

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF AGRICULTURE AND FORESTRY

No. 2

FEASIBILITY STUDY
ON
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT
IN
THE SUBURBS OF VIENTIANE

DRAWINGS

JULY 1989

JAPAN INTERNATIONAL COOPERATION AGENCY

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LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF AGRICULTURE AND FORESTRY

FEASIBILITY STUDY
ON
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT
IN
THE SUBURBS OF VIENTIANE

DRAWINGS

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JULY 1989

JAPAN INTERNATIONAL COOPERATION AGENCY



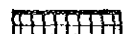
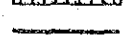


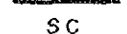
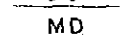
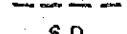



PLATE NO.	DRAWING NO.	TITLE
1	101	GENERAL LAYOUT OF IRRIGATION & DRAINAGE FACILITIES
2	201	PLAN & PROFILE OF HEADREACH (1/2)
3	202	PLAN & PROFILE OF HEADREACH (2/2)
4	203	PROFILES OF WEST MAIN CANAL NO.1 & NO.2
5	204	PROFILE OF EAST MAIN CANAL
6	205	PROFILES OF SECONDARY CANALS (1/3)
7	206	PROFILES OF SECONDARY CANALS (2/3)
8	207	PROFILES OF SECONDARY CANALS (3/3)
9	208	TYPICAL CROSS SECTIONS OF CANALS & FARM ROADS
10	301	MAIN PUMP STATION
11	302	BOOSTER PUMP STATION NO.1 & NO.2
12	303	REGULATION POND (1/3)
13	304	REGULATION POND (2/3)
14	305	REGULATION POND (3/3)
15	306	TURNOUTS (1/2)
16	307	TURNOUTS (2/2)
17	308	CHECKS (1/2)
18	309	CHECKS (2/2)

DRAWINGS

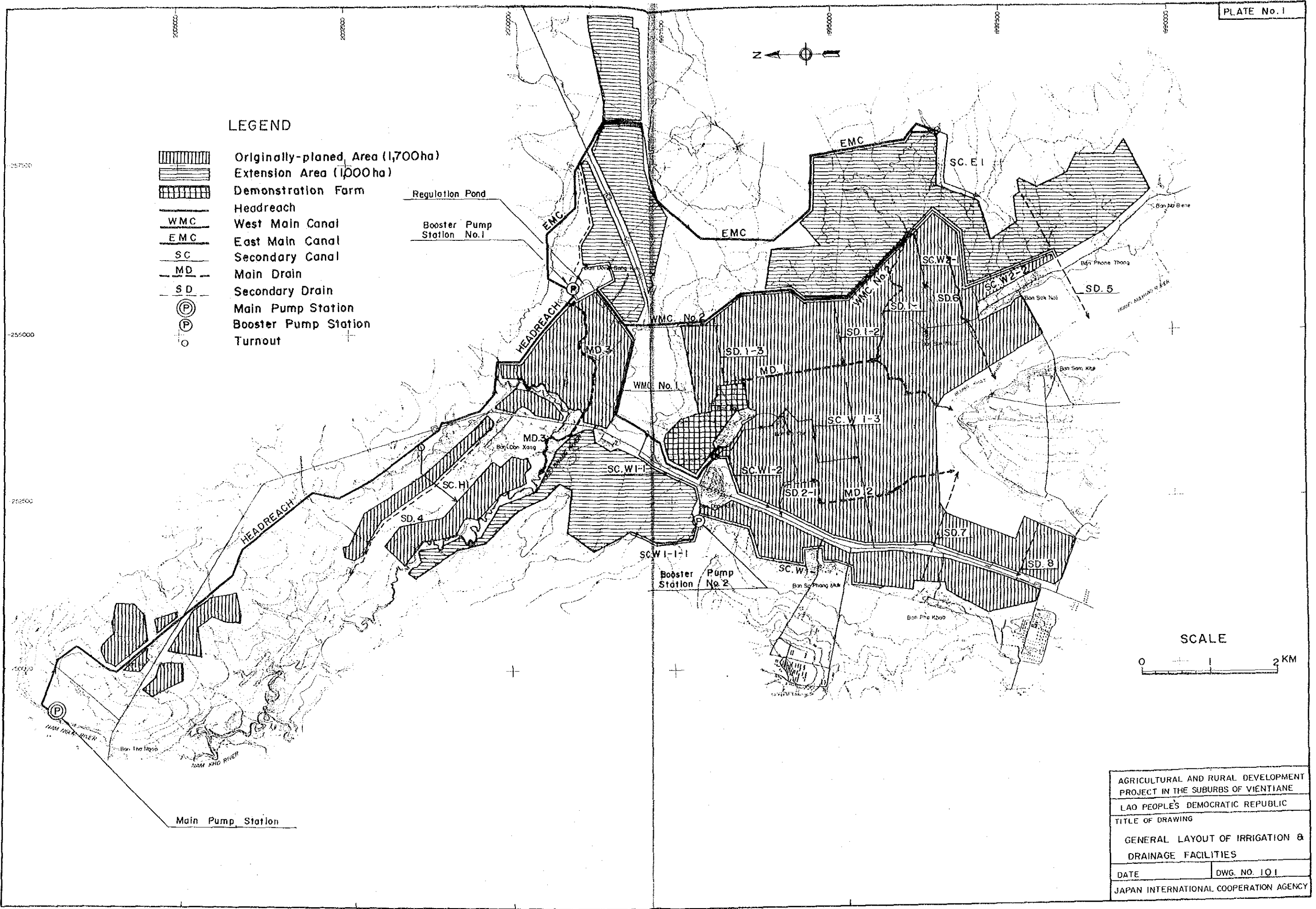
PLATE NO.	DRAWING NO.	TITLE
19	310	SYPHONS (1/2)
20	311	SYPHONS (2/2)
21	312	CULVERTS (1/2)
22	313	CULVERTS (2/2)
23	314	SPILLWAY / WASTEWAY & DROP
24	315	CROSS DRAINS
25	316	FOOTPATH BRIDGES
26	317	DIVISION BOXES
27	401	PROFILES & TYPICAL CROSS SECTIONS OF MAIN DRAINS
28	402	PROFILES OF SECONDARY DRAINS (1/3)
29	403	PROFILES OF SECONDARY DRAINS (2/3)
30	404	PROFILES OF SECONDARY DRAINS (3/3)
31	501	DRAINAGE CULVERTS
32	502	DRAINAGE DROPS
33	601	GENERAL LAYOUT OF DEMONSTRATION FARM
34	701	GENERAL LAYOUT OF RURAL INFRASTRUCTURES
35	702	RURAL INFRASTRUCTURES



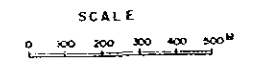
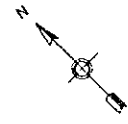
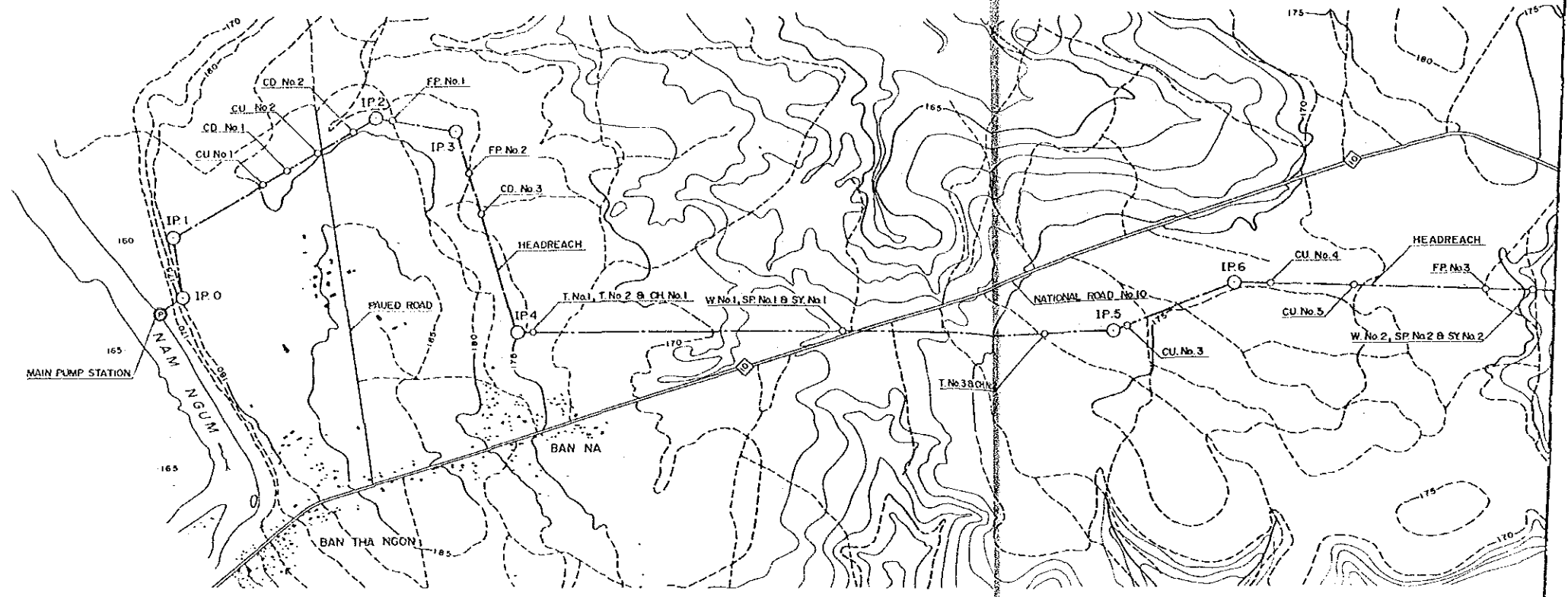
LEGEND

-  Originally-planned Area (1,700ha)
-  Extension Area (1,000ha)
-  Demonstration Farm
-  Headreach
-  WMC West Main Canal
-  EMC East Main Canal
-  SC Secondary Canal
-  MD Main Drain
-  SD Secondary Drain
-  Main Pump Station
-  Booster Pump Station
-  Turnout

Regulation Pond
 Booster Pump Station No.1



AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
GENERAL LAYOUT OF IRRIGATION & DRAINAGE FACILITIES	
DATE	DWG. NO. 101
JAPAN INTERNATIONAL COOPERATION AGENCY	

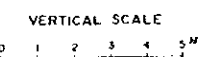
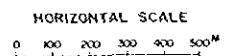
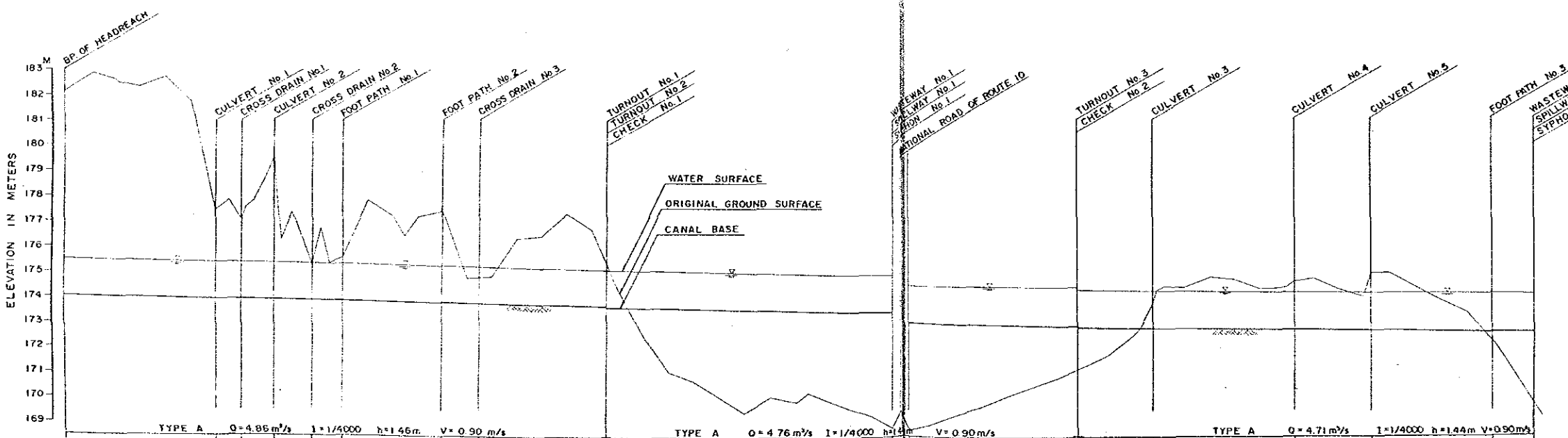


LEGEND

- HEADREACH
- NATIONAL ROAD
- PAVED ROAD
- FOOT PATH
- MAIN PUMP STATION

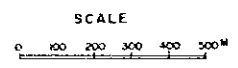
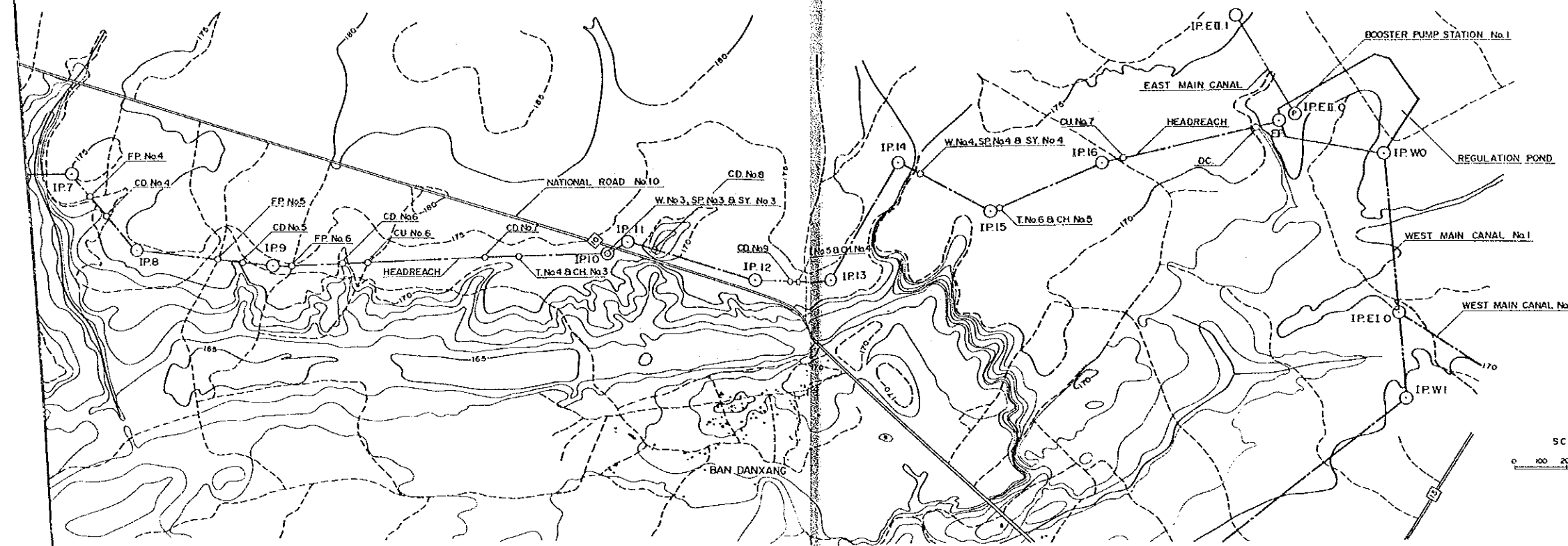
ABBREVIATIONS

- BF: BEGINNING POINT
- IP: INTERSECTION POINT
- CU: CULVERT
- CD: CROSS DRAIN
- FP: FOOT PATH BRIDGE
- T: TURNOUT
- CH: CHECK
- W: WASTEWAY
- SP: SPILLWAY
- SY: SYPHON
- M: METERS



STATION	WATER SURFACE ELEVATION	CANAL BASE ELEVATION	ORIGINAL GROUND SURFACE	ACCUMULATED DISTANCE	DISTANCE	CURVE
No.0	175.50	174.04	182.18	0.00	0.00	
No.1	175.47	174.01	182.79	112.00	112.00	IP1
No.2	175.43	173.99	182.52	200.00	88.00	
No.3	175.45	173.99	182.41	300.00	90.00	
No.4	175.43	173.97	182.23	400.00	100.00	
No.5	175.40	173.94	182.60	500.00	100.00	
No.6	175.38	173.92	181.62	600.00	100.00	
No.7	175.35	173.89	177.41	700.00	100.00	
No.8	175.34	173.88	177.70	800.00	100.00	
No.9	175.33	173.87	177.80	900.00	100.00	
No.10	175.32	173.86	177.80	1000.00	100.00	
No.11	175.31	173.85	177.80	1100.00	100.00	
No.12	175.30	173.84	177.80	1200.00	100.00	
No.13	175.29	173.83	177.80	1300.00	100.00	
No.14	175.28	173.82	177.80	1400.00	100.00	
No.15	175.27	173.81	177.80	1500.00	100.00	
No.16	175.26	173.80	177.80	1600.00	100.00	
No.17	175.25	173.79	177.80	1700.00	100.00	
No.18	175.24	173.78	177.80	1800.00	100.00	
No.19	175.23	173.77	177.80	1900.00	100.00	
No.20	175.22	173.76	177.80	2000.00	100.00	
No.21	175.21	173.75	177.80	2100.00	100.00	
No.22	175.20	173.74	177.80	2200.00	100.00	
No.23	175.19	173.73	177.80	2300.00	100.00	
No.24	175.18	173.72	177.80	2400.00	100.00	
No.25	175.17	173.71	177.80	2500.00	100.00	
No.26	175.16	173.70	177.80	2600.00	100.00	
No.27	175.15	173.69	177.80	2700.00	100.00	
No.28	175.14	173.68	177.80	2800.00	100.00	
No.29	175.13	173.67	177.80	2900.00	100.00	
No.30	175.12	173.66	177.80	3000.00	100.00	
No.31	175.11	173.65	177.80	3100.00	100.00	
No.32	175.10	173.64	177.80	3200.00	100.00	
No.33	175.09	173.63	177.80	3300.00	100.00	
No.34	175.08	173.62	177.80	3400.00	100.00	
No.35	175.07	173.61	177.80	3500.00	100.00	
No.36	175.06	173.60	177.80	3600.00	100.00	
No.37	175.05	173.59	177.80	3700.00	100.00	
No.38	175.04	173.58	177.80	3800.00	100.00	
No.39	175.03	173.57	177.80	3900.00	100.00	
No.40	175.02	173.56	177.80	4000.00	100.00	
No.41	175.01	173.55	177.80	4100.00	100.00	
No.42	175.00	173.54	177.80	4200.00	100.00	
No.43	174.99	173.53	177.80	4300.00	100.00	
No.44	174.98	173.52	177.80	4400.00	100.00	
No.45	174.97	173.51	177.80	4500.00	100.00	
No.46	174.96	173.50	177.80	4600.00	100.00	
No.47	174.95	173.49	177.80	4700.00	100.00	
No.48	174.94	173.48	177.80	4800.00	100.00	
No.49	174.93	173.47	177.80	4900.00	100.00	
No.50	174.92	173.46	177.80	5000.00	100.00	
No.51	174.91	173.45	177.80	5100.00	100.00	
No.52	174.90	173.44	177.80	5200.00	100.00	
No.53	174.89	173.43	177.80	5300.00	100.00	
No.54	174.88	173.42	177.80	5400.00	100.00	
No.55	174.87	173.41	177.80	5500.00	100.00	
No.56	174.86	173.40	177.80	5600.00	100.00	
No.57	174.85	173.39	177.80	5700.00	100.00	
No.58	174.84	173.38	177.80	5800.00	100.00	
No.59	174.83	173.37	177.80	5900.00	100.00	
No.60	174.82	173.36	177.80	6000.00	100.00	
No.61	174.81	173.35	177.80	6100.00	100.00	
No.62	174.80	173.34	177.80	6200.00	100.00	
No.63	174.79	173.33	177.80	6300.00	100.00	
No.64	174.78	173.32	177.80	6400.00	100.00	
No.65	174.77	173.31	177.80	6500.00	100.00	
No.66	174.76	173.30	177.80	6600.00	100.00	
No.67	174.75	173.29	177.80	6700.00	100.00	
No.68	174.74	173.28	177.80	6800.00	100.00	
No.69	174.73	173.27	177.80	6900.00	100.00	
No.70	174.72	173.26	177.80	7000.00	100.00	
No.71	174.71	173.25	177.80	7100.00	100.00	
No.72	174.70	173.24	177.80	7200.00	100.00	
No.73	174.69	173.23	177.80	7300.00	100.00	
No.74	174.68	173.22	177.80	7400.00	100.00	
No.75	174.67	173.21	177.80	7500.00	100.00	
No.76	174.66	173.20	177.80	7600.00	100.00	
No.77	174.65	173.19	177.80	7700.00	100.00	
No.78	174.64	173.18	177.80	7800.00	100.00	
No.79	174.63	173.17	177.80	7900.00	100.00	
No.80	174.62	173.16	177.80	8000.00	100.00	
No.81	174.61	173.15	177.80	8100.00	100.00	
No.82	174.60	173.14	177.80	8200.00	100.00	
No.83	174.59	173.13	177.80	8300.00	100.00	
No.84	174.58	173.12	177.80	8400.00	100.00	
No.85	174.57	173.11	177.80	8500.00	100.00	
No.86	174.56	173.10	177.80	8600.00	100.00	
No.87	174.55	173.09	177.80	8700.00	100.00	
No.88	174.54	173.08	177.80	8800.00	100.00	
No.89	174.53	173.07	177.80	8900.00	100.00	
No.90	174.52	173.06	177.80	9000.00	100.00	
No.91	174.51	173.05	177.80	9100.00	100.00	
No.92	174.50	173.04	177.80	9200.00	100.00	
No.93	174.49	173.03	177.80	9300.00	100.00	
No.94	174.48	173.02	177.80	9400.00	100.00	
No.95	174.47	173.01	177.80	9500.00	100.00	
No.96	174.46	173.00	177.80	9600.00	100.00	
No.97	174.45	172.99	177.80	9700.00	100.00	
No.98	174.44	172.98	177.80	9800.00	100.00	
No.99	174.43	172.97	177.80	9900.00	100.00	
No.100	174.42	172.96	177.80	10000.00	100.00	

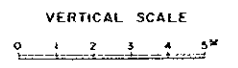
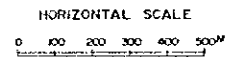
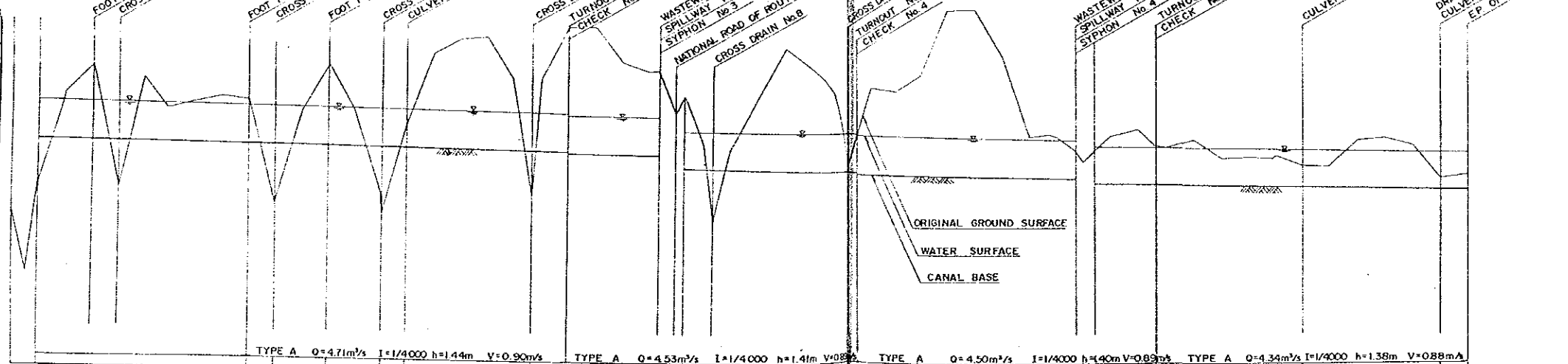
AGRICULTURAL AND RURAL DEVELOPMENT
PROJECT IN THE SUBURBS OF VIENTIANE
LAO PEOPLE'S DEMOCRATIC REPUBLIC
TITLE OF DRAWING
PLAN & PROFILE OF HEADREACH (1/2)
DATE _____ DWG. NO. 201
JAPAN INTERNATIONAL COOPERATION AGENCY



- LEGEND
- HEADREACH
 - MAIN CANAL
 - NATIONAL ROAD
 - PAVED ROAD
 - FOOT PATH
 - ⊙ BOOSTER PUMP STATION

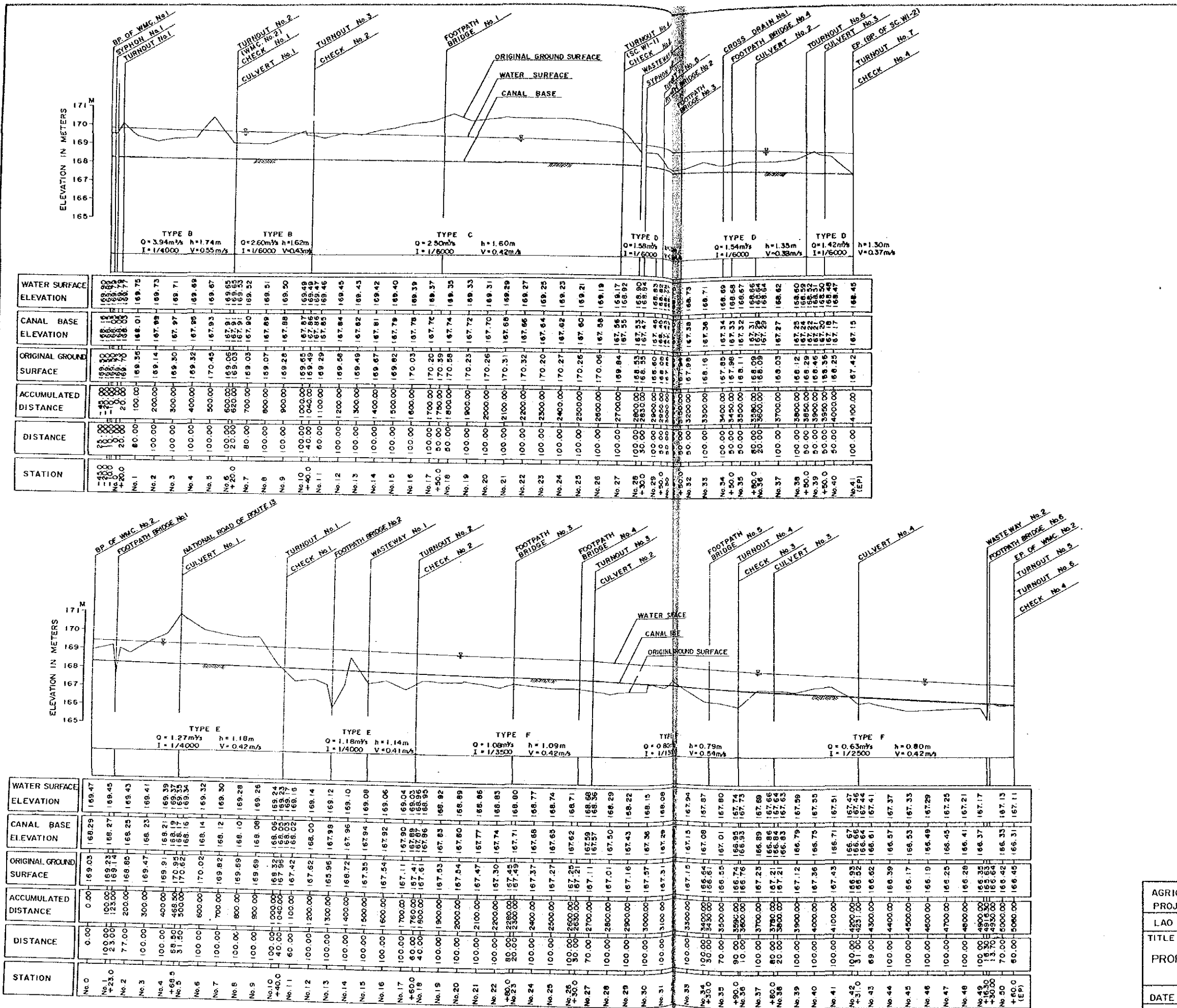
- ABBREVIATIONS
- EP: END POINT
 - IP: INTERSECTION POINT
 - DC: DRAINAGE CULVERT
 - CU: CULVERT
 - CD: CROSS DRAIN
 - FP: FOOT PATH BRIDGE
 - T: TURNOUT
 - CH: CHECK
 - W: WASTEWAY
 - SP: SPILLWAY
 - SY: SYPHON
 - M: METERS

ELEVATION IN METERS

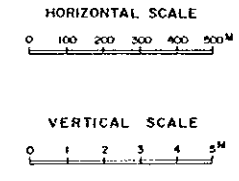


STATION	DISTANCE	ACCUMULATED DISTANCE	ORIGINAL GROUND SURFACE	CANAL BASE ELEVATION	WATER SURFACE ELEVATION
No. 59	35.00	590.00	168.65	173.11	173.11
+33.00	45.00	635.00	166.56	171.67	173.06
No. 60	55.00	690.00	169.84	171.60	173.04
+81.40	94.60	781.40	173.92	171.65	173.08
No. 61	100.00	881.40	174.17	171.62	173.06
No. 62	100.00	981.40	169.74	171.60	173.04
No. 63	100.00	1081.40	173.80	171.57	173.01
No. 64	95.00	1176.40	172.72	171.55	172.99
+29.00	115.00	1291.40	172.71	171.55	172.99
No. 65	100.00	1391.40	172.95	171.52	172.96
No. 66	100.00	1491.40	173.15	171.50	172.94
No. 67	100.00	1591.40	173.11	171.47	172.91
No. 68	100.00	1691.40	169.27	171.43	172.89
No. 69	100.00	1791.40	173.69	171.42	172.86
No. 70	29.00	1820.40	173.24	171.41	172.85
No. 71	71.00	1891.40	174.44	171.40	172.84
No. 72	100.00	1991.40	172.74	171.37	172.81
No. 73	46.00	2037.40	169.57	171.35	172.79
+6.00	2083.40	168.85	171.34	172.78	
No. 74	94.00	2177.40	172.31	171.32	172.76
No. 75	100.00	2277.40	174.84	171.30	172.74
No. 76	100.00	2377.40	175.33	171.27	172.71
No. 77	100.00	2477.40	175.47	171.25	172.69
No. 78	100.00	2577.40	173.93	171.22	172.66
+69.00	2646.40	169.48	171.20	172.64	
No. 79	32.00	2678.40	173.98	171.20	172.64
+35.00	2713.40	171.17	172.61		
No. 80	100.00	2813.40	175.80	171.15	172.56
No. 81	100.00	2913.40	175.82	171.13	172.54
No. 82	100.00	3013.40	174.50	171.10	172.51
No. 83	40.00	3053.40	174.19	171.08	172.49
+40.00	3093.40	174.19	171.07	172.48	
No. 84	60.00	3153.40	173.50	171.05	172.45
+32.80	3186.20	173.50	171.05	172.45	
No. 85	67.20	3253.40	171.59	171.06	172.07
+35.00	3318.40	168.49	170.65	172.05	
No. 86	64.00	3382.40	171.17	170.64	172.05
No. 87	100.00	3482.40	173.14	170.61	172.02
No. 88	100.00	3582.40	175.02	170.59	172.00
No. 89	46.60	3629.00	174.30	170.56	171.97
+6.00	3675.00	173.96	170.55	171.96	
No. 90	53.30	3728.30	173.50	170.54	171.95
+40.00	3768.30	171.92	170.57	171.94	
No. 91	60.00	3828.30	173.69	170.46	171.86
No. 92	100.00	3928.30	173.52	170.43	171.85
+42.80	3971.10	173.75	170.42	171.82	
No. 93	57.20	4028.30	174.10	170.41	171.81
No. 94	100.00	4128.30	176.50	170.38	171.78
No. 95	100.00	4228.30	176.52	170.36	171.76
No. 96	100.00	4328.30	174.86	170.33	171.73
No. 97	100.00	4428.30	171.87	170.31	171.71
No. 98	72.45	4500.75	170.29	170.28	171.69
+27.45	4528.20	170.28	170.28	171.68	
No. 99	30.00	4558.20	170.35	170.26	171.65
+40.00	4598.20	171.30	170.05	171.45	
No. 100	60.00	4658.20	171.87	170.04	171.44
No. 101	100.00	4758.20	172.12	170.01	171.41
+49.00	4807.20	171.33	170.00	171.40	
No. 102	40.00	4847.20	171.55	170.00	171.39
+40.00	4887.20	171.55	170.00	171.39	
No. 103	100.00	4987.20	171.68	169.98	171.36
No. 104	100.00	5087.20	170.96	169.95	171.33
No. 105	100.00	5187.20	170.98	169.93	171.31
No. 106	15.00	5202.20	170.93	169.90	171.28
+84.00	5286.20	170.63	169.88	171.26	
No. 107	100.00	5386.20	170.57	169.85	171.23
No. 108	100.00	5486.20	171.57	169.83	171.21
No. 109	100.00	5586.20	171.66	169.80	171.18
No. 110	100.00	5686.20	171.42	169.78	171.16
No. 111	100.00	5786.20	170.14	169.75	171.12
No. 112	100.00	5886.20	170.28	169.72	171.10

AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE
 LAO PEOPLE'S DEMOCRATIC REPUBLIC
 TITLE OF DRAWING
PLAN & PROFILE OF HEADREACH (2/2)
 DATE _____ DWG. NO. 202
 JAPAN INTERNATIONAL COOPERATION AGENCY



- ABBREVIATIONS**
- BP. : BEGINNING POINT
 - EP. : END POINT
 - W.M.C. : WEST MAIN CANAL
 - M. : METER(S)

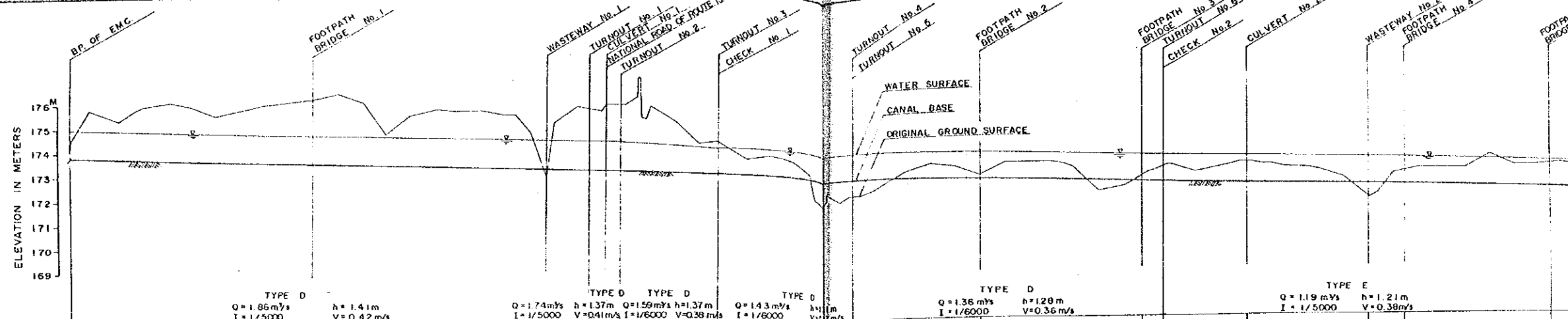


AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE
LAO PEOPLE'S DEMOCRATIC REPUBLIC

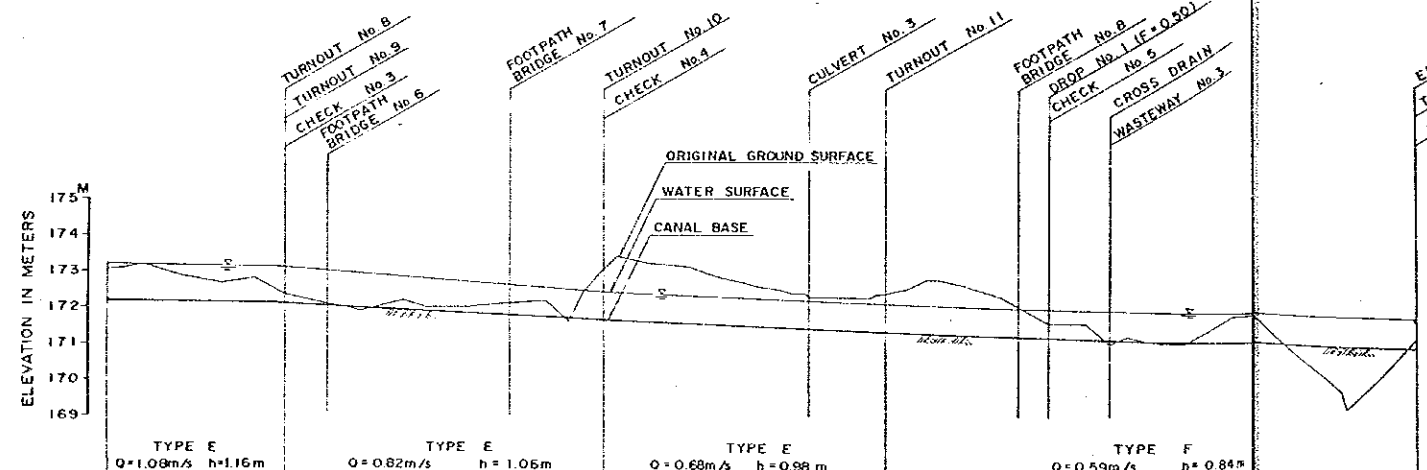
TITLE OF DRAWING
PROFILES OF WEST MAIN CANAL NO. 1 & NO. 2

DATE _____ DWG. NO. 203

JAPAN INTERNATIONAL COOPERATION AGENCY



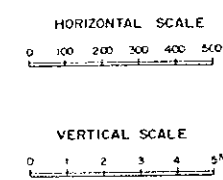
STATION	DISTANCE	ACCUMULATED DISTANCE	ORIGINAL GROUND SURFACE	CANAL BASE ELEVATION	WATER SURFACE ELEVATION
No 0	100.00	0.00	174.61	173.99	175.00
No 1	100.00	100.00	175.65	173.97	174.98
No 2	100.00	200.00	175.35	173.95	174.96
No 3	100.00	300.00	175.98	173.93	174.94
No 4	100.00	400.00	176.13	173.91	174.92
No 5	100.00	500.00	175.94	173.49	174.90
No 6	100.00	600.00	175.64	173.47	174.88
No 7	100.00	700.00	175.83	173.45	174.86
No 8	100.00	800.00	176.09	173.43	174.84
No 9	100.00	900.00	176.15	173.41	174.82
No 10	100.00	1000.00	176.37	173.39	174.80
No 11	100.00	1100.00	176.54	173.37	174.78
No 12	100.00	1200.00	176.17	173.35	174.76
No 13	100.00	1300.00	174.90	173.33	174.74
No 14	100.00	1400.00	175.53	173.31	174.72
No 15	100.00	1500.00	175.89	173.29	174.70
No 16	100.00	1600.00	175.94	173.27	174.68
No 17	100.00	1700.00	175.83	173.25	174.66
No 18	100.00	1800.00	175.64	173.22	174.64
No 19	100.00	1900.00	174.92	173.20	174.62
No 20	30.00	1930.00	175.32	173.18	174.60
No 21	100.00	2030.00	176.00	173.17	174.59
No 22	50.00	2080.00	173.91	173.16	174.58
No 23	20.00	2100.00	175.83	173.15	174.57
No 24	50.00	2150.00	175.85	173.14	174.56
No 25	20.00	2170.00	176.04	173.13	174.55
No 26	50.00	2220.00	176.10	173.12	174.54
No 27	30.00	2250.00	176.01	173.11	174.53
No 28	100.00	2350.00	175.39	173.09	174.51
No 29	100.00	2450.00	174.03	173.07	174.49
No 30	100.00	2550.00	173.91	173.05	174.47
No 31	100.00	2650.00	173.26	173.03	174.45
No 32	100.00	2750.00	172.16	173.01	174.43
No 33	50.00	2800.00	172.37	172.99	174.41
No 34	40.00	2840.00	172.40	172.97	174.39
No 35	100.00	2940.00	172.58	172.95	174.37
No 36	100.00	3040.00	173.35	172.93	174.35
No 37	100.00	3140.00	173.98	172.91	174.33
No 38	100.00	3240.00	173.53	172.89	174.31
No 39	100.00	3340.00	173.10	172.87	174.29
No 40	100.00	3440.00	173.53	172.85	174.27
No 41	100.00	3540.00	173.57	172.83	174.25
No 42	100.00	3640.00	173.60	172.81	174.23
No 43	100.00	3740.00	173.41	172.79	174.21
No 44	100.00	3840.00	172.39	172.77	174.19
No 45	100.00	3940.00	172.62	172.75	174.17
No 46	56.00	4000.00	172.55	172.73	174.15
No 47	50.00	4050.00	173.37	172.71	174.13
No 48	100.00	4150.00	173.45	172.69	174.11
No 49	100.00	4250.00	173.39	172.67	174.09
No 50	100.00	4350.00	173.59	172.65	174.07
No 51	100.00	4450.00	173.59	172.63	174.05
No 52	100.00	4550.00	173.47	172.61	174.03
No 53	100.00	4650.00	173.67	172.59	174.01
No 54	100.00	4750.00	173.27	172.57	173.99
No 55	100.00	4850.00	172.59	172.55	173.97
No 56	100.00	4950.00	172.82	172.53	173.95
No 57	50.00	5000.00	172.92	172.51	173.93
No 58	100.00	5100.00	173.01	172.49	173.91
No 59	100.00	5200.00	173.06	172.47	173.89
No 60	100.00	5300.00	173.06	172.45	173.87
No 61	100.00	5400.00	173.53	172.43	173.85
No 62	100.00	5500.00	173.13	172.41	173.83
No 63	50.00	5550.00	172.21	172.39	173.81
No 64	60.00	5610.00	173.41	172.37	173.79
	40.00	5650.00	173.15	172.35	173.77



STATION	DISTANCE	ACCUMULATED DISTANCE	ORIGINAL GROUND SURFACE	CANAL BASE ELEVATION	WATER SURFACE ELEVATION
No 64	40.00	6400.00	173.14	172.16	173.37
No 65	100.00	6500.00	173.22	172.14	173.30
No 66	100.00	6600.00	172.94	172.12	173.28
No 67	100.00	6700.00	172.71	172.10	173.26
No 68	100.00	6800.00	172.76	172.08	173.24
No 69	80.00	6880.00	172.42	172.06	173.22
No 70	20.00	6900.00	172.35	172.04	173.20
No 71	100.00	7000.00	172.07	172.02	173.18
No 72	100.00	7100.00	171.93	172.01	173.17
No 73	100.00	7200.00	172.18	171.99	173.15
No 74	100.00	7300.00	171.99	171.97	173.13
No 75	100.00	7400.00	172.03	171.95	173.11
No 76	100.00	7500.00	172.13	171.93	173.09
No 77	100.00	7600.00	172.24	171.92	173.07
No 78	60.00	7660.00	172.33	171.89	173.05
No 79	40.00	7700.00	171.56	171.88	173.03
No 80	40.00	7740.00	173.34	171.85	173.02
No 81	100.00	7840.00	173.17	171.83	173.00
No 82	100.00	7940.00	173.09	171.81	172.98
No 83	100.00	8040.00	172.77	171.79	172.96
No 84	100.00	8140.00	172.61	171.77	172.94
No 85	100.00	8240.00	172.39	171.75	172.92
No 86	70.00	8310.00	172.33	171.72	172.90
No 87	40.00	8350.00	172.55	171.70	172.88
No 88	100.00	8450.00	172.32	171.68	172.86
No 89	40.00	8490.00	172.41	171.65	172.84
No 90	20.00	8510.00	172.55	171.63	172.82
No 91	44.00	8554.00	172.80	171.60	172.80
No 92	56.00	8610.00	172.47	171.57	172.78
No 93	100.00	8710.00	172.16	171.54	172.76
No 94	100.00	8810.00	170.01	171.52	172.74
No 95	80.00	8890.00	171.59	171.50	172.72
No 96	20.00	8910.00	171.81	171.48	172.70
No 97	44.00	8954.00	171.97	171.46	172.68
No 98	56.00	9010.00	171.19	171.44	172.66
No 99	100.00	9110.00	171.02	171.42	172.64
No 100	100.00	9210.00	171.23	171.40	172.62
	100.00	9310.00	171.71	171.38	172.60
No 97	100.00	9410.00	171.11	171.36	172.58
No 98	100.00	9510.00	170.36	171.34	172.56
No 99	100.00	9610.00	169.57	171.32	172.54
No 100	100.00	9710.00	170.11	171.30	172.52
EP	85.00	9795.00	170.84	171.28	172.50

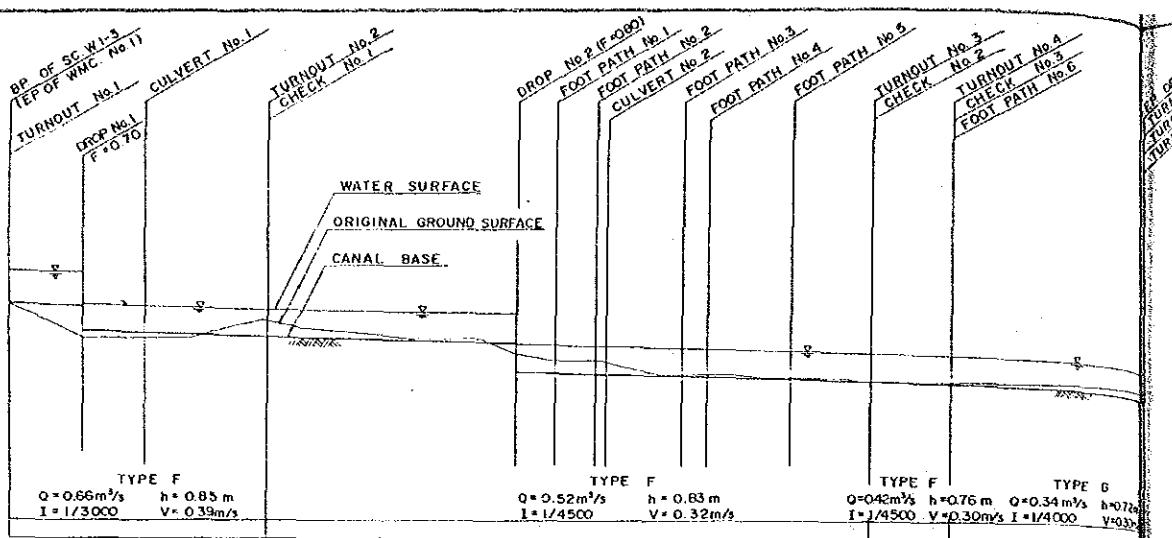
ABBREVIATIONS

BP : BEGINNING POINT
EP : END POINT
EMC : EAST MAIN CANAL
M : METER(S)



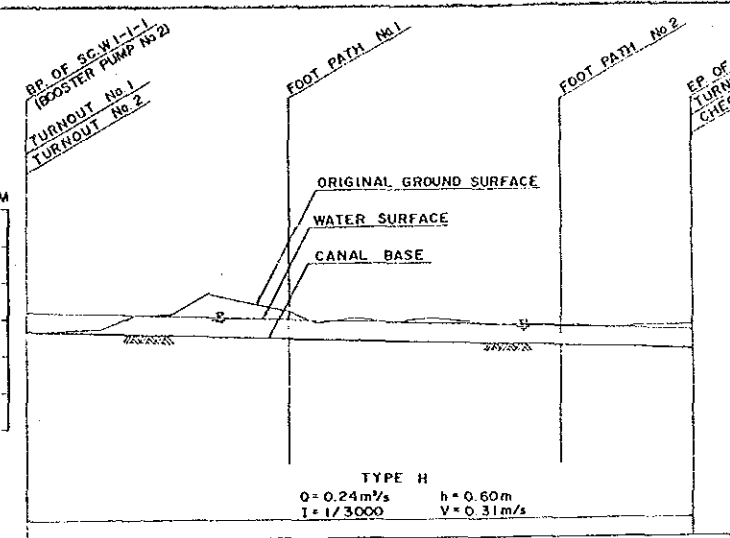
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE
LAO PEOPLE'S DEMOCRATIC REPUBLIC
TITLE OF DRAWING
PROFILE OF EAST MAIN CANAL
DATE : DWG. NO. 204
JAPAN INTERNATIONAL COOPERATION AGENCY

ELEVATION IN METERS



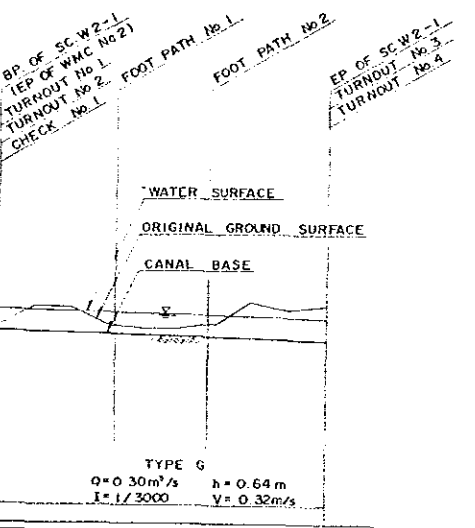
WATER SURFACE ELEVATION	CANAL BASE ELEVATION	ORIGINAL GROUND SURFACE	ACCUMULATED DISTANCE	DISTANCE	STATION
168.30	167.45	167.42	0.00	0.00	No. 0
168.27	167.42	167.00	100.00	100.00	No. 1
168.24	167.39	166.50	200.00	100.00	No. 2
168.21	167.36	166.50	300.00	100.00	No. 3
168.18	167.33	166.50	370.00	70.00	No. 4
168.15	167.30	166.50	400.00	30.00	No. 5
168.12	167.27	166.50	500.00	100.00	No. 6
168.09	167.24	166.50	600.00	100.00	No. 7
168.06	167.21	166.50	700.00	100.00	No. 8
168.03	167.18	166.50	800.00	100.00	No. 9
168.00	167.15	166.50	900.00	100.00	No. 10
167.97	167.12	166.50	1000.00	100.00	No. 11
167.94	167.09	166.50	1100.00	100.00	No. 12
167.91	167.06	166.50	1200.00	100.00	No. 13
167.88	167.03	166.50	1300.00	100.00	No. 14
167.85	167.00	166.50	1400.00	100.00	No. 15
167.82	166.97	166.50	1500.00	100.00	No. 16
167.79	166.94	166.50	1600.00	100.00	No. 17
167.76	166.91	166.50	1700.00	100.00	No. 18
167.73	166.88	166.50	1800.00	100.00	No. 19
167.70	166.85	166.50	1900.00	100.00	No. 20
167.67	166.82	166.50	2000.00	100.00	No. 21
167.64	166.79	166.50	2100.00	100.00	No. 22
167.61	166.76	166.50	2200.00	100.00	No. 23
167.58	166.73	166.50	2300.00	100.00	No. 24
167.55	166.70	166.50	2400.00	100.00	No. 25
167.52	166.67	166.50	2500.00	100.00	No. 26
167.49	166.64	166.50	2600.00	100.00	No. 27
167.46	166.61	166.50	2700.00	100.00	No. 28
167.43	166.58	166.50	2800.00	100.00	No. 29
167.40	166.55	166.50	2900.00	100.00	No. 30
167.37	166.52	166.50	3000.00	100.00	No. 31

ELEVATION IN METERS



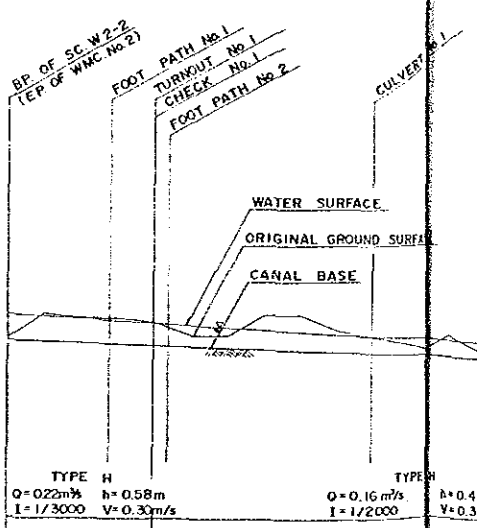
WATER SURFACE ELEVATION	CANAL BASE ELEVATION	ORIGINAL GROUND SURFACE	ACCUMULATED DISTANCE	DISTANCE	STATION
170.20	169.60	169.70	0.00	0.00	No. 0
170.17	169.57	169.70	100.00	100.00	No. 1
170.14	169.54	169.70	200.00	100.00	No. 2
170.11	169.51	170.10	300.00	100.00	No. 3
170.08	169.48	170.10	400.00	100.00	No. 4
170.05	169.45	170.70	500.00	100.00	No. 5
170.02	169.42	170.50	600.00	100.00	No. 6
169.99	169.39	170.20	700.00	100.00	No. 7
169.96	169.36	169.90	800.00	100.00	No. 8
169.93	169.33	170.00	900.00	100.00	No. 9
169.90	169.30	169.90	1000.00	100.00	No. 10
169.87	169.27	170.00	1100.00	100.00	No. 11
169.84	169.24	169.90	1200.00	100.00	No. 12
169.81	169.21	169.80	1300.00	100.00	No. 13
169.78	169.18	169.80	1400.00	100.00	No. 14
169.75	169.15	169.80	1500.00	100.00	No. 15
169.72	169.12	169.70	1600.00	100.00	No. 16
169.69	169.09	169.80	1700.00	100.00	No. 17
169.66	169.06	169.80	1800.00	100.00	No. 18

ELEVATION IN METERS



WATER SURFACE ELEVATION	CANAL BASE ELEVATION	ORIGINAL GROUND SURFACE	ACCUMULATED DISTANCE	DISTANCE	STATION
167.01	166.37	166.45	0.00	0.00	No. 0
166.98	166.34	167.00	100.00	100.00	No. 1
166.95	166.31	166.70	200.00	100.00	No. 2
166.92	166.28	166.50	300.00	100.00	No. 3
166.89	166.25	166.50	400.00	100.00	No. 4
166.85	166.22	166.40	500.00	100.00	No. 5
166.83	166.19	166.50	600.00	100.00	No. 6
166.80	166.16	167.10	700.00	100.00	No. 7
166.77	166.13	166.90	800.00	100.00	No. 8

ELEVATION IN METERS



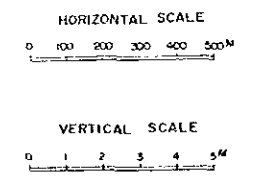
WATER SURFACE ELEVATION	CANAL BASE ELEVATION	ORIGINAL GROUND SURFACE	ACCUMULATED DISTANCE	DISTANCE	STATION
167.01	166.43	166.45	0.00	0.00	No. 0
166.98	166.40	167.10	100.00	100.00	No. 1
166.95	166.37	167.00	200.00	100.00	No. 2
166.92	166.34	167.00	300.00	100.00	No. 3
166.89	166.31	166.90	400.00	100.00	No. 4
166.87	166.28	166.70	400.00	0.00	No. 5
166.84	166.25	166.50	500.00	100.00	No. 6
166.81	166.22	166.50	600.00	100.00	No. 7
166.78	166.19	167.10	700.00	100.00	No. 8
166.75	166.16	166.70	800.00	100.00	No. 9
166.72	166.13	166.50	900.00	100.00	No. 10
166.69	166.10	166.30	1000.00	100.00	No. 11

ELEVATION IN METERS

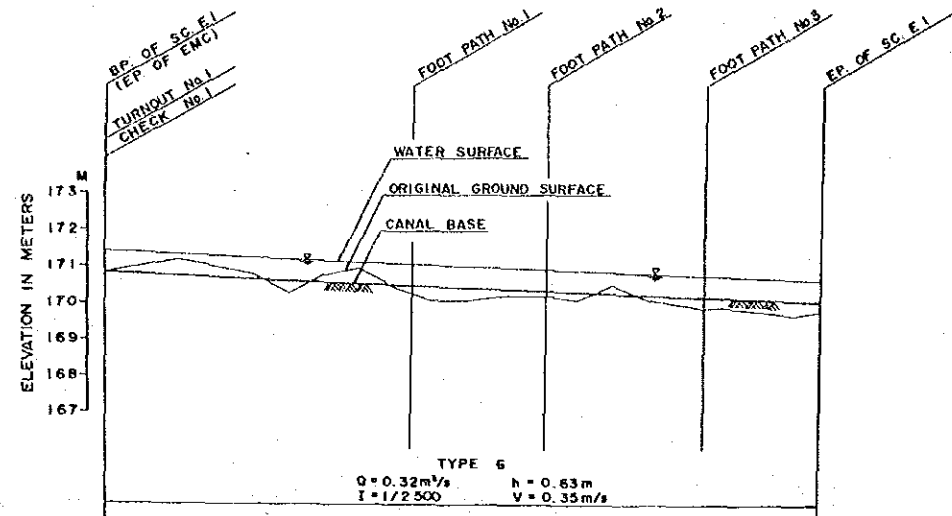


WATER SURFACE ELEVATION	CANAL BASE ELEVATION	ORIGINAL GROUND SURFACE	ACCUMULATED DISTANCE	DISTANCE	STATION
166.48	165.82	166.00	1300.00	100.00	No. 13
166.45	165.79	166.10	1400.00	100.00	No. 14
166.42	165.76	166.10	1500.00	100.00	No. 15
166.39	165.73	166.00	1600.00	100.00	No. 16
166.36	165.70	166.30	1700.00	100.00	No. 17
166.33	165.67	166.00	1800.00	100.00	No. 18

ABBREVIATIONS
 B.P. : BEGINNING POINT
 E.P. : END POINT
 W.M.C. : WEST MAIN CANAL
 S.C. : SECONDARY CANAL
 M : METER(S)
 F : DROP HEIGHT IN METER

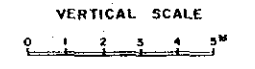
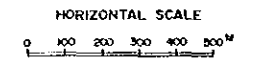


AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE
 LAO PEOPLE'S DEMOCRATIC REPUBLIC
 TITLE OF DRAWING
 PROFILES OF SECONDARY CANALS (2/3)
 DATE : DWG. NO. 206
 JAPAN INTERNATIONAL COOPERATION AGENCY



WATER SURFACE ELEVATION	171.46	171.42	171.38	171.34	171.30	171.26	171.22	171.18	171.14	171.10	171.06	171.02	170.98	170.94	170.90	170.86	170.82	170.78	170.74	170.70	170.67		
CANAL BASE ELEVATION	170.85	170.79	170.75	170.71	170.67	170.63	170.59	170.55	170.51	170.47	170.43	170.39	170.35	170.31	170.27	170.23	170.19	170.15	170.11	170.07	170.04		
ORIGINAL GROUND SURFACE	170.84	171.00	171.20	171.00	170.80	170.30	170.80	171.00	170.40	170.30	170.10	170.20	170.20	170.30	170.50	170.10	170.00	169.90	169.80	169.70	169.80		
ACCUMULATED DISTANCE	0.00	100.00	200.00	300.00	400.00	500.00	600.00	700.00	800.00	840.00	900.00	1000.00	1100.00	1200.00	1300.00	1400.00	1500.00	1600.00	1650.00	1700.00	1800.00	1900.00	1970.00
DISTANCE	0.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	40.00	60.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	50.00	100.00	100.00	70.00		
STATION	No.0	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8 +80.0	No.9	No.10	No.11	No.12 +10.0	No.13	No.14	No.15	No.16 +30.0	No.17	No.18	No.19	+70.0 (E.P.)		

ABBREVIATIONS
 B.P. : BEGINNING POINT
 E.P. : END POINT
 EMC : EAST MAIN CANAL
 S.C. : SECONDARY CANAL
 M. : METER (S)



AGRICULTURAL AND RURAL DEVELOPMENT
 PROJECT IN THE SUBURBS OF VIENTIANE
 LAO PEOPLE'S DEMOCRATIC REPUBLIC
 TITLE OF DRAWING
 PROFILES OF SECONDARY CANALS (3/3)
 DATE _____ DWG. NO. 207
 JAPAN INTERNATIONAL COOPERATION AGENCY

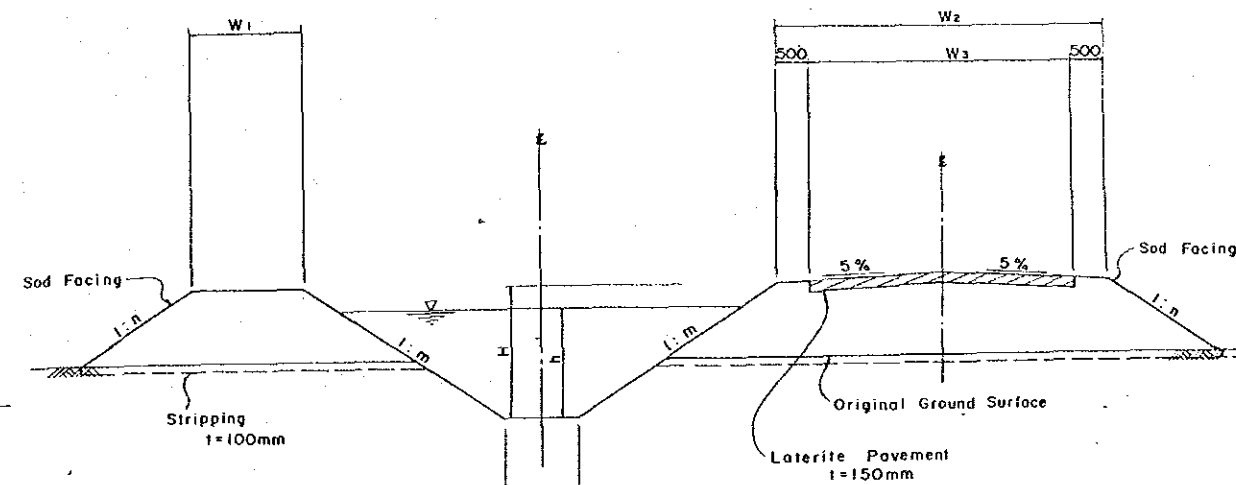
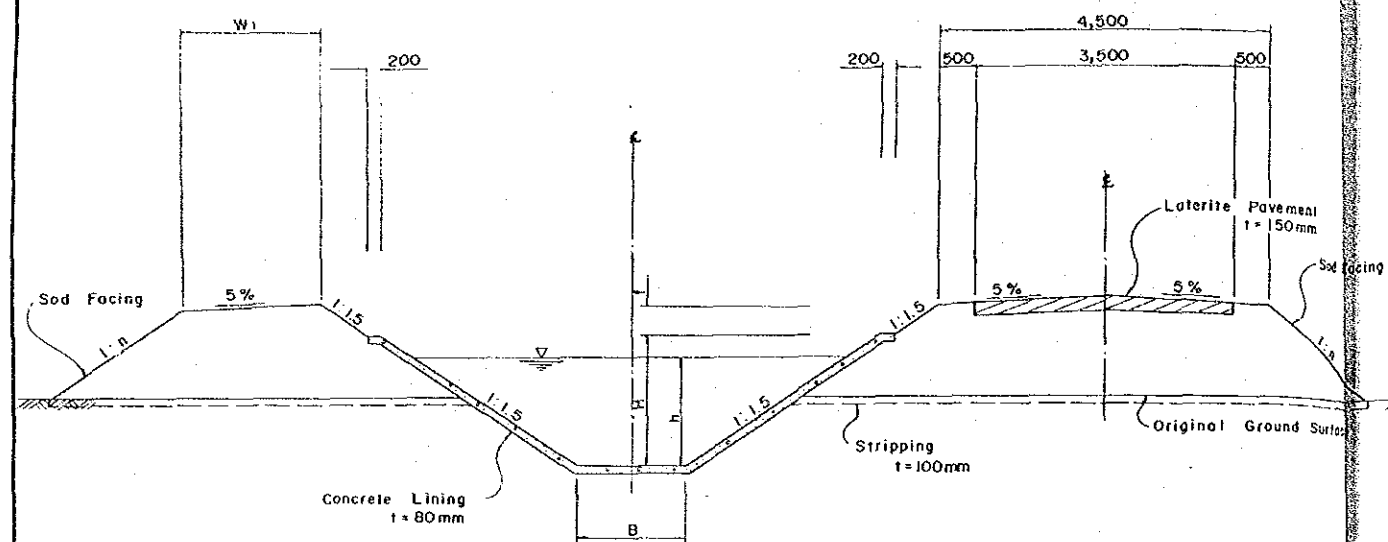
TYPICAL CROSS SECTIONS OF CANALS AND FARM ROADS

CONCRETE-LINED CANAL

FARM ROAD

UNLINED CANAL

FARM ROAD



Note: Laterite pavement will be provided only on the top of farm roads for headreach, main and secondary canals.

