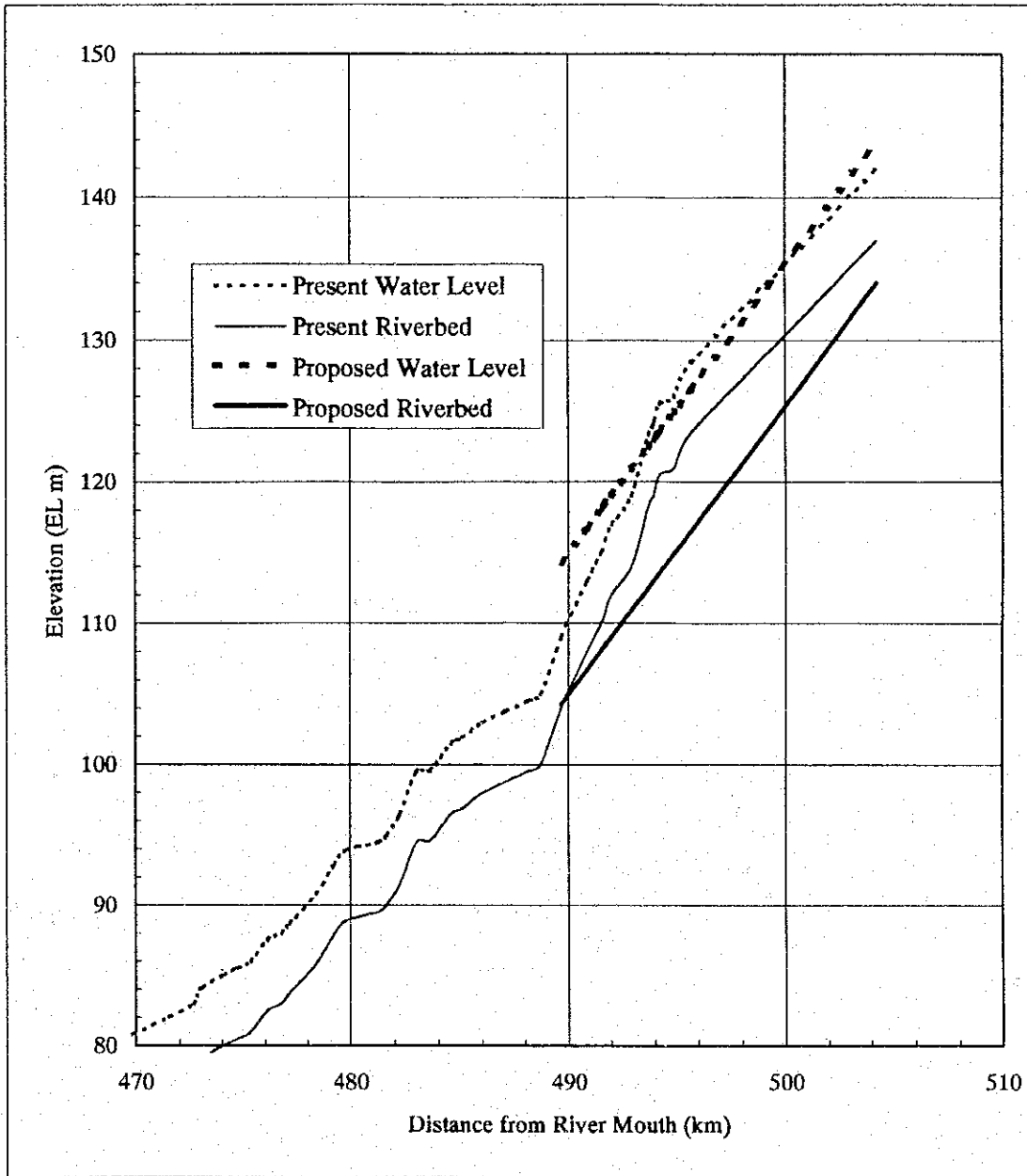
Unit: m

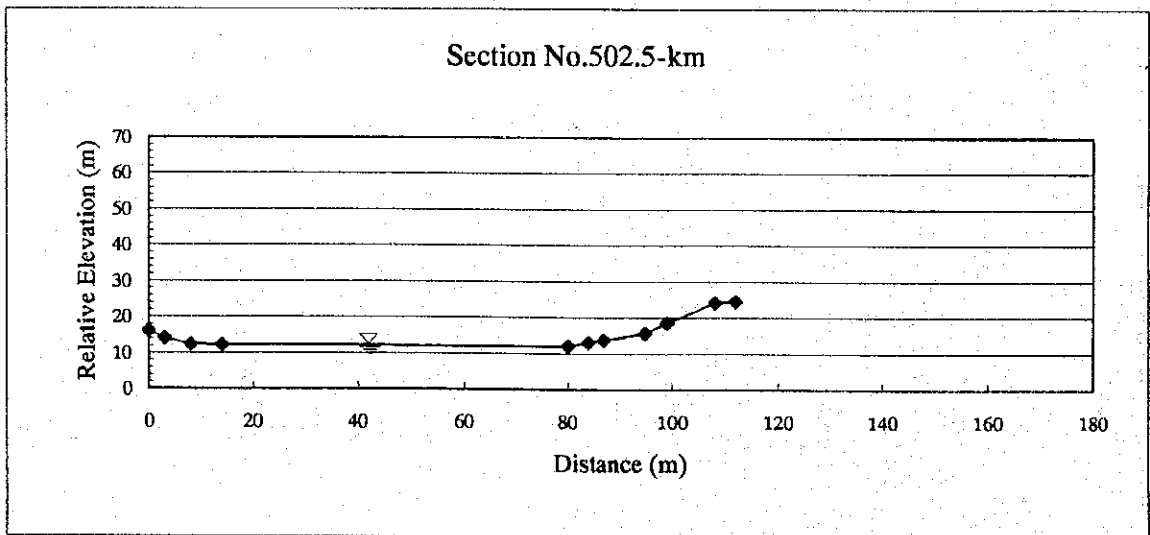
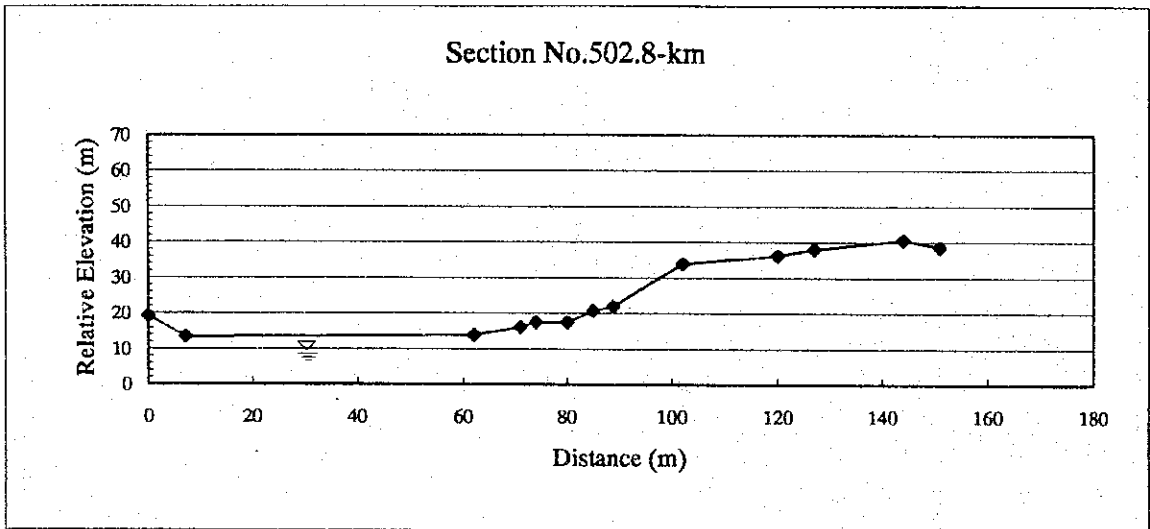
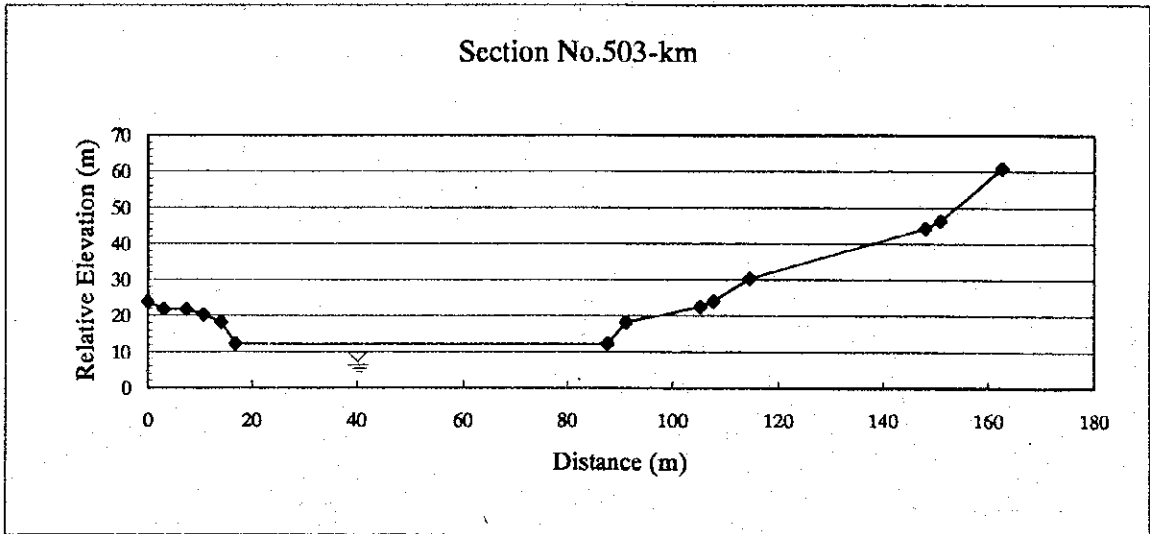
River	No.	Accm. Distance (km)	Type	B0	B1	B2	h1	h2	h3
Sukam	No. 0	0.0							
	No. 9	8.4	B	60	4.0	10	3.0	1.0	1.8
	No. 12	11.9	B	40	4.0	10	4.5	1.0	2.5
Palangki	No. 0	0.0							
	No. 18	18.0	B	90	4.0	10	5.5	1.2	2.1



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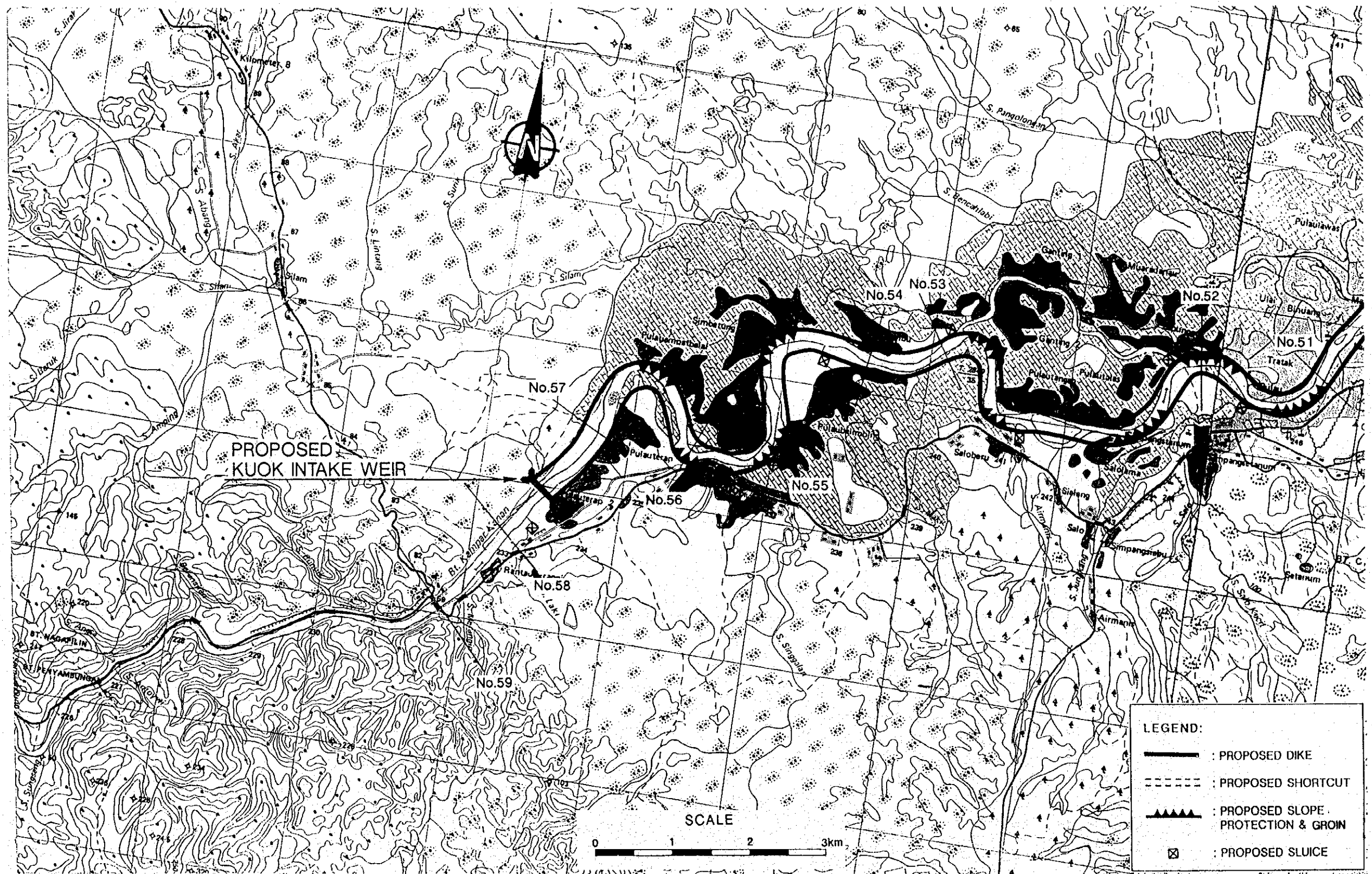
Fig. VI.5.19 ALTERNATIVE FLOODWAY ROUTE
 FOR SOLOK AREA
 RIVER IMPROVEMENT PLAN





