

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

LAO, PEOPLE'S DEMOCRATIC, REPUBLIC

MINISTRY OF AGRICULTURE AND FORESTRY

No. 1

**BASIC DESIGN STUDY REPORT**  
**ON**  
**THE INTEGRATED AGRICULTURAL RURAL**  
**DEVELOPMENT PROJECT**  
**IN**  
**SAVANNAKHET PROVINCE**

**DRAWINGS**

**SEPTEMBER 1993**

**KOKUSAI KOGYO CO., LTD.**

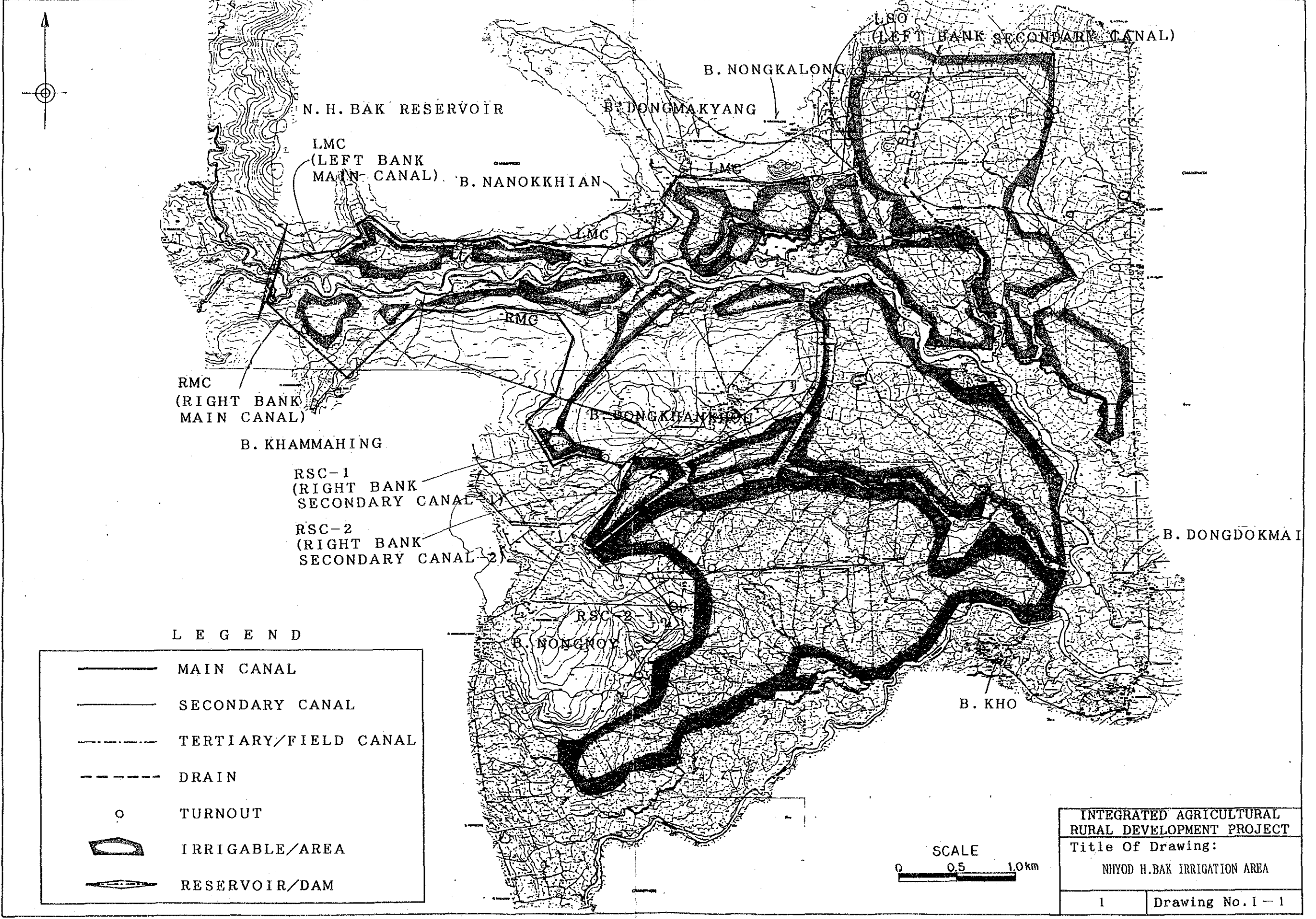
<b>G R F</b>
<b>C R (2)</b>
<b>93-162</b>

BASIC DESIGN DRAWING LIST



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6 3	R-27	BRIDGE PLAN & CROSS SECTION (ROUTE C STATION NO.2+038)
6 4	R-28	BRIDGE AS-BUILT DRAWING (ROUTE C STATION NO.6+600)(1/3)
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N. H. BAK RESERVOIR

B. NONGKALONG

B. DONGMAKYANG

LSO  
(LEFT BANK SECONDARY CANAL)

LMC  
(LEFT BANK  
MAIN CANAL)

B. NANOKKHIAN

LMC

LMC

RMC

RMC  
(RIGHT BANK  
MAIN CANAL)

B. BONGKHAYEON

B. KHAMMAHING

RSC-1  
(RIGHT BANK  
SECONDARY CANAL-1)

RSC-2  
(RIGHT BANK  
SECONDARY CANAL-2)

B. DONGDOKMAI

L E G E N D

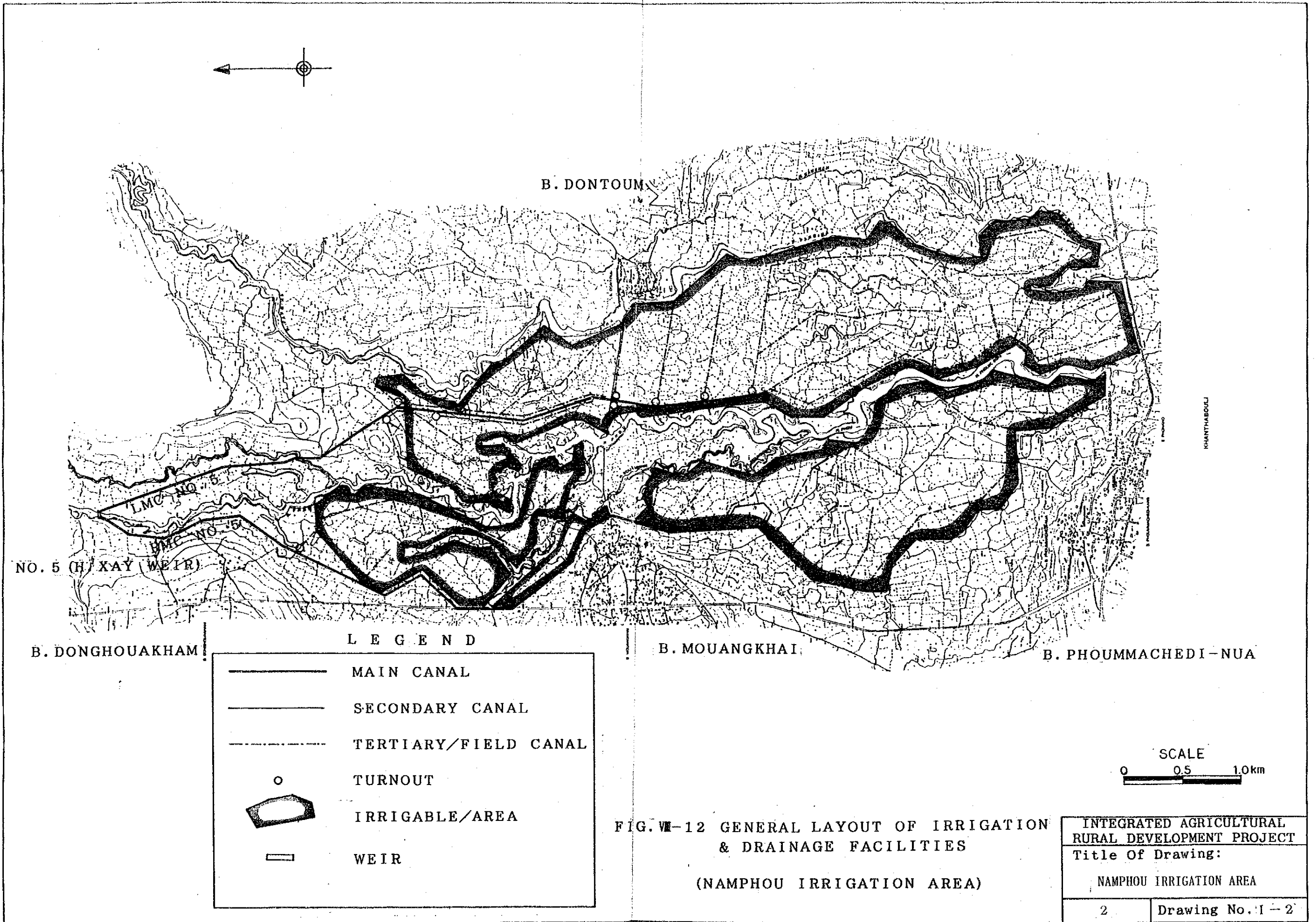
	MAIN CANAL
	SECONDARY CANAL
	TERTIARY/FIELD CANAL
	DRAIN
	TURNOUT
	IRRIGABLE/AREA
	RESERVOIR/DAM

B. NONGMOY

B. KHO

SCALE  
0 0.5 1.0km

INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: NYOD H.BAK IRRIGATION AREA	
1	Drawing No. 1-1



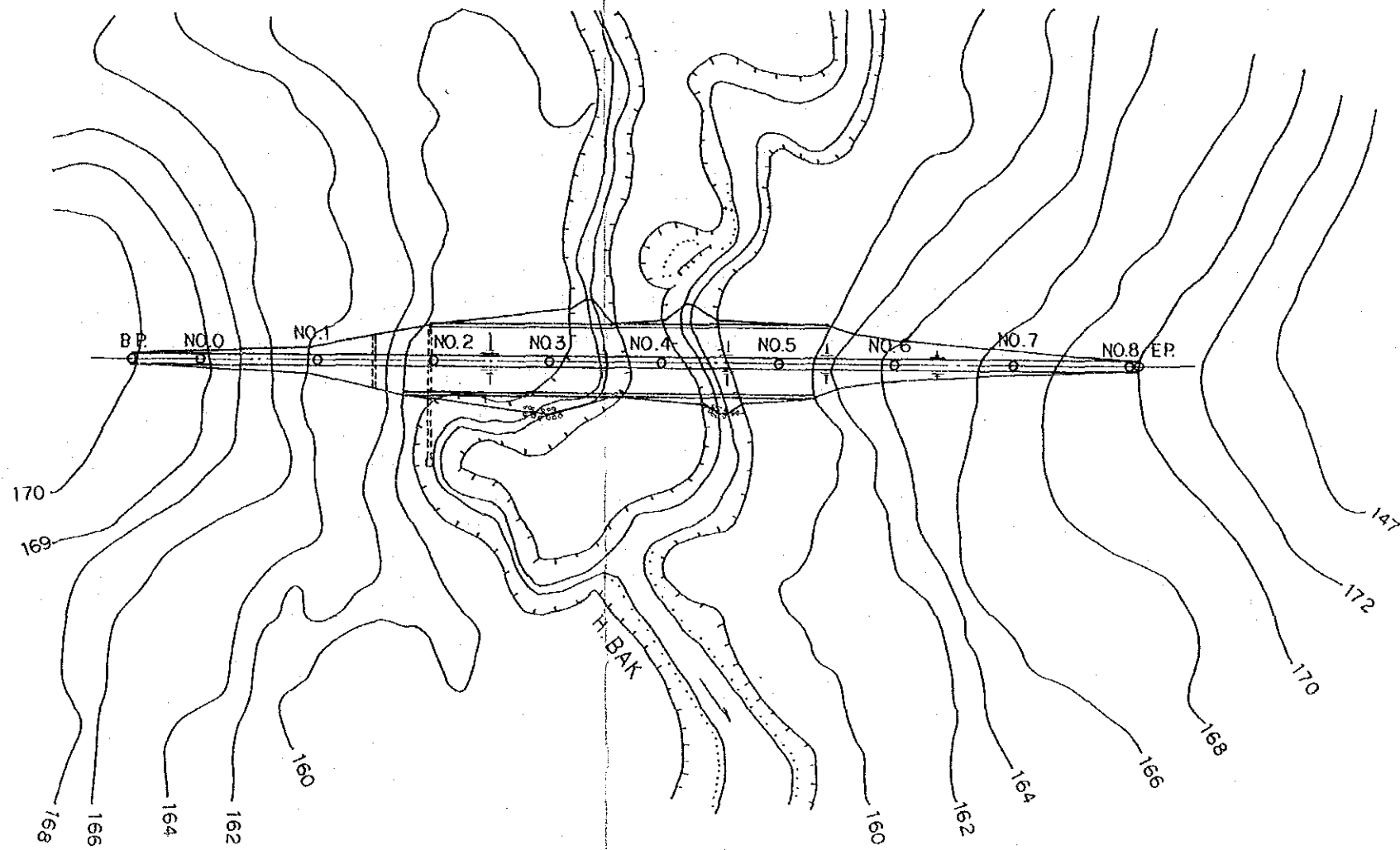
L E G E N D

	MAIN CANAL
	SECONDARY CANAL
	TERTIARY/FIELD CANAL
	TURNOUT
	IRRIGABLE/AREA
	WEIR

FIG. VII-12 GENERAL LAYOUT OF IRRIGATION & DRAINAGE FACILITIES  
(NAMPHOU IRRIGATION AREA)

INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing:	
NAMPHOU IRRIGATION AREA	
2	Drawing No. 1-2

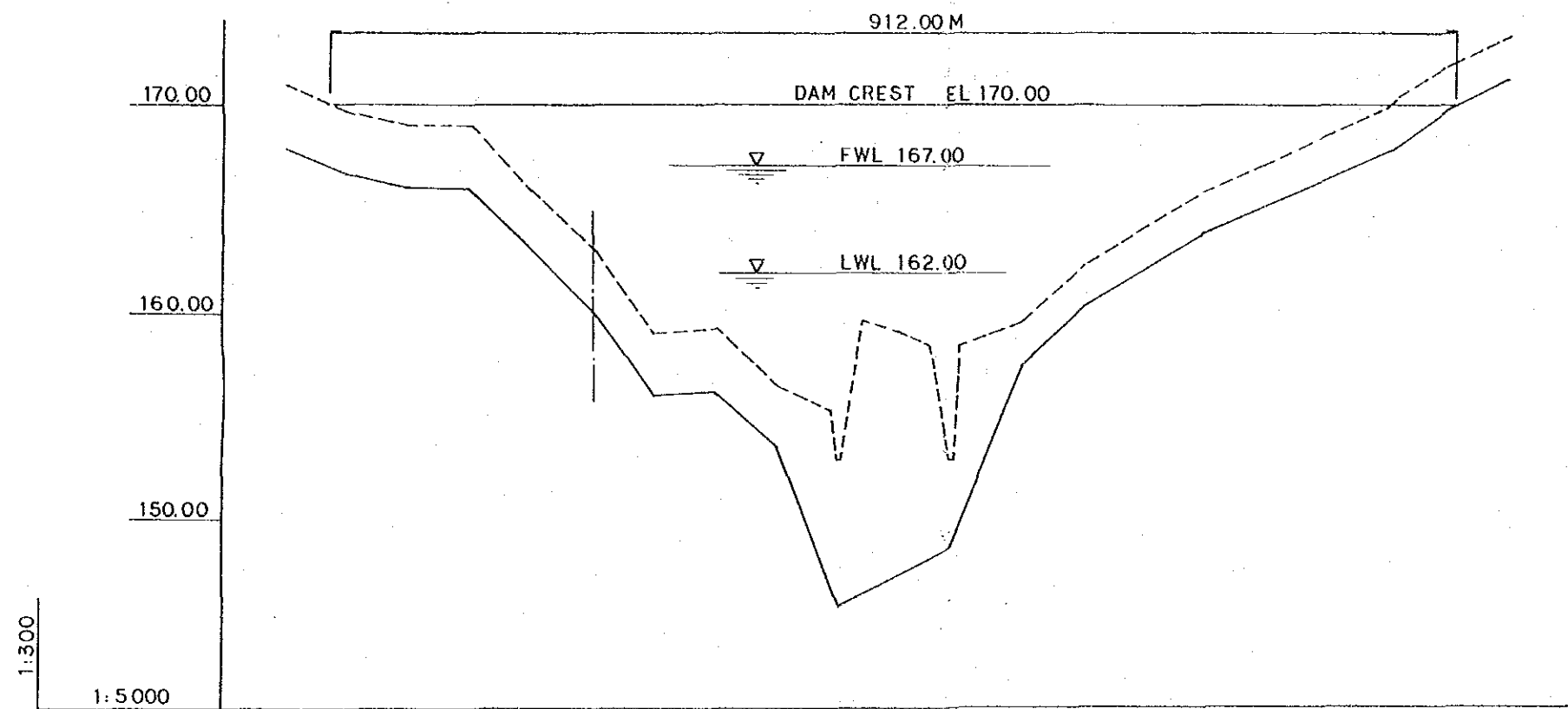
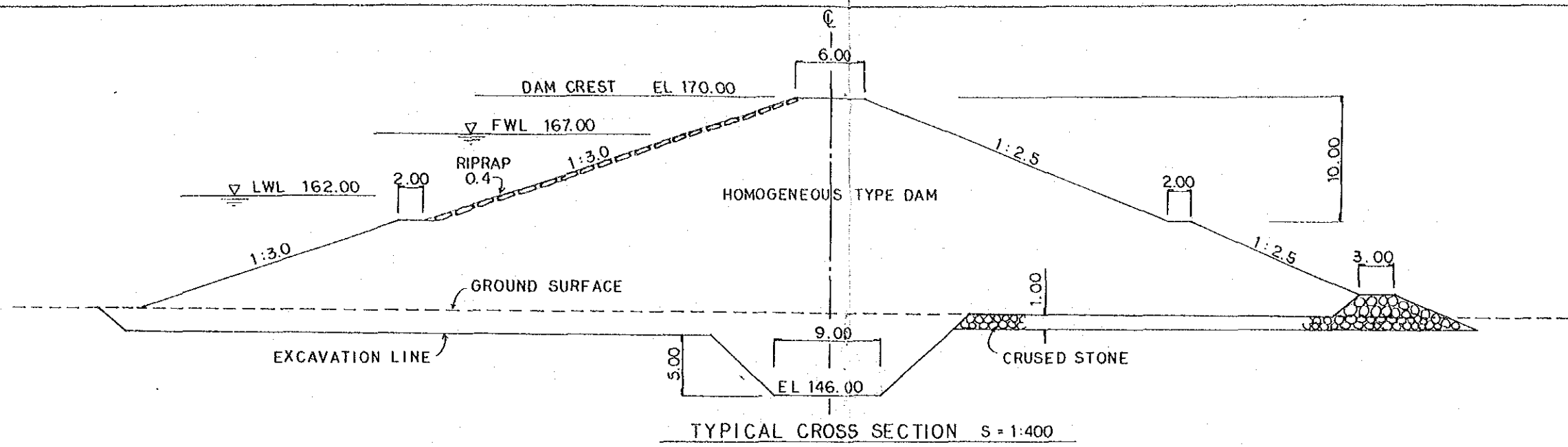
SCALE  
0 0.5 1.0km



RESERVOIR PLAN S = 1:5000

0 100 200 300M

INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: NHYOD H.BAK RESERVOIR (PLAN)	
3	Drawing No.: I - 3



GROUND ELEVATION	170.95	170.00	169.70	169.10	169.08	166.00	163.08	159.10	159.26	156.36	155.27	153.00	159.64	159.16	156.85	153.80	159.50	162.34	164.17	165.81	167.16	166.68	169.97	170.00	171.78	173.14
ACCUMULATE DISTANCE		0	12	62	112	162	212	262	312	362	412	462	512	562	612	662	712	762	812	862	863	863	863	863	863	863
DISTANCE	0	38	12	50	50	50	50	50	50	50	42.5	7.5	20.0	30.0	41.7	8.5	50	50	50	50	50	50	50	1	49	50
STATION	100	BP	50	NO.0	NO.1	NO.2	NO.3	NO.3	NO.4	NO.4	NO.4	NO.4	NO.4	NO.4	NO.4	NO.4	NO.5	NO.5	NO.6	NO.6	NO.7	NO.7	NO.8	EP	NO.9	NO.9

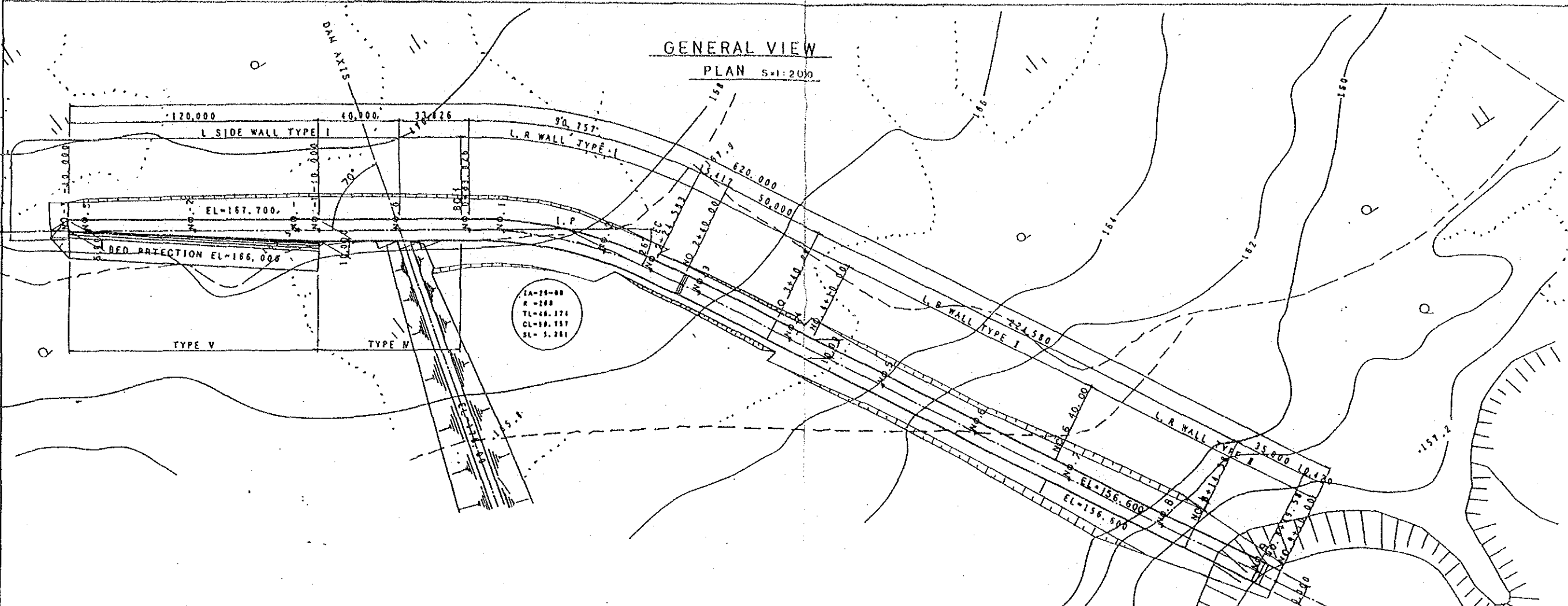
INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT

Title Of Drawing:  
NHYOD H.BAK RESERVOIR  
(LONGITUDINAL SECTION)

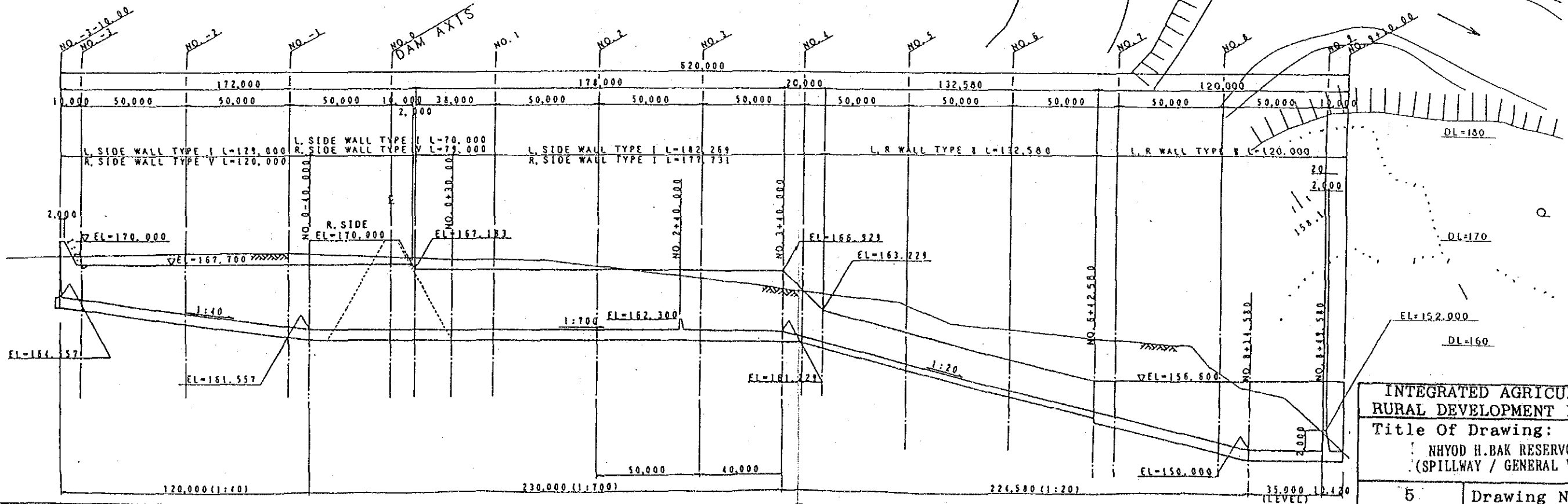
4      Drawing No. I-4

GENERAL VIEW

PLAN S=1:2000



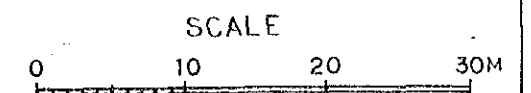
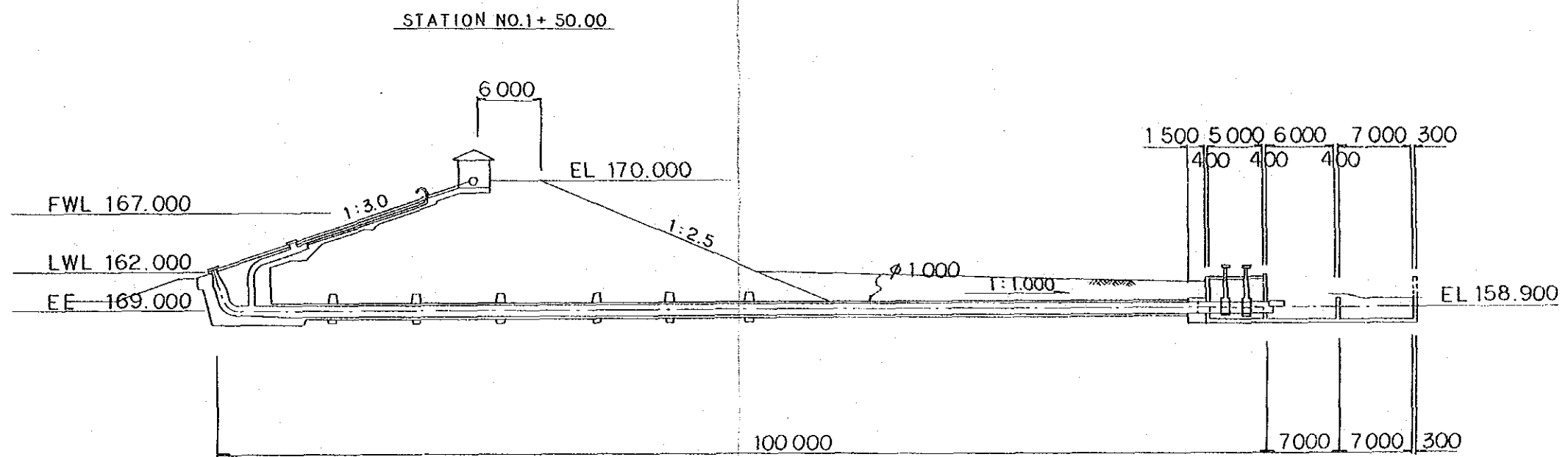
PROFILE V:1:400  
H:1:2000



INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
NHYOD H.BAK RESERVOIR  
(SPILLWAY / GENERAL VIEW)

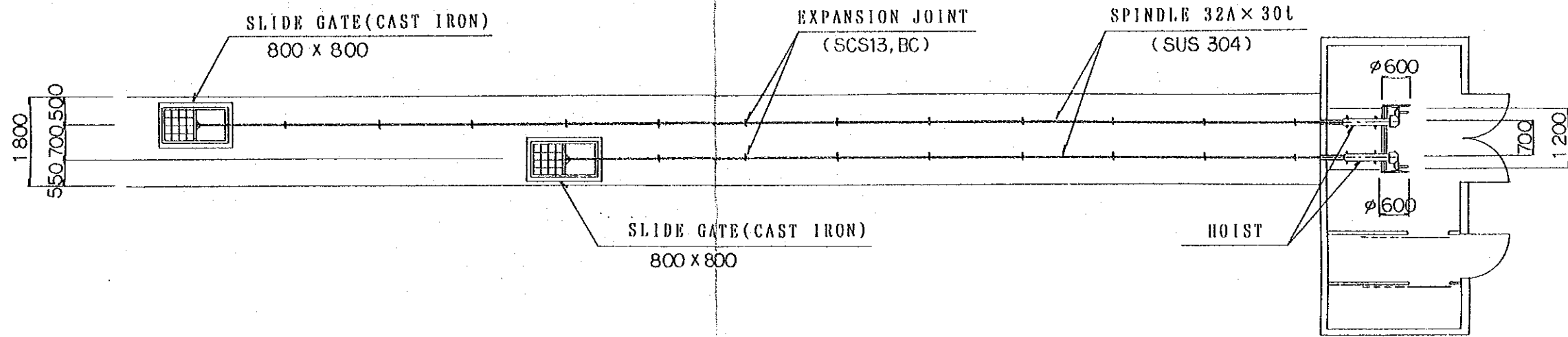
5 Drawing No. I-5



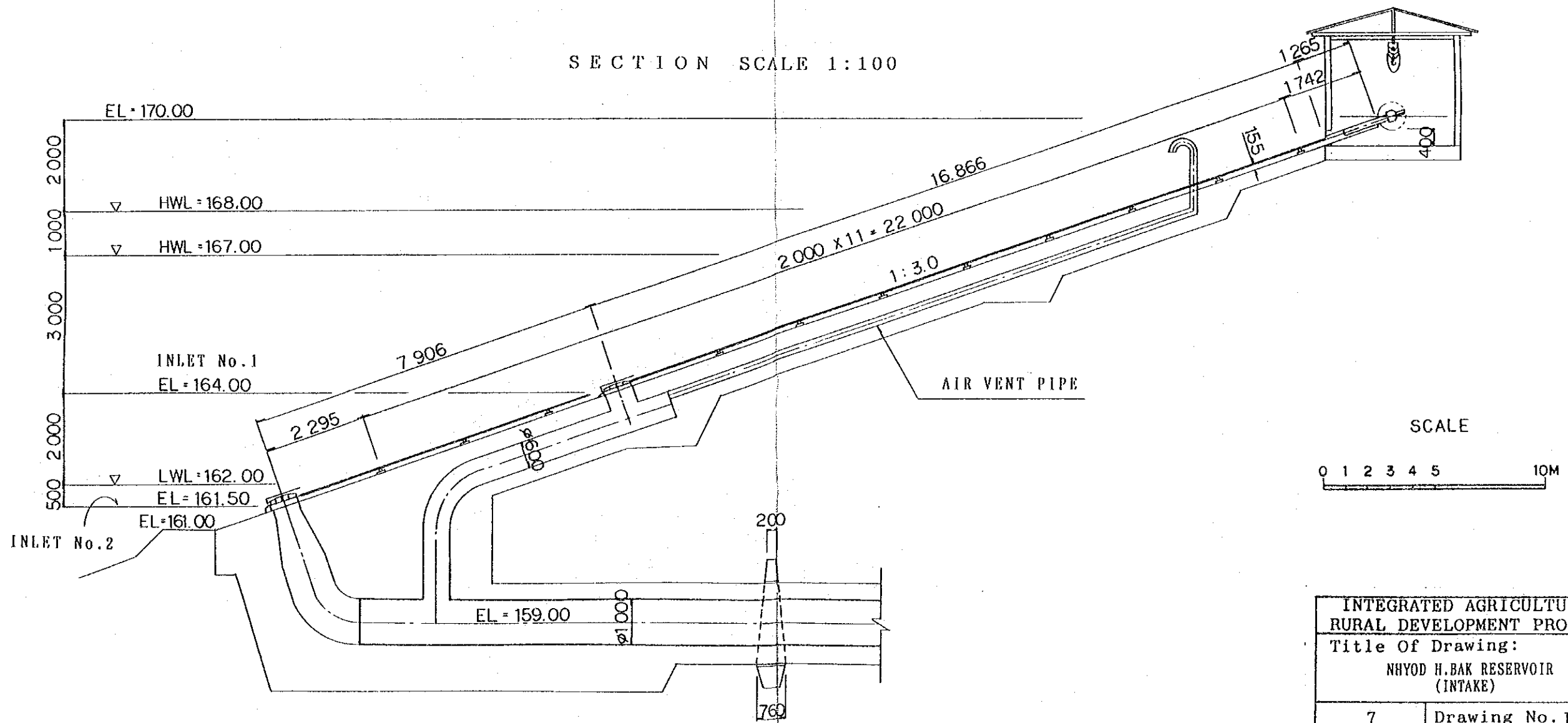


INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: NHYOD H. BAK RESERVOIR (PROFILE OF INTAKE)	
6	Drawing No. I - 6