TYPICAL CROSS SECTION SCALE - A

TYPICAL CROSS SECTION SCALE - A

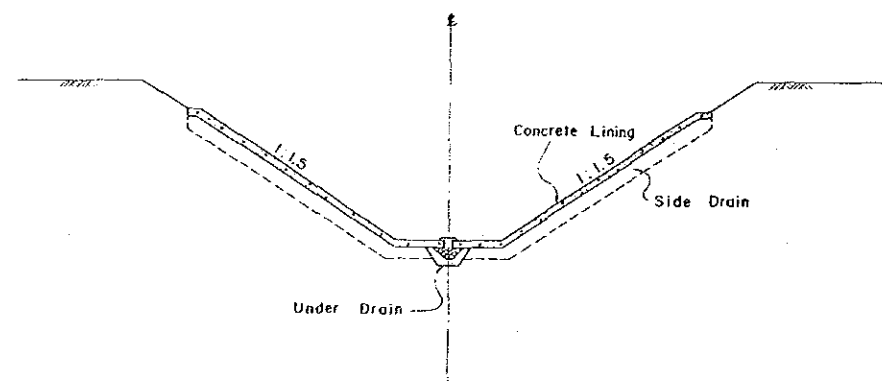
DIMENSION

Canal Type	unit: mm					
	B	H	f	h max	W1	
A	1,500	1,800	400	1,500	2,000	0

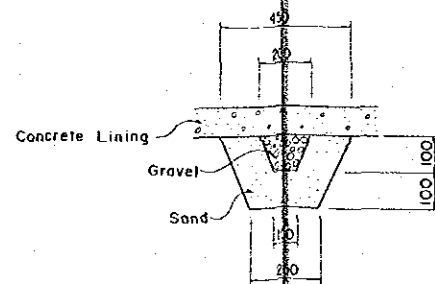
DIMENSION

Canal Type	unit: mm							
	B	H	h max	W1	W2	W3	m	n
B	1,500	2,000	1,700	1,500	4,500	3,500	1.5	1.5 ~ 2.0
C	1,300	2,000	1,700	1,500	4,500	3,500	1.5	1.5 ~ 2.0
D	1,000	1,800	1,500	1,500	4,500	3,500	1.5	1.5 ~ 2.0
E	800	1,600	1,300	1,500	4,500	3,500	1.5	1.5 ~ 2.0
F	700	1,400	1,100	1,500	4,500	3,500	1.5	1.5 ~ 2.0
G	500	1,100	800	1,500	4,500	3,500	1.5	1.5 ~ 2.0
H	400	900	600	1,000	4,500	3,500	1.5	1.5 ~ 2.0
I	400	800	600	400	3,000	—	1.0	1.5
J	300	600	400	400	3,000	—	1.0	1.5
K	300	500	300	300	3,000	—	1.0	1.5

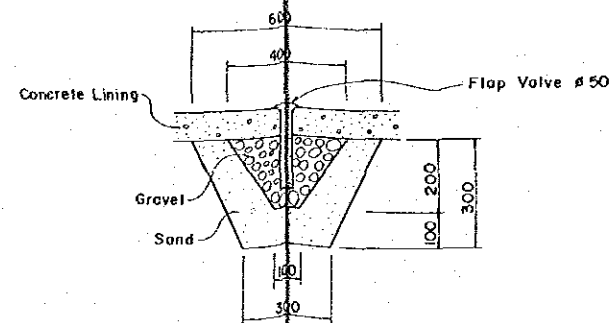
UNDER SIDE DRAIN & FLAP VALVE ON LINED-CANAL



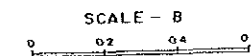
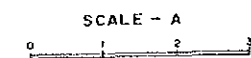
TYPICAL CROSS SECTION SCALE - A



SIDE DRAIN SCALE - B



UNDER DRAIN SCALE - B

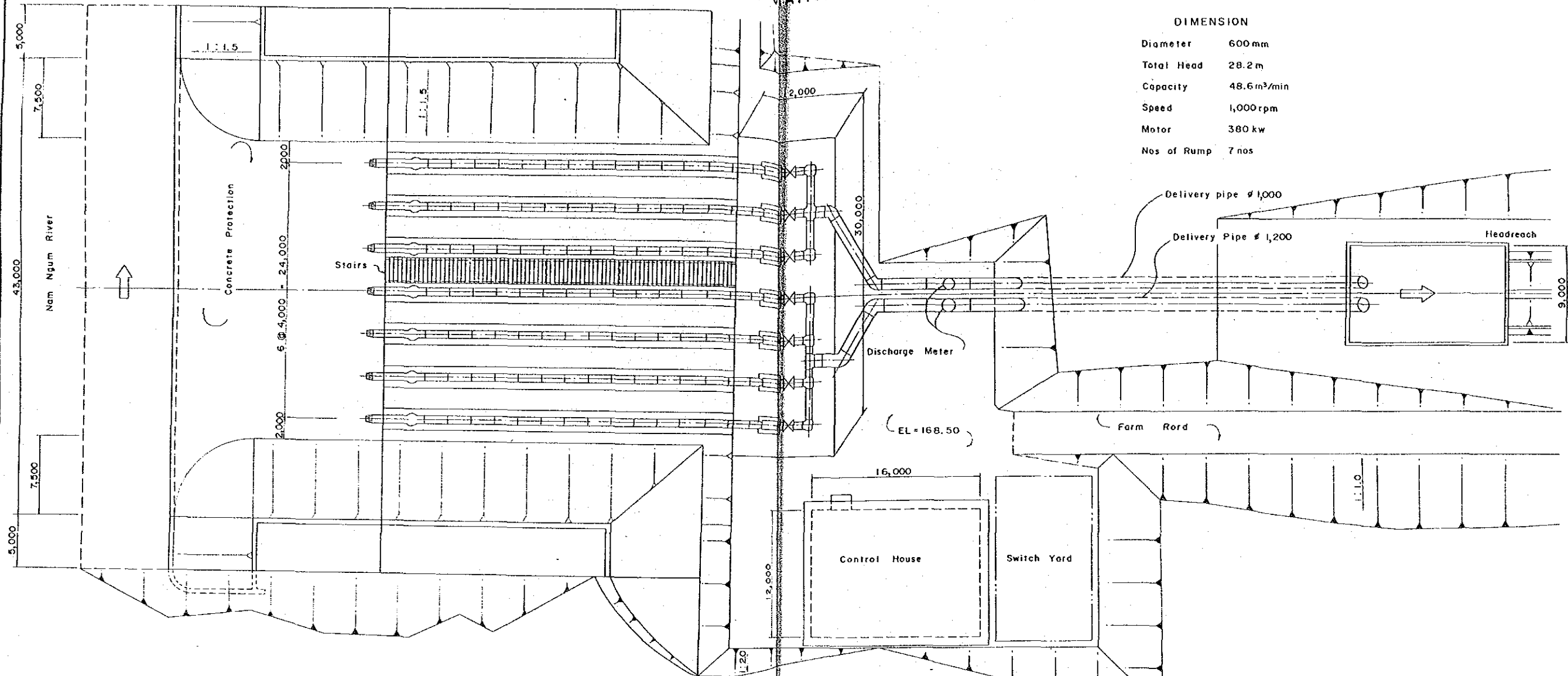


AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
TYPICAL CROSS SECTIONS OF CANALS & FARM ROADS	
DATE	DWG. NO. 208
JAPAN INTERNATIONAL COOPERATION AGENCY	

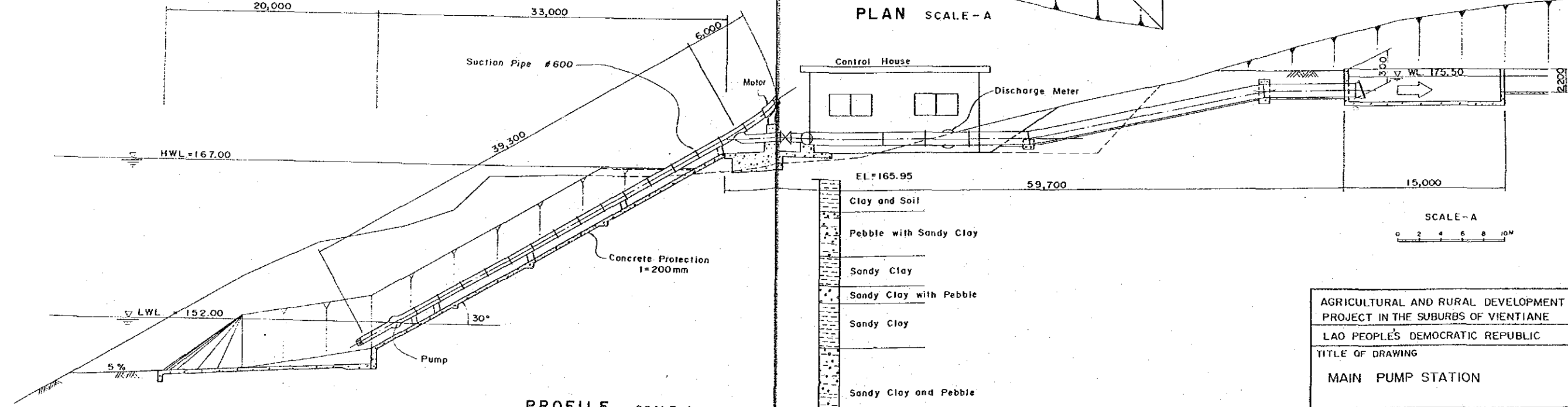
MAIN PUMP STATION

DIMENSION

Diameter	600mm
Total Head	28.2m
Capacity	48.6m ³ /min
Speed	1,000rpm
Motor	380 kw
Nos of Rump	7 nos



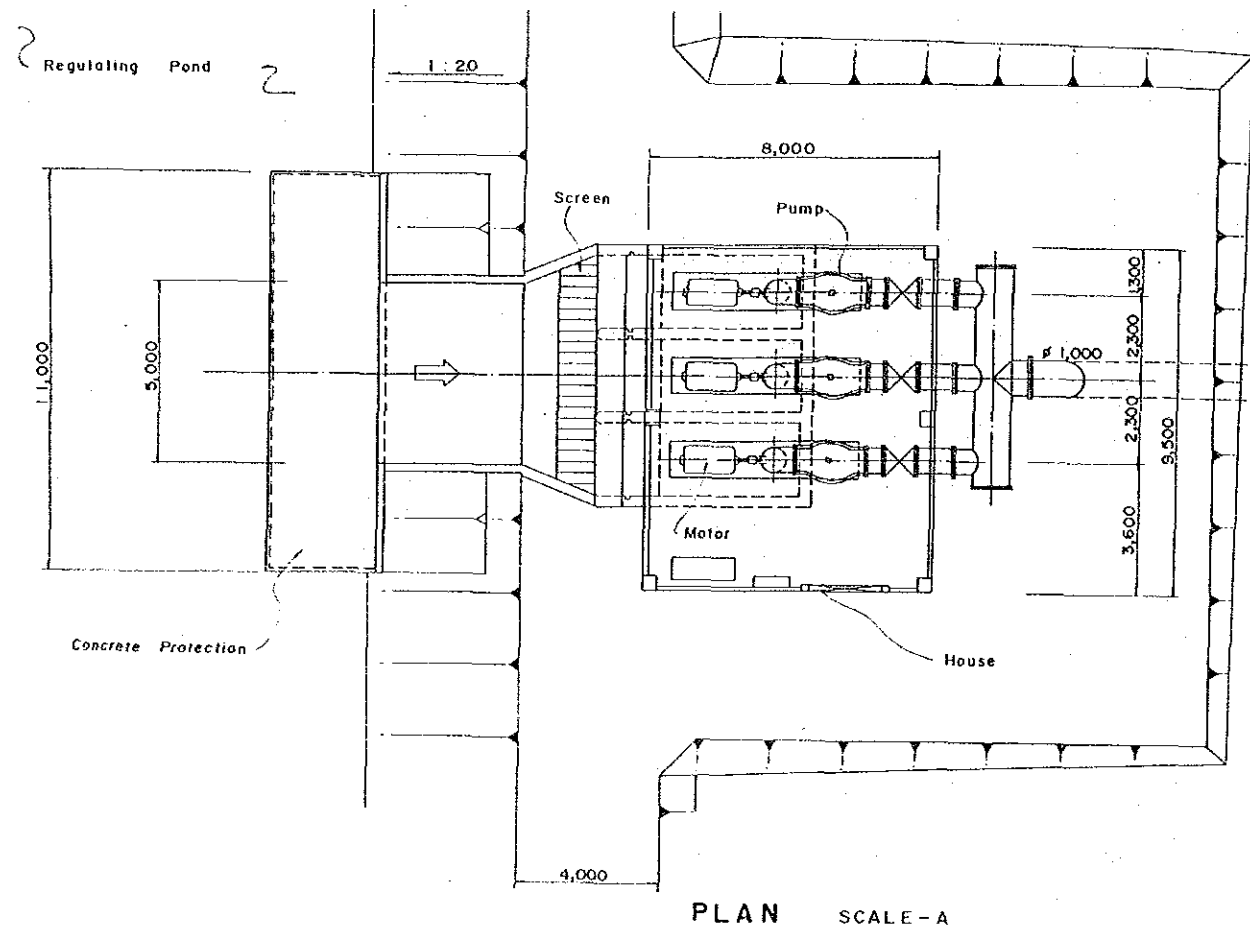
PLAN SCALE - A



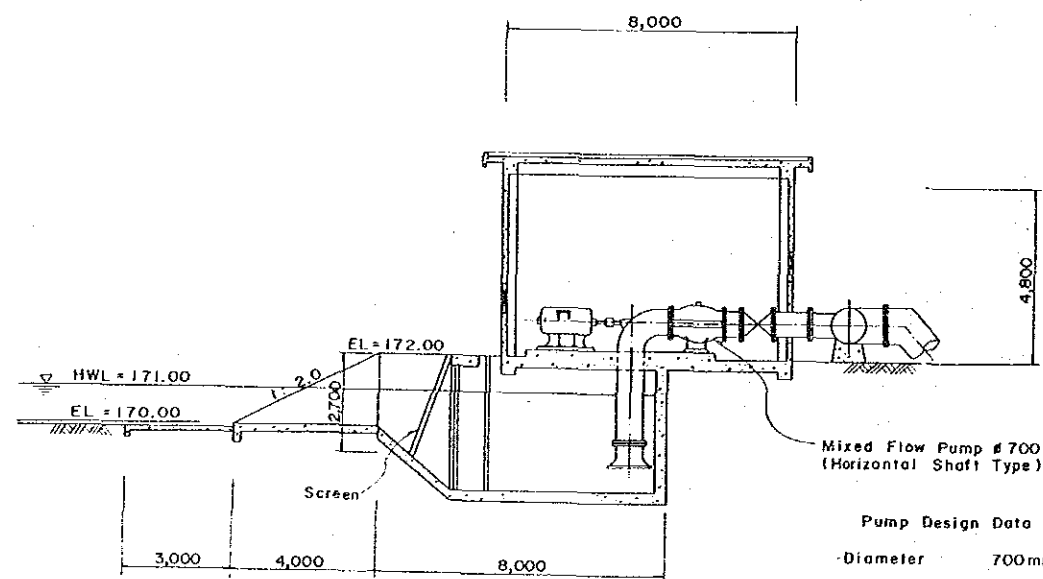
PROFILE SCALE - A

AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
MAIN PUMP STATION	
DATE	DWG. NO. 301
JAPAN INTERNATIONAL COOPERATION AGENCY	

BOOSTER PUMP STATION NO. 1



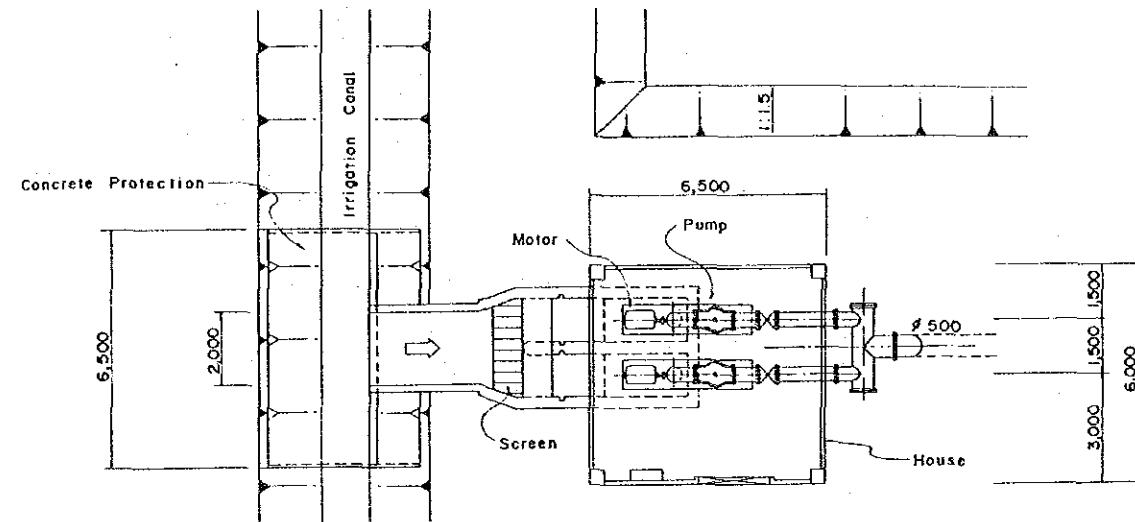
PLAN SCALE-A



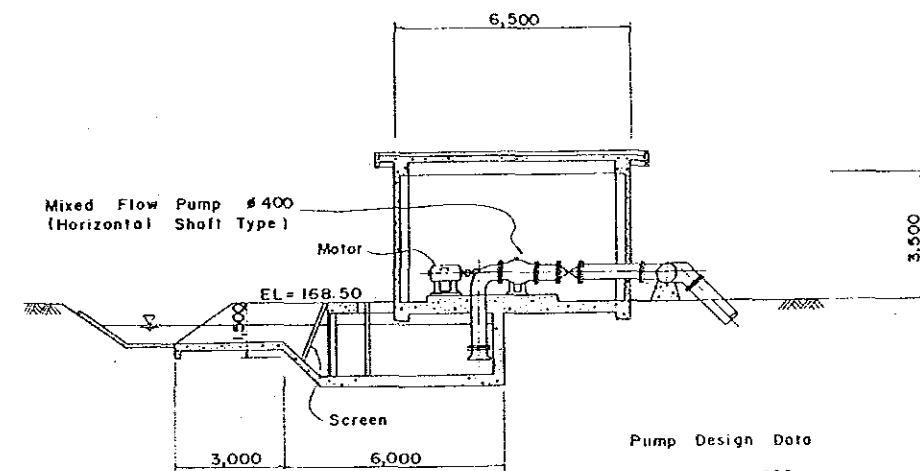
PROFILE SCALE-A

Pump Design Data
 - Diameter 700mm
 - Total Head 6m
 - Capacity 55.5 m³/min.
 - Speed 500 rpm
 - Motor 80 kw

BOOSTER PUMP STATION NO. 2

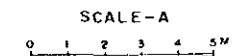


PLAN SCALE-A

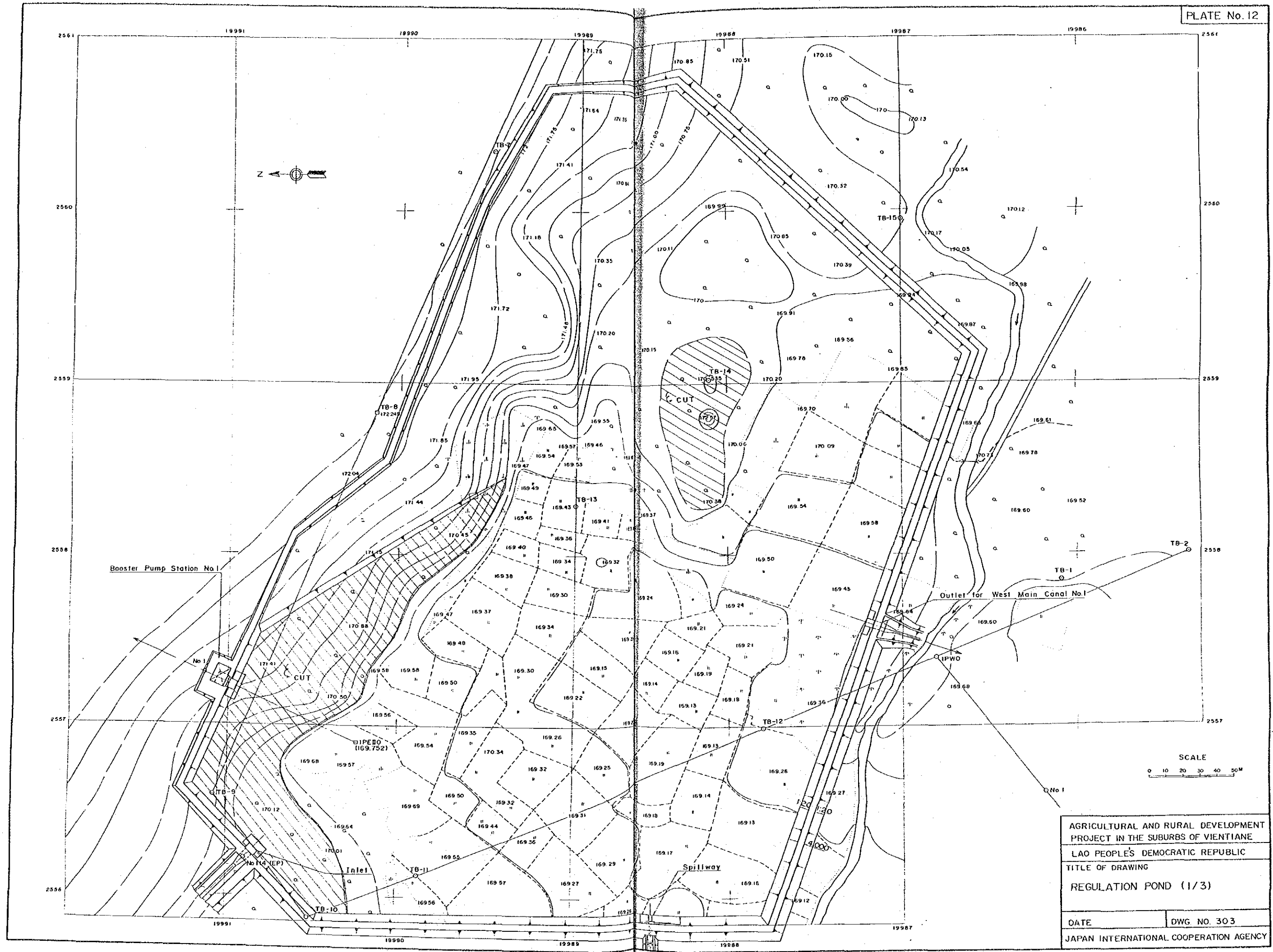


PROFILE SCALE-A

Pump Design Data
 - Diameter 400mm
 - Total Head 2.4m
 - Capacity 16.8 m³/min
 - Speed 600 rpm
 - Motor 10 kw

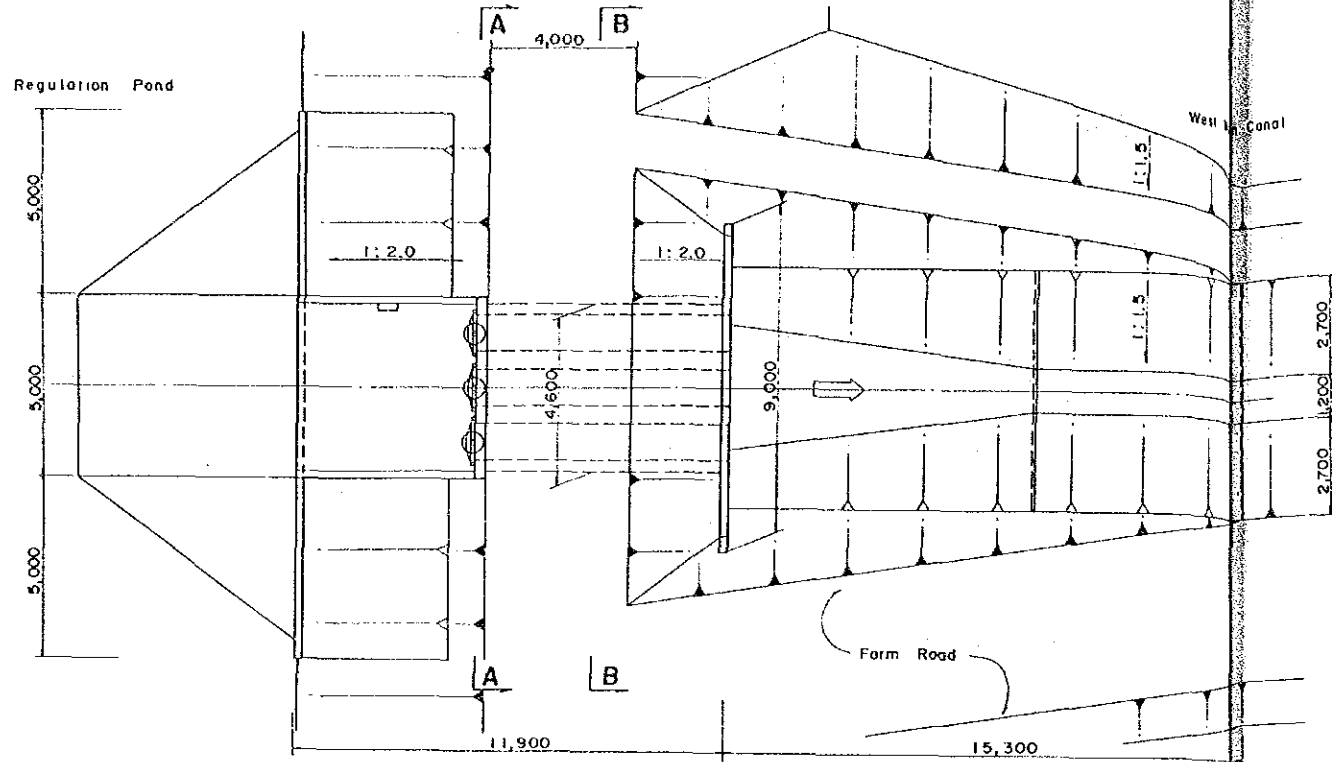


AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
BOOSTER PUMP STATION No.1 & No.2	
DATE	DWG. NO. 302
JAPAN INTERNATIONAL COOPERATION AGENCY	

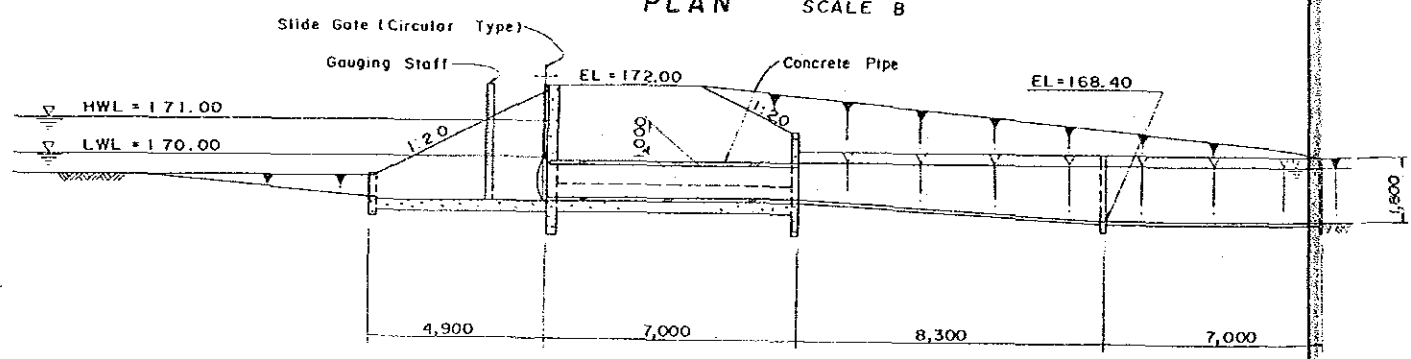


AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
REGULATION POND (1/3)	
DATE	DWG NO. 303
JAPAN INTERNATIONAL COOPERATION AGENCY	

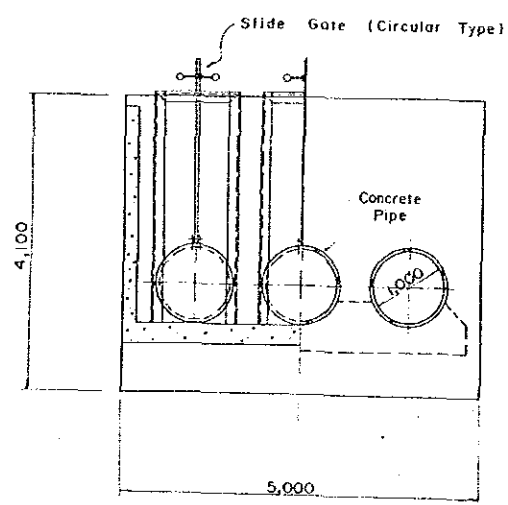
OUTLET FOR WEST MAIN CANAL NO. 1



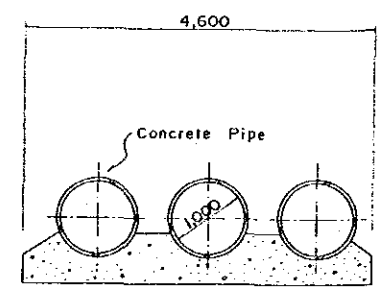
PLAN SCALE B



PROFILE SCALE-B

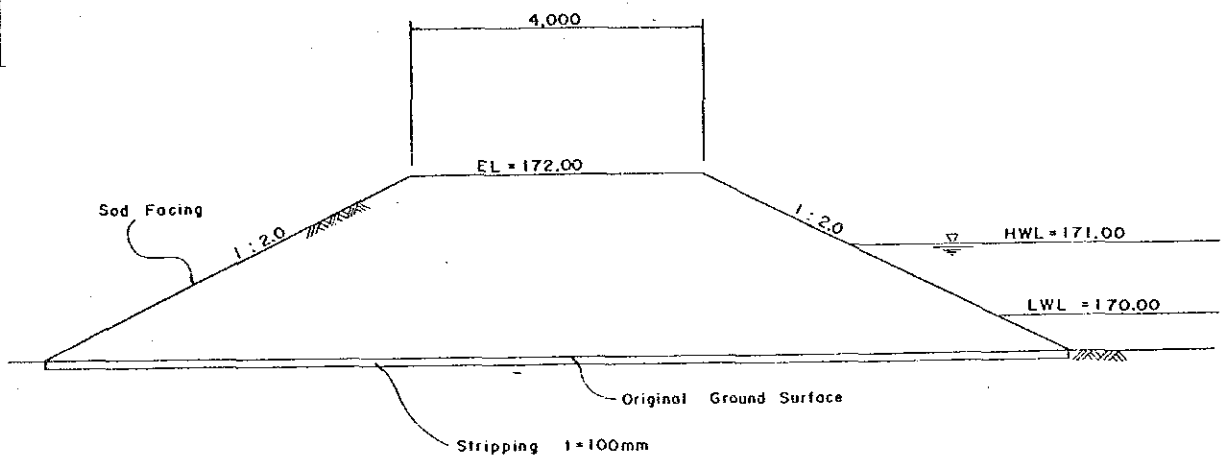


SECTION A-A SCALE-A

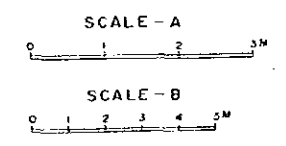


SECTION B-B SCALE-B

DIKE OF REGULATION POND

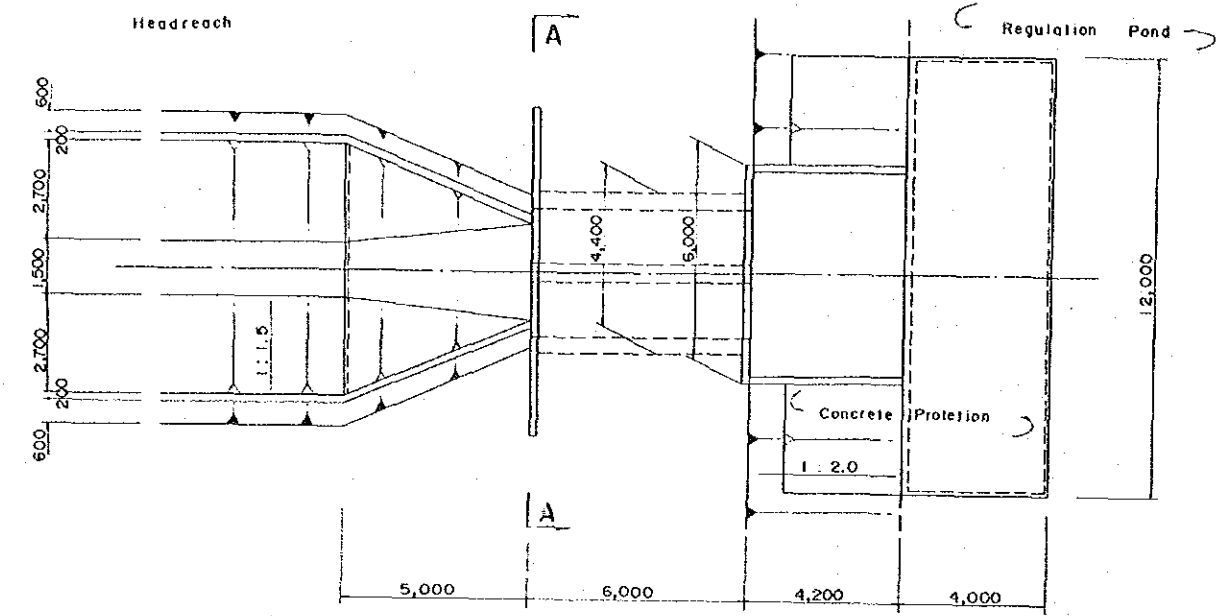


SECTION SCALE - A

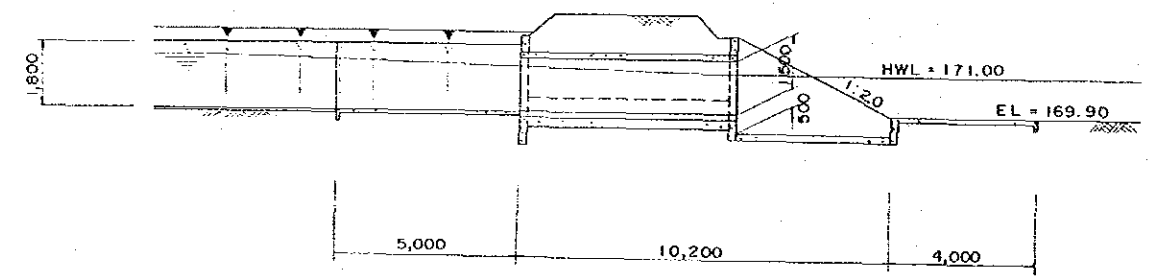


AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
REGULATION POND (2/3)	
DATE	DWG. NO. 304
JAPAN INTERNATIONAL COOPERATION AGENCY	

