

FIGURE 9.5.1.2 (7) C-4U KHLONG KRASAENG BAN WAT SADET

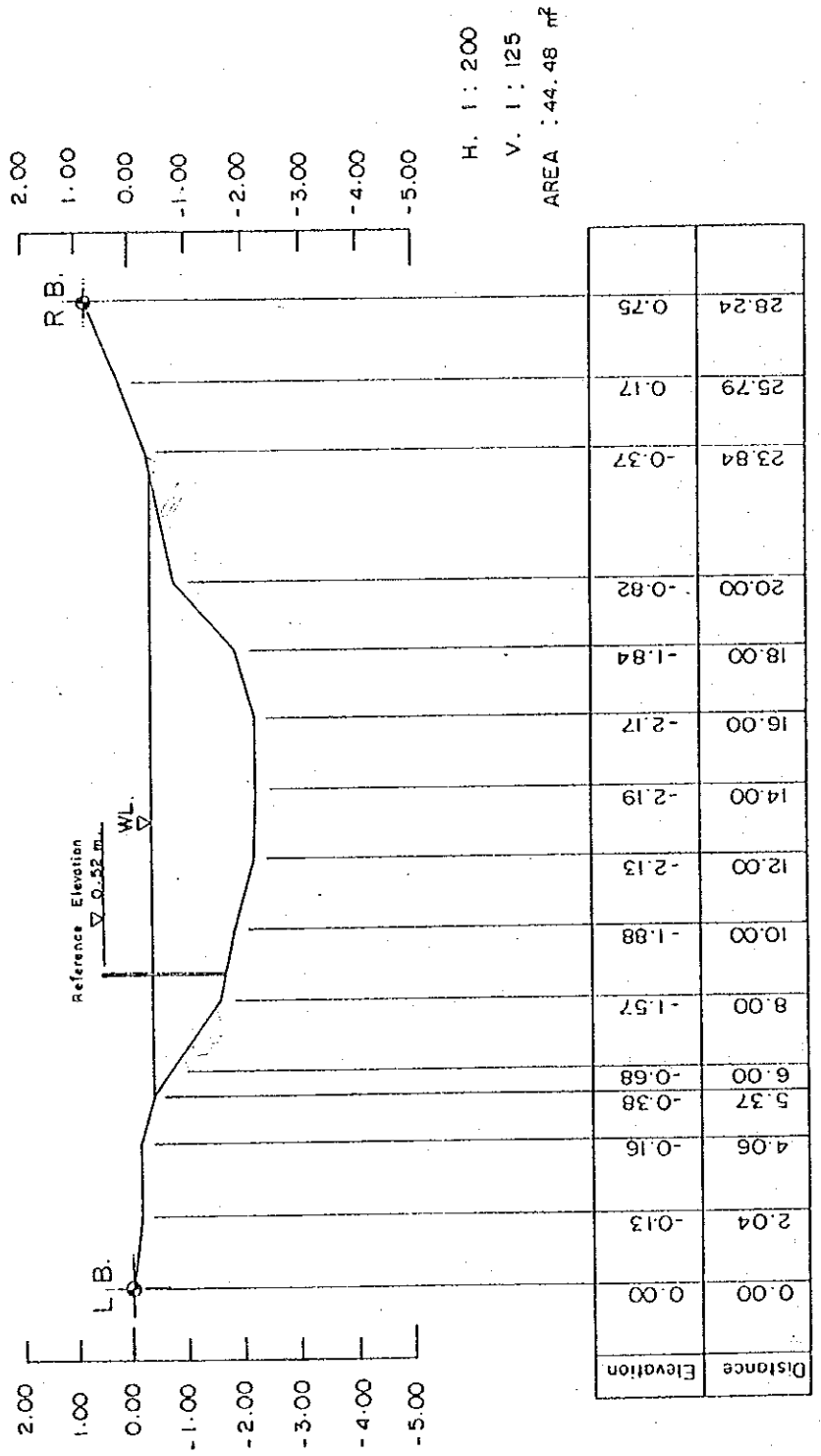


FIGURE 9.5.1.2 (8) C-4L KHLONG KRASAENG BAN KRASAENG

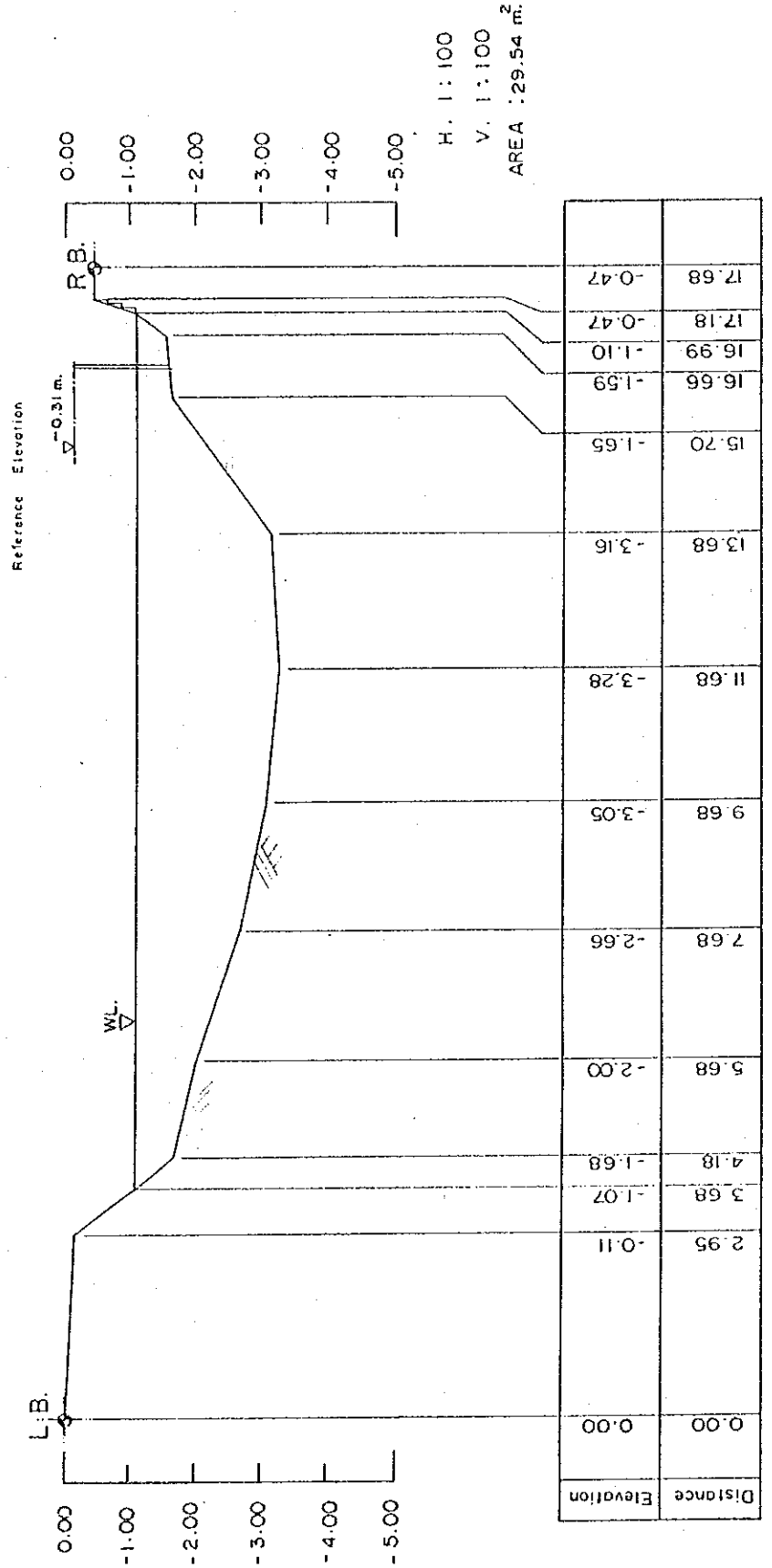


FIGURE 9.5.1.2 (9) C-5U KHLONG BANPHO PATHUMTHANI

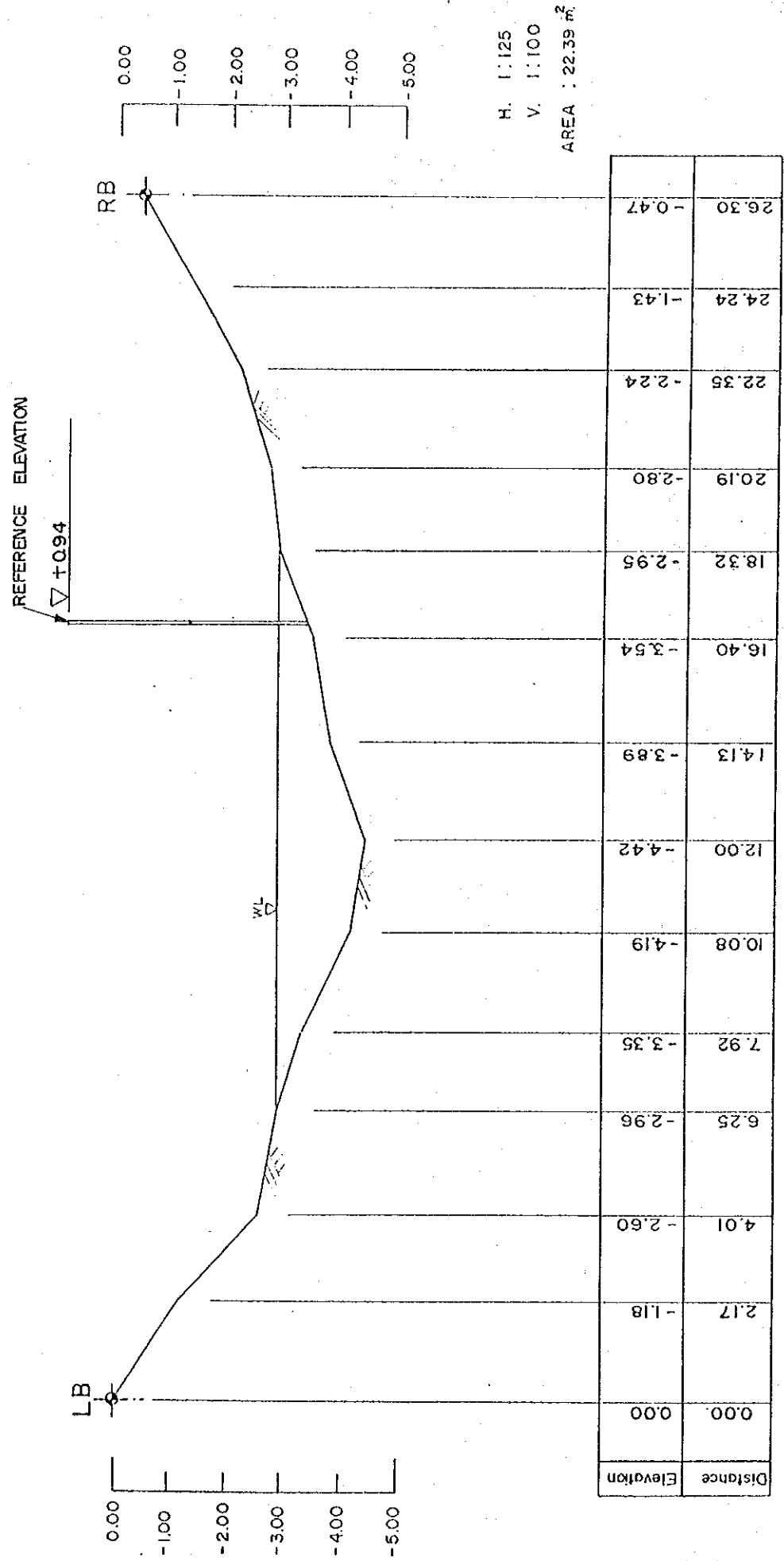


FIGURE 9.5.1.2 (10) C-5L KHLONG BANGPHO PATHUM THAN

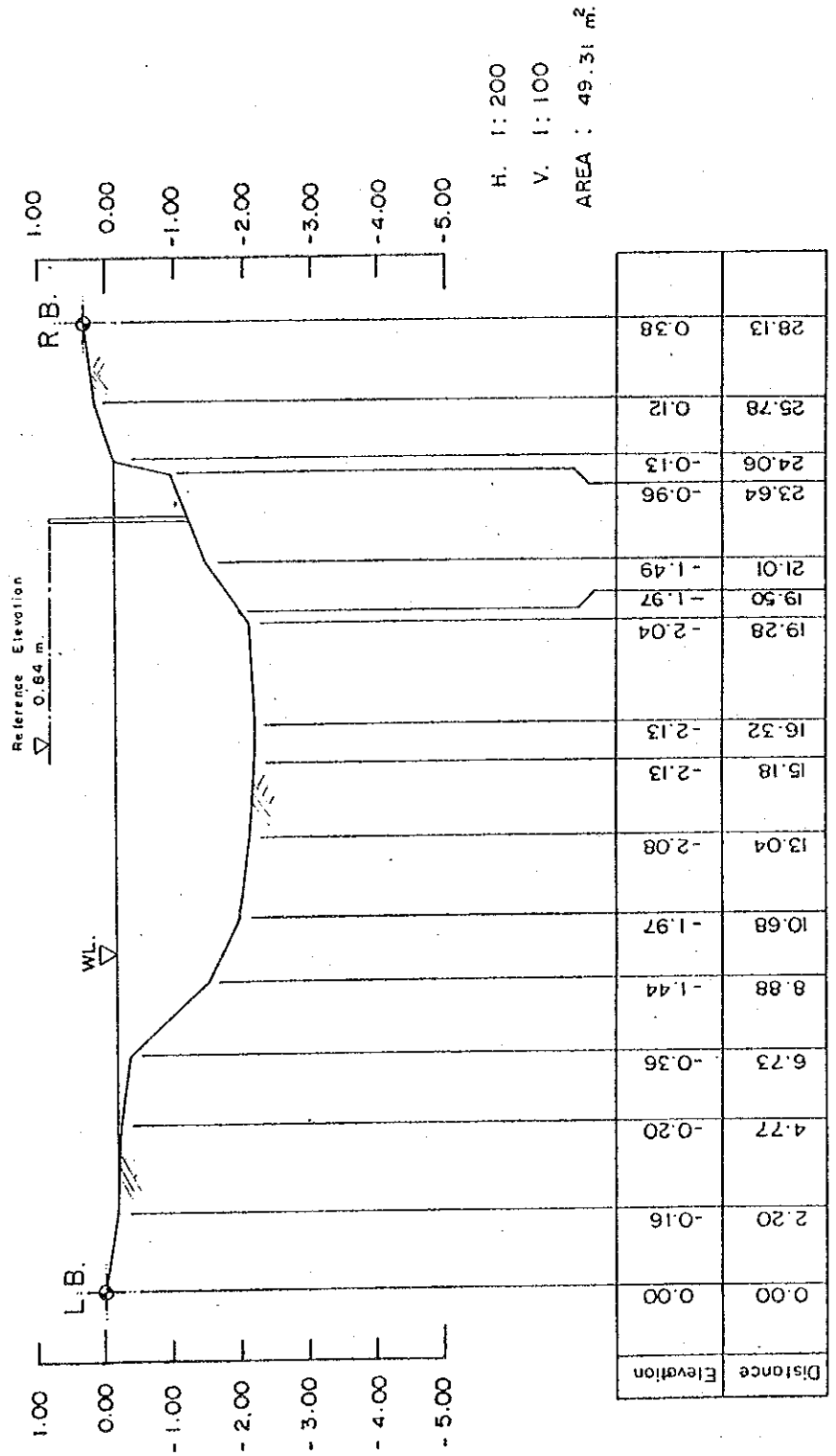


FIGURE 9.5.1.2 (11) C-6L KHLONG BANGNA PATHUMTHANI

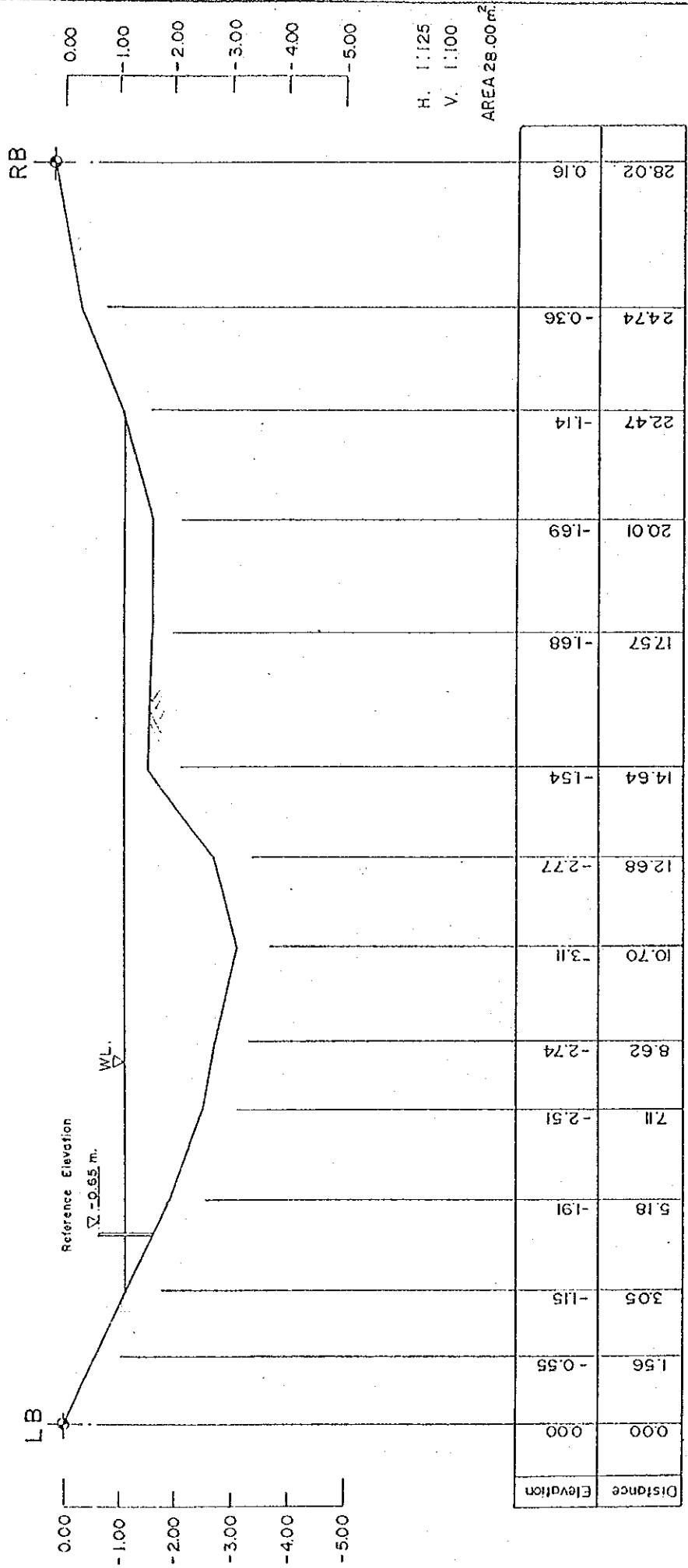
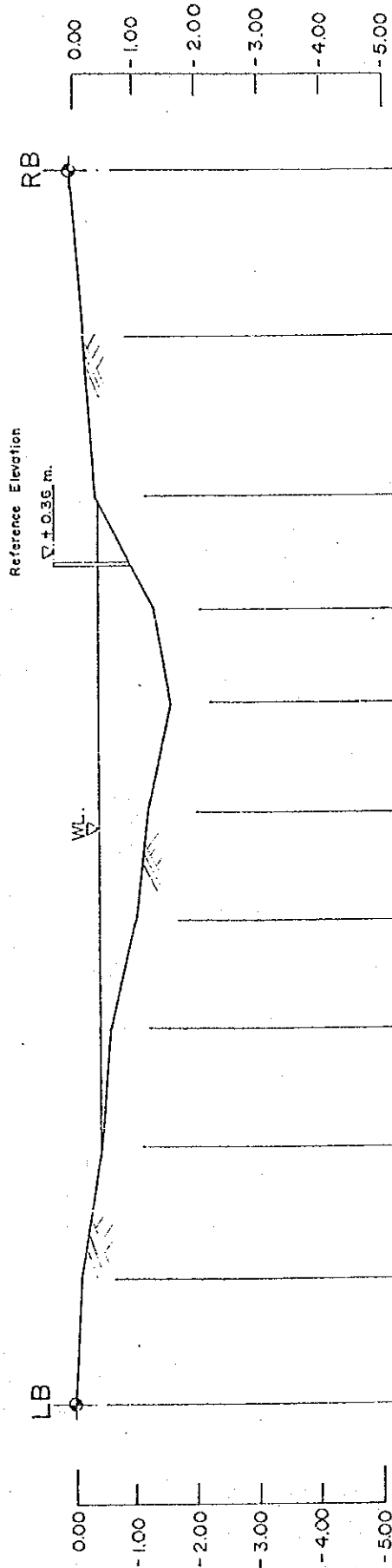


FIGURE 9.5.1.2 (12) C-7L KHLONG WAT PHO LEARN



H. 1:125
V. 1:100

AREA: 22.89 m²

Distance	Elevation
0.00	0.00
2.45	-0.08
5.08	-0.41
7.33	-0.60
9.47	-1.07
11.55	-1.21
13.85	-1.60
15.67	-1.32
17.95	-0.33
21.29	-0.18
24.65	0.10