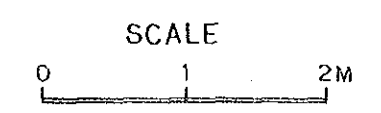
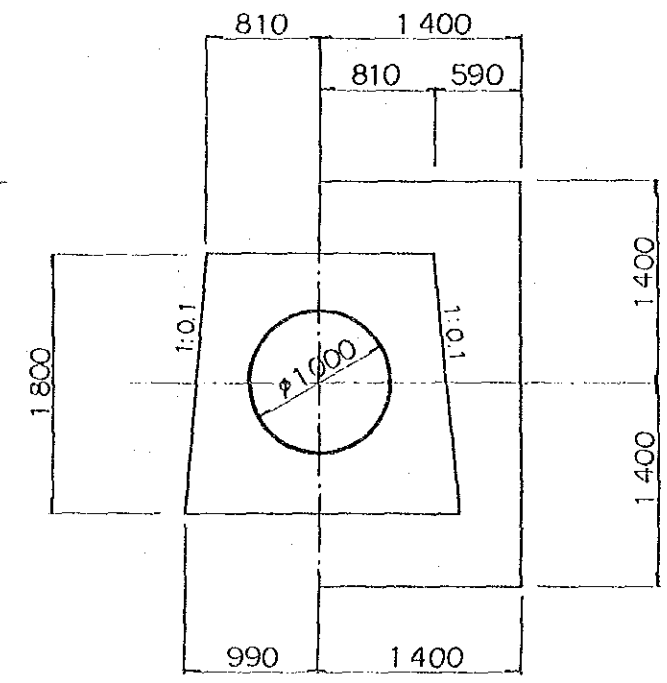
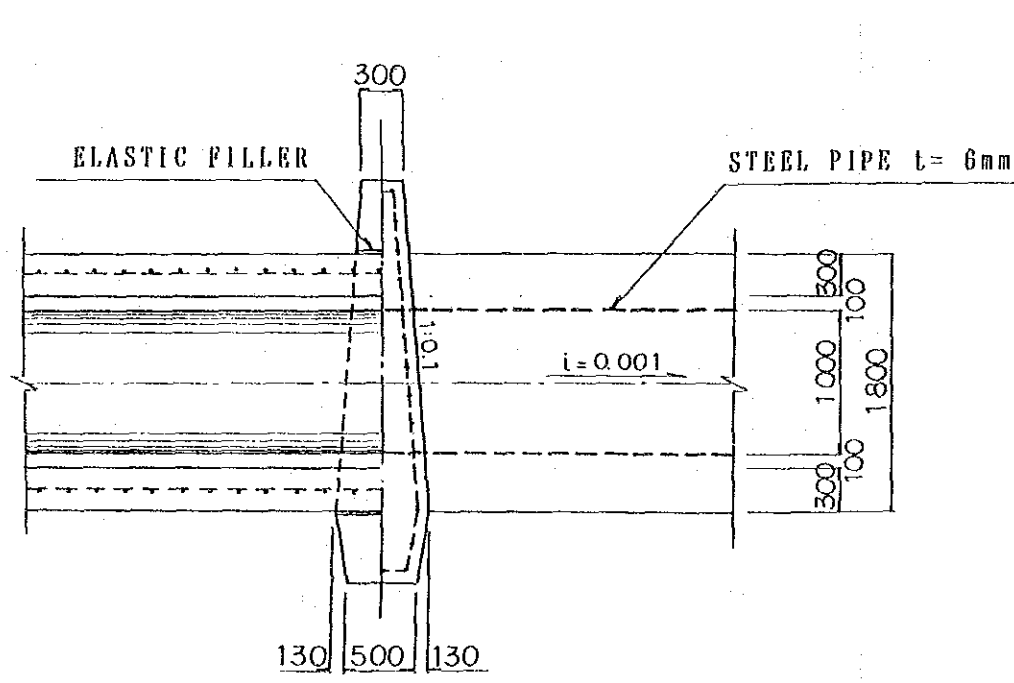
PLAN SCALE 1:100



SECTION SCALE 1:100

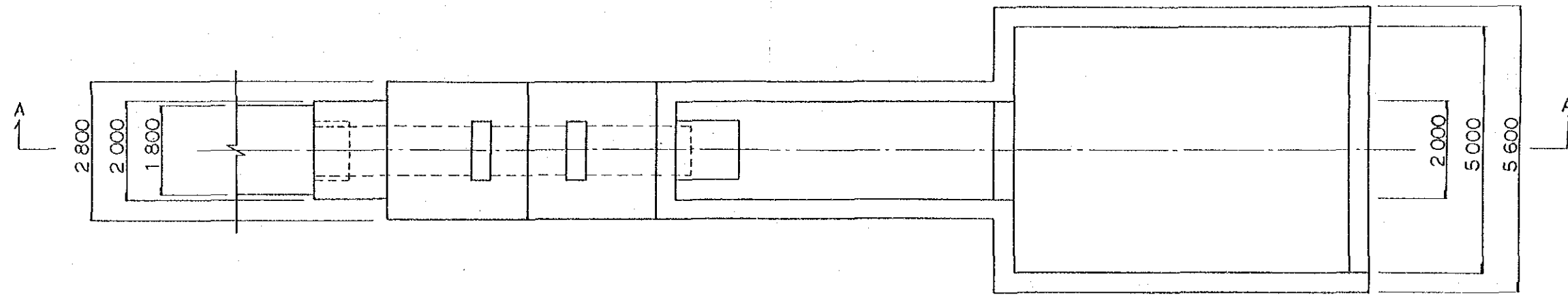


INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: NHOD H.BAK RESERVOIR (INTAKE)	
7	Drawing No. I-7

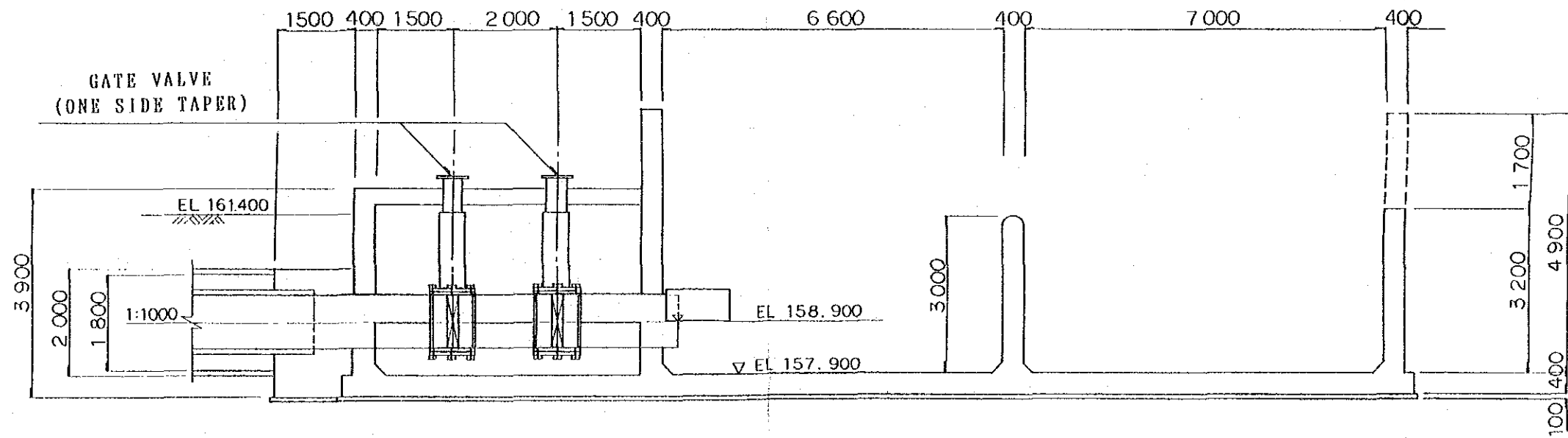


INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: NHYOD H.BAK RESERVOIR (CUT-OFF WALL)	
8	Drawing No. 1-8

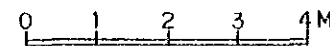
PLAN



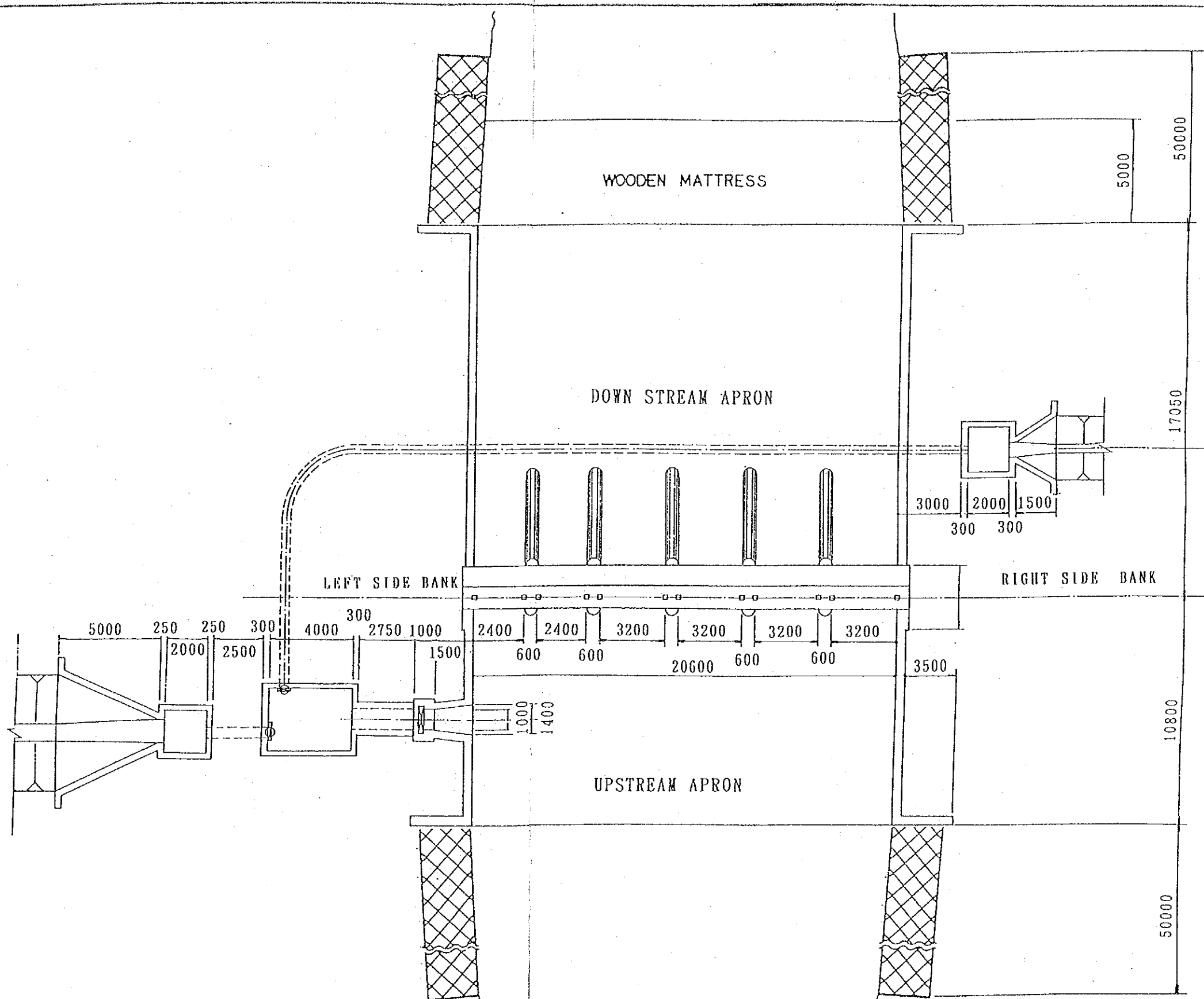
SECTION A-A



SCALE

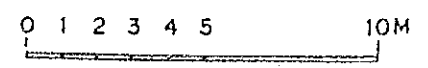


INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: NHYOD H.BAK RESERVOIR (SURGE VALVE)	
9	Drawing No. I-9



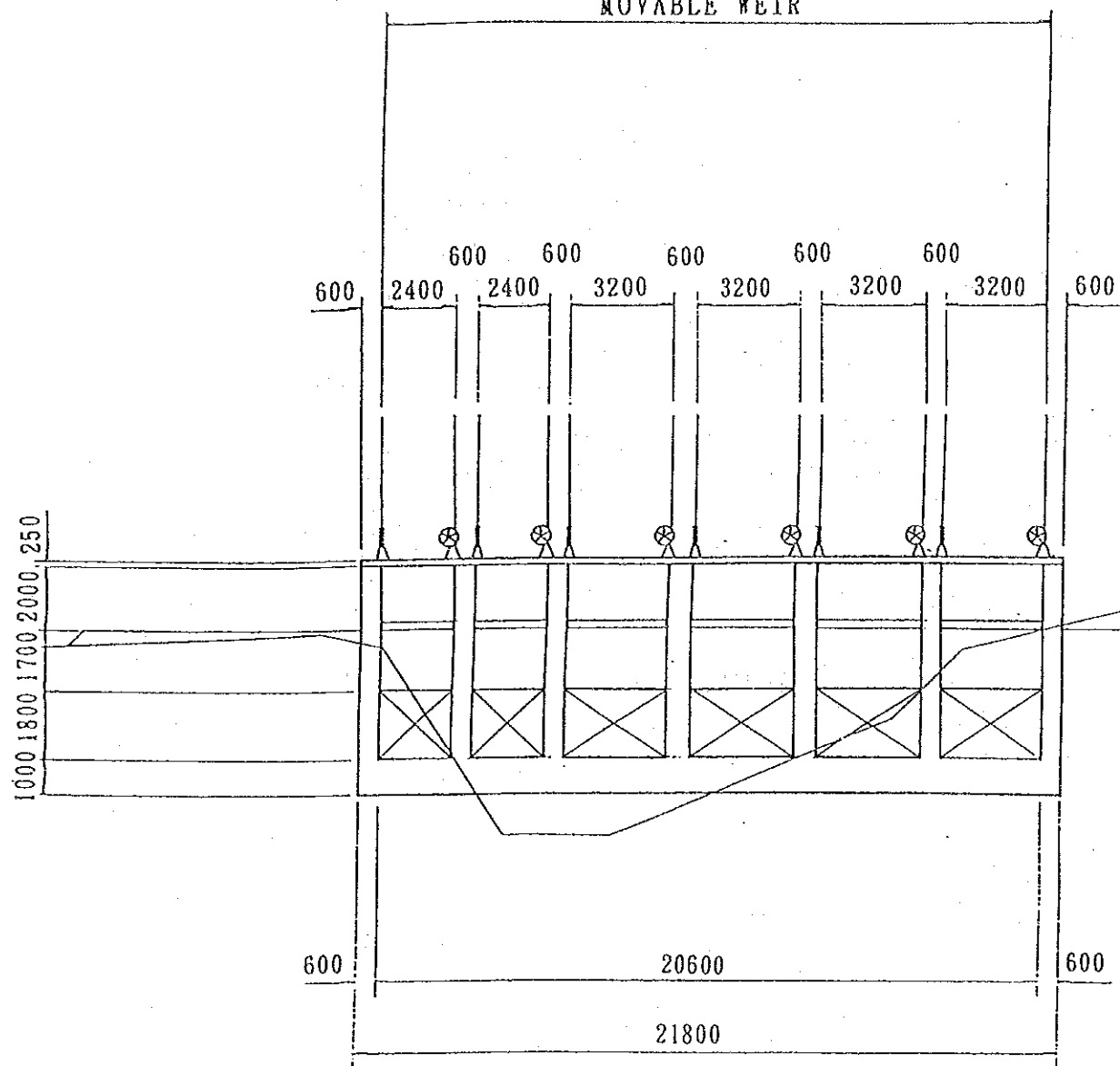
P L A N

SCALE



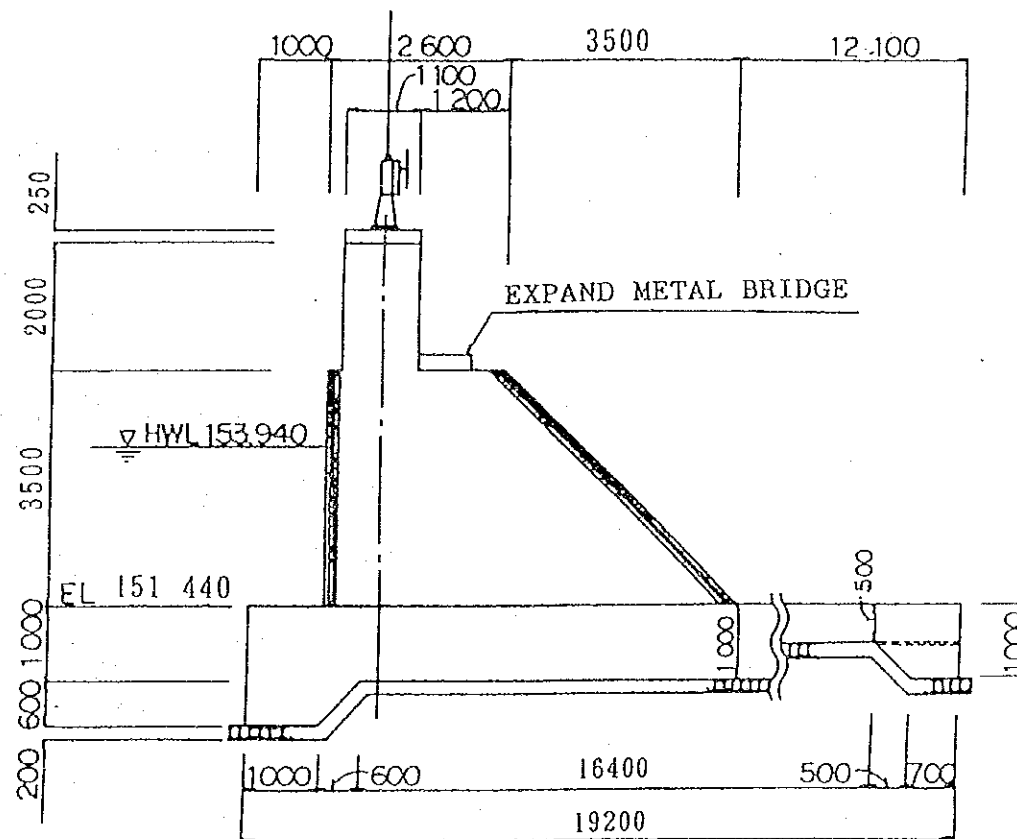
INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: NAMPHOU IRRIGATION (H.XAY WEIR, PLAN)(1/4)	
10	Drawing No. I-10

MOVABLE WEIR



PROFILE

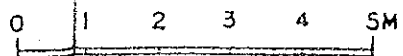
SCALE - B



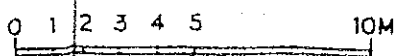
GATED WEIR SECTION

SCALE - A

SCALE - A

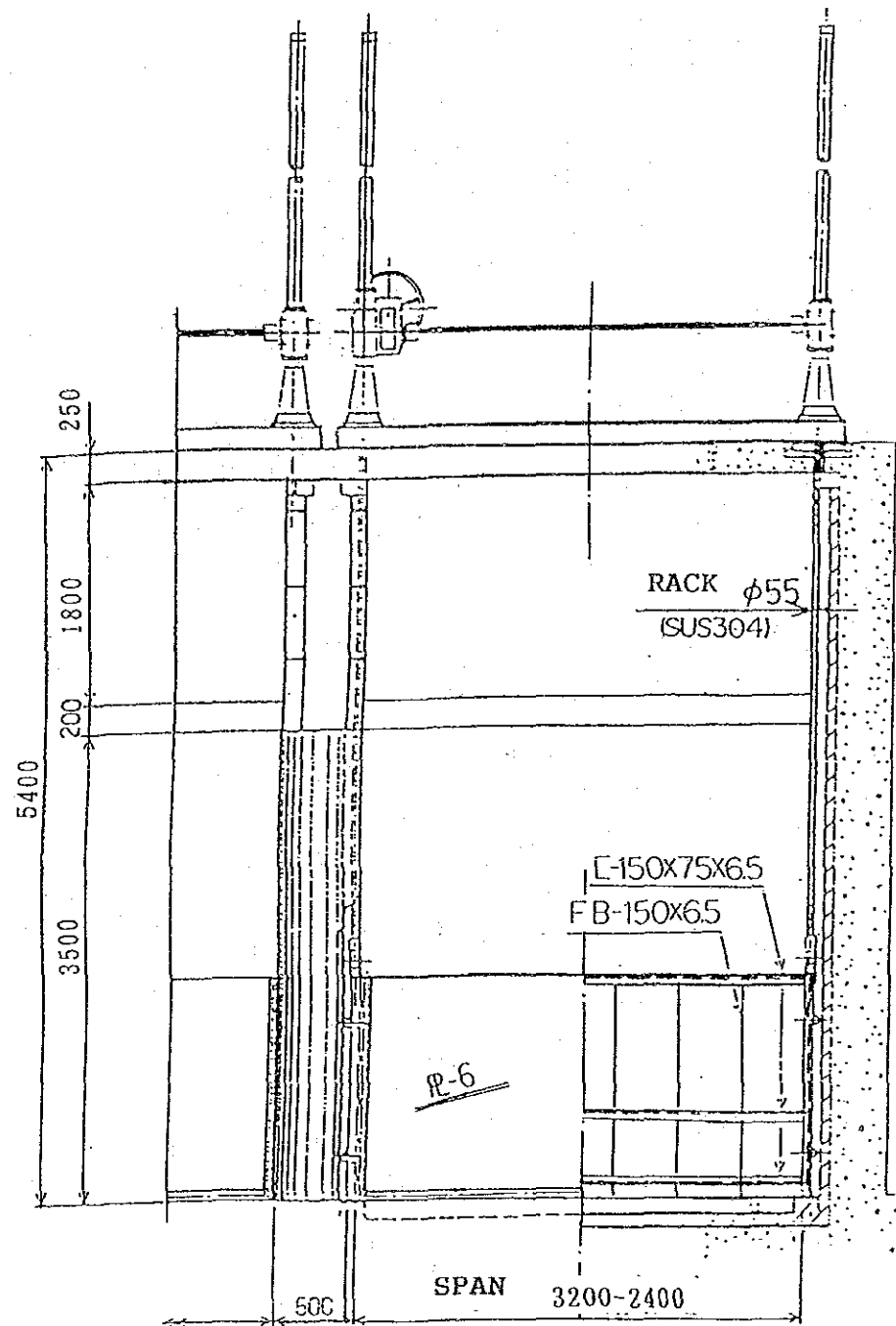


SCALE - B

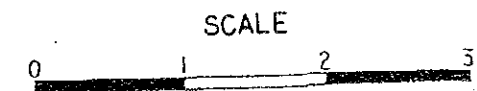
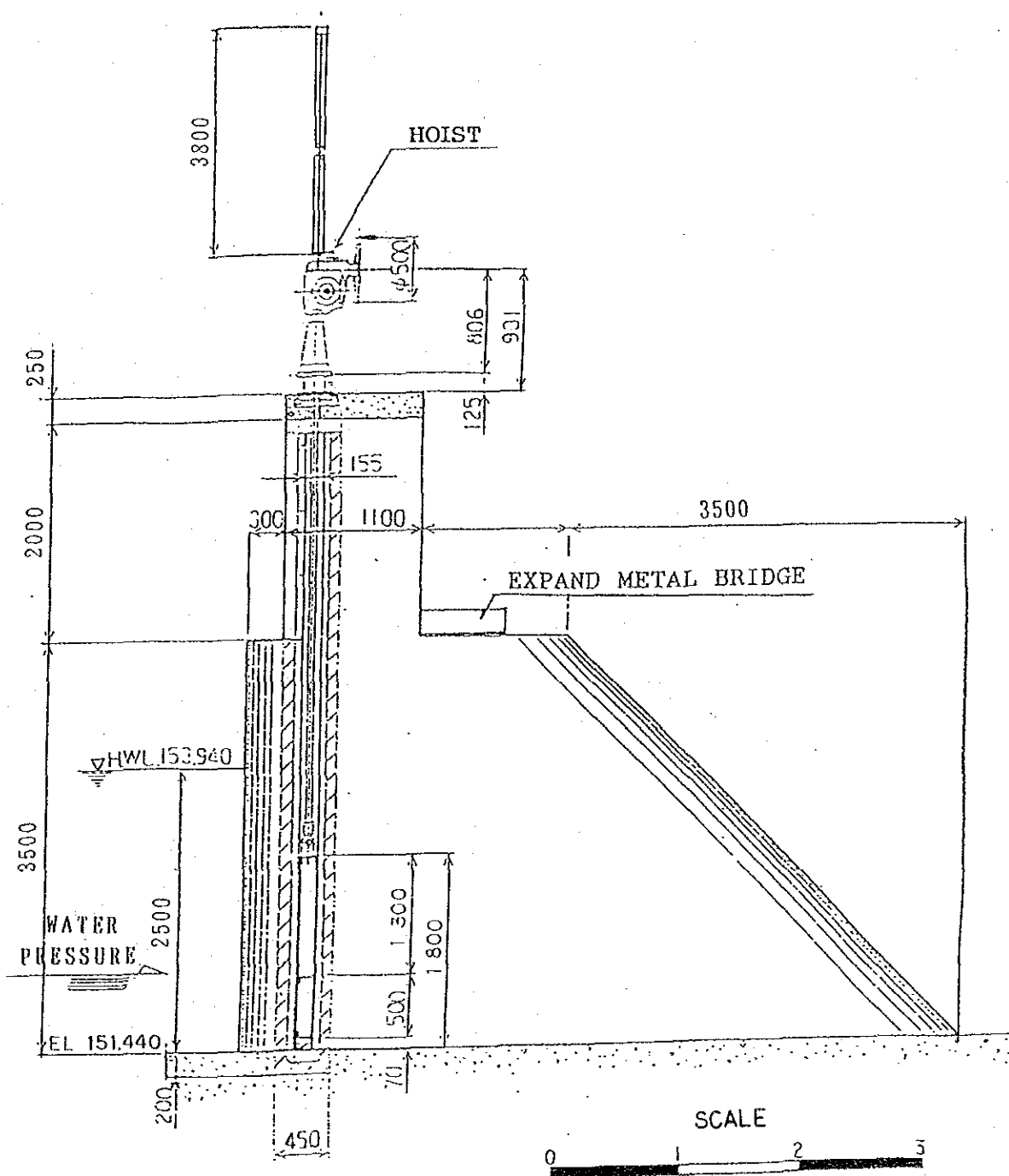


INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: NAMPHOU IRRIGATION (H.XAY WEIR, PROFILE, SECTION)(2/4)	
11	Drawing No. I-11

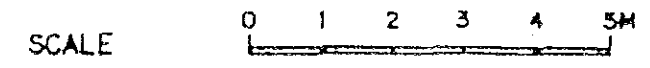
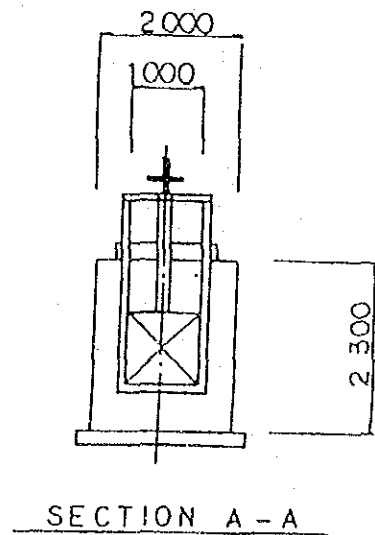
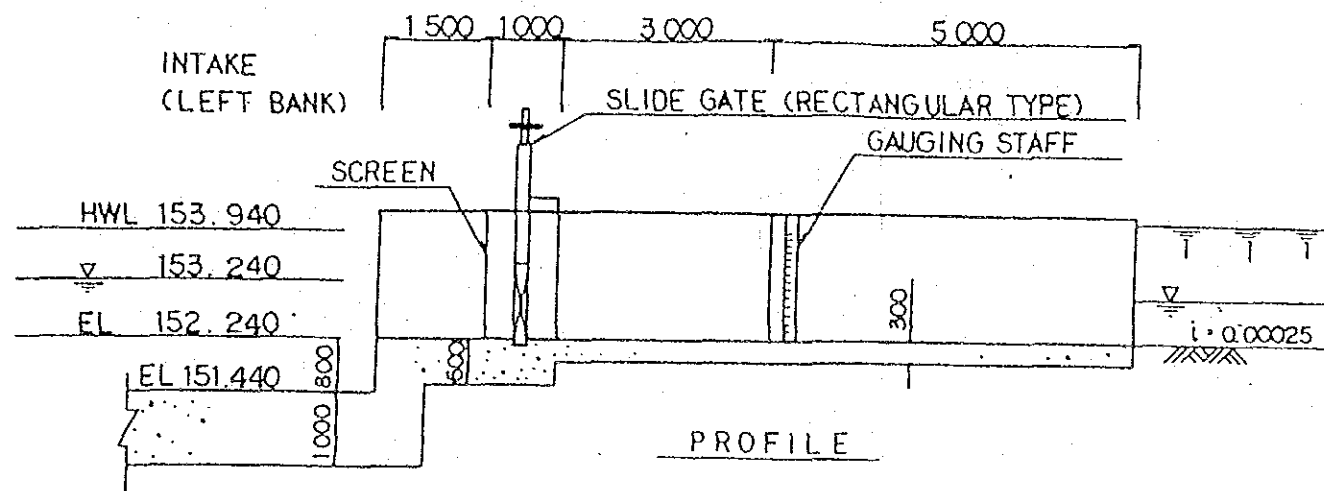
PROFILE



SECTION



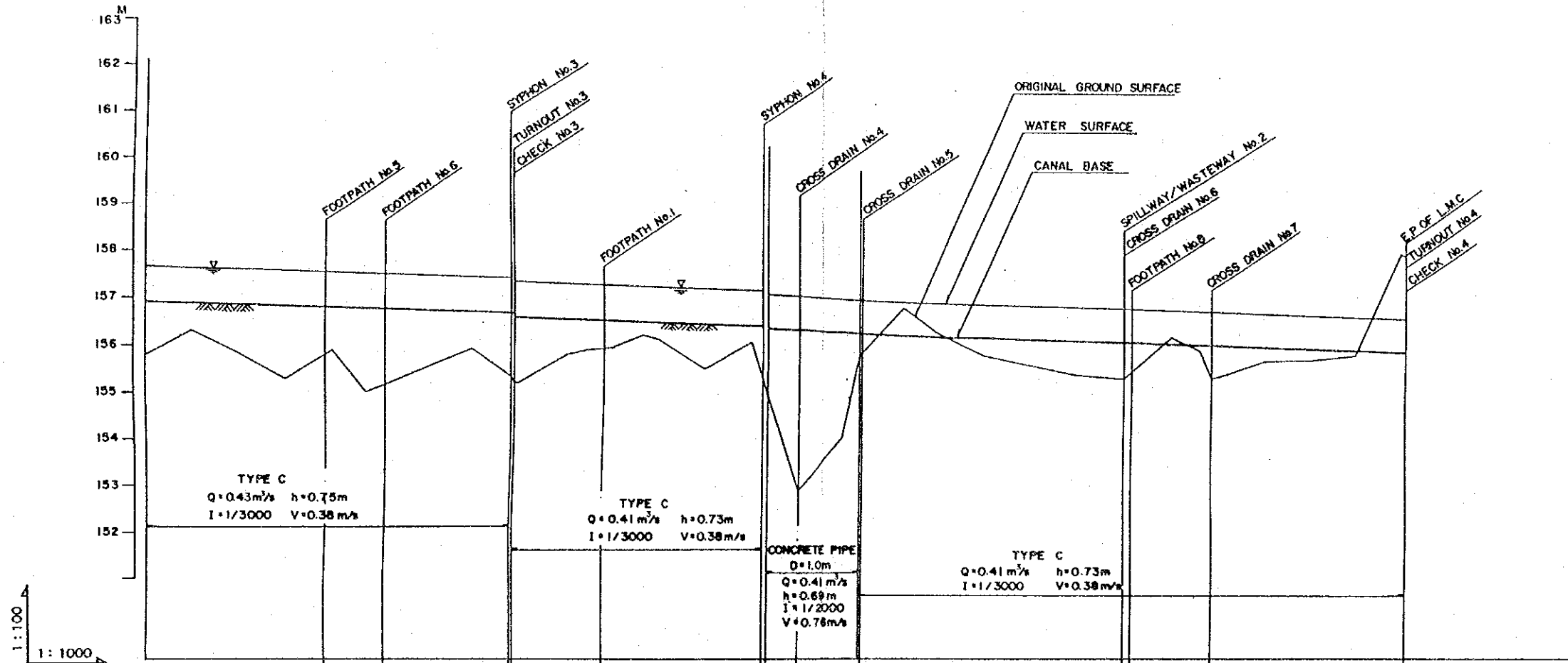
INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: NAMPHOU IRRIGATION (H.XAY WEIR, GATE)(3/4)	
12	Drawing No. I-12



INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: NAMPHOU IRRIGATION (H.XAY WEIR, INTAKE)(4/4)	
13	Drawing No. I-13