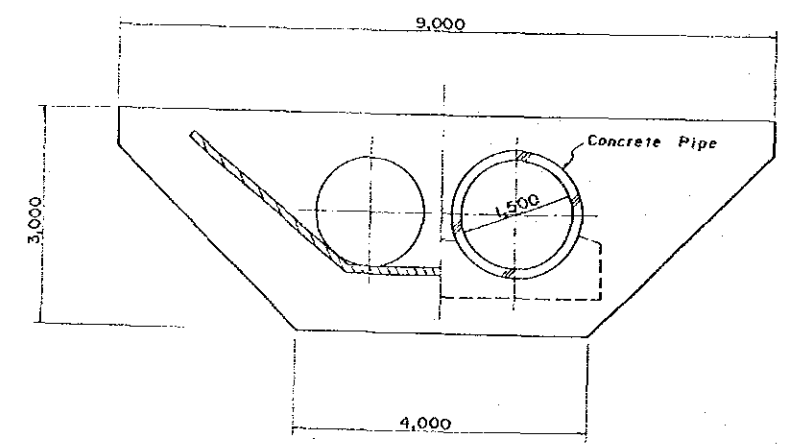
INLET



PLAN SCALE-A

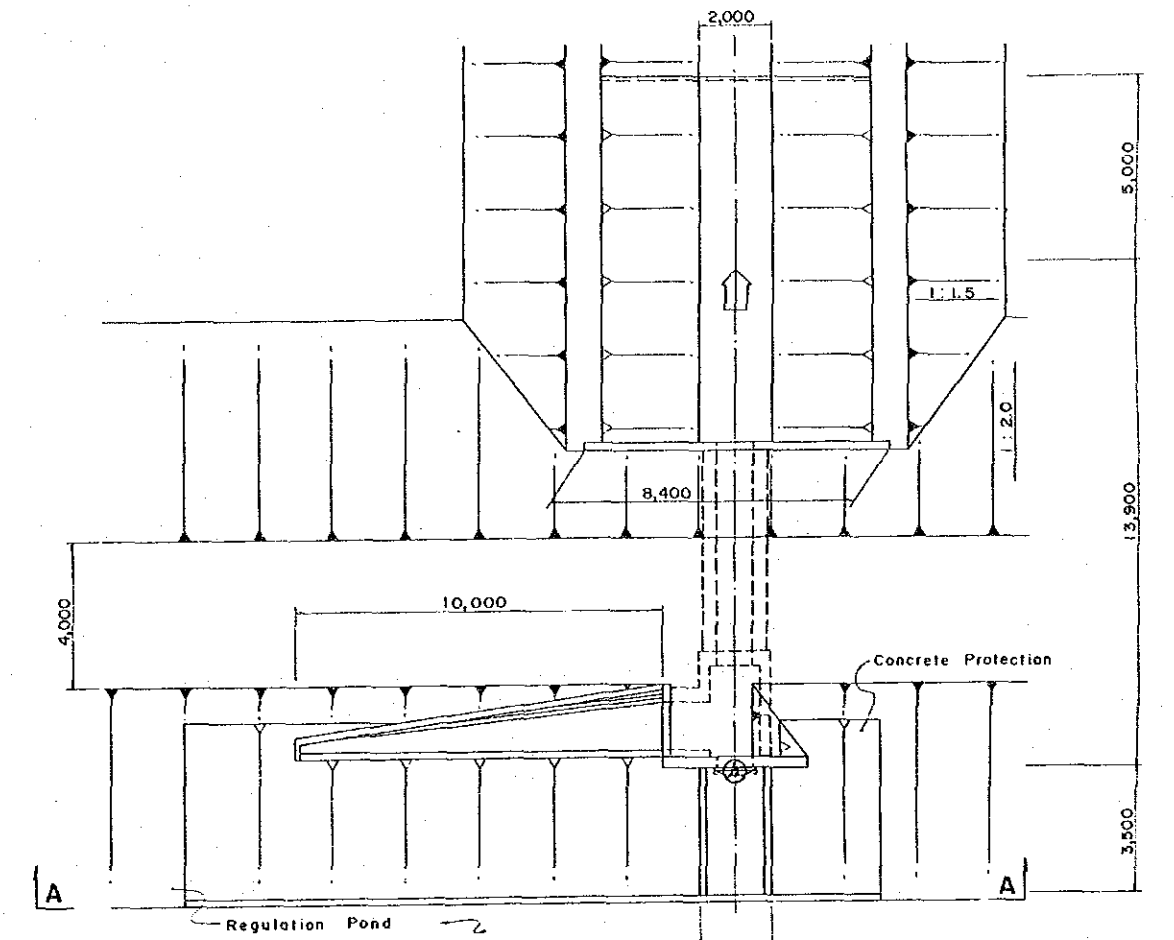


PROFILE SCALE-A

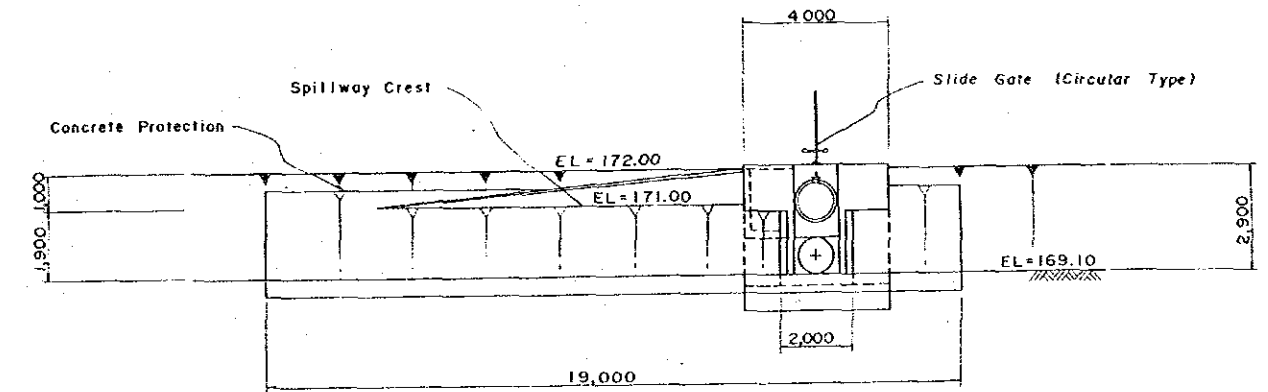


SECTION A-A SCALE-B

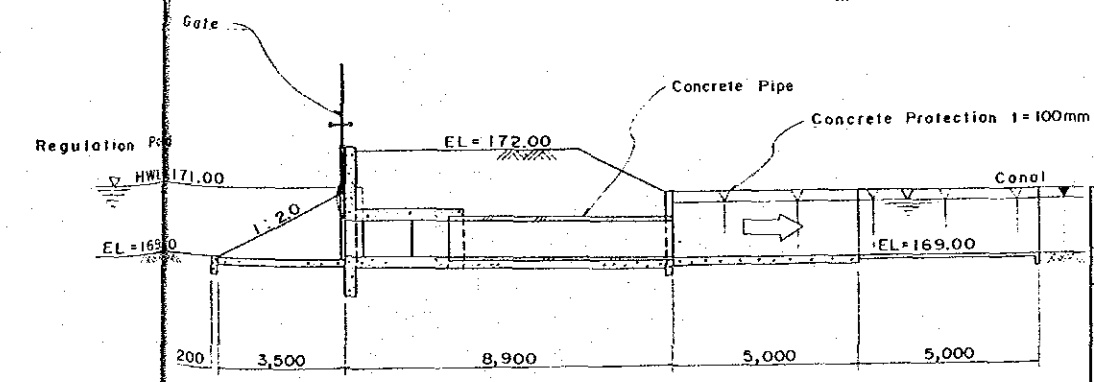
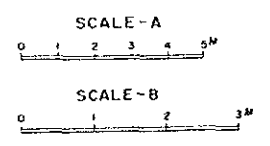
SPILLWAY



PLAN SCALE-A



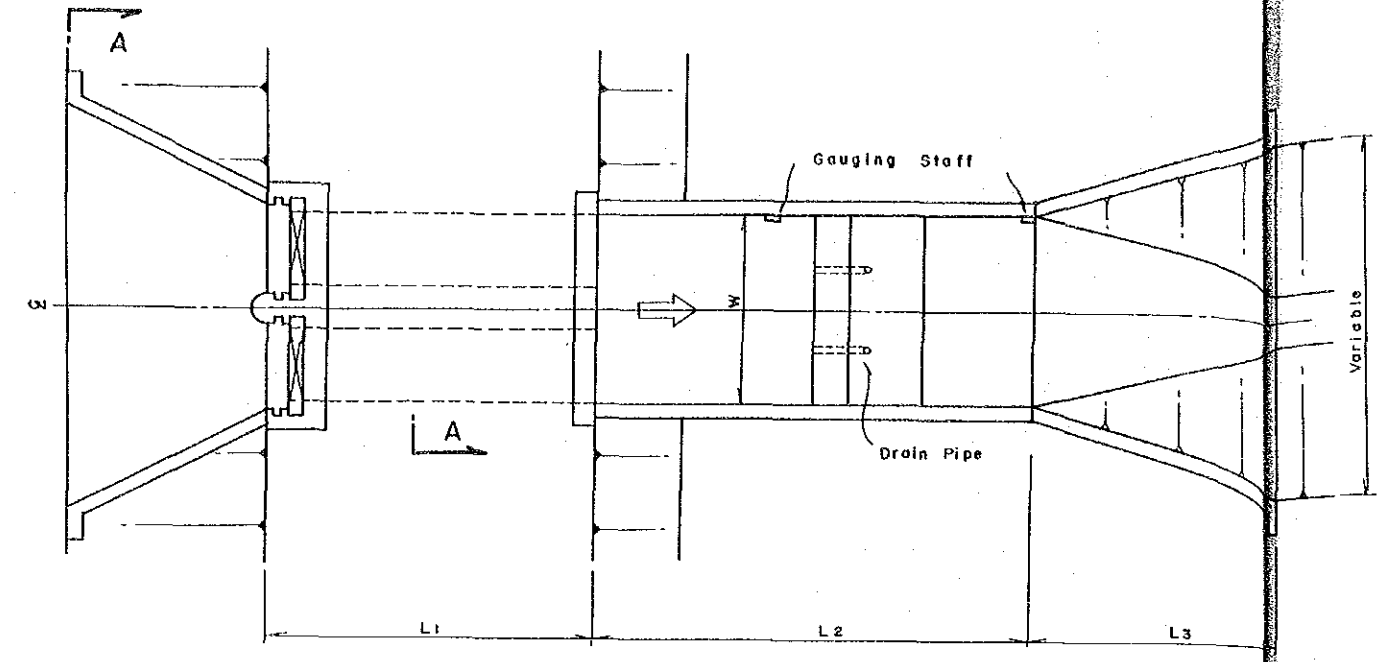
SECTION A-A SCALE-A



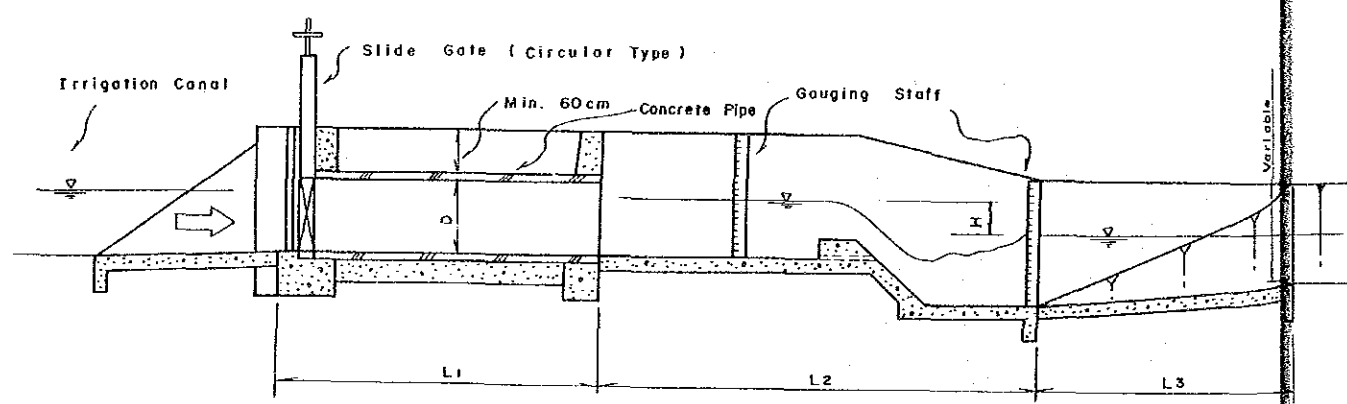
PROFILE SCALE-A

AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
REGULATION POND (3/3)	
DATE	DWG. NO. 305
JAPAN INTERNATIONAL COOPERATION AGENCY	

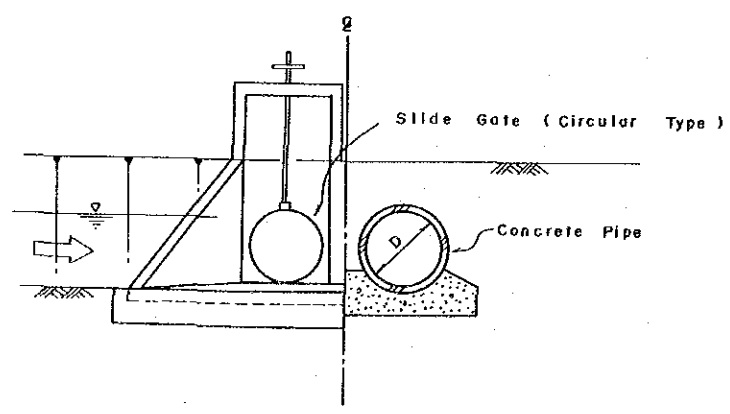
TURNOUT , TYPE - A



PLAN SCALE - A

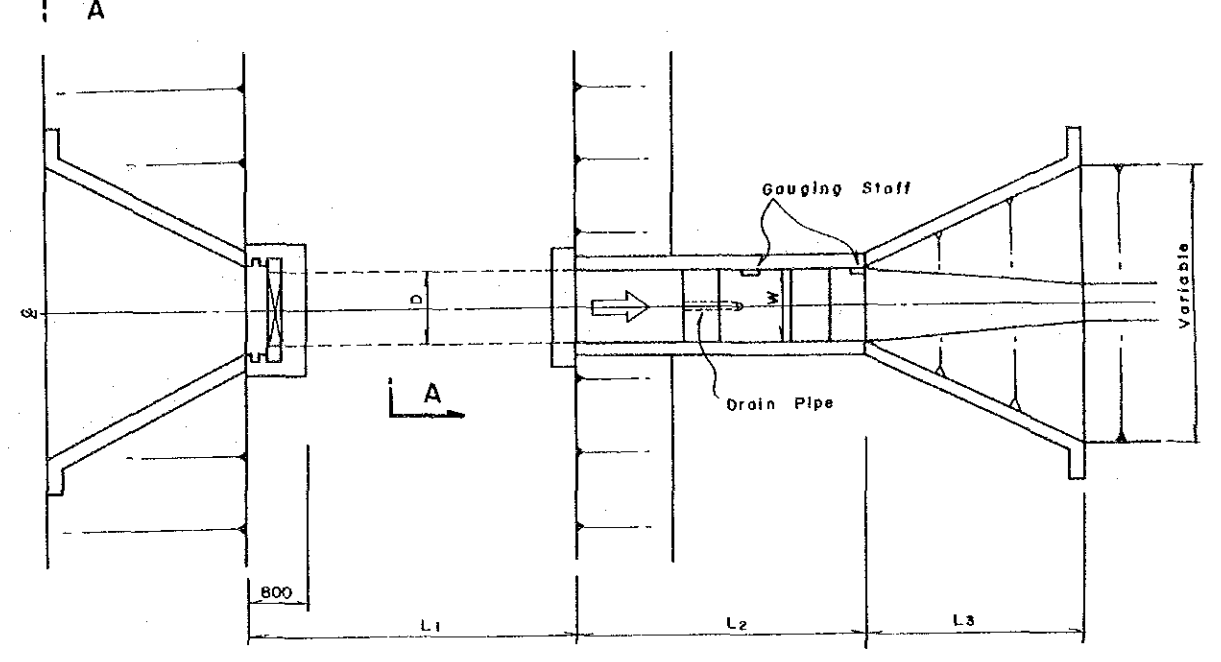


PROFILE SCALE - A

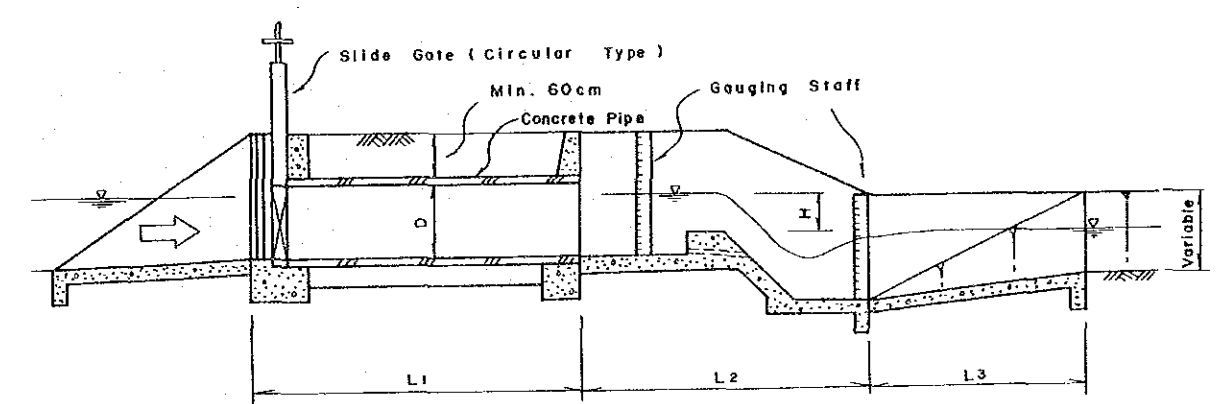


SECTION A - A SCALE - A

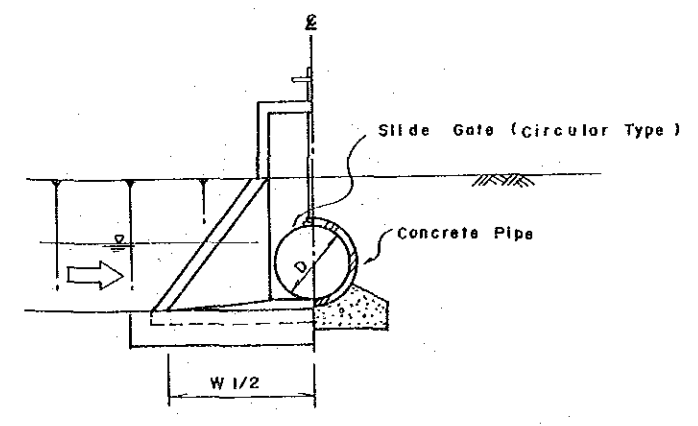
TURNOUT , TYPE - B



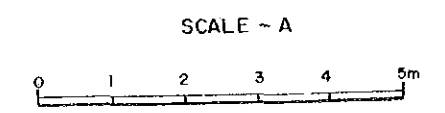
PLAN SCALE - A



PROFILE SCALE - A

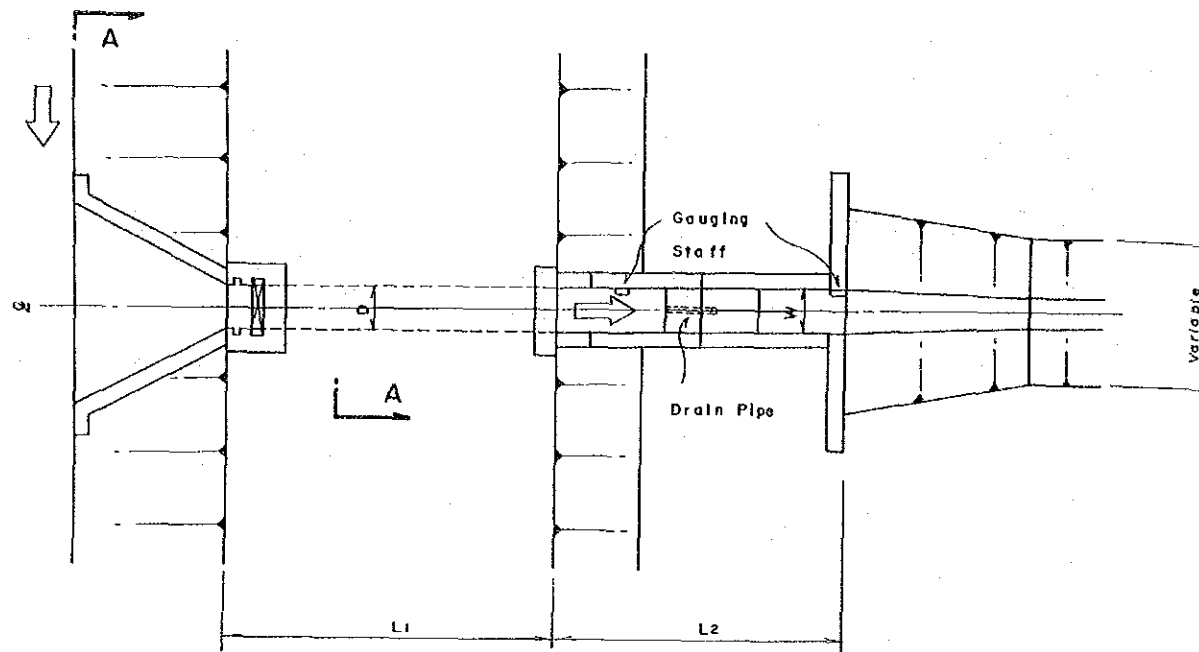


SECTION A - A SCALE - A

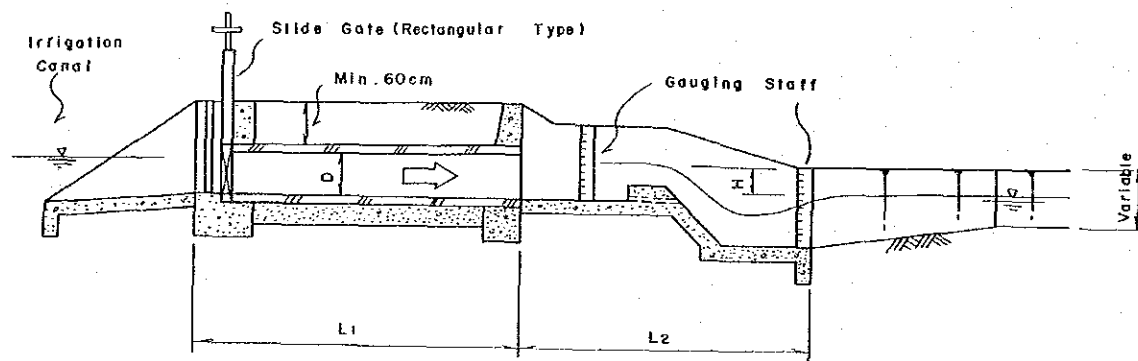


AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
TURNOUTS (1/2)	
DATE	DWG. NO. 306
JAPAN INTERNATIONAL COOPERATION AGENCY	

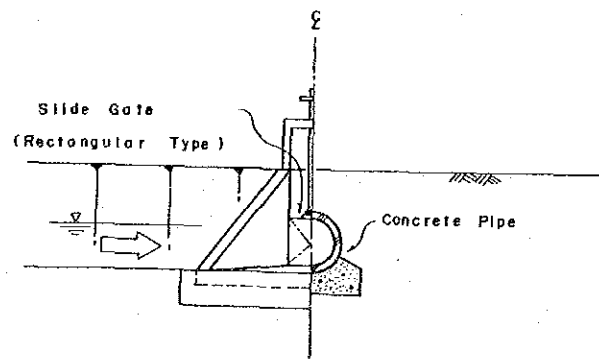
TURNOUT, TYPE - C



PLAN SCALE - A



PROFILE SCALE - A



SECTION A-A SCALE - A

DIMENSION

(Unit : mm)

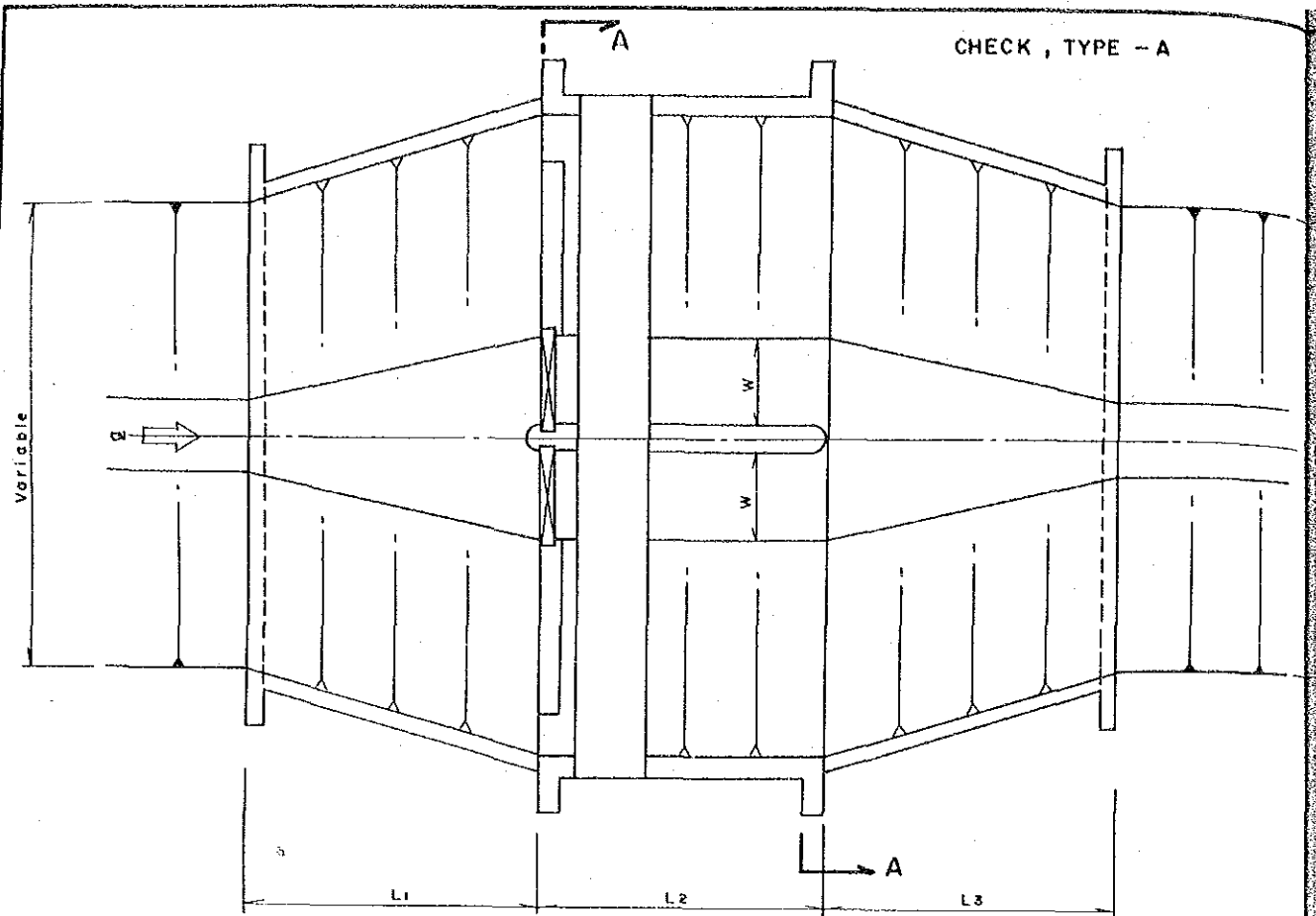
Type	Pipe	Q	D	L1	L2	L3	W	H	Gate
A	φ 1,000x2	0.65 ~ 1.30	1,000	4,500	6,000	5,000	2,600	300	φ 1,000 x 2 nos
B	φ 1,000	0.25 ~ 0.65	1,000	4,000	5,000	4,000	1,000	300	φ 1,000
C - 1	φ 600	0.15 ~ 0.25	600	4,500	4,000	-	600	300	φ 600
C - 2	φ 500	~ 0.15	500	4,500	4,000	-	500	300	φ 500

SCALE - A

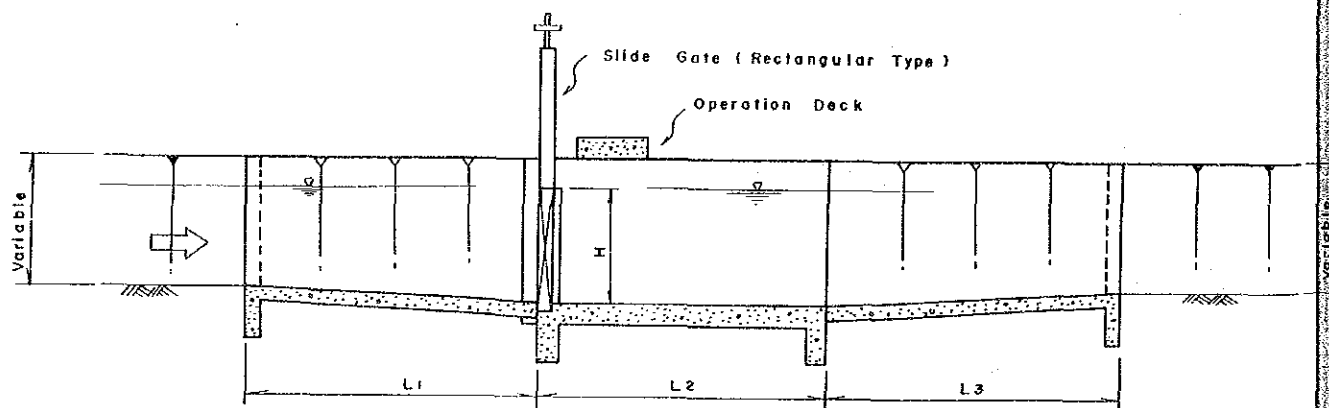


AGRICULTURAL AND RURAL DEVELOPMENT
PROJECT IN THE SUBURBS OF VIENTIANE
LAO PEOPLES DEMOCRATIC REPUBLIC
TITLE OF DRAWING
TURNOUTS (2/2)
DATE _____ DWG. NO. 307
JAPAN INTERNATIONAL COOPERATION AGENCY