FIGURE 9.5.1.2 (13) P-1U CHAOPHRAYA RIVER ANGTHONG

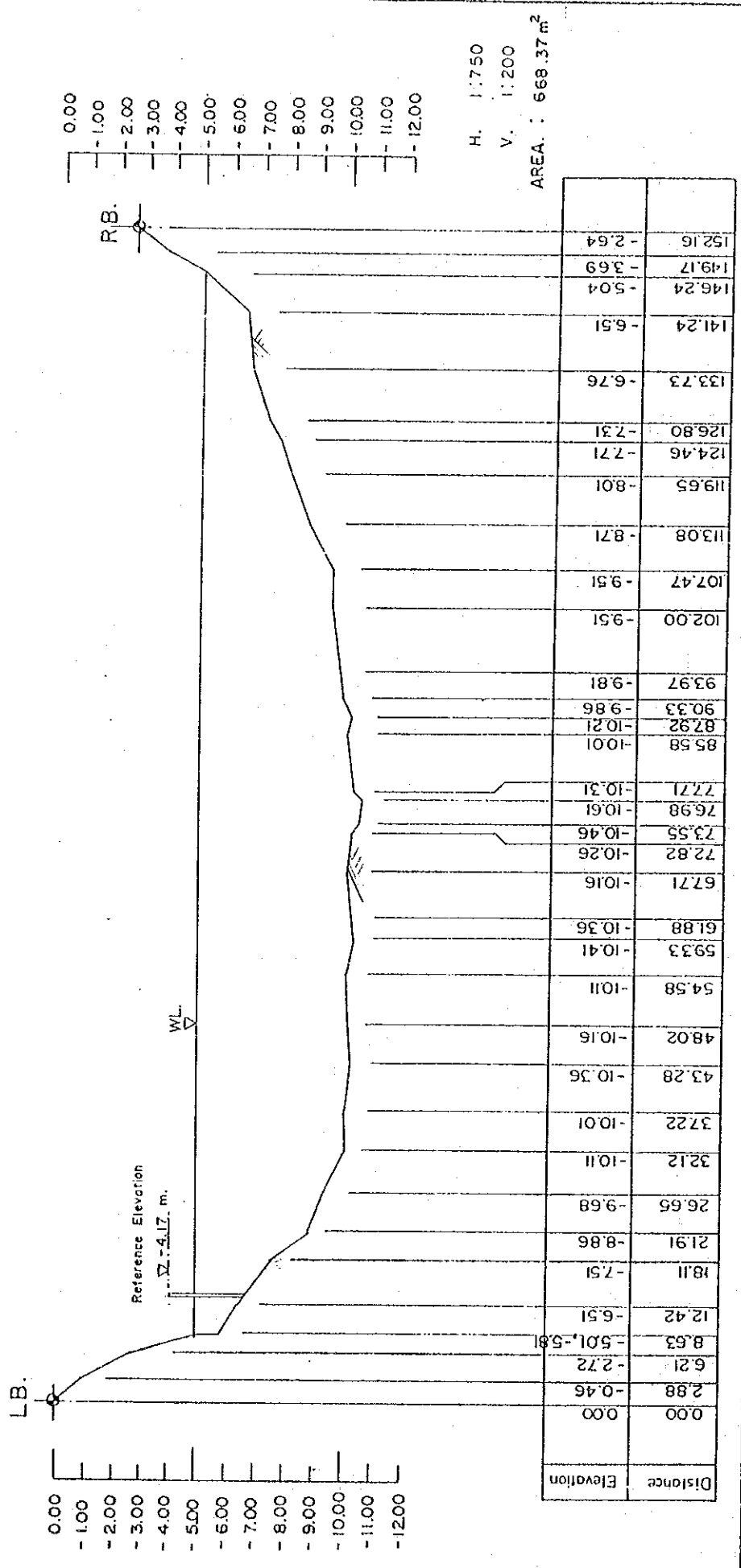


FIGURE 9.5.1.2 (14) P-1L CHAOPHRAYA RIVER ANGTHONG

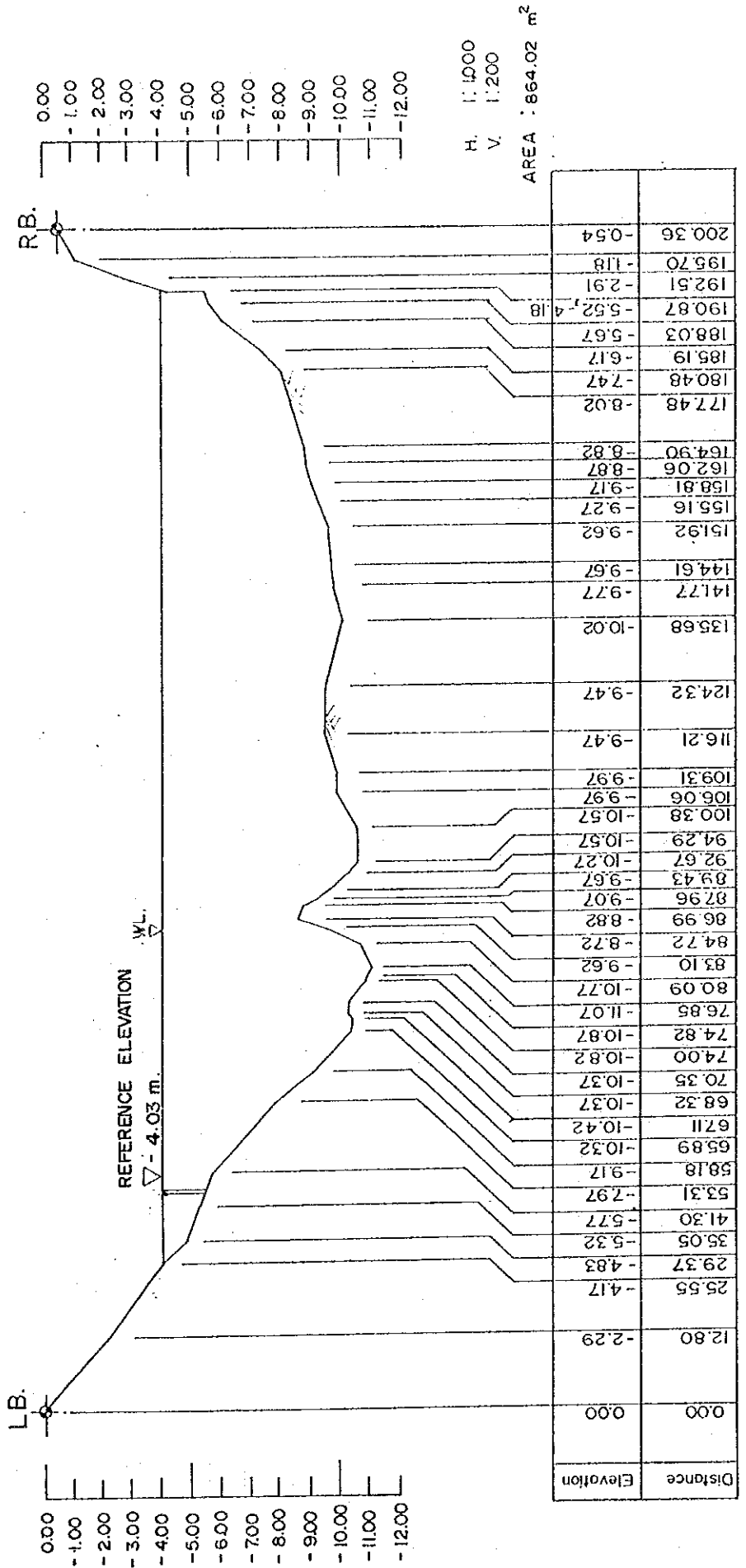


FIGURE 9.5.1.2 (15) P-2U CHAOPHRAYA RIVER NONTHABURI BRIDGE

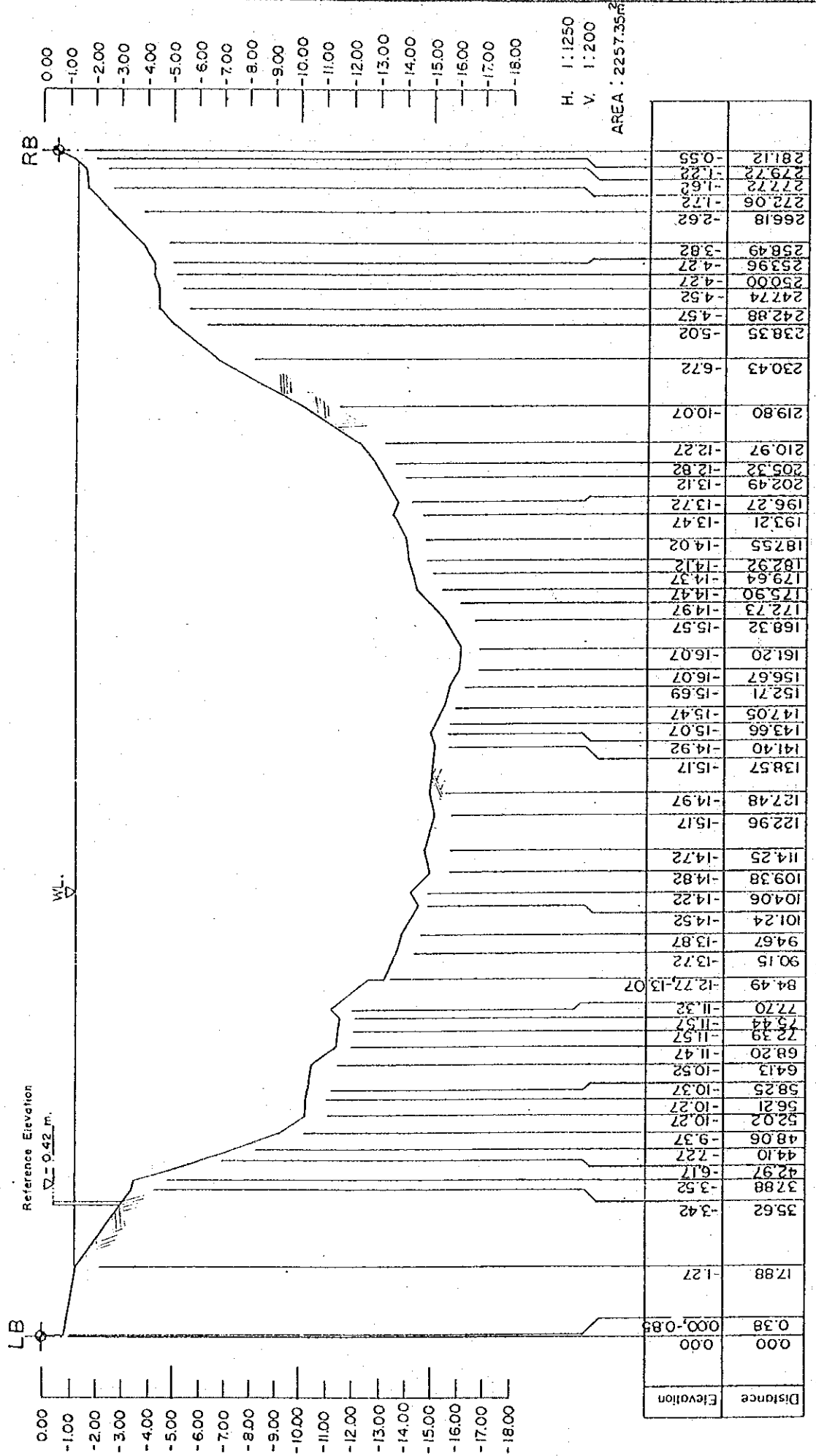


FIGURE 9.5.1.2 (16) P-2L CHAOPHRAYA RIVER A.PRAKET NONTHABURI

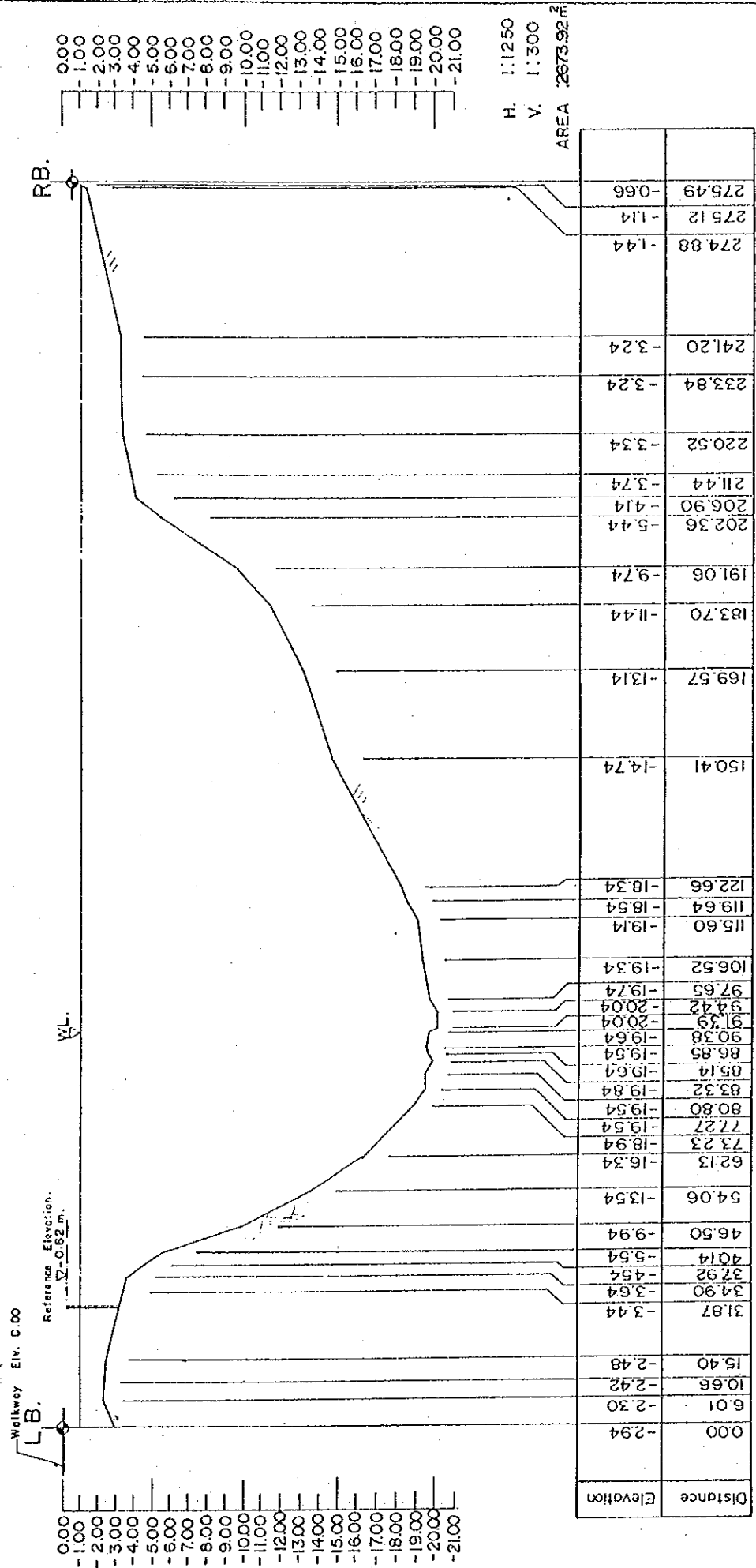


FIGURE 9.5.1.2 (17) P-3U LOP BURI RIVER AYUTTHAYA

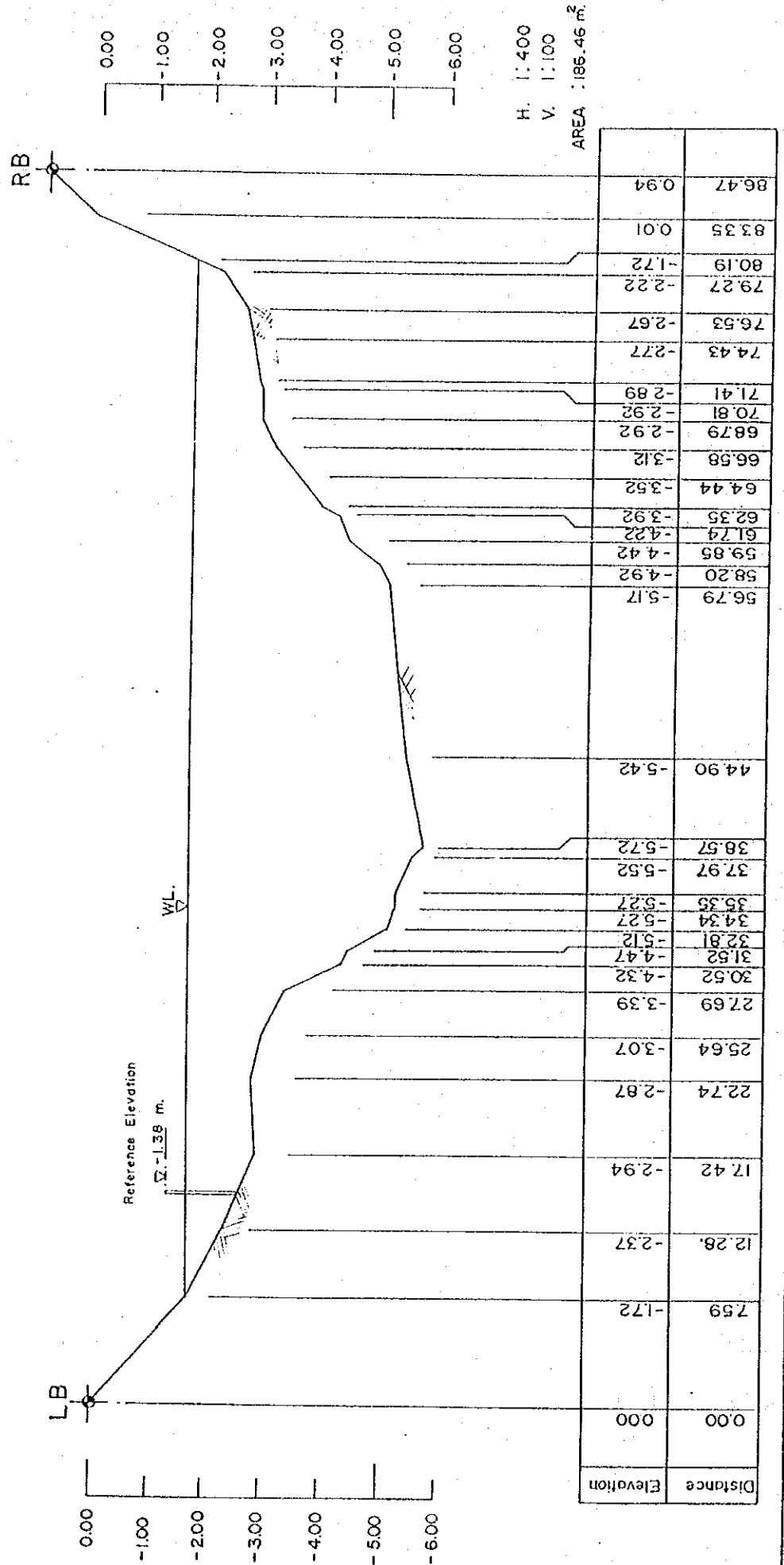
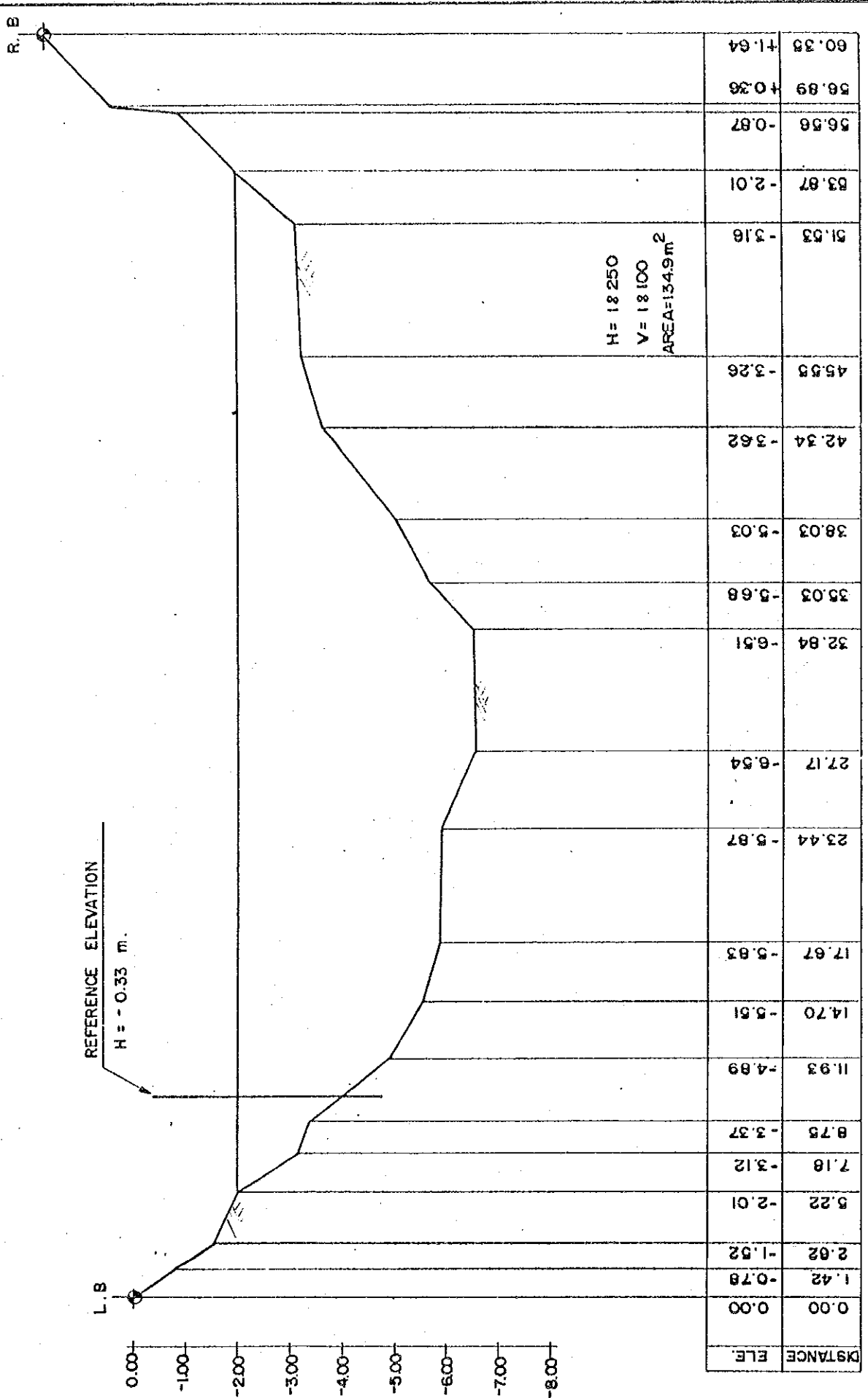


FIGURE 9.5.1.2 (18) P-3L LOP BURI RIVER ATUTTHAYA



9.5.1.3 WATER LEVEL MEASUREMENT

TABLE 9.5.1.3 (1) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	PTU CHAO PHRAYA RIVER : ANGTHONG
SURVEYOR	DR. SUKIT VISEHSIN

DISTANCE		HEIGHT				GROUND LEVEL		REMARK
SECTION	CUMULATION	B.S.		F.S.(DEPTH)		(RIVER BED L)		
	0 00	1	31			0	00	(I) Standard Point
2	88				1 77	- 0	46	
3	31				4 03	- 2	72	
2	42				6 32	- 5	01	WL= 0.03 (Post H=0.84)
0	00				(0 80)	- 5	81	
3	79				(1 50)	- 6	51	
5	69				(2 50)	- 7	51	
3	80				(3 85)	- 8	86	
4	74				(4 67)	- 9	68	
5	47				(5 11)	- 10	11	
5	10				(5 00)	- 10	01	
6	06				(5 35)	- 10	36	
4	74				(5 15)	- 10	16	
6	56				(5 10)	- 10	11	
4	75				(5 40)	- 10	41	
2	55				(5 35)	- 10	36	
5	83				(5 15)	- 10	16	
5	11				(5 25)	- 10	26	
0	73				(5 45)	- 10	46	SOUNDING
3	43				(5 60)	- 10	61	
0	73				(5 30)	- 10	31	
7	87				(5 00)	- 10	01	
2	34				(5 20)	- 10	21	
2	41				(4 85)	- 9	86	
3	64				(4 80)	- 9	81	
8	03				(4 50)	- 9	51	

TABLE 9.5.1.3 (2) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	PIU CHAO PHRAYA RIVER : ANGTHONG
SURVEYOR	DR. SUKIT VISESHSIN

DISTANCE				HEIGHT				GROUND LEVEL		REMARK
SECTION		CUMULATION		B.S.		F.S.(DEPTH)		(RIVER BED L)		
5	47	107	47			(4	50)	- 9	51	
5	61	113	08			(3	70)	- 8	71	
6	57	119	65			(3	00)	- 8	01	
4	81	124	46			(2	70)	- 7	71	SOUNDING
2	34	126	80			(2	30)	- 7	31	
6	93	133	73			(1	75)	- 6	76	
7	51	141	24			(1	50)	- 6	51	
5	00	146	24			6	35	- 5	04	WL.= 0.00
2	93	149	17			5	00	- 3	69	
2	99	152	16			3	95	- 2	64	(R) Standard Point

TABLE 9.5.1.3 (3) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	P1L CHAO PHRAYA RIVER : ANGTHONG
SURVEYOR	DR. SUKIT VISEHSIN

