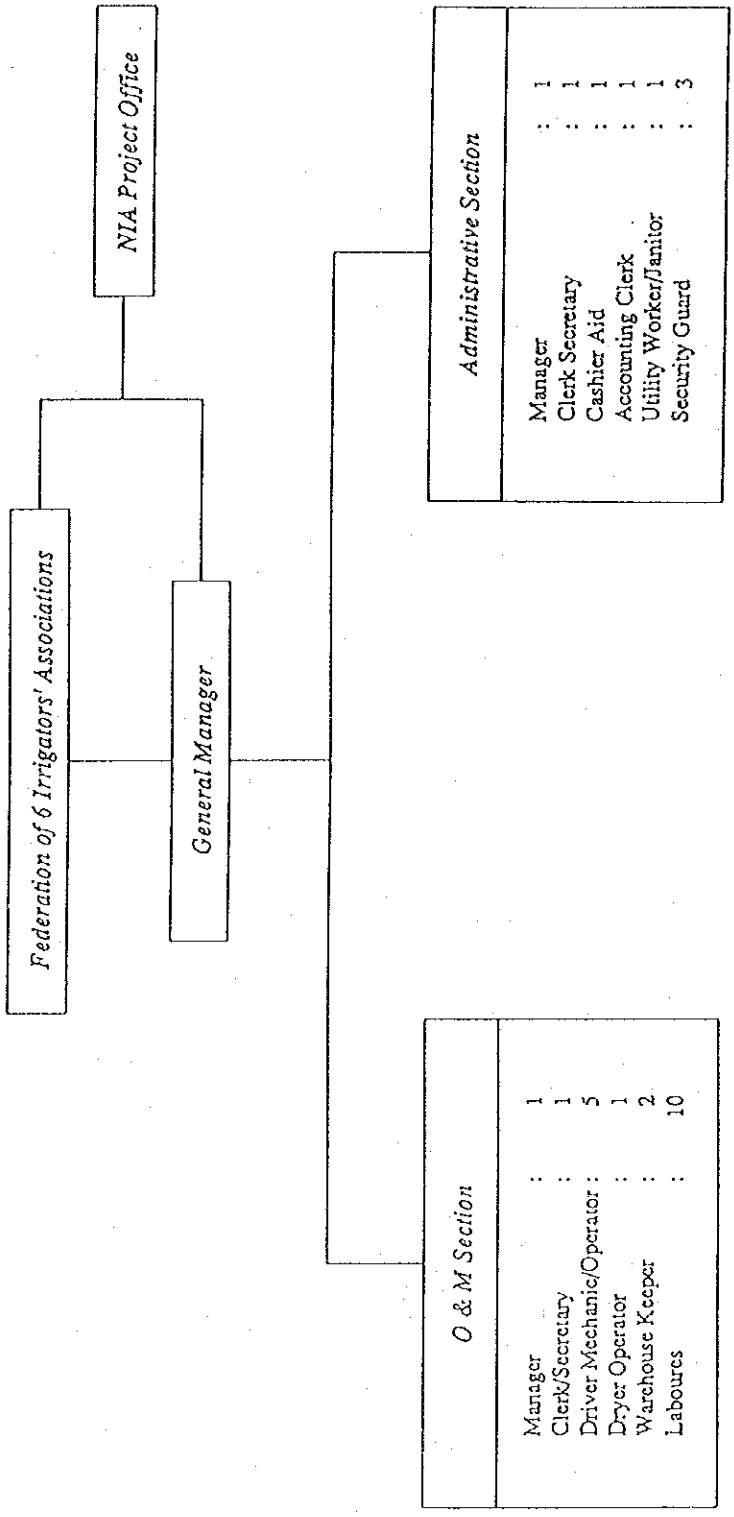
Organization of Post - Harvest Facilities Office