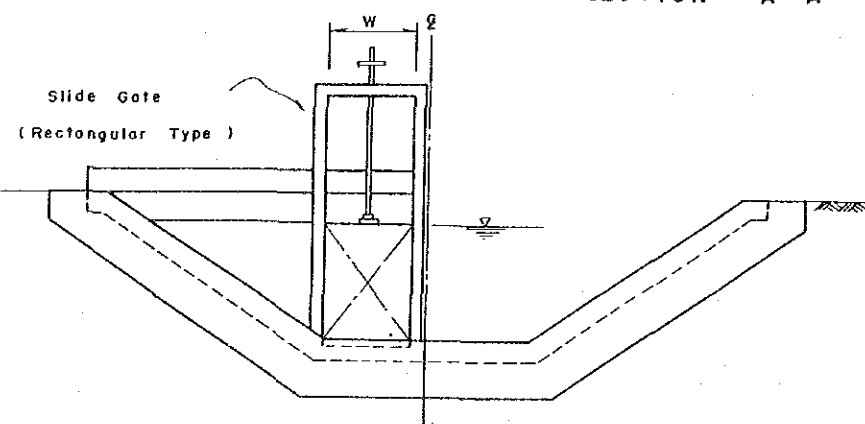
CHECK , TYPE - A



PLAN SCALE - A

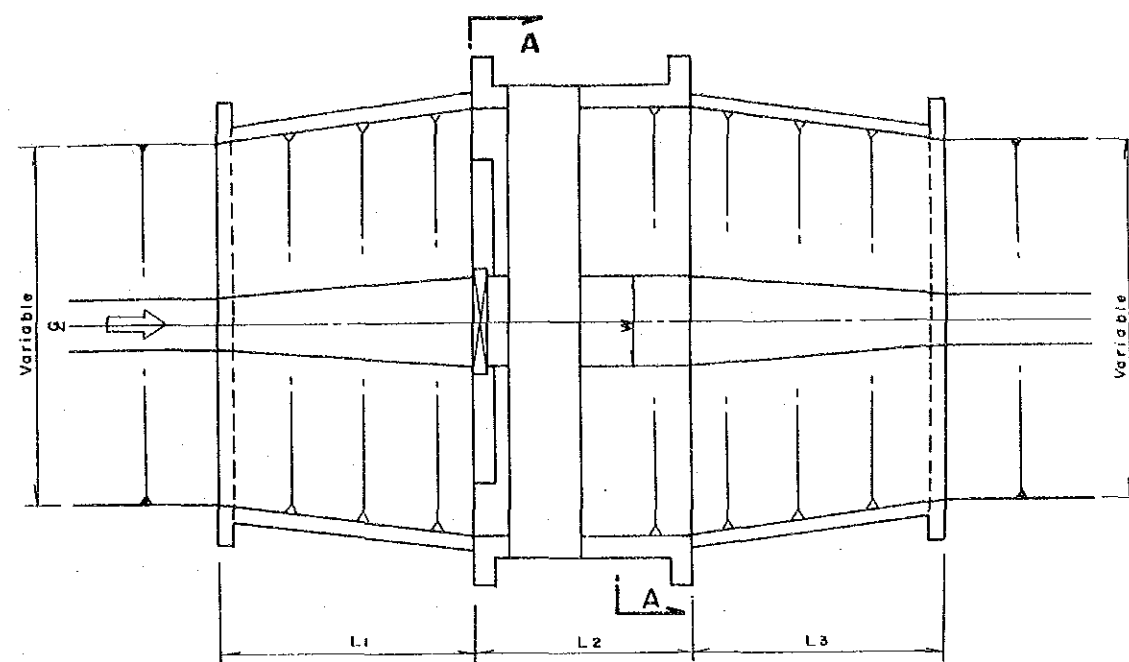


SECTION A-A SCALE - A

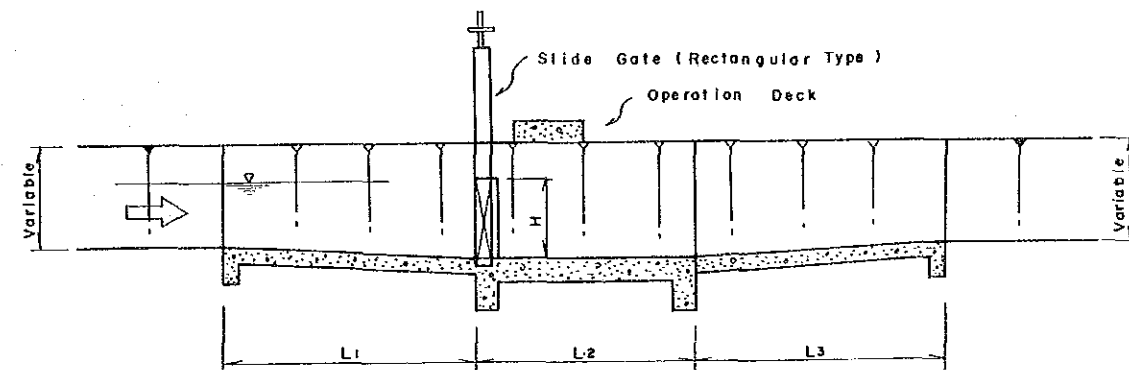


SECTION A-A SCALE - A

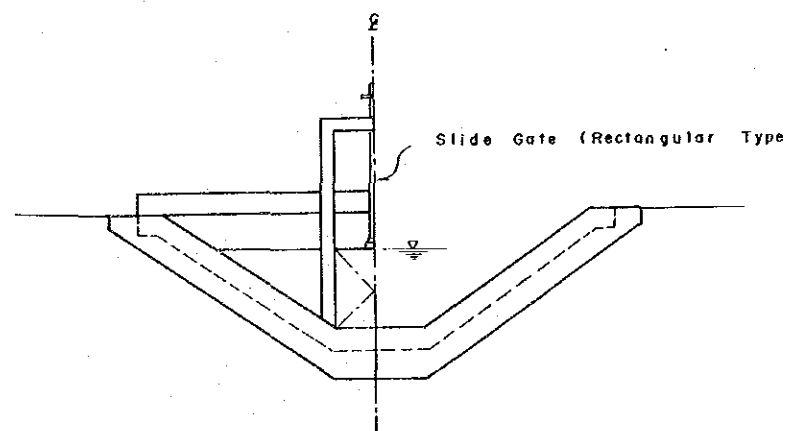
CHECK TYPE - B



PLAN SCALE - A

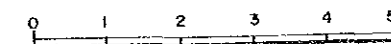


PROFILE SCALE - A



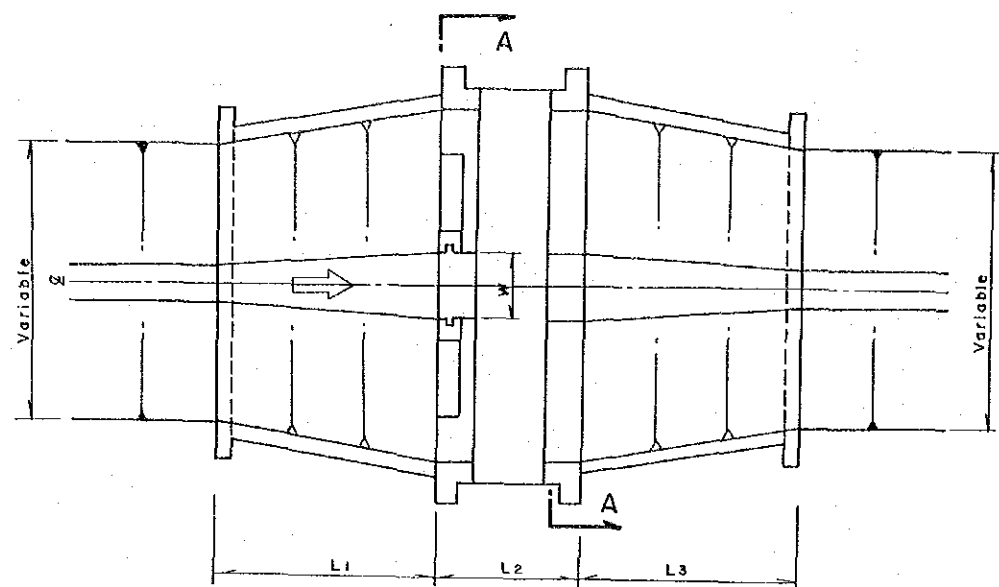
SECTION A-A SCALE - A

SCALE - A

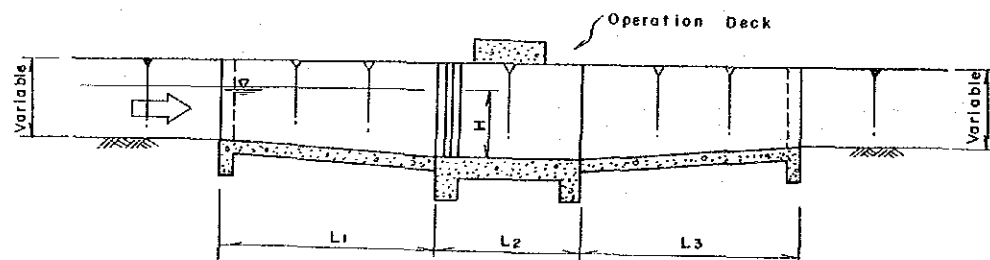


AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
CHECKS (1/2)	
DATE	DWG. NO. 308
JAPAN INTERNATIONAL COOPERATION AGENCY	

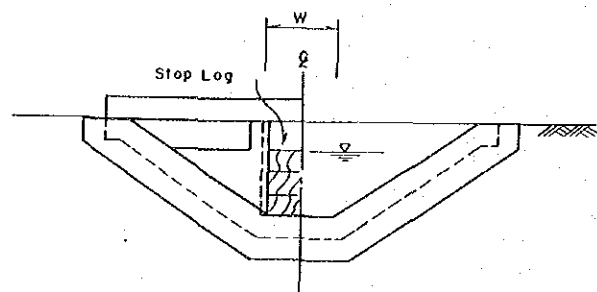
CHECK , TYPE - C



PLAN SCALE - A



PROFILE SCALE - A



SECTION A-A SCALE - A

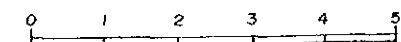
DIMENSION

[Unit: mm]

Type	Canal	Q (m ³ /s)	L1	L2	L3	W	H	Cote(m) WxH
A-1	H/R, M/C	3.0 ~ 5.0	5,000	4,000	5,000	2,000	1,500	2000x1500 2nos
B-1	H/R, M/C	1.5 ~ 3.0	4,000	3,000	4,000	2,000	1,500	2000x1500
B-2	H/R, M/C	0.65 ~ 1.5	3,000	2,000	3,000	1,500	1,500	1500x1500
B-3	H/R, M/C	~ 0.65	2,000	1,500	2,000	1,000	1,000	1,000x1,000
C-1	S/C	0.65 ~ 1.0	3,000	2,000	3,000	1,500	1,500	—
C-2	S/C	~ 0.65	2,000	1,500	2,000	1,000	1,000	—

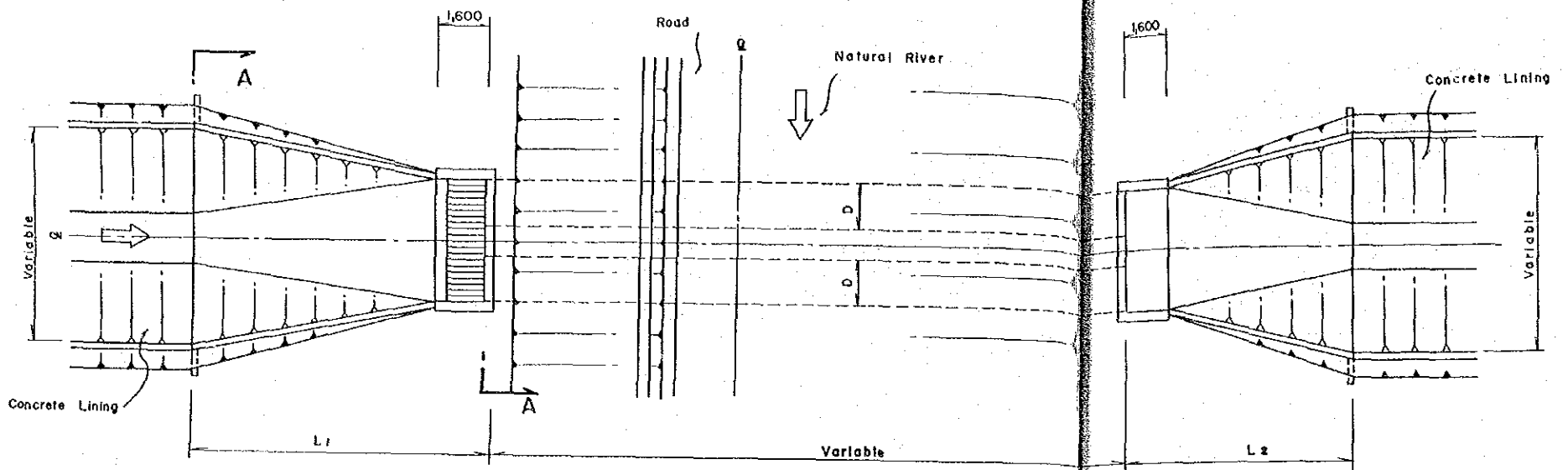
Note ; H/R : Headreach
M/C : Main Canal
S/C : Secondary Canal

SCALE - A

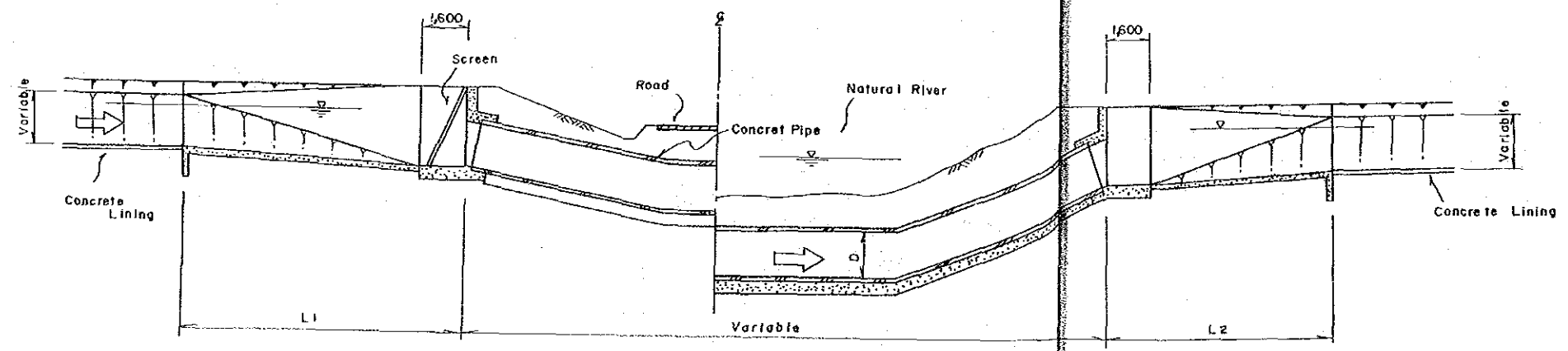


AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
CHECKS (2/2)	
DATE	DWG. NO. 309
JAPAN INTERNATIONAL COOPERATION AGENCY	

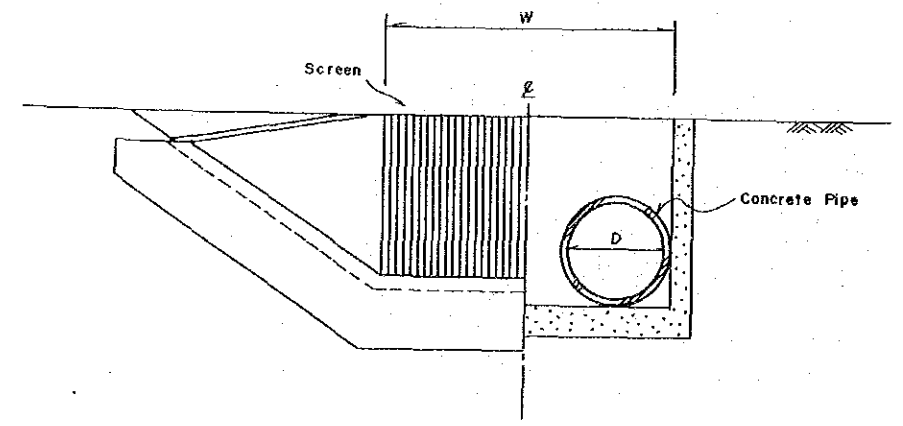
SYPHON , TYPE - A



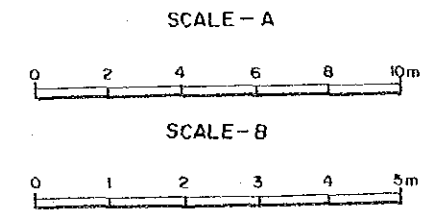
PLAN SCALE - A



PROFILE SCALE - A

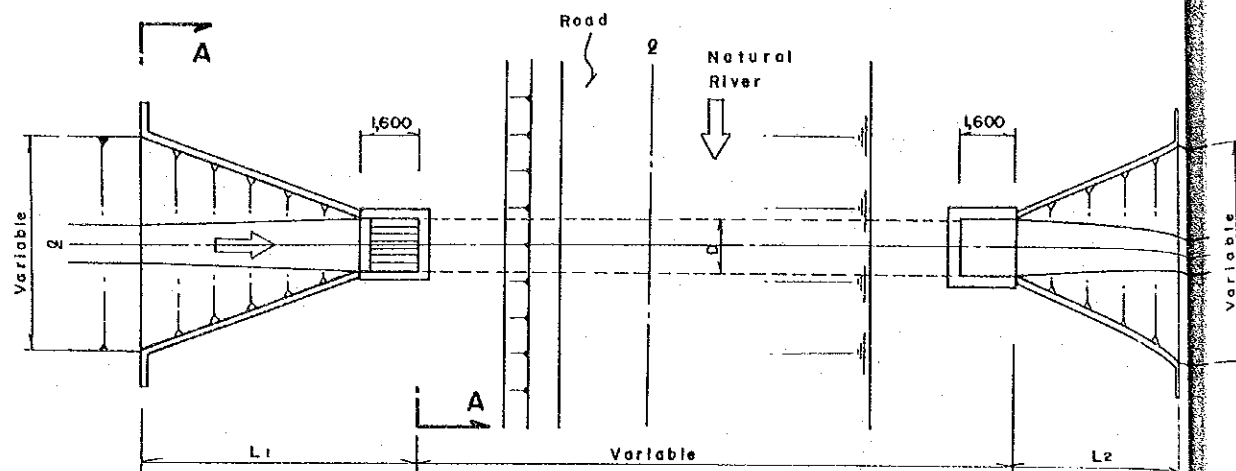


SECTION A - A SCALE - B

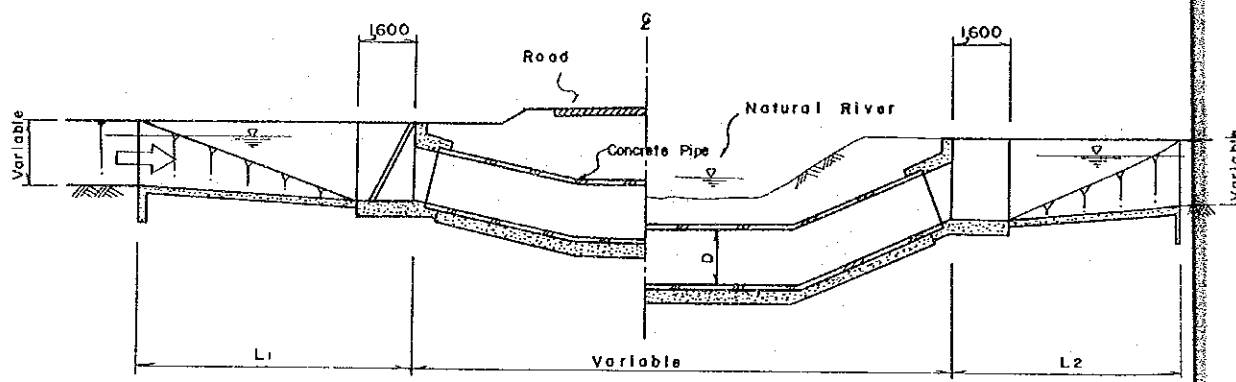


AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
SYPHON (1/2)	
DATE	DWG. NO. 310
JAPAN INTERNATIONAL COOPERATION AGENCY	

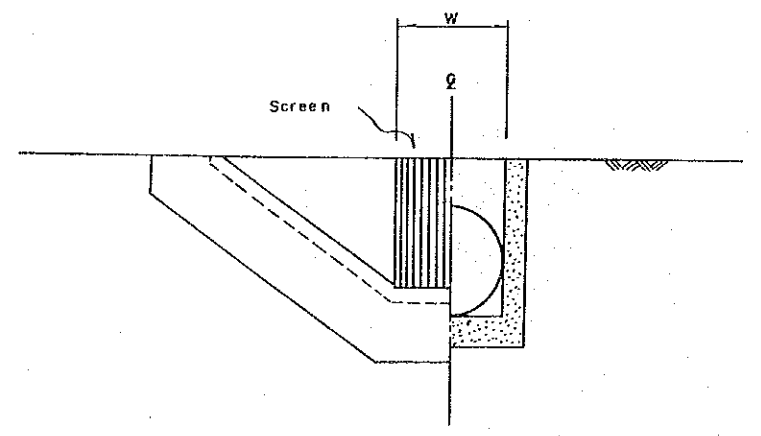
SYPHON , TYPE - B



PLAN SCALE - A

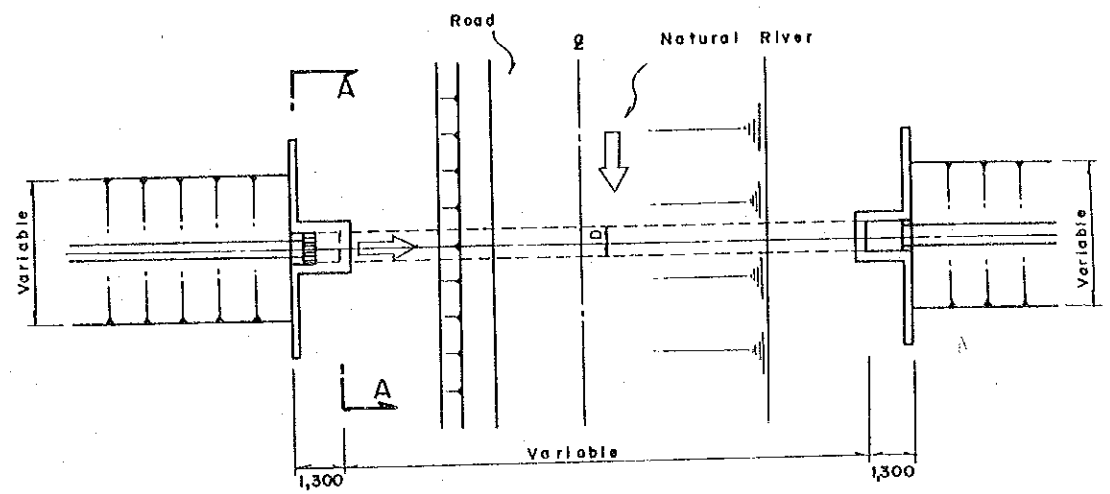


PROFILE SCALE - A

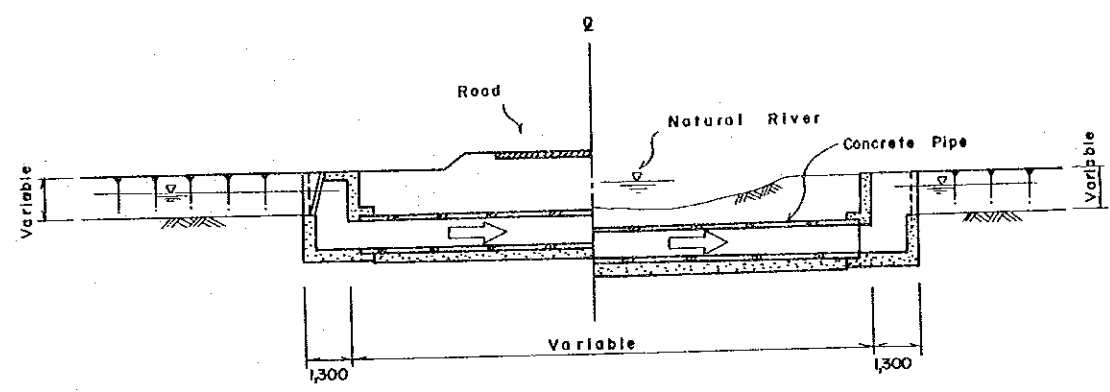


SECTION A - A SCALE - B

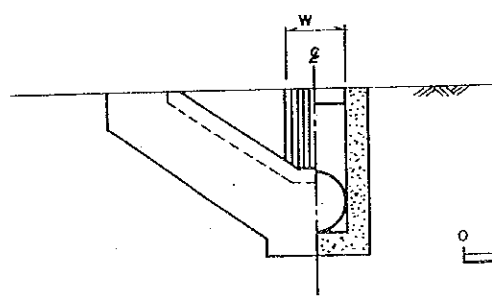
SYPHON , TYPE - C



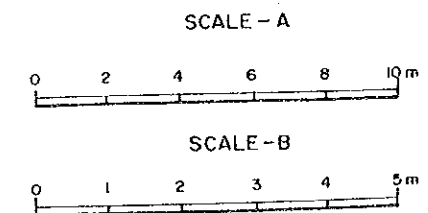
PLAN SCALE - A



PROFILE SCALE - A



SECTION A - A SCALE - A



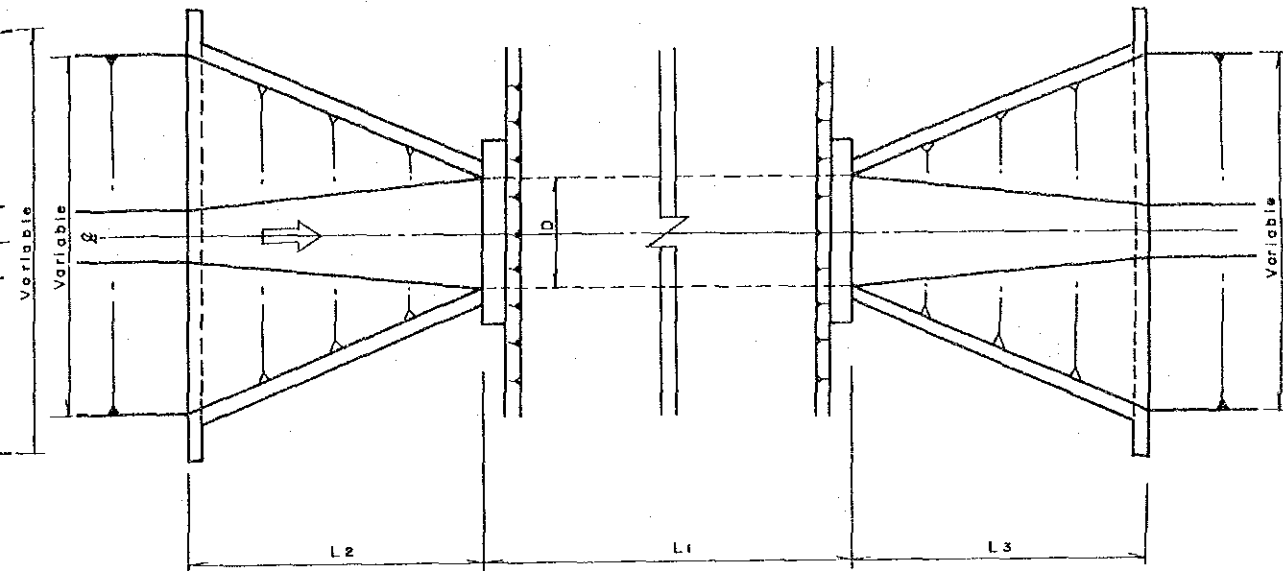
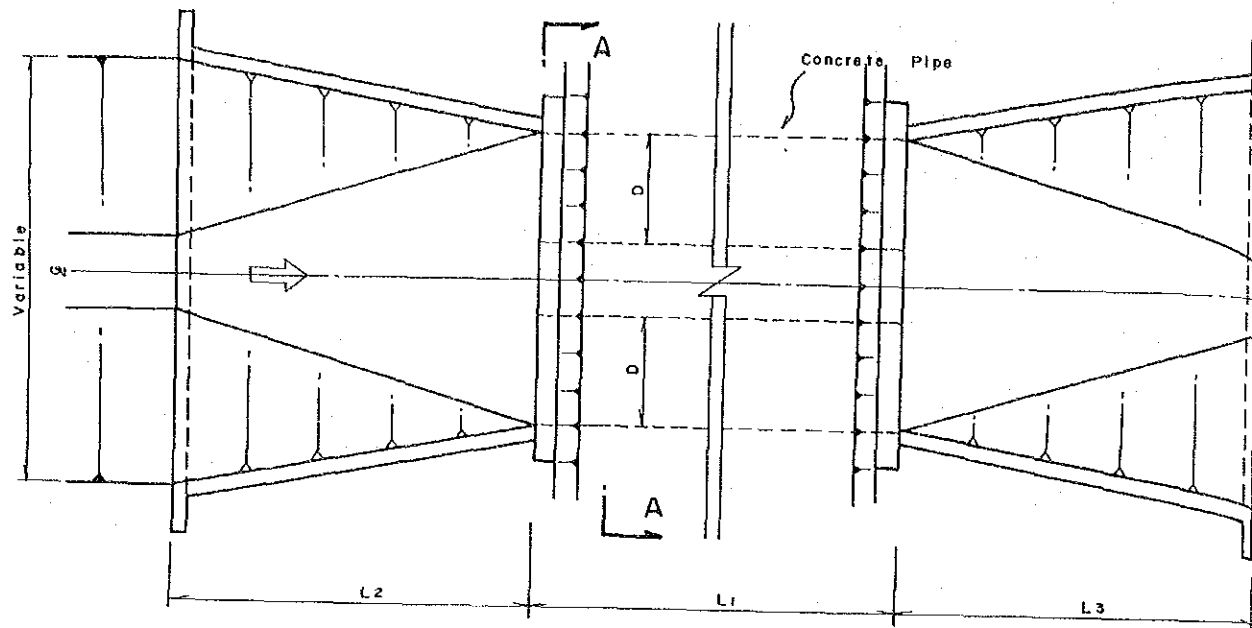
DIMENSION

Type	Q (l/s)	D	L1	L2	W	Pipe
A	2.5 - 5.0	1,500	10,000	8,000	4,000	φ 1,500 x 2 nos
B	1.5 - 2.5	1,500	8,000	7,000	1,500	φ 1,500
C - 1	0.3 - 1.5	1,000	-	-	1,000	φ 1,000
C - 2	0.3	600	-	-	600	φ 600

AGRICULTURAL AND RURAL DEVELOPMENT
PROJECT IN THE SUBURBS OF VIENTIANE
LAO PEOPLE'S DEMOCRATIC REPUBLIC
TITLE OF DRAWING
SYPHONS (2/2)
DATE _____ DWG. NO. 311
JAPAN INTERNATIONAL COOPERATION AGENCY

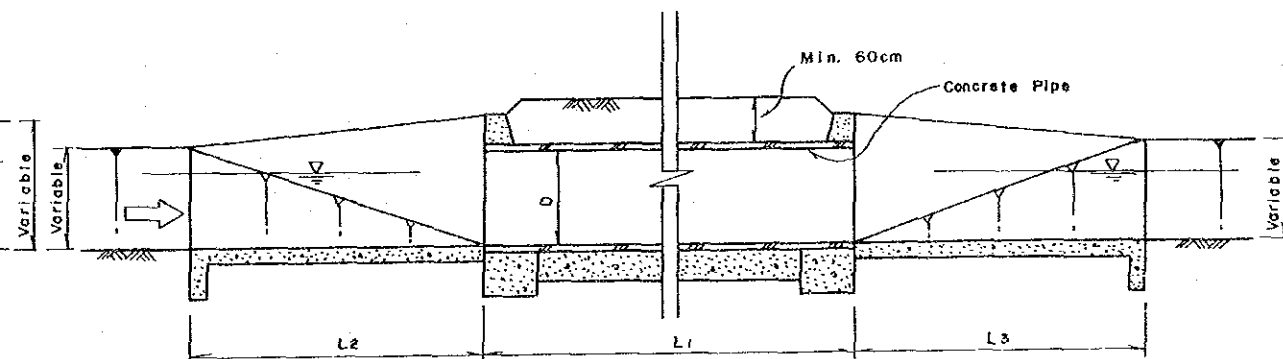
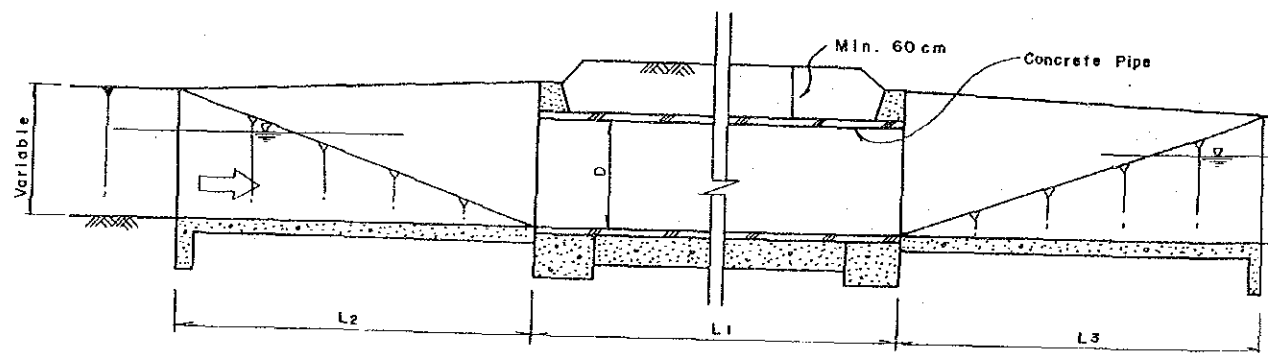
CULVERT, TYPE - A