DISTANCE		HEIGHT		GROUND LEVEL		REMARK
SECTION	CUMULATION	B.S.	F.S.(DEPTH)	(RIVER BED L)		
	0 00	1 35		0 00		(L) Standard Point
12 80	12 80		3 64	- 2 29		
12 75	25 55		5 52	- 4 17		WL= 0.01 (Post H= 0.62)
3 82	29 37		6 18	- 4 83		
5 68	35 05		(1 15)	- 5 32		
6 25	41 30		(1 60)	- 5 77		
12 01	53 31		(3 80)	- 7 97		
4 87	58 18		(5 00)	- 9 17		
7 71	65 89		(6 15)	- 10 32		
1 22	67 11		(6 25)	- 10 42		
1 21	68 32		(6 20)	- 10 37		
2 03	70 35		(6 20)	- 10 37		SOUNDING
3 65	74 00		(6 65)	- 10 82		
0 82	74 82		(6 70)	- 10 87		
2 03	76 85		(6 90)	- 11 07		
3 24	80 09		(6 60)	- 10 77		
3 01	83 10		(5 45)	- 9 62		
1 62	84 72		(4 55)	- 8 72		
2 27	86 99		(4 65)	- 8 82		
0 97	87 96		(4 90)	- 9 07		
1 47	89 43		(5 50)	- 9 67		
3 24	92 67		(6 10)	- 10 27		
1 62	94 29		(6 40)	- 10 57		
6 09	100 38		(6 40)	- 10 57		
5 68	106 06		(5 80)	- 9 97		
3 25	109 31		(5 80)	- 9 97		

TABLE 9.5.1.3 (4) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	P1L CHAO PHRAYA RIVER : ANGTHONG
SURVEYOR	DR. SUKIT VISESHSIN

DISTANCE				HEIGHT				GROUND LEVEL		REMARK
SECTION		CUMULATION		B.S.		F.S.(DEPTH)		(RIVER BED L)		
6	90	116	21			(5	30)	- 9	47	
8	11	124	32			(5	30)	- 9	47	
11	36	135	68			(5	85)	- 10	02	
6	09	141	77			(5	60)	- 9	77	
2	84	144	61			(5	50)	- 9	67	
7	31	151	92			(5	45)	- 9	62	
3	24	155	16			(5	10)	- 9	27	
3	65	158	81			(5	00)	- 9	17	SOUNDING
3	25	162	06			(4	70)	- 8	87	
2	84	164	90			(4	65)	- 8	82	
12	58	177	48			(3	85)	- 8	02	
3	00	180	48			(3	30)	- 7	47	
4	71	185	19			(2	00)	- 6	17	
2	84	188	03			(1	50)	- 5	67	
2	84	190	87			(1	35)	- 5	52	
0	00	190	87			5	53	- 4	18	WL.= 0.00
1	64	192	51			4	26	- 2	91	
3	19	195	70			2	53	- 1	18	
4	66	200	36			1	89	- 0	54	(R) Standard Point

TABLE 9.5.1.3 (5) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	P2U CHAO PHRAYA RIVER : NONTABURI BRIDGE
SURVEYOR	DR. SUKIT VISEHSIN

DISTANCE		HEIGHT		GROUND LEVEL		REMARK
SECTION	CUMULATION	B.S.	F.S.(DEPTH)	(RIVER BED L)		
	0 00	1 62		0 00		(L) Standard Point
0 38	0 38		1 62	0 00		
0 00	0 38		2 47	- 0 85		
17 50	17 88		2 89	- 1 27		WL= 0.00 (Post H= 0.85)
17 74	35 62		(2 20)	- 3 42		
2 26	37 88		(2 30)	- 3 52		
5 09	42 97		(4 95)	- 6 17		
1 13	44 10		(6 05)	- 7 27		
3 96	48 06		(8 15)	- 9 37		
3 96	52 02		(9 05)	- 10 27		
4 19	56 21		(9 05)	- 10 27		
2 04	58 25		(9 15)	- 10 37		
5 88	64 13		(9 30)	- 10 52		SOUNDING
4 07	68 20		(10 25)	- 11 47		
4 19	72 39		(10 35)	- 11 57		
3 05	75 44		(10 35)	- 11 57		
2 26	77 70		(10 10)	- 11 32		
6 79	84 49		(11 55)	- 12 77		
0 00	84 49		(11 85)	- 13 07		
5 66	90 15		(12 50)	- 13 72		
4 52	94 67		(12 65)	- 13 87		
6 57	101 24		(13 38)	- 14 52		
2 82	104 06		(13 00)	- 14 22		
5 32	109 38		(13 60)	- 14 82		
4 87	114 25		(13 50)	- 14 72		
8 71	122 96		(13 95)	- 15 17		

TABLE 9.5.1.3 (6) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	P2U CHAO PHRAYA RIVER : NONTHABURI BRIDGE
SURVEYOR	DR. SUKIT VISEHSIN

DISTANCE				HEIGHT				GROUND LEVEL		REMARK
SECTION		CUMULATION		B.S.		F.S.(DEPTH)		(RIVER BED L)		
4	52	127	48			(13	75)	- 14	97	
11	09	138	57			(13	95)	- 15	17	
2	83	141	40			(13	70)	- 14	92	
2	26	143	66			(13	85)	- 15	07	
3	39	147	05			(14	25)	- 15	47	
5	66	152	71			(14	47)	- 15	69	
3	96	156	67			(14	85)	- 16	07	
4	53	161	20			(14	85)	- 16	07	
7	12	168	32			(14	35)	- 15	57	
4	41	172	73			(13	75)	- 14	97	
3	17	175	90			(13	25)	- 14	47	SOUNDING
3	74	179	64			(13	15)	- 14	37	
3	28	182	92			(12	90)	- 14	12	
4	63	187	55			(12	80)	- 14	02	
5	66	193	21			(12	25)	- 13	47	
3	06	196	27			(12	50)	- 13	72	
6	22	202	49			(11	90)	- 13	12	
2	83	205	32			(11	60)	- 12	82	
5	65	210	97			(11	05)	- 12	27	
8	83	219	80			(8	85)	- 10	07	
10	63	230	43			(5	50)	- 6	72	
7	92	238	35			(3	80)	- 5	02	
4	53	242	88			(3	35)	- 4	57	
4	86	247	74			(3	30)	- 4	52	
2	26	250	00			(3	05)	- 4	27	
3	96	253	96			(3	05)	- 4	27	

TABLE 9.5.1.3 (7) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	P2U CHAO PHRAYA RIVER : NONTABURI BRIDGE
SURVEYOR	DR. SUKIT VISEHSIN

DISTANCE				HEIGHT				GROUND LEVEL		REMARK
SECTION		CUMULATION		B.S.		F.S.(DEPTH)		(RIVER BED L)		
4	53	258	49			(2	60)	- 3	82	
7	69	266	18			(1	40)	- 2	62	
5	88	272	06			(0	50)	- 1	72	SOUNDING
5	66	277	72			(0	40)	- 1	62	↓
2	00	279	72			2	84	- 1	22	WL= 0.05
1	40	281	12			2	17	- 0	55	(R) Standard Point

TABLE 9.5.1.3 (8) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	P2L CHAO PHRAYA RIVER : A. PRAKET, NONTABURI
SURVEYOR	DR. SUKIT VISEHSIN

DISTANCE		HEIGHT		GROUND LEVEL		REMARK
SECTION	CUMULATION	B.S.	F.S.(DEPTH)	(RIVER BED L)		
	0 00	1 35		0 00		(L) Standard Point
0 00	0 00		2 49	- 1 14		WL= 0.00 (Post H= 0.52)
0 00	0 00		4 29	- 2 94		
6 01	6 01		3 65	- 2 30		
4 65	10 66		3 77	- 2 42		
4 74	15 40		3 83	- 2 48		
16 47	31 87		(2 30)	- 3 44		
3 03	34 90		(2 50)	- 3 64		
3 02	37 92		(3 40)	- 4 54		
2 22	40 14		(4 40)	- 5 54		
6 36	46 50		(8 80)	- 9 94		
7 56	54 06		(12 40)	- 13 54		
8 07	62 13		(15 20)	- 16 34		
11 10	73 23		(17 80)	- 18 94		
4 04	77 27		(18 40)	- 19 54		SOUNDING
3 53	80 80		(18 40)	- 19 54		
2 52	83 32		(18 70)	- 19 84		
1 82	85 14		(18 50)	- 19 64		
1 71	86 85		(18 40)	- 19 54		
5 24	90 38		(18 50)	- 19 64		
1 01	91 39		(18 90)	- 20 04		
3 03	94 42		(18 90)	- 20 04		
3 23	97 65		(18 60)	- 19 74		
8 87	106 52		(18 20)	- 19 34		
9 08	115 60		(18 00)	- 19 14		
4 04	119 64		(17 40)	- 18 54		

TABLE 9.5.1.3 (9) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	P2L CHAO PHRAYA RIVER : A. PRAKET, NONTHABURI
SURVEYOR	DR. SUKIT VISEHSIN

DISTANCE				HEIGHT				GROUND LEVEL		REMARK	
SECTION		CUMULATION		B.S.		F.S.(DEPTH)		(RIVER BED L)			
3	02	122	66			(17	20)	- 18	34		
27	75	150	41			(13	60)	- 14	74		
19	16	169	57			(12	00)	- 13	14		
14	13	183	70			(10	30)	- 11	44		
7	36	191	06			(8	60)	- 9	74		
11	30	202	36			(4	30)	- 5	44		
4	54	206	90			(3	00)	- 4	14	SOUNDING	
4	54	211	44			(2	60)	- 3	74		
9	08	220	52			(2	20)	- 3	34		
13	32	233	84			(2	10)	- 3	24		
7	36	241	20			(2	10)	- 3	24		
33	68	274	88			2	79	- 1	44		
0	24	275	12			2	49	- 1	14	WL=0.00	
0	37	275	49			2	01	- 0	66	(R) Standard Point	

TABLE 9.5.1.3 (10) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	P3U LOPBURI RIVER : AYUTTHAYA
SURVEYOR	DR. SUKIT VISESHSIN

DISTANCE		HEIGHT				GROUND LEVEL		REMARK
SECTION	CUMULATION	B.S.		F.S.(DEPTH)		(RIVER BED L)		
	0 00	1	06			0	00	(L) Standard Point
7 59	7 59			2	78	- 1	72	WL= 0.00 (Post H= 0.34)
4 69	12 28			3	43	- 2	37	
5 14	17 42			4	00	- 2	94	
5 32	22 74			(1	15)	- 2	87	
2 90	25 64			(1	35)	- 3	07	
2 05	27 69			(1	67)	- 3	39	
2 83	30 52			(2	60)	- 4	32	
1 00	31 52			(2	75)	- 4	47	
1 29	32 81			(3	40)	- 5	12	
1 53	34 34			(3	55)	- 5	27	
1 01	35 35			(3	55)	- 5	27	
2 62	37 97			(3	80)	- 5	52	
0 60	38 57			(4	00)	- 5	72	
6 33	44 90			(3	70)	- 5	42	SOUNDING
11 89	56 79			(3	45)	- 5	17	
1 41	58 20			(3	20)	- 4	92	
1 65	59 85			(2	70)	- 4	42	
1 89	61 74			(2	50)	- 4	22	
2 50	62 35			(2	20)	- 3	92	
2 09	64 44			(1	80)	- 3	52	
2 14	66 58			(1	40)	- 3	12	
2 21	68 79			(1	20)	- 2	92	
2 02	70 81			(1	20)	- 2	92	
0 60	71 41			(1	17)	- 2	89	
3 02	74 43			(1	05)	- 2	77	

TABLE 9.5.1.3 (11) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	P3U LOPBURI RIVER : AYUTHAYA
SURVEYOR	DR. SUKIT VISESHSIN

DISTANCE				HEIGHT				GROUND LEVEL		REMARK
SECTION		CUMULATION		B.S.		F.S.(DEPTH)		(RIVER BED L)		
2	10	76	53			(0	39)	- 2	67	
2	74	79	27			(0	25)	- 2	22	SOUNDING
0	92	80	19			2	78	- 1	72	WL= 0.00
3	16	83	35			1	05	0	01	
3	12	86	47			0	12	0	94	(R) Standard Point

TABLE 9.5.1.3 (12) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	P-3L LOP BURI RIVER (AYUTTHAYA)
SURVEYOR	

DISTANCE		HEIGHT		GROUND LEVEL (RIVER BED L)	REMARKS	
SECTION	CUMULATION	B.S.	F.S. (DEPTH)			
		0.00		0.00	(L) Standard Point	
1.42	1.42		-0.78	-0.78		
1.20	2.62		-1.52	-1.52		
2.60	5.22		-2.01	-2.01	WL=0.00 (Post H=-0.33)	
1.96	7.18		(1.11)	-3.12	↑ ↓	
1.57	8.75		(1.36)	-3.37		
3.18	11.93		(2.88)	-4.89		
2.77	14.70		(3.50)	-5.51		
2.97	17.67		(3.82)	-5.83		
5.77	23.44		(3.86)	-5.87		
3.73	27.17		(4.53)	-6.54		SOUNDING
5.67	32.84		(4.50)	-6.51		
2.19	35.03		(3.67)	-5.68		
3.00	38.03		(3.02)	-5.03		
4.31	42.34		(1.61)	-3.62		
3.21	45.55		(1.25)	-3.26		
5.98	51.53		(1.15)	-3.16		
2.34	53.87		-2.01	-2.01	WL=0.00	
2.69	56.56		-0.87	-0.87		
0.33	56.89		0.36	0.36		
3.46	60.35		1.64	1.64	(R) Standard Point	

TABLE 9.5.1.3 (13) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	C1U KHLONG MAKAM : AYUTTHAYA
SURVEYOR	DR. SUKIT VISEHSIN

DISTANCE		HEIGHT				GROUND LEVEL		REMARK
SECTION	CUMULATION	B.S.		F.S.(DEPTH)		(RIVER BED L)		
	0 00	1	37			0	00	(L) Standard Point
0 63	0 63			1	38	- 0	01	
0 13	0 76			1	64	- 0	27	
1 97	2 73			2	82	- 1	45	
0 76	3 49			4	11	- 2	74	
1 62	5 11			4	34	- 2	97	WL= 0.00 (Post H= 0.73)
1 35	6 45			4	49	- 3	12	
1 14	7 59			4	53	- 3	16	
1 47	9 06			4	57	- 3	20	
1 29	10 35			4	51	- 3	14	
1 52	11 87			4	33	- 2	96	WL= 0.01
2 00	13 87			3	74	- 2	37	
2 13	16 00			1	91	- 0	54	
0 24	16 24			1	52	- 0	15	
0 72	16 96			1	52	- 0	15	(R) Standard Point

TABLE 9.5.1.3 (14) MEASUREMENT RECORD OF SURVEY

PROJECT NAME		Sewerage Development M/P for Lower Chao Phraya River Basin			
LOCATION		C-1L URBAN-AREA (AYUTTHAYA)			
SURVEYOR					
DISTANCE		HEIGHT		GROUND LEVEL (RIVER BED L)	REMARKS
SECTION	CUMULATION	B.S.	F.S. (DEPTH)		
		1.24		0.00	(L) Standard Point
5.74	5.74		4.51	-3.27	WL=0.00 (Post H=-2.11)
0.50	6.24		4.74	-3.50	
0.50	6.74		4.84	-3.60	
0.50	7.24		4.81	-3.57	
0.50	7.74		4.90	-3.66	
0.50	8.24		4.93	-3.69	
0.50	8.74		4.86	-3.62	
0.50	9.24		4.86	-3.62	
1.28	9.74		4.64	-3.40	
0.87	10.52		4.51	-3.27	WL=0.00
7.12	17.64		1.47	-0.23	(R) Standard Point

TABLE 9.5.1.3 (15) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	C-2U URBAN-AREA (PATHUM THANI)
SURVEYOR	

DISTANCE		HEIGHT		GROUND LEVEL (RIVER BED L)	REMARKS
SECTION	CUMULATION	B.S.	F.S. (DEPTH)		
		0.89		0.00	(L) Standard Point
0.00	0.00		1.92	-1.03	WL=0.27 (Post H=-0.21)
0.50	0.50		2.04	-1.15	
0.50	1.00		2.04	-1.15	
0.50	1.50		2.11	-1.22	
0.50	2.00		1.65	-0.76	WL=0.00
0.37	2.37		0.95	-0.06	(R) Standard Point

TABLE 9.5.1.3 (16) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	C-2L URBAN-AREA (PATHUM THANI)
SURVEYOR	

DISTANCE		HEIGHT		GROUND LEVEL	REMARKS
SECTION	CUMULATION	B.S.	F.S. (DEPTH)	(RIVER BED L)	
		1.30		-0.46	
0.00	0.00		0.92	0.00	(L) Standard Point
0.40	0.40		0.92	0.00	
0.00	0.40		4.22	-3.30	
0.40	0.80		4.26	-3.34	
0.40	1.20		4.22	-3.30	
0.40	1.60		4.22	-3.30	
0.40	2.00		4.18	-3.26	
0.40	2.40		4.21	-3.29	
0.40	2.80		4.21	-3.29	
0.00	2.80		3.96	-3.04	WL=0.00 (Post H=0.00)
0.00	2.80		2.14	-1.22	
0.00	2.80		0.92	0.00	
0.40	3.20		0.92	0.00	(R) Standard Point
0.00	3.20		1.69	-0.77	

TABLE 9.5.1.3 (17) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	C3U KHLONG TAKIEN : AYUTHAYA
SURVEYOR	DR. SUKIT VISEHSIN

DISTANCE		HEIGHT				GROUND LEVEL		REMARK		
SECTION	CUMULATION	B.S.		F.S.(DEPTH)		(RIVER BED L)				
		0	00	0	40		0	00	(L) Standard Point	
2	41	2	41			1	38	- 0	98	
3	55	5	96			2	66	- 2	26	
5	15	11	11			3	51	- 3	11	WL= 0.00
3	51	14	62			4	30	- 3	90	
2	31	16	93			4	60	- 4	20	
2	10	19	03			4	61	- 4	21	
2	21	21	24			4	25	- 3	85	
1	99	23	23			4	02	- 3	62	
2	25	25	48			3	81	- 3	41	
2	20	27	68			3	50	- 3	10	WL= 0.01 (Post H= 1.07)
2	64	30	32			2	69	- 2	29	
4	99	35	31			1	85	- 1	45	(R) Standard Point

TABLE 9.5.1.3 (18) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	C3L KHLONG TAKIEN : AYUTHAYA
SURVEYOR	DR. SUKIT VISEHSIN

DISTANCE				HEIGHT				GROUND LEVEL		REMARK
SECTION		CUMULATION		B.S.		F.S.(DEPTH)		(RIVER BED L)		
		0	00	1	35			- 0	00	(L) Standard Point
2	30	2	30			2	54	- 1	19	WL= 0.00 (Post H= 0.58)
1	65	3	95			2	98	- 1	63	
1	81	5	76			3	22	- 1	87	
1	19	6	95			3	35	- 2	00	
1	83	8	78			3	52	- 2	17	
2	03	10	81			3	65	- 2	30	
1	76	12	57			3	34	- 1	99	
1	66	14	23			3	10	- 1	75	
2	53	16	76			2	52	- 1	17	WL= 0.02
2	71	19	47			1	67	- 0	32	
3	38	22	85			0	38	- 0	97	(R) Standard Point

TABLE 9.5.1.3 (19) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	C4U KHLONG KRASAENG : BAN WAT SADET
SURVEYOR	DR. SUKIT VISESHSIN

DISTANCE		HEIGHT				GROUND LEVEL		REMARK
SECTION	CUMULATION	B.S.		F.S.(DEPTH)		(RIVER BED I)		
	0 00	1	42			0	00	(L) Standard Point
2 04	2 04			1	55	- 0	13	
2 02	4 06			1	58	- 0	16	
1 31	5 37			1	80	- 0	38	WL.= 0.00 (Post H= 0.90)
0 63	6 00			2	10	- 0	68	
2 00	8 00			2	99	- 1	57	
2 00	10 00			3	30	- 1	88	
2 00	12 00			3	55	- 2	13	
2 00	14 00			3	61	- 2	19	
2 00	16 00			3	59	- 2	17	
2 00	18 00			3	26	- 1	84	
2 00	20 00			2	24	- 0	82	
3 84	23 84			1	79	- 0	37	WL = 0.01
1 95	25 79			1	25	0	17	
2 45	28 24			0	67	0	75	(R) Standard Point

TABLE 9.5.1.3 (20) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	C4L KHLONG KRASAENG : BAN KRASAENG
SURVEYOR	DR. SUKIT VISEHSIN

DISTANCE		HEIGHT				GROUND LEVEL		REMARK
SECTION	CUMULATION	B.S.		F.S.(DEPTH)		(RIVER BED L)		
	0 00	0	93			0	00	(L) Standard Point
2 95	2 95			1	04	- 0	11	
0 73	3 68			2	00	- 1	07	WL.= 0.03
0 50	4 18			2	61	- 1	68	
1 50	5 68			2	93	- 2	00	
2 00	7 68			3	59	- 2	66	
2 00	9 68			3	98	- 3	05	
2 00	11 68			4	21	- 3	28	
2 00	13 68			4	09	- 3	16	
2 02	15 70			2	58	- 1	65	
0 96	16 66			2	52	- 1	59	
0 33	16 99			2	03	- 1	10	WL.=0.00 (Post H= 0.76)
0 19	17 18			1	40	- 0	47	
0 50	17 68			1	40	- 0	47	(R) Standard Point

TABLE 9.5.1.3 (21) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	C5U KHLONG BANG PHO : PATHUMTHANI
SURVEYOR	DR. SUKIT VISESHSIN

DISTANCE		HEIGHT				GROUND LEVEL		REMARK
SECTION	CUMULATION	B.S.		F.S.(DEPTH)		(RIVER BED L)		
	0 00	0 84			0 00		(L) Standard Point	
2 17	2 17			2 02	- 1 18			
1 84	4 01			3 44	- 2 60			
2 24	6 25			3 80	- 2 96		WL= 0.00	
1 67	7 92			4 19	- 3 35			
2 16	10 08			5 03	- 4 19			
1 92	12 00			5 26	- 4 42			
2 13	14 13			4 73	- 3 89			
2 27	16 40			4 38	- 3 54			
1 92	18 32			3 79	- 2 95		WL= 0.01 (Post H= 0.78)	
1 87	20 19			3 64	- 2 80			
2 16	22 35			3 08	- 2 24			
1 89	24 24			2 27	- 1 43			
2 06	26 30			1 31	- 0 47		(R) Standard Point	

TABLE 9.5.1.3 (22) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	C5L KHLONG BANG PHO : PATHUMTHANI
SURVEYOR	DR. SUKIT VISESHSIN

DISTANCE				HEIGHT				GROUND LEVEL	REMARK
SECTION		CUMULATION		B.S.		F.S.(DEPTH)		(RIVER BED L)	
		0	00	1	78			0 00	(L) Standard Point
2	20	2	20			1	94	- 0 16	WL.= 0.00
2	57	4	77			1	98	- 0 20	
1	96	6	73			2	14	- 0 36	
2	15	8	88			3	22	- 1 44	
1	80	10	68			3	75	- 1 97	
2	36	13	04			3	86	- 2 08	
2	14	15	18			3	91	- 2 13	
1	14	16	32			3	91	- 2 13	
2	96	19	28			3	82	- 2 04	
0	22	19	50			3	75	- 1 97	
1	51	21	01			3	27	- 1 49	
2	63	23	64			2	74	- 0 96	
0	42	24	06			1	91	- 0 13	WL.= 0.03 (Post H= 0.99)
1	72	25	78			1	66	0 12	
2	35	28	13			1	40	0 38	(R) Standard Point

TABLE 9.5.1.3 (23) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	C6L KHLONG BANG NA : PATHUMTHANI
SURVEYOR	DR. SUKIT VISEHSIN