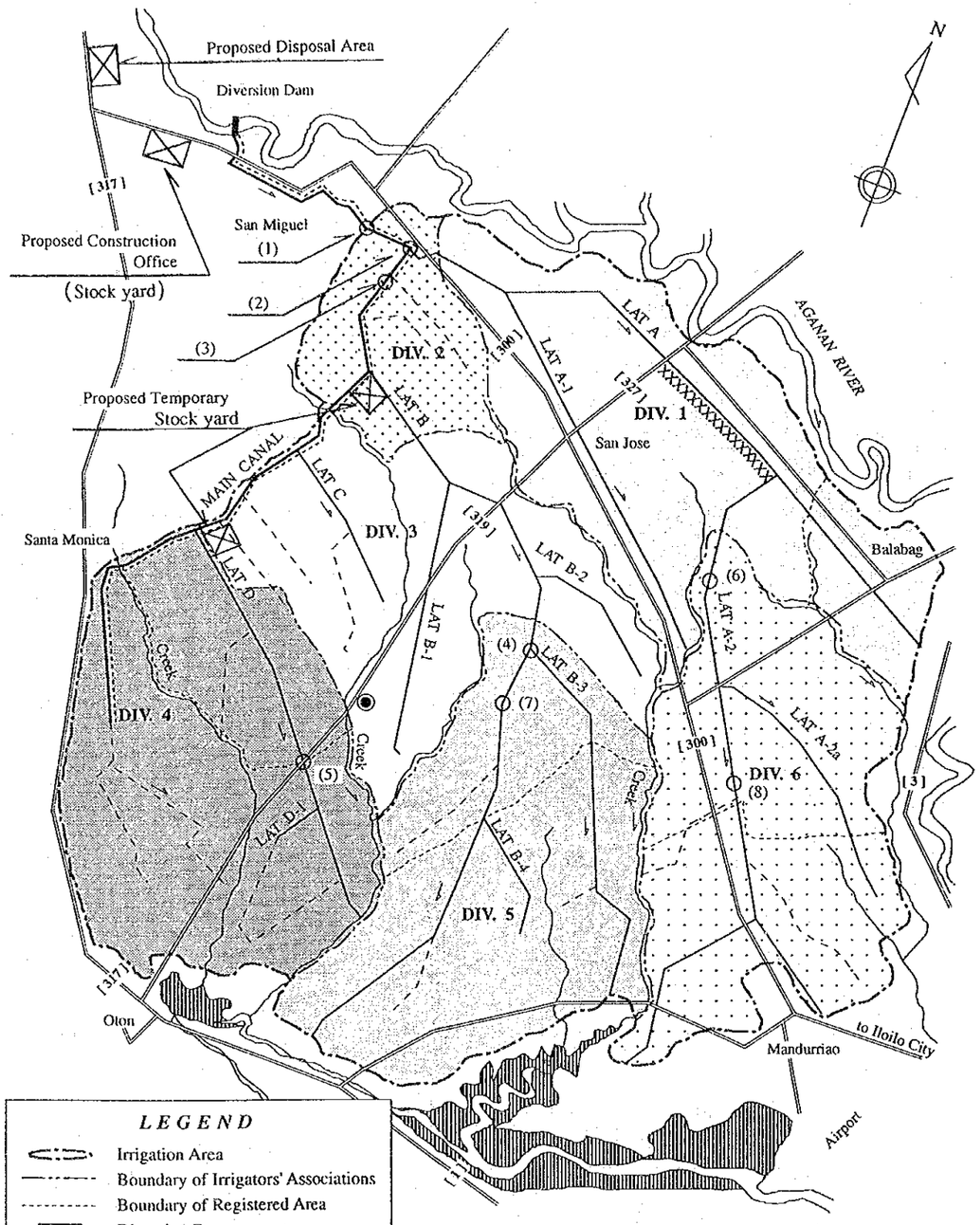


DRAWINGS

LIST OF DRAWINGS

PLATE NO.	DRAWING NO.		TITLE OF DRAWING
1	0001	GENERAL	GENERAL PLAN
2	0002	GENERAL	IRRIGATION FLOW DIAGRAM (1/3)
3	0003	GENERAL	IRRIGATION FLOW DIAGRAM (2/3)
4	0004	GENERAL	IRRIGATION FLOW DIAGRAM (3/3)
5	1001	DIVERSION DAM	PLAN, PROFILE AND CROSS SECTION
6	1002	DIVERSION DAM	APRON AND CONCRETE BLOCKS
7	1003	DIVERSION DAM	REVETMENT (1/2)
8	1004	DIVERSION DAM	REVETMENT (2/2)
9	1005	DIVERSION DAM	ENTRANCE OF THE DIVERSION DAM SITE
10	2001	IRRIGATION CANAL	PLAN AND PROFILE OF MAIN CANAL (1/9)
11	2002	IRRIGATION CANAL	PLAN AND PROFILE OF MAIN CANAL (2/9)
12	2003	IRRIGATION CANAL	PLAN AND PROFILE OF MAIN CANAL (3/9)
13	2004	IRRIGATION CANAL	PLAN AND PROFILE OF MAIN CANAL (4/9)
14	2005	IRRIGATION CANAL	PLAN AND PROFILE OF MAIN CANAL (5/9)
15	2006	IRRIGATION CANAL	PLAN AND PROFILE OF MAIN CANAL (6/9)
16	2007	IRRIGATION CANAL	PLAN AND PROFILE OF MAIN CANAL (7/9)
17	2008	IRRIGATION CANAL	PLAN AND PROFILE OF MAIN CANAL (8/9)
18	2009	IRRIGATION CANAL	PLAN AND PROFILE OF MAIN CANAL (9/9)
19	3001	CANAL STRUCTURES	REPLACEMENT OF CHECK GATE (MAIN CANAL, STA 2+200)
20	3002	CANAL STRUCTURES	REPLACEMENT OF COMBINED CHECK AND HEAD GATE (MAIN CANAL, STA 2+773) (1/2)