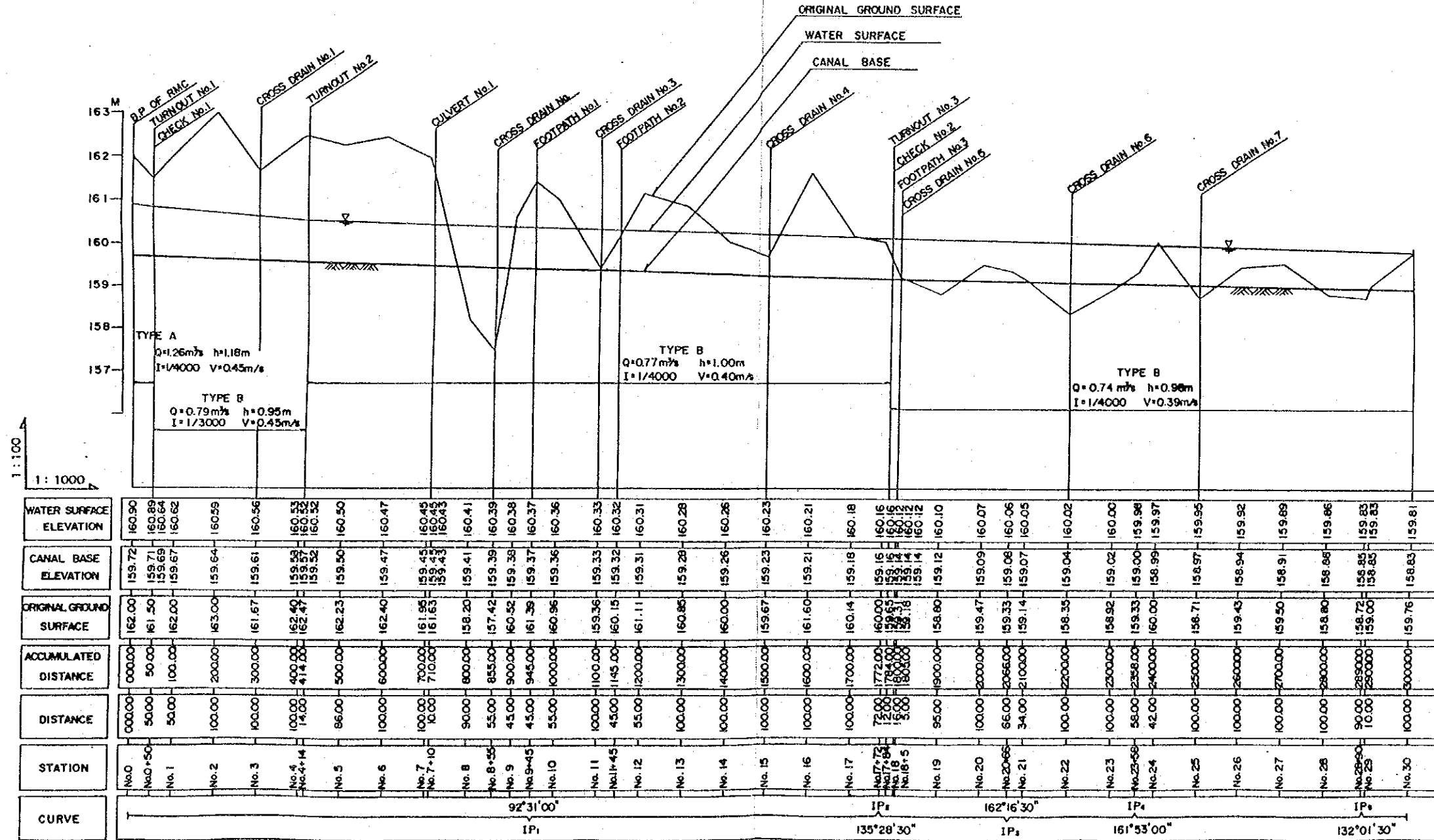






STATION	DISTANCE	ACCUMULATED DISTANCE	ORIGINAL GROUND SURFACE	CANAL BASE ELEVATION	WATER SURFACE ELEVATION
No. 30	100.00	0.00000	153.76	156.91	157.66
No. 31	100.00	100.00000	156.29	156.88	157.63
No. 32	100.00	200.00000	155.82	156.85	157.60
No. 33	100.00	300.00000	155.27	156.81	157.56
No. 33+04	84.00	384.00000	155.76	156.79	157.54
No. 34	16.00	340.00000	156.88	156.78	157.53
No. 34+68	68.00	348.00000	155.00	156.76	157.51
No. 35	32.00	380.00000	155.11	156.75	157.50
No. 35+10	10.00	350.00000	155.18	156.74	157.49
No. 36	90.00	360.00000	155.50	156.71	157.46
No. 37	100.00	370.00000	155.92	156.67	157.42
No. 37+84	84.00	378.00000	155.78	156.65	157.40
No. 37+93	9.00	379.00000	155.78	156.64	157.39
No. 38	7.00	386.00000	155.19	156.63	157.38
No. 39	100.00	390.00000	155.79	156.52	157.27
No. 39+45	45.00	394.50000	155.80	156.51	157.26
No. 39+81	36.00	398.10000	155.90	156.49	157.24
No. 40	19.00	400.00000	155.92	156.48	157.23
No. 40+70	70.00	407.00000	156.15	156.46	157.19
No. 41	30.00	410.00000	156.08	156.45	157.18
No. 42	100.00	420.00000	155.45	156.41	157.14
No. 43	100.00	430.00000	156.00	156.38	157.11
No. 43+24	24.00	432.40000	155.23	156.37	157.10
No. 43+48	70.00	434.00000	154.85	156.29	156.98
No. 44	66.00	440.00000	152.85	156.26	156.94
No. 45	100.00	460.00000	154.00	156.21	156.90
No. 45+35	35.00	435.00000	153.73	156.19	156.88
No. 45+60	3.00	436.00000	153.75	156.18	156.87
No. 46	60.00	460.00000	156.44	156.15	156.86
No. 47	100.00	470.00000	156.22	156.09	156.82
No. 48	100.00	480.00000	155.74	156.06	156.79
No. 48	100.00	490.00000	155.52	156.02	156.75
No. 50	100.00	500.00000	155.30	155.99	156.72
No. 51	100.00	510.00000	155.22	155.96	156.69
No. 51+14	14.00	514.00000	155.37	155.95	156.68
No. 52	86.00	500.00000	156.10	155.92	156.65
No. 52+50	50.00	505.00000	155.87	155.91	156.64
No. 52+68	21.00	506.00000	155.79	155.90	156.63
No. 53	15.00	530.00000	156.28	155.89	156.62
No. 54	100.00	540.00000	155.81	155.86	156.59
No. 55	100.00	560.00000	156.63	155.82	156.56
No. 56	100.00	560.00000	155.73	155.79	156.52
No. 57	100.00	570.00000	157.67	155.76	156.49
No. 57+5	5.00	570.00000	157.60	155.76	156.49

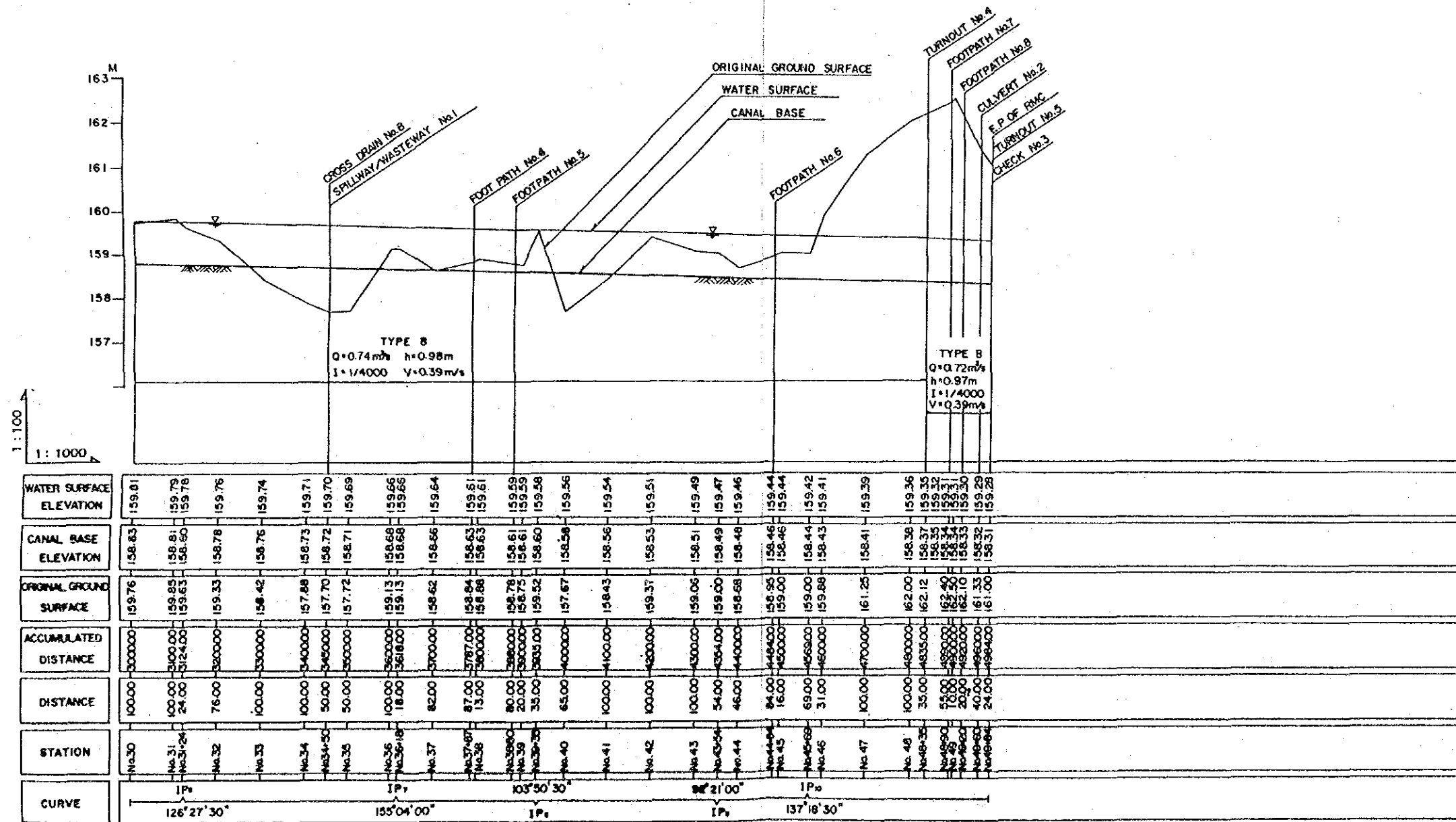
INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT  
 Title Of Drawing:  
 NHYOD H.BAK IRRIGATION,  
 PROFILE OF MAIN CANAL, LMC(2/2)  
 15 Drawing No. I-15



STATION	DISTANCE	ACCUMULATED DISTANCE	ORIGINAL GROUND SURFACE	CANAL BASE ELEVATION	WATER SURFACE ELEVATION
No.0	000.00	000.00	162.00	159.72	160.90
No.0+50	50.00	50.00	161.50	159.71	160.89
No.1	50.00	100.00	162.00	159.69	160.84
No.2	100.00	200.00	163.00	159.64	160.62
No.3	100.00	300.00	161.67	159.61	160.56
No.4	14.00	400.00	162.40	159.53	160.53
No.4+14	14.00	414.00	162.47	159.52	160.52
No.5	86.00	500.00	162.23	159.50	160.50
No.6	100.00	600.00	162.40	159.47	160.47
No.7	100.00	700.00	161.95	159.45	160.43
No.7+10	10.00	710.00	161.63	159.43	160.43
No.8	90.00	800.00	158.20	159.41	160.41
No.8+55	55.00	855.00	157.42	159.39	160.39
No.9	45.00	900.00	160.52	159.38	160.38
No.9+45	45.00	945.00	161.38	159.37	160.37
No.10	55.00	1000.00	160.96	159.36	160.36
No.11	100.00	1100.00	159.36	159.33	160.33
No.11+45	45.00	1145.00	160.15	159.32	160.32
No.12	55.00	1200.00	161.11	159.31	160.31
No.13	100.00	1300.00	160.85	159.28	160.28
No.14	100.00	1400.00	160.00	159.26	160.26
No.15	100.00	1500.00	159.67	159.23	160.23
No.16	100.00	1600.00	161.60	159.21	160.21
No.17	100.00	1700.00	160.14	159.18	160.18
No.17+75	75.00	1775.00	160.00	159.16	160.16
No.18	15.00	1800.00	159.51	159.15	160.15
No.18+5	5.00	1805.00	159.18	159.14	160.12
No.19	95.00	1900.00	158.80	159.12	160.10
No.20	100.00	2000.00	159.47	159.09	160.07
No.20+65	65.00	2065.00	159.33	159.08	160.06
No.21	34.00	2100.00	159.14	159.07	160.05
No.22	100.00	2200.00	158.35	159.04	160.02
No.23	100.00	2300.00	158.92	159.02	160.00
No.23+58	58.00	2358.00	159.33	159.00	159.98
No.24	42.00	2400.00	160.00	158.99	159.97
No.25	100.00	2500.00	158.71	158.97	159.95
No.26	100.00	2600.00	159.43	158.94	159.92
No.27	100.00	2700.00	159.50	158.91	159.89
No.28	100.00	2800.00	158.80	158.88	159.86
No.28+90	90.00	2890.00	158.72	158.85	159.83
No.29	10.00	2900.00	159.00	158.85	159.83
No.30	100.00	3000.00	159.76	158.83	159.81

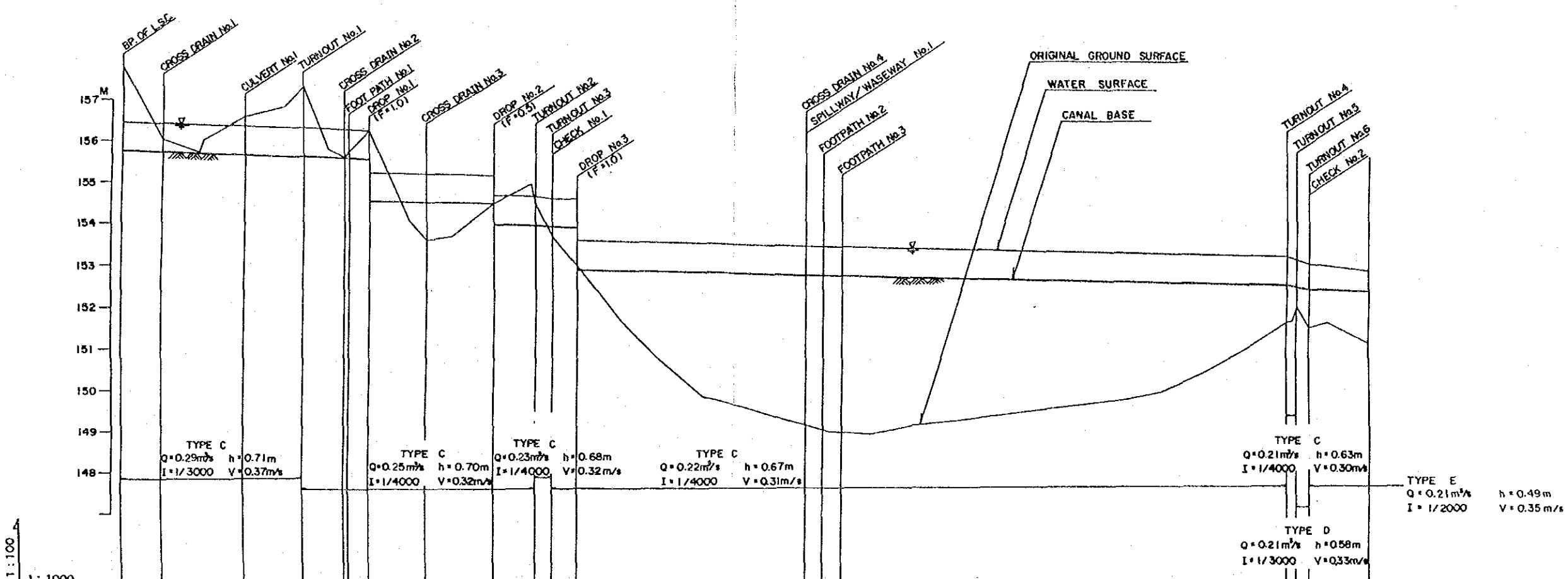
INTEGRATED AGRICULTURAL  
 RURAL DEVELOPMENT PROJECT  
 Title Of Drawing:  
 NHYOD H.BAK IRRIGATION,  
 PROFILE OF MAIN CANAL, RMC(1/2)

16 Drawing No. I-16



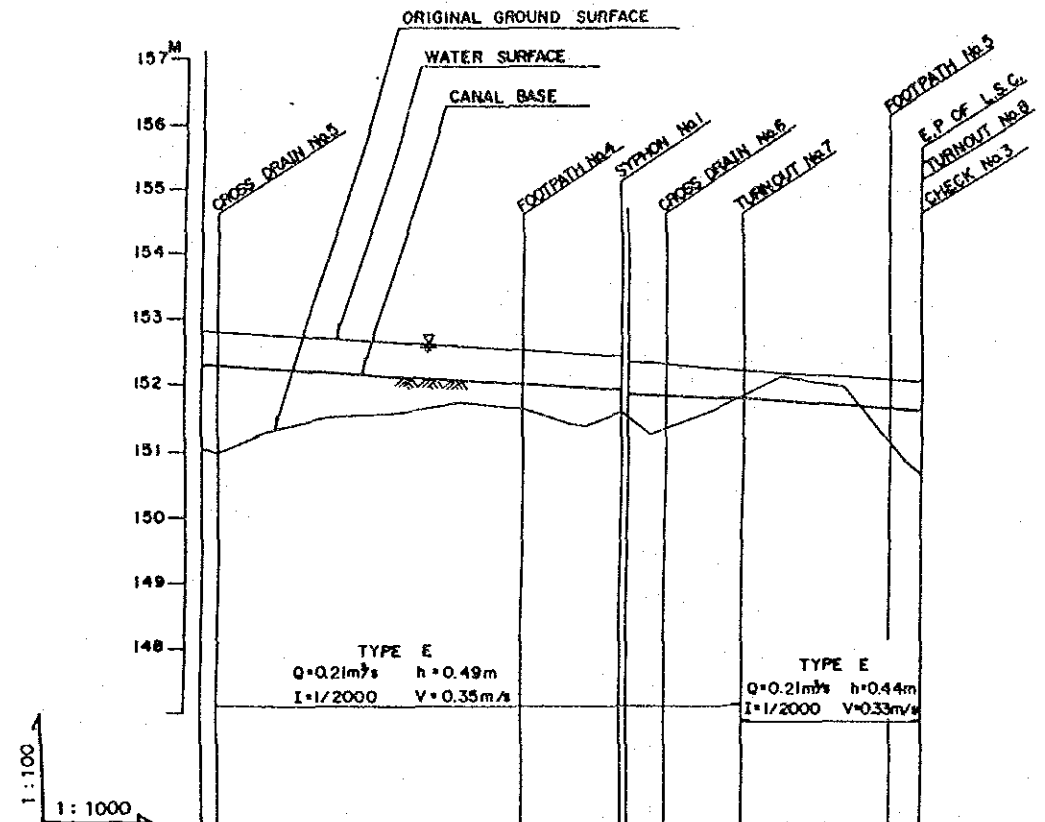
INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
NHYOD H.BAK IRRIGATION,  
PROFILE OF MAIN CANAL, RMC(2/2)

17 Drawing No. I-17



WATER SURFACE ELEVATION	CANAL BASE ELEVATION	ORIGINAL GROUND SURFACE	ACCUMULATED DISTANCE	DISTANCE	STATION	CURVE
156.45	155.74	157.80	000.00	000.00	No.0	
156.42	155.71	156.00	100.00	100.00	No.1	
156.39	155.68	155.73	192.00	92.00	No.1+92	
156.39	155.68	156.00	200.00	8.00	No.2	102° 21' 30"
156.35	155.64	156.55	300.00	100.00	No.3	
156.32	155.61	156.80	400.00	100.00	No.4	
156.30	155.59	157.24	442.00	42.00	No.4+42	
156.25	155.55	155.78	500.00	58.00	No.5	
156.24	155.54	155.57	540.00	40.00	No.5+40	
156.24	155.54	155.70	552.00	12.00	No.5+52	
156.22	155.52	156.18	600.00	48.00	No.6	
155.22	154.52	154.52	700.00	100.00	No.7	
155.19	154.49	154.00	740.00	40.00	No.7+40	
155.18	154.48	153.59	800.00	60.00	No.8	
155.16	154.46	153.66	900.00	100.00	No.9	
155.10	154.43	154.43	968.00	68.00	No.9+68	
154.60	153.93	154.50	1000.00	32.00	No.10	
154.58	153.91	154.45	1042.00	42.00	No.10+42	
154.55	153.88	153.63	1100.00	58.00	No.11	
153.52	152.85	152.94	1200.00	100.00	No.12	
153.50	152.83	151.72	1300.00	100.00	No.13	
153.47	152.80	150.71	1400.00	100.00	No.14	
153.45	152.78	149.82	1500.00	100.00	No.15	
153.42	152.75	149.57	1600.00	100.00	No.16	
153.40	152.73	149.26	1652.00	52.00	No.16+52	
153.38	152.72	149.14	1700.00	48.00	No.17	
153.38	152.71	149.00	1735.00	35.00	No.17+35	
153.37	152.70	148.95	1800.00	65.00	No.18	
153.35	152.68	148.90	1900.00	100.00	No.19	
153.32	152.65	149.10	2000.00	100.00	No.20	
153.30	152.63	149.22	2100.00	100.00	No.21	
153.27	152.60	149.35	2200.00	100.00	No.22	
153.25	152.58	149.48	2300.00	100.00	No.23	
153.22	152.55	149.61	2375.00	75.00	No.23+75	
153.21	152.54	149.71	2400.00	25.00	No.24	
153.20	152.53	149.72	2500.00	100.00	No.25	
153.18	152.51	149.93	2600.00	100.00	No.26	
153.15	152.48	150.38	2700.00	100.00	No.27	
153.13	152.46	150.93	2800.00	100.00	No.28	
152.91	152.24	151.62	2840.00	40.00	No.28+40	
152.90	152.23	151.59	2880.00	40.00	No.29	
152.88	152.21	151.56	2900.00	20.00	No.29+20	
152.85	152.18	151.56	3000.00	47.00	No.30	
152.78	152.29	151.06	3000.00	100.00	No.30	

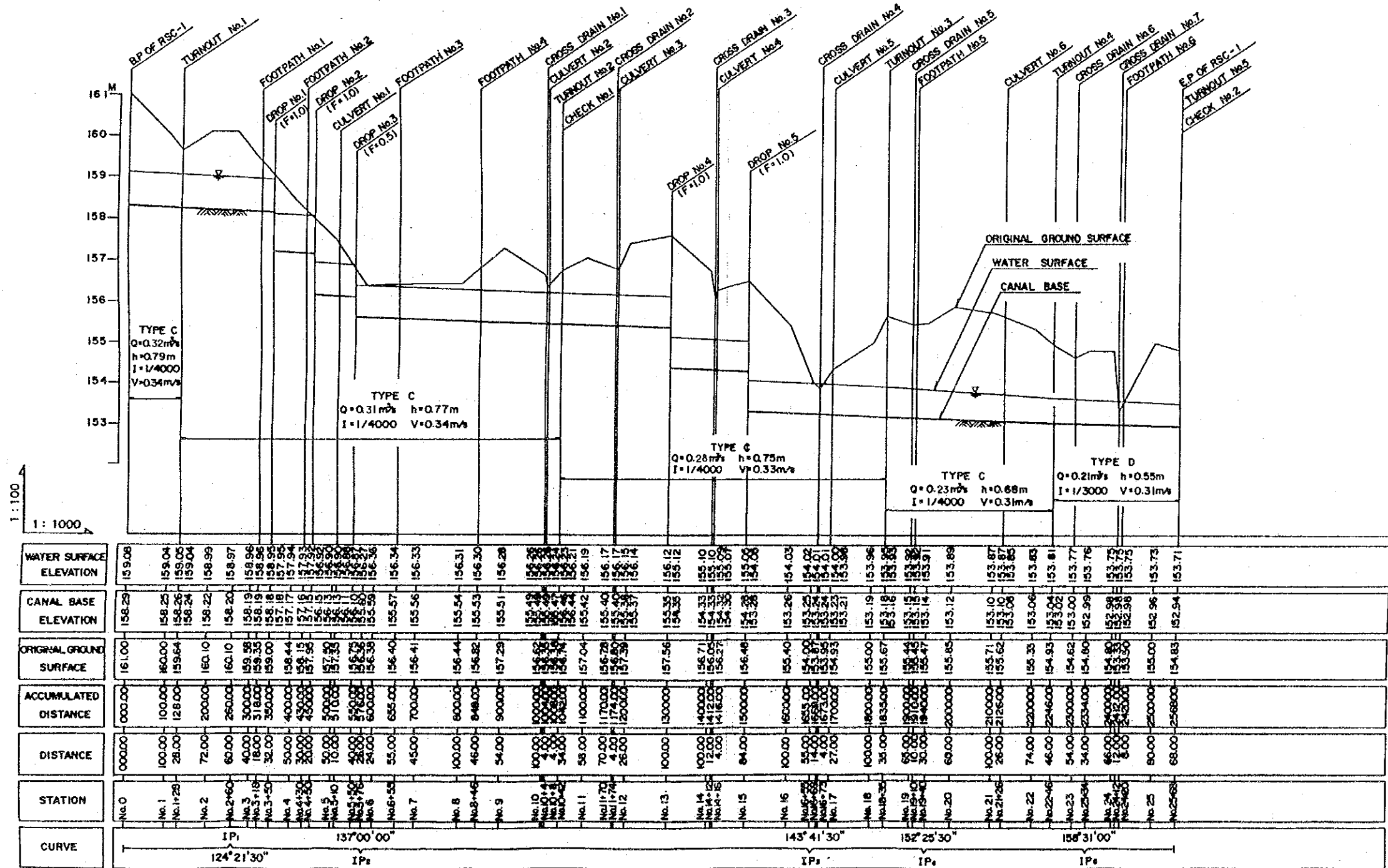
INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
NHOD H.BAK IRRIGATION,  
PROFILE OF SECONDARY CANAL, LSC(1/2)



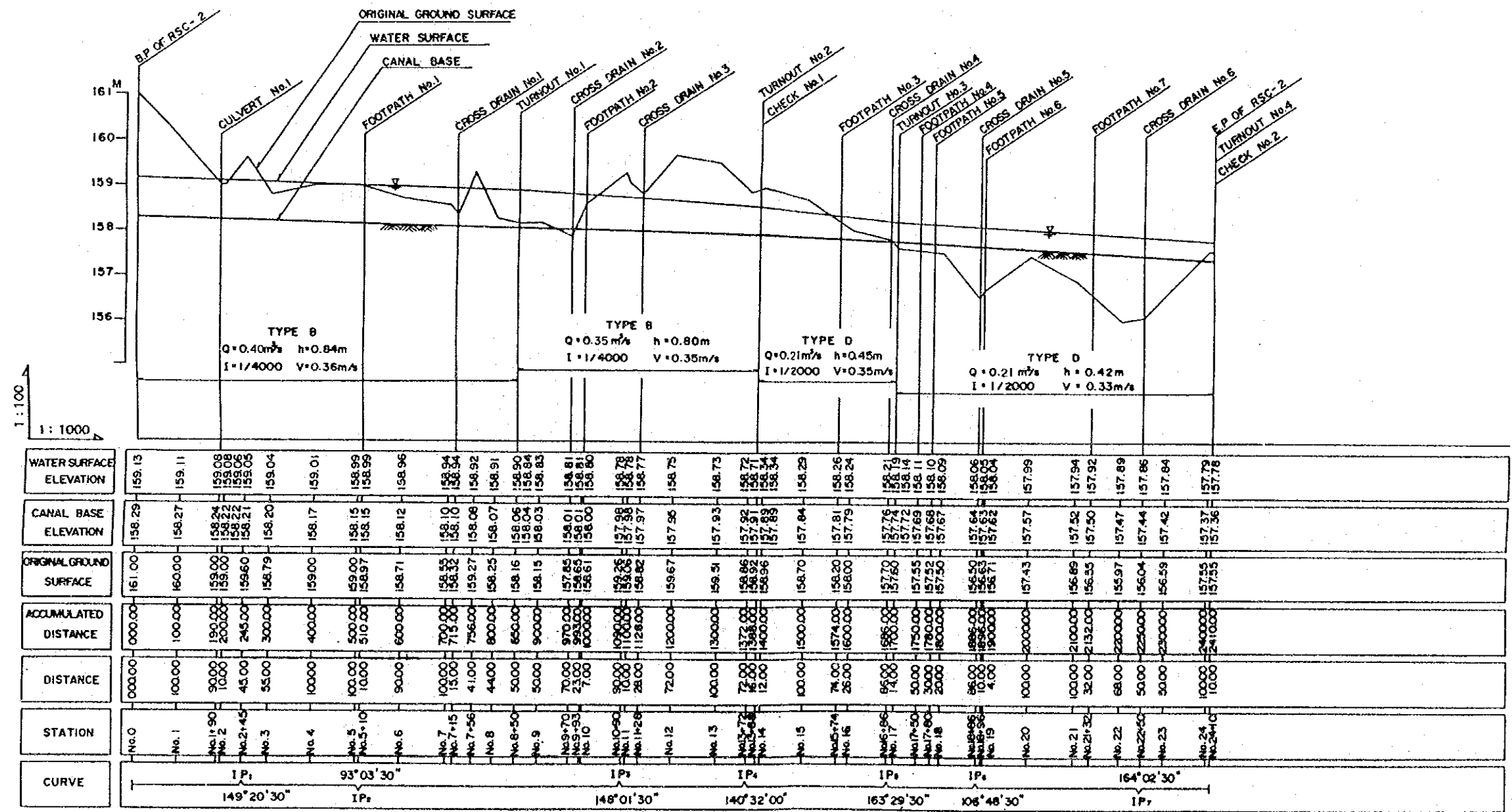
WATER SURFACE ELEVATION	CANAL BASE ELEVATION	ORIGINAL GROUND SURFACE	ACCUMULATED DISTANCE	DISTANCE	STATION	CURVE
152.76	152.27	151.06	3000.00	100.00	No.30	129° 18' 30"
152.75	152.26	150.98	3025.00	25.00	No.30+25	
152.72	152.23	151.28	3100.00	75.00	No.31	IPs
152.67	152.18	151.31	3200.00	100.00	No.32	
152.62	152.13	151.56	3300.00	100.00	No.33	
152.57	152.08	151.75	3400.00	100.00	No.34	
152.52	152.03	151.64	3500.00	100.00	No.35	
152.48	151.99	151.44	3579.00	79.00	No.35+79	
152.46	151.97	151.41	3600.00	22.00	No.36	
152.43	151.94	151.60	3658.00	58.00	No.36+58	
152.36	151.87	151.59	3668.00	10.00	No.37	
152.34	151.85	151.73	3700.00	32.00	No.37+32	
152.32	151.83	151.17	3725.00	25.00	No.37+25	
152.29	151.80	151.63	3800.00	75.00	No.38	
152.27	151.78	151.90	3845.00	45.00	No.38+45	
152.20	151.76	152.13	3900.00	55.00	No.39	
152.17	151.73	151.96	4000.00	100.00	No.40	
152.12	151.68	151.12	4074.00	74.00	No.40+74	
152.09	151.64	150.83	4100.00	26.00	No.41	
152.07	151.63	150.84	4126.00	26.00	No.41+26	
152.06	151.62					

INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
NHYOD H.BAK IRRIGATION,  
PROFILE OF SECONDARY CANAL, LSC(2/2)

19 Drawing No. I-19

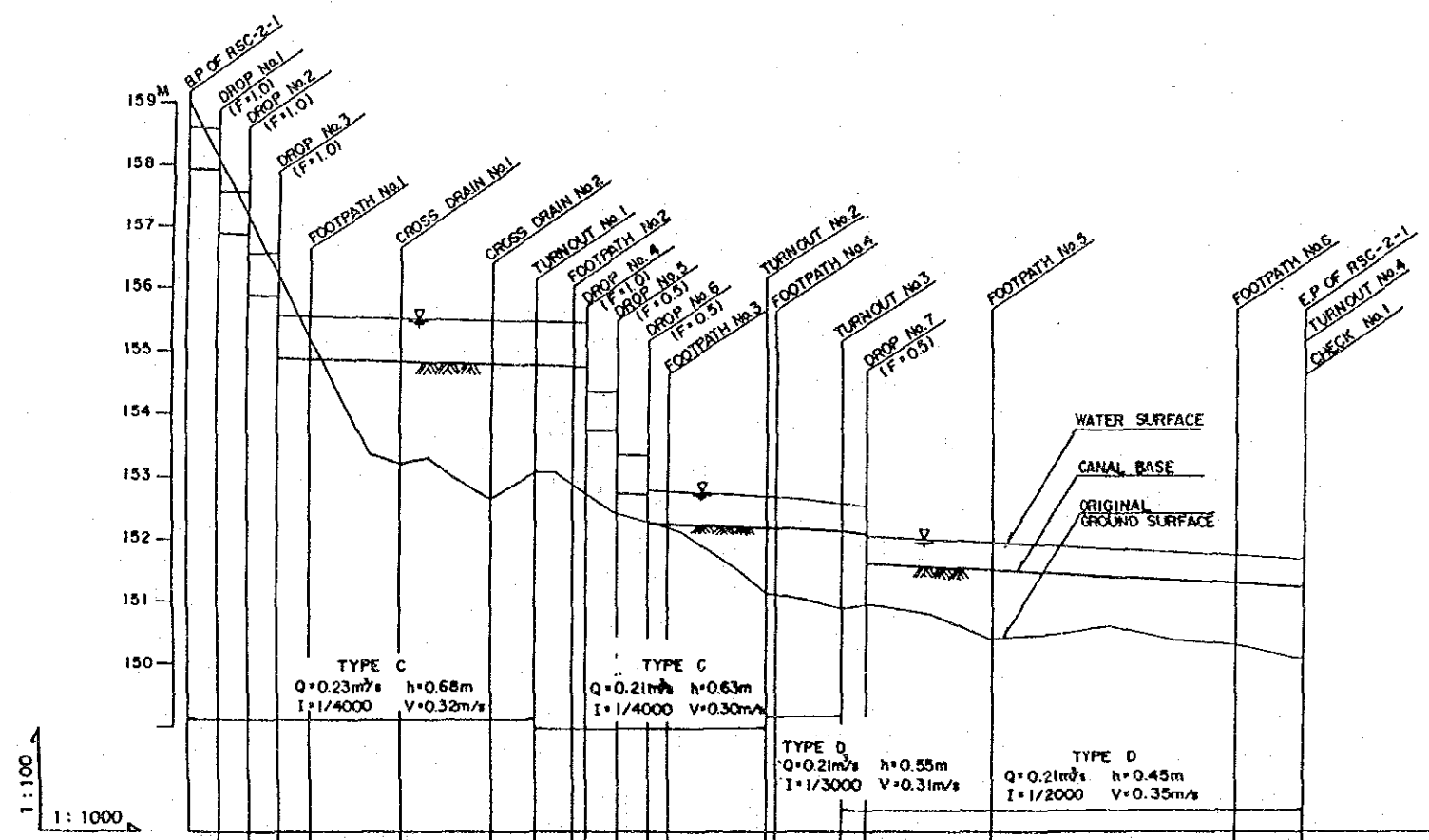


INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
NHYOD H.BAK IRRIGATION,  
PROFILE OF SECONDARY CANAL, RSC-1  
20 Drawing No. I-20