DISTANCE		HEIGHT				GROUND LEVEL		REMARK	
SECTION	CUMULATION	B.S.		F.S.(DEPTH)		(RIVER BED L)			
	0 00	1	39			0	00	(L) Standard Point	
1	56	1	56		1	94	- 0	55	
1	49	3	05		2	54	- 1	15	WL= 0.00 (Post H= 0.50)
2	13	5	18		3	30	- 1	91	
1	93	7	11		3	90	- 2	51	
1	51	8	62		4	13	- 2	74	
2	08	10	70		4	50	- 3	11	
1	98	12	68		4	16	- 2	77	
1	96	14	64		2	93	- 1	54	
2	93	17	57		3	07	- 1	68	
2	44	20	01		3	08	- 1	69	
2	46	22	47		2	53	- 1	14	WL= 0.01
2	27	24	74		1	75	- 0	36	
3	28	28	02		1	23	0	16	(L) Standard Point

TABLE 9.5.1.3 (24) MEASUREMENT RECORD OF SURVEY

PROJECT NAME	Sewerage Development M/P for Lower Chao Phraya River Basin
LOCATION	C7L KHLONG WAT PHO LERAN : PATHUMTHANI
SURVEYOR	DR. SUKIT VISESHSIN

DISTANCE				HEIGHT				GROUND LEVEL		REMARK
SECTION		CUMULATION		B.S.		F.S.(DEPTH)		(RIVER BED L)		
		0	00	1	41			0	00	(L) Standard Point
2	45	2	45			1	49	- 0	08	
3	63	5	08			1	82	- 0	41	WL = 0.00
2	25	7	33			2	01	- 0	60	
2	14	9	47			2	48	- 1	07	
2	08	11	55			2	62	- 1	21	
2	30	13	85			3	01	- 1	60	
1	82	15	67			2	73	- 1	32	
2	28	17	95			1	74	- 0	33	WL=0.08 (Post H= 0.77)
3	34	21	29			1	59	- 0	18	
3	36	24	65			1	31	0	10	(R) Standard Point

9.5.1.4 Velocity and Flow Rate

Table 9.5.1.4 (1)
Result of the Measurement in Chao Phraya River and its Tributaries
 for Concentration and Purification Ratio Calculation

Station No. : C-1U

(Water level is measured from point (0, 0) of the
 coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-2.97	0.88	0.068	0.06	0.06	387.1
	10:00-11:00					0.05	
	11:00-12:00	-2.97	0.88	0.040	0.04	0.04	266.3
	12:00-13:00					0.04	
	13:00-14:00	-2.97	0.88	0.049	0.04	0.04	331.5
	14:00-15:00					-0.05	
	15:00-16:00	-2.97	0.88	0.063	0.06	0.06	377.3
	16:00-17:00					0.05	
	17:00-18:00	-2.98	0.92	0.048	0.04	0.04	236.1
	18:00-19:00					0.02	
	19:00-20:00	-2.98	0.92	0.000	0.00	0.00	0.0
	20:00-21:00					0.00	
	21:00-22:00	-2.98	0.92	0.000	0.00	0.00	0.0
	22:00-23:00					0.00	
23:00-24:00	-2.98	0.92	0.000	0.00	0.00		
31st January 1993	24:00-01:00					0.00	0.0
	01:00-02:00	-2.98	0.92	0.000	0.00	0.00	39.9
	02:00-03:00					0.01	
	03:00-04:00	-2.98	0.92	0.024	0.02	0.02	159.6
	04:00-05:00					0.02	
	05:00-06:00	-2.98	0.92	0.024	0.02	0.02	155.5
	06:00-07:00					0.02	
	07:00-08:00	-2.98	0.92	0.022	0.02	0.02	215.3
	08:00-09:00					0.04	
	09:00-10:00						
10:00-11:00							
11:00-12:00							
Average		-2.98	0.91	0.028	0.03	0.03	180.7
Flow rate (m ³ /day)		-	-	-	2,168.6	2,168.6	2,168.6

Table 9.5.1.4 (4)

Result of the Measurement in Chao Phraya River and its Tributaries
for Concentration and Purification Ratio Calculation

Station No. : C-2L

(Water level is measured from point (0, 0) of the
coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-1.87	3.43	-0.102	-0.35	-0.35	-1,048.4
	10:00-11:00					0.06	
	11:00-12:00	-1.87	3.43	0.135	0.46	0.46	3,210.5
	12:00-13:00					0.43	
	13:00-14:00	-2.09	2.90	0.137	0.40	0.40	2,138.7
	14:00-15:00					0.20	
	15:00-16:00	-2.14	2.78	0.000	0.00	0.00	362.2
	16:00-17:00					0.10	
	17:00-18:00	-2.04	3.02	-0.067	0.20	0.20	1,497.5
	18:00-19:00					0.21	
	19:00-20:00	-2.00	3.11	0.073	0.23	0.23	2,051.9
	20:00-21:00					0.34	
	21:00-22:00	-2.30	2.39	0.190	0.45	0.45	2,700.1
	22:00-23:00					0.30	
23:00-24:00	-2.62	1.63	0.083	0.14	0.14		
31st January 1993	24:00-01:00					0.09	823.7
	01:00-02:00	-2.97	0.79	0.065	0.05	0.05	362.8
	02:00-03:00					0.05	
	03:00-04:00	-3.01	0.69	0.070	0.05	0.05	518.7
	04:00-05:00					0.10	
	05:00-06:00	-2.82	1.15	-0.125	0.14	0.14	306.9
	06:00-07:00					-0.06	
	07:00-08:00	-2.18	2.68	-0.097	-0.26	-0.26	-2,027.0
	08:00-09:00					-0.30	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-2.33	2.33	0.030	0.13	0.13	908.1
Flow rate (m ³ /day)		-	-	-	10,897.6	10,897.6	10,897.6

Table 9.5.1.4 (5)

Result of the Measurement in Chao Phraya River and its Tributaries
for Concentration and Purification Ratio Calculation

Station No. : C-3U

(Water level is measured from point (0, 0) of the
coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-2.71	17.73	0.027	0.48	0.48	550.0
	10:00-11:00					-0.33	
	11:00-12:00	-2.53	21.52	-0.053	-1.15	-1.15	-11,953.5
	12:00-13:00					-2.17	
	13:00-14:00	-2.33	26.10	-0.123	-3.20	-3.20	-21,788.9
	14:00-15:00					-2.86	
	15:00-16:00	-2.25	28.03	-0.090	-2.51	-2.51	-7,883.4
	16:00-17:00					0.32	
	17:00-18:00	-2.44	23.54	0.134	3.16	3.16	21,207.6
	18:00-19:00					2.73	
	19:00-20:00	-2.66	18.75	0.123	2.30	2.30	15,458.1
	20:00-21:00					2.00	
	21:00-22:00	-2.70	17.93	0.095	1.70	1.70	11,291.9
	22:00-23:00					1.44	
23:00-24:00	-2.71	17.73	0.067	1.18	1.18		
31st January 1993	24:00-01:00					0.48	5,975.6
1993	01:00-02:00	-2.62	19.59	-0.012	-0.23	-0.23	-1,030.5
	02:00-03:00					-0.06	
	03:00-04:00	-2.57	20.65	0.005	0.10	0.10	1,388.3
	04:00-05:00					0.28	
	05:00-06:00	-2.68	18.34	0.025	0.46	0.46	3,255.9
	06:00-07:00					0.44	
	07:00-08:00	-2.73	17.32	0.025	0.42	0.42	3,163.7
	08:00-09:00					0.45	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-2.58	20.60	0.019	0.23	0.23	1,636.2
Flow rate (m ³ /day)		-	-	-	19,634.9	19,634.9	19,634.9

Table 9.5.1.4 (6)

Result of the Measurement in Chao Phraya River and its Tributaries
for Concentration and Purification Ratio Calculation

Station No. : C-3L

(Water level is measured from point (0, 0) of the
coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-1.80	2.32	0.235	0.54	0.54	3,807.1
	10:00-11:00					0.51	
	11:00-12:00	-1.80	2.32	0.208	0.48	0.48	2,508.3
	12:00-13:00					0.21	
	13:00-14:00	-1.74	2.86	-0.019	-0.05	-0.05	-385.4
	14:00-15:00					-0.05	
	15:00-16:00	-1.77	2.58	-0.020	-0.05	-0.05	347.7
	16:00-17:00					0.15	
	17:00-18:00	-1.83	2.06	0.170	0.35	0.35	2,366.7
	18:00-19:00					0.31	
	19:00-20:00	-1.95	1.19	0.222	0.26	0.26	1,830.3
	20:00-21:00					0.25	
	21:00-22:00	-1.97	1.06	0.215	0.23	0.23	1,559.6
	22:00-23:00					0.20	
23:00-24:00	-1.99	0.98	0.185	0.18	0.18		
31st January 1993	24:00-01:00					0.09	993.5
	01:00-02:00	-2.04	0.68	0.011	0.01	0.01	513.4
	02:00-03:00					0.14	
	03:00-04:00	-1.95	1.19	0.222	0.26	0.26	1,830.3
	04:00-05:00					0.25	
	05:00-06:00	-1.97	1.06	0.215	0.23	0.23	1,864.1
	06:00-07:00					0.29	
	07:00-08:00	-1.83	2.06	0.170	0.35	0.35	2,873.1
	08:00-09:00					0.45	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-1.89	1.70	0.151	0.23	0.23	1,675.7
Flow rate (m ³ /day)		-	-	-	20,108.6	20,108.6	20,108.6

Table 9.5.1.4 (7)

Result of the Measurement in Chao Phraya River and its Tributaries
for Concentration and Purification Ratio Calculation

Station No. : C-4U

(Water level is measured from point (0, 0) of the
coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-1.10	9.94	0.000	0.00	0.00	-404.4
	10:00-11:00					-0.11	
	11:00-12:00	-0.92	12.25	0.018	-0.22	-0.22	-23.9
	12:00-13:00					0.22	
	13:00-14:00	-0.88	12.79	0.052	0.66	0.66	5,279.6
	14:00-15:00					0.81	
	15:00-16:00	-1.05	10.57	0.090	0.95	0.95	6,846.6
	16:00-17:00					0.95	
	17:00-18:00	-1.05	10.57	0.690	0.95	0.95	4,790.9
	18:00-19:00					0.38	
	19:00-20:00	-0.98	11.47	-0.017	-0.19	-0.19	1,724.9
	20:00-21:00					0.67	
	21:00-22:00	-1.00	11.21	0.137	1.53	1.53	10,734.2
	22:00-23:00					1.45	
23:00-24:00	-1.02	10.95	0.125	1.37	1.37		
31st January 1993	24:00-01:00					1.19	9,208.1
	01:00-02:00	-1.55	4.73	0.213	1.01	1.01	6,223.5
	02:00-03:00					0.72	
	03:00-04:00	-1.78	2.50	0.172	0.43	0.43	2,115.5
	04:00-05:00					0.16	
	05:00-06:00	-1.93	1.29	0.085	-0.11	-0.11	-372.1
	06:00-07:00					0.01	
	07:00-08:00	-1.56	4.63	-0.027	0.12	0.12	666.3
	08:00-09:00					0.06	
	09:00-10:00						
10:00-11:00							
11:00-12:00							
Average		-1.24	8.57	0.078	0.54	0.54	3,899.1
Flow rate (m ³ /day)		-	-	-	46,789.3	46,789.3	46,789.3

Table 9.5.1.4 (8)

Result of the Measurement in Chao Phraya River and its Tributaries
for Concentration and Purification Ratio Calculation

Station No. : C-4L

(Water level is measured from point (0, 0) of the
coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-1.39	15.01	-0.104	-1.56	-1.56	-13.323.1
	10:00-11:00					-2.14	
	11:00-12:00	-1.20	17.48	-0.155	-2.71	-2.71	-12.957.1
	12:00-13:00					-0.89	
	13:00-14:00	-1.21	17.35	0.054	0.93	0.93	7.917.5
	14:00-15:00					1.27	
	15:00-16:00	-1.34	15.66	0.103	1.61	1.61	8.667.0
	16:00-17:00					0.80	
	17:00-18:00	-1.40	14.89	0.000	0.00	0.00	-1.856.6
	18:00-19:00					-0.52	
	19:00-20:00	-1.33	15.79	-0.065	-1.03	-1.03	-2.464.8
	20:00-21:00					0.35	
	21:00-22:00	-1.31	16.05	0.108	1.73	1.73	15.183.6
	22:00-23:00					2.49	
23:00-24:00	-1.61	12.23	0.267	3.26	3.26		
31st January 1993	24:00-01:00					2.79	21.794.8
1993	01:00-02:00	-1.86	9.44	0.247	2.33	2.33	14.875.2
	02:00-03:00					1.80	
	03:00-04:00	-2.23	5.96	0.215	1.28	1.28	7.420.8
	04:00-05:00					0.78	
	05:00-06:00	-2.33	5.13	0.055	0.28	0.28	-4.091.1
	06:00-07:00					-1.42	
	07:00-08:00	-1.87	9.33	-0.333	-3.11	-3.11	-19.613.9
	08:00-09:00					-2.34	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-1.59	12.86	0.032	0.25	0.25	1.796.0
Flow rate (m ³ /day)		-	-	-	21.552.2	21.552.2	21.552.2

Table 9.5.1.4 (9)
Result of the Measurement in Chao Phraya River and its Tributaries
 for Concentration and Purification Ratio Calculation

Station No. : C-5U

(Water level is measured from point (0, 0) of the
 coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-2.56	15.49	0.240	3.72	3.72	27,901.9
	10:00-11:00					4.03	
	11:00-12:00	-2.45	17.40	0.250	4.35	4.35	28,436.3
	12:00-13:00					3.55	
	13:00-14:00	-2.40	18.30	0.150	2.74	2.74	15,428.2
	14:00-15:00					1.54	
	15:00-16:00	-2.48	16.88	0.020	0.34	0.34	2,417.4
	16:00-17:00					0.33	
	17:00-18:00	-2.50	16.52	0.020	0.33	0.33	5,505.8
	18:00-19:00					1.20	
	19:00-20:00	-2.46	17.23	0.120	2.07	2.07	12,122.5
	20:00-21:00					1.30	
	21:00-22:00	-2.43	17.76	0.030	0.53	0.53	10,768.7
	22:00-23:00					2.46	
23:00-24:00	-2.55	15.66	0.280	4.38	4.38		
31st January 1993	24:00-01:00					4.48	31,894.8
	01:00-02:00	-2.73	12.69	0.360	4.57	4.57	30,619.9
	02:00-03:00					3.94	
	03:00-04:00	-2.89	10.35	0.320	3.31	3.31	22,429.2
	04:00-05:00					2.92	
	05:00-06:00	-2.95	9.72	0.260	2.53	2.53	15,084.5
	06:00-07:00					1.66	
	07:00-08:00	-2.92	9.96	0.080	0.80	0.80	10,991.6
	08:00-09:00					2.26	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-2.61	14.83	0.178	2.47	2.47	17,800.1
Flow rate (m ³ /day)					213,601.0	213,601.0	213,601.0

Table 9.5.1.4 (10)
Result of the Measurement in Chao Phraya River and its Tributaries
 for Concentration and Purification Ratio Calculation

Station No. : C-5L

(Water level is measured from point (0, 0) of the
 coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-0.24	25.32	0.220	5.57	5.57	45,712.5
	10:00-11:00					7.13	
	11:00-12:00	-0.07	28.94	0.300	8.68	8.68	50,560.5
	12:00-13:00					5.36	
	13:00-14:00	-0.06	29.18	0.070	2.04	2.04	9,609.8
	14:00-15:00					0.63	
	15:00-16:00	-0.19	26.28	-0.030	-0.79	-0.79	-5,175.7
	16:00-17:00					-0.65	
	17:00-18:00	-0.23	25.51	-0.020	-0.51	-0.51	3,103.7
	18:00-19:00					1.37	
	19:00-20:00	-0.15	27.12	0.120	3.25	3.25	19,454.9
	20:00-21:00					2.15	
	21:00-22:00	-0.20	26.08	0.040	1.04	1.04	13,030.5
	22:00-23:00					2.58	
23:00-24:00	-0.45	21.63	0.190	4.11	4.11		
31st January 1993	24:00-01:00					3.72	28,180.7
01:00-02:00	-0.75	16.64	0.200	3.33	3.33	22,533.3	
02:00-03:00					2.93		
03:00-04:00	-1.00	12.66	0.200	2.53	2.53	16,268.9	
04:00-05:00					1.99		
05:00-06:00	-1.16	10.28	0.140	1.44	1.44	14,934.1	
06:00-07:00					2.71		
07:00-08:00	-0.71	17.29	0.230	3.98	3.98	31,507.7	
08:00-09:00					4.77		
09:00-10:00							
10:00-11:00							
11:00-12:00							
Average		-0.43	22.25	0.138	2.89	2.89	20,810.0
Flow rate (m ³ /day)		-	-	-	249,720.6	249,720.6	249,720.6

Table 9.5.1.4 (11)
Result of the Measurement in Chao Phraya River and its Tributaries
 for Concentration and Purification Ratio Calculation

Station No. : C-6L

(Water level is measured from point (0, 0) of the
 coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-1.26	15.51	-0.027	-0.41	-0.41	
	10:00-11:00					0.81	1,420.8
	11:00-12:00	-1.12	18.18	0.112	2.03	2.03	
	12:00-13:00					1.01	10,961.2
	13:00-14:00	-1.12	18.18	0.000	0.00	0.00	
	14:00-15:00					0.00	0.0
	15:00-16:00	-1.24	15.88	0.000	0.00	0.00	
	16:00-17:00					0.00	0.0
	17:00-18:00	-1.28	15.14	0.000	0.00	0.00	
	18:00-19:00					0.21	744.3
	19:00-20:00	-1.26	15.51	0.027	0.41	0.41	
	20:00-21:00					0.34	2,726.4
	21:00-22:00	-1.29	14.95	0.018	0.27	0.27	
	22:00-23:00					0.55	2,974.4
31st January 1993	23:00-24:00	-1.63	9.22	0.090	0.83	0.83	
	24:00-01:00					0.71	5,555.8
	01:00-02:00	-1.76	7.78	0.077	0.60	0.60	
	02:00-03:00					0.45	3,764.7
	03:00-04:00	-2.07	5.04	0.060	0.30	0.30	
	04:00-05:00					0.15	1,633.2
	05:00-06:00	-2.22	3.88	0.000	0.00	0.00	
	06:00-07:00					-0.67	-2,397.2
	07:00-08:00	-1.77	7.68	-0.173	-1.33	-1.33	
	08:00-09:00					-0.87	-7,936.0
	09:00-10:00						
10:00-11:00							
11:00-12:00							
Average		-1.50	12.25	0.015	0.23	0.23	1,620.6
Flow rate (m ³ /day)		-	-	-	19,447.7	19,447.7	19,447.7

Table 9.5.1.4 (12)

Result of the Measurement in Chao Phraya River and its Tributaries
for Concentration and Purification Ratio Calculation

Station No. : C-7L

(Water level is measured from point (0, 0) of the
coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /s)
30th January 1993	09:00-10:00	-0.69	4.77	-0.030	-0.14	-0.14	957.8
	10:00-11:00					0.41	
	11:00-12:00	-0.53	6.37	-0.152	0.97	0.97	5,220.5
	12:00-13:00					0.48	
	13:00-14:00	-0.54	6.27	0.000	0.00	0.00	554.2
	14:00-15:00					0.15	
	15:00-16:00	-0.68	4.86	0.063	0.31	0.31	1,965.1
	16:00-17:00					0.24	
	17:00-18:00	-0.71	4.58	0.037	0.17	0.17	997.1
	18:00-19:00					0.08	
	19:00-20:00	-0.66	5.05	0.000	0.00	0.00	598.0
	20:00-21:00					0.17	
	21:00-22:00	-0.64	5.25	0.063	0.33	0.33	2,360.1
	22:00-23:00					0.32	
23:00-24:00	-0.90	2.95	0.107	0.31	0.31		
31st January 1993	24:00-01:00					0.22	1,914.2
	01:00-02:00	-1.24	0.79	0.152	0.12	0.12	699.8
	02:00-03:00					0.07	
	03:00-04:00	-1.44	0.16	0.185	0.03	0.03	145.4
	04:00-05:00					0.01	
	05:00-06:00	-1.51	0.05	0.145	-0.01	-0.01	-39.3
	06:00-07:00					-0.00	
	07:00-08:00	-1.22	0.87	0.000	0.00	0.00	-257.5
	08:00-09:00					-0.07	
	09:00-10:00						
	10:00-11:00						
	11:00-12:00						
Average		-0.90	3.50	0.048	0.17	0.17	1,253.0
Flow rate (m ³ /day)		-	-	-	15,035.5	15,035.5	15,035.5

Table 9.5.1.4 (13)

Result of the Measurement in Chao Phraya River and its Tributaries
for Concentration and Purification Ratio Calculation

Station No. : P-1U

(Water level is measured from point (0, 0) of the
coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-4.57	612.61	0.269	164.72	164.72	1,202,191.2
	10:00-11:00					169.23	
	11:00-12:00	-4.63	604.27	0.288	173.74	173.74	1,064,425.9
	12:00-13:00					121.94	
	13:00-14:00	-4.57	612.61	0.114	70.14	70.14	457,005.4
	14:00-15:00					56.81	
	15:00-16:00	-4.42	633.51	0.069	43.47	43.47	305,730.9
	16:00-17:00					41.45	
	17:00-18:00	-4.35	643.29	0.061	39.43	39.43	478,564.7
	18:00-19:00					93.50	
	19:00-20:00	-4.43	632.11	0.233	147.57	147.57	1,110,967.2
	20:00-21:00					161.03	
	21:00-22:00	-4.50	622.35	0.280	174.49	174.49	1,280,115.0
	22:00-23:00					181.10	
23:00-24:00	-4.58	611.22	0.307	187.72	187.72		
31st January 1993	24:00-01:00					179.81	1,323,095.4
	01:00-02:00	-4.64	602.88	0.285	171.89	171.89	
	02:00-03:00					160.88	1,197,995.4
	03:00-04:00	-4.64	602.88	0.249	149.87	149.87	
	04:00-05:00					140.71	1,046,118.6
	05:00-06:00	-4.62	605.66	0.217	131.56	131.56	
	06:00-07:00					140.13	978,058.8
	07:00-08:00	-4.63	604.27	0.246	148.70	148.70	
	08:00-09:00					156.71	1,099,474.2
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-4.55	615.64	0.218	133.61	133.61	961,978.6
Flow rate (m ³ /day)		-	-	-	11,543,742.7	11,543,742.7	11,543,742.7

Table 9.5.1.4 (14)
Result of the Measurement in Chao Phraya River and its Tributaries
 For Concentration and Purification Ratio Calculation

Station No.: P-1 L

(Water level is measured from point (0, 0) of the
 coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-5.58	534.37	0.182	116.78	116.78	1,020,142.8
	10:00-11:00					166.59	
	11:00-12:00	-5.60	531.35	0.407	216.41	216.41	1,356,708.6
	12:00-13:00					160.46	
	13:00-14:00	-5.49	548.09	0.191	104.51	104.51	752,464.8
	14:00-15:00					104.51	
	15:00-16:00	-5.49	548.09	0.191	104.51	104.51	696,013.0
	16:00-17:00					88.83	
	17:00-18:00	-5.34	571.26	-0.128	73.15	73.15	526,657.7
	18:00-19:00					73.15	
	19:00-20:00	-5.34	571.26	-0.128	73.15	73.15	605,197.3
	20:00-21:00					94.96	
	21:00-22:00	-5.58	534.37	0.182	116.78	116.78	908,969.4
	22:00-23:00					135.71	
23:00-24:00	-5.57	535.88	0.289	154.64	154.64		
31st January 1993	24:00-01:00					180.74	1,207,366.2
	01:00-02:00	-5.57	535.88	0.386	206.83	206.83	1,327,086.0
	02:00-03:00					161.81	
	03:00-04:00	-5.58	534.37	0.182	116.78	116.78	810,103.7
	04:00-05:00					108.25	
	05:00-06:00	-5.56	537.39	0.186	99.72	99.72	670,139.5
	06:00-07:00					86.43	
	07:00-08:00	-5.34	571.26	-0.128	73.15	73.15	605,197.3
	08:00-09:00					94.96	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-5.50	546.13	0.151	121.37	121.37	873,837.2
Flow rate (m ³ /day)		-	-	-	10,486,046.2	10,486,046.2	10,486,046.2