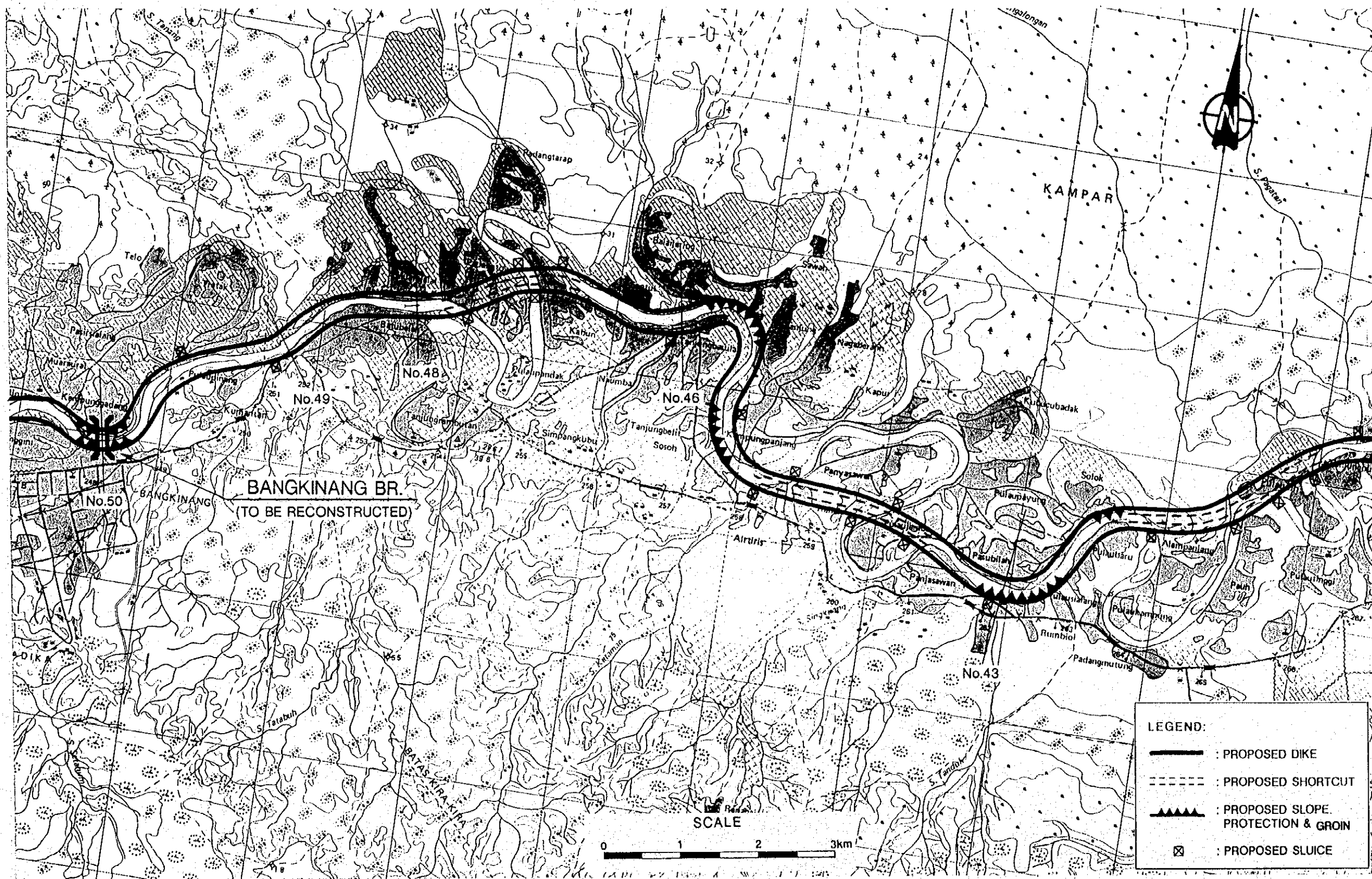
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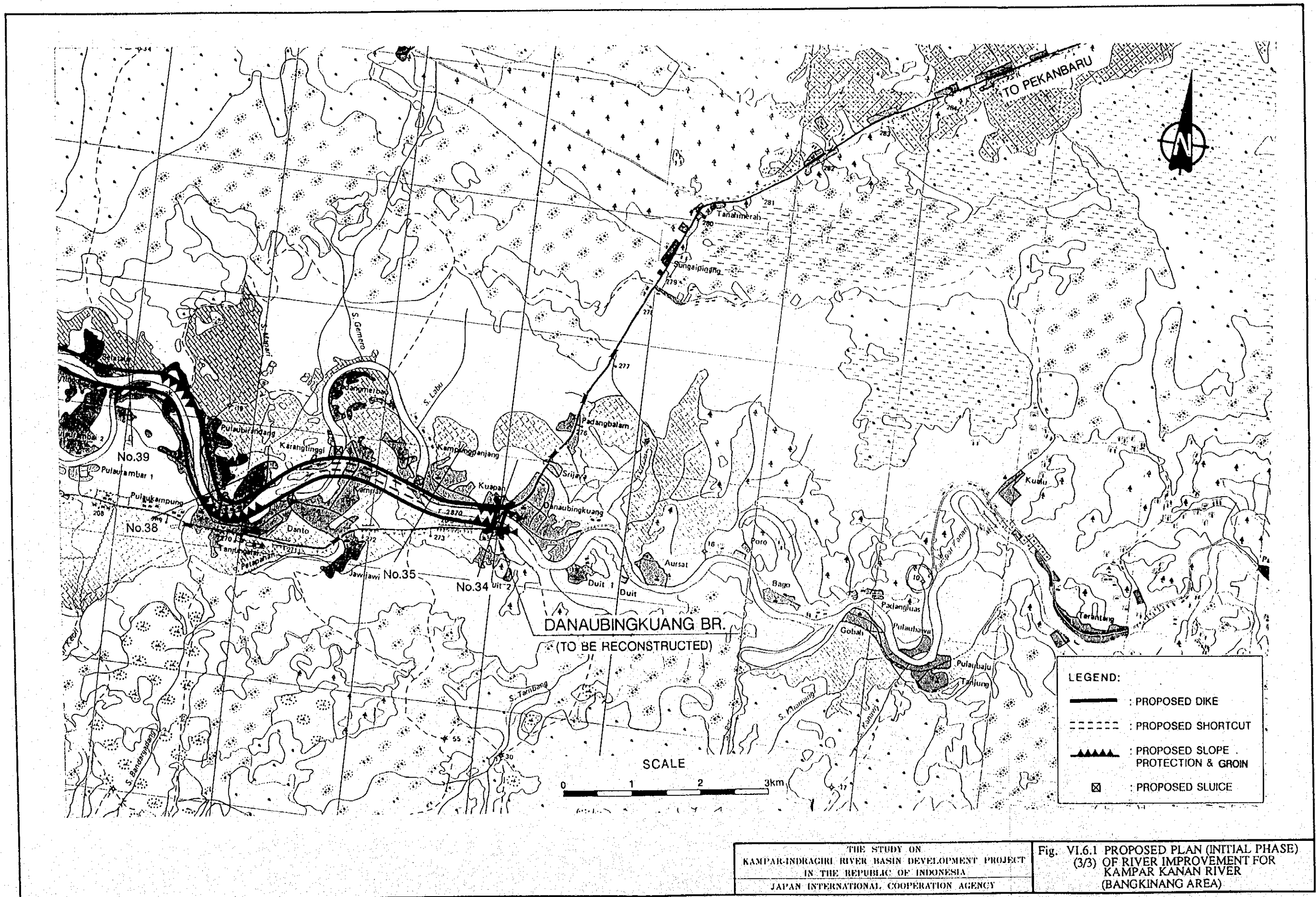
Fig.VI.5.22 CROSS SECTIONS OF PRESENT RIVER CHANNEL OF KUANTAN RIVER UPSTREAM STRETCHES

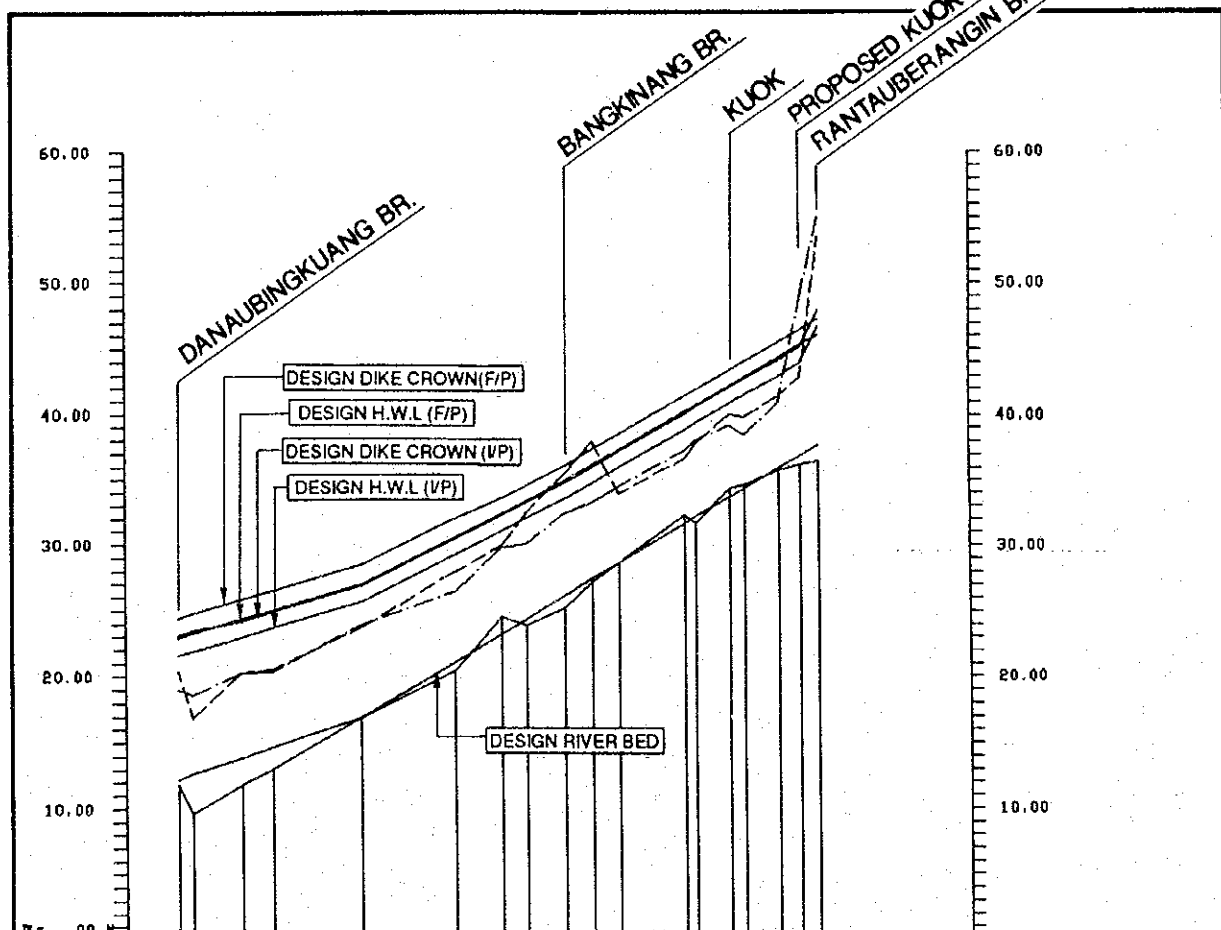


THE STUDY ON
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Fig. VI.6.1 PROPOSED PLAN (INITIAL PHASE)
 (1/3) OF RIVER IMPROVEMENT FOR
 KAMPAR KANAN RIVER
 (BANGKINANG AREA)





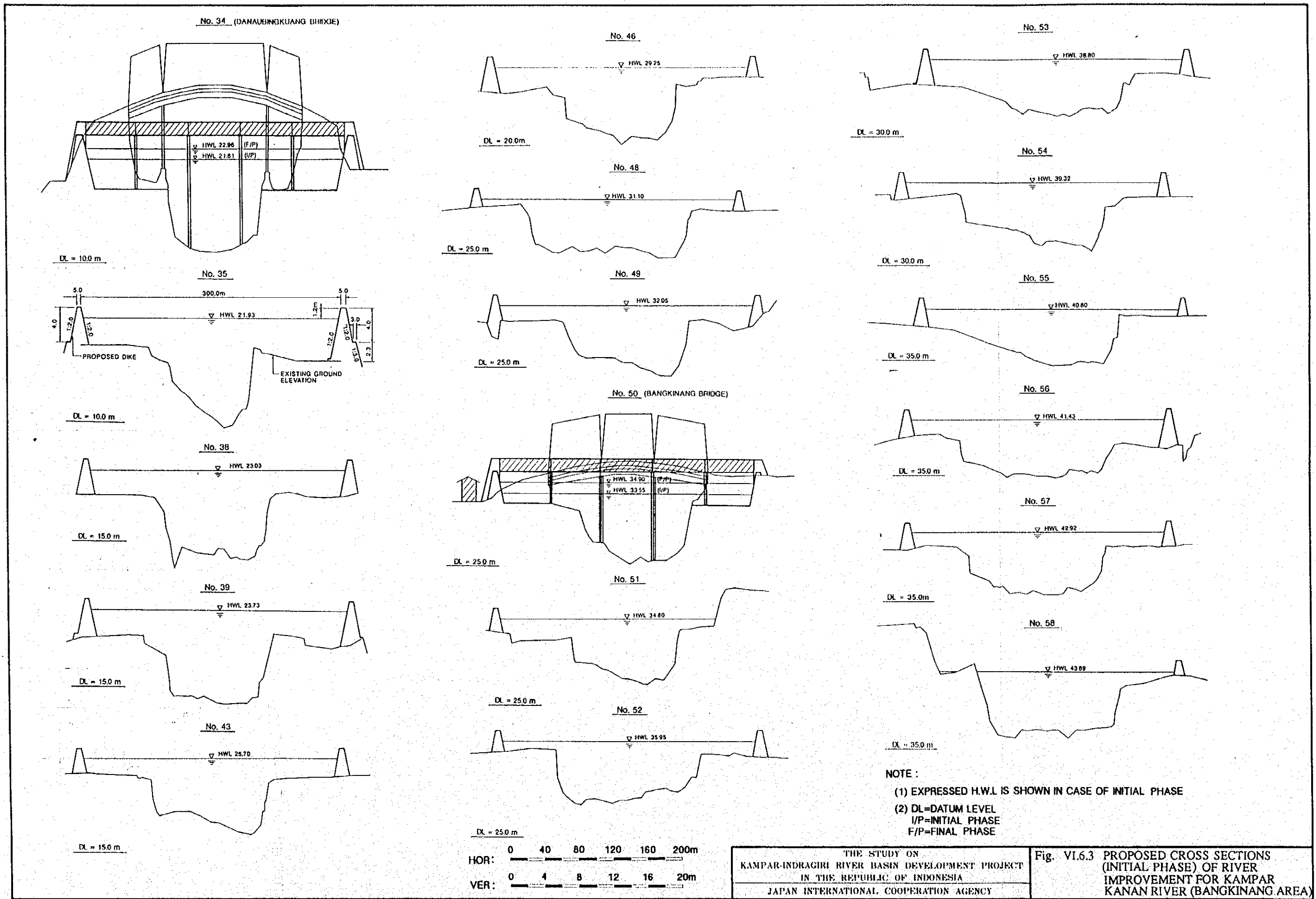


SECTION NO.	DISTANCE (KM)		EXISTING EL. (M)				DESIGN EL. (M)			