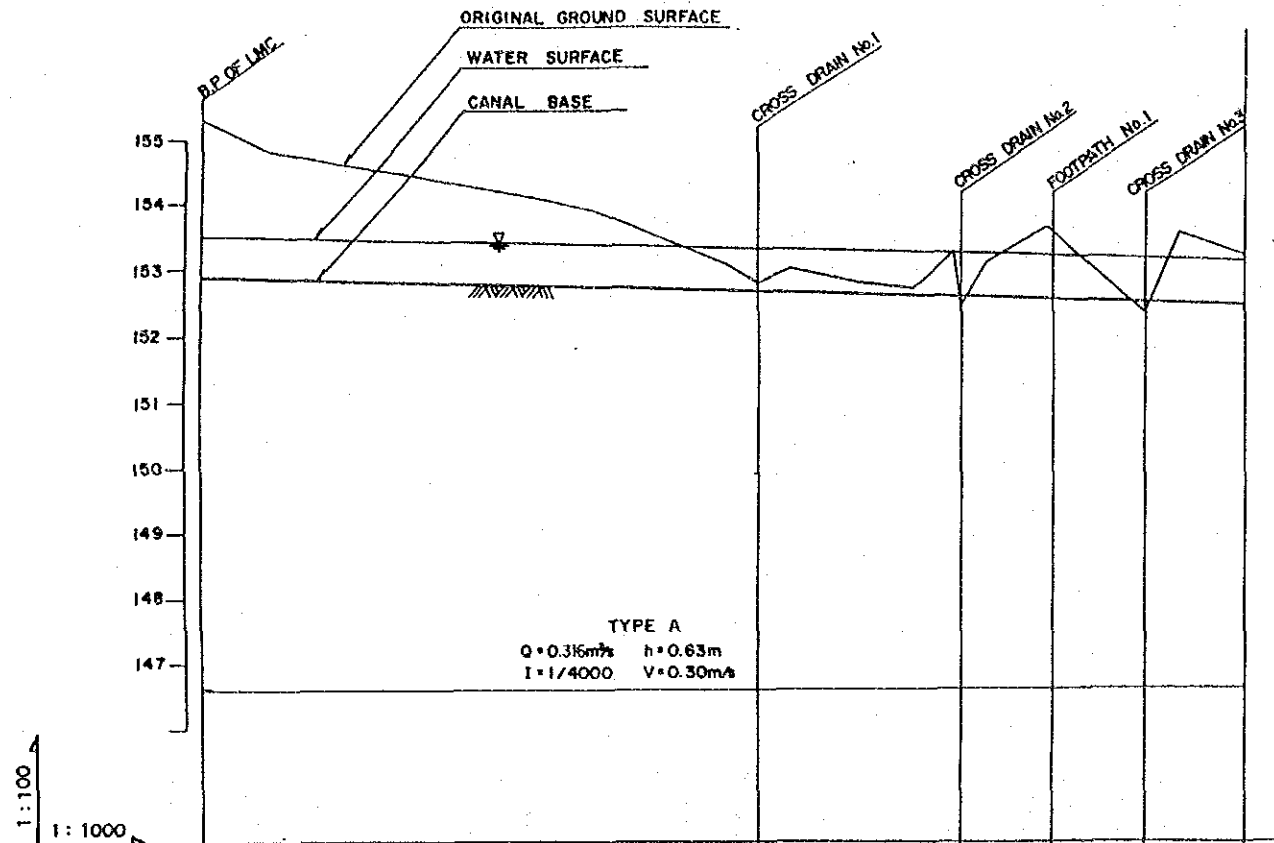
INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
NHYOD H.BAK IRRIGATION,  
PROFILE OF SECONDARY CANAL, RSC-2  
21 Drawing No. I - 21





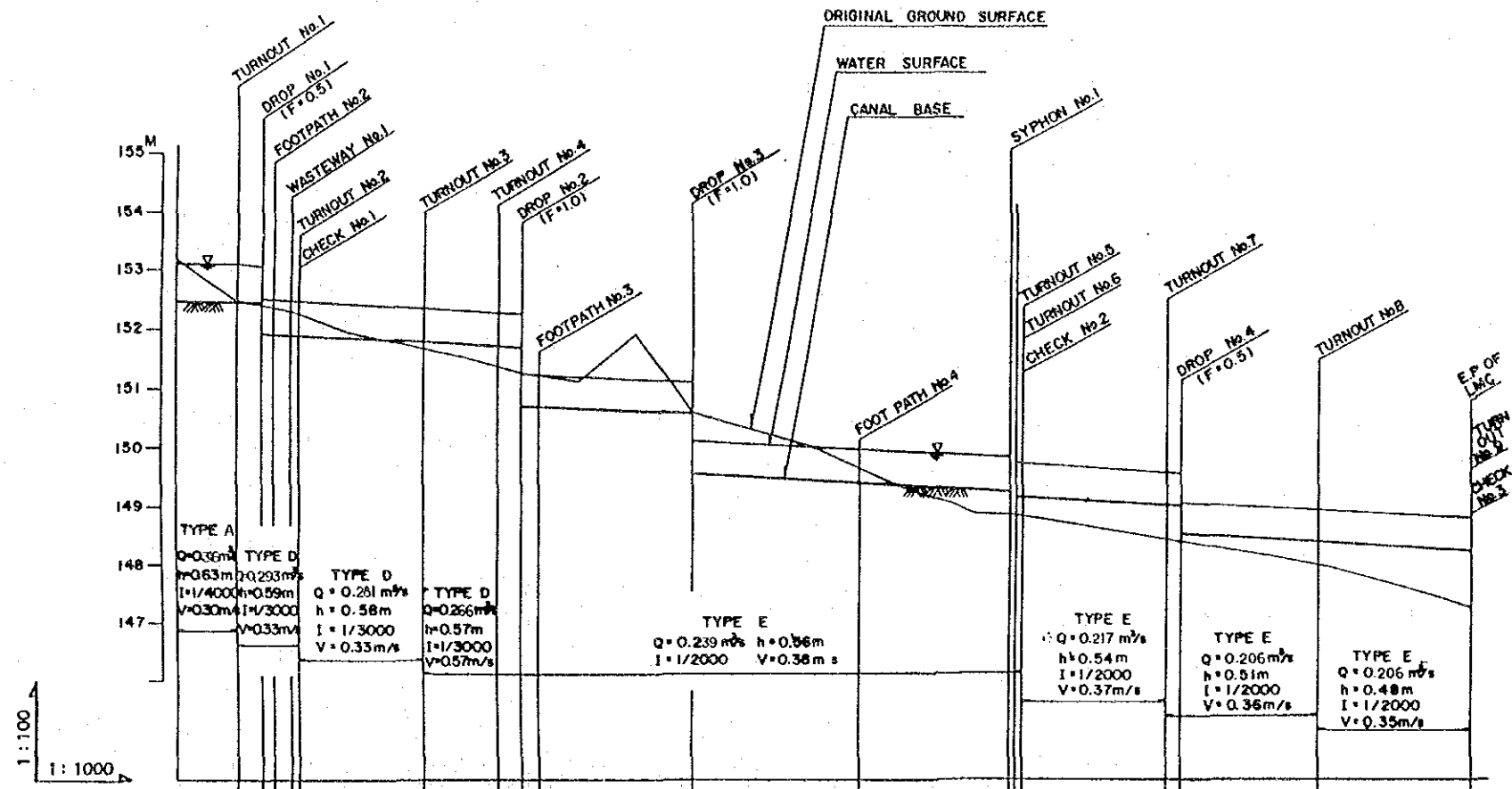
STATION	DISTANCE	ACCUMULATED DISTANCE	ORIGINAL GROUND SURFACE	CANAL BASE ELEVATION	WATER SURFACE ELEVATION
No. 0	00.00	000.00	159.00	157.89	158.57
No. 1	50.00	50.00	158.10	157.88	157.56
No. 2	100.00	100.00	157.17	156.87	156.55
No. 3	150.00	150.00	156.20	155.86	155.54
No. 4	200.00	200.00	155.22	154.85	155.53
No. 5	300.00	300.00	153.33	154.82	155.50
No. 6	350.00	350.00	153.20	154.81	155.49
No. 7	400.00	400.00	153.26	154.80	155.48
No. 8	456.00	456.00	153.00	154.79	155.47
No. 9	500.00	500.00	152.03	154.77	155.45
No. 10	570.00	570.00	151.05	154.75	155.43
No. 11	600.00	600.00	151.00	154.74	155.42
No. 12	630.00	630.00	151.00	154.73	155.41
No. 13	650.00	650.00	151.00	154.72	155.40
No. 14	700.00	700.00	151.00	154.71	155.39
No. 15	750.00	750.00	151.00	154.70	155.38
No. 16	800.00	800.00	151.00	154.69	155.37
No. 17	850.00	850.00	151.00	154.68	155.36
No. 18	900.00	900.00	151.00	154.67	155.35
No. 19	950.00	950.00	151.00	154.66	155.34
No. 20	1000.00	1000.00	151.00	154.65	155.33
No. 21	1050.00	1050.00	151.00	154.64	155.32
No. 22	1100.00	1100.00	151.00	154.63	155.31
No. 23	1150.00	1150.00	151.00	154.62	155.30
No. 24	1200.00	1200.00	151.00	154.61	155.29
No. 25	1250.00	1250.00	151.00	154.60	155.28
No. 26	1300.00	1300.00	151.00	154.59	155.27
No. 27	1350.00	1350.00	151.00	154.58	155.26
No. 28	1400.00	1400.00	151.00	154.57	155.25
No. 29	1450.00	1450.00	151.00	154.56	155.24
No. 30	1500.00	1500.00	151.00	154.55	155.23
No. 31	1550.00	1550.00	151.00	154.54	155.22
No. 32	1600.00	1600.00	151.00	154.53	155.21
No. 33	1650.00	1650.00	151.00	154.52	155.20
No. 34	1700.00	1700.00	151.00	154.51	155.19
No. 35	1750.00	1750.00	151.00	154.50	155.18
No. 36	1800.00	1800.00	151.00	154.49	155.17
No. 37	1850.00	1850.00	151.00	154.48	155.16
No. 38	1900.00	1900.00	151.00	154.47	155.15
No. 39	1950.00	1950.00	151.00	154.46	155.14
No. 40	2000.00	2000.00	151.00	154.45	155.13

INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title of Drawing:  
NHOD H.BAK IRRIGATION,  
PROFILE OF SECONDARY CANAL, RSC 2-1  
22 Drawing No. I-22



WATER SURFACE ELEVATION	153.50	153.47	153.45	153.42	153.40	153.37	153.35	153.32	153.31	153.30	153.29	153.27	153.25	153.22	153.22	153.21	153.21	153.20	153.17	153.17	153.15	153.13	153.12	153.10						
CANAL BASE ELEVATION	152.87	152.84	152.82	152.79	152.77	152.74	152.72	152.69	152.68	152.67	152.66	152.64	152.62	152.60	152.59	152.58	152.58	152.57	152.54	152.54	152.52	152.50	152.49	152.47						
ORIGINAL GROUND SURFACE	153.30	154.80	154.62	154.47	154.27	154.09	153.86	153.46	153.16	153.06	152.79	153.00	152.80	152.70	152.80	153.24	152.40	153.06	153.56	153.56	152.73	152.35	153.51	153.18						
ACCUMULATED DISTANCE	000.00	100.00	200.00	300.00	400.00	500.00	600.00	700.00	777.00	800.00	850.00	900.00	1000.00	1085.00	1100.00	1150.00	1160.00	1200.00	1257.00	1300.00	1400.00	1450.00	1500.00	1600.00						
DISTANCE	000.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	77.00	23.00	50.00	50.00	100.00	85.00	15.00	50.00	10.00	40.00	57.00	50.00	95.00	50.00	50.00	100.00						
STATION	No.0	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.7+77	No.8	No.8+50	No.9	No.10	No.10+85	No.11	No.11+50	No.11+60	No.12	No.12+97	No.13	No.14	No.14+50	No.15	No.16						
CURVE																	164°20'30"		IP <sub>1</sub>		156°08'30"		IP <sub>2</sub>		152°19'30"		IP <sub>3</sub>		144°00'30"	

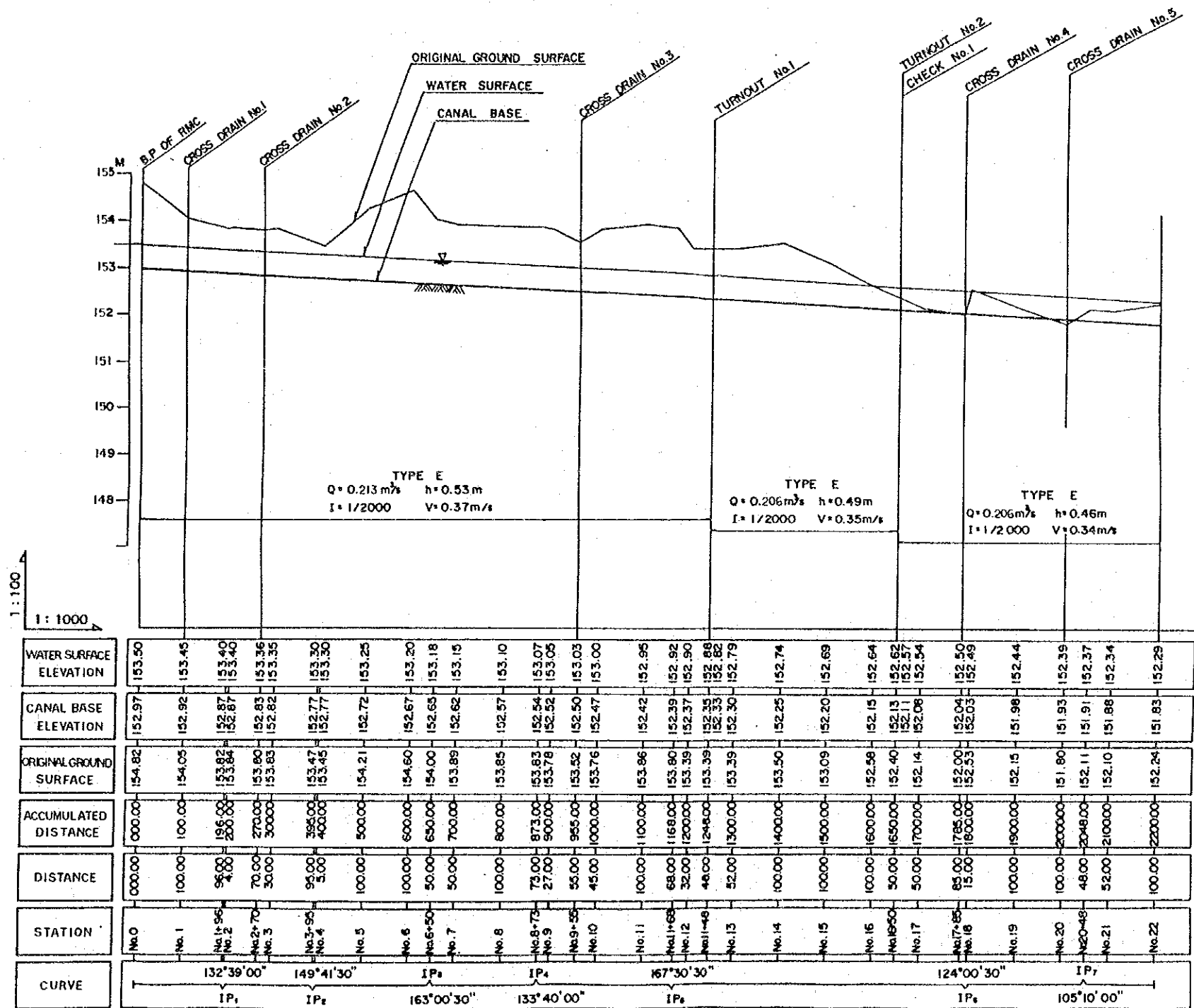
INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
NAMPHOU IRRIGATION,  
PROFILE OF MAIN CANAL, LMC(1/2)



1:100  
1:1000

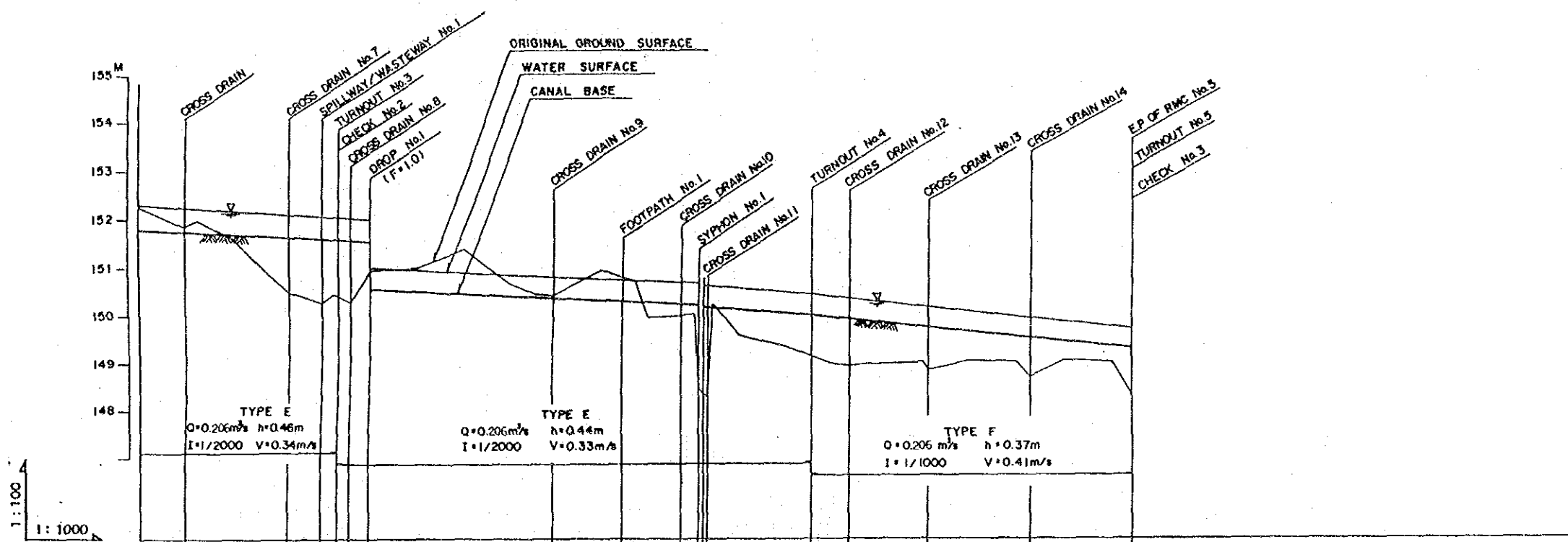
WATER SURFACE ELEVATION	CANAL BASE ELEVATION	ORIGINAL GROUND SURFACE	ACCUMULATED DISTANCE	DISTANCE	STATION	CURVE
153.10	152.47	153.18	0.00	100.00	No.16	139°42'00"
153.07	152.44	152.46	100.00	100.00	No.17	
153.05	152.42	152.43	170.00	30.00	No.17.5	155°51'00"
153.03	152.40	152.39	170.00	30.00	No.18	
153.01	152.38	152.38	170.00	30.00	No.18.5	153°39'30"
152.99	152.36	152.35	170.00	30.00	No.19	
152.97	152.34	152.34	170.00	30.00	No.19.5	163°40'30"
152.95	152.32	152.32	170.00	30.00	No.20	
152.93	152.30	151.73	170.00	34.00	No.20.5	155°51'00"
152.91	152.28	151.67	170.00	66.00	No.21	
152.89	152.26	151.52	170.00	66.00	No.21.5	153°39'30"
152.87	152.24	151.40	170.00	60.00	No.22	
152.85	152.22	151.23	170.00	40.00	No.22.5	155°51'00"
152.83	152.20	151.20	170.00	30.00	No.23	
152.81	152.18	151.10	170.00	70.00	No.23.5	153°39'30"
152.79	152.16	151.87	170.00	100.00	No.24	
152.77	152.14	151.87	170.00	100.00	No.24.5	155°51'00"
152.75	152.12	151.85	170.00	90.00	No.25	
152.73	152.10	151.85	170.00	10.00	No.25.5	153°39'30"
152.71	152.08	151.85	170.00	10.00	No.26	
152.69	152.06	151.85	170.00	100.00	No.26.5	155°51'00"
152.67	152.04	151.85	170.00	90.00	No.27	
152.65	152.02	151.85	170.00	10.00	No.27.5	153°39'30"
152.63	152.00	151.85	170.00	10.00	No.28	
152.61	151.98	151.85	170.00	100.00	No.28.5	155°51'00"
152.59	151.96	151.85	170.00	90.00	No.29	
152.57	151.94	151.85	170.00	76.00	No.29.5	153°39'30"
152.55	151.92	151.85	170.00	44.00	No.30	
152.53	151.90	151.85	170.00	55.00	No.30.5	155°51'00"
152.51	151.88	151.85	170.00	20.00	No.31	
152.49	151.86	151.85	170.00	25.00	No.31.5	153°39'30"
152.47	151.84	151.85	170.00	100.00	No.32	
152.45	151.82	151.85	170.00	100.00	No.32.5	155°51'00"
152.43	151.80	151.85	170.00	100.00	No.33	
152.41	151.78	151.85	170.00	25.00	No.33.5	153°39'30"
152.39	151.76	151.85	170.00	25.00	No.34	
152.37	151.74	151.85	170.00	100.00	No.34.5	155°51'00"
152.35	151.72	151.85	170.00	100.00	No.35	
152.33	151.70	151.85	170.00	66.00	No.35.5	153°39'30"
152.31	151.68	151.85	170.00	14.00	No.36	
152.29	151.66	151.85	170.00	100.00	No.36.5	155°51'00"
152.27	151.64	151.85	170.00	100.00	No.37	
152.25	151.62	151.85	170.00	100.00	No.37.5	153°39'30"
152.23	151.60	151.85	170.00	100.00	No.38	
152.21	151.58	151.85	170.00	55.00	No.38.5	155°51'00"
152.19	151.56	151.85	170.00	55.00	No.39	

INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT  
 Title Of Drawing:  
 NAMPHOU IRRIGATION,  
 PROFILE OF MAIN CANAL, LMC(2/2)  
 24 Drawing No. I - 24



INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
NAMPHOU IRRIGATION,  
PROFILE OF MAIN CANAL, RMC(1/2)

25 Drawing No. I - 25

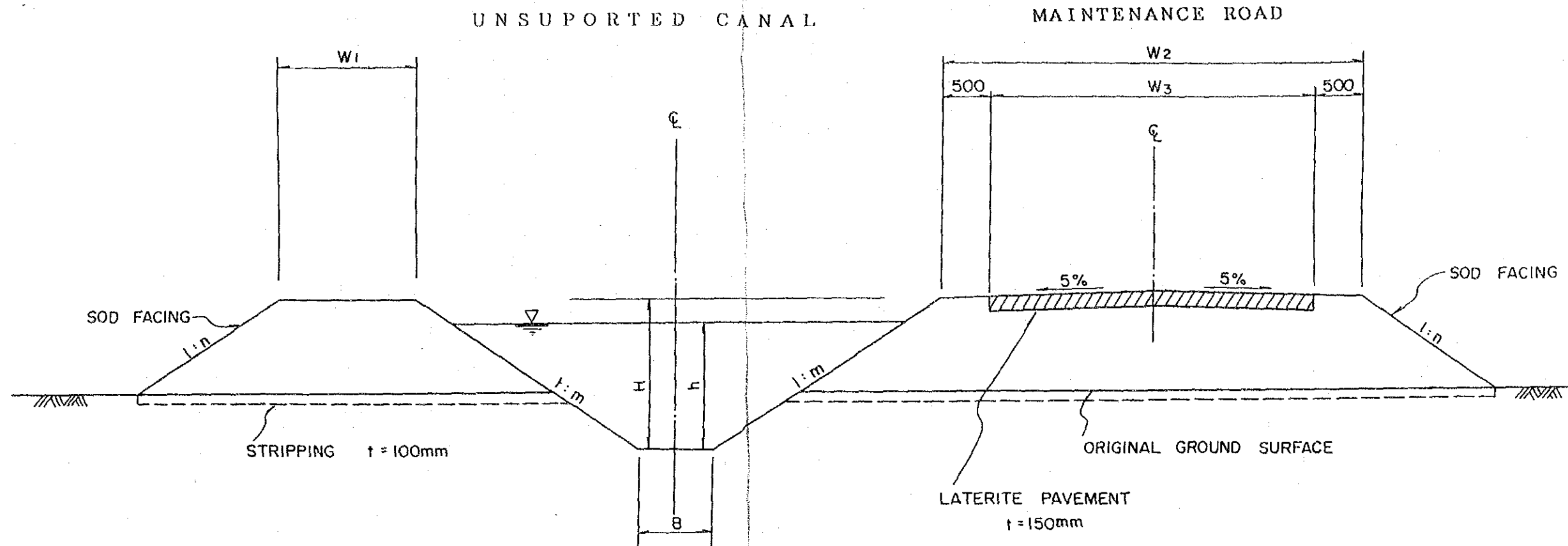


STATION	DISTANCE	ACCUMULATED DISTANCE	ORIGINAL GROUND SURFACE	CANAL BASE ELEVATION	WATER SURFACE ELEVATION
No. 22	100.00	2200.00	152.24	151.83	152.29
No. 23	100.00	2300.00	151.85	151.78	152.24
No. 24	26.00	2326.00	151.97	151.77	152.23
No. 25	74.00	2400.00	151.63	151.73	152.19
No. 26	100.00	2500.00	150.70	151.68	152.14
No. 27	25.00	2525.00	150.50	151.67	152.13
No. 28	75.00	2600.00	150.28	151.63	152.09
No. 29	20.00	2620.00	150.45	151.61	152.07
No. 30	20.00	2640.00	150.40	151.59	152.05
No. 31	25.00	2665.00	150.30	151.57	152.03
No. 32	40.00	2705.00	150.82	151.55	152.01
No. 33	100.00	2805.00	151.00	151.51	151.95
No. 34	100.00	2905.00	151.38	151.46	151.90
No. 35	100.00	3005.00	150.67	151.41	151.85
No. 36	63.00	3068.00	150.45	151.38	151.82
No. 37	33.00	3101.00	150.43	151.36	151.80
No. 38	100.00	3201.00	150.94	151.31	151.75
No. 39	46.00	3247.00	150.80	151.29	151.73
No. 40	24.00	3271.00	150.71	151.27	151.71
No. 41	30.00	3301.00	149.94	151.26	151.70
No. 42	70.00	3371.00	149.97	151.22	151.66
No. 43	70.00	3441.00	150.00	151.21	151.65
No. 44	70.00	3511.00	149.99	151.19	151.63
No. 45	70.00	3581.00	149.99	151.18	151.62
No. 46	80.00	3661.00	149.50	151.11	151.55
No. 47	100.00	3761.00	149.33	151.06	151.50
No. 48	63.00	3824.00	149.10	151.03	151.47
No. 49	38.00	3862.00	148.96	149.97	150.34
No. 50	40.00	3902.00	148.81	149.93	150.30
No. 51	40.00	3942.00	148.89	149.89	150.26
No. 52	20.00	3962.00	148.95	149.87	150.24
No. 53	100.00	4062.00	149.00	149.77	150.14
No. 54	10.00	4072.00	148.82	149.76	150.13
No. 55	90.00	4162.00	149.01	149.67	150.04
No. 56	100.00	4262.00	149.00	149.57	148.94
No. 57	30.00	4292.00	148.69	149.54	148.91
No. 58	70.00	4362.00	149.03	149.47	148.84
No. 59	65.00	4427.00	149.00	149.39	148.76
No. 60	15.00	4442.00	149.00	149.37	148.74
No. 61	44.00	4486.00	148.26	149.33	148.70

INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT  
 Title Of Drawing:  
 NAMPHOU IRRIGATION,  
 PROFILE OF MAIN CANAL, RMC(2/2)

26 Drawing No. I-26

TYPICAL CROSS SECTION OF CANALS AND MAINTENANCE ROADS



NOTE: 1. LATERITE PAVEMENT WILL BE PROVIDED ONLY ON THE TOP OF FARM ROADS FOR MAIN AND SECONDARY CANALS OF TYPE A TO D.

2. MAINTENANCE ROAD IS ONLY APPLICABLE TO MAIN AND SECONDARY CANALS

DIMENSION

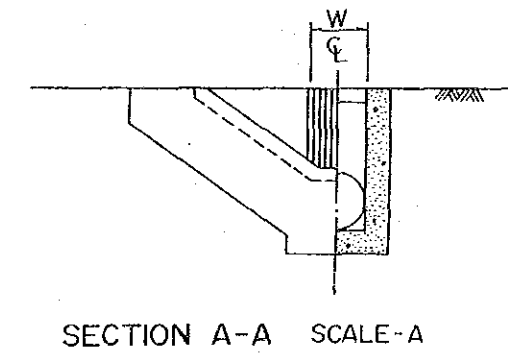
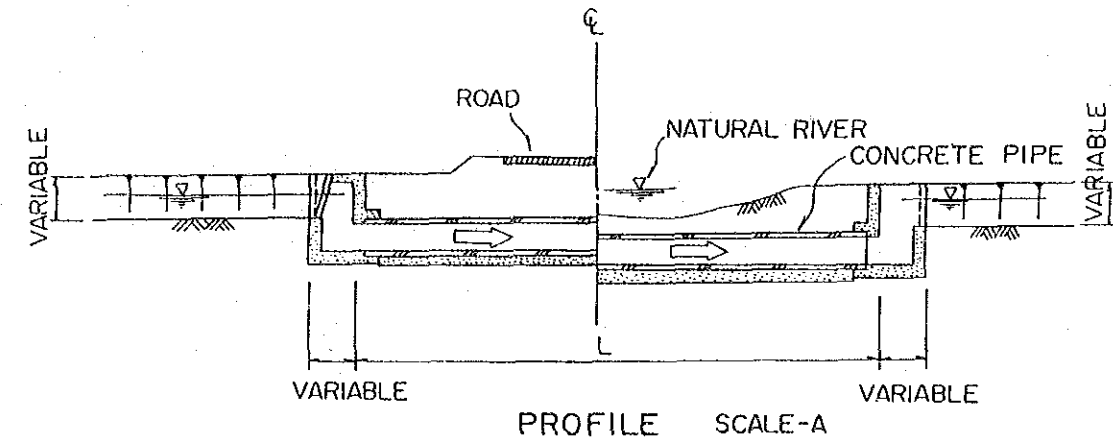
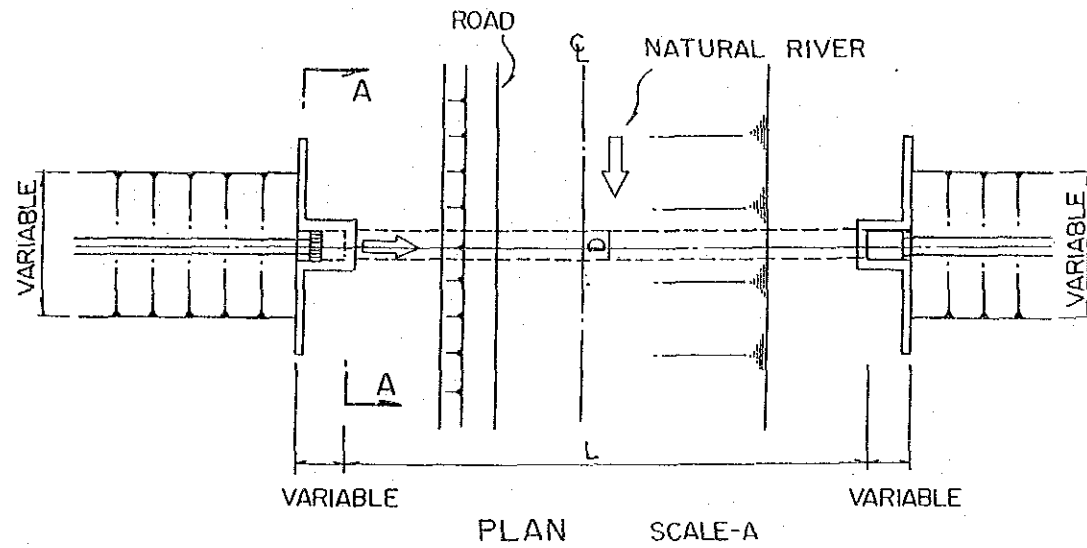
UNIT: mm

CANAL TYPE	B	H	h max	W <sub>1</sub>	W <sub>2</sub>	W <sub>3</sub>	m	n
A	800	1600	1300	1500	4500	3500	1.5	1.5~2.0
B	600	1300	1000	1500	4500	3500	1.5	1.5~2.0
C	500	1100	800	1500	4500	3500	1.5	1.5~2.0
D	400	900	600	1000	4500	3500	1.5	1.5~2.0
E	400	800	600	400	4500	3500	1.0	1.5
F	300	600	400	400	3000	—	1.0	1.5
G	300	500	300	300	3000	—	1.0	1.5
H	200	350	300	300	800	—	1.0	1.5
I	200	300	250	300	600	—	1.0	1.5
J	100	200	180	200	300	—	1.0	1.5



INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
TYPICAL CROSS SECTIONS  
OF CANALS & MAINTENANCE ROADS  
27 Drawing No. I-27

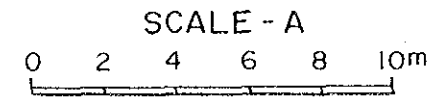
SYPHION , TYPE - A E



DIMENSION

UNIT: mm

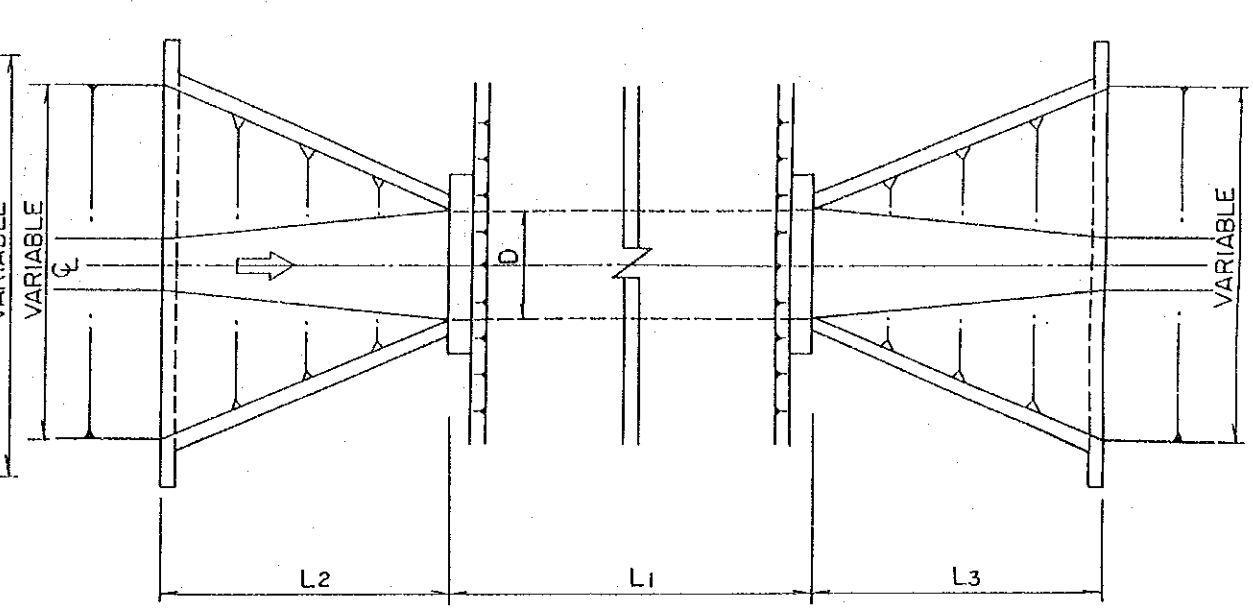
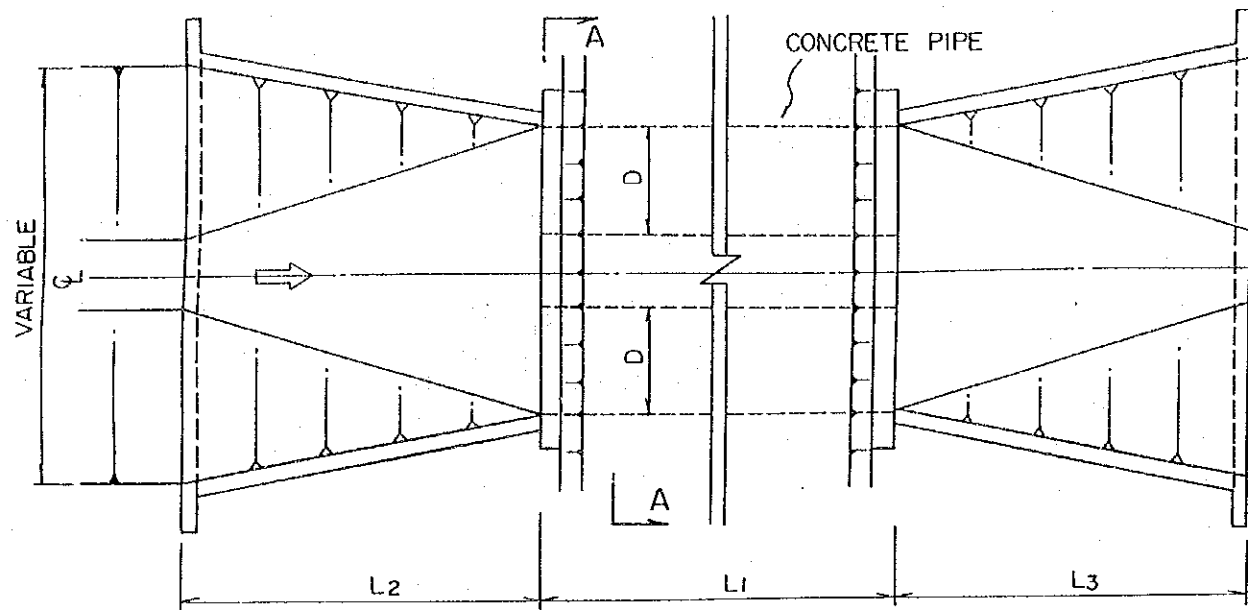
TYPE	Q (m <sup>3</sup> /s)	D	L	W	PIPE
A	0.3 ~ 0.6	800	20 000	800	φ 800
B	0.3 ~ 0.6	800	10 000	800	φ 800
C	0.2 ~ 0.3	600	10 000	600	φ 600
D	0.1 ~ 0.2	500	10 000	500	φ 500
E	~ 0.1	300	5 000	300	φ 300



INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing:	
SYPHONS	
28	Drawing No: I-28

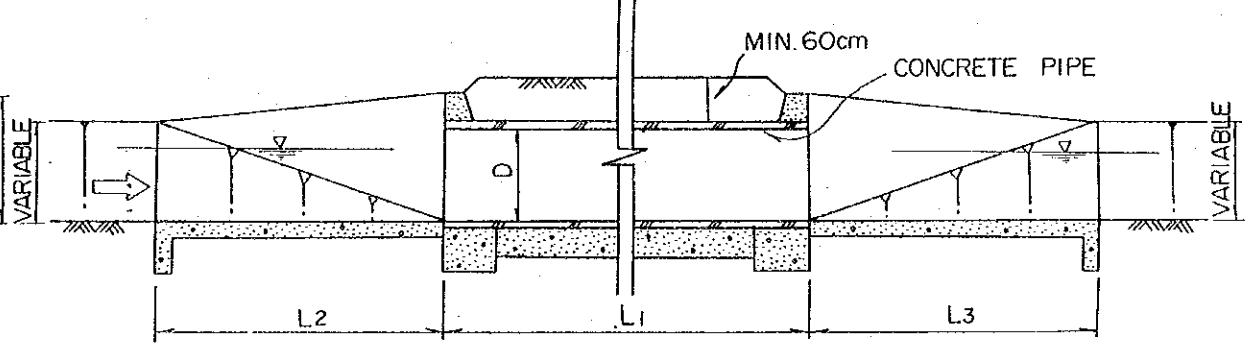
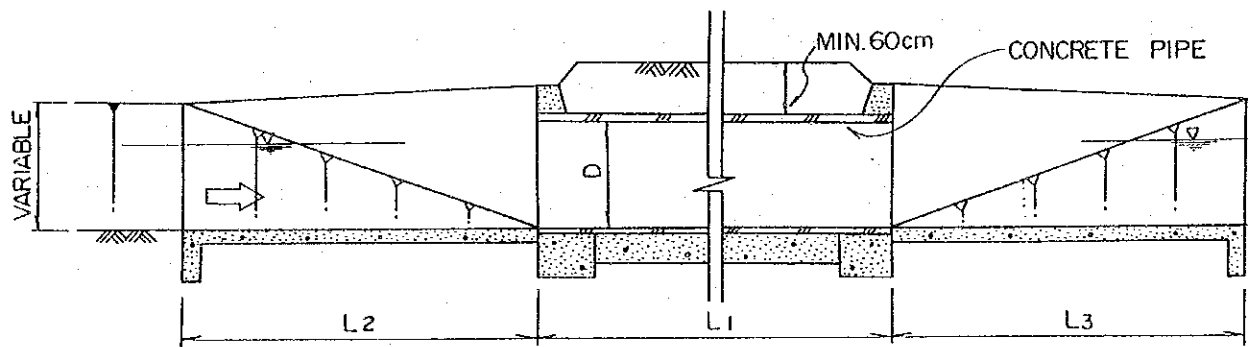
CULVERT, TYPE-A

CULVERT, TYPE-B, C



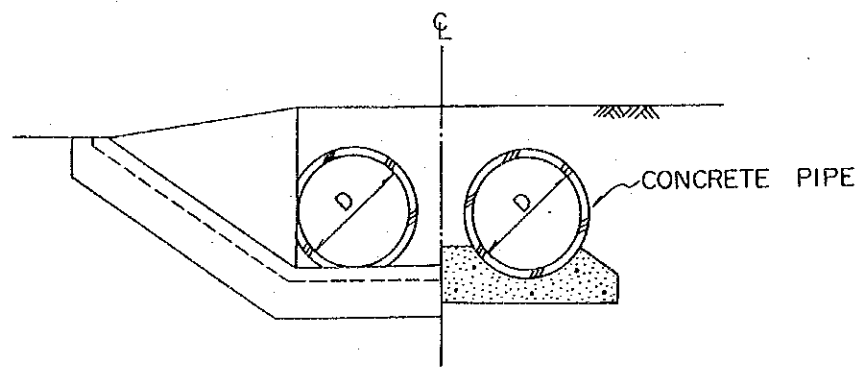
PLAN SCALE-A

PLAN SCALE-A

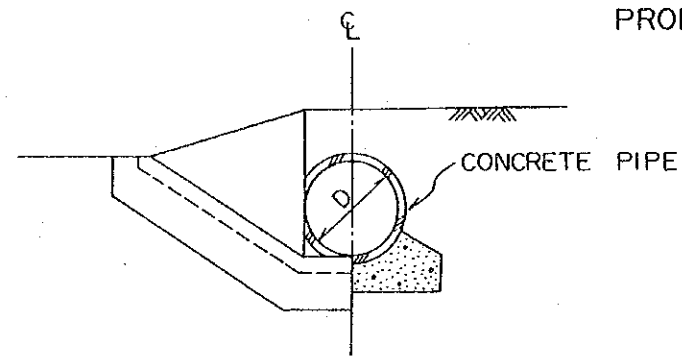


PROFILE SCALE-A

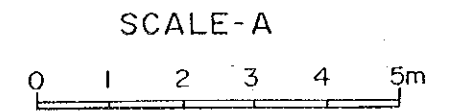
PROFILE SCALE-A



SECTION A-A SCALE-A



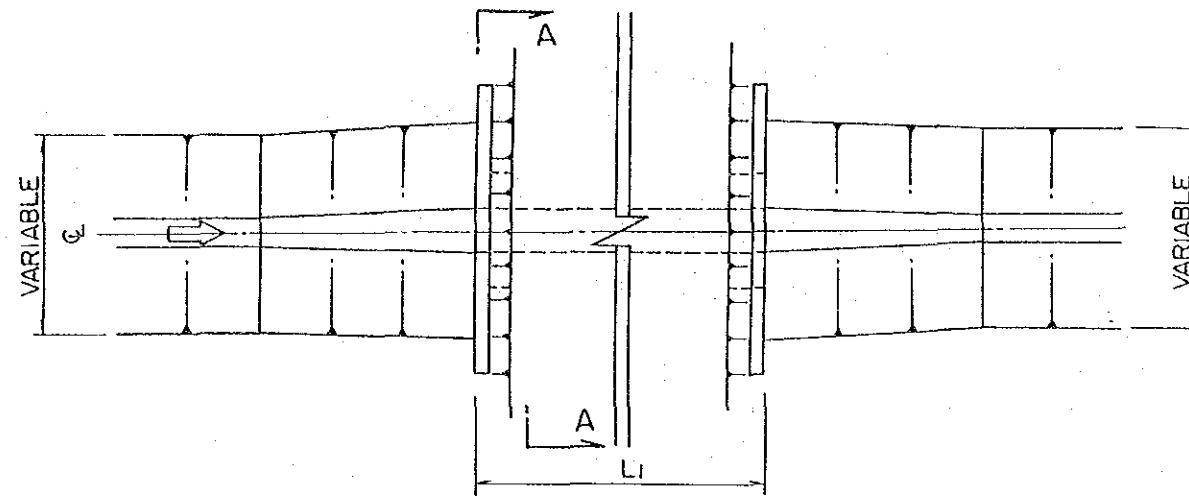
SECTION A-A SCALE-A



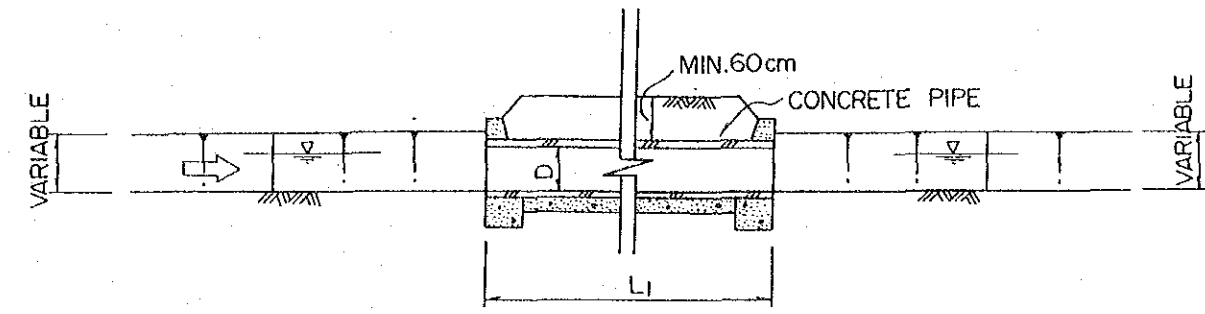
INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing:	
CULVERTS (1/2)	
29	Drawing No. I-29



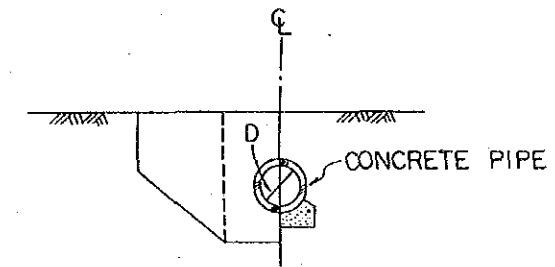
CULVERT, TYPE - D, E



SCALE - A



PROFILE SCALE - A

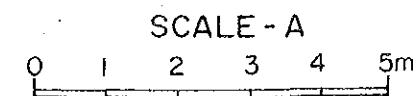


SECTION A-A SCALE - A

DIMENSION

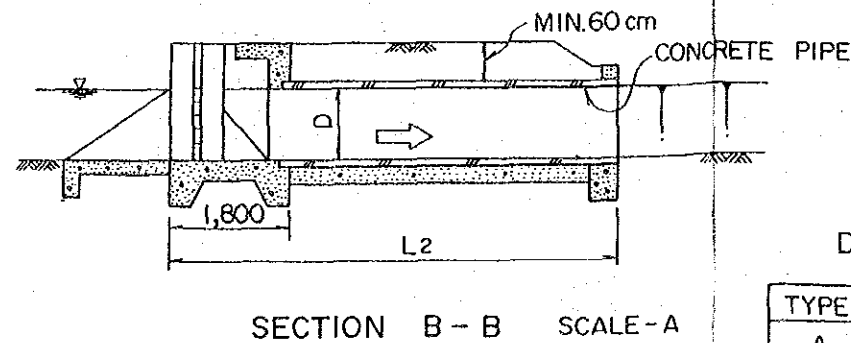
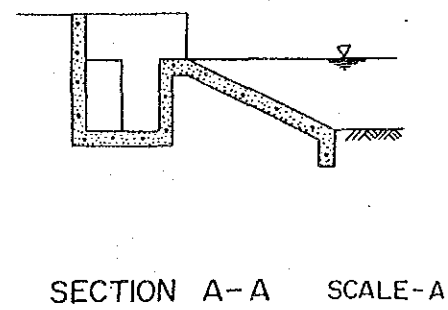
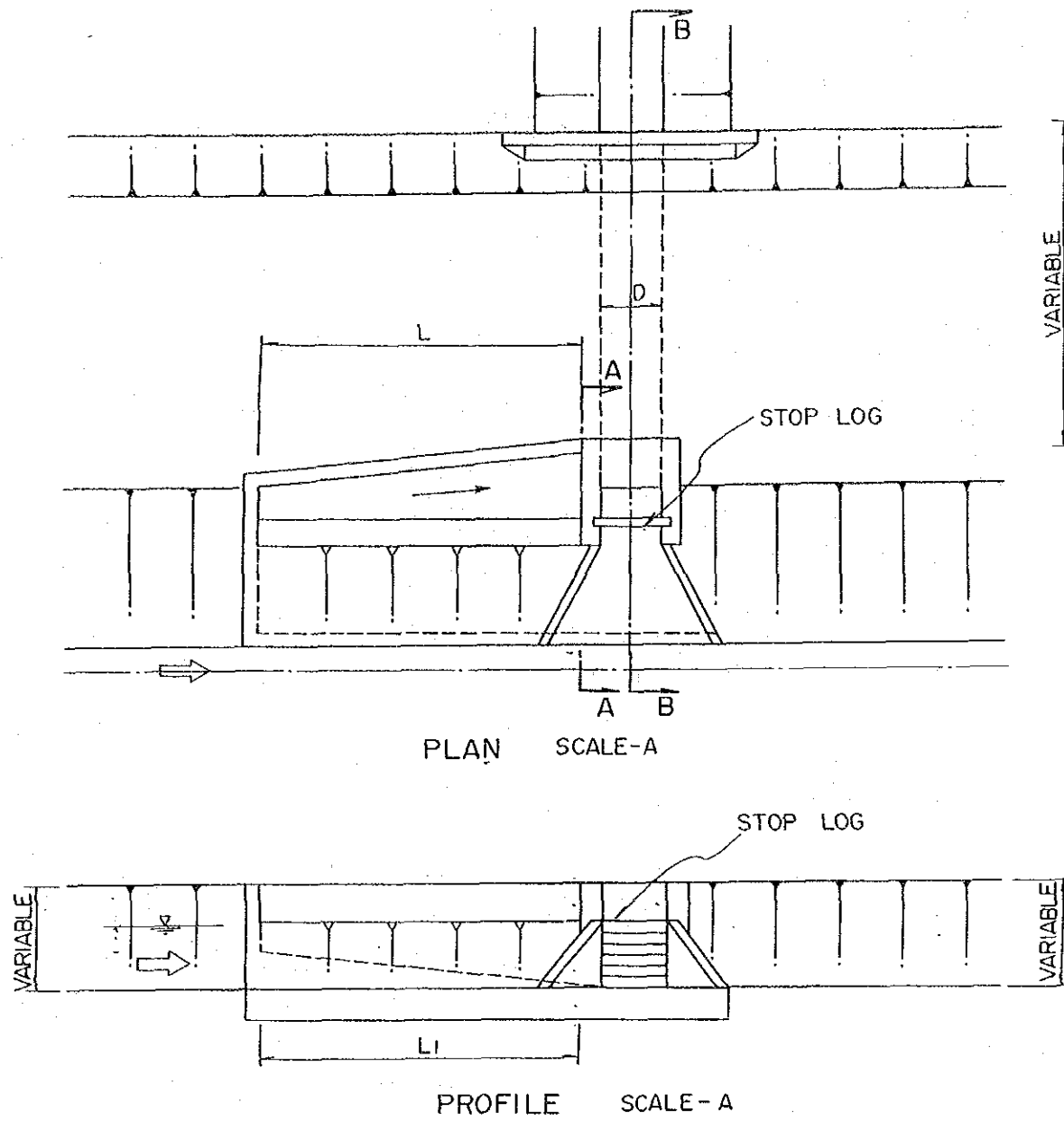
UNIT : mm

TYPE	Q (m <sup>3</sup> /s)	D	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	PIPE
A	1.5 ~ 3.0	1 500	6 000	5 000	5 000	φ 1 500 x 2 Nos
B	0.65 ~ 1.5	1 500	4 000	4 000	4 000	φ 1 500
C	0.25 ~ 0.65	1 000	4 000	2 000	2 000	φ 1 000
D	0.1 ~ 0.25	500	2 000	—	—	φ 500
E	~ 0.1	200	2 000	—	—	φ 200

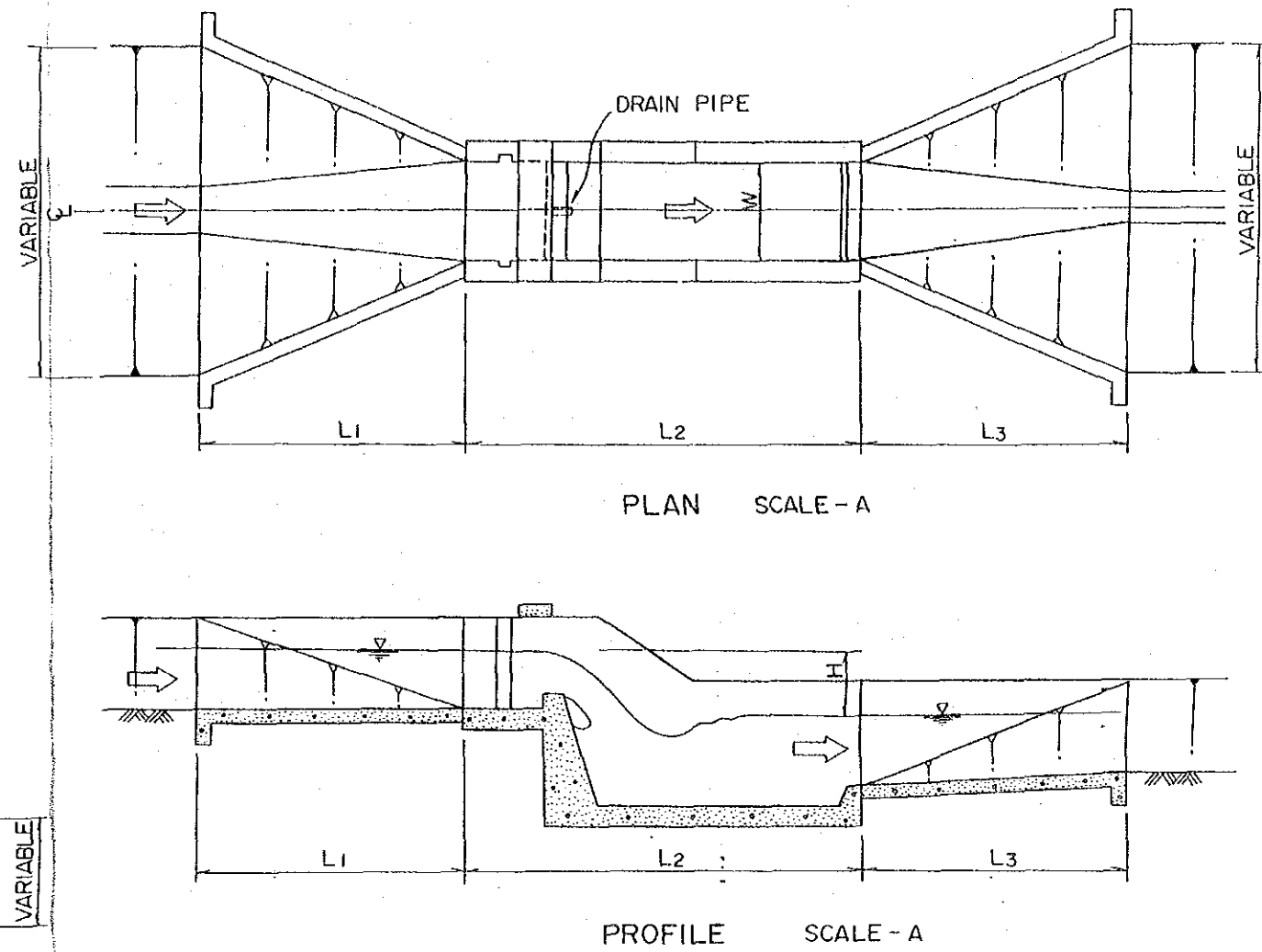


INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: CULVERTS (2/2)	
30	Drawing No. I-30

SPILLWAY WASTEWAY, TYPE-A E



DROP, TYPE-A D



DIMENSION (DROP)

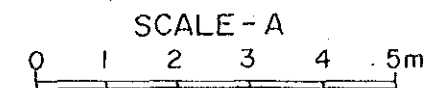
UNIT: mm

TYPE	H	Q (m <sup>3</sup> /s)	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	W
A - 1	1000	0.25 ~ 0.5	1500	2000	3000	1300
A - 2	500	"	1500	2000	3000	1300
B - 1	1000	0.1 ~ 0.25	1000	1500	2000	1000
B - 2	500	"	1000	1500	2000	1000
C	1000	~ 0.1	500	1500	500	800

DIMENSION (SPILLWAY WASTEWAY)

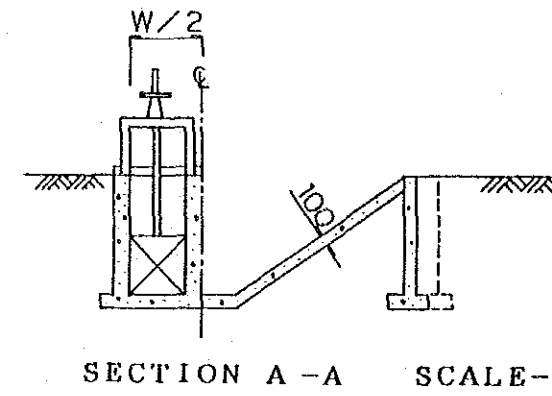
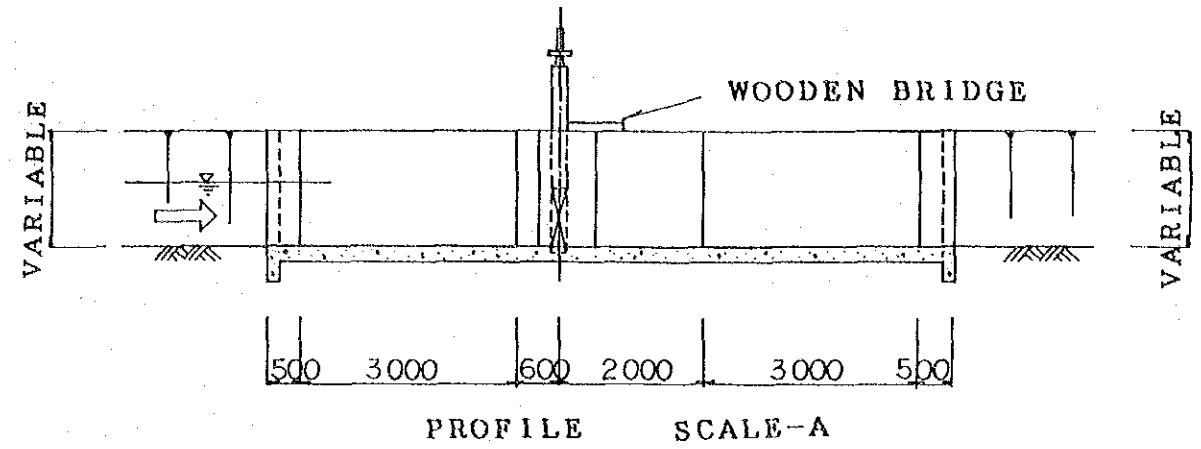
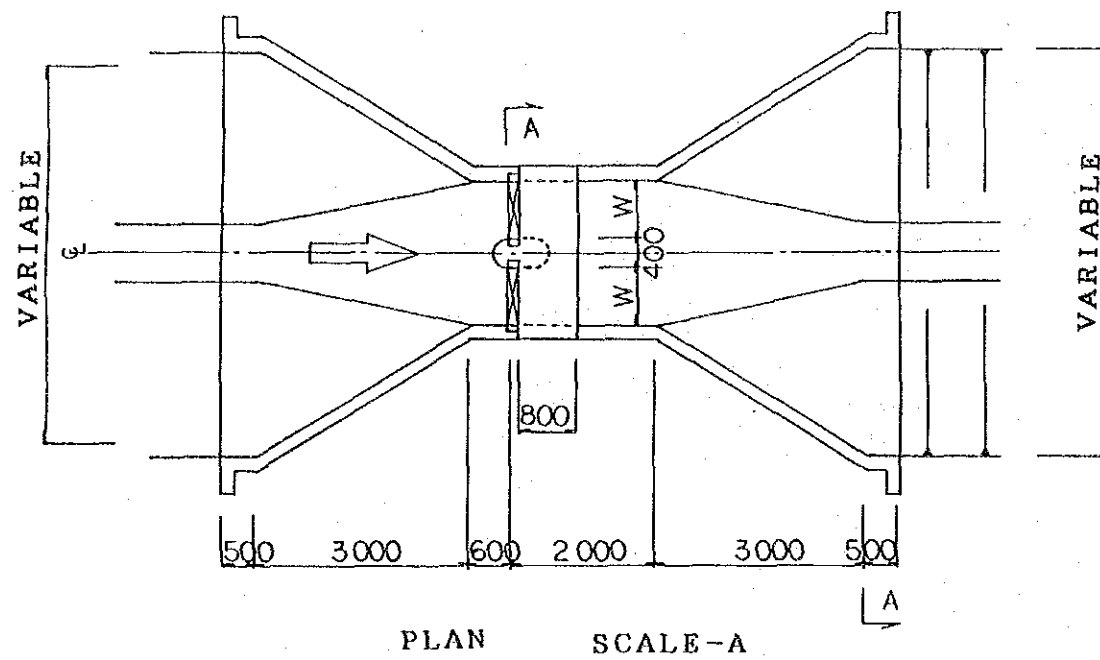
UNIT: mm.

TYPE	Q (m <sup>3</sup> /s)	D	L <sub>1</sub>	L <sub>2</sub>	PIPE	STOP LOG
A	0.5 ~ 1.0	1000	4000	7000	φ 1000	1000x1000
B	0.3 ~ 0.5	1000	2000	7000	φ 1000	1000x1000
C	0.2 ~ 0.3	600	2000	7000	φ 600	600 x 600
D	~ 0.2	500	1000	5500	φ 500	500 x 500

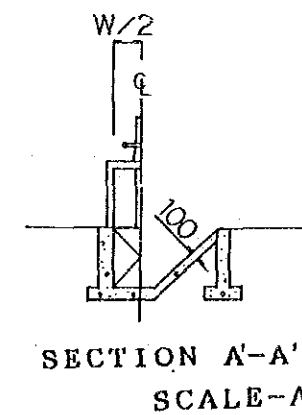
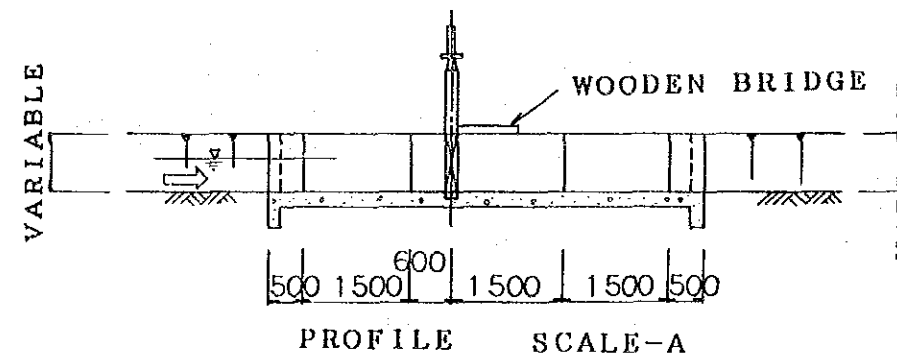
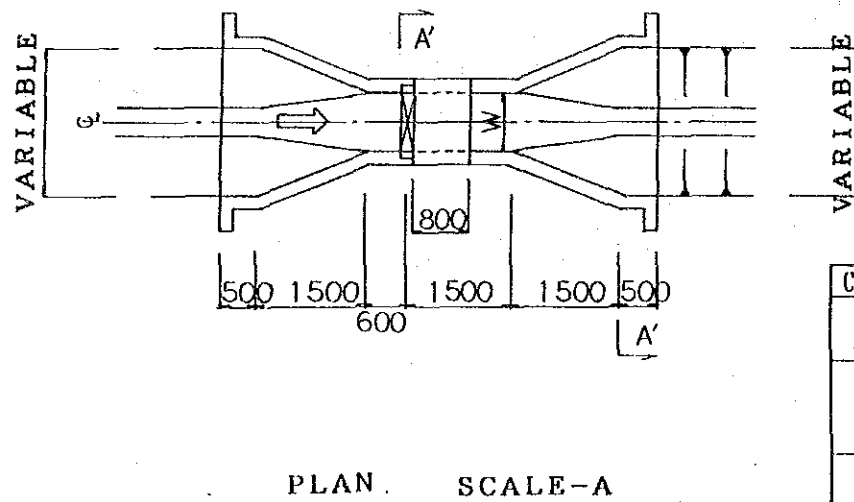


INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
SPILLWAY / WASTEWAY, DROPS  
31 Drawing No. I-31

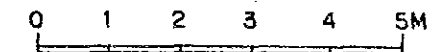
CHECK TYPE I, II



CHECK TYPE III-V



SCALE - A



CANAL TYPE	I	Q(m <sup>3</sup> /s)	CHECK TYPE	W(mm)
A	1/4000	1.26	I	800
		0.32	IV	800
B	1/4000	0.77~0.72	II	600
		0.40~0.35	IV	800
C	1/3000	0.79	II	600
	1/4000	0.32~0.25	IV	800
		0.23~0.21	V	600
	1/3000	0.47~0.41	III	1000
D	1/3000	0.29~0.21	IV	800
	1/2000	0.24~0.21	III	1000
E	1/2000	0.21	IV	800
F	1/1000	0.21	V	600
			IV	800

I: RIVER BED SLOPE

INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT

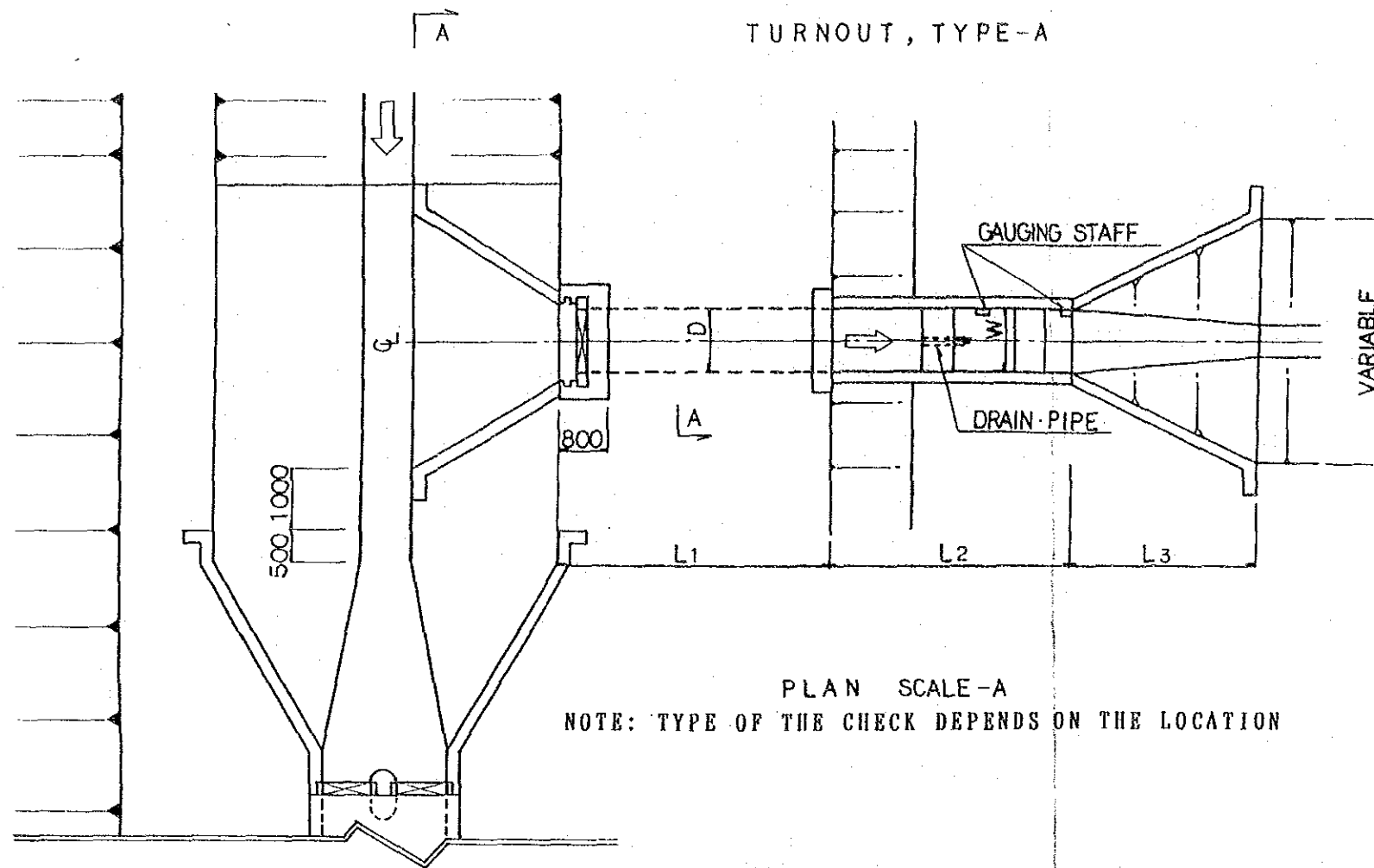
Title Of Drawing:

CHECKS

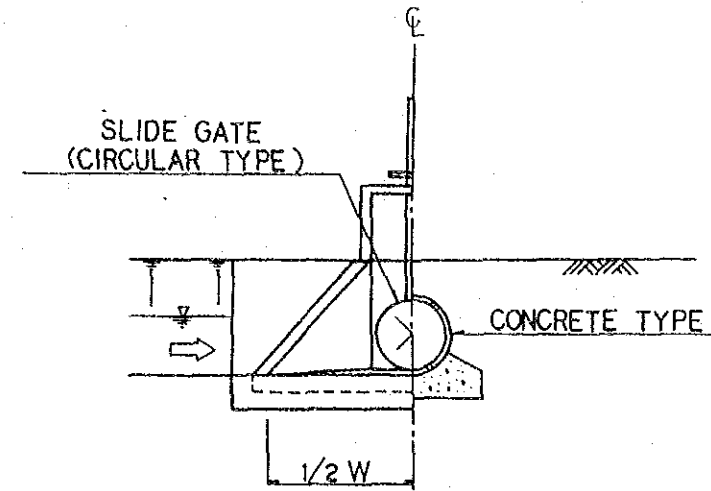
3 2

Drawing No. I-32

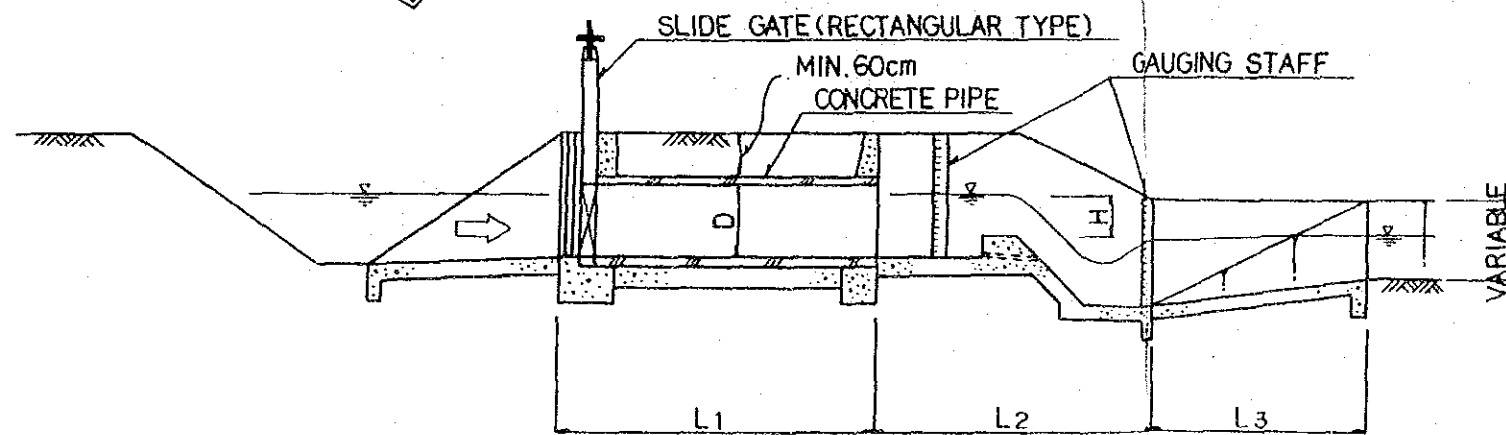
TURNOUT, TYPE-A



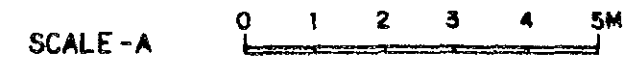
PLAN SCALE-A  
NOTE: TYPE OF THE CHECK DEPENDS ON THE LOCATION



SECTION A-A SCALE-A

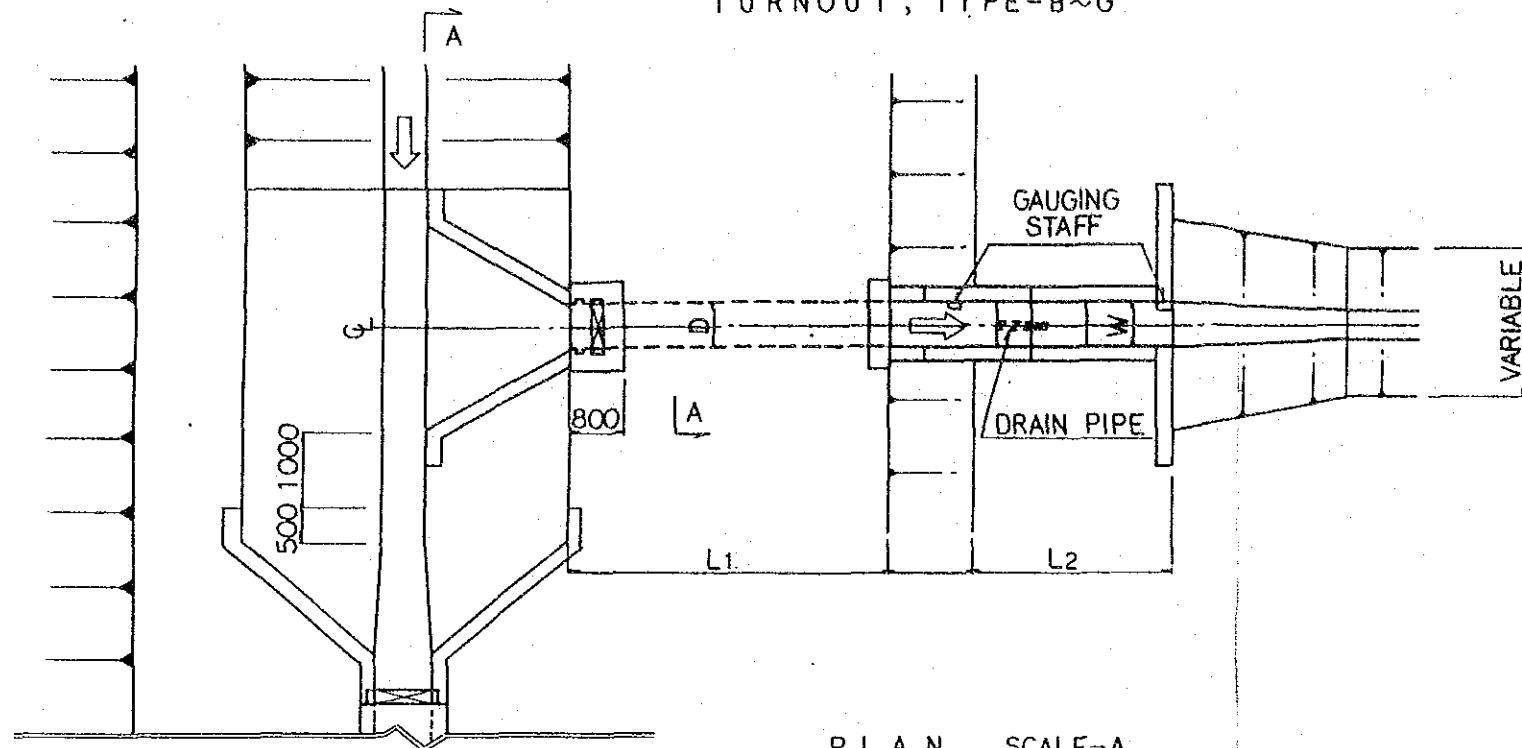


PROFILE SCALE-A



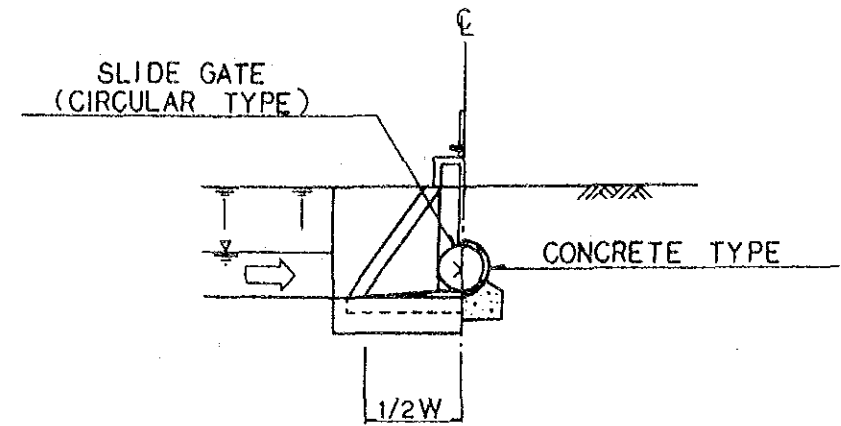
INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: TURNOUT (1/2)	
3-3	Drawing No. I-33

TURNOUT, TYPE-B~G

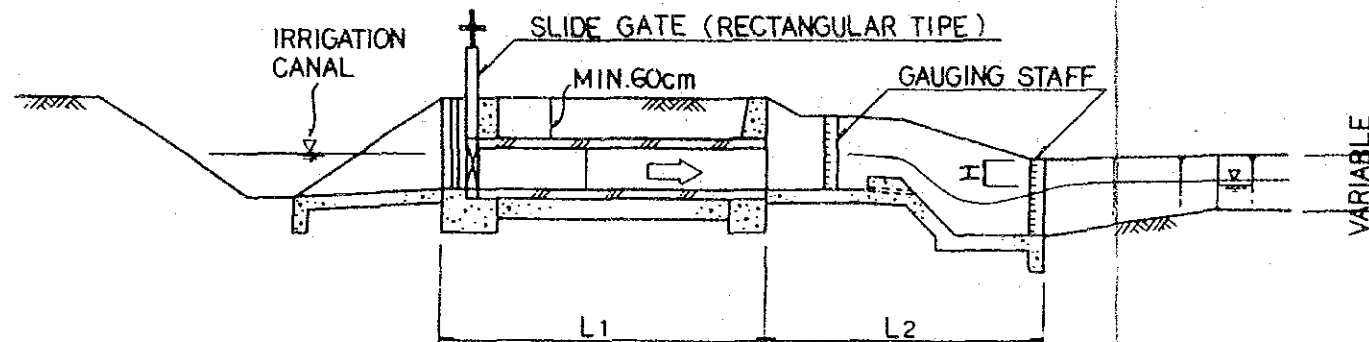


PLAN SCALE-A

NOTE: TYPE OF THE CHECK DEPENDS ON THE LOCATION



SECTION A-A SCALE-A



PROFILE SCALE-A

DIMENSION

UNIT: mm

TYPE	PIPE	Q(m <sup>3</sup> /s)	D	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	W	H
A	φ 1 000	0.5 ~ 0.2	1 000	4 500	4 000	3 000	1 000	300
B	φ 500	0.2 ~ 0.1	500	4 500	4 000	—	500	300
C	φ 500	0.2 ~ 0.1	500	1 500	1 500	—	500	300
D	φ 300	0.1 ~ 0.05	300	4 500	4 000	—	300	300
E	φ 300	0.1 ~ 0.05	300	1 500	1 500	—	300	300
F	φ 200	0.05 ~	200	4 500	4 000	—	200	300
G	φ 200	0.05 ~	200	1 500	1 500	—	200	300

SCALE-A

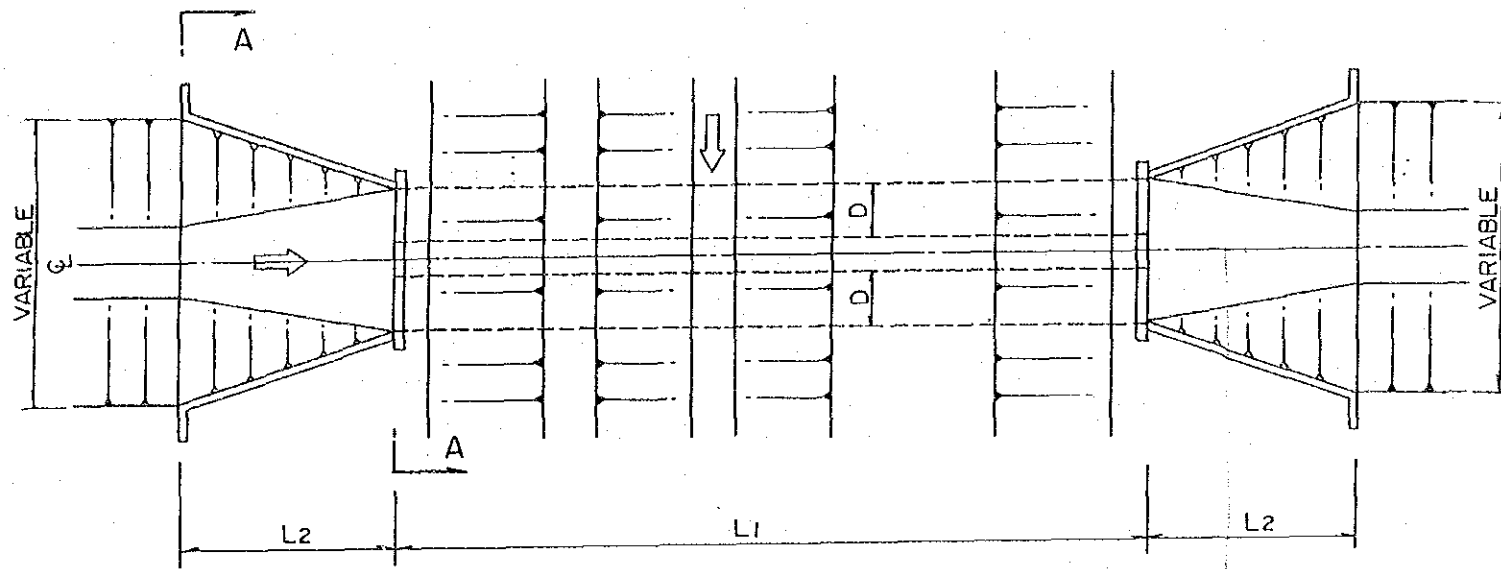


INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT

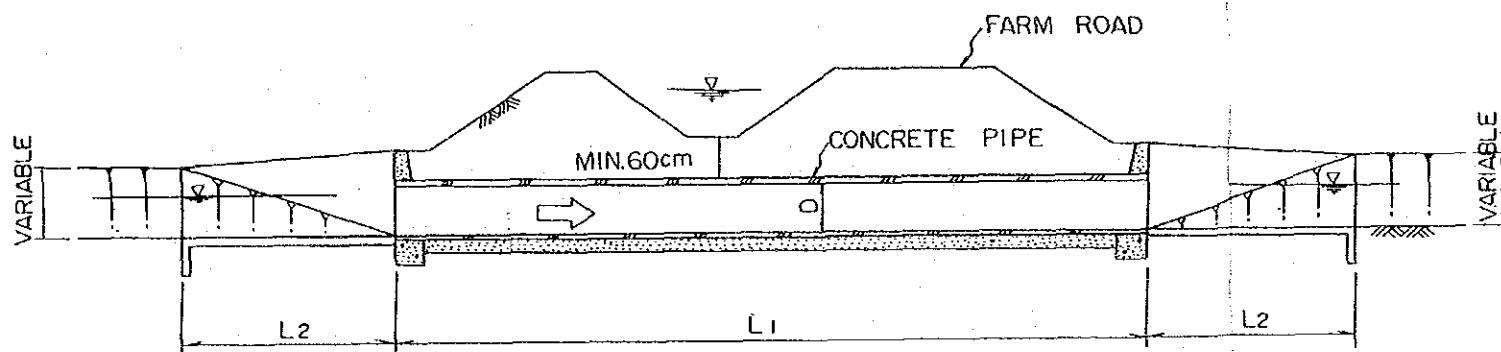
Title Of Drawing:

TURNOUT (2/2)

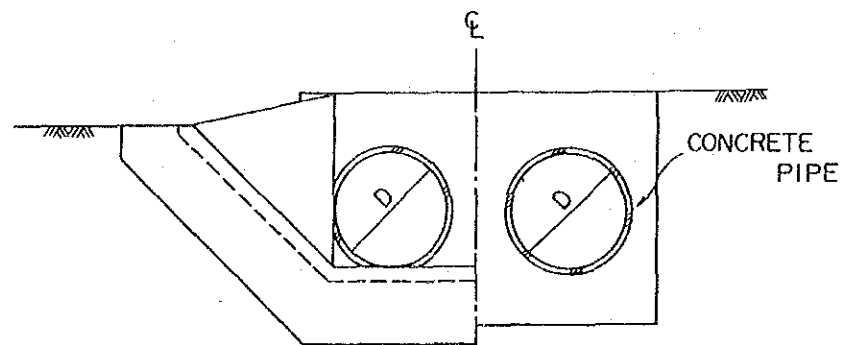
CROSS DRAIN , TYPE - A



PLAN SCALE - A

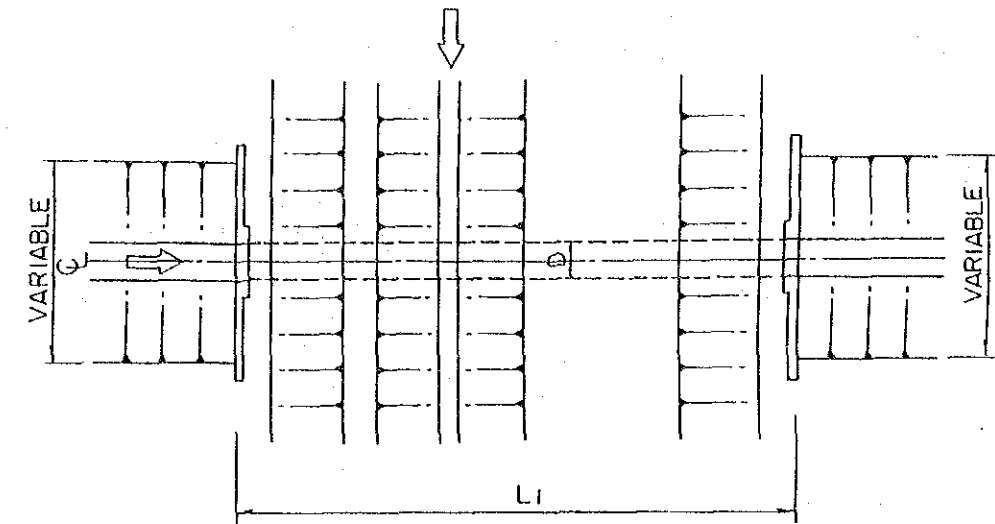


PROFILE SCALE - A

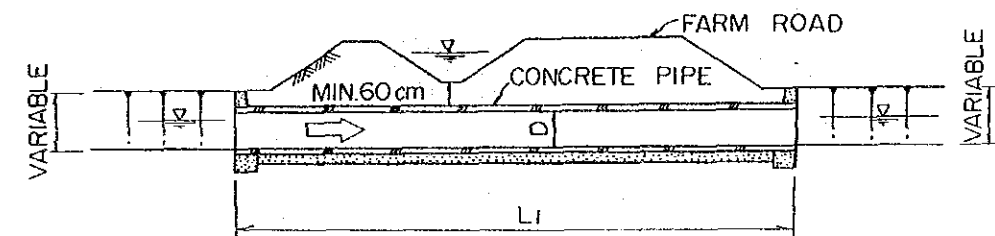


SECTION A - A SCALE - B

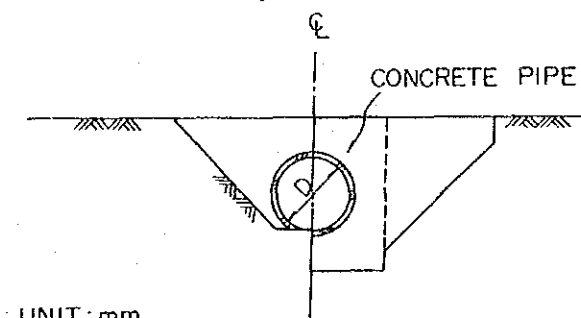
CROSS DRAIN , TYPE - B



PLAN SCALE - A



PROFILE SCALE - A

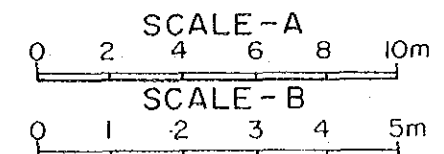


SECTION A - A SCALE - B

DIMENSION

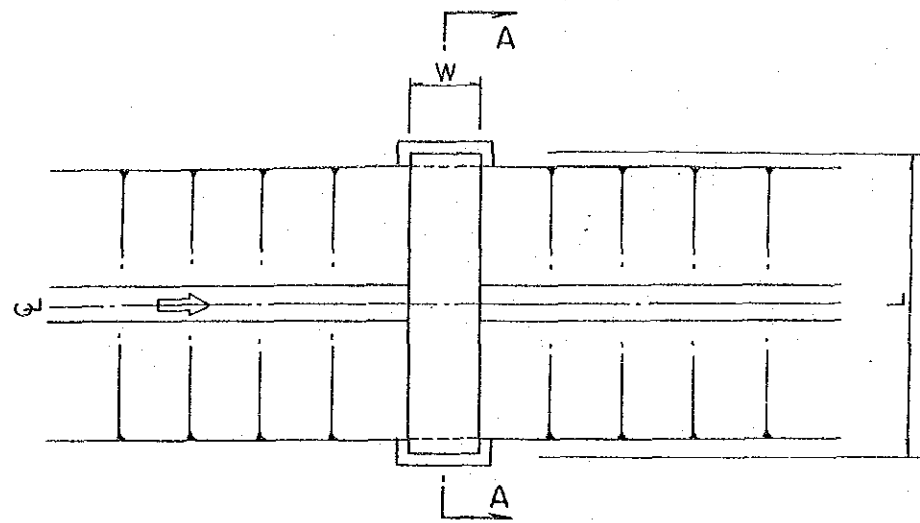
UNIT : mm

TYPE	Q (m <sup>3</sup> /s)	D	L <sub>1</sub>	L <sub>2</sub>	PIPE
A	2.5 ~ 5.0	1500	12000	5000	φ1500x2 Nos
B-1	1.0 ~ 2.5	1500	15000	—	φ1500
-2	1.0 ~ 2.5	1500	7000	—	φ1500
-3	0.5 ~ 1.0	1000	12000	—	φ1000
-4	0.5 ~ 1.0	1000	10000	—	φ1000
-5	0.5 ~ 1.0	1000	7000	—	φ1000
-6	0.2 ~ 0.5	800	12000	—	φ 800
-7	0.2 ~ 0.5	800	10000	—	φ 800
-8	0.2 ~ 0.5	800	7000	—	φ 800
-9	~ 0.2	500	3000	—	φ 500

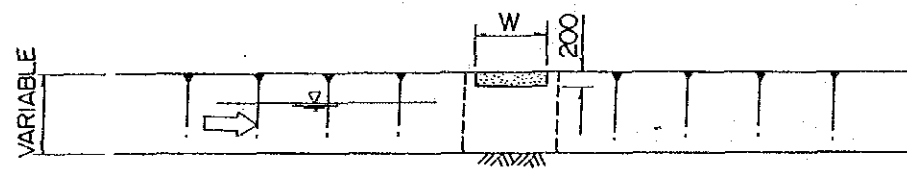


INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
CROSS DRAINS  
35 | Drawing No.I - 35

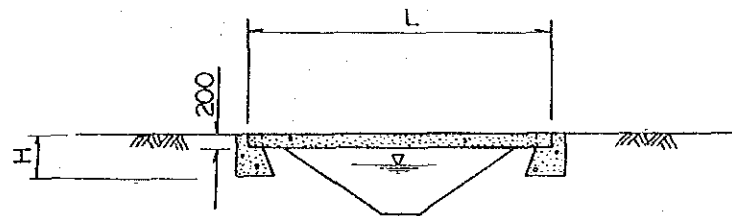
FOOTPATH BRIDGE, TYPE-A (L = 5m)



PLAN SCALE-A



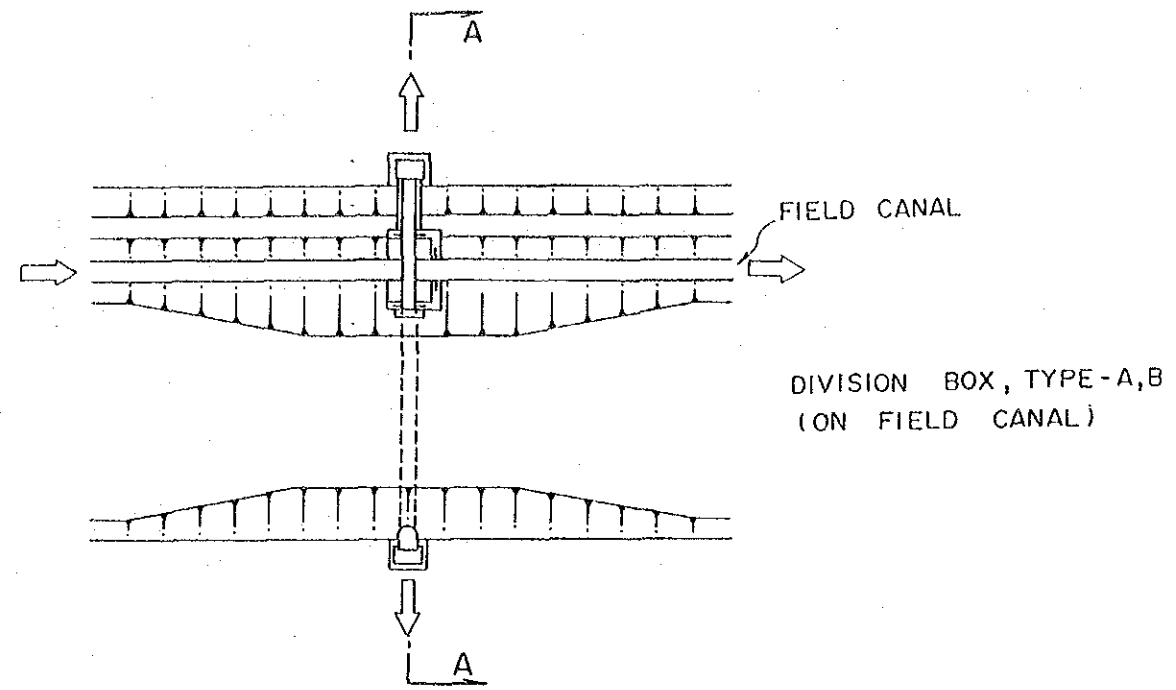
PROFILE SCALE-A



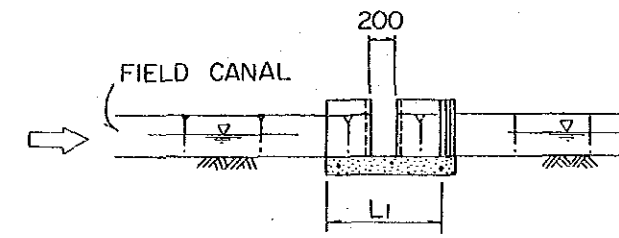
SECTION A-A SCALE-A

DIMENSION (FOOTPATH BRIDGE)  
UNIT: mm

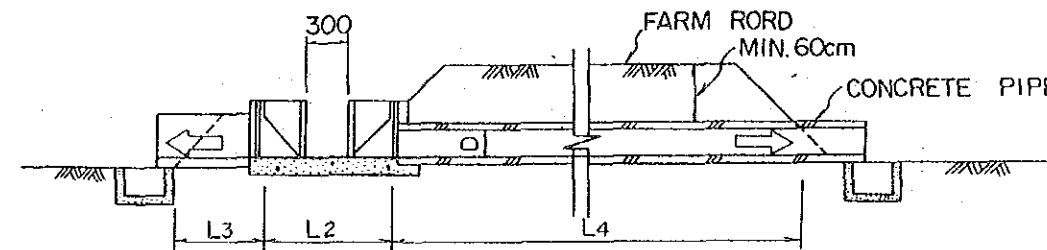
TYPE	H	W	L
A-1	600	1000	5000
-2	600	1000	4000
-3	600	1000	3000
-4	600	1000	2000



PLAN SCALE-A



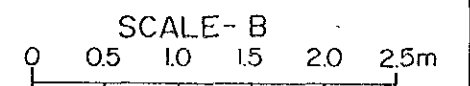
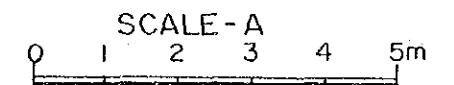
PROFILE SCALE-B



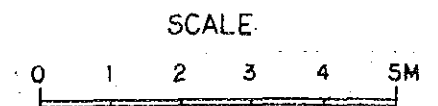
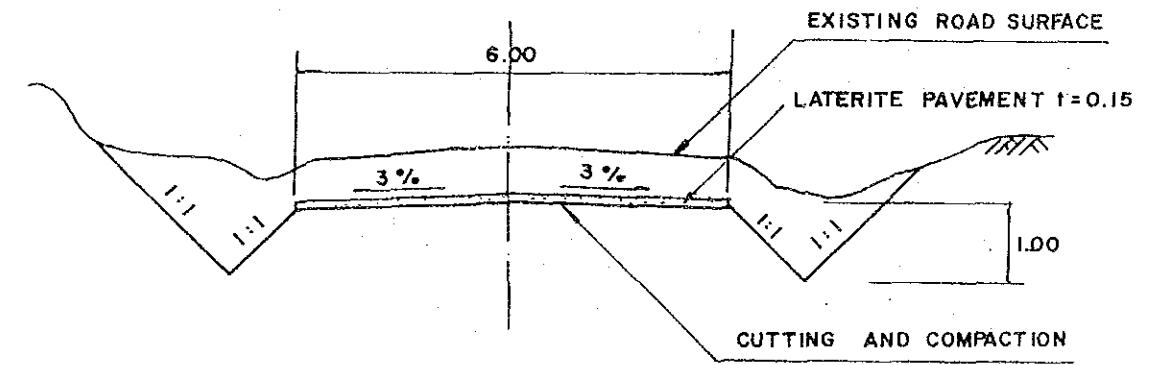
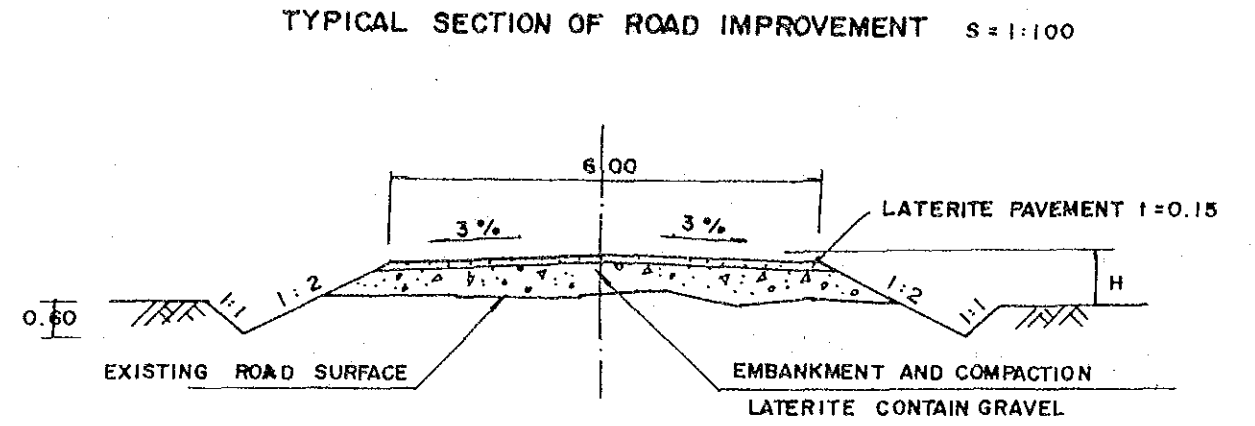
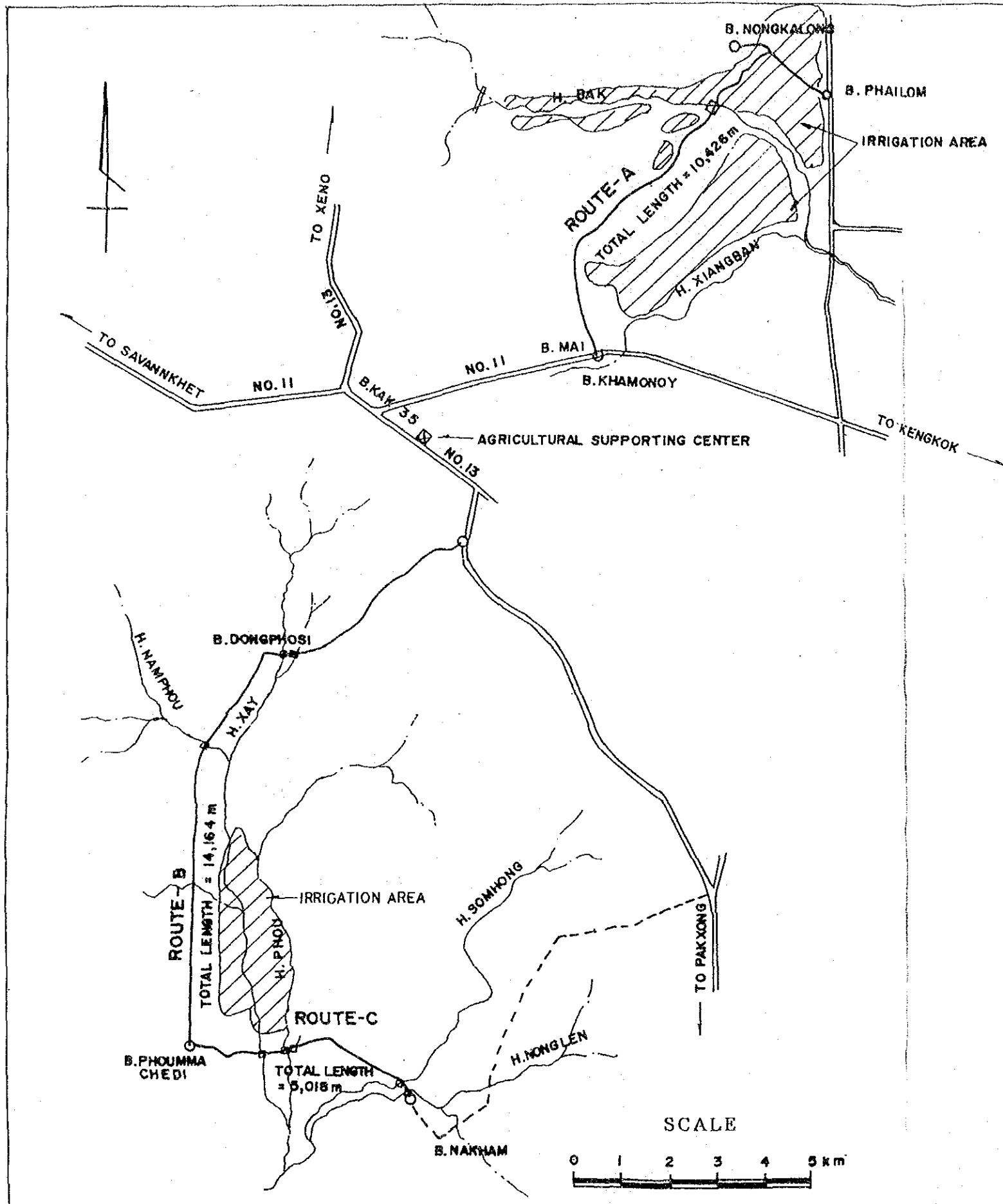
SECTION A-A SCALE-B