Table 9.5.1.4 (15)
 Result of the Measurement in Chao Phraya River and its Tributaries
 for Concentration and Purification Ratio Calculation

Station No. : P-2U

(Water level is measured from point (0, 0) of the
 coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-1.47	2,345.09	-0.321	-752.29	-752.29	5,669,247.6
	10:00-11:00					-822.50	
	11:00-12:00	-1.34	2,378.87	-0.375	-892.71	-892.71	
	12:00-13:00					-935.72	
	13:00-14:00	-1.42	2,358.05	-0.415	-978.74	-978.74	
	14:00-15:00					-172.57	
	15:00-16:00	-1.51	2,334.74	0.271	633.59	633.59	
	16:00-17:00					668.39	
	17:00-18:00	-1.42	2,358.05	0.298	703.19	703.19	
	18:00-19:00					750.07	
	19:00-20:00	-1.44	2,352.86	0.339	796.96	796.96	
	20:00-21:00					731.24	
	21:00-22:00	-1.56	2,321.84	0.287	665.52	665.52	
	22:00-23:00					757.47	
23:00-24:00	-1.83	2,253.57	0.377	849.42	849.42		
31st January 1993	24:00-01:00					782.23	
	01:00-02:00	-2.13	2,179.58	0.328	715.04	715.04	
	02:00-03:00					793.27	
	03:00-04:00	-2.40	2,114.13	0.412	871.50	871.50	
	04:00-05:00					787.51	
	05:00-06:00	-2.54	2,080.62	0.338	703.53	703.53	
	06:00-07:00					45.67	
	07:00-08:00	-1.87	2,243.62	-0.273	-612.19	-612.19	
	08:00-09:00					-682.24	
	09:00-10:00						
	10:00-11:00						
	11:00-12:00						
Average		-1.74	2,276.75	0.106	225.23	225.23	1,621,690.8
Flow rate (m ³ /day)		-	-	-	19,460,289.6	19,460,289.6	19,460,289.6

Table 9.5.1.4 (16)
Result of the Measurement in Chao Phraya River and its Tributaries
 for Concentration and Purification Ratio Calculation

Station No. : P-2L

(Water level is measured from point (0,0) of the
 coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-1.32	2,449.77	-0.344	-843.56	-843.56	-5,793,352.2
	10:00-11:00					-765.70	
	11:00-12:00	-1.17	2,490.96	-0.276	-687.84	-687.84	
	12:00-13:00					136.88	
	13:00-14:00	-1.29	2,458.00	-0.391	961.61	961.61	
	14:00-15:00					903.92	
	15:00-16:00	-1.39	2,430.59	0.348	846.24	846.24	
	16:00-17:00					685.83	
	17:00-18:00	-1.35	2,441.55	0.215	525.42	525.42	
	18:00-19:00					438.47	
	19:00-20:00	-1.28	2,460.74	0.143	351.52	351.52	
	20:00-21:00					351.52	
	21:00-22:00	-1.28	2,460.74	0.143	351.52	351.52	
	22:00-23:00					434.10	
23:00-24:00	-1.76	2,330.55	0.222	516.69	516.69		
31st January 1993	24:00-01:00					333.27	
	01:00-02:00	-2.03	2,259.53	0.066	149.85	149.85	
	02:00-03:00					226.05	
	03:00-04:00	-2.31	2,187.66	0.138	302.25	302.25	
	04:00-05:00					202.86	
	05:00-06:00	-2.33	2,182.61	0.047	103.47	103.47	
	06:00-07:00					126.66	
	07:00-08:00	-2.03	2,259.53	0.066	149.85	149.85	
	08:00-09:00					-346.86	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-1.63	2,367.69	0.031	227.25	227.25	1,636,195.2
Flow rate (m ³ /day)		-	-	-	19,634,342.4	19,634,342.4	19,634,342.4

Table 9.5.1.4 (17)

Result of the Measurement in Chao Phraya River and Its Tributaries
for Concentration and Purification Ratio Calculation

Station No. : P-3U

(Water level is measured from point (0, 0) of the
coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-2.62	95.69	0.057	5.43	5.43	68,451.1
	10:00-11:00					13.59	
	11:00-12:00	-2.60	96.94	0.224	21.75	21.75	79,806.1
	12:00-13:00					0.42	
	13:00-14:00	-2.30	116.40	-0.180	-20.92	-20.92	-72,800.8
	14:00-15:00					0.70	
	15:00-16:00	-2.20	123.17	0.181	22.32	22.32	156,451.0
	16:00-17:00					21.14	
	17:00-18:00	-2.38	111.08	0.180	19.96	19.96	140,718.2
	18:00-19:00					19.13	
	19:00-20:00	-2.59	97.57	0.188	18.31	18.31	128,077.2
	20:00-21:00					17.27	
	21:00-22:00	-2.78	86.01	0.189	16.23	16.23	106,937.8
	22:00-23:00					13.47	
23:00-24:00	-2.78	86.01	0.125	10.71	10.71		
31st January 1993	24:00-01:00					8.60	69,533.6
1993	01:00-02:00	-2.79	85.43	0.076	6.50	6.50	41,956.4
	02:00-03:00					5.16	
	03:00-04:00	-2.50	103.28	0.037	3.82	3.82	30,382.1
	04:00-05:00					4.62	
	05:00-06:00	-2.62	95.69	0.057	5.43	5.43	62,248.6
	06:00-07:00					11.87	
	07:00-08:00	-2.59	97.57	0.188	18.31	18.31	108,623.1
	08:00-09:00					11.87	
	09:00-10:00						
	10:00-11:00						
	11:00-12:00						
Average		-2.56	99.57	0.110	10.65	10.65	76,698.7
Flow rate (m ³ /day)		-	-	-	920,384.4	920,384.4	920,384.4

Table 9.5.1.4 (18)
Result of the Measurement in Chao Phraya River and its Tributaries
 for Concentration and Purification Ratio Calculation

Station No. P-3L

(Water level is measured from point (0, 0) of the
 coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate		
					Measured (m ³ /s)	Interpolated (m ³ /s)	Average (m ³ /2hrs)
30th January 1993	09:00-10:00	-1.78	146.36	0.146	21.37	21.37	106.0
	10:00-11:00					-21.35	
	11:00-12:00	-1.40	166.04	-0.386	-64.06	-64.06	-431.030.2
	12:00-13:00					-55.67	
	13:00-14:00	-1.21	176.16	-0.268	-47.27	-47.27	-203.683.7
	14:00-15:00					-9.31	
	15:00-16:00	-1.12	181.01	0.158	28.64	28.64	268.587.2
	16:00-17:00					45.97	
	17:00-18:00	-1.32	170.29	0.372	63.29	63.29	422.065.3
	18:00-19:00					53.95	
	19:00-20:00	-1.54	158.68	0.281	44.61	44.61	290.540.3
	20:00-21:00					36.09	
	21:00-22:00	-1.82	144.35	0.191	27.57	27.57	149.213.4
	22:00-23:00					13.87	
23:00-24:00	-1.78	146.36	0.001	0.17	0.17		
31st January 1993	24:00-01:00					11.49	41.979.1
	01:00-02:00	-1.50	160.77	0.142	22.80	22.80	123.103.3
	02:00-03:00					11.40	
	03:00-04:00	-1.41	165.51	0.000	0.00	0.00	54.746.8
	04:00-05:00					15.21	
	05:00-06:00	-1.54	158.68	0.192	30.41	30.41	207.849.2
	06:00-07:00					27.32	
	07:00-08:00	-1.68	151.44	0.160	24.23	24.23	169.300.6
	08:00-09:00					22.80	
	09:00-10:00						
10:00-11:00							
11:00-12:00							
Average		-1.51	160.47	0.082	12.65	12.65	91.064.8
Flow rate (m ³ /day)		-	-	-	1,092,777.5	1,092,777.5	1,092,777.5

9.5.1.5 FLOW RAER OBSERVED BY RID

TABLE 9.5.1.5 (1) FLOW RATE IN CHAO PHRAYA RIVER AND ITS TRIBUTARIES OBSERVED BY RID

Station	Year	Monthly average flow rate (m ³ /s)											
		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Chao Phraya	1988				403.4	509.2	559.2	540.5	557.2	822.5	1,198.9	963.1	463.0
A.Muang	1989	272.3	347.8	444.3	522.6	490.9	729.5	361.8	485.6	658.8	846.3	741.2	434.7
Nakon	1990	217.6	277.4	486.5	471.1	507.0	913.2	475.6	463.0	792.1	840.4	617.8	465.6
Sawan	1991	235.9	274.2	365.2	373.0	247.0	219.0	167.0	570.0	1,168.0	919.0	589.0	384.0
(C.2)	1992	197.0	240.0	274.0									
	Avg.	230.7	284.9	392.5	442.5	438.5	605.2	386.2	519.0	860.4	951.2	727.8	436.8
Chao Phraya	1988				122.9	227.7	349.9	288.9	253.4	657.2	1,149.1	730.4	340.5
A.Muang	1989	171.0	125.1	125.3	110.7	103.0	348.3	124.6	103.7	203.3	374.7	180.6	307.6
Ang Thong	1990	148.4	110.2	130.9	143.8	189.1	544.7	135.6	137.6	177.8	846.7	272.8	281.5
(C.7A)	1991	171.6	136.8	143.9	124.6	108.8	96.0	88.4	199.1	649.7	432.9	154.6	259.9
	1992	118.8	107.4	114.4									
	Avg.	152.5	119.9	128.6	125.5	157.2	334.7	159.4	173.5	422.0	700.9	334.6	297.4
Chao Phraya	1988				54.1	209.5	367.5	311.6	261.2	781.5	1,429.6	719.0	202.9
A.Sanphaya	1989	79.1	52.6	62.8	89.1	85.7	375.4	91.5	79.4	190.4	367.8	128.6	148.9
Chai Nat	1990	50.7	49.8	93.3	93.7	149.2	574.5	104.0	91.9	167.3	806.8	204.2	153.9
(C.13)	1991	66.7	72.4	78.8	75.0	49.6	43.4	42.9	190.7	572.6	387.2	93.2	83.4
	1992	45.7	59.1	68.8									
	Avg.	60.6	58.5	75.9	78.0	123.5	340.2	137.5	155.8	428.0	747.9	286.3	147.3
Pasak	1988				28.5	48.1	51.2	38.9	74.6	97.6	221.4	142.9	80.2
A.Tha Rua	1989	38.1	27.6	28.2	33.5	29.7	86.8	38.0	35.1	72.2	68.6	48.0	99.6
Ayutthaya	1990	42.6	35.7	39.9	35.6	39.8	81.1	30.1	33.1	68.7	483.6	82.5	68.5
(S.26)	1991	42.4	34.8	35.9	40.8	36.7	33.0	32.2	109.5	547.2	356.7	42.1	77.0
	1992	37.7	33.8	35.3									
	Avg.	40.2	33.0	34.8	34.6	38.6	63.0	34.8	63.1	196.4	282.6	78.9	81.3
Lop Buri	1988				6.9	18.7	21.2	16.1	22.1	46.5	87.0	99.5	71.4
A.Ban	1989	14.8	0.9	0.4	1.0	5.9	10.6	7.3	7.4	40.7	44.7	79.1	84.3
Phreak	1990	15.4	0.8	1.6	2.2	20.0	28.9	10.0	13.3	8.5	94.9	84.8	87.6
Ayutthaya	1991	19.9	0.6	1.1	0.9	1.7	3.1	0.5	2.8	20.5	23.0	47.2	86.7
(L.5)	1992	8.4	1.2	0.4									
	Avg.	14.6	0.9	0.9	2.7	11.6	16.0	8.5	11.4	29.0	62.4	77.6	82.5

TABLE 9.5.1.5 (2) WATER INTAKE BY GATES AND PUMPING STATIONS IN CHAO PHRAYA RIVER AND ITS TRIBUTARIES

Gate/ Pumping St.	Year	Monthly average flow rate (m ³ /s)											
		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Bang Bua Thong (+72.0 km)	1988	-13.12	-22.52	-23.01	-19.05	-8.14	-15.36	-11.01	-28.45	-15.96	-31.15	23.96	26.92
	1989	-13.21	-9.96	-21.52	-20.57	-18.58	-17.01	6.89	9.34	14.07	-17.10	5.52	-2.91
	1990	-20.65	-21.29	-6.55	-16.84	-12.16	-17.49	2.88	11.11	2.82	26.00	31.82	24.13
	1991	-20.42	-24.11	-20.54	-21.08	-20.04	11.86	14.57	14.02	-26.59	-26.17	4.31	0.00
	1992	-21.35	-24.22	-26.69	-22.79	-22.34	-15.04	-16.61	8.28	3.67	19.20	13.53	2.03
Avg.		-17.75	-20.42	-19.66	-20.07	-16.25	-10.61	-0.66	2.86	-4.40	-5.84	15.83	10.03
Pra Udom (+74.0 km)	1988	-4.31	-5.60	-6.14	-4.25	-1.52	-4.43	-2.61	0.00	6.12	7.47	8.25	11.57
	1989	-8.79	-6.42	-11.58	-10.55	-10.88	-8.29	0.00	-5.08	6.95	1.15	0.00	3.45
	1990	-11.77	-18.64	-8.75	-16.53	-12.23	-15.54	-1.96	-1.87	0.00	12.19	9.89	2.04
	1991	-8.37	-16.64	-14.62	-14.77	-14.00	-8.85	-11.56	-8.15	4.32	4.57	0.00	0.00
	1992	-12.87	-15.90	-13.81	-12.70	-11.63	-12.58	-10.81	-7.41	6.37	4.18	0.73	1.32
Avg.		-9.22	-12.64	-10.98	-11.76	-10.05	-9.94	-5.39	-4.50	4.75	5.91	3.77	3.68
Pra Intra- racha (+100.0 km)	1988	0.00	0.00	0.00	0.00	0.60	1.47	2.45	0.40	3.21	9.29	7.00	1.71
	1989	1.65	2.64	1.19	0.67	0.23	1.33	1.68	0.87	2.20	5.40	6.00	4.03
	1990	3.03	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.74	4.90	0.00
	1991	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.00	2.00	2.00	0.40	1.87
	1992	1.13	0.21	0.00	0.00	0.00	0.00	0.00	6.32	2.00	4.78	6.67	0.61
Avg.		1.16	0.63	0.24	0.13	0.17	0.71	0.83	1.52	1.88	7.44	4.99	1.64
Singhanat (+108.0 km)	1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1989	0.00	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991	3.44	13.28	5.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1992	7.86	-2.31	-1.74	-1.24	-0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avg.		2.26	2.43	0.82	-0.25	-0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jao Jed (+136.0 km)	1988	14.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.56	7.87	25.93
	1989	7.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.27
	1990	6.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04	0.00	8.95
	1991	9.66	0.00	0.00	0.00	0.00	0.00	0.00	1.66	0.33	0.00	0.00	26.40
	1992	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.92
Avg.		8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.07	1.32	1.57	19.89

Note : - "-" refers to water intake and "+" refers to water release from gates
 - Bang Ban Pumping Station, data is not available for whole year, but is estimated that water intake is less than 1.0 m³/s
 - PWA Pumping Station, water intake varies very slightly whole year, therefore it is assumed that water intake is constant at 30.0 m³/s
 - Chulalongkorn gate, data by gravity and pumping station in the recent years are not available, therefore water intake is assumed 0.0 m³/s

TABLE 9.5.1.5 (3) RECORDED DISCHARGE AT RID'S OBSERVATION STATIONS
(ON 9TH, 10TH AND 17TH JANUARY 1993)

Flow Rate Measured in Chao Phraya River and Its Tributaries

River	RID Sta. No.	Location	Distance from River Mouth (km)	Flow Rate (m ³ /s)				Average Flow Rate		
				January 1993				m ³ /s	m ³ /day	m ³ /day
				9th	10th	16th	17th			
Chao Phraya	C.2	A. Muang Nakorn Sawan Prov.	372.0	239.10	227.60	195.33	195.33	214.3	18,518,976	1.85E+07
	-	Chao Phraya Dam Chainat Prov.	272.0	65.00	63.00	50.00	50.00	57.0	4,924,800	4.92E+06
	C.13	Ban Re Rai A. Sanphraya, Chainat	261.0	Data not available				-	-	-
	C.7A	Ban Bang Kaeo A. Muang, Ang Thong	180.0	169.20	156.00	115.50	130.80	142.9	12,344,400	1.23E+07
Lop Buri	L.5	A. Ban Phraek Ayutthaya	187.0	12.00	8.99	5.60	4.56	7.8	672,840	6.73E+05
Pasak	-	Rama VI Dam		0.00	0.00	0.00	0.00	0.0	0	0.00E+00
	S.26	A. Tha Rua Ayutthaya	192.0	38.88	45.75	40.75	51.37	44.2	3,817,800	3.82E+06

Note : - Distance from river mouth of Lop Buri and Noi river is measured from PCD's set up point at Pompetch, A. Muang, Ayutthaya (142.0 km from river mouth) and at Nonthaburi Provincial Office, Nonthaburi (62.0 from river mouth) along that river respectively

TABLE 9.5.1.5 (4) DISCHARGE TAKEN BY MAJOR IRRIGATION GATES
(ON 9TH, 10TH AND 17TH JANUARY 1993)

River	Name of Gate and Pump St.	Location	Distance from River Mouth (km)	Average Flow Rate (m ³ /s)				
				Jan. 93	Jan. 93	Jan. 93	Jan. 93	Average
				9th	10th	16th	17th	
(In charge by RID)	Bang Bua Thong	Pathum Thani	72.0	-22.82	-17.64	-16.75	-17.28	-18.62
	Phra Udom	Pathum Thani	74.0	-8.95	-8.92	-8.64	-10.86	-9.34
	Chula-longkorn	South Rangsit, Pathum Thani	84.0	0.00	0.00	0.00	0.00	0.00
	Phra Intraracha	North Rangsit, Pathum Thani	100.0	0.00	0.00	0.00	0.00	0.00
	Singhanat	Pathum Thani	108.0	0.00	0.00	0.00	0.00	0.00
Total			(m ³ /s)	-31.77	-26.56	-25.39	-28.14	-27.97
Chao Phraya	MWA Raw Water Intake	Sam Lae, Pathum Thani	98.0	-30.00	-30.00	-30.00	-30.00	-30.00
Chao Phraya	Bang Ban Pumping St.	Ayutthaya	126.0	0.00	0.00	0.00	0.00	0.00
Noi	Jao Jed	Ayutthaya	136.0	33.21	31.73	0.00	0.00	16.24

Note : * Distance from river mouth of Noi river is measured from PCD's set up point at Pompetch, Ayutthaya (142.0 km from river mouth) along that river
'-' refers to water intake and '+' refers to water release from gates

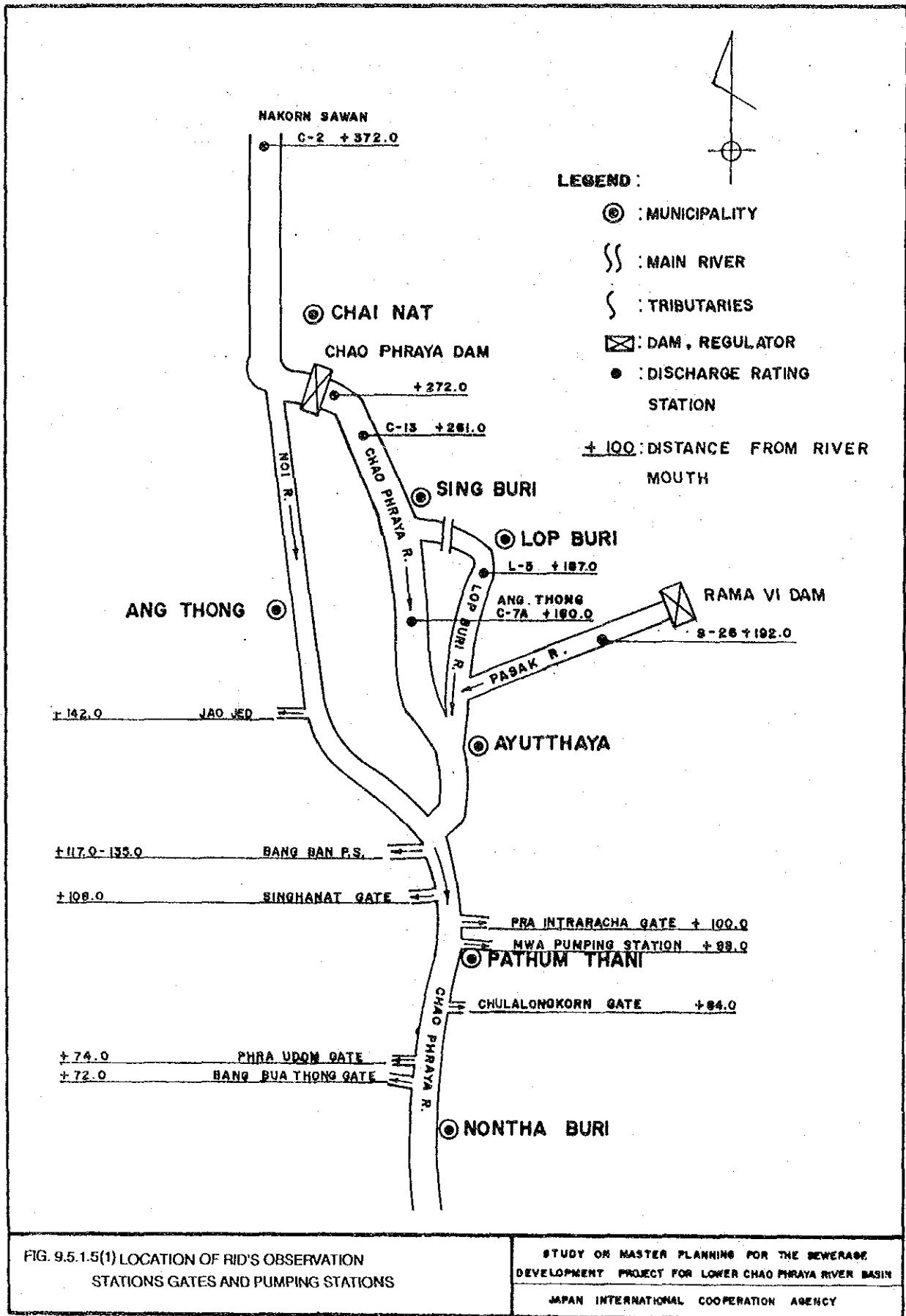


FIG. 9.5.1.5(1) LOCATION OF RID'S OBSERVATION STATIONS GATES AND PUMPING STATIONS

STUDY ON MASTER PLANNING FOR THE SEWERAGE DEVELOPMENT PROJECT FOR LOWER CHAO PHRAYA RIVER BASIN
 JAPAN INTERNATIONAL COOPERATION AGENCY