21	3003	CANAL STRUCTURES	REPLACEMENT OF COMBINED CHECK AND HEAD GATE (MAIN CANAL, STA 2+773) (2/2)
22	3004	CANAL STRUCTURES	REPLACEMENT OF CHECK GATE (MAIN CANAL, STA 3+106)
23	3005	CANAL STRUCTURES	REPLACEMENT OF HEAD GATE (LATERAL B, STA 3+830)
24	3006	CANAL STRUCTURES	REPLACEMENT OF CHECK GATE (LATERAL D, STA 2+890)
25	3007	CANAL STRUCTURES	REPLACEMENT OF GATES FOR TURNOUTS
26	3008	CANAL STRUCTURES	REHABILITATION OF THRESHER CROSSING WITH CHECK (LATERAL A-2, STA 1+540)
27	3009	CANAL STRUCTURES	REHABILITATION OF CHECK WITH DROP (LATERAL B, STA 4+510)
28	3010	CANAL STRUCTURES	NEW CONSTRUCTION OF THRESHER CROSSING WITH CHECK (LATERAL A-2, STA 3+830)
29	3011	CANAL STRUCTURES	STEEL SLIDE GATE
30	4001	POST HARVEST FACILITY	GENERAL PLAN
31	4002	POST HARVEST FACILITY	MULTIPURPOSE PAVEMENT
32	4003	POST HARVEST FACILITY	GLASS HOUSE
33	4004	POST HARVEST FACILITY	PADDY WAREHOUSE (1/2)
34	4004	POST HARVEST FACILITY	PADDY WAREHOUSE (2/2)
35	4006	POST HARVEST FACILITY	ADMINISTRATION OFFICE
36	4007	POST HARVEST FACILITY	EQUIPMENT SHED
37	4008	POST HARVEST FACILITY	GUARD HOUSE
38	4009	POST HARVEST FACILITY	PUMP ROOM
39	4010	POST HARVEST FACILITY	ELECTRICAL AND LIGHTING SYSTEM
40	5001	MISCELLANEOUS	TYPICAL CROSS SECTIONS OF CANALS AND O&M ROAD, MISCELLANEOUS