DIMENSION (DIVISION BOX)  
UNIT: mm

TYPE	L1	L2	L3	L4
A	800	900	600	1500
B	400	500	400	500



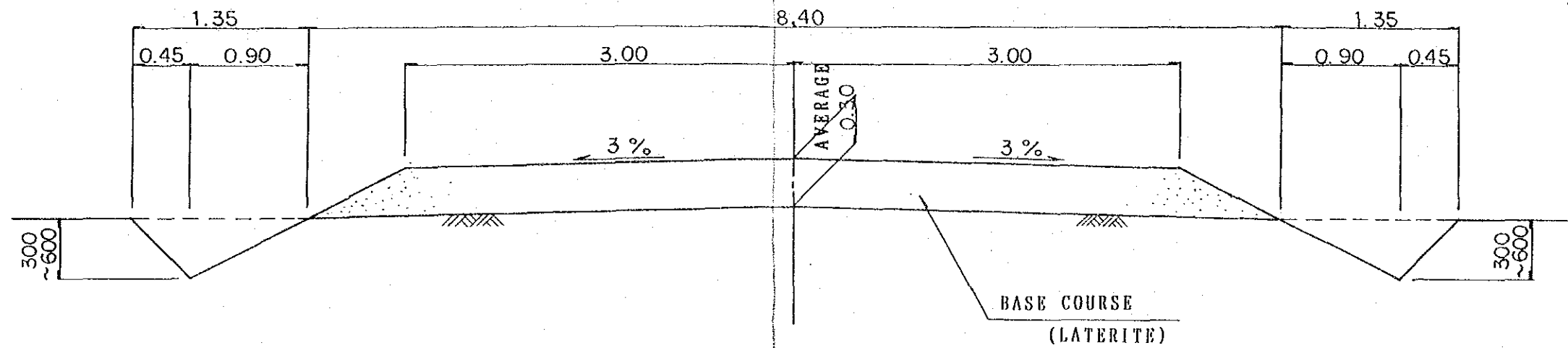
INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
FOOTPATH BRIDGES &  
DIVISION BOXES  
36 | Drawing No. I-36



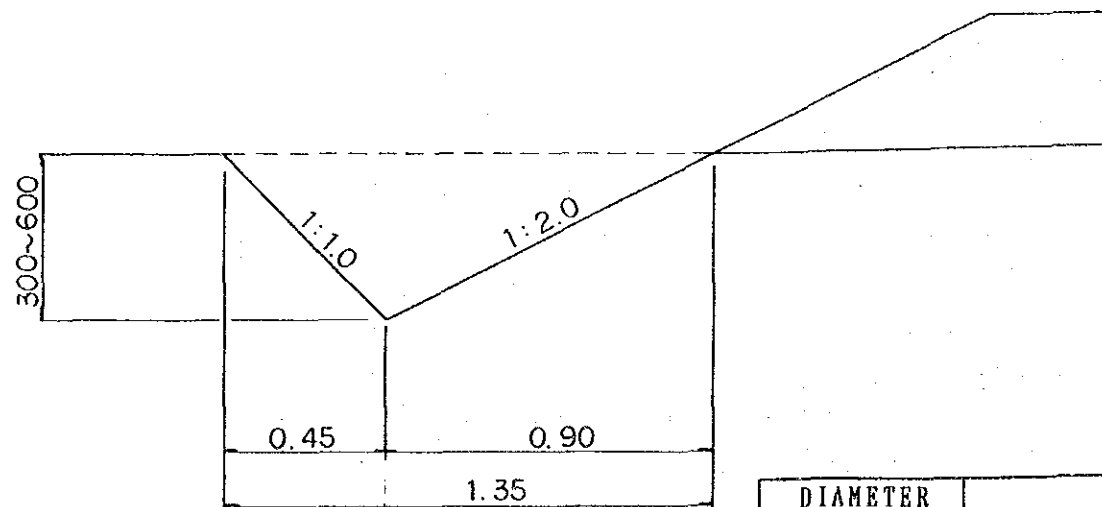
INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing: ROAD IMPROVEMENT PLAN (ROUTE A,B,C)	
37	Drawing No. R-1



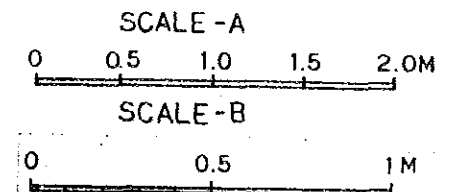
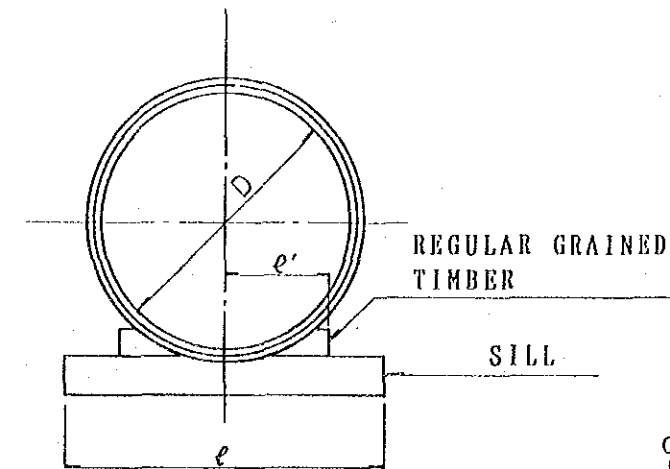
TYPICAL DRAWING OF ROAD SCALE-A



EARTH GUTTER SCALE-B

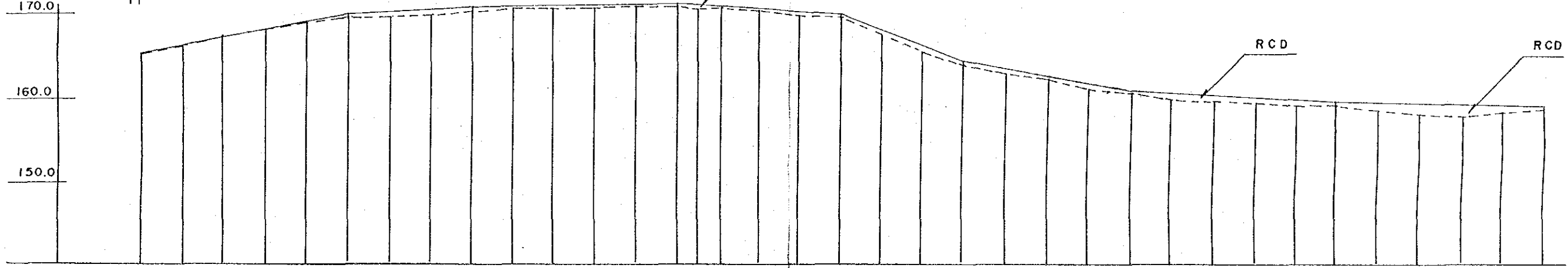
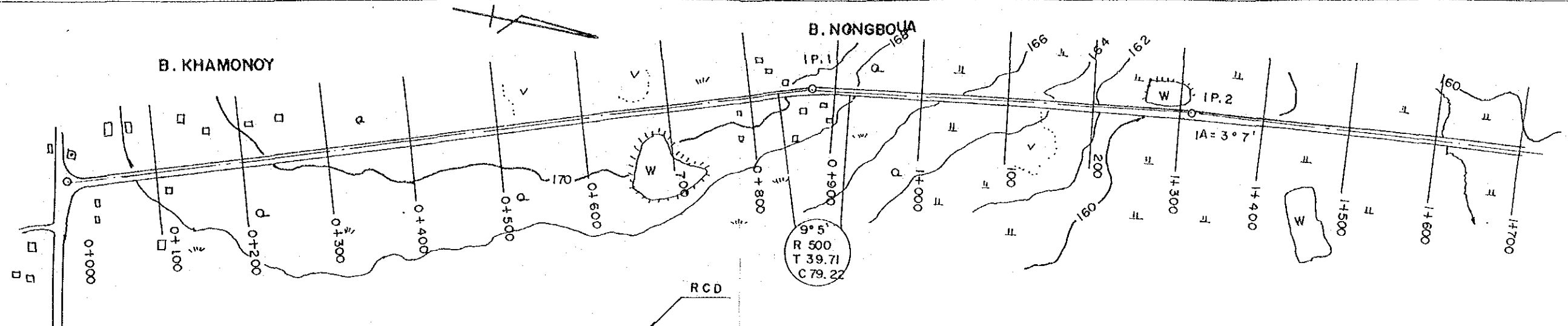


TYPICAL DRAWING OF LAYING PIPES SCALE-B



DIAMETER D	S e	S I L L		REGULAR GRAINED TIMBER	
		FINISH DIAMETER	e'		
150 - 300	450	105*75	150	80*80	
400 - 600	600	120*90	200	60*60	
700 - 1000	900	150*120	300	75*75	
1000 - 1200	1200	150*120	400	75*75	

INTEGRATED AGRICULTURAL RURAL DEVELOPMENT PROJECT	
Title Of Drawing:	
ROAD IMPROVEMENT TYPICAL SECTION	
38	Drawing No. R-2



CURVE SLOPE																																					
ROAD SURFAC	165.20																																				
GROUND LEVEL	165.11	166.23	167.40	168.14	168.90	169.43	169.66	170.03	170.21	170.34	170.59	170.86	170.86	170.96	170.63	170.74	170.37	169.82	169.25	167.55	165.38	163.94	163.01	162.21	161.18	160.44	159.72	159.43	159.37	159.15	159.13	158.65	158.27	158.08	158.28	158.67	159.00
ACCUMULAT DISTANCE	0	50	100	150	200	250	300	350	400	450	500	550	600	650	676	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	
DISTANS	0	50	50	50	50	50	50	50	50	50	50	50	50	50	26	24	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
STATION	0+000	0+100		0+200		0+300		0+400		0+500		0+600		0+700			0+800	0+900		1+000		1+100		1+200		1+300		1+400		1+500		1+600		1+700			

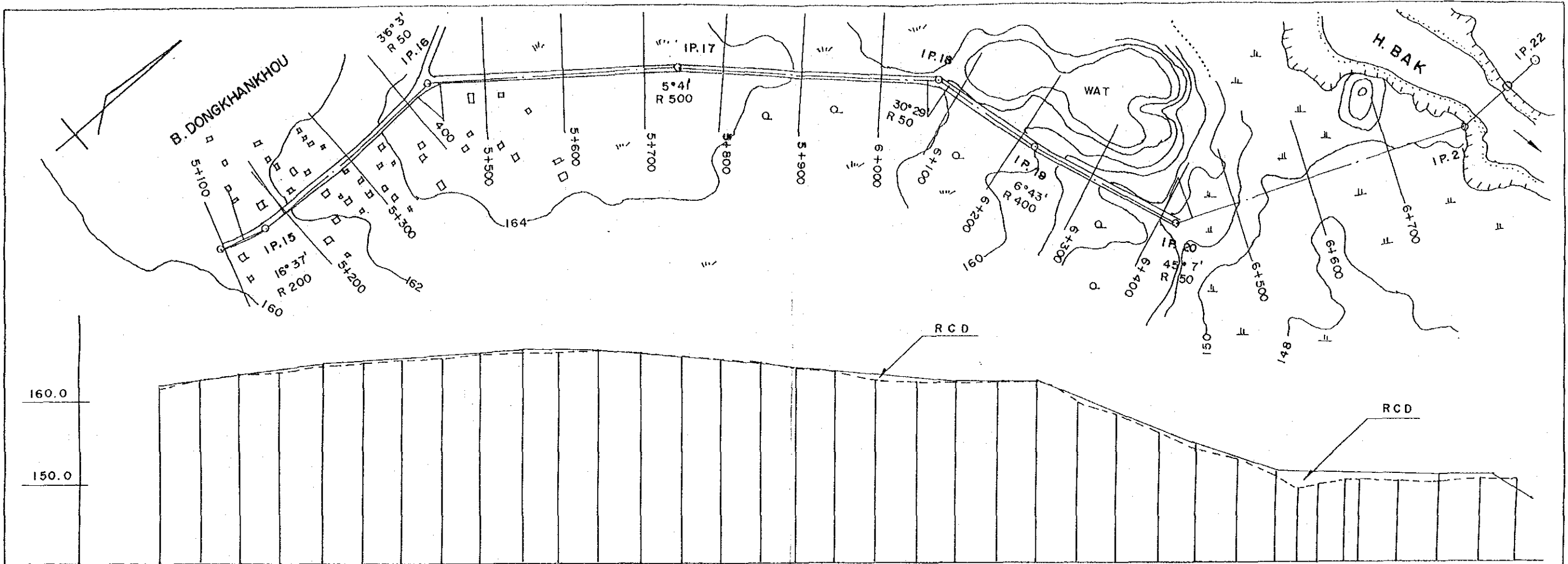


INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
RURAL ROAD IMPROVEMENT  
(ROUTE A, 1/7)

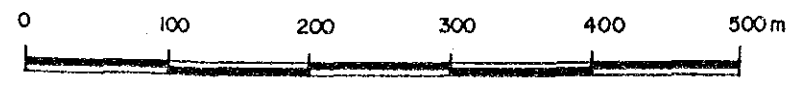
39 Drawing No. R-3





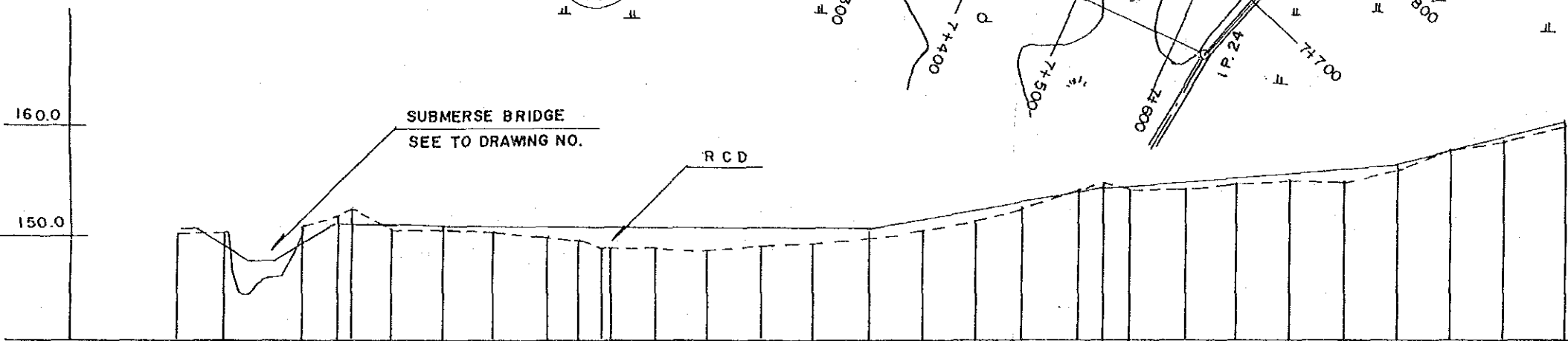
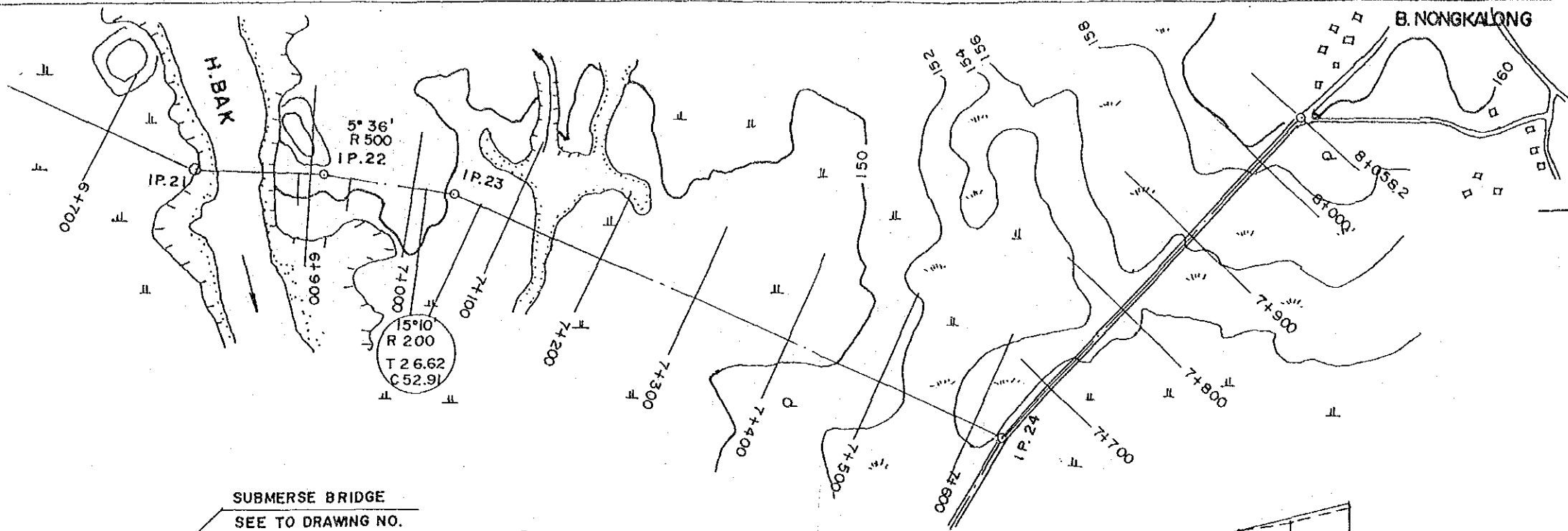


CURVE SLOPE	1.35%															0.8%					0.1%					0.84%					LEVEL		3.9%					3.6%		0.2%					LEVEL	
ROAD SURFAC	161.50				164.20					166.20			166.10							162.30	162.30				154.50	150.90					150.50	150.50														
GROUND LEVEL	161.34	162.33	162.98	163.52	164.00	164.51	164.94	165.39	165.86	166.04	166.12	166.13	165.82	165.21	165.03	164.43	163.99	163.18	162.50	162.05	162.21	162.29	162.32	159.67	158.16	156.22	154.13	152.85	150.63	149.73	150.08	150.16	150.15	150.05	150.00	150.25	150.23									
ACCUMULAT DISTANCE	5100	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850	5900	5950	6000	6050	6100	6150	6200	6250	6300	6350	6400	6450	6500	6526	6550	6578	6600	6650	6700	6750	6796.1									
DISTANS	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	26	24	28	22	50	50	50	18.30										
STATION	5+100		5+200		5+300		5+400		5+500		5+600		5+700		5+800		5+900		6+000		6+100		6+200		6+300		6+400		6+500		6+600		6+700		IP.21											

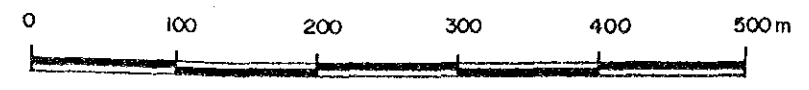


INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
RURAL ROAD IMPROVEMENT  
(ROUTE A, 4/7)

42 Drawing No. R-8

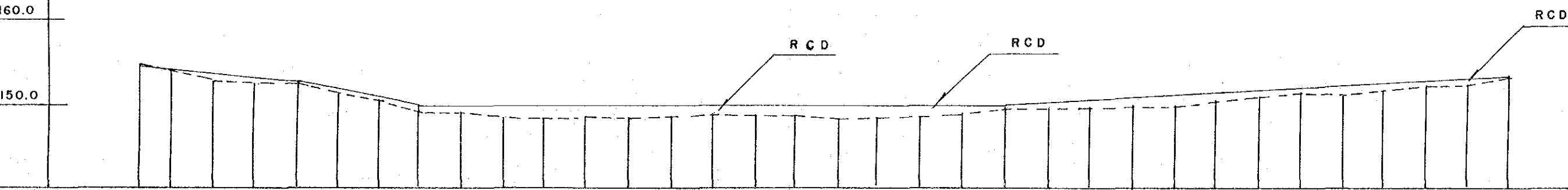
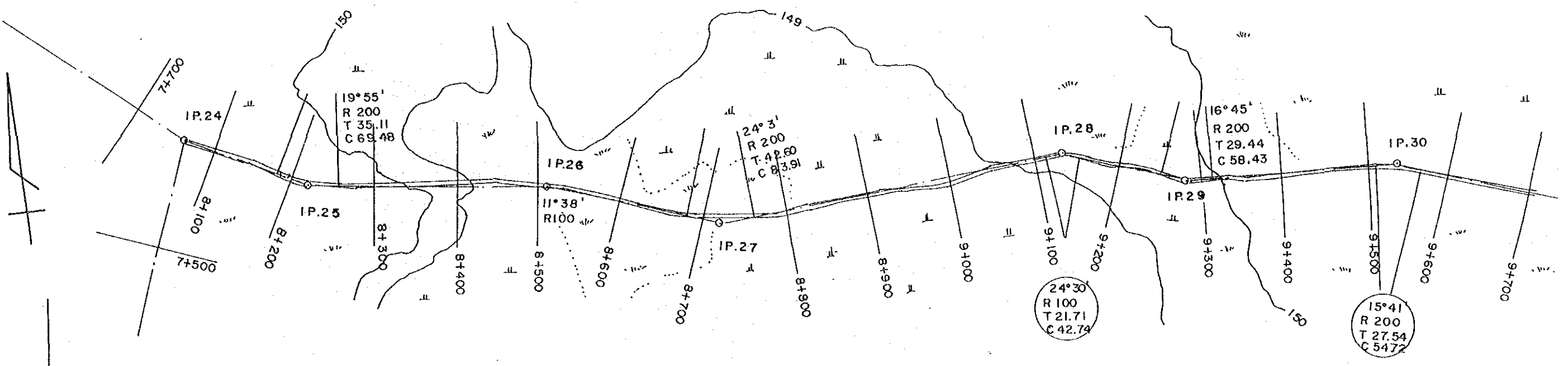


CURVE SLOPE	6.4%   7.4%   0.56%   0.125%   1.95%   0.78%   2.34%																															
ROAD SURFAC	150.50	147.30	151.00	150.40		149.90	154.40	156.50	160.20																							
GROUND LEVEL	150.25	150.23	144.53	150.71	151.93	152.34	150.56	150.20	150.12	149.95	149.75	148.40	148.52	148.60	148.62	148.67	148.95	149.63	150.08	151.33	152.48	154.22	154.67	153.94	154.05	154.34	154.78	155.01	156.20	157.96	158.60	160.12
ACCUMULAT DISTANCE	6750	6796.16	6804.66	6868.36	6900	6916	6950	7000	7050	7100	7131	7150	7156	7200	7250	7300	7350	7400	7450	7500	7550	7600	7631.2	7650	7700	7750	7800	7850	7900	7950	8000	8058.2
DISTANS	50	46.16	8.50	72.20	31.64	16	34	50	50	50	31	18	6	44	50	50	50	50	50	50	50	50	31.2	18.8	50	50	50	50	50	50	50	58.2
STATION	6+750	IP.21 6+800		6+900			7+000			7+100			7+200			7+300			7+400			7+500		IP.24 7+600		7+700		7+800		7+900		8+000

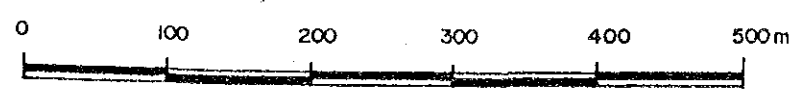


INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
RURAL ROAD IMPROVEMENT  
(ROUTE A, 5/7)

43 | Drawing No. R-7

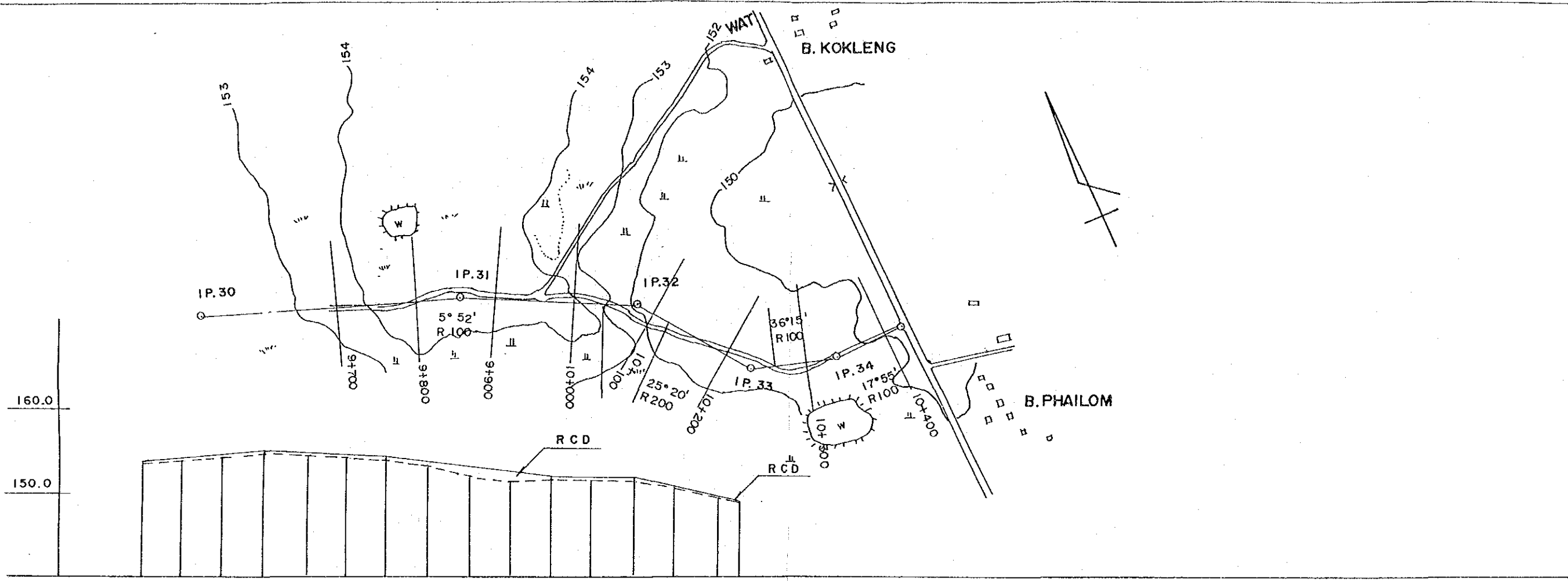


CURVE SLOPE	LEVEL																																	
	0.85%				LEVEL																		0.67%											
ROAD SURFAC	154.40				152.70																									153.80				
GROUND LEVEL	154.67	153.77	152.85	152.45	152.55	151.14	150.21	149.26	149.03	148.70	148.62	148.51	148.46	148.40	148.35	148.67	148.78	148.38	148.13	148.39	149.01	149.50	149.61	149.77	149.81	149.94	150.66	150.99	151.20	151.64	151.72	152.11	152.86	153.72
ACCUMULAT DISTANCE	(763.12) 8058.2	8100	8150	8200	8250	8300	8350	8400	8450	8500	8550	8600	8650	8700	8750	8800	8850	8900	8950	9000	9050	9100	9150	9200	9250	9300	9350	9400	9450	9500	9550	9600	9650	9700
DISTANS		41.8	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
STATION	IP.24	8+100		8+200		8+300		8+400		8+500		8+600		8+700		8+800		8+900		9+000		9+100		9+200		9+300		9+400		9+500		9+600		9+700

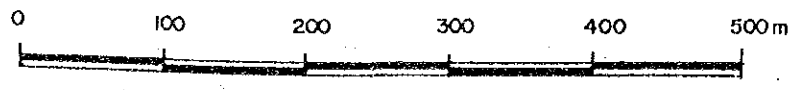


INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
RURAL ROAD IMPROVEMENT  
(ROUTE A, 6/7)

44 | Drawing No. R-8

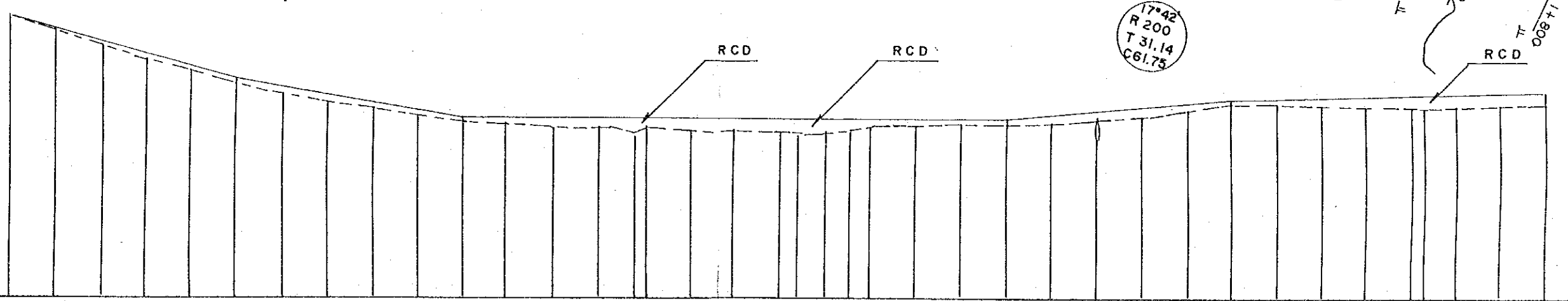
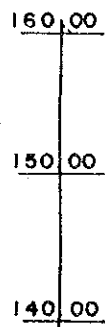
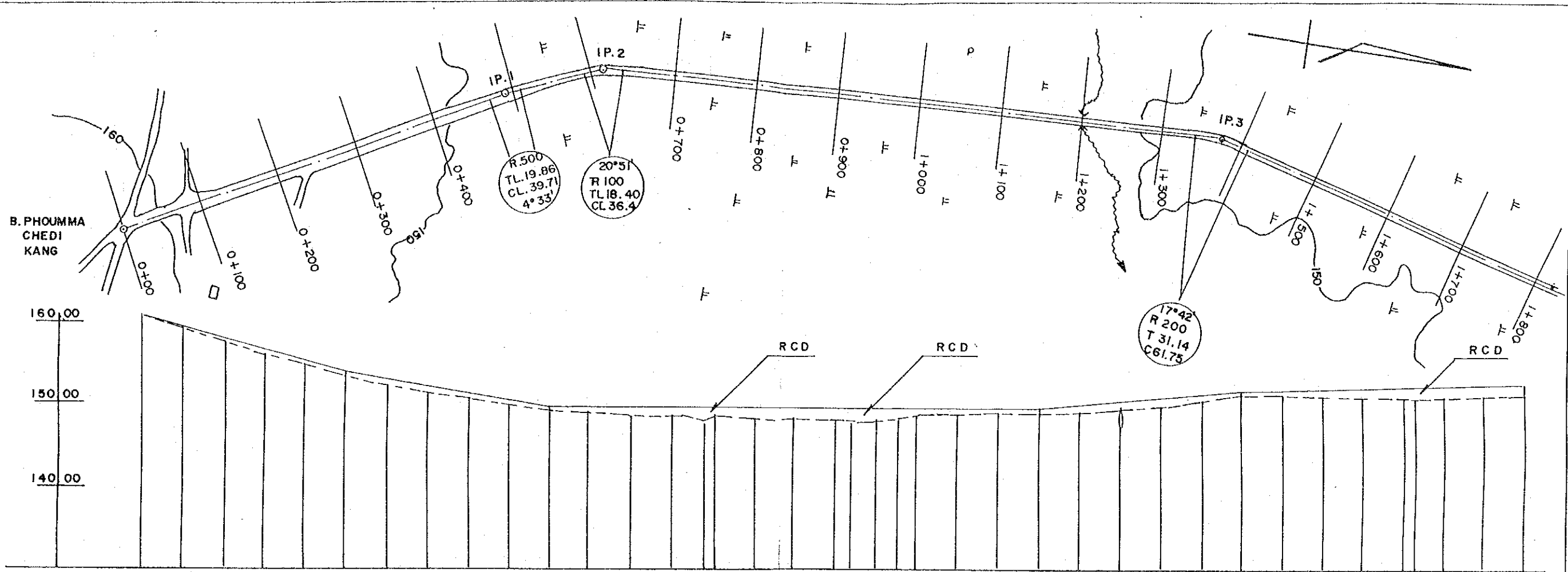


CURVE SLOPE																
ROAD SURFAC	153.80		155.30		154.50		152.00		151.60		149.50					
GROUND LEVEL	153.72	154.09	154.65	155.05	154.83	154.42	154.15	153.43	152.07	151.64	151.72	151.40	151.33	150.87	149.96	149.33
ACCUMULAT DISTANCE	9700	9750	9800	9850	9900	9950	10000	10050	10100	10150	10200	10250	10300	10350	10400	10426
DISTANS	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	26
STATION	9+700		9+800		9+900		10+000		10+100		10+200		10+300		10+400	10+426



INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
RURAL ROAD IMPROVEMENT  
(ROUTE A, 7/7)  
45 Drawing No. R-9