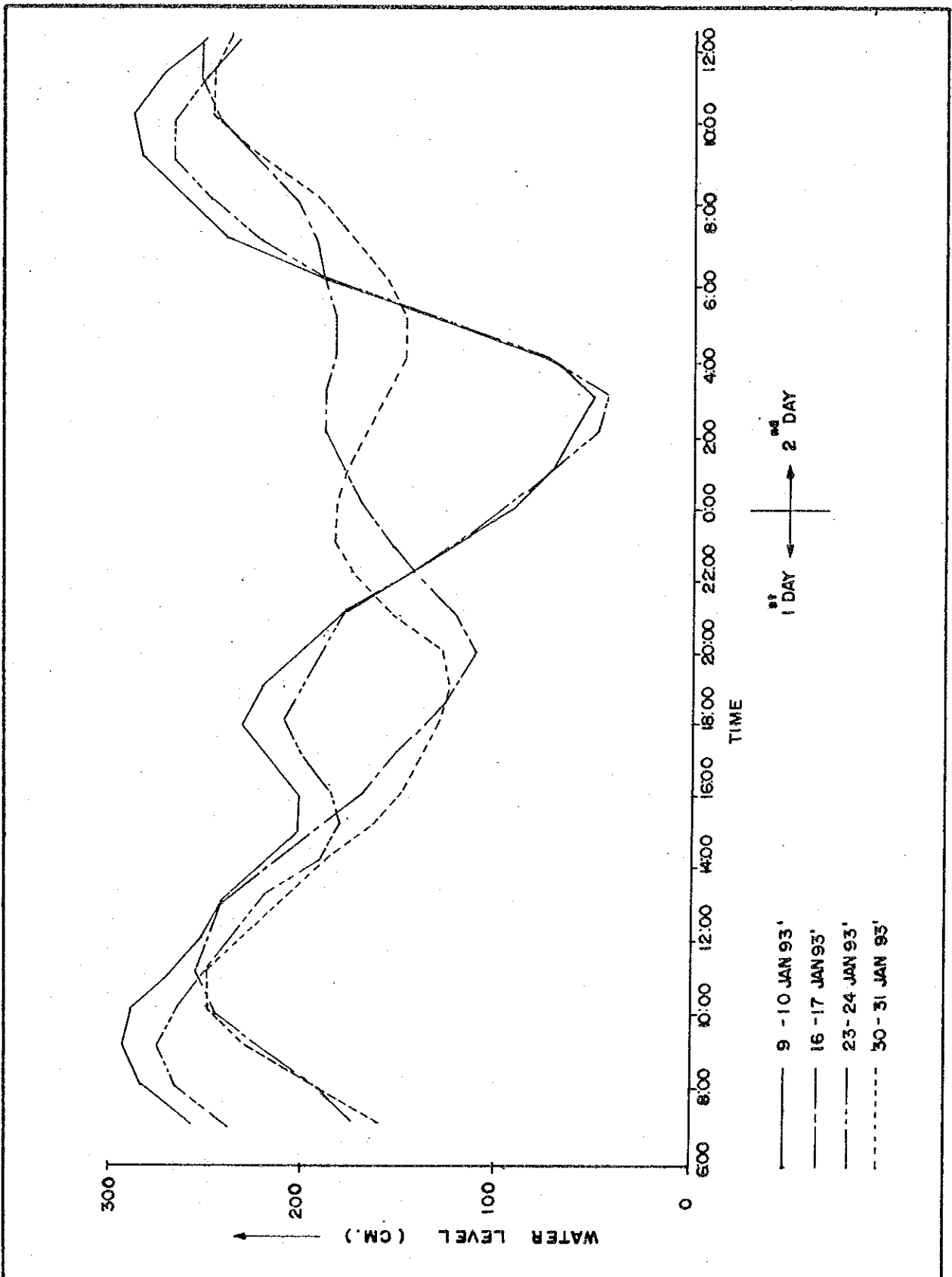


FIG. 9.5.1.5(2) WATER LEVEL AT HYDROGRAPHIC DEPT
(CHAO PHRAYA RIVER, RAMA IV BRIDGE)

STUDY ON MASTER PLANNING FOR THE SEWERAGE
DEVELOPMENT PROJECT FOR LOWER CHAO PHRAYA RIVER BASIN
JAPAN INTERNATIONAL COOPERATION AGENCY

9.5.3 Investigated and Recorded Data on Flow Rate

9.5.3.1 Flow Rate

Table 9.5.3.1 (1) Recorded Discharge at RID's Observation Stations
(On 13th, 14th, 20th, 21st June, 1992 and 9th, 10th, 16th, 17th January 1993)

Flow Rate Measured in Chao Phraya River and Its Tributaries

River	RID Sta. No.	Location	Dist. from River Mouth (km)	Flow Rate (m ³ /s)												Average Flow Rate	
				June 1992						January 1993						m ³ /s	m ³ /day
				13th	14th	20th	21st	9th	10th	16th	17th	m ³ /day					
Chao Phraya	C.2	A. Muang Nakorn Sawan Prov.	372.0	136.0	136.0	124.0	124.0	239.1	227.6	195.3	195.3	195.3	172.2	14,875,488	1.49E+07		
	-	Chao Phraya Dam Chainat Prov.	272.0	50.0	50.0	50.0	65.0	63.0	50.0	50.0	50.0	50.0	53.5	4,622,400	4.62E+06		
Lop Buri	C.13	Ban Re Rai A. Sanphraya, Chainat	261.0	Data not available												-	-
	C.7A	Ban Bang Kaeo A. Muang, Ang Thong	180.0	109.0	101.0	77.2	73.3	169.2	156.0	115.5	130.8	116.5	10,065,600	1.01E+07			
Pasak	L.5	A. Ban Phraek Ayuthaya	187.0	Data not available						12.0	9.0	5.6	4.6	7.8	672,840	6.73E+05	
	-	Rama VI Dam		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00		
	S.26	A. Tha Rua Ayuthaya	192.0	Data not available						38.9	45.8	40.8	51.4	44.2	3,817,800	3.82E+06	

Note : - Distance from river mouth of Lop Buri and Noi river is measured from PCD's set up point at Pompetch, A. Muang, Ayuthaya (142.0 km from river mouth) and at Nonthaburi Provincial Office, Nonthaburi (62.0 from river mouth) along that river respectively

Table 9.5.3.1 (2) Water Intake by Irrigation Gates and Pumping Stations
(On 13th, 14th, 20th, 21st June, 1992 and 9th, 10th, 16th, 17th January 1993)

River	Location	Dist. from River Mouth (km)	Flow Rate (m ³ /s)										Average Flow Rate				
			June 1992					January 1993					m ³ /s	m ³ /day			
			13th	14th	20th	21st	9th	10th	16th	17th	m ³ /day	m ³ /day					
Chao Phraya	Gates and Pumping stations in Pathum Thani	74.0 (Avg.)															
	- Bang Bua Thong																
	- Phra Udom		-70.4	-70.4	-70.4	-70.4	-31.8	-26.6	-25.4	-28.1	-49.2	-4,249,368	-4.25E+06				
	- Chulalongkorn																
	- Phra Intraracha																
	- Singhanat																
	MWA Raw Water Intake at Samlae, Pathum Thani	98.0															
	Bang Ban Pumping Station Ayuthaya	126.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	
Noi	Gates and Pumping stations in Ayuthaya																
	- Jao Jed	136.0	0.0	0.0	0.0	0.0	-31.7	0.0	0.0	-8.1	-701,352	-7.01E+05					

Note : - Distance from river mouth of Lop Buri and Noi river is measured from PCD's set up point at Pompetch, A. Muang, Ayuthaya (142.0 km from river mouth) and at Nonthaburi Provincial Office, Nonthaburi (62.0 km from river mouth) along that river respectively.

Table 9.5.3.1 (3)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Chainat before branch to Noi river

Station No.: 1

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00					188.87	
	10:00-11:00					242.07	
	11:00-12:00					295.26	
	12:00-13:00	-4.22	1,482.77	0.235	348.45	348.45	
	13:00-14:00					325.14	
	14:00-15:00					301.83	
	15:00-16:00					278.52	
	16:00-17:00					255.21	
	17:00-18:00					231.90	
	18:00-19:00	-4.20	1,489.94	0.140	208.59	208.59	
	19:00-20:00					187.38	
	20:00-21:00					166.17	
	21:00-22:00					144.96	
	22:00-23:00					123.75	
23:00-24:00	-4.27	1,464.86	0.070	102.54	102.54		
14th June 1992	24:00-01:00					92.08	
	01:00-02:00					81.61	
	02:00-03:00					71.15	
	03:00-04:00					60.69	
	04:00-05:00					50.22	
	05:00-06:00					39.76	
	06:00-07:00	-4.27	1,484.86	0.020	29.30	29.30	
	07:00-08:00					82.49	
	08:00-09:00					135.68	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-4.24	1480.61	0.114	-	168.48	

Table 9.5.3.1 (4)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Sing Buri, before branch to Lop Buri river

Station No.: 2

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00					46.39	
	10:00-11:00					45.98	
	11:00-12:00					45.56	
	12:00-13:00	-10.40	215.01	0.210	45.15	45.15	
	13:00-14:00					44.72	
	14:00-15:00					44.29	
	15:00-16:00					43.86	
	16:00-17:00					43.43	
	17:00-18:00	-10.40	215.01	0.200	43.00	43.00	
	18:00-19:00					38.55	
	19:00-20:00					34.09	
	20:00-21:00					29.64	
	21:00-22:00					25.19	
	22:00-23:00					20.73	
23:00-24:00	-11.70	70.79	0.230	16.28	16.28		
14th June 1992	24:00-01:00					21.58	
	01:00-02:00					26.87	
	02:00-03:00					32.16	
	03:00-04:00					37.46	
	04:00-05:00					42.75	
	05:00-06:00	-11.00	145.59	0.330	48.05	48.05	
	06:00-07:00					47.63	
	07:00-08:00					47.22	
	08:00-09:00					46.80	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-10.88	161.60	0.237	-	38.22	

Table 9.5.3.1 (5)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Ayutthaya, before joining with Pasak river

Station No.: 3

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured (m ³ /s)	Interpolated	
13th June 1992	09:00-10:00					56.03	
	10:00-11:00	-5.10	281.91	0.314	88.61	88.61	
	11:00-12:00					81.86	
	12:00-13:00	-5.00	288.78	0.260	75.11	75.11	
	13:00-14:00	-5.12	280.54	0.506	142.08	142.08	
	14:00-15:00	-5.31	267.64	0.600	160.46	160.46	
	15:00-16:00					165.76	
	16:00-17:00	-5.51	254.23	0.673	171.06	171.06	
	17:00-18:00					146.62	
	18:00-19:00					122.19	
	19:00-20:00					97.75	
	20:00-21:00					73.31	
	21:00-22:00					48.87	
	22:00-23:00					24.44	
23:00-24:00	—	—		0.000	0.00	0.00	
14th June 1992	24:00-01:00					-12.38	
	01:00-02:00					-24.76	
	02:00-03:00					-37.13	
	03:00-04:00					-49.51	
	04:00-05:00					-61.89	
	05:00-06:00	-5.01	286.57	-0.259	-74.27	-74.27	
	06:00-07:00					-41.69	
	07:00-08:00					-9.12	
	08:00-09:00					23.46	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-5.18	276.61	0.176	-	48.62	

Table 9.5.3.1 (6)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Ayutthaya, after joining with Pasak river

Station No.: 4

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00	-1.78	1,043.61	0.266	277.47	277.47	
	10:00-11:00					-20.45	
	11:00-12:00	-1.68	1,060.49	-0.300	-318.36	-318.36	
	12:00-13:00	-1.55	1,082.53	0.000	0.00	0.00	
	13:00-14:00	-1.70	1,057.11	0.364	384.51	384.51	
	14:00-15:00	-1.91	1,021.82	0.562	574.63	574.63	
	15:00-16:00					510.96	
	16:00-17:00	-2.16	980.49	0.456	447.29	447.29	
	17:00-18:00					865.90	
	18:00-19:00	-2.25	965.79	1.330	1,284.50	1284.50	
	19:00-20:00					973.60	
	20:00-21:00					662.70	
	21:00-22:00					351.80	
	22:00-23:00					40.90	
23:00-24:00	-2.08	993.64	-0.272	-270.00	-270.00		
14th June 1992	24:00-01:00					-261.18	
	01:00-02:00					-252.36	
	02:00-03:00					-243.54	
	03:00-04:00					-234.72	
	04:00-05:00					-225.90	
	05:00-06:00					-217.08	
	06:00-07:00	-1.47	1,096.13	-0.190	-208.26	-208.26	
	07:00-08:00					-46.35	
	08:00-09:00					115.56	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-1.84	1033.51	0.169	-	174.65	

Table 9.5.3.1 (7)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Nonthaburi beside provincial office

Station No.: 5

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00	-0.41	2,592.38	0.042	107.84	107.84	
	10:00-11:00	-0.67	2,513.07	0.046	115.98	115.98	
	11:00-12:00	-0.95	2,427.37	0.098	236.67	236.67	
	12:00-13:00	-1.07	2,390.68	0.368	879.53	879.53	
	13:00-14:00					1089.50	
	14:00-15:00					1299.47	
	15:00-16:00	-1.43	2,281.15	0.662	1,509.44	1509.44	
	16:00-17:00	-1.93	2,134.16	0.462	986.30	986.30	
	17:00-18:00	-1.89	2,145.46	0.150	320.75	320.75	
	18:00-19:00					225.55	
	19:00-20:00					130.36	
	20:00-21:00					35.17	
	21:00-22:00					-60.02	
	22:00-23:00					-155.21	
23:00-24:00	-0.49	2,568.23	-0.098	-250.40	-250.40		
14th June 1992	24:00-01:00					-177.11	
	01:00-02:00					-103.82	
	02:00-03:00					-30.53	
	03:00-04:00					42.76	
	04:00-05:00					116.05	
	05:00-06:00	-0.95	2,427.37	0.078	189.33	189.33	
	06:00-07:00					168.96	
	07:00-08:00					148.59	
	08:00-09:00					128.22	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-1.09	2,386.65	0.121	-	289.72	

Table 9.5.3.1 (8)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Noi river, Chainat, after branching from main river

Station No.: 6

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00					24.11	
	10:00-11:00					21.13	
	11:00-12:00					18.14	
	12:00-13:00	-6.06	63.11	0.240	15.15	15.15	
	13:00-14:00					16.33	
	14:00-15:00					17.52	
	15:00-16:00					18.71	
	16:00-17:00					19.90	
	17:00-18:00	-5.93	68.02	0.310	21.09	21.09	
	18:00-19:00					22.28	
	19:00-20:00					23.46	
	20:00-21:00					24.65	
	21:00-22:00					25.84	
	22:00-23:00					27.03	
23:00-24:00					28.22		
14th June 1992	24:00-01:00	-5.92	68.40	0.430	29.41	29.41	
	01:00-02:00					30.74	
	02:00-03:00					32.08	
	03:00-04:00					33.41	
	04:00-05:00					34.74	
	05:00-06:00	-5.86	70.73	0.510	36.07	36.07	
	06:00-07:00					33.08	
	07:00-08:00					30.09	
	08:00-09:00					27.10	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-5.94	67.57	0.376	-	25.43	

Table 9.5.3.1 (9)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Lop Buri river, Lop Buri

Station No.: 7

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00					1.61	
	10:00-11:00					1.53	
	11:00-12:00	-4.98	36.49	0.040	1.46	1.46	
	12:00-13:00					1.46	
	13:00-14:00					1.46	
	14:00-15:00					1.46	
	15:00-16:00					1.46	
	16:00-17:00					1.46	
	17:00-18:00	-4.98	36.49	0.040	1.46	1.46	
	18:00-19:00					1.46	
	19:00-20:00					1.46	
	20:00-21:00					1.46	
	21:00-22:00					1.46	
	22:00-23:00					1.46	
23:00-24:00	-4.98	36.49	0.040	1.46	1.46		
14th June 1992	24:00-01:00					1.51	
	01:00-02:00					1.56	
	02:00-03:00					1.62	
	03:00-04:00					1.67	
	04:00-05:00					1.72	
	05:00-06:00					1.77	
	06:00-07:00	-4.98	36.49	0.050	1.82	1.82	
	07:00-08:00					1.76	
	08:00-09:00					1.70	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-4.98	36.49	0.043	-	1.55	

Table 9.5.3.1 (10)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Lop Buri river, Ayutthaya, before joining with Pasak river

Station No.: 8

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00					-3.35	
	10:00-11:00	-2.88	350.26	0.000	0.00	0.00	
	11:00-12:00	-2.80	357.61	-0.099	-35.56	-35.56	
	12:00-13:00	-2.81	356.69	0.091	32.48	32.48	
	13:00-14:00	-2.86	352.09	0.080	28.31	28.31	
	14:00-15:00	-2.99	340.18	0.114	38.92	38.92	
	15:00-16:00	-3.10	330.15	0.200	65.93	65.93	
	16:00-17:00	-3.23	318.35	0.155	49.27	49.27	
	17:00-18:00	-3.29	312.92	0.152	47.48	47.48	
	18:00-19:00	-3.72	274.45	0.330	90.57	90.57	
	19:00-20:00					69.66	
	20:00-21:00					48.75	
	21:00-22:00					27.84	
	22:00-23:00					6.94	
23:00-24:00					-13.97		
14th June 1992	24:00-01:00	-3.54	290.67	-0.120	-34.88	-34.88	
	01:00-02:00					-31.25	
	02:00-03:00					-27.62	
	03:00-04:00					-24.00	
	04:00-05:00					-20.37	
	05:00-06:00	-3.05	334.79	-0.050	-16.74	-16.74	
	06:00-07:00					-13.39	
	07:00-08:00					-10.04	
	08:00-09:00					-6.70	
	09:00-10:00						
	10:00-11:00						
	11:00-12:00						
Average		-3.12	328.92	0.034	-	11.18	

Table 9.5.3.1 (11)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Pasak river, Ayutthaya, before joining with Lop Buri river

Station No.: 9

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00					-17.30	
	10:00-11:00	-1.49	160.99	-0.124	-20.02	-20.02	
	11:00-12:00	-1.47	162.35	-0.054	-8.78	-8.78	
	12:00-13:00	-1.44	163.93	-0.159	-26.06	-26.06	
	13:00-14:00	-1.50	160.77	0.000	0.00	0.00	
	14:00-15:00	-1.61	155.04	0.142	22.00	22.00	
	15:00-16:00	-1.73	148.89	0.266	39.53	39.53	
	16:00-17:00	-1.87	141.85	0.239	33.83	33.83	
	17:00-18:00	-1.91	139.87	0.154	21.56	21.56	
	18:00-19:00	-1.86	142.55	0.330	47.04	47.04	
	19:00-20:00					33.96	
	20:00-21:00					20.88	
	21:00-22:00					7.79	
	22:00-23:00					-5.29	
23:00-24:00	-1.65	153.08	-0.120	-18.37	-18.37		
14th June 1992	24:00-01:00					-17.05	
	01:00-02:00					-15.73	
	02:00-03:00					-14.41	
	03:00-04:00					-13.09	
	04:00-05:00					-11.77	
	05:00-06:00					-10.45	
	06:00-07:00	-1.09	182.74	-0.050	-9.14	-9.14	
	07:00-08:00					-11.86	
	08:00-09:00					-14.58	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-1.60	155.64	0.003	-	0.53	

Table 9.5.3.1 (12)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Noi river, Bang Shai, before joining with main river

Station No.: 10

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00					49.83	
	10:00-11:00					41.40	
	11:00-12:00	-2.96	470.88	0.070	32.96	32.96	
	12:00-13:00					67.51	
	13:00-14:00					102.05	
	14:00-15:00					136.60	
	15:00-16:00					171.15	
	16:00-17:00					205.69	
	17:00-18:00	-2.10	600.60	0.400	240.24	240.24	
	18:00-19:00					180.68	
	19:00-20:00					121.12	
	20:00-21:00					61.55	
	21:00-22:00					1.99	
	22:00-23:00					-57.57	
23:00-24:00	-2.53	532.42	-0.220	-117.13	-117.13		
14th June 1992	24:00-01:00					-83.68	
	01:00-02:00					-50.23	
	02:00-03:00					-16.77	
	03:00-04:00					16.68	
	04:00-05:00					50.13	
	05:00-06:00	-2.81	491.67	0.170	83.58	83.58	
	06:00-07:00					75.15	
	07:00-08:00					66.71	
	08:00-09:00					58.27	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-2.60	523.89	0.114	-	59.91	

Table 9.5.3.1 (13)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage Channel, Ang Thong

Station No.: 11

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00					1.96	
	10:00-11:00					1.96	
	11:00-12:00	-1.33	17.84	0.110	1.96	1.96	
	12:00-13:00					1.96	
	13:00-14:00					1.96	
	14:00-15:00					1.96	
	15:00-16:00					1.96	
	16:00-17:00					1.96	
	17:00-18:00	-1.33	17.79	0.110	1.96	1.96	
	18:00-19:00					1.93	
	19:00-20:00					1.90	
	20:00-21:00					1.88	
	21:00-22:00					1.85	
	22:00-23:00					1.82	
23:00-24:00					1.80		
14th June 1992	24:00-01:00	-1.34	17.71	0.100	1.77	1.77	
	01:00-02:00					1.80	
	02:00-03:00					1.83	
	03:00-04:00					1.86	
	04:00-05:00					1.89	
	05:00-06:00					1.92	
	06:00-07:00	-1.34	17.69	0.110	1.95	1.95	
	07:00-08:00					1.95	
	08:00-09:00					1.95	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-1.34	17.76	0.107	-	1.90	

Table 9.5.3.1 (14)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage channel, Ayutthaya, connecting main river and Noi river

Station No.: 12

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00					14.23	
	10:00-11:00					10.40	
	11:00-12:00	-0.73	109.47	0.060	6.57	6.57	
	12:00-13:00					10.80	
	13:00-14:00					15.02	
	14:00-15:00					19.25	
	15:00-16:00					23.48	
	16:00-17:00					27.71	
	17:00-18:00	-1.38	91.25	0.350	31.94	31.94	
	18:00-19:00					20.36	
	19:00-20:00					8.78	
	20:00-21:00					-2.80	
	21:00-22:00					-14.38	
	22:00-23:00					-25.96	
23:00-24:00	-1.33	89.39	-0.420	-37.55	-37.55		
14th June 1992	24:00-01:00					-26.36	
	01:00-02:00					-15.18	
	02:00-03:00					-4.00	
	03:00-04:00					7.19	
	04:00-05:00					18.37	
	05:00-06:00	-0.73	109.47	0.270	29.56	29.56	
	06:00-07:00					25.72	
	07:00-08:00					21.89	
	08:00-09:00					18.06	
	09:00-10:00						
	10:00-11:00						
	11:00-12:00						
Average		-1.04	99.89	0.076	-	7.63	

Table 9.5.3.1 (15)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage channel, Ayutthaya, flowing to Pasak river

Station No.: 13

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00					0.10	
	10:00-11:00					0.08	
	11:00-12:00					0.05	
	12:00-13:00	-3.33	1.00	0.030	0.03	0.03	
	13:00-14:00					0.05	
	14:00-15:00					0.07	
	15:00-16:00					0.09	
	16:00-17:00					0.11	
	17:00-18:00	-3.31	1.08	0.120	0.13	0.13	
	18:00-19:00					0.13	
	19:00-20:00					0.12	
	20:00-21:00					0.12	
	21:00-22:00					0.11	
	22:00-23:00					0.11	
23:00-24:00	-3.32	1.04	0.100	0.10	0.10		
14th June 1992	24:00-01:00					0.11	
	01:00-02:00					0.12	
	02:00-03:00					0.13	
	03:00-04:00					0.14	
	04:00-05:00					0.15	
	05:00-06:00					0.16	
	06:00-07:00	-3.28	1.22	0.140	0.17	0.17	
	07:00-08:00					0.15	
	08:00-09:00					0.12	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-3.31	1.08	0.102	-	0.11	