	START	END	DEEPEST CHANNEL BED	GROUND LEFT	GROUND RIGHT	CHANNEL BED	LONG PLAN HIGH WATER	LONG PLAN DIKE CREST	SHORT PLAN HIGH WATER	SHORT PLAN DIKE CREST
34	0.00	1.10	11.80	19.00	20.40	12.26	22.96	24.46	21.61	23.11
35	1.10	3.80	9.62	18.60	16.90	12.63	25.28	24.78	21.93	23.43
38	3.80	4.90	11.87	20.30	20.30	13.89	24.38	25.88	23.03	24.23
39	4.90	7.30	13.05	20.40	20.60	14.69	25.08	26.58	23.73	24.93
43	7.30	14.10	16.96	24.00	23.80	16.96	27.05	28.55	25.70	26.90
46	14.10	21.20	20.48	26.50	28.00	21.14	30.60	32.10	29.25	30.45
48	21.20	24.90	24.58	29.80	30.00	23.31	32.45	33.65	31.10	32.30
49	24.90	26.80	23.99	30.10	32.50	24.43	33.40	34.60	32.05	33.25
50	26.80	29.80	25.28	32.40	35.50	26.20	34.90	36.10	33.55	34.75
51	29.80	32.00	27.24	33.30	37.90	27.49	36.15	37.36	34.80	36.00
52	32.00	34.00	28.62	34.50	33.90	28.67	37.30	38.50	35.95	37.15
53	34.00	38.90	31.23	37.80	39.90	31.14	40.19	41.87	38.88	40.88
55	38.90	42.50	34.29	39.10	40.00	33.67	42.16	43.36	40.80	42.00
56	42.50	43.60	34.61	38.40	39.80	34.31	42.78	43.98	41.43	42.63
57	43.60	46.20	35.63	40.90	41.40	35.84	44.27	45.47	42.92	44.12
58	46.20	47.90	36.18	48.80	42.80	36.84	45.24	46.44	43.89	45.09