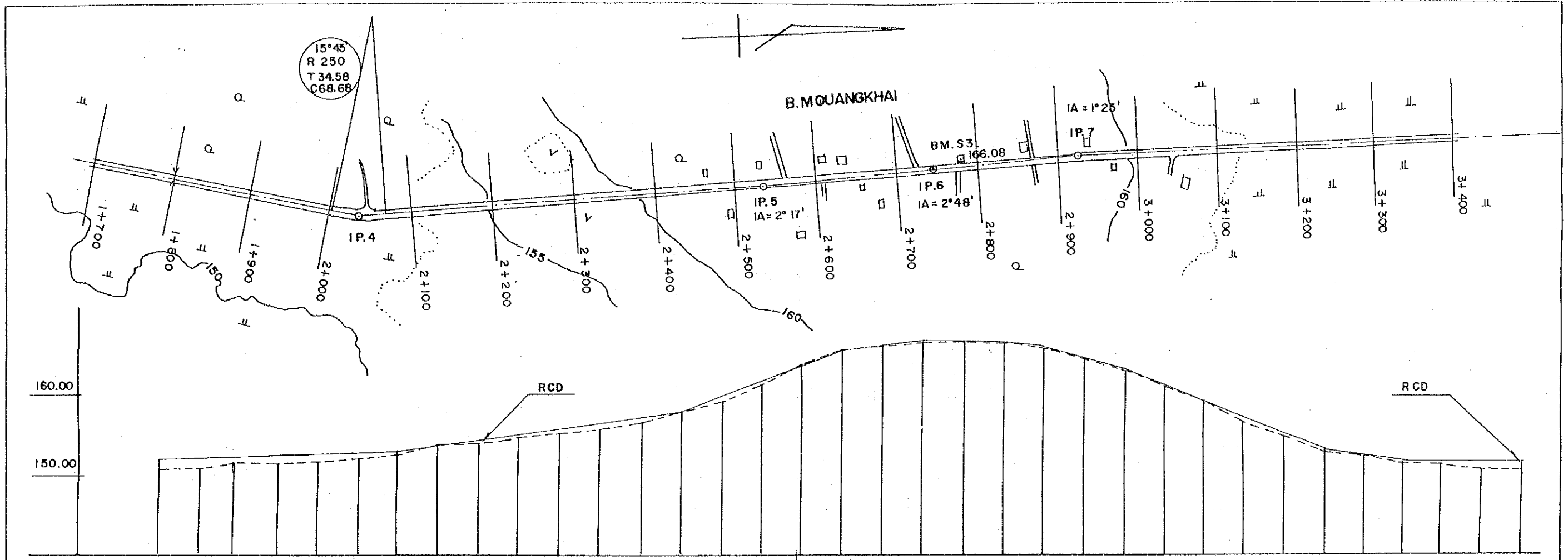




CURVE SLOPE	3.00 %																	1.56 %																	0.04 %																	0.80 %																	0.22 %																																	
ROAD SURFAC	160.90																	153.40																	149.50																	149.20																	151.20																	151.96																
GROUND LEVEL	160.91	158.96	157.60	156.34	155.02	153.23	151.98	151.10	150.22	149.73	149.27	149.22	148.91	148.61	148.39	148.27	147.78	148.24	148.08	148.17	148.00	147.63	148.26	148.14	148.42	148.53	148.80	148.79	148.89	149.29	147.64	149.58	150.34	150.85	150.93	150.99	150.65	150.52	150.55	150.30	150.57	150.68	150.79																																																											
ACCUMULAT DISTANCE	0	50	100	150	200	250	300	350	400	450	500	550	600	650	690	700	750	800	850	866.5	900	927	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1562	1600	1650	1700																																																															
DISTANS	0	50	50	50	50	50	50	50	50	50	50	50	50	50	40	10	50	50	50	16.50	33.50	27.00	23.00	50	50	50	50	50	50	50	50	50	50	50	12	38	50	50																																																																
STATION	0+000	0+100			0+200			0+300			0+400			IP.1 0+500	0+600			IP.2 0+700	0+800			0+900			1+000			1+100			1+200			1+300			IP.3 1+400	1+500			1+600			1+700																																																										



INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
RURAL ROAD IMPROVEMENT  
(ROUTE B, 1/9)  
46 Drawing No. R-10

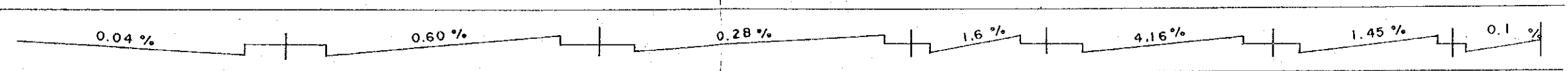
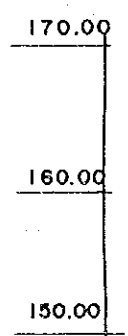
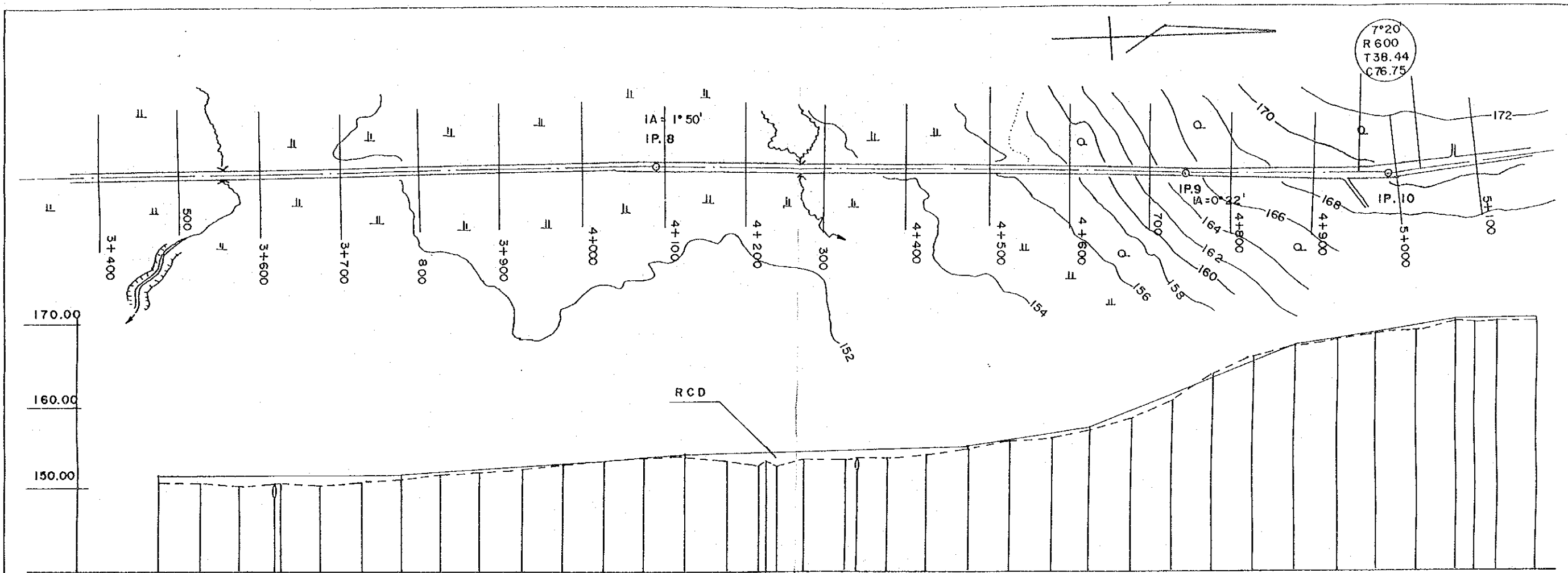


CURVE SLOPE	0.22 %																				1.60 %																				3.65 %																				1.0 %																				0.67 %																				2.60 %																				3.96 %																				1.20 %																				0.04 %																			
ROAD SURFAC	151.96																				152.60																				158.20																				165.50																				166.50																				165.60																				163.00																				153.10																				151.90																			
GROUND LEVEL	150.79	150.90	151.23	151.30	151.24	151.34	152.03	152.38	153.40	153.60	153.93	154.30	155.02	155.61	156.65	158.12	159.89	161.18	163.88	165.03	165.36	165.90	166.39	166.65	166.48	166.12	165.47	164.21	162.87	162.07	161.10	159.03	156.89	154.83	152.90	152.13	151.62	151.16	150.66	150.33																																																																																																																																												
ACCUMULAT DISTANCE	1700	1750	1795	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400																																																																																																																																																
DISTANS	50	50	45	5	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50																																																																																																																																														
STATION	1+700		1+800		1+900		2+000	IP.4		2+100		2+200		2+300		2+400		2+500	IP.5		2+600		2+700	IP.6		2+800		2+900	IP.7		3+000		3+100		3+200		3+300		3+400																																																																																																																																													



INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
RURAL ROAD IMPROVEMENT  
(ROUTE B, 2/9)

47 Drawing No. R-11

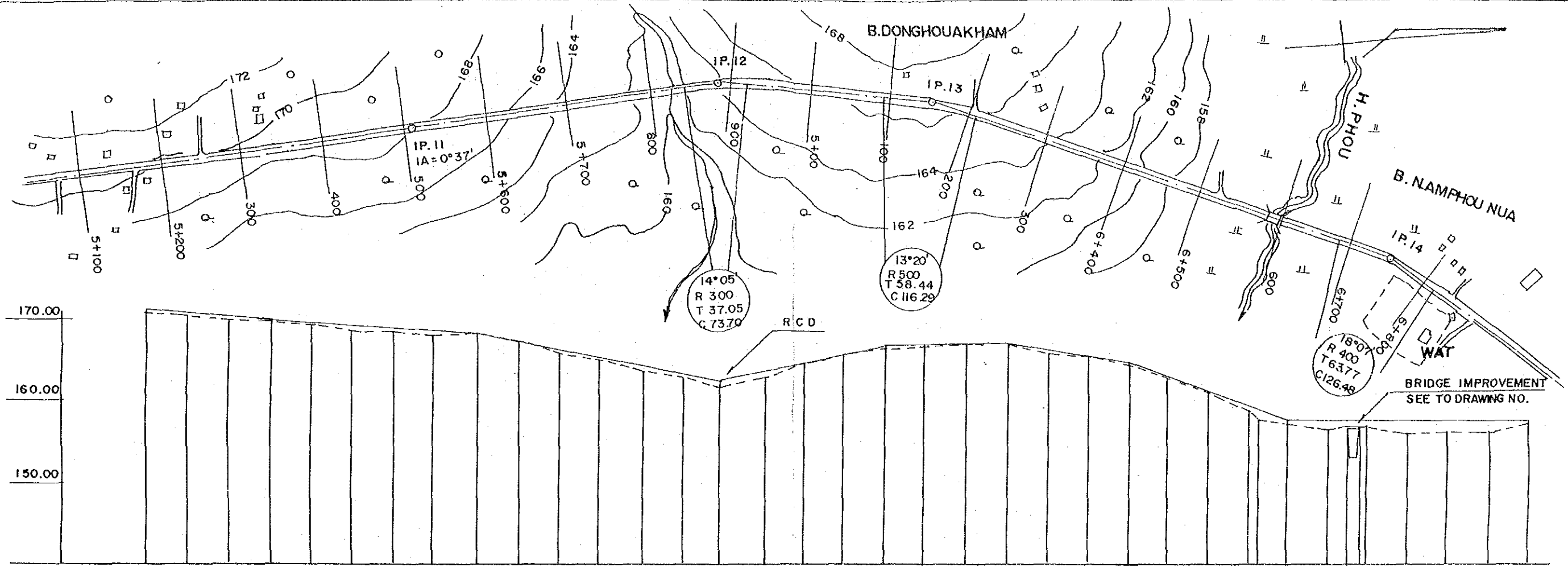


CURVE SLOPE	0.04%      0.60%      0.28%      1.6%      4.16%      1.45%      0.1%																																												
ROAD SURFAC	151.70      153.80      154.80      157.20      167.60      170.50      170.60																																												
GROUND LEVEL	150.33	150.19	150.06	150.33	150.05	150.52	151.12	151.65	152.04	152.27	153.08	153.21	153.47	153.59	153.56	153.32	152.85	152.28	153.28	153.34	153.35	153.36	153.58	153.98	154.59	155.30	156.21	157.02	158.41	160.83	164.18	166.36	166.52	167.55	168.40	169.05	169.69	170.50	170.51	170.30	170.59	170.47			
ACCUMULAT DISTANCE	3400	3450	3500	3546.25	3550	3600	3650	3700	3750	3800	3850	3900	3950	4000	4050	4100	4143	4150	4162	4200	4250	4267	4300	4350	4400	4450	4500	4550	4600	4650	4700	4750	4800	4850	4900	4950	5000	5022	5050	5100					
DISTANS	50	50	50	46.25	3.75	50	50	50	50	50	50	50	50	50	50	50	47	7	12	38	50	17	33	50	50	50	50	50	50	50	50	50	50	50	50	50	50	22	28	50					
STATION	3+400		3+500			3+600		3+700		3+800		3+900		4+000		IP. 8 4+100			4+200			4+300			4+400			4+500			4+600			4+700		IP. 9 4+800			4+900			IP. 10 5+000			5+100

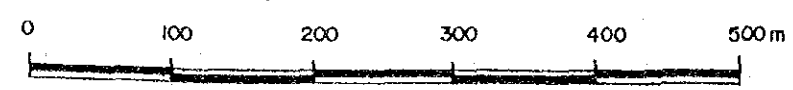


**INTEGRATED AGRICULTURAL  
 RURAL DEVELOPMENT PROJECT**  
 Title Of Drawing:  
**RURAL ROAD IMPROVEMENT  
 (ROUTE B, 3/9)**

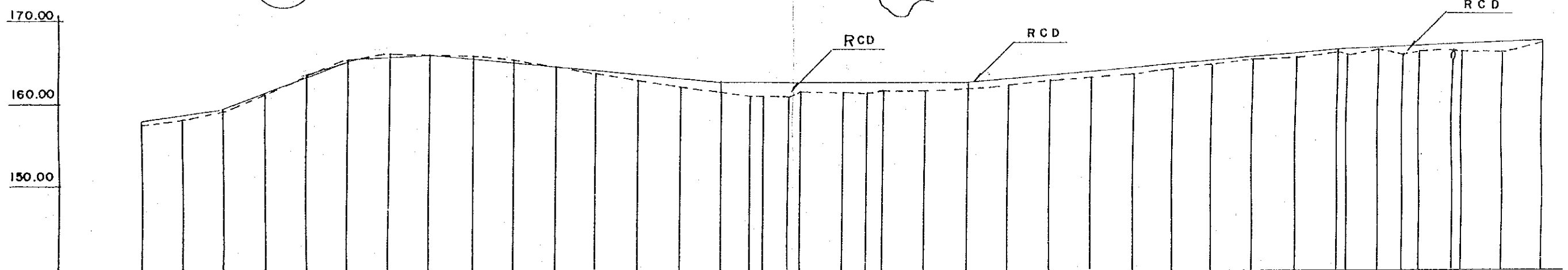
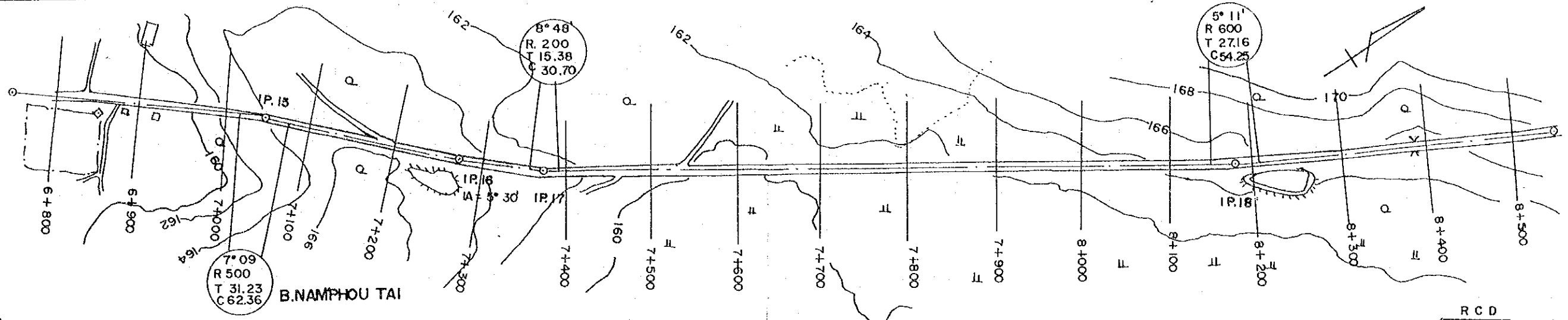
48      Drawing No. R-12



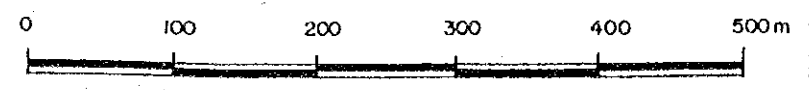
CURVE SLOPE	0.65%      2.0%      2.20%      0.27%      1.86%      3.3%      LEVEL																																										
ROAD SURFAC	170.60							168.00													157.40																						
GROUND LEVEL	170.47	170.28	169.82	169.42	169.10	168.51	168.21	167.89	167.89	166.90	165.65	164.46	163.12	162.27	161.63	161.73	162.76	164.37	164.61	165.61	166.29	166.67	166.76	166.72	166.80	166.71	165.65	164.98	163.92	162.59	160.89	158.49	157.68	156.98	156.65	156.94	156.97	156.87	156.09	156.35	156.53	156.38	157.39
ACCUMULAT DISTANCE	5100	5150	5200	5250	5300	5350	5400	5445	5450	5500	5550	5600	5650	5700	5750	5795	5800	5850	5900	5950	6000	6050	6100	6150	6200	6250	6300	6350	6400	6450	6461	6500	6550	6575	6589	6600	6650	6700	6750	6800			
DISTANS	50	50	50	50	50	50	50	45	5	50	50	50	50	50	50	45	5	50	50	50	50	50	50	50	50	50	50	50	50	50	11	39	50	25	14	11	50	50	50	50			
STATION	5+100		5+200		5+300		5+400		5+500	IP.11		5+600		5+700		5+800	IP.12	5+900		6+000		6+100		6+200	IP.13		6+300		6+400		6+500		6+600		6+700	IP.14		6+800					



INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
RURAL ROAD IMPROVEMENT  
(ROUTE B, 4/9)  
49      Drawing No. R-13

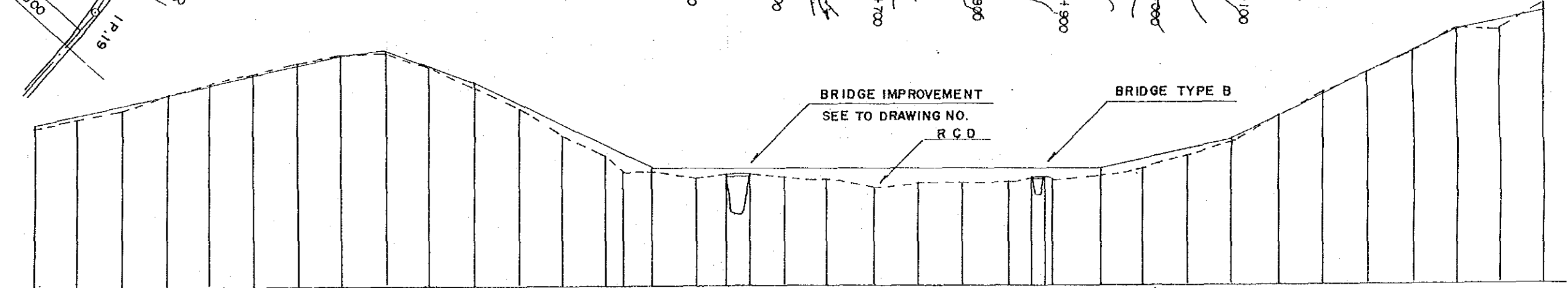
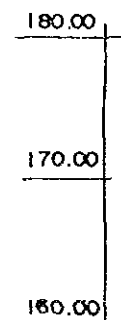
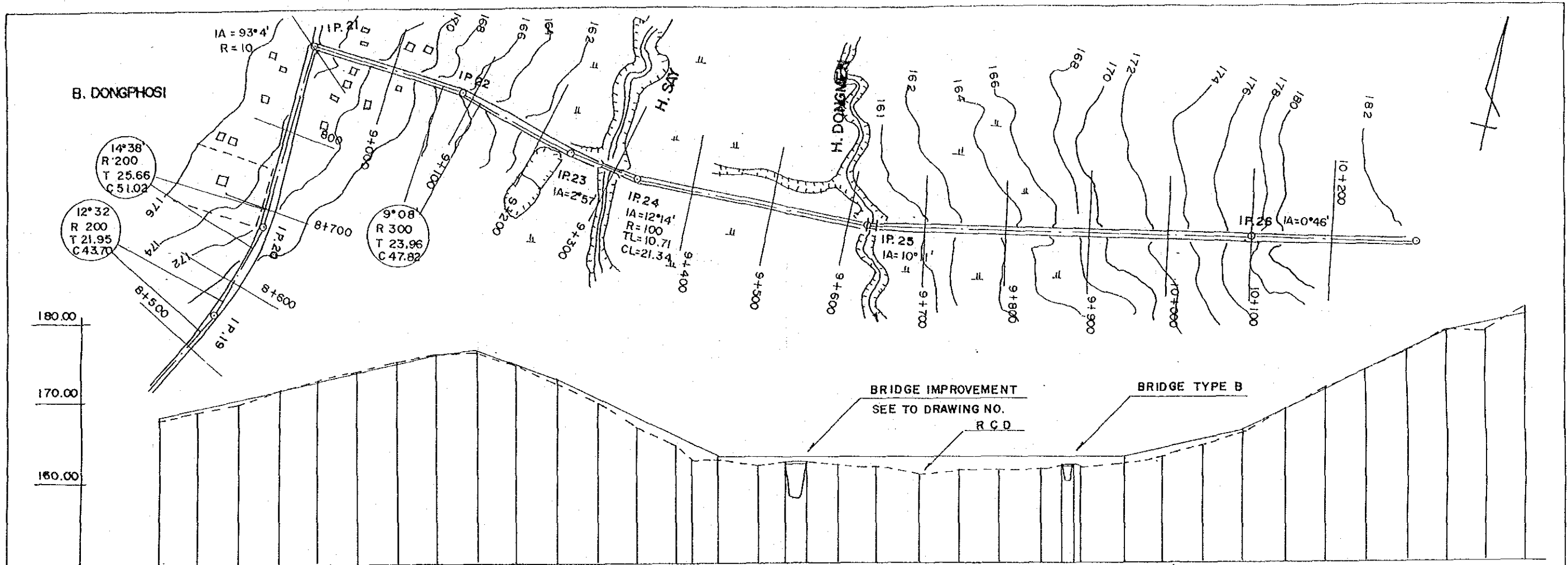


CURVE SLOPE	+ 1.8%   3.93%   0.8%   0.93%   1.15%   LEVEL   0.91%   0.52%																																									
ROAD SURFAC	157.40	159.20	165.10	165.90	164.50	162.20	162.20	166.30	167.60																																	
GROUND LEVEL	157.39	158.00	159.19	161.21	163.42	164.84	165.15	165.93	165.94	165.87	165.31	164.88	164.49	163.77	163.53	162.77	161.89	161.55	161.37	161.21	161.12	161.48	161.66	161.82	162.12	162.60	163.23	163.76	164.28	164.73	165.16	165.69	165.68	166.24	165.81	166.22	165.78	166.29	166.15	166.20	166.54	167.58
ACCUMULAT DISTANCE	6800	6850	6900	6950	7000	7050	7100	7150	7200	7250	7300	7350	7400	7450	7460	7500	7535	7550	7583	7600	7650	7680	7700	7750	7800	7850	7900	7950	8000	8050	8100	8150	8200	8250	8257	8300	8325	8350	8389	8400	8450	8500
DISTANS	50	50	50	50	50	50	50	50	50	50	50	50	50	50	10	40	35	15	33	17	50	30	20	50	50	50	50	50	50	50	50	50	50	7	43	25	25	39	11	50	50	
STATION	6+800	6+900	7+000	IP.15	7+100	7+200	IP.16	7+300	IP.17	7+400	7+500	7+600	7+700	7+800	7+900	8+000	8+100	IP.18	8+200	8+300	8+400	8+500																				



INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
RURAL ROAD IMPROVEMENT  
(ROUTE B, 5/9)

50 Drawing No. R-14

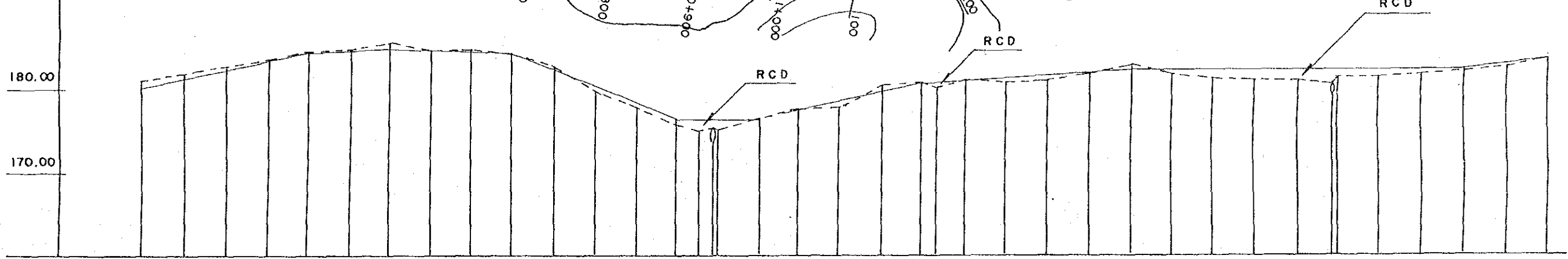
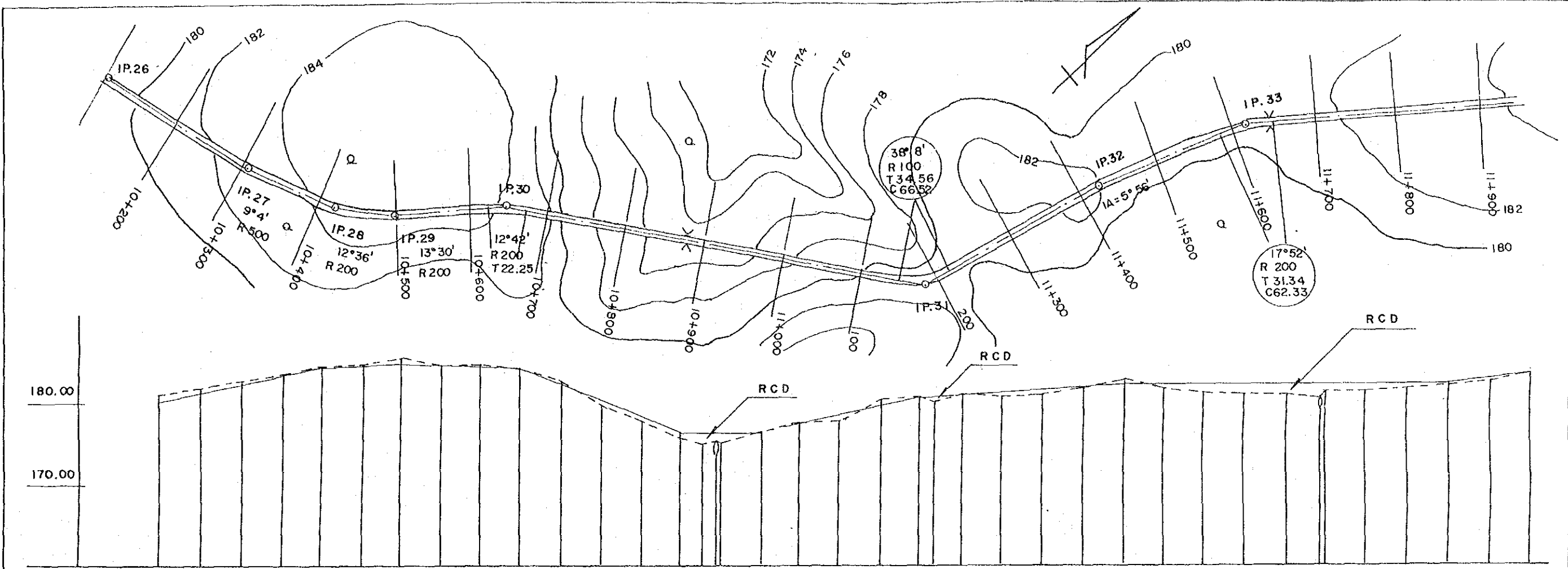


CURVE	2.2%    0.6%    3.8%    4.75%    LEVEL    1.93%    4.96%    2.1%																																												
SLOPE																																													
ROAD SURFAC	167.50						175.30	175.90		172.10							162.60				162.60	165.50		177.90																					
GROUND LEVEL	167.58	168.66	168.72	169.61	171.09	172.21	172.68	173.84	174.66	175.22	175.97	175.80	174.14	171.86	169.33	167.66	166.64	164.16	162.91	162.22	161.70	161.63	162.20	162.20	161.62	161.65	161.29	160.56	161.08	161.04	161.03	161.74	161.37	161.45	162.55	163.87	165.35	168.33	171.04	173.17	175.41	177.93	179.74	180.98	
ACCUMULAT DISTANCE	8500	8550	8600	8650	8700	8750	8800	8850	8900	8950	9000	9050	9100	9150	9166	9200	9250	9285.2	9309.7	9350	9400	9450	9500	9550	9600	9630.26	9650	9700	9750	9800	9850	9900	9950	10000	10050	10100	10150	10200							
DISTANS	50	50	50	50	50	50	50	50	50	50	50	50	50	50	16	34	50	35.2	14.8	9.7	50	50	50	50	50	30.26	15.50	14.34	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
STATION	8+500	IP.19	8+600	IP.20	8+700	8+800	IP.21	8+900	9+000	IP.22	9+100	9+200	IP.23	9+300	IP.24	9+400	9+500	9+600	9+700	9+800	9+900	10+000	10+100	10+200																					



INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
RURAL ROAD IMPROVEMENT  
(ROUTE B, 6/9)

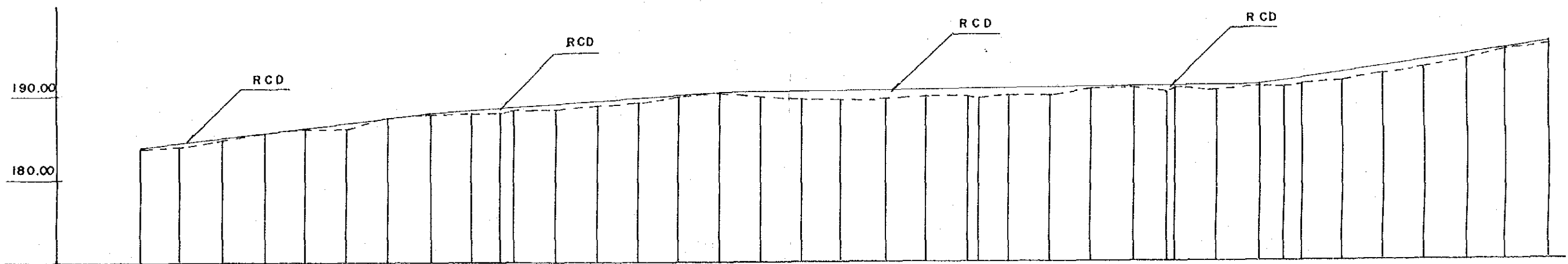
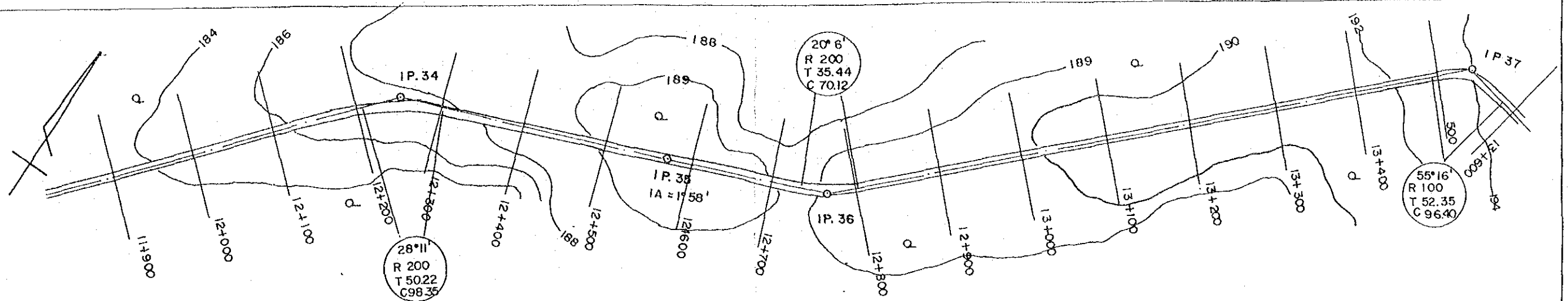
51     Drawing No. R-15



CURVE SLOPE																																									
ROAD SURFAC					184.10		185.10			183.90			176.00		176.00			180.50			182.00						182.40														
GROUND LEVEL	180.98	181.77	182.80	183.47	184.12	184.78	185.17	184.67	184.35	183.98	182.20	179.41	177.40	175.50	174.80	175.18	175.08	176.23	177.38	178.83	179.98	180.48	179.77	180.73	180.34	180.70	181.54	182.27	181.63	181.06	180.82	180.94	180.04	181.08	181.32	181.86	182.17	182.92	183.51		
ACCUMULAT DISTANCE	10200	10250	10300	10350	10400	10450	10500	10550	10600	10650	10700	10750	10800	10850	10877	10895	10900	10950	11000	11050	11100	11150	11165	11200	11250	11300	11350	11400	11450	11500	11550	11600	11644	11650	11700	11750	11800	11850	11900		
DISTANS	50	50	50	50	50	50	50	50	50	50	50	50	50	50	27	18	5	50	50	50	50	50	15	35	50	50	50	50	50	50	50	50	44	6	50	50	50	50	50		
STATION	10+200		10+300		10+400		10+500		10+600		10+700		10+800		10+900		11+000		11+100		11+200		11+300		11+400		11+500		11+600		11+700		11+800		11+900						



INTEGRATED AGRICULTURAL  
RURAL DEVELOPMENT PROJECT  
Title Of Drawing:  
RURAL ROAD IMPROVEMENT  
(ROUTE B, 7/9)  
52 Drawing No.R-16



CURVE SLOPE																																										
ROAD SURFAC																																										
GROUND LEVEL	183.51	183.99	184.44	185.34	185.76	186.30	186.99	187.38	187.89	187.86	187.99	188.16	188.42	188.97	189.64	189.92	189.62	189.19	189.20	189.26	189.58	189.70	189.26	189.84	189.78	190.20	190.06	189.90	190.21	189.97	190.33	190.21	190.56	191.04	191.79	192.63	193.53	194.73	195.18			
ACCUMULAT DISTANCE	11900	11950	12000	12050	12100	12150	12200	12250	12300	12330	12350	12400	12450	12500	12550	12600	12650	12700	12750	12800	12850	12900	12914	12950	13000	13050	13100	13140	13150	13200	13250	13280	13300	13350	13400	13450	13500	13550	13600			
DISTANS	50	50	50	50	50	50	50	50	50	30	20	50	50	50	50	50	50	50	50	50	50	50	14	36	50	50	50	40	10	50	50	30	20	50	50	50	50	50	50	50		
STATION	11+900	12+000	12+100	12+200	12+300	12+400	12+500	12+600	12+700	12+800	12+900	13+000	13+100	13+200	13+300	13+400	13+500	13+600																								



INTEGRATED AGRICULTURAL  
 RURAL DEVELOPMENT PROJECT  
 Title Of Drawing:  
 RURAL ROAD IMPROVEMENT  
 (ROUTE B, 8/9)  
 53 Drawing No.R-17