Table 9.5.3.1 (16)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage channel, Pathum Thani, flowing to main river

Station No.: 14

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00					0.01	
	10:00-11:00					0.01	
	11:00-12:00	-2.43	0.35	0.040	0.01	0.01	
	12:00-13:00					0.03	
	13:00-14:00					0.05	
	14:00-15:00					0.07	
	15:00-16:00					0.09	
	16:00-17:00					0.11	
	17:00-18:00	-2.33	0.75	0.170	0.13	0.13	
	18:00-19:00					0.10	
	19:00-20:00					0.08	
	20:00-21:00					0.06	
	21:00-22:00					0.03	
	22:00-23:00					0.01	
23:00-24:00	-2.38	0.53	-0.030	-0.02	-0.02		
14th June 1992	24:00-01:00					-0.01	
	01:00-02:00					-0.01	
	02:00-03:00					-0.01	
	03:00-04:00					0.00	
	04:00-05:00					0.00	
	05:00-06:00	-2.35	0.66	0.008	0.01	0.01	
	06:00-07:00					0.01	
	07:00-08:00					0.01	
	08:00-09:00					0.01	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-2.37	0.57	0.057	-	0.03	

Table 9.5.3.1 (17)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage channel, Nonthaburi, flowing to main river

Station No.: 15

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
13th June 1992	09:00-10:00					0.05	
	10:00-11:00					0.04	
	11:00-12:00					0.03	
	12:00-13:00					0.01	
	13:00-14:00	-2.90	0.95	0.004	0.00	0.00	
	14:00-15:00					0.04	
	15:00-16:00					0.07	
	16:00-17:00					0.11	
	17:00-18:00					0.14	
	18:00-19:00	-2.97	0.79	0.220	0.17	0.17	
	19:00-20:00					0.18	
	20:00-21:00					0.19	
	21:00-22:00					0.19	
	22:00-23:00					0.20	
	23:00-24:00					0.20	
14th June 1992	24:00-01:00	-2.03	3.04	0.069	0.21	0.21	
	01:00-02:00					0.19	
	02:00-03:00					0.17	
	03:00-04:00					0.15	
	04:00-05:00					0.12	
	05:00-06:00					0.10	
	06:00-07:00	-2.49	1.94	0.041	0.08	0.08	
	07:00-08:00					0.07	
	08:00-09:00					0.06	
	09:00-10:00						
	10:00-11:00						
	11:00-12:00						
Average		-2.60	1.68	0.068	-	0.11	

Table 9.5.3.1 (18)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Chainat before branch to Noi river

Station No.: 1

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00					148.69	
	10:00-11:00					182.70	
	11:00-12:00					216.72	
	12:00-13:00	-4.29	1,457.70	0.172	250.73	250.73	
	13:00-14:00					248.54	
	14:00-15:00					246.36	
	15:00-16:00					244.17	
	16:00-17:00					241.98	
	17:00-18:00					239.80	
	18:00-19:00	-4.29	1,457.70	0.163	237.61	237.61	
	19:00-20:00					210.10	
	20:00-21:00					182.58	
	21:00-22:00					155.07	
	22:00-23:00					127.56	
23:00-24:00					100.04		
21st June 1992	24:00-01:00	-4.31	1,450.55	0.050	72.528	72.53	
	01:00-02:00					68.21	
	02:00-03:00					63.90	
	03:00-04:00					59.59	
	04:00-05:00					55.27	
	05:00-06:00					50.96	
	06:00-07:00	-4.29	1,457.70	0.032	46.65	46.65	
	07:00-08:00					80.66	
	08:00-09:00					114.67	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-4.30	1455.91	0.104	-	151.88	

Table 9.5.3.1 (19)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Sing Buri, before branch to Lop Buri river

Station No.: 2

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00					77.51	
	10:00-11:00					74.95	
	11:00-12:00					72.38	
	12:00-13:00	-9.92	271.66	0.257	69.82	69.82	
	13:00-14:00					72.86	
	14:00-15:00					75.90	
	15:00-16:00					78.95	
	16:00-17:00					81.99	
	17:00-18:00	-9.92	271.66	0.313	85.03	85.03	
	18:00-19:00					84.53	
	19:00-20:00					84.03	
	20:00-21:00					83.54	
	21:00-22:00					83.04	
	22:00-23:00					82.54	
23:00-24:00	-9.92	271.66	0.302	82.04	82.04		
21st June 1992	24:00-01:00					82.49	
	01:00-02:00					82.94	
	02:00-03:00					83.39	
	03:00-04:00					83.85	
	04:00-05:00					84.30	
	05:00-06:00					84.75	
	06:00-07:00	-9.93	270.47	0.315	85.20	85.20	
	07:00-08:00					82.64	
	08:00-09:00					80.07	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-9.92	271.36	0.298	-	80.78	

Table 9.5.3.1 (20)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Ayutthaya, before joining with Pasak river

Station No.: 3

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00	-3.46	400.87	0.334	133.86	133.86	
	10:00-11:00	-3.35	409.51	0.243	99.60	99.60	
	11:00-12:00	-3.39	406.36	0.317	128.79	128.79	
	12:00-13:00	-3.53	395.43	0.443	175.31	175.31	
	13:00-14:00	-3.69	383.16	0.537	205.80	205.80	
	14:00-15:00	-3.80	374.86	0.579	216.86	216.86	
	15:00-16:00	-3.92	366.68	0.614	225.09	225.09	
	16:00-17:00	-4.05	356.35	0.659	234.95	234.95	
	17:00-18:00	-4.18	346.86	0.752	260.68	260.68	
	18:00-19:00	-4.32	336.72	0.654	220.09	220.09	
	19:00-20:00	-4.40	330.97	0.559	185.10	185.10	
	20:00-21:00				123.07	123.07	
	21:00-22:00	-4.13	350.50	0.174	61.05	61.05	
	22:00-23:00	-3.66	385.44	-0.098	-37.64	-37.64	
23:00-24:00				-58.38	-58.38		
21st June 1992	24:00-01:00	-3.47	400.09	-0.198	-79.12	-79.12	
	01:00-02:00	-3.29	414.27	-0.301	-124.55	-124.55	
	02:00-03:00				-127.94	-127.94	
	03:00-04:00	-3.18	423.08	-0.310	-131.33	-131.33	
	04:00-05:00	-3.24	418.26	-0.141	-58.87	-58.87	
	05:00-06:00	-3.38	407.14	0.172	70.07	70.07	
	06:00-07:00	-3.47	400.09	0.302	120.78	120.78	
	07:00-08:00	-3.47	400.09	0.331	132.58	132.58	
	08:00-09:00	-3.47	400.09	0.357	142.89	142.89	
	09:00-10:00	-3.46	400.87	0.334	133.86		
	10:00-11:00						
11:00-12:00							
Average		-3.46	400.87	0.220	-	88.28	

Table 9.5.3.1 (21)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Ayutthaya, after joining with Pasak river

Station No.: 4

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured wcr	Interpolated	
20th June 1992	09:00-10:00				275.89	275.89	
	10:00-11:00	-1.97	1,009.87	-0.109	-110.48	-110.477	
	11:00-12:00	-2.09	991.99	0.281	278.47	278.472	
	12:00-13:00	-2.23	969.05	0.452	438.20	438.203	
	13:00-14:00	-2.40	941.51	0.577	543.13	543.126	
	14:00-15:00	-2.52	922.28	0.595	548.97	548.965	
	15:00-16:00	-2.63	904.77	0.583	527.70	527.695	
	16:00-17:00	-2.76	884.15	0.556	491.31	491.308	
	17:00-18:00	-2.89	863.59	0.524	452.88	452.876	
	18:00-19:00	-3.03	841.53	0.519	437.17	437.166	
	19:00-20:00	-3.11	828.96	0.538	446.09	446.090	
	20:00-21:00					117.08	
	21:00-22:00	-2.79	879.40	-0.241	-211.94	-211.939	
	22:00-23:00	-2.23	969.05	-0.338	-327.62	-327.624	
23:00-24:00					-348.84		
21st June 1992	24:00-01:00	-2.01	1,005.20	-0.368	-370.05	-370.049	
	01:00-02:00	-1.87	1,028.51	-0.357	-367.30	-367.297	
	02:00-03:00					-320.59	
	03:00-04:00	-1.79	1,041.93	-0.263	-273.88	-273.882	
	04:00-05:00	-1.96	1,013.50	-0.072	-73.25	-73.252	
	05:00-06:00	-2.05	998.58	0.214	213.70	213.703	
	06:00-07:00	-2.09	991.99	0.281	278.94	278.935	
	07:00-08:00	-2.11	988.70	0.289	285.56	285.558	
	08:00-09:00	-2.10	990.34	0.275	272.39	272.388	
	09:00-10:00	-2.03	1,001.89	0.275	275.89		
	10:00-11:00						
11:00-12:00							
Average		-2.32	955.56	0.140	-	133.48	

Table 9.5.3.1 (22)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Nonthaburi beside provincial office

Station No.: 5

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00				-1,158.15	-1158.15	
	10:00-11:00	-1.19	2,354.04	0.313	736.18	1132.59	
	11:00-12:00	-1.38	2,296.29	0.421	966.63	1487.13	
	12:00-13:00	-1.53	2,252.44	0.444	1,000.70	1539.54	
	13:00-14:00	-1.67	2,208.99	0.429	947.04	1456.99	
	14:00-15:00	-1.82	2,166.79	0.466	1,008.91	1552.17	
	15:00-16:00	-1.95	2,129.93	0.418	890.49	1369.99	
	16:00-17:00	-2.07	2,094.89	0.418	875.66	1347.17	
	17:00-18:00	-1.97	2,124.30	0.431	915.36	1408.24	
	18:00-19:00	-1.48	2,266.03	-0.209	-473.78	-728.89	
	19:00-20:00	-1.09	2,384.56	-0.430	-1,024.98	-1576.89	
	20:00-21:00	-0.81	2,470.20	-0.440	-1,085.79	-1670.45	
	21:00-22:00	-0.85	2,459.49	-0.506	-1,245.58	-1916.27	
	22:00-23:00	-0.62	2,528.38	-0.489	-1,237.16	-1903.33	
23:00-24:00	-0.62	2,528.38	-0.423	-1,068.55	-1643.93		
21st June 1992	24:00-01:00	-0.57	2,543.71	-0.427	-1,086.38	-1671.36	
	01:00-02:00	-0.61	2,532.98	0.328	829.91	1276.79	
	02:00-03:00	-0.84	2,461.02	0.231	569.30	875.84	
	03:00-04:00	-0.97	2,422.78	0.217	526.93	810.66	
	04:00-05:00	-0.89	2,447.25	0.251	613.64	944.06	
	05:00-06:00	-0.87	2,451.84	0.309	756.57	1163.95	
	06:00-07:00	-0.84	2,462.55	0.362	892.12	1372.49	
	07:00-08:00	-0.79	2,476.32	0.314	776.80	1195.08	
	08:00-09:00	-0.68	2,511.54	0.251	630.58	970.13	
	09:00-10:00	-0.68	2,510.00	-0.300	-752.80		
	10:00-11:00						
11:00-12:00							
Average		-1.13	2372.81	0.087	-	206.74	

Table 9.5.3.1 (23)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Noi river, Chainat, after branching from main river

Station No.: 6

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00					15.51	
	10:00-11:00					14.62	
	11:00-12:00	-5.65	79.36	0.173	13.73	13.73	
	12:00-13:00					13.35	
	13:00-14:00					12.98	
	14:00-15:00					12.61	
	15:00-16:00					12.23	
	16:00-17:00					11.86	
	17:00-18:00	-5.64	79.77	0.144	11.49	11.49	
	18:00-19:00					11.00	
	19:00-20:00					10.52	
	20:00-21:00					10.03	
	21:00-22:00					9.55	
	22:00-23:00					9.07	
23:00-24:00	-5.66	78.74	0.109	8.58	8.58		
21st June 1992	24:00-01:00					10.33	
	01:00-02:00					12.08	
	02:00-03:00					13.82	
	03:00-04:00					15.57	
	04:00-05:00					17.32	
	05:00-06:00	-5.61	80.43	0.237	19.06	19.06	
	06:00-07:00					18.17	
	07:00-08:00					17.28	
	08:00-09:00					16.40	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-5.64	79.57	0.166	-	13.21	

Table 9.5.3.1 (24)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Lop Buri river, Lop Buri

Station No.: 7

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00					1.68	
	10:00-11:00					1.72	
	11:00-12:00	-4.73	50.52	0.035	1.75	1.75	
	12:00-13:00					1.80	
	13:00-14:00					1.85	
	14:00-15:00					1.90	
	15:00-16:00					1.94	
	16:00-17:00					1.99	
	17:00-18:00	-4.73	50.52	0.040	2.04	2.04	
	18:00-19:00					1.97	
	19:00-20:00					1.90	
	20:00-21:00					1.83	
	21:00-22:00					1.75	
	22:00-23:00					1.68	
23:00-24:00	-4.73	50.52	0.032	1.61	1.61		
21st June 1992	24:00-01:00					1.60	
	01:00-02:00					1.59	
	02:00-03:00					1.58	
	03:00-04:00					1.57	
	04:00-05:00					1.56	
	05:00-06:00	-4.73	50.52	0.031	1.55	1.55	
	06:00-07:00					1.58	
	07:00-08:00					1.62	
	08:00-09:00					1.65	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-4.73	50.52	0.034	-	1.74	

Table 9.5.3.1 (25)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Lop Buri river, Ayutthaya, before joining with Pasak river

Station No.: 8

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00					5.27	
	10:00-11:00	-1.74	148.38	0.097	14.37	14.37	
	11:00-12:00	-1.74	148.38	0.023	3.41	3.41	
	12:00-13:00	-1.85	142.85	0.023	3.29	3.29	
	13:00-14:00	-1.97	136.92	0.160	21.85	21.85	
	14:00-15:00	-2.09	131.09	0.281	36.83	36.83	
	15:00-16:00	-2.20	125.79	0.183	23.07	23.07	
	16:00-17:00	-2.31	120.54	0.204	24.58	24.58	
	17:00-18:00	-2.43	114.87	0.075	8.58	8.58	
	18:00-19:00	-2.58	107.85	0.179	19.29	19.29	
	19:00-20:00	-2.66	104.15	0.207	21.59	21.59	
	20:00-21:00	-2.76	99.55	0.225	22.39	22.39	
	21:00-22:00	-2.61	106.46	0.067	7.17	7.17	
	22:00-23:00	-2.36	118.17	-0.031	-3.70	-3.70	
23:00-24:00	-2.16	127.71	-0.096	-12.30	-12.30		
21st June 1992	24:00-01:00	-2.11	130.12	-0.028	-3.64	-3.64	
	01:00-02:00	-1.96	137.41	-0.031	-4.25	-4.25	
	02:00-03:00	-1.90	140.36	-0.024	-3.34	-3.34	
	03:00-04:00	-1.86	142.35	-0.067	-9.57	-9.57	
	04:00-05:00	-1.71	149.91	-0.030	-4.44	-4.44	
	05:00-06:00	-1.64	153.49	-0.028	-4.30	-4.30	
	06:00-07:00	-1.82	144.35	0.050	7.22	7.22	
	07:00-08:00	-1.84	143.35	0.023	3.30	3.30	
	08:00-09:00	-1.85	142.85	0.019	2.75	2.75	
	09:00-10:00	-1.76	147.37	0.036	5.27		
	10:00-11:00						
11:00-12:00							
Average		-2.08	131.84	0.057		7.48	

Table 9.5.3.1 (26)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Pasak river, Ayutthaya, before joining with Lop Buri river

Station No.: 9

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00					5.46	
	10:00-11:00	-3.07	332.88	-0.024	-7.92	-7.92	
	11:00-12:00	-3.08	331.97	-0.104	-34.46	-34.46	
	12:00-13:00	-3.21	320.16	0.261	83.72	83.72	
	13:00-14:00	-3.33	309.32	0.239	74.00	74.00	
	14:00-15:00	-3.46	297.64	0.184	54.66	54.66	
	15:00-16:00	-3.57	288.07	0.152	43.70	43.70	
	16:00-17:00	-3.68	278.06	0.104	29.04	29.04	
	17:00-18:00	-3.82	265.79	0.126	33.56	33.56	
	18:00-19:00	-3.89	259.71	0.022	5.71	5.71	
	19:00-20:00	-4.03	247.67	0.066	16.28	16.28	
	20:00-21:00	-3.93	256.25	0.074	18.84	18.84	
	21:00-22:00	-3.88	260.57	-0.035	-9.07	-9.07	
	22:00-23:00	-3.81	266.66	-0.097	-25.76	-25.76	
23:00-24:00	-3.71	275.41	-0.040	-11.03	-11.03		
21st June 1992	24:00-01:00	-3.45	298.54	-0.024	-7.30	-7.30	
	01:00-02:00	-3.28	313.83	-0.038	-11.85	-11.85	
	02:00-03:00	-3.23	318.35	-0.036	-11.53	-11.53	
	03:00-04:00	-3.19	321.97	-0.040	-12.87	-12.87	
	04:00-05:00	-3.03	336.53	-0.019	-6.32	-6.32	
	05:00-06:00	-3.00	339.27	-0.051	-17.46	-17.46	
	06:00-07:00	-3.15	325.60	0.026	8.34	8.34	
	07:00-08:00	-3.18	322.88	0.017	5.49	5.49	
	08:00-09:00	-3.21	320.16	0.017	5.44	5.44	
	09:00-10:00	-3.20	321.06	0.017	5.46		
	10:00-11:00						
11:00-12:00							
Average		-3.43	300.35	0.032	-	9.53	

Table 9.5.3.1 (27)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Noi river, Bang Shai, before joining with main river

Station No.: 10

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00					-67.93	
	10:00-11:00					-46.75	
	11:00-12:00	-2.43	547.59	0.214	117.43	117.43	
	12:00-13:00	-2.54	530.92	0.052	27.71	27.71	
	13:00-14:00	-2.67	511.73	0.498	254.71	254.71	
	14:00-15:00	-2.83	488.86	0.554	270.97	270.97	
	15:00-16:00	-2.99	466.81	0.608	283.64	283.64	
	16:00-17:00	-3.10	452.14	0.593	267.91	267.91	
	17:00-18:00	-3.24	434.05	0.508	220.56	220.56	
	18:00-19:00	-3.37	418.35	0.334	139.85	139.85	
	19:00-20:00					42.66	
	20:00-21:00	-3.24	434.05	-0.126	-54.53	-54.53	
	21:00-22:00	-2.88	481.88	-0.198	-95.56	-95.56	
	22:00-23:00	-2.66	513.18	-0.200	-102.82	-102.82	
23:00-24:00	-2.50	536.94	-0.343	-184.08	-184.08		
21st June 1992	24:00-01:00	-2.32	564.67	-0.541	-305.25	-305.25	
	01:00-02:00	-2.20	583.99	-0.406	-237.26	-237.26	
	02:00-03:00	-2.14	593.90	-0.413	-245.50	-245.50	
	03:00-04:00	-2.11	598.92	-0.190	-113.80	-113.80	
	04:00-05:00	-2.20	583.99	0.126	73.83	73.83	
	05:00-06:00	-2.36	558.41	0.341	190.66	190.66	
	06:00-07:00	-2.38	555.30	0.276	153.18	153.18	
	07:00-08:00	-2.41	550.67	0.186	102.36	102.36	
	08:00-09:00	-2.41	550.67	0.108	59.39	59.39	
	09:00-10:00	-2.38	555.30	-0.122	-67.93		
	10:00-11:00	-2.29	569.42	-0.082	-46.75		
11:00-12:00							
Average		-2.59	525.29	0.060	-	31.31	

Table 9.5.3.1 (28)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage Channel, Ayutthaya

Station No.: 11

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00					2.11	
	10:00-11:00					2.23	
	11:00-12:00	-1.45	15.82	0.148	2.34	2.34	
	12:00-13:00					2.36	
	13:00-14:00					2.37	
	14:00-15:00					2.39	
	15:00-16:00					2.40	
	16:00-17:00					2.42	
	17:00-18:00	-1.45	15.82	0.154	2.44	2.44	
	18:00-19:00					2.44	
	19:00-20:00					2.44	
	20:00-21:00					2.44	
	21:00-22:00					2.45	
	22:00-23:00					2.45	
23:00-24:00	-1.45	15.82	0.155	2.45	2.45		
21st June 1992	24:00-01:00					2.32	
	01:00-02:00					2.19	
	02:00-03:00					2.06	
	03:00-04:00					1.92	
	04:00-05:00					1.79	
	05:00-06:00	-1.45	15.82	0.105	1.66	1.66	
	06:00-07:00					1.77	
	07:00-08:00					1.89	
	08:00-09:00					2.00	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-1.45	15.82	0.140	-	2.22	

Table 9.5.3.1 (29)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage channel, Ayutthaya, connecting main and Noi river

Station No.: 12

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00					19.87	
	10:00-11:00					16.80	
	11:00-12:00	-1.04	98.68	0.139	13.72	13.72	
	12:00-13:00					15.57	
	13:00-14:00					17.42	
	14:00-15:00					19.27	
	15:00-16:00					21.13	
	16:00-17:00					22.98	
	17:00-18:00	-2.12	66.04	0.376	24.83	24.83	
	18:00-19:00					27.14	
	19:00-20:00					29.45	
	20:00-21:00					31.76	
	21:00-22:00					34.08	
	22:00-23:00					36.39	
23:00-24:00	-1.41	86.96	0.445	38.70	38.70		
21st June 1992	24:00-01:00					37.33	
	01:00-02:00					35.96	
	02:00-03:00					34.59	
	03:00-04:00					33.22	
	04:00-05:00					31.85	
	05:00-06:00					30.48	
	06:00-07:00	-1.03	99.02	0.294	29.11	29.11	
	07:00-08:00					26.03	
	08:00-09:00					22.95	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-1.40	87.68	0.309	-	27.11	

Table 9.5.3.1 (30)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage channel, Ayutthaya, flowing to Pasak river

Station No.: 13

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00					0.06	
	10:00-11:00					0.06	
	11:00-12:00					0.06	
	12:00-13:00	-2.92	3.19	0.017	0.05	0.05	
	13:00-14:00					0.05	
	14:00-15:00					0.05	
	15:00-16:00					0.05	
	16:00-17:00					0.05	
	17:00-18:00					0.05	
	18:00-19:00	-2.92	3.19	0.015	0.05	0.05	
	19:00-20:00					0.05	
	20:00-21:00					0.05	
	21:00-22:00					0.05	
	22:00-23:00					0.06	
23:00-24:00	-2.92	3.19	0.018	0.06	0.06		
21st June 1992	24:00-01:00					0.06	
	01:00-02:00					0.06	
	02:00-03:00					0.06	
	03:00-04:00					0.06	
	04:00-05:00					0.06	
	05:00-06:00					0.06	
	06:00-07:00	-2.92	3.19	0.019	0.06	0.06	
	07:00-08:00					0.06	
	08:00-09:00					0.06	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-2.92	3.19	0.017	-	0.06	

Table 9.5.3.1 (31)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage channel, Pathum Thani, flowing to main river

Station No.: 14

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00					0.32	
	10:00-11:00					0.34	
	11:00-12:00	-1.67	7.33	0.049	0.36	0.36	
	12:00-13:00					0.41	
	13:00-14:00					0.47	
	14:00-15:00					0.52	
	15:00-16:00					0.57	
	16:00-17:00					0.63	
	17:00-18:00	-1.92	4.37	0.156	0.68	0.68	
	18:00-19:00					0.66	
	19:00-20:00					0.64	
	20:00-21:00					0.62	
	21:00-22:00					0.60	
	22:00-23:00					0.58	
23:00-24:00	-1.23	14.79	0.038	0.56	0.56		
21st June 1992	24:00-01:00					0.51	
	01:00-02:00					0.46	
	02:00-03:00					0.41	
	03:00-04:00					0.35	
	04:00-05:00					0.30	
	05:00-06:00	-1.32	13.10	0.019	0.25	0.25	
	06:00-07:00					0.27	
	07:00-08:00					0.29	
	08:00-09:00					0.30	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-1.54	9.89	0.047	-	0.46	