59	47.90	49.30	36.47	55.00	53.50	37.67	46.04	47.24	46.66	47.86

LEGEND
 - - - - - : EXISTING RIVER BED
 - - - - - : EXISTING GROUND EL.(R)
 - - - - - : EXISTING GROUND EL.(L)

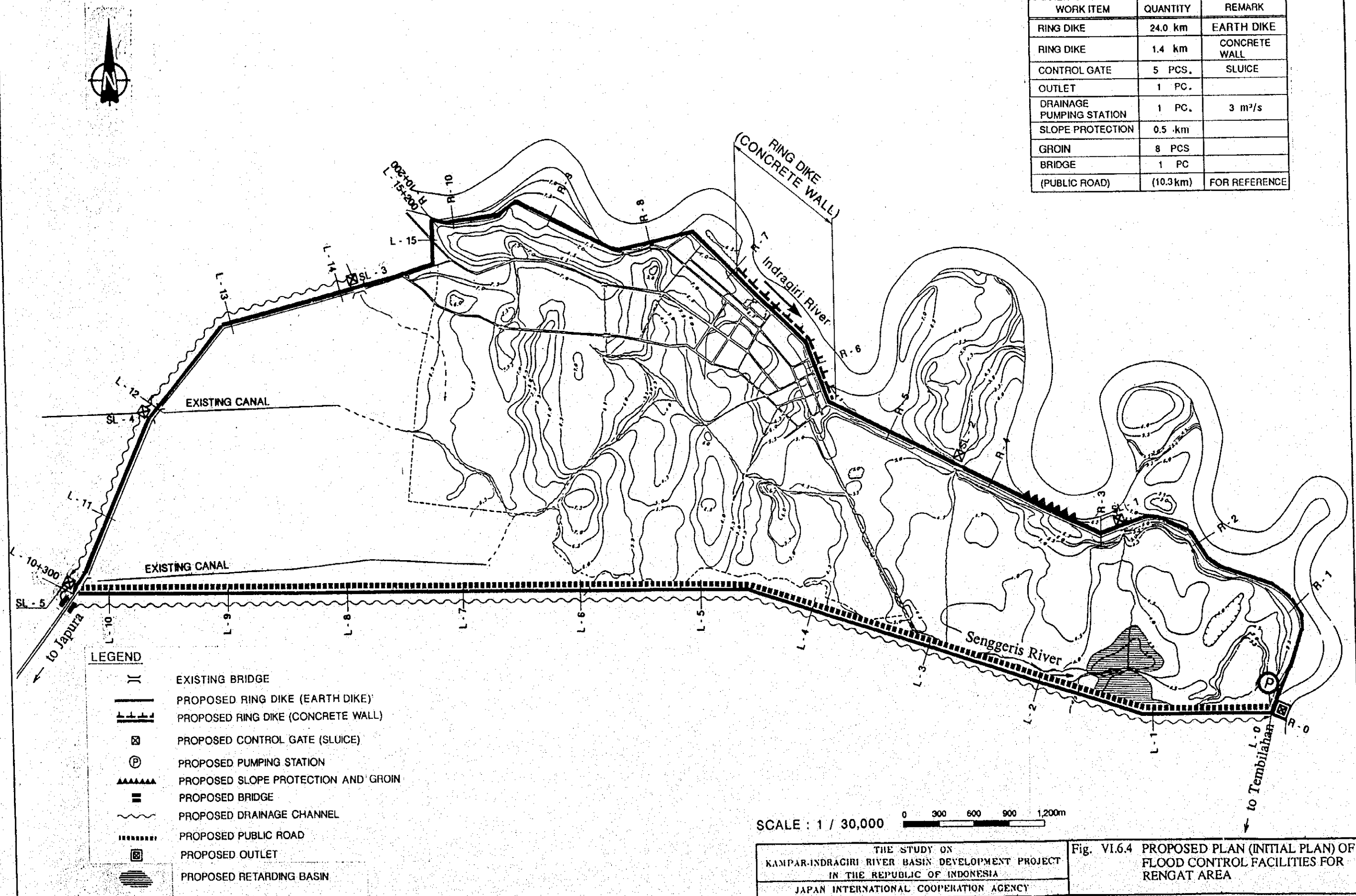
THE STUDY ON
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Fig. VI.6.2 PROPOSED LONGITUDINAL PROFILE
 (INITIAL PHASE) OF RIVER IMPROVEMENT
 FOR KAMPAR KANAN RIVER
 (BANGKINANG AREA)



PROPOSED STURUCTURES

WORK ITEM	QUANTITY	REMARK
RING DIKE	24.0 km	EARTH DIKE
RING DIKE	1.4 km	CONCRETE WALL
CONTROL GATE	5 PCS.	SLUICE
OUTLET	1 PC.	