CULVERT, TYPE - B



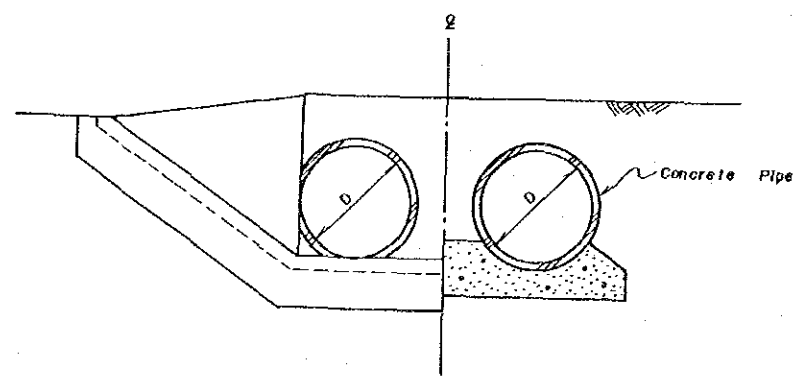
PLAN SCALE - A

PLAN SCALE - A

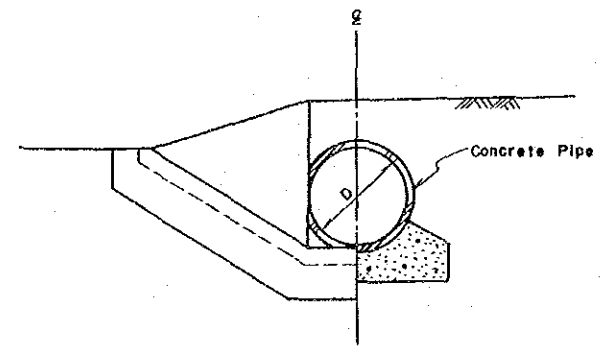


PROFILE SCALE - A

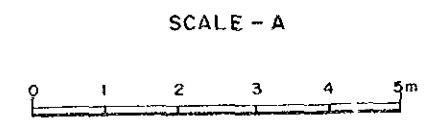
PROFILE SCALE - A



SECTION A-A SCALE - A

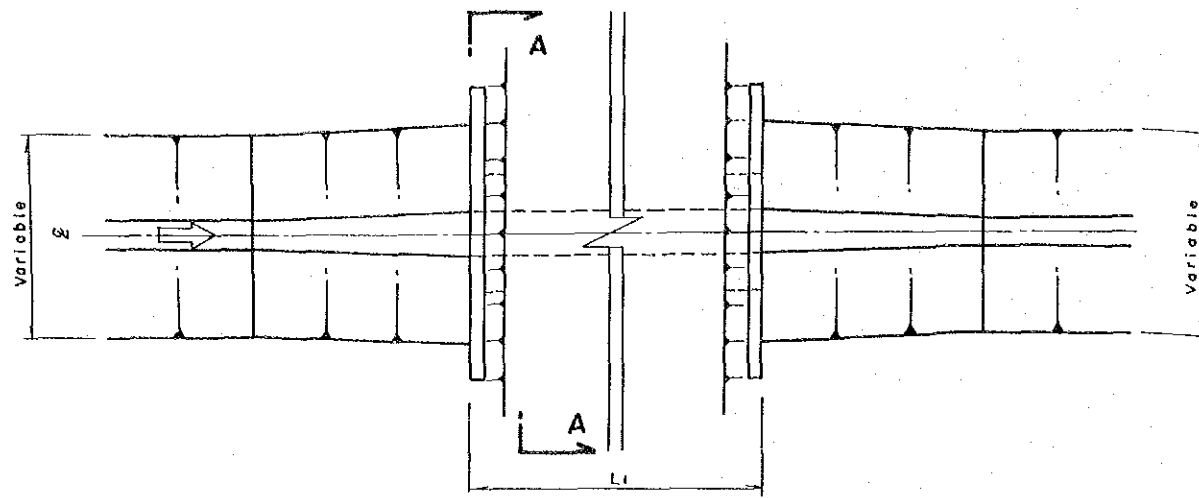


SECTION A-A SCALE - A

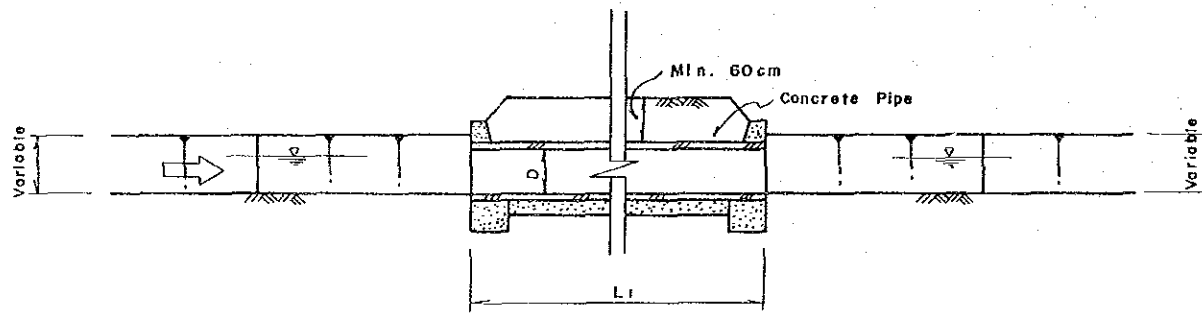


AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
CULVERTS (1/2)	
DATE	DWG. NO. 312
JAPAN INTERNATIONAL COOPERATION AGENCY	

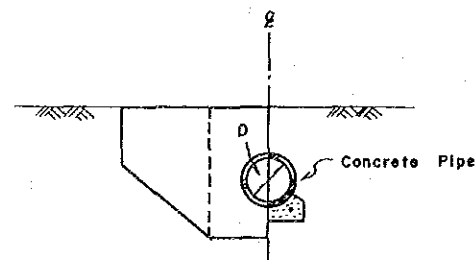
CULVERT, TYPE - C



PLAN SCALE - A



PROFILE SCALE - A



SECTION A - A SCALE - A

DIMENSION

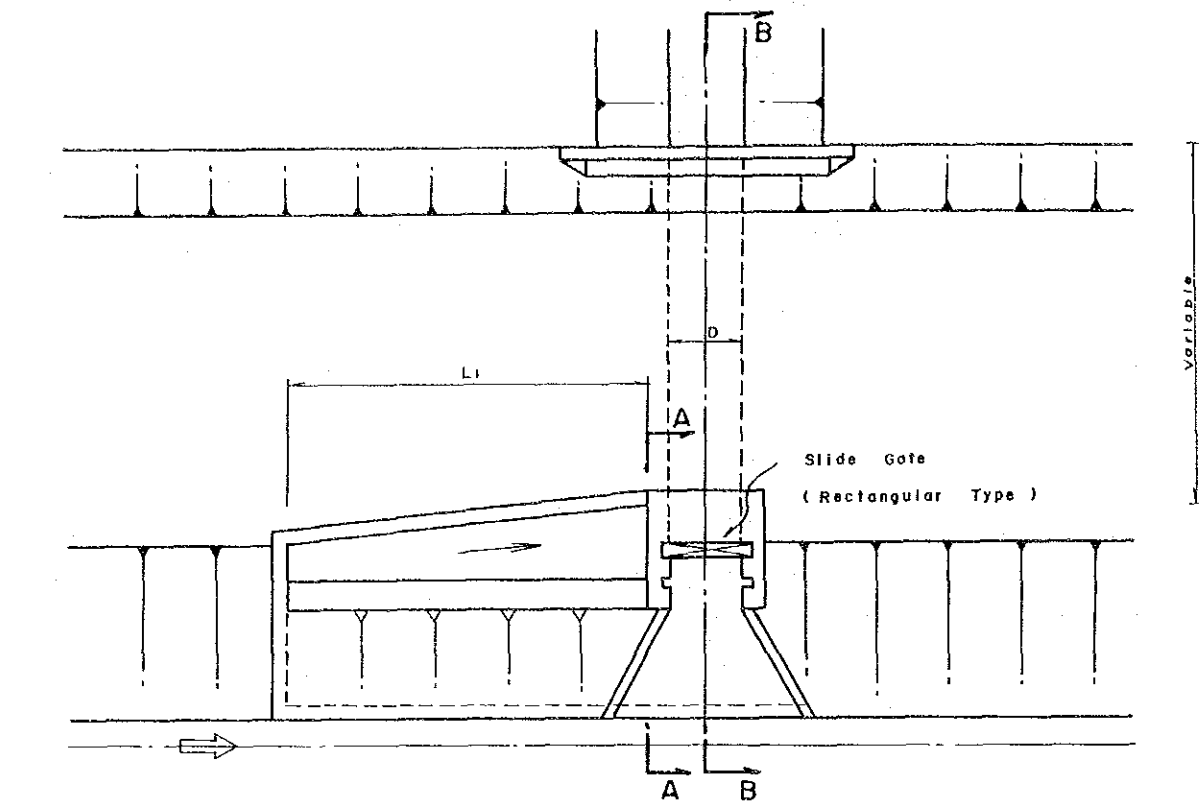
Type	Q (m ³ /s)	D	L ₁	L ₂	L ₃	Pipe
A - 1	3.0 ~ 5.0	1,500	6,000	6,000	6,000	φ 1,500 x 3 nos
A - 2	1.5 ~ 3.0	1,500	6,000	5,000	5,000	φ 1,500 x 2 nos
B - 1	0.65 ~ 1.5	1,500	6,000	4,000	4,000	φ 1,500
B - 2	0.25 ~ 0.65	1,000	6,000	2,000	2,000	φ 1,000
C - 1	0.15 ~ 0.25	600	4,000	-	-	φ 600
C - 2	~ 0.15	500	4,000	-	-	φ 500

SCALE - A

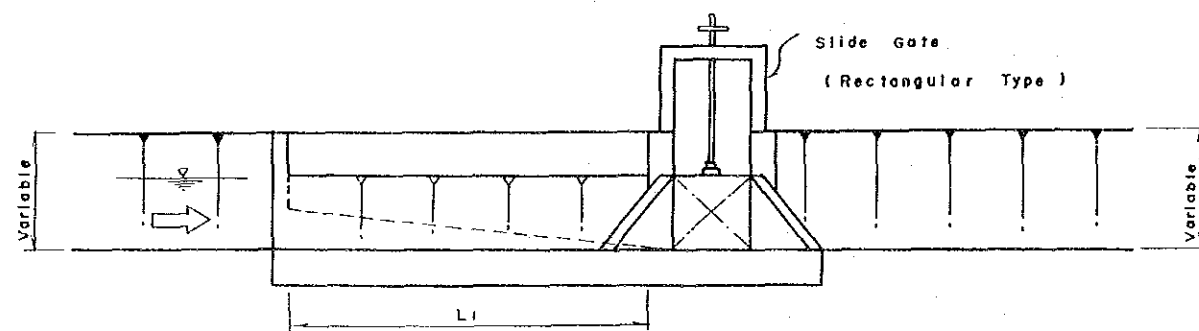


AGRICULTURAL AND RURAL DEVELOPMENT
PROJECT IN THE SUBURBS OF VIENTIANE
LAO PEOPLE'S DEMOCRATIC REPUBLIC
TITLE OF DRAWING
CULVERTS (2/2)
DATE _____ DWG. NO. 313
JAPAN INTERNATIONAL COOPERATION AGENCY

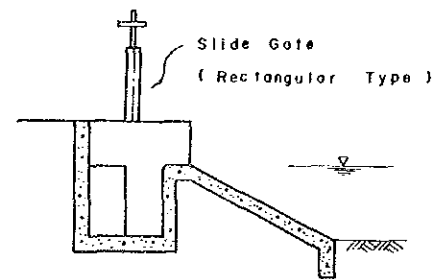
SPILLWAY / WASTEWAY, TYPE - A



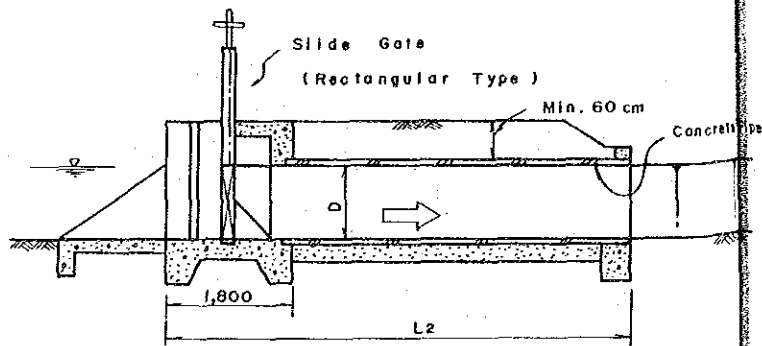
PLAN SCALE - A



PROFILE SCALE - A

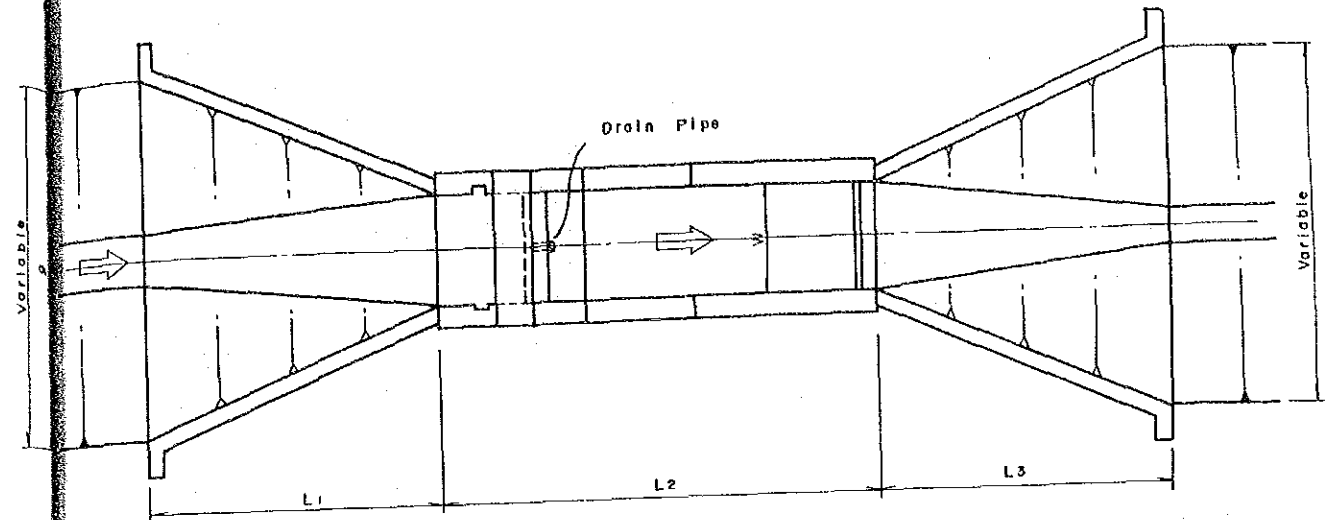


SECTION A - A SCALE - A

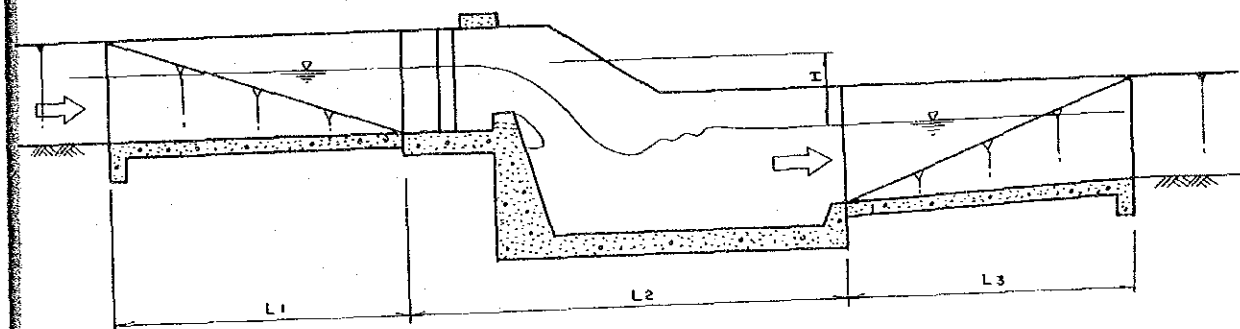


SECTION B - B SCALE - A

DROP, TYPE - A



PLAN SCALE - A



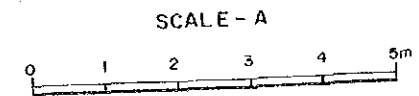
PROFILE SCALE - A

DIMENSION (DROP)

Type	H	Q (m ³ /s)	L1	L2	L3	W
A-1-1	1,500	3.0 ~ 5.0	4,000	6,000	6,000	3,500
A-1-2	1,500	1.5 ~ 3.0	3,000	5,000	5,000	2,500
A-1-3	1,500	~ 1.5	3,000	4,000	5,000	1,500
A-2-1	1,000	3.0 ~ 5.0	3,500	5,000	5,000	3,500
A-2-2	1,000	1.5 ~ 3.0	2,500	4,000	4,000	2,500
A-2-3	1,000	~ 1.5	2,500	3,000	4,000	1,500

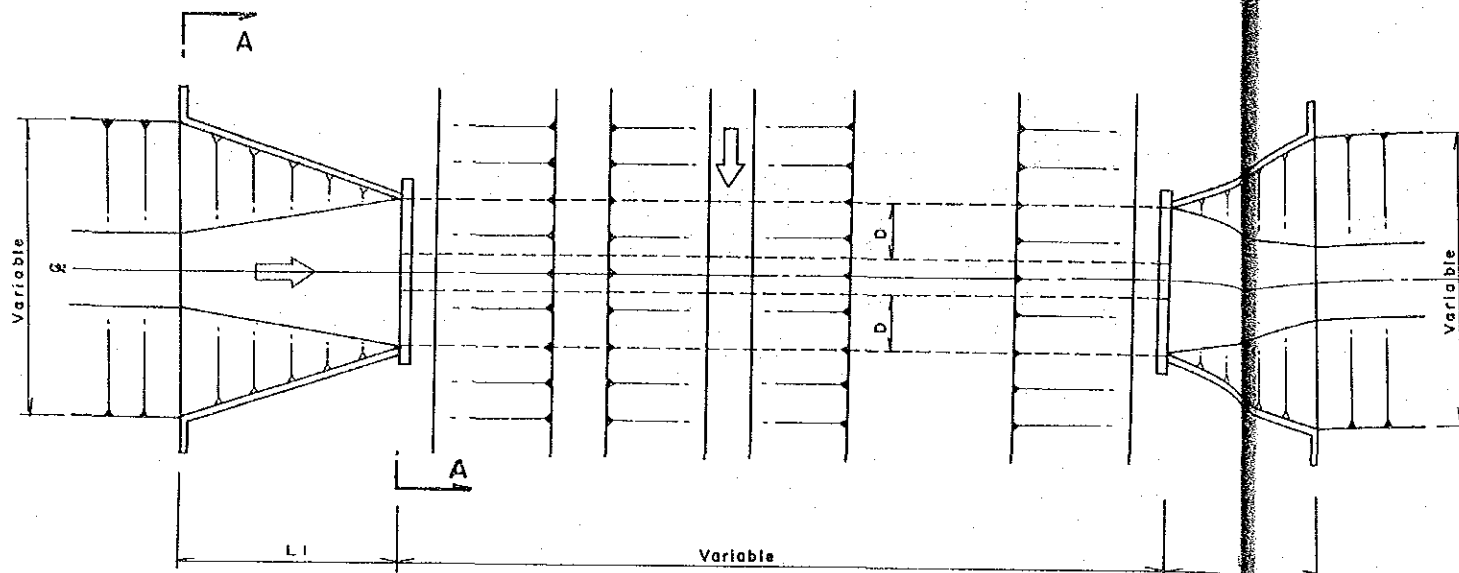
DIMENSION (SPILLWAY / WASTEWAY)

Type	Q	D	L1	L2	pipe	Gate
A-1	3.0 ~ 5.0	1,500	8,000	7,000	φ 1,500	1,500 x 1,500
A-2	1.5 ~ 3.0	1,500	6,000	7,000	φ 1,500	1,500 x 1,500
A-3	~ 1.5	1,000	4,000	7,000	φ 1,000	1,000 x 1,000



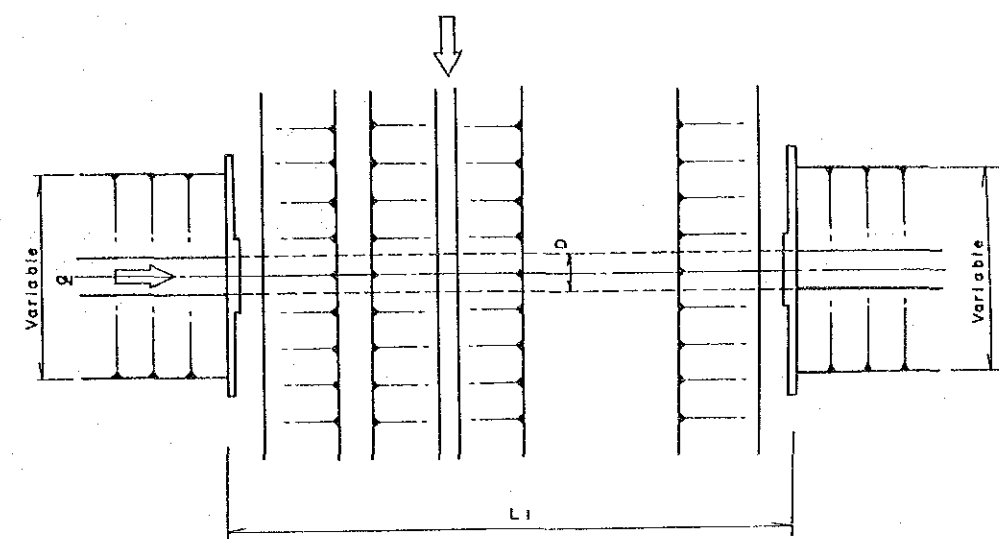
AGRICULTURAL AND RURAL DEVELOPMENT
PROJECT IN THE SUBURBS OF VIENTIANE
LAO PEOPLE'S DEMOCRATIC REPUBLIC
TITLE OF DRAWING
SPILLWAY/WASTEWAY & DROP
DATE _____ DWS. NO. 314
JAPAN INTERNATIONAL COOPERATION AGENCY

CROSS DRAIN , TYPE - A

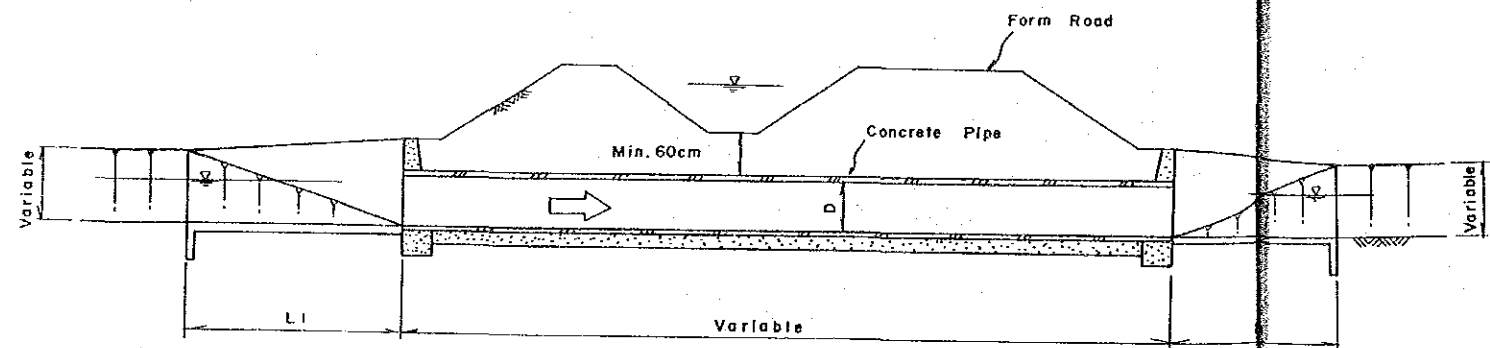


PLAN SCALE - A

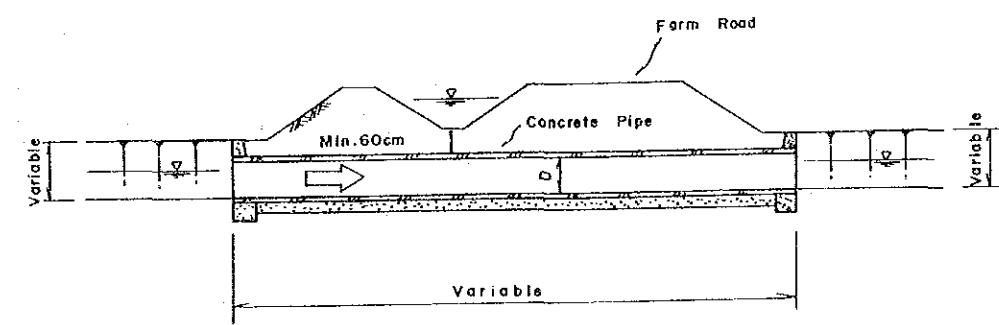
CROSS DRAIN , TYPE - B



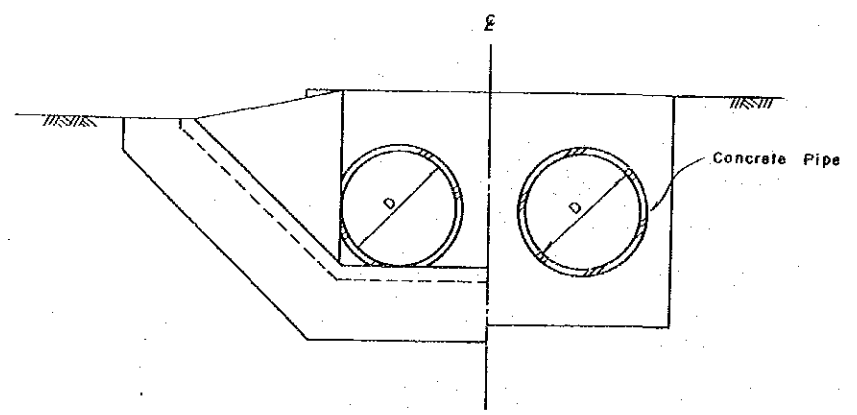
PLAN SCALE - A



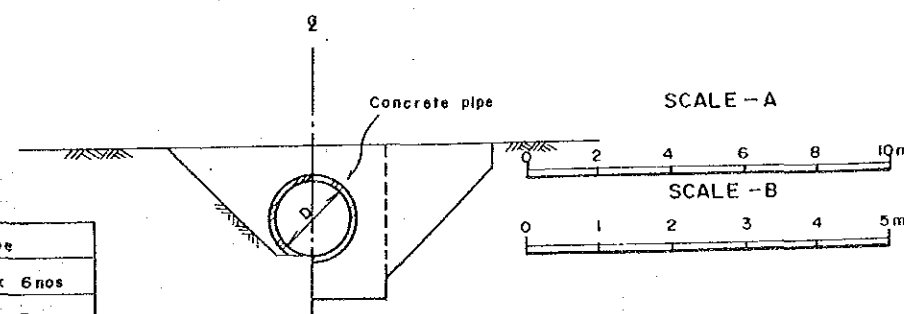
PROFILE SCALE - A



PROFILE SCALE - A



SECTION A-A SCALE - B



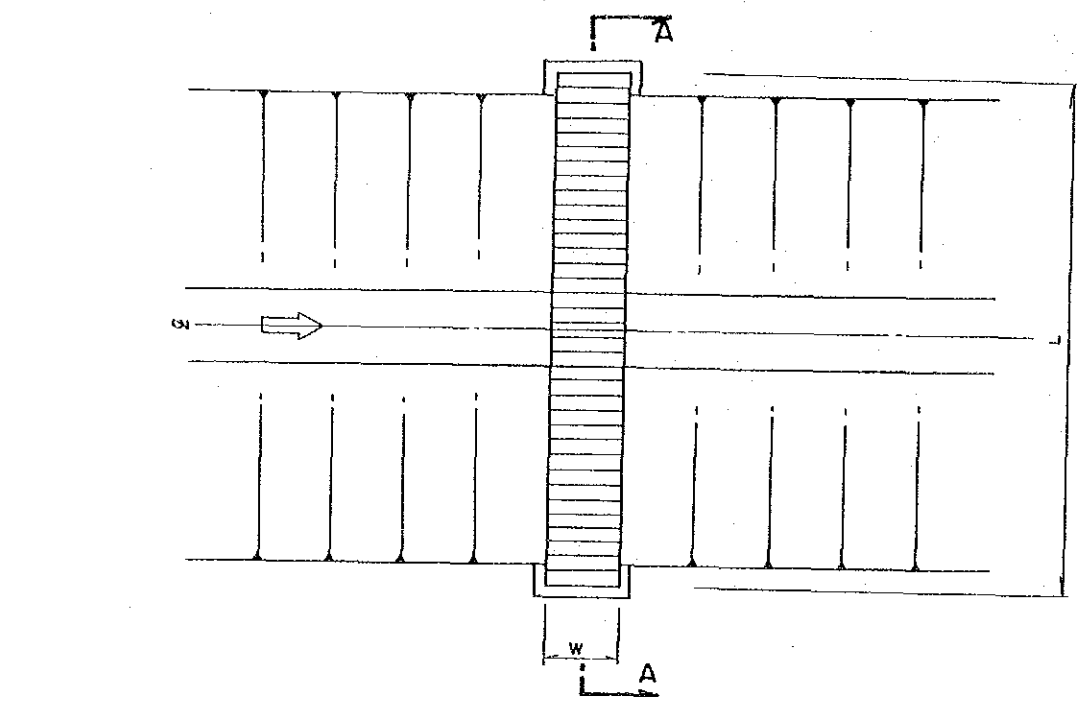
SECTION A - A SCALE - B

DIMENSION

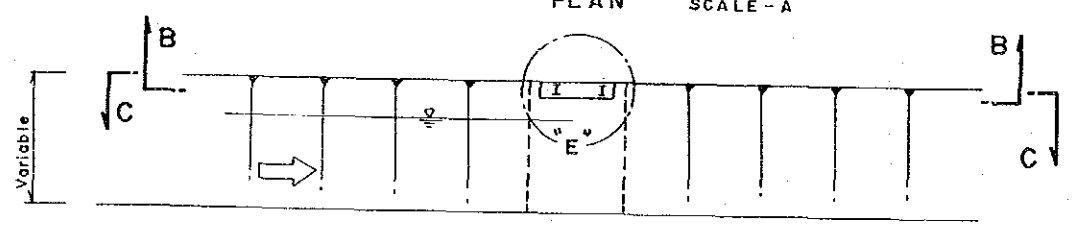
Type	m ³ /s)	D	L1	L2	Pipe	
A - 1	15	~15.0	1,500	10,000	10,000	φ 1,500 x 6 nos
A - 2	10	~12.5	1,500	8,000	8,000	φ 1,500 x 5 nos
A - 3	7.5	~10.0	1,500	7,000	7,000	φ 1,500 x 4 nos
A - 4	5	~7.5	1,500	6,000	6,000	φ 1,500 x 3 nos
A - 5	2.5	~5.0	1,500	5,000	5,000	φ 1,500 x 2 nos
B - 1	1	~2.5	1,500	4,000	4,000	φ 1,500
B - 2	0.5	~1.0	1,000	4,000	4,000	φ 1,000

AGRICULTURAL AND RURAL DEVELOPMENT
PROJECT IN THE SUBURBS OF VIENTIANE
LAO PEOPLE'S DEMOCRATIC REPUBLIC
TITLE OF DRAWING
CROSS DRAINS
DATE _____ DWG. NO. 315
JAPAN INTERNATIONAL COOPERATION AGENCY

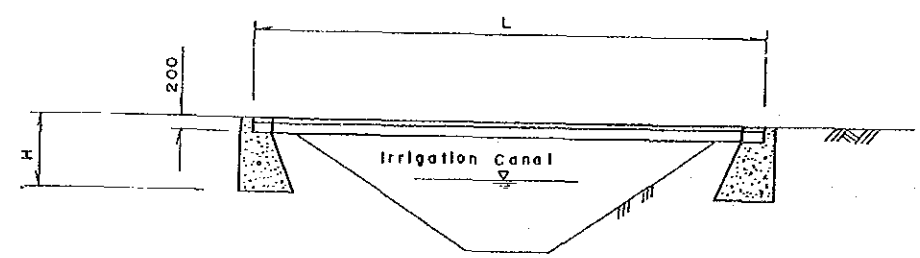
FOOTPATH BRIDGE, TYPE - A (L > 5m)



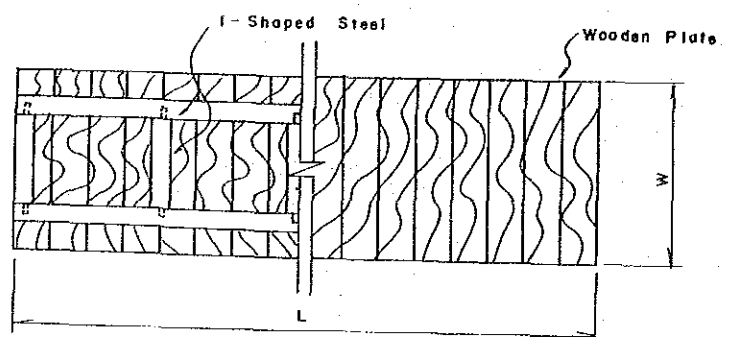
PLAN SCALE - A



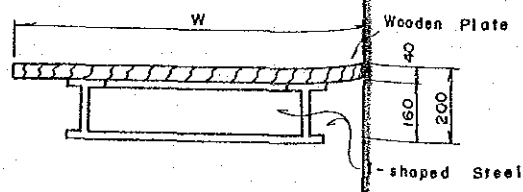
PROFILE SCALE - A



SECTION A-A SCALE - A

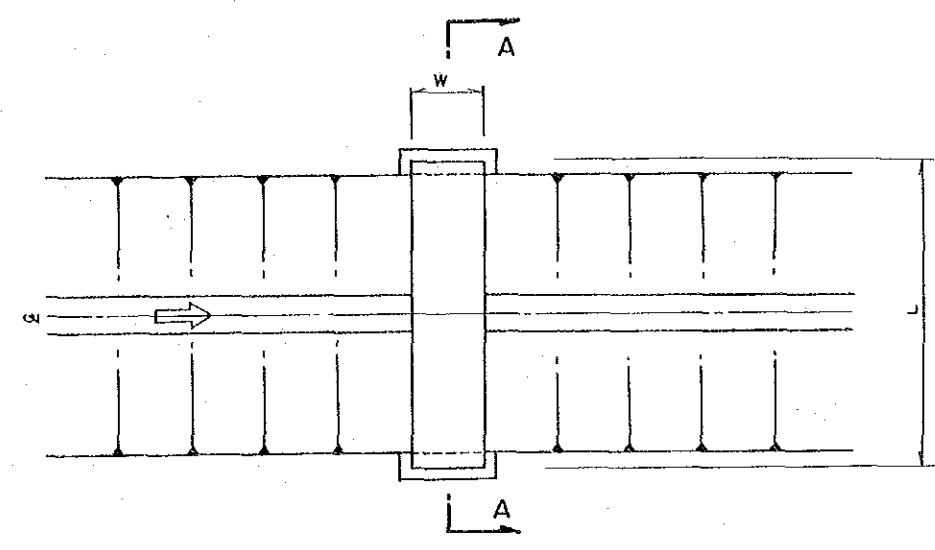


SECTION B-B, C-C SCALE - B

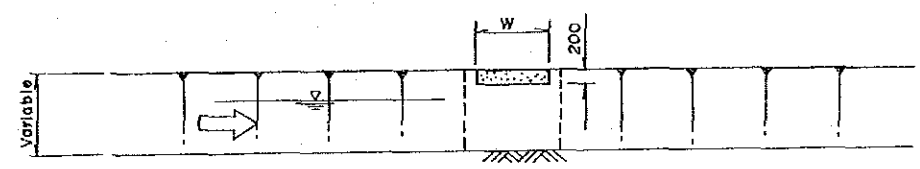


"E" SCALE - C

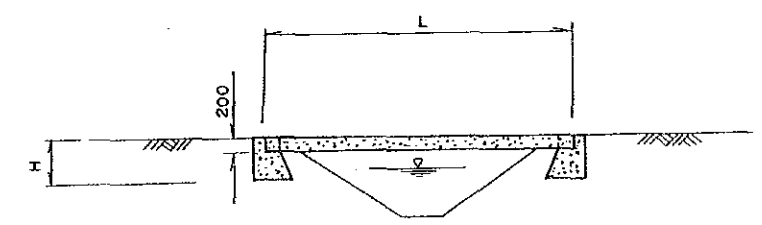
FOOTPATH BRIDGE, TYPE - B (L ≤ 5m)