Table 9.5.3.1 (32)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage channel, Nonthaburi, flowing to main river

Station No.: 15

(Water level is measured from point (0,0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remark
					Measured	Interpolated	
20th June 1992	09:00-10:00					0.08	
	10:00-11:00					0.09	
	11:00-12:00					0.11	
	12:00-13:00	-3.00	0.71	0.169	0.12	0.12	
	13:00-14:00					0.12	
	14:00-15:00					0.12	
	15:00-16:00					0.12	
	16:00-17:00					0.12	
	17:00-18:00					0.11	
	18:00-19:00	-3.03	0.64	0.176	0.11	0.11	
	19:00-20:00					0.15	
	20:00-21:00					0.20	
	21:00-22:00					0.24	
	22:00-23:00					0.28	
23:00-24:00					0.32		
21st June 1992	24:00-01:00	-2.33	2.32	0.155	0.36	0.36	
	01:00-02:00					0.32	
	02:00-03:00					0.27	
	03:00-04:00					0.23	
	04:00-05:00					0.18	
	05:00-06:00					0.14	
	06:00-07:00					0.10	
	07:00-08:00	-2.58	1.72	0.031	0.05	0.05	
	08:00-09:00					0.07	
	09:00-10:00						
	10:00-11:00						
11:00-12:00							
Average		-2.74	1.35	0.124	-	0.17	

Table 9.5.3.1 (33)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Channel before diverting to Noi river

Station No. : 1

(Water level is measured from point (0, 0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Interpolated	
9th January 1993	09:00-10:00						
	10:00-11:00					54.56	
	11:00-12:00					36.45	
	12:00-13:00	-4.09	1,529.43	0.012	18.35	18.35	
	13:00-14:00					32.42	
	14:00-15:00					46.50	
	15:00-16:00					60.57	
	16:00-17:00					74.64	
	17:00-18:00					88.71	
	18:00-19:00	-4.14	1,511.47	0.068	102.78	102.78	
	19:00-20:00					106.45	
	20:00-21:00					110.13	
	21:00-22:00					113.80	
	22:00-23:00					117.48	
23:00-24:00					121.15		
10th January 1993	24:00-01:00	-4.11	1,522.24	0.082	124.82	124.82	
	01:00-02:00					125.18	
	02:00-03:00					125.54	
	03:00-04:00					125.89	
	04:00-05:00					126.25	
	05:00-06:00					126.61	
	06:00-07:00	-4.14	1,511.47	0.084	126.96	126.96	
	07:00-08:00					108.86	
	08:00-09:00					90.76	
	09:00-10:00					72.66	
	10:00-11:00						
11:00-12:00							
Average		-4.12	1,518.65	0.062	93.23	93.23	
Flow rate (m ³ /day)		-	-	-	8,055.076	8,055.076	

Table 9.5.3.1 (36)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Ayulthaya, after joining with Pasak river

Station No. : 4

(Water level is measured from point (0.0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Average in 6 hrs.	
9th January 1993	09:00-10:00						
	10:00-11:00	-1.52	1,087.63	-0.228	-247.82		
	11:00-12:00	-1.40	1,108.04	-0.333	-369.14		
	12:00-13:00	-1.29	1,126.78	-0.337	-379.84	-224.53	
	13:00-14:00	-1.22	1,138.72	-0.262	-298.66		
	14:00-15:00	-1.18	1,145.55	-0.252	-288.59		
	15:00-16:00	-1.20	1,142.14	0.207	236.88		
	16:00-17:00	-1.25	1,133.60	0.310	350.86		
	17:00-18:00	-1.34	1,118.25	0.292	327.07		
	18:00-19:00	-1.41	1,106.33	0.232	256.56	301.50	
	19:00-20:00	-1.39	1,109.74	0.272	301.86		
	20:00-21:00	-1.38	1,111.44	0.252	279.83		
	21:00-22:00	-1.40	1,108.04	0.264	292.85		
	22:00-23:00	-1.43	1,102.93	0.257	283.31		
23:00-24:00	-1.51	1,089.32	0.329	357.86			
10th January 1993	24:00-01:00	-1.63	1,068.96	0.369	393.93	375.51	
	01:00-02:00	-1.71	1,055.42	0.366	386.31		
	02:00-03:00	-1.85	1,031.85	0.371	383.04		
	03:00-04:00	-1.97	1,012.74	0.443	448.62		
	04:00-05:00	-2.09	991.99	0.631	626.16		
	05:00-06:00	-2.32	954.43	0.675	644.20		
	06:00-07:00	-2.36	947.96	0.565	535.35	295.77	
	07:00-08:00	-2.42	938.29	0.441	413.59		
	08:00-09:00	-2.03	1,001.89	-0.176	-176.36		
	09:00-10:00	-1.78	1,043.61	-0.257	-268.31		
	10:00-11:00						
11:00-12:00							
Average		-1.63	1,069.82	0.185	187.06	187.06	
Flow rate (m ³ /day)		-	-	-	16,162,405	16,162,405	

Table 9.5.3.1 (37)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Main river, Nonthaburi beside provincial office

Station No. : 5

(Water level is measured from point (0, 0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Average in 6 hrs.	
9th January 1993	09:00-10:00						
	10:00-11:00	-0.05	2,703.54	-0.946	-2,556.69		
	11:00-12:00	-0.04	2,707.38	-0.628	-1,700.74		
	12:00-13:00	-0.11	2,684.85	-0.328	-880.71	-849.45	
	13:00-14:00	-0.24	2,644.93	-0.230	-608.81		
	14:00-15:00	-0.34	2,615.77	0.089	232.08		
	15:00-16:00	-0.33	2,617.30	0.160	418.15		
	16:00-17:00	-0.32	2,620.37	0.163	426.43		
	17:00-18:00	-0.25	2,641.86	0.146	386.15		
	18:00-19:00	-0.26	2,638.79	0.152	400.91	631.49	
	19:00-20:00	-0.34	2,614.23	0.208	544.16		
	20:00-21:00	-0.39	2,598.89	0.263	684.64		
	21:00-22:00	-0.61	2,531.45	0.532	1,346.63		
	22:00-23:00	-0.90	2,442.66	0.647	1,580.76		
23:00-24:00	-1.06	2,393.73	0.741	1,773.59			
10th January 1993	24:00-01:00	-1.21	2,347.94	0.744	1,747.21	1,710.80	
	01:00-02:00	-1.38	2,296.29	0.737	1,693.50		
	02:00-03:00	-1.48	2,266.03	0.759	1,719.60		
	03:00-04:00	-1.60	2,229.84	0.785	1,750.12		
	04:00-05:00	-1.60	2,229.84	0.733	1,635.41		
	05:00-06:00	-1.10	2,380.46	0.220	524.86		
	06:00-07:00	-0.62	2,528.38	-0.297	-751.01	-661.53	
	07:00-08:00	-0.42	2,589.69	-0.591	-1,530.84		
	08:00-09:00	-0.32	2,620.37	-0.709	-1,857.56		
	09:00-10:00	-0.20	2,657.21	-0.749	-1,990.04		
	10:00-11:00						
11:00-12:00							
Average		-0.63	2,525.08	0.108	207.82	207.82	
Flow rate (m ³ /day)		-	-	-	17,956.048	17,956.048	

Table 9.5.3.1 (38)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Roi river, Chainat after diverting from main river

Station No. : 6

(Water level is measured from point (0, 0) of the
coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Interpolated	
9th January 1993	09:00-10:00						
	10:00-11:00					23.68	
	11:00-12:00					22.85	
	12:00-13:00	-6.07	62.74	0.351	22.02	22.02	
	13:00-14:00					21.28	
	14:00-15:00					20.54	
	15:00-16:00					19.80	
	16:00-17:00					19.06	
	17:00-18:00					18.32	
	18:00-19:00	-6.11	61.27	0.287	17.58	17.58	
	19:00-20:00					19.33	
	20:00-21:00					21.07	
	21:00-22:00					22.81	
	22:00-23:00					24.55	
23:00-24:00					26.29		
10th January 1993	24:00-01:00	-6.09	62.00	0.452	28.03	28.03	
	01:00-02:00					27.86	
	02:00-03:00					27.69	
	03:00-04:00					27.52	
	04:00-05:00					27.35	
	05:00-06:00					27.17	
	06:00-07:00	-0.62	64.60	0.418	27.00	27.00	
	07:00-08:00					26.17	
	08:00-09:00					25.34	
	09:00-10:00					24.51	
	10:00-11:00						
	11:00-12:00						
Average		-4.72	62.66	0.377	23.66	23.66	
Flow rate (m ³ /day)		-	-	-	2,044,189	2,044,189	

Table 9.5.3.1 (39)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Lop Buri river, Lop Buri

Station No. : 7

(Water level is measured from point (0.0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Interpolated	
9th January 1993	09:00-10:00						
	10:00-11:00					0.15	
	11:00-12:00					0.14	
	12:00-13:00	-5.78	2.71	0.047	0.13	0.13	
	13:00-14:00					0.13	
	14:00-15:00					0.14	
	15:00-16:00					0.14	
	16:00-17:00					0.15	
	17:00-18:00					0.15	
	18:00-19:00	-5.76	3.21	0.049	0.16	0.16	
	19:00-20:00					0.13	
	20:00-21:00					0.10	
	21:00-22:00					0.08	
	22:00-23:00					0.05	
23:00-24:00					0.03		
10th January 1993	24:00-01:00	-5.76	3.21	0.000	0.00	0.00	
	01:00-02:00					0.03	
	02:00-03:00					0.07	
	03:00-04:00					0.10	
	04:00-05:00					0.14	
	05:00-06:00					0.17	
	06:00-07:00	-5.71	4.26	0.049	0.21	0.21	
	07:00-08:00					0.20	
	08:00-09:00					0.18	
	09:00-10:00					0.17	
	10:00-11:00						
11:00-12:00							
Average		-5.75	3.35	0.036	0.12	0.12	
Flow rate (m ³ /day)					10.654	10.654	

Table 9.5.3.1 (40)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Lop Buri river, Ayutthaya, before joining with Pasak river

Station No. : 8

(Water level is measured from point (0, 0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Average in 6 hrs.	
9th January 1993	09:00-10:00						
	10:00-11:00	-0.99	188.06	-0.115	-21.54		
	11:00-12:00	-0.87	194.63	-0.203	-39.46		
	12:00-13:00	-0.78	199.59	-0.227	-45.22	-6.37	
	13:00-14:00	-0.71	203.46	-0.112	-22.84		
	14:00-15:00	-0.70	204.01	0.125	25.55		
	15:00-16:00	-0.73	202.35	0.323	65.29		
	16:00-17:00	-0.81	197.93	0.267	52.90		
	17:00-18:00	-0.86	195.18	0.282	55.00		
	18:00-19:00	-0.89	193.53	0.253	49.05	38.22	
	19:00-20:00	-0.92	191.89	0.125	23.98		
	20:00-21:00	-0.92	191.89	0.088	16.83		
	21:00-22:00	-0.93	191.34	0.165	31.56		
22:00-23:00	-0.99	188.06	0.231	43.43			
23:00-24:00	-1.07	183.71	0.198	36.36			
10th January 1993	24:00-01:00	-1.17	178.31	0.221	39.40	46.24	
	01:00-02:00	-1.28	172.42	0.322	55.45		
	02:00-03:00	-1.39	166.57	0.294	48.96		
	03:00-04:00	-1.40	166.04	0.324	53.84		
	04:00-05:00	-1.61	155.04	0.349	54.15		
	05:00-06:00	-1.73	148.89	0.390	58.02		
	06:00-07:00	-1.82	144.35	0.368	53.10	17.65	
	07:00-08:00	-1.84	143.35	0.221	31.66		
	08:00-09:00	-1.50	160.77	-0.403	-64.81		
	09:00-10:00	-1.33	169.75	-0.154	-26.22		
	10:00-11:00						
11:00-12:00							
Average		-1.14	180.46	0.139	23.93	23.93	
Flow rate (m ³ /day)		-	-	-	2,067.975	2,067.975	

Table 9.5.3.1 (41)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Pasak river, Ayutthaya, before joining with Lop Buri river

Station No. : 9

(Water level is measured from point (0, 0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Average in 6 hrs.	
9th January 1993	09:00-10:00						
	10:00-11:00	-3.03	336.53	-0.343	-115.32		
	11:00-12:00	-2.93	345.67	-0.578	-199.73		
	12:00-13:00	-2.82	355.77	-0.310	-110.19	-112.54	
	13:00-14:00	-2.73	364.06	-0.380	-138.41		
	14:00-15:00	-2.71	365.91	-0.377	-138.06		
	15:00-16:00	-2.74	363.14	0.073	26.48		
	16:00-17:00	-2.80	357.61	0.184	65.86		
	17:00-18:00	-2.85	353.01	0.302	106.60		
	18:00-19:00	-2.89	349.34	0.359	125.37	81.61	
	19:00-20:00	-2.94	344.76	0.314	108.38		
	20:00-21:00	-2.93	345.67	0.118	40.77		
	21:00-22:00	-2.93	345.67	0.123	42.68		
	22:00-23:00	-2.97	342.01	0.249	85.28		
23:00-24:00	-3.04	335.79	0.325	109.17			
10th January 1993	24:00-01:00	-3.13	327.42	0.451	147.77	138.07	
	01:00-02:00	-3.25	316.54	0.460	145.75		
	02:00-03:00	-3.36	306.62	0.543	166.34		
	03:00-04:00	-3.47	296.74	0.587	174.10		
	04:00-05:00	-3.56	288.70	0.620	179.14		
	05:00-06:00	-3.68	278.06	0.646	179.55		
	06:00-07:00	-3.79	268.40	0.637	170.99	60.41	
	07:00-08:00	-3.86	262.31	0.365	95.82		
	08:00-09:00	-3.55	289.60	-0.415	-120.16		
	09:00-10:00	-3.29	312.92	-0.457	-142.85		
	10:00-11:00						
11:00-12:00							
Average		-3.14	327.18	0.146	41.89	41.89	
Flow rate (m ³ /day)		-	-	-	3,619,236	3,619,236	

Table 9.5.3.1 (42)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Noi river, Bang Sai, before joining with main river

Station No. : 10

(Water level is measured from point (0, 0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Average in 6 hrs.	
9th January 1993	09:00-10:00						
	10:00-11:00	-1.99	619.18	-0.272	-168.55		
	11:00-12:00	-1.90	634.53	-0.251	-159.18		
	12:00-13:00	-1.77	656.93	-0.239	-156.74	-132.76	
	13:00-14:00	-1.66	676.10	-0.237	-160.06		
	14:00-15:00	-1.61	684.88	-0.160	-109.64		
	15:00-16:00	-1.60	686.64	-0.062	-42.40		
	16:00-17:00	-1.65	677.85	0.186	126.19		
	17:00-18:00	-1.72	665.62	0.331	220.48		
	18:00-19:00	-1.77	656.93	0.364	238.82	166.95	
	19:00-20:00	-1.79	653.46	0.276	180.37		
	20:00-21:00	-1.81	650.01	0.244	158.77		
	21:00-22:00	-1.80	651.73	0.118	77.08		
	22:00-23:00	-1.82	648.28	0.119	76.97		
23:00-24:00	-1.87	639.67	0.356	227.88			
10th January 1993	24:00-01:00	-1.98	620.88	0.441	273.76	251.49	
	01:00-02:00	-2.10	600.60	0.505	303.17		
	02:00-03:00	-2.22	580.72	0.572	332.19		
	03:00-04:00	-2.35	559.96	0.527	294.94		
	04:00-05:00	-2.50	536.94	0.542	291.27		
	05:00-06:00	-2.63	517.58	0.411	212.67		
	06:00-07:00	-2.75	500.19	0.481	240.66	182.02	
	07:00-08:00	-2.84	487.45	0.618	301.08		
	08:00-09:00	-2.82	490.26	0.313	153.69		
	09:00-10:00	-2.45	544.53	-0.197	-107.23		
	10:00-11:00						
11:00-12:00							
Average		-2.06	610.04	0.208	116.93	116.93	
Flow rate (m ³ /day)		-	-	-	10,102,321	10,102,321	

Table 9.5.3.1 (43)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage Channel, Ang Thong

Station No. : 11

(Water level is measured from point (0, 0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Interpolated	
9th January 1993	09:00-10:00						
	10:00-11:00					0.43	
	11:00-12:00					0.50	
	12:00-13:00	-2.07	6.23	0.090	0.56	0.56	
	13:00-14:00					0.52	
	14:00-15:00					0.47	
	15:00-16:00					0.43	
	16:00-17:00					0.39	
	17:00-18:00					0.34	
	18:00-19:00	-2.09	5.95	0.050	0.30	0.30	
	19:00-20:00					0.29	
	20:00-21:00					0.28	
	21:00-22:00					0.27	
	22:00-23:00					0.26	
23:00-24:00					0.25		
10th January 1993	24:00-01:00	-2.06	6.37	0.037	0.24	0.24	
	01:00-02:00					0.23	
	02:00-03:00					0.22	
	03:00-04:00					0.21	
	04:00-05:00					0.20	
	05:00-06:00					0.19	
	06:00-07:00	-2.08	6.09	0.029	0.18	0.18	
	07:00-08:00					0.24	
	08:00-09:00					0.30	
	09:00-10:00					0.37	
	10:00-11:00						
11:00-12:00							
Average		-2.08	6.16	0.052	0.32	0.32	
Flow rate (m ³ /day)		-	-	-	27,424	27,424	

Table 9.5.3.1 (44)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage Channel, Ayutthaya connecting main river and Noi river

Station No. : 12

(Water level is measured from point (0, 0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Interpolated	
9th January 1993	09:00-10:00						
	10:00-11:00					-2.72	
	11:00-12:00					-10.93	
	12:00-13:00	-0.42	121.13	-0.158	-19.14	-19.14	
	13:00-14:00					-11.88	
	14:00-15:00					-4.61	
	15:00-16:00					2.65	
	16:00-17:00					9.91	
	17:00-18:00					17.17	
	18:00-19:00	-0.50	118.04	0.207	24.43	24.43	
	19:00-20:00					24.41	
	20:00-21:00					24.38	
	21:00-22:00					24.35	
	22:00-23:00					24.33	
23:00-24:00					24.30		
10th January 1993	24:00-01:00	-0.52	117.27	0.207	24.28	24.28	
	01:00-02:00					25.25	
	02:00-03:00					26.22	
	03:00-04:00					27.19	
	04:00-05:00					28.17	
	05:00-06:00					29.14	
	06:00-07:00	-1.27	91.25	0.330	30.11	30.11	
	07:00-08:00					21.90	
	08:00-09:00					13.70	
	09:00-10:00					5.49	
	10:00-11:00						
11:00-12:00							
Average		-0.68	111.92	0.147	14.92	14.92	
Flow rate (m ³ /day)		-	-	-	1,289,155	1,289,155	

Table 9.5.3.1 (45)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage Channel, Ayutthaya, flowing to Pasak river

Station No. : 13

(Water level is measured from point (0, 0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Interpolated	
9th January 1993	09:00-10:00						
	10:00-11:00					0.16	
	11:00-12:00					0.16	
	12:00-13:00	-3.01	2.65	0.062	0.16	0.16	
	13:00-14:00					0.18	
	14:00-15:00					0.19	
	15:00-16:00					0.21	
	16:00-17:00					0.22	
	17:00-18:00					0.23	
	18:00-19:00	-3.08	2.25	0.110	0.25	0.25	
	19:00-20:00					0.24	
	20:00-21:00					0.24	
	21:00-22:00					0.23	
	22:00-23:00					0.23	
23:00-24:00					0.22		
10th January 1993	24:00-01:00	-3.31	1.08	0.199	0.22	0.22	
	01:00-02:00					0.20	
	02:00-03:00					0.19	
	03:00-04:00					0.18	
	04:00-05:00					0.17	
	05:00-06:00					0.16	
	06:00-07:00	-3.31	1.08	0.140	0.15	0.15	
	07:00-08:00					0.15	
	08:00-09:00					0.16	
	09:00-10:00					0.16	
	10:00-11:00						
11:00-12:00							
Average		-3.18	1.77	0.128	0.19	0.19	
Flow rate (m ³ /day)		-	-	-	16.829	16.829	

Table 9.5.3.1 (46)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage Channel, Pathum Thani, flowing to main river

Station No. : 14

(Water level is measured from point (0, 0) of the
coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Interpolated	
9th January 1993	09:00-10:00						
	10:00-11:00					0.00	
	11:00-12:00					0.00	
	12:00-13:00	-0.93	20.76	0.000	0.00	0.00	
	13:00-14:00					0.00	
	14:00-15:00					0.00	
	15:00-16:00					0.00	
	16:00-17:00					0.00	
	17:00-18:00					0.00	
	18:00-19:00	-1.18	15.75	0.000	0.00	0.00	
	19:00-20:00					0.00	
	20:00-21:00					0.00	
	21:00-22:00					0.00	
	22:00-23:00					0.00	
23:00-24:00					0.00		
10th January 1993	24:00-01:00	-1.72	6.70	0.000	0.00	0.00	
	01:00-02:00					0.00	
	02:00-03:00					0.00	
	03:00-04:00					0.00	
	04:00-05:00					0.00	
	05:00-06:00					0.00	
	06:00-07:00	-2.04	3.12	0.000	0.00	0.00	
	07:00-08:00					0.00	
	08:00-09:00					0.00	
	09:00-10:00					0.00	
	10:00-11:00						
	11:00-12:00						
Average		-1.47	11.58	0.000	0.00	0.00	
Flow rate (m ³ /day)		-	-	-	0	0	

Table 9.5.3.1 (47)

Result of the Measurement in Chao Phraya River and Its Tributaries

Location : Drainage Channel, Nonthaburi, flowing to main river

Station No. : 15

(Water level is measured from point (0, 0) of the coordinate system in the cross sectional survey)

Date	Time	Water Level (m)	Cross Sectional Area (m ²)	Average Velocity (m/s)	Flow Rate (m ³ /s)		Remarks
					Measured	Interpolated	
9th January 1993	09:00-10:00						
	10:00-11:00					0.36	
	11:00-12:00					0.57	
	12:00-13:00	-1.93	3.28	0.239	0.78	0.78	
	13:00-14:00					0.68	
	14:00-15:00					0.58	
	15:00-16:00					0.48	
	16:00-17:00					0.38	
	17:00-18:00					0.28	
	18:00-19:00	-2.00	3.11	0.059	0.18	0.18	
	19:00-20:00					0.18	
	20:00-21:00					0.17	
	21:00-22:00					0.17	
	22:00-23:00					0.16	
23:00-24:00					0.16		
10th January 1993	24:00-01:00	-3.00	0.71	0.215	0.15	0.15	
	01:00-02:00					0.05	
	02:00-03:00					-0.06	
	03:00-04:00					-0.16	
	04:00-05:00					-0.27	
	05:00-06:00					-0.37	
	06:00-07:00	-2.24	2.54	-0.187	-0.47	-0.47	
	07:00-08:00					-0.26	
	08:00-09:00					-0.05	
	09:00-10:00					0.15	
	10:00-11:00						
11:00-12:00							
Average		-2.29	2.41	0.082	0.16	0.16	
Flow rate (m ³ /day)		-	-	-	13.976	13.976	