DRAINAGE PUMPING STATION	1 PC.	3 m ² /s
SLOPE PROTECTION	0.5 km	
GROIN	8 PCS	
BRIDGE	1 PC	
(PUBLIC ROAD)	(10.3 km)	FOR REFERENCE

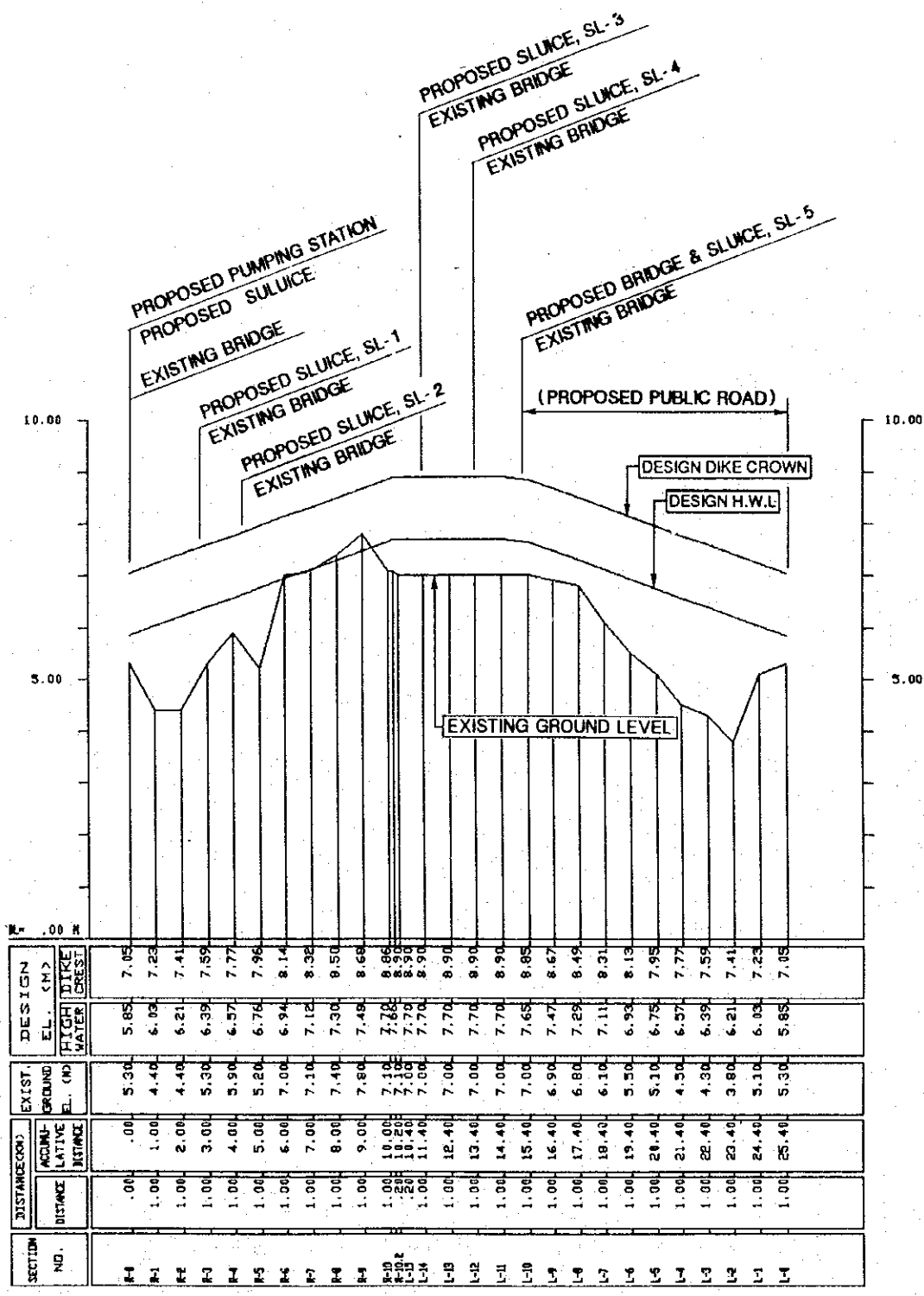


- LEGEND
- (=) EXISTING BRIDGE
 - PROPOSED RING DIKE (EARTH DIKE)
 - PROPOSED RING DIKE (CONCRETE WALL)
 - ⊠ PROPOSED CONTROL GATE (SLUICE)
 - ⊙ PROPOSED PUMPING STATION
 - ▲▲▲▲ PROPOSED SLOPE PROTECTION AND GROIN
 - ▬ PROPOSED BRIDGE
 - ~~~~~ PROPOSED DRAINAGE CHANNEL
 - PROPOSED PUBLIC ROAD
 - ⊞ PROPOSED OUTLET
 - ▨ PROPOSED RETARDING BASIN

SCALE : 1 / 30,000

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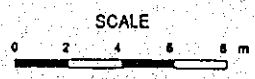
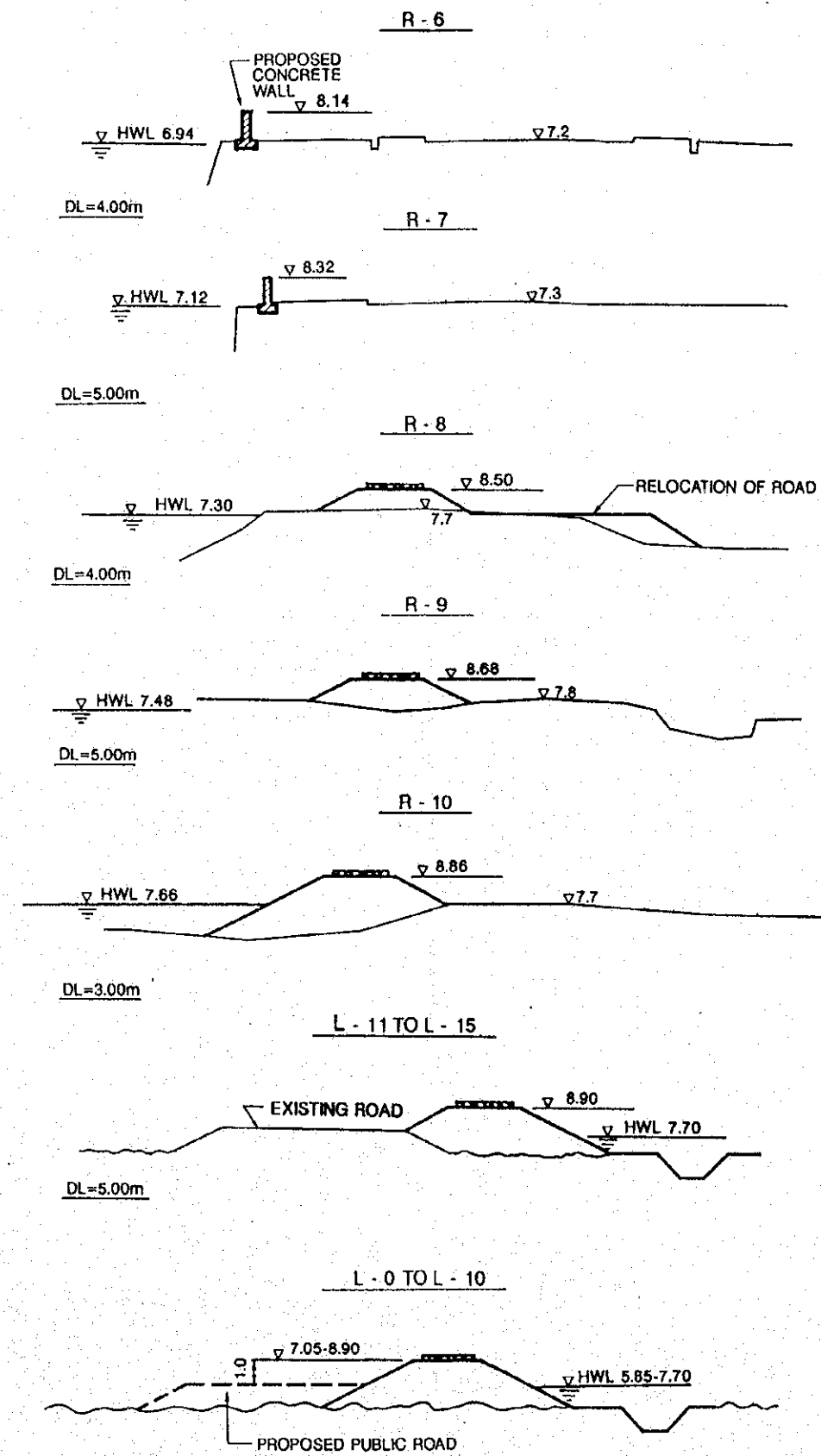
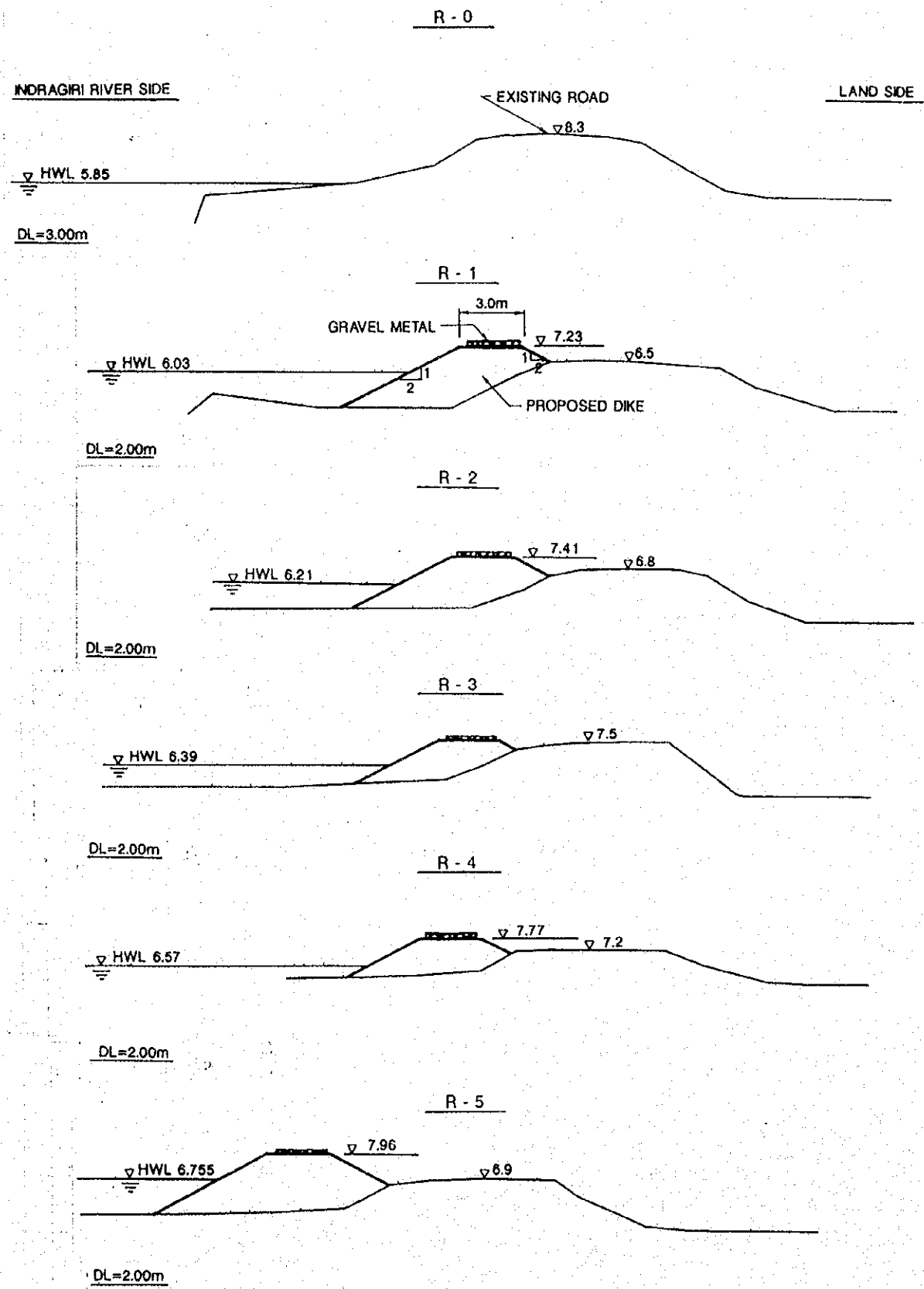
Fig. VI.6.4 PROPOSED PLAN (INITIAL PLAN) OF FLOOD CONTROL FACILITIES FOR RENGAT AREA



SECTION NO.	DISTANCE (M)		EXIST. GROUND EL. (M)	DESIGN EL. (M)	
	DISTANCE	ACCUMULATIVE DISTANCE		HIGH WATER	DIKE CREST
R-0	0.00	0.00	5.30	5.85	7.05
R-1	1.00	1.00	4.40	6.03	7.23
R-2	1.00	2.00	4.40	6.21	7.41
R-3	1.00	3.00	5.30	6.39	7.59
R-4	1.00	4.00	5.30	6.57	7.77