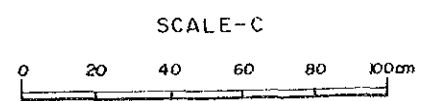
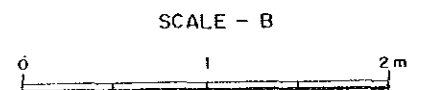
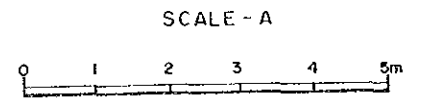
PLAN SCALE - A



PROFILE SCALE - A



SECTION A-A SCALE - A

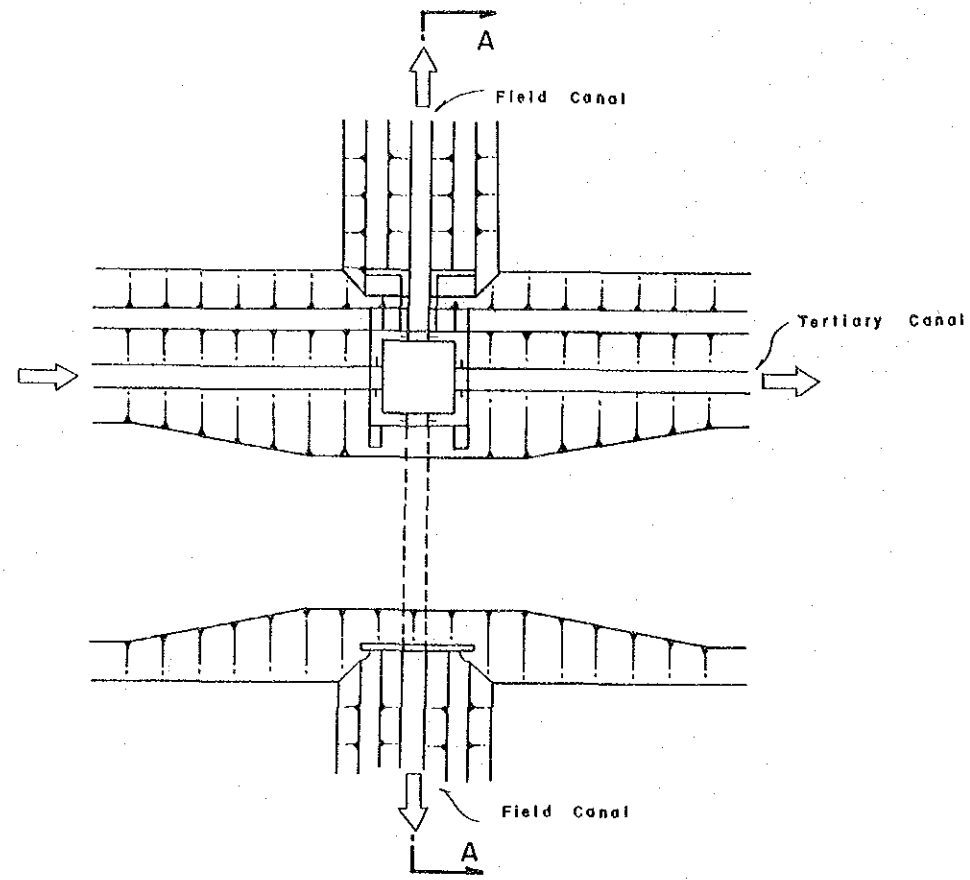


DIMENSION

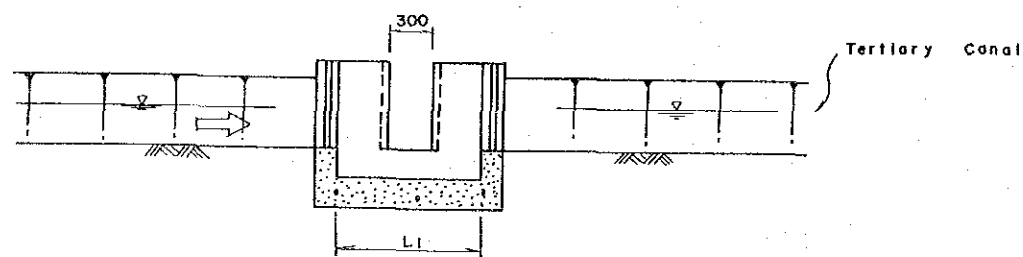
Type	H	W
A	1,000	1,000
B	600	1,000

AGRICULTURAL AND RURAL DEVELOPMENT
PROJECT IN THE SUBURBS OF VIENTIANE
LAO PEOPLE'S DEMOCRATIC REPUBLIC
TITLE OF DRAWING
FOOTPATH BRIDGES
DATE _____ DWG. NO. 316
JAPAN INTERNATIONAL COOPERATION AGENCY

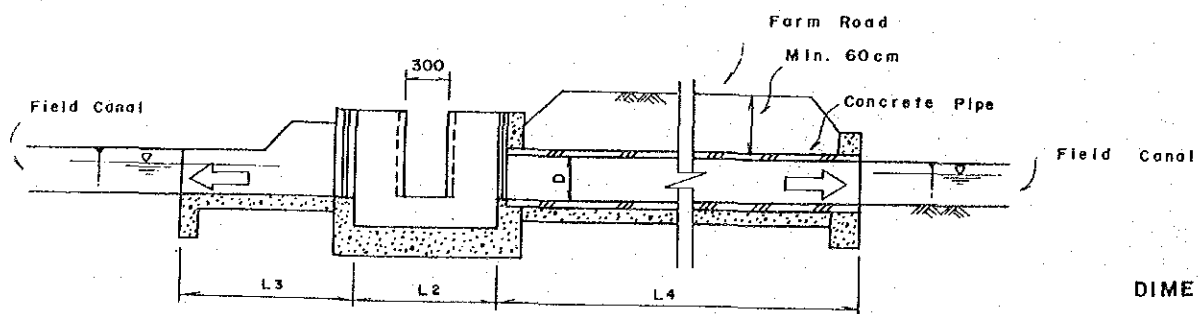
DIVISION BOX, TYPE-A
(ON TERTIARY CANAL)



PLAN SCALE - A



PROFILE SCALE - B

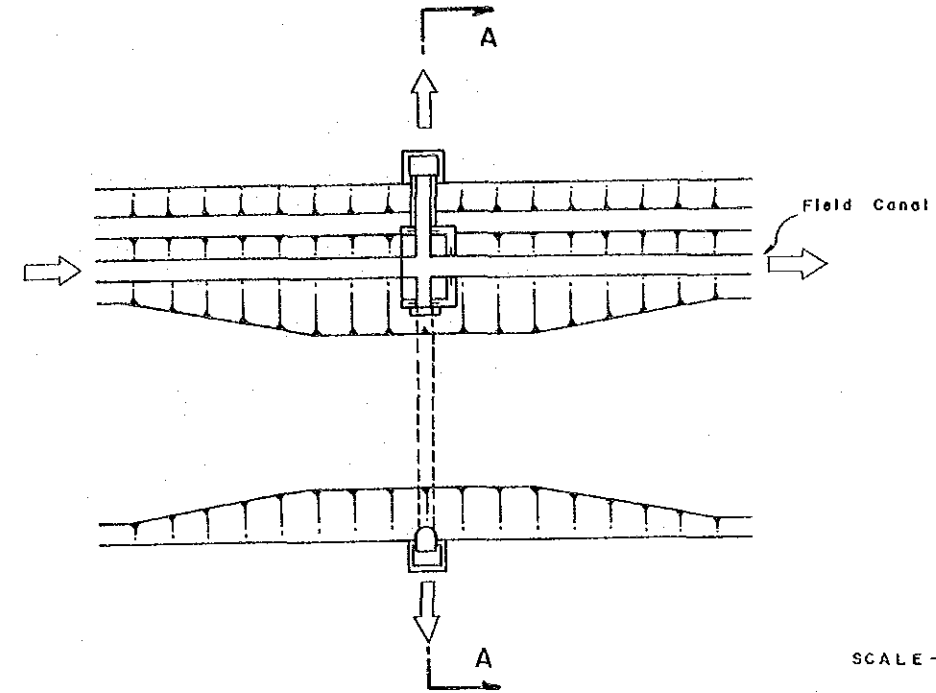


SECTION A-A SCALE - B

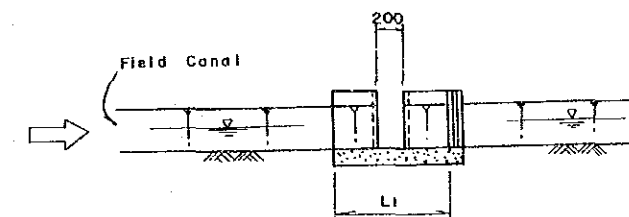
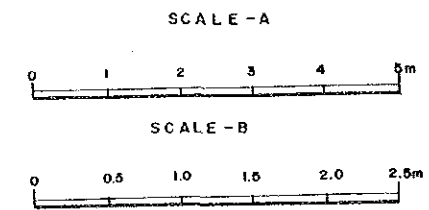
DIMENSION

Type	L1	L2	L3	L4
A	1,000	1,000	1,200	4,000
B	800	900	1,200	4,000

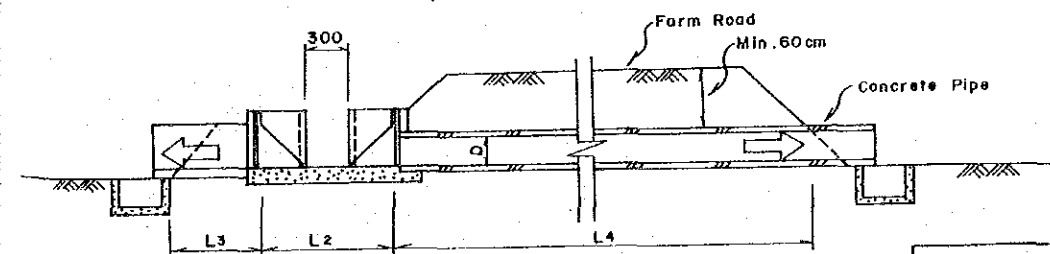
DIVISION BOX, TYPE-B
(ON FIELD CANAL)



PLAN SCALE - A

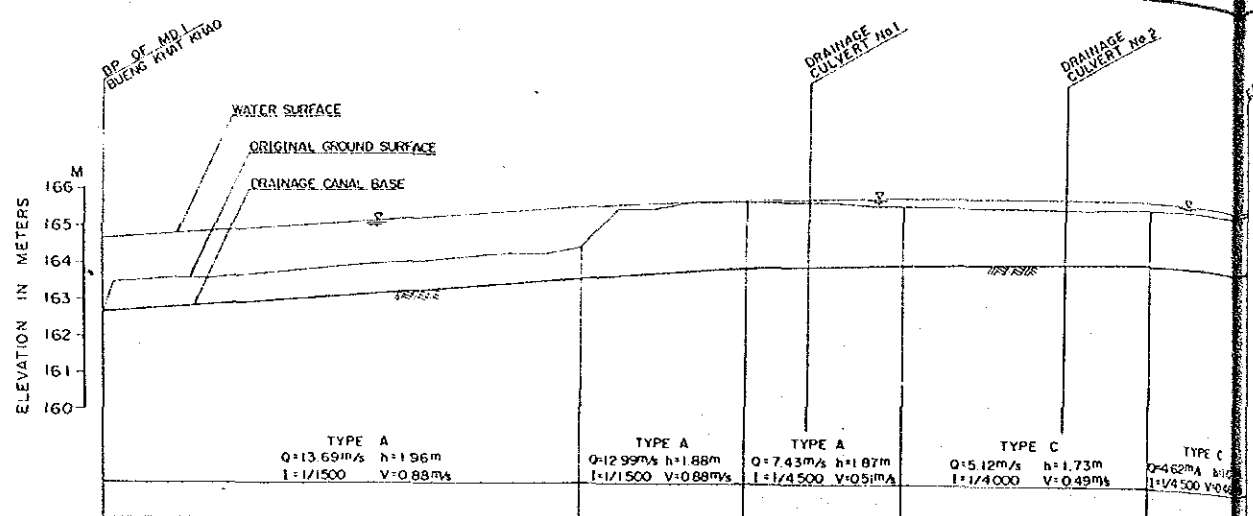


PROFILE SCALE - B

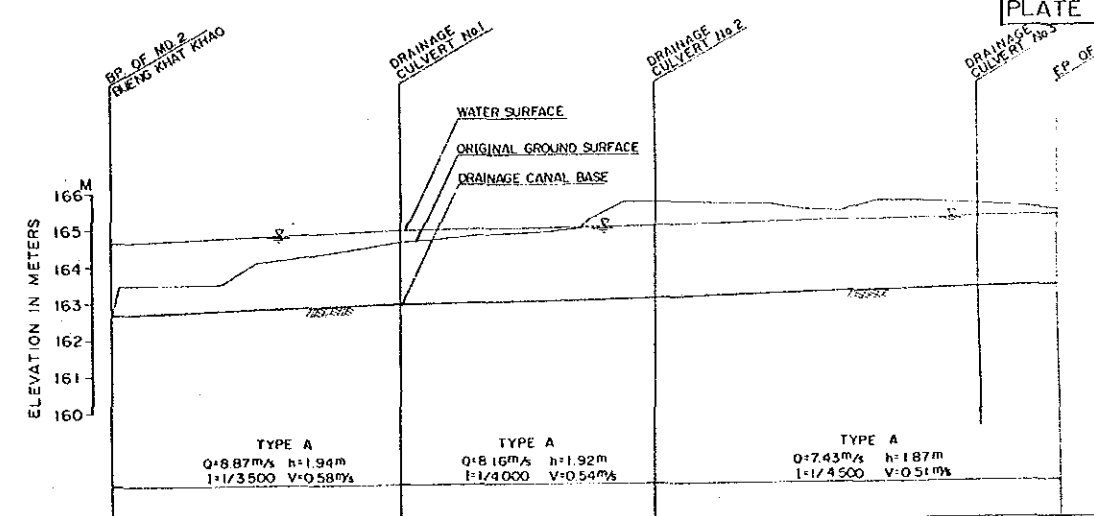


SECTION A-A SCALE - B

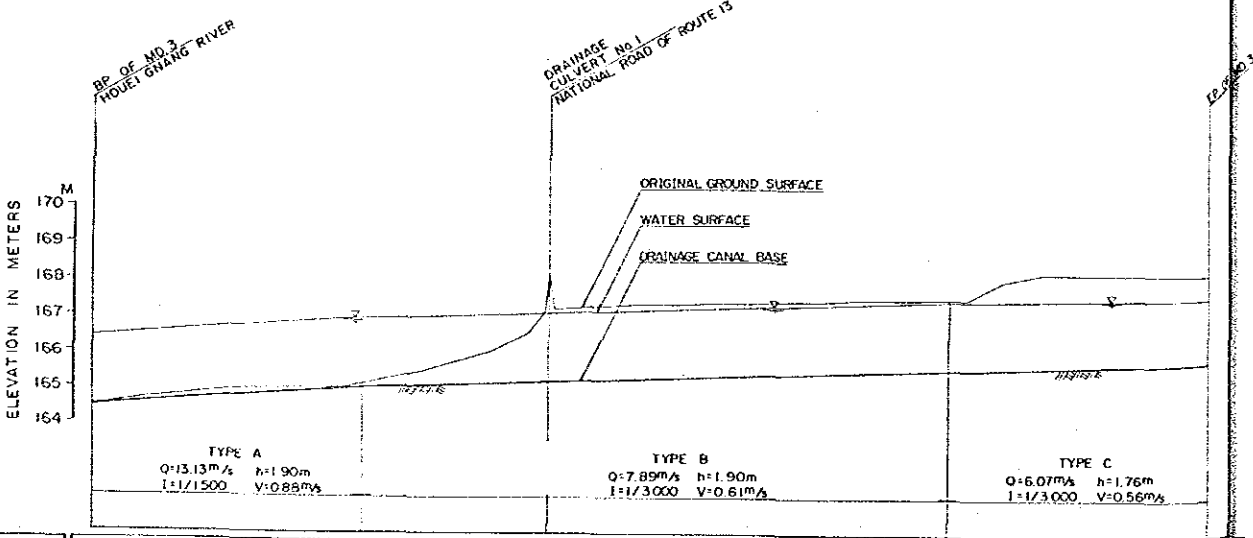
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
DIVISION BOXES	
DATE	DWG. NO. 317
JAPAN INTERNATIONAL COOPERATION AGENCY	



STATION	DISTANCE	ACCUMULATED DISTANCE	ORIGINAL GROUND SURFACE	CANAL BASE ELEVATION	WATER SURFACE ELEVATION
NO 0	0.00	0.00	162.70	162.70	164.66
NO 1	100.00	100.00	163.50	162.77	164.73
NO 2	200.00	200.00	163.60	162.83	164.79
NO 3	300.00	300.00	163.60	162.90	164.86
NO 4	400.00	400.00	163.70	162.97	164.93
NO 5	500.00	500.00	163.80	163.03	164.99
NO 6	600.00	600.00	163.90	163.10	165.06
NO 7	700.00	700.00	164.00	163.17	165.13
NO 8	800.00	800.00	164.05	163.23	165.19
NO 9	900.00	900.00	164.10	163.30	165.25
NO 10	1000.00	1000.00	164.20	163.37	165.32
NO 11	1100.00	1100.00	164.30	163.43	165.39
NO 12	1200.00	1200.00	164.30	163.50	165.46
NO 13	1300.00	1300.00	164.45	163.57	165.53
NO 14	1400.00	1400.00	165.50	163.72	165.60
NO 15	1500.00	1500.00	165.50	163.78	165.65
NO 16	1600.00	1600.00	165.70	163.85	165.73
NO 17	1700.00	1700.00	165.70	163.92	165.80
NO 18	1800.00	1800.00	165.70	164.00	165.87
NO 19	1900.00	1900.00	165.70	164.07	165.94
NO 20	2000.00	2000.00	165.70	164.14	166.01
NO 21	2100.00	2100.00	165.66	164.20	166.07
NO 22	2200.00	2200.00	165.65	164.26	166.14
NO 23	2300.00	2300.00	165.63	164.32	166.20
NO 24	2400.00	2400.00	165.60	164.38	166.26
NO 25	2500.00	2500.00	165.60	164.44	166.32
NO 26	2600.00	2600.00	165.60	164.50	166.38
NO 27	2700.00	2700.00	165.60	164.56	166.44
NO 28	2800.00	2800.00	165.63	164.62	166.50
NO 29	2900.00	2900.00	165.67	164.68	166.56
NO 30	3000.00	3000.00	165.70	164.74	166.62
NO 31	3100.00	3100.00	165.70	164.80	166.68
EP	3200.00	3200.00	165.80	164.86	166.74

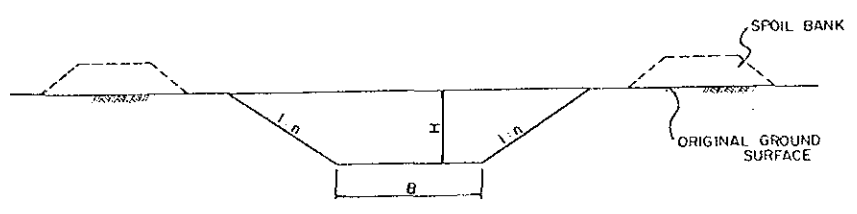


STATION	DISTANCE	ACCUMULATED DISTANCE	ORIGINAL GROUND SURFACE	CANAL BASE ELEVATION	WATER SURFACE ELEVATION
NO 0	0.00	0.00	162.70	162.70	164.64
NO 1	100.00	100.00	163.90	162.73	164.67
NO 2	200.00	200.00	163.90	162.76	164.70
NO 3	300.00	300.00	163.90	162.79	164.73
NO 4	400.00	400.00	164.10	162.81	164.75
NO 5	500.00	500.00	164.20	162.84	164.78
NO 6	600.00	600.00	164.30	162.87	164.81
NO 7	700.00	700.00	164.30	162.90	164.84
NO 8	800.00	800.00	164.63	162.93	164.87
NO 9	900.00	900.00	164.63	162.96	164.90
NO 10	1000.00	1000.00	164.90	163.00	164.92
NO 11	1100.00	1100.00	164.85	163.03	164.95
NO 12	1200.00	1200.00	164.90	163.05	164.97
NO 13	1300.00	1300.00	165.20	163.08	165.00
NO 14	1400.00	1400.00	165.70	163.10	165.02
NO 15	1500.00	1500.00	165.70	163.13	165.05
NO 16	1600.00	1600.00	165.70	163.16	165.08
NO 17	1700.00	1700.00	165.70	163.20	165.07
NO 18	1800.00	1800.00	165.65	163.22	165.09
NO 19	1900.00	1900.00	165.65	163.25	165.12
NO 20	2000.00	2000.00	165.50	163.27	165.14
NO 21	2100.00	2100.00	165.48	163.29	165.16
NO 22	2200.00	2200.00	165.75	163.31	165.18
NO 23	2300.00	2300.00	165.75	163.34	165.21
NO 24	2400.00	2400.00	165.66	163.36	165.23
NO 25	2500.00	2500.00	165.65	163.38	165.25
NO 26	2600.00	2600.00	165.50	163.44	165.31



STATION	DISTANCE	ACCUMULATED DISTANCE	ORIGINAL GROUND SURFACE	CANAL BASE ELEVATION	WATER SURFACE ELEVATION
NO 0	0.00	0.00	164.50	164.50	166.40
NO 1	100.00	100.00	164.60	164.57	166.47
NO 2	200.00	200.00	164.70	164.63	166.53
NO 3	300.00	300.00	164.80	164.70	166.60
NO 4	400.00	400.00	164.90	164.77	166.67
NO 5	500.00	500.00	164.90	164.83	166.73
NO 6	600.00	600.00	165.00	164.90	166.80
NO 7	700.00	700.00	165.00	164.97	166.87
NO 8	800.00	800.00	165.20	165.00	166.90
NO 9	900.00	900.00	165.20	165.02	166.92
NO 10	1000.00	1000.00	165.40	165.05	166.95
NO 11	1100.00	1100.00	165.70	165.09	166.99
NO 12	1200.00	1200.00	165.00	165.12	167.02
NO 13	1300.00	1300.00	165.17	165.15	167.05
NO 14	1400.00	1400.00	165.17	165.17	167.07
NO 15	1500.00	1500.00	165.19	165.19	167.08
NO 16	1600.00	1600.00	165.22	165.22	167.11
NO 17	1700.00	1700.00	167.14	165.25	167.14
NO 18	1800.00	1800.00	167.18	165.29	167.18
NO 19	1900.00	1900.00	167.21	165.32	167.21
NO 20	2000.00	2000.00	167.24	165.35	167.24
NO 21	2100.00	2100.00	167.28	165.39	167.28
NO 22	2200.00	2200.00	167.31	165.42	167.31
NO 23	2300.00	2300.00	167.34	165.45	167.34
NO 24	2400.00	2400.00	167.38	165.49	167.38
NO 25	2500.00	2500.00	167.41	165.52	167.41
NO 26	2600.00	2600.00	167.44	165.54	167.44
NO 27	2700.00	2700.00	167.47	165.56	167.47
NO 28	2800.00	2800.00	167.49	165.57	167.49
NO 29	2900.00	2900.00	167.53	165.61	167.53
NO 30	3000.00	3000.00	167.56	165.64	167.56
EP	3100.00	3100.00	167.59	165.68	167.59

TYPICAL CROSS SECTION OF DRAINS



ABBREVIATIONS
 BP BEGINNING POINT
 EP END POINT
 MD MAIN DRAIN

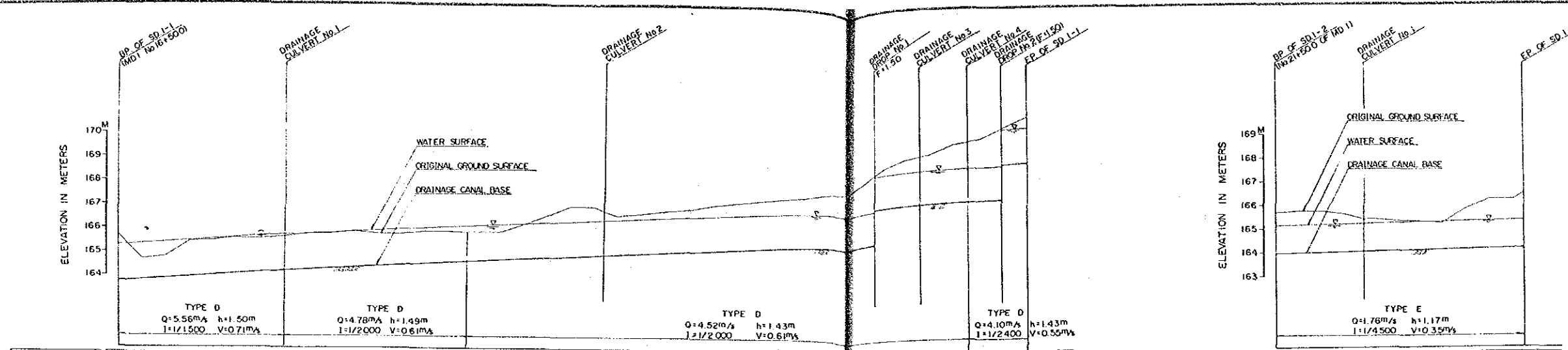
HORIZONTAL SCALE
 0 100 200 300 400 500 M

VERTICAL SCALE
 0 1 2 3 4 M

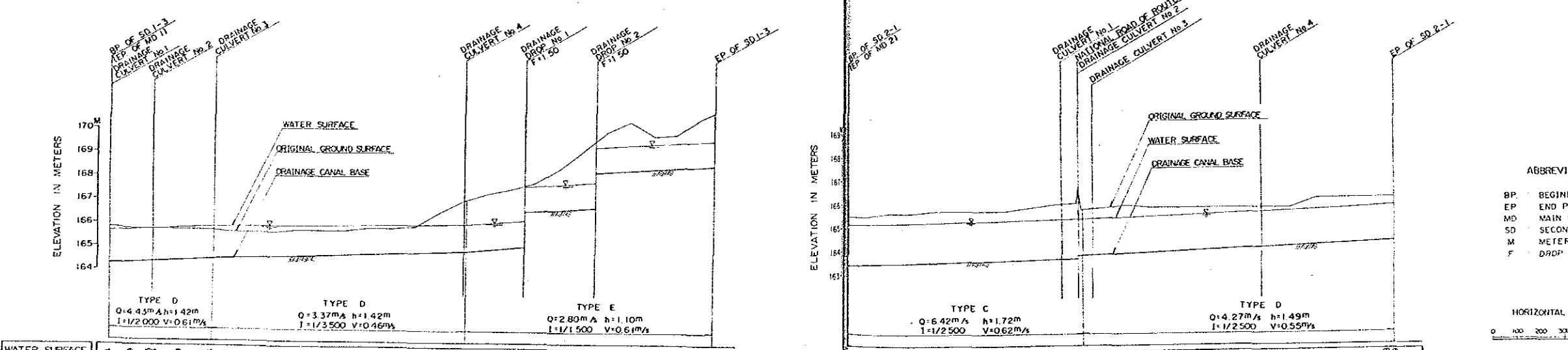
DIMENSION (mm)

CANAL TYPE	B	H	n
A	5,000	2,000	1.5
B	4,000	2,000	1.5
C	3,500	1,800	1.5
D	3,000	1,500	1.5
E	2,500	1,200	1.5
F	2,000	800	1.5
G	500	500	1.0

AGRICULTURAL AND RURAL DEVELOPMENT
 PROJECT IN THE SUBURBS OF VIENTIANE
 LAO PEOPLE'S DEMOCRATIC REPUBLIC
 TITLE OF DRAWING
 PROFILES & TYPICAL CROSS
 SECTIONS OF MAIN DRAINS
 DATE _____ DWG. NO. 401
 JAPAN INTERNATIONAL COOPERATION AGENCY

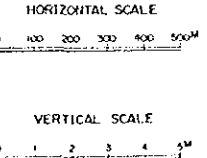


STATION	DISTANCE	ACCUMULATED DISTANCE	ORIGINAL GROUND SURFACE	CANAL BASE ELEVATION	WATER SURFACE ELEVATION
NO 0	0 00	0 00	165.70	163.60	165.30
NO 1	100 00	100 00	164.70	163.87	165.37
NO 2	200 00	200 00	164.80	163.93	165.43
NO 3	300 00	300 00	165.50	164.00	165.50
NO 4	400 00	400 00	165.50	164.07	165.57
NO 5	500 00	500 00	165.60	164.13	165.53
NO 6	600 00	600 00	165.60	164.20	165.70
NO 7	700 00	700 00	165.70	164.27	165.77
NO 8	800 00	800 00	165.80	164.33	165.82
NO 9	900 00	900 00	165.80	164.36	165.87
NO 10	1000 00	1000 00	165.90	164.43	165.92
NO 11	1100 00	1100 00	165.80	164.48	165.97
NO 12	1200 00	1200 00	165.90	164.53	166.02
NO 13	1300 00	1300 00	165.90	164.58	166.07
NO 14	1400 00	1400 00	165.90	164.63	166.12
NO 15	1500 00	1500 00	165.80	164.67	166.15
NO 16	1600 00	1600 00	165.90	164.80	166.23
NO 17	1700 00	1700 00	166.20	164.85	166.26
NO 18	1800 00	1800 00	166.50	164.90	166.33
NO 19	1900 00	1900 00	167.00	164.95	166.38
NO 20	2000 00	2000 00	167.00	165.00	166.43
NO 21	2100 00	2100 00	166.80	165.04	166.47
NO 22	2200 00	2200 00	166.60	165.07	166.50
NO 23	2300 00	2300 00	166.70	165.12	166.55
NO 24	2400 00	2400 00	166.80	165.17	166.60
NO 25	2500 00	2500 00	166.90	165.22	166.65
NO 26	2600 00	2600 00	167.10	165.27	166.70
NO 27	2700 00	2700 00	167.20	165.32	166.75
NO 28	2800 00	2800 00	167.30	165.37	166.80
NO 29	2900 00	2900 00	167.40	165.42	166.85
NO 30	3000 00	3000 00	167.50	165.47	166.90