R-5	1.00	5.00	5.20	6.76	7.95
R-6	1.00	6.00	7.00	6.94	8.14
R-7	1.00	7.00	7.10	7.12	8.32
R-8	1.00	8.00	7.10	7.30	8.50
R-9	1.00	9.00	7.80	7.48	8.68
R-10	1.00	10.00	7.10	7.66	8.86
L-10	1.00	11.00	7.00	7.84	9.04
L-11	1.00	12.00	7.00	8.02	9.22
L-12	1.00	13.00	7.00	8.20	9.40
L-13	1.00	14.00	7.00	8.38	9.58
L-14	1.00	15.00	7.00	8.56	9.76
L-15	1.00	16.00	6.90	8.74	9.94
L-16	1.00	17.00	6.80	8.92	10.12
L-17	1.00	18.00	6.10	9.10	10.30
L-18	1.00	19.00	5.50	9.28	10.48
L-19	1.00	20.00	5.10	9.46	10.66
L-20	1.00	21.00	4.30	9.64	10.84
L-21	1.00	22.00	4.30	9.82	11.02
L-22	1.00	23.00	3.80	10.00	11.20
L-23	1.00	24.00	3.10	10.18	11.38
L-24	1.00	25.00	5.30	10.36	11.56

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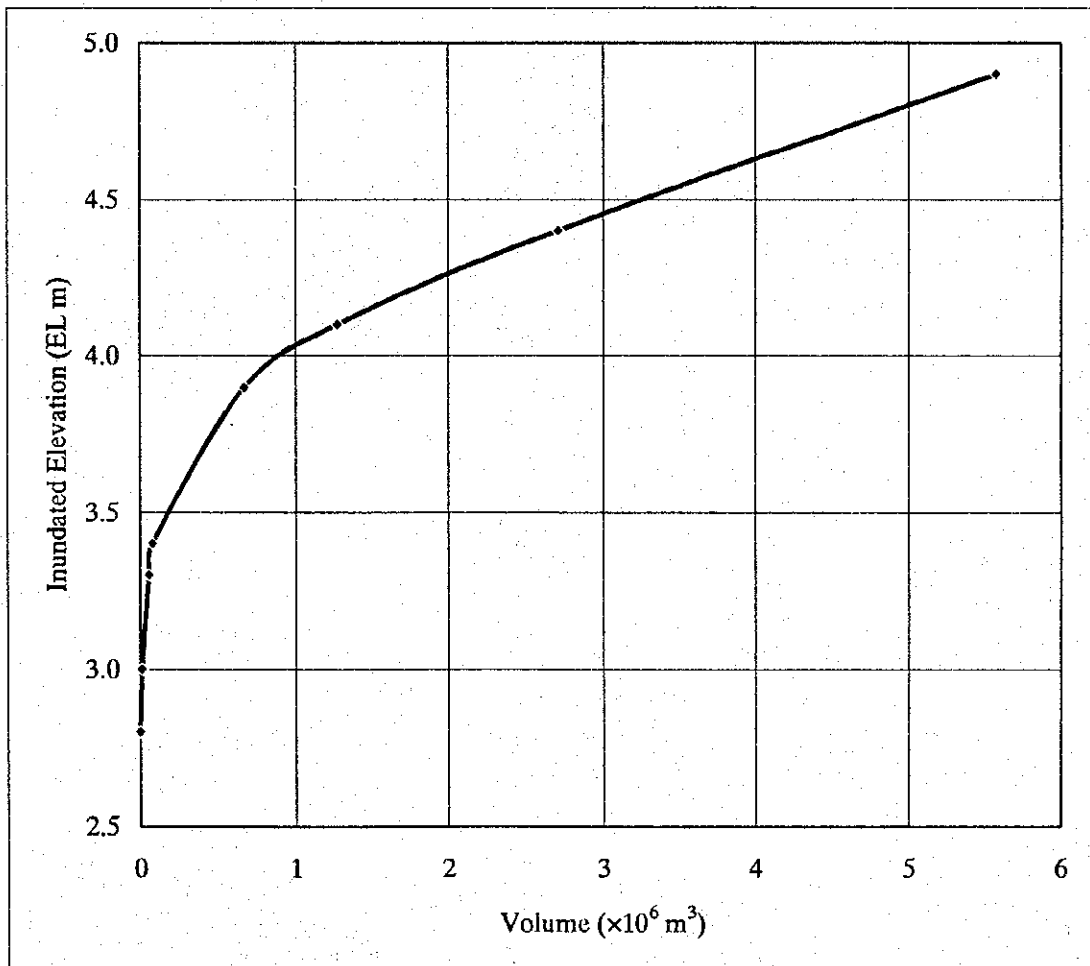
Fig. VI.6.5 PROPOSED LONGITUDINAL PROFILE (INITIAL PLAN) OF RING DIKE FOR RENGAT AREA



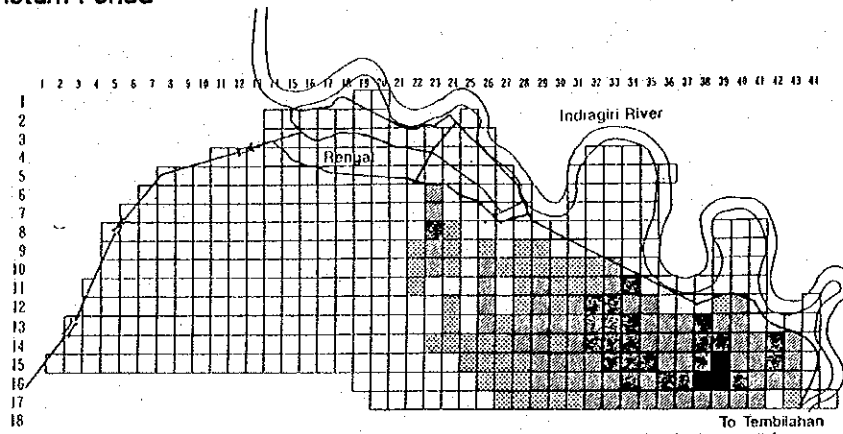
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Fig. VI.6.6 PROPOSED CROSS SECTIONS
 (INITIAL PLAN) OF RING DIKE FOR
 RENGAT AREA

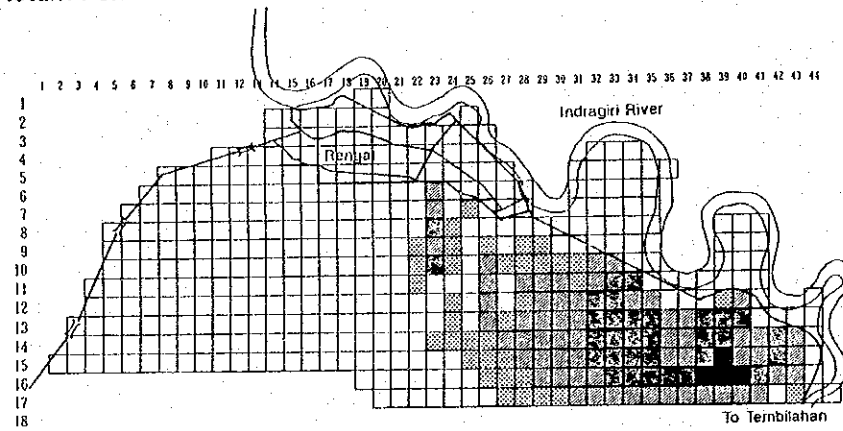
Inundated Elevation (EL m)	Volume ($\times 10^6 \text{ m}^3$)
2.8	0.000
3.0	0.013
3.3	0.059
3.4	0.081
3.9	0.675
4.1	1.275
4.4	2.709
4.9	5.572



2-year Return Period



5-year Return Period



LEGEND

Inundation depth : H

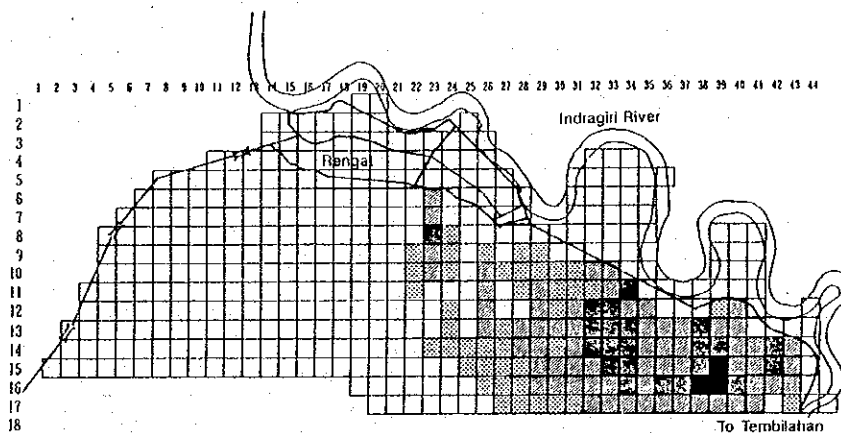
□ H=0m ▨ H<0.5m ▩ 0.5m<H<1m ▮ 1m<H<1.5m ■ 1.5m<H<2m

SCALE 1 : 100,000

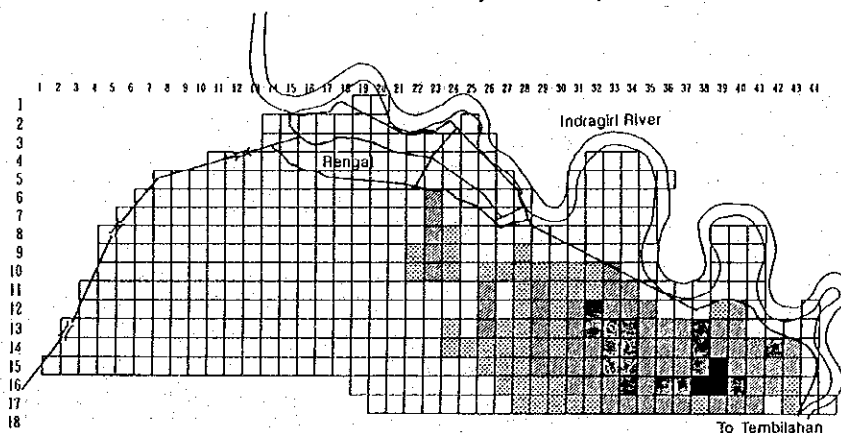
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Fig. VI.6.8 INUNDATION DEPTH FOR EACH RETURN PERIOD

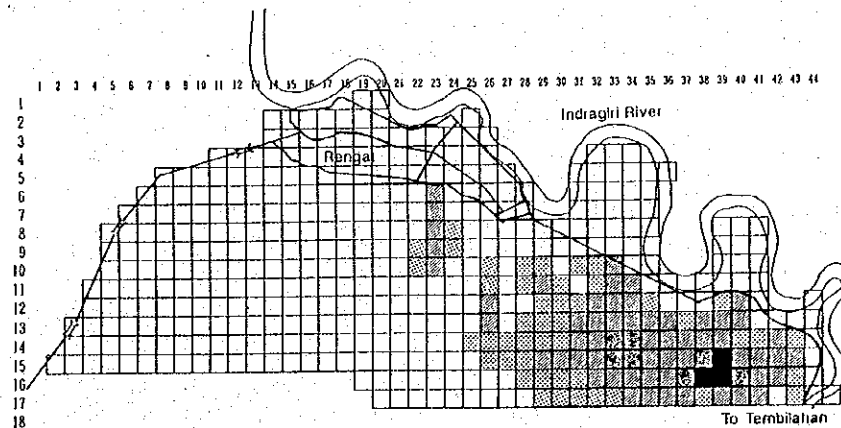
Inundation Elevation of 4.7m : Pump capacity of 1m³/s at 5-year return period



Inundation Elevation of 4.6m : Pump capacity of 1m³/s at 2-year return period and 3m³/s at 10-year return period



Inundation Elevation of 4.5m : Pump capacity of 3m³/s at 5-year return period and 5m³/s at 5 and 10-year return periods



LEGEND

Inundation depth : H

- H=0m
- ▒ H<0.5m
- ▓ 0.5m<H<1m
- 1m<H<1.5m
- 1.5m<H<2m

SCALE 1 : 100,000

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Fig. VI.6.9 INUNDATION DEPTH FOR (1/3) DIFFERENT PUMP CAPACITY AT EACH RETURN PERIOD