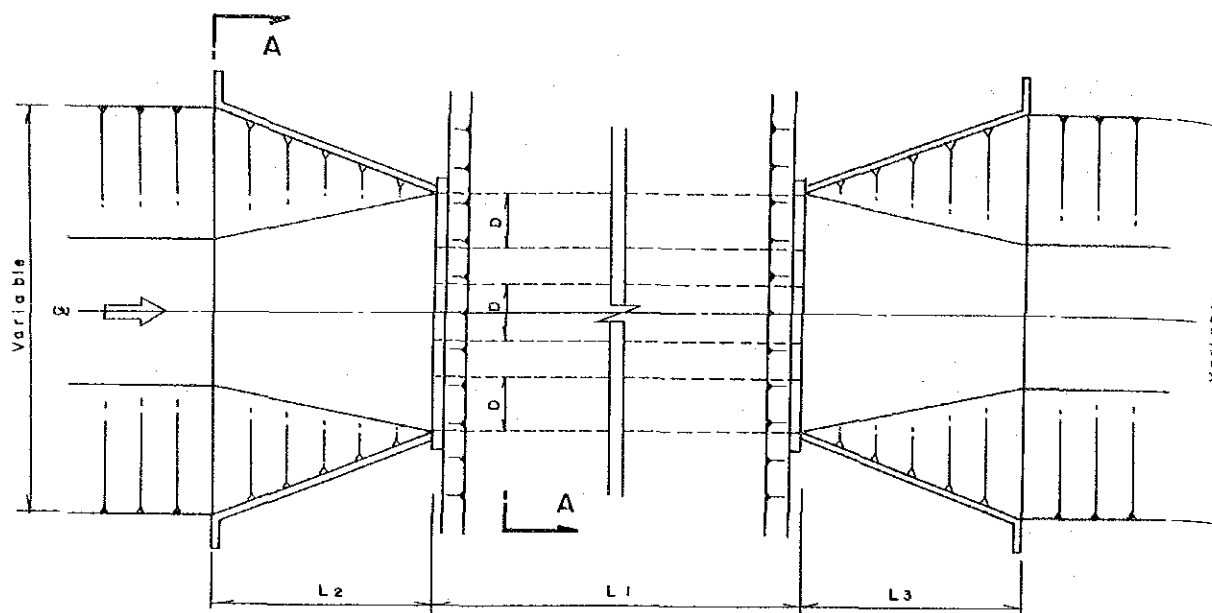
STATION	DISTANCE	ACCUMULATED DISTANCE	ORIGINAL GROUND SURFACE	CANAL BASE ELEVATION	WATER SURFACE ELEVATION
NO 31	100 00	3100 00	167.60	165.52	166.95
NO 32	200 00	3200 00	167.70	165.57	167.00
NO 33	300 00	3300 00	167.80	165.62	167.05
NO 34	400 00	3400 00	167.90	165.67	167.10
NO 35	500 00	3500 00	168.00	165.72	167.15
NO 36	600 00	3600 00	168.10	165.77	167.20
NO 37	700 00	3700 00	168.20	165.82	167.25
NO 38	800 00	3800 00	168.30	165.87	167.30
NO 39	900 00	3900 00	168.40	165.92	167.35
NO 40	1000 00	4000 00	168.50	165.97	167.40

ABBREVIATIONS
 BP - BEGINNING POINT
 EP - END POINT
 MD - MAIN DRAIN
 SD - SECONDARY DRAIN
 M - METER (S)
 F - DROP HEIGHT IN METER

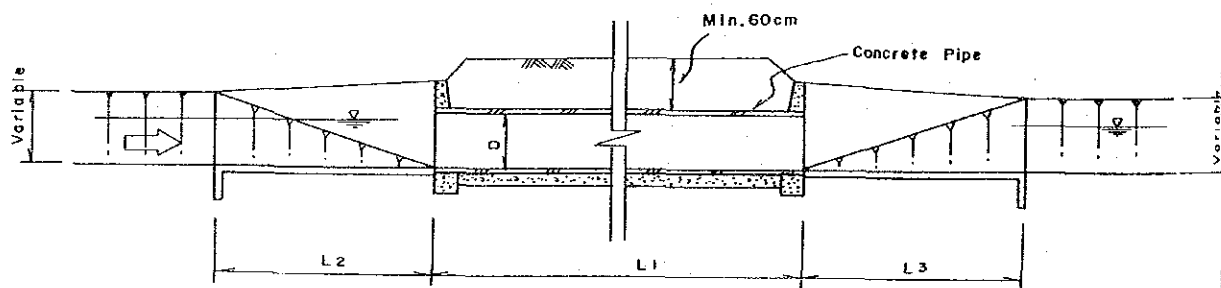


AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE
 LAO PEOPLE'S DEMOCRATIC REPUBLIC
 TITLE OF DRAWING
 PROFILES OF SECONDARY DRAINS (1/3)
 DATE _____ DWG. NO. 402
 JAPAN INTERNATIONAL COOPERATION AGENCY

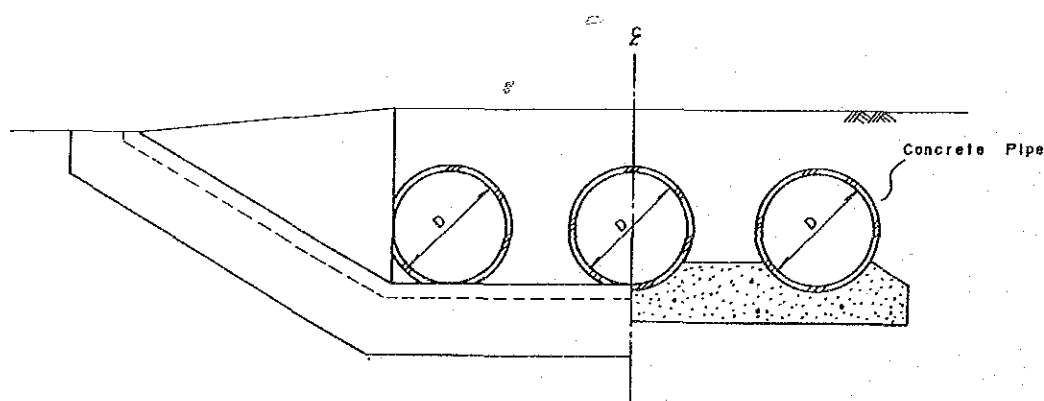
DRAINAGE CULVERT, TYPE - A



PLAN SCALE - A

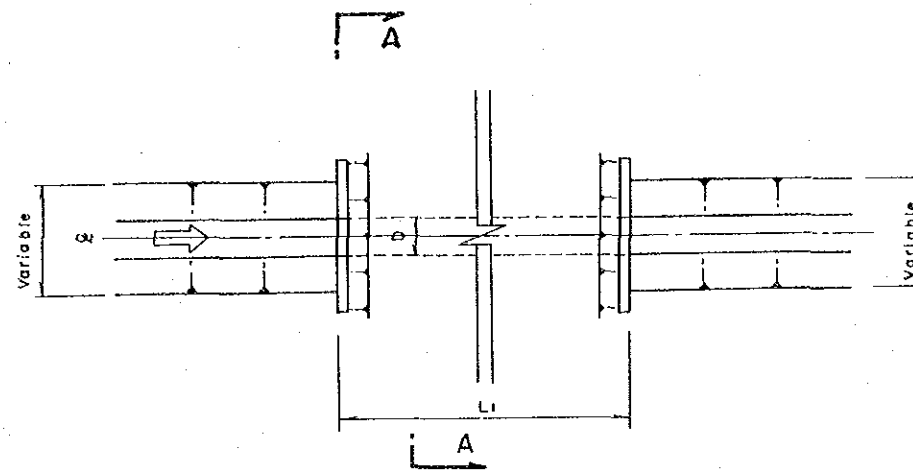


PROFILE SCALE - A

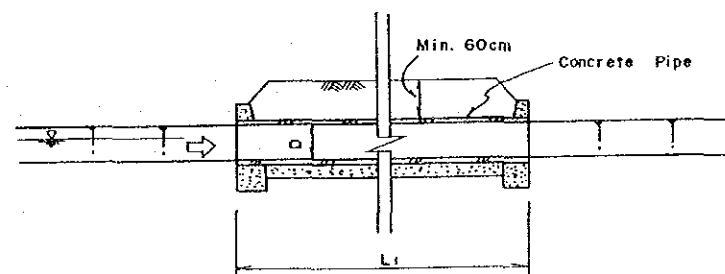


SECTION A - A SCALE - B

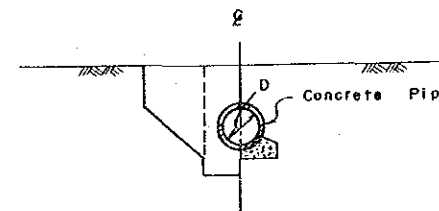
DRAINAGE CULVERT, TYPE - B



PLAN SCALE - A

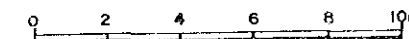


PROFILE SCALE - A

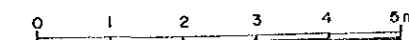


SECTION A - A SCALE - A

SCALE - A



SCALE - B



DIMENSION

Type	Q (m ³ /sec)	D	L1	L2	L3	Pipe
A-1	12.5 ~ 15.0	1,500	6,000	10,000	10,000	φ 1,500 x 6
A-2	10.0 ~ 12.5	1,500	6,000	8,000	8,000	φ 1,500 x 5
A-3	7.5 ~ 10.0	1,500	6,000	7,000	7,000	φ 1,500 x 4
A-4	5.0 ~ 7.5	1,500	6,000	6,000	6,000	φ 1,500 x 3
A-5	2.5 ~ 5.0	1,500	6,000	5,000	5,000	φ 1,500 x 2
B-1	1.0 ~ 2.5	1,500	6,000	4,000	4,000	φ 1,500
B-2	0.4 ~ 1.0	1,000	6,000	4,000	4,000	φ 1,000
B-3	0.25 ~ 0.4	600	4,000	3,000	3,000	φ 600
B-4	~ 0.15	500	4,000	3,000	3,000	φ 500

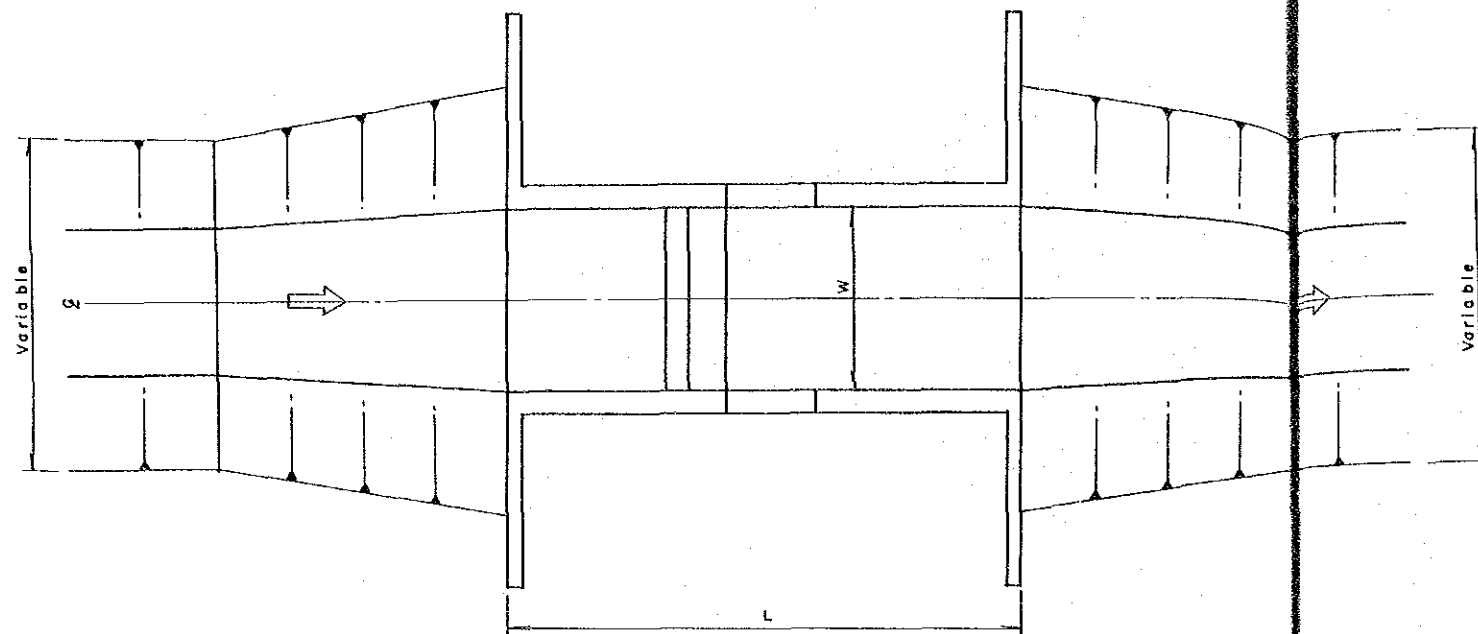
AGRICULTURAL AND RURAL DEVELOPMENT
PROJECT IN THE SUBURBS OF VIENTIANE
LAO PEOPLE'S DEMOCRATIC REPUBLIC
TITLE OF DRAWING

DRAINAGE CULVERTS

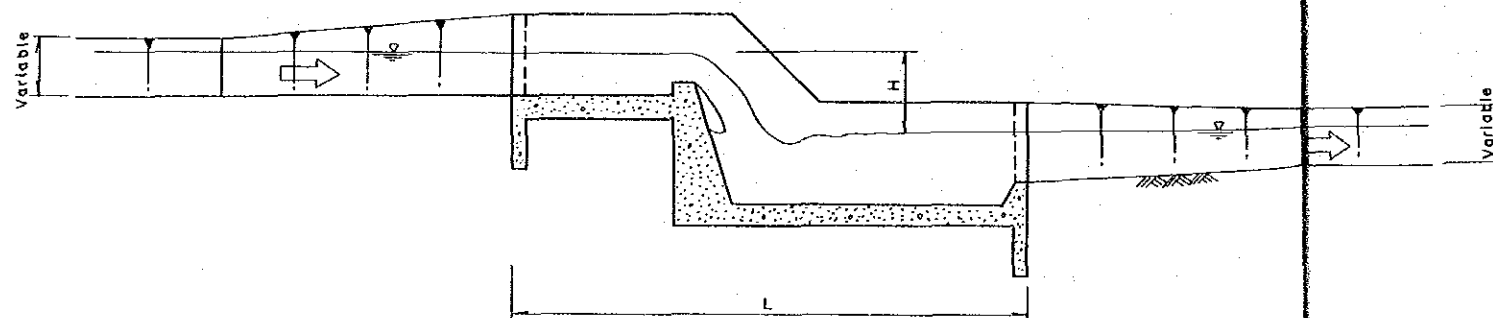
DATE DWG. NO. 501

JAPAN INTERNATIONAL COOPERATION AGENCY

DRAINAGE DROP, TYPE - A



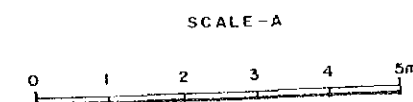
PLAN SCALE - A



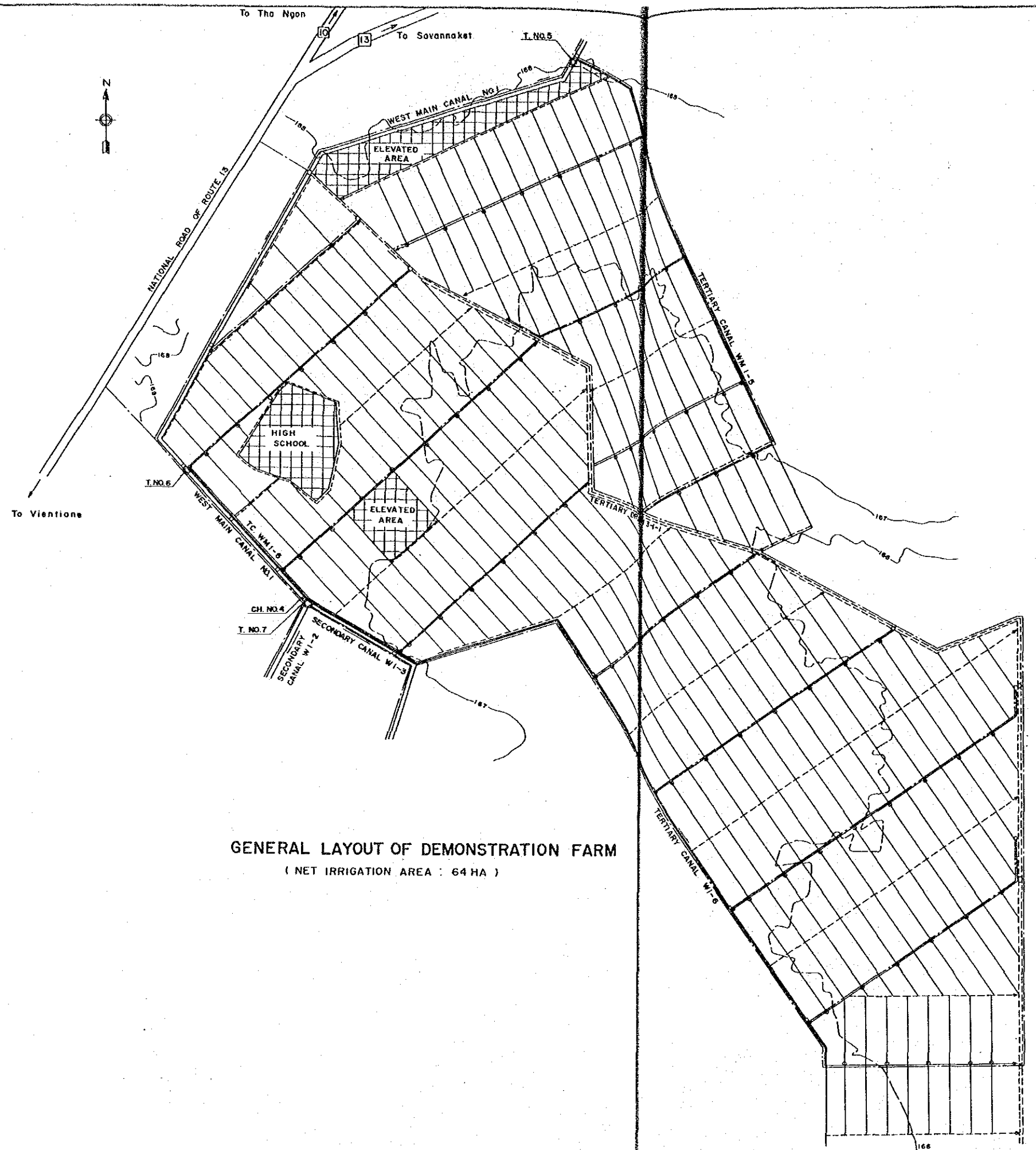
PROFILE SCALE - A

DIMENSION

TYPE	H	Q (m ³ /s)	L	W
A-1-1	1,500	5.0 ~	7,000	4,500
A-1-2	1,500	3.0 ~ 5.0	6,000	3,500
A-1-3	1,500	1.5 ~ 3.0	5,000	2,500
A-1-4	1,500	0 ~ 1.5	5,000	1,500
A-2-1	1,000	5.0 ~	6,000	4,500
A-2-2	1,000	3.0 ~ 5.0	5,000	3,500
A-2-3	1,000	1.5 ~ 3.0	4,000	2,500
A-2-4	1,000	~ 1.5	4,000	1,500

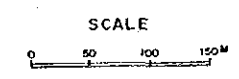


AGRICULTURAL AND RURAL DEVELOPMENT
PROJECT IN THE SUBURBS OF VIENTIANE
LAO PEOPLES DEMOCRATIC REPUBLIC
TITLE OF DRAWING
DRAINAGE DROPS
DATE _____ DWG. NO. 502
JAPAN INTERNATIONAL COOPERATION AGENCY

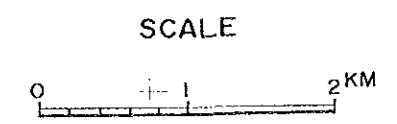
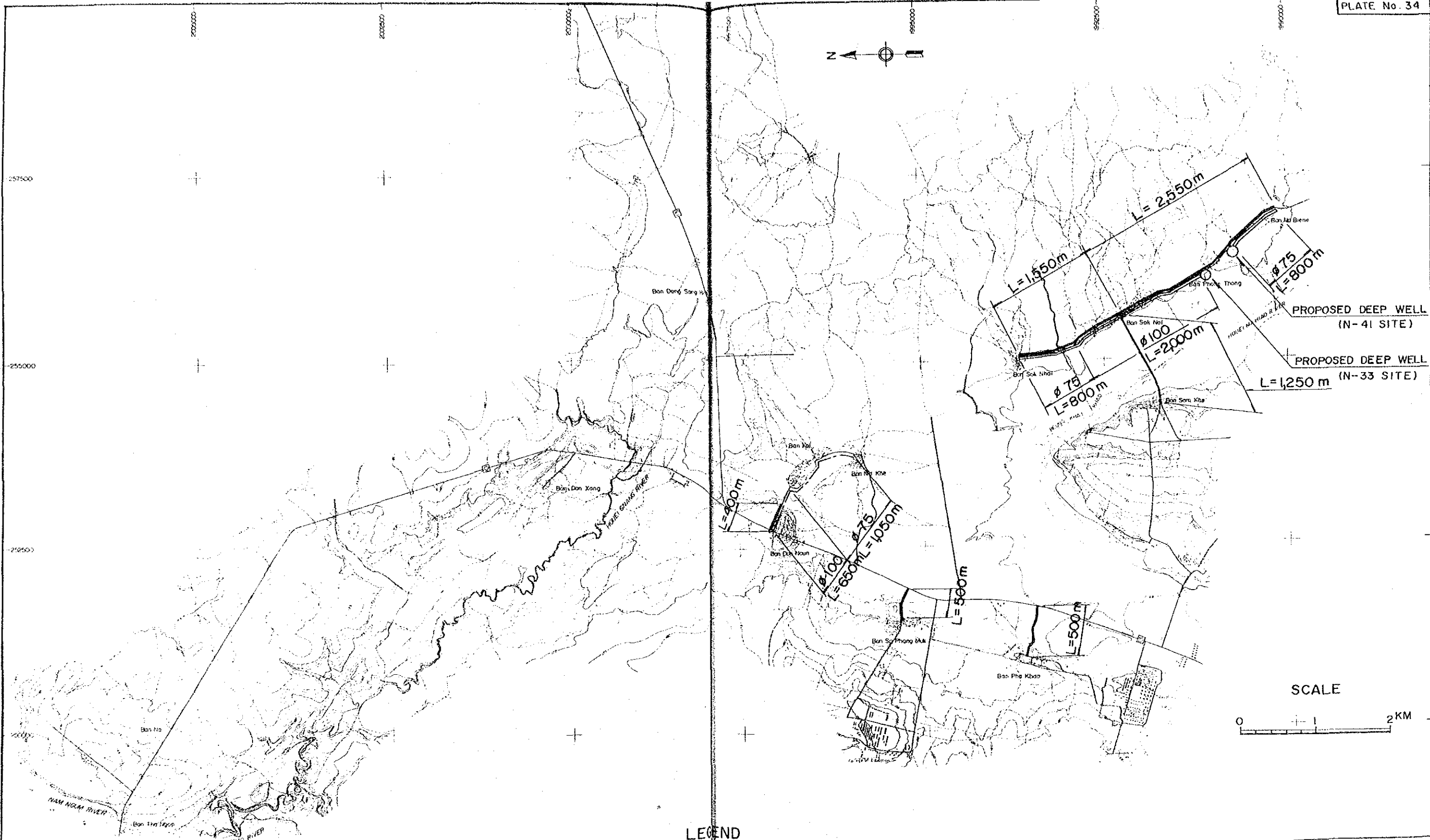


GENERAL LAYOUT OF DEMONSTRATION FARM
 (NET IRRIGATION AREA : 64 HA)

- LEGEND
- ==== Main Canal / Secondary Canal
 - Tertiary Canal
 - Field Canal
 - Tertiary Drain
 - Field Drain
 - Turnout (T.)
 - +--- Check (CH)
 - +--- Culvert (CU)
 - Division Box on Tertiary Canal (DB)
 - Division Box on Field Canal (DBF)
 - Demonstration Farm Plot
 - ▨ Elevated Area
 - Farm Road
 - Contour Line



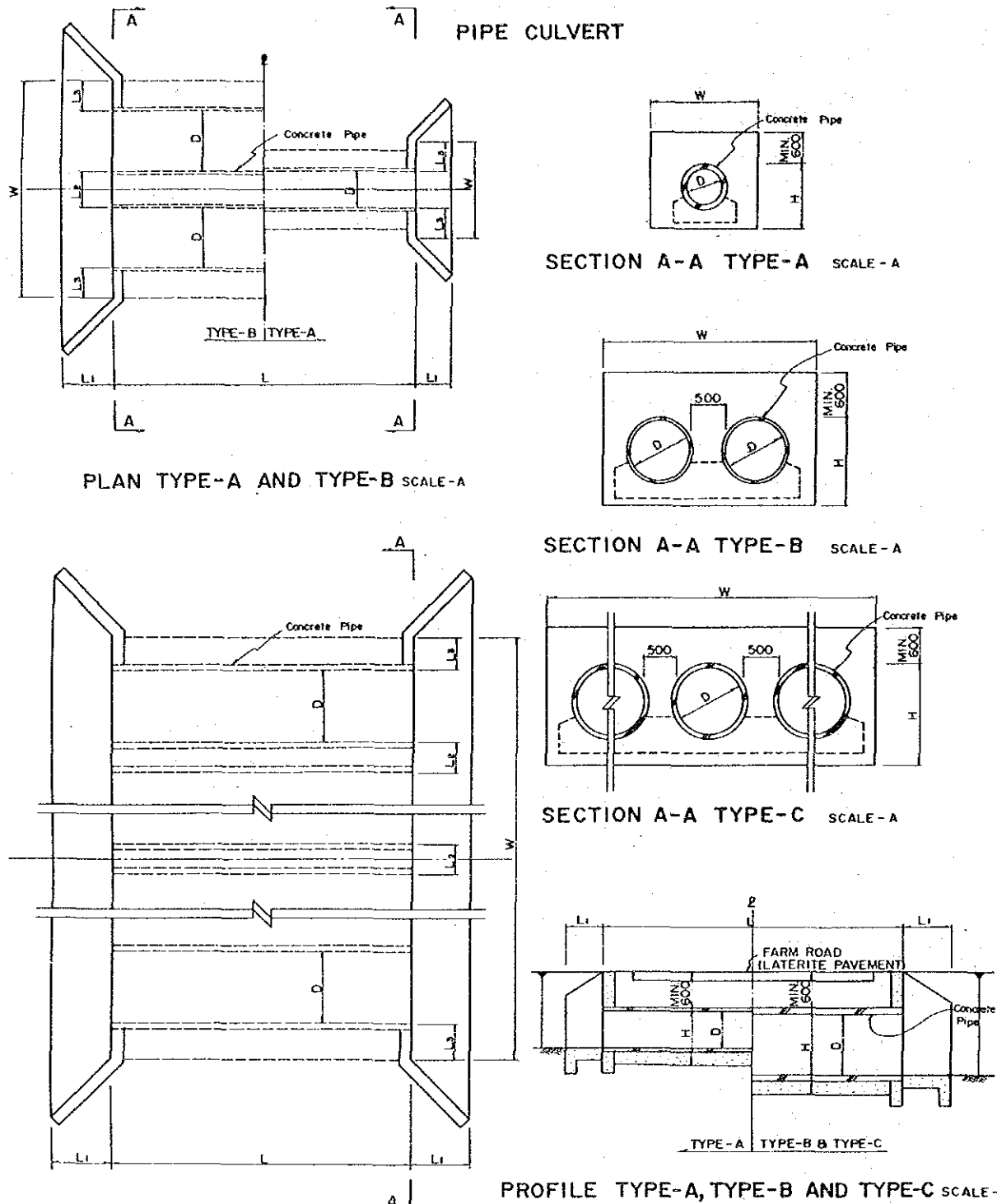
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
GENERAL LAYOUT OF DEMONSTRATION FARM	
DATE	DWG. NO. 601
JAPAN INTERNATIONAL COOPERATION AGENCY	



LEGEND

- Village road to be improved
- Proposed Pipe Line of Nam Papa
- Proposed Distribution Pipe Line From Deep Well
- Proposed Deep Well
- $\phi 100$ Diameter of Pipe Line (mm)

AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	
TITLE OF DRAWING	
GENERAL LAYOUT OF RURAL INFRASTRUCTURES	
DATE	DWG. NO. 701
JAPAN INTERNATIONAL COOPERATION AGENCY	



PLAN TYPE-A AND TYPE-B SCALE-A

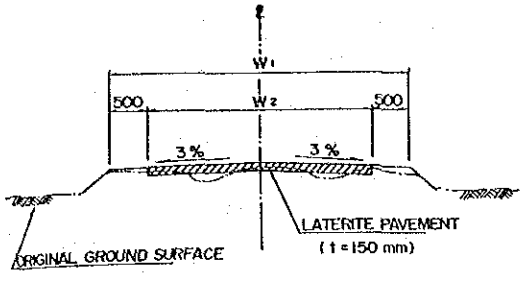
PLAN TYPE-C SCALE-A

DIMENSION

Unit: mm

TYPE	D	L	L ₁	L ₂	L ₃	W	H	PIPE NUMBER
A-I	600	6,000	450	500	500	1,600	1,200	1
A-II	600	7,000	450	500	500	1,600	1,200	1
A-III	800	8,000	550	500	500	1,800	1,400	1
A-IV	800	9,000	550	500	500	1,800	1,400	1
B	1,000	6,000	700	500	500	3,500	1,800	2
C	1,200	6,000	850	500	600	17,700	1,900	10

TYPICAL CROSS SECTION OF VILLAGE ROADS



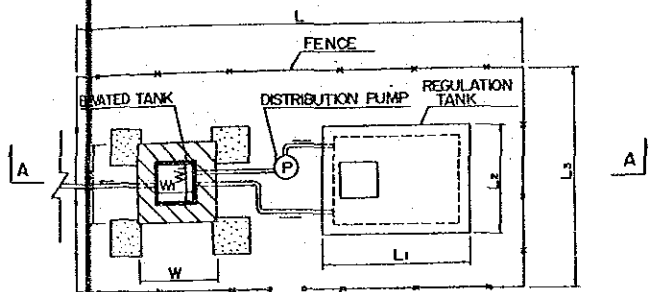
TYPICAL SECTION SCALE-A

DIMENSION

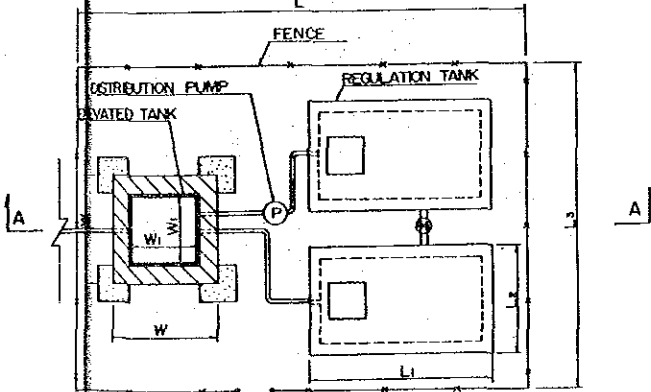
LOCATION OF VILLAGE ROADS	TOTAL LENGTH (m)	W ₁ (mm)	W ₂ (mm)
* R13 TO BAN PHA KHAO	500	7,000	6,000
* R13 TO BAN SA PHANG MUK	500	6,000	5,000
* R13 TO BAN XAI	400	5,000	4,000
BAN SAM KHE TO BAN SOK NOI	1,250	7,000	6,000
BAN SOK NOI TO BAN SOK NHAI	1,550	4,000	3,000
BAN SOK NOI TO BAN NA BIENE	2,500	4,000	3,000

* R13 : NATIONAL ROAD OF ROUTE 13

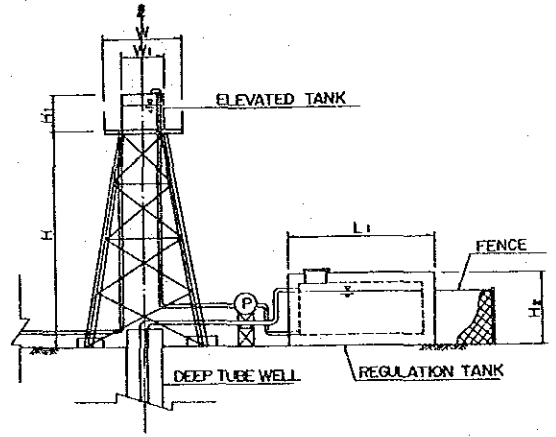
POTABLE WATER SUPPLY BY DEEP TUBE WELL



PLAN TYPE-A SCALE-B



PLAN TYPE-B SCALE-B



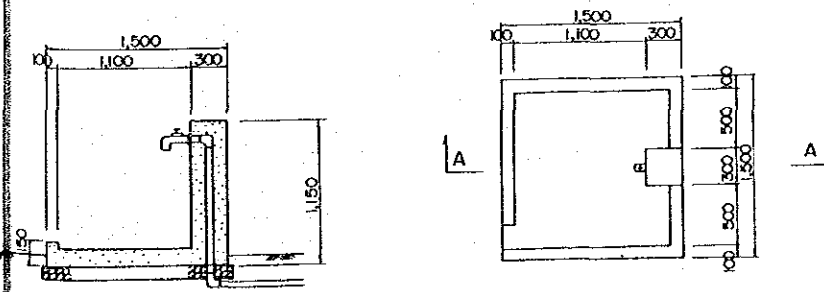
SECTION A-A SCALE-B

DIMENSION

Unit: mm

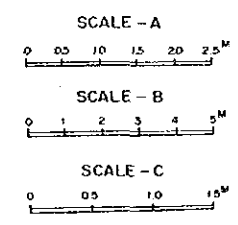
WELL	TYPE	L	L ₁	L ₂	L ₃	W	W ₁	H	H ₁	H ₂
N-33 SITE	A	13,000	4,000	3,000	6,000	2,200	1,200	6,000	1,000	2,600
N-41 SITE	B	13,000	5,000	3,000	9,000	3,000	2,000	15,000	1,750	3,600

COMMUNAL TAPS AND WASHING PLACE



SECTION A-A SCALE-C

PLAN SCALE-C



AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE
 LAO PEOPLES DEMOCRATIC REPUBLIC
 TITLE OF DRAWING
RURAL INFRASTRUCTURES
 DATE _____ DWG. NO. 702
 JAPAN INTERNATIONAL COOPERATION AGENCY

JICA