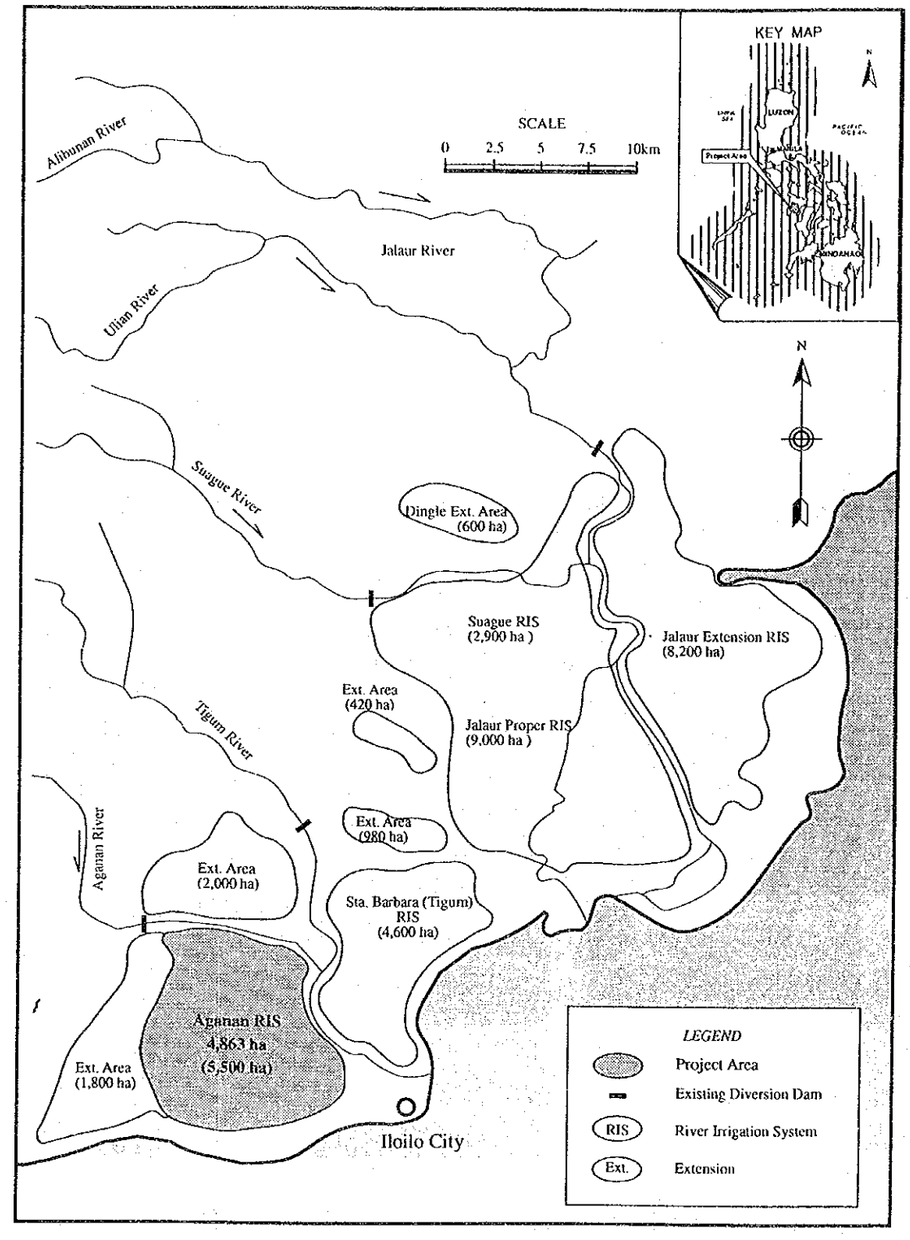
PLATE No. 1



LEGEND

- Irrigation Area
- Boundary of Irrigators' Associations
- Boundary of Registered Area
- Diversion Dam
- Main Canal
- Proposed Canal Lining Section
- Lateral Canal
- Main Farm Ditch
- Proposed Post-Harvest Facilities Site
- Creek
- River
- Swamp
- Road
- DIV. Water Management Block

SCALE 0 0.5 1 1.5 2 km



XXX REHABILITATION OF O&M ROAD (LATERAL A,STA 3+270 - STA 4+990)

(1) REPLACEMENT OF CHECK GATE (MAIN CANAL, STA 2+200)
(2) REPLACEMENT OF COMBINED CHECK AND HEAD GATE (MAIN CANAL, STA 2+773)
(3) REPLACEMENT OF CHECK GATE (MAIN CANAL, STA 3+106)
(4) REPLACEMENT OF HEAD GATE (LATERAL B,STA 3+830)
(5) REPLACEMENT OF CHECK GATE (LATERAL D,STA 2+890)
(6) REHABILITATION OF THRESHER CROSSING WITH CHECK (LATERAL A-2,STA 1+540)
(7) REHABILITATION OF CHECK WITH DROP (LATERAL B,STA 4+510)
(8) NEW CONSTRUCTION OF THRESHER CROSSING WITH CHECK (LATERAL A-2,STA 3+830)

THE REPUBLIC OF THE PHILIPPINES

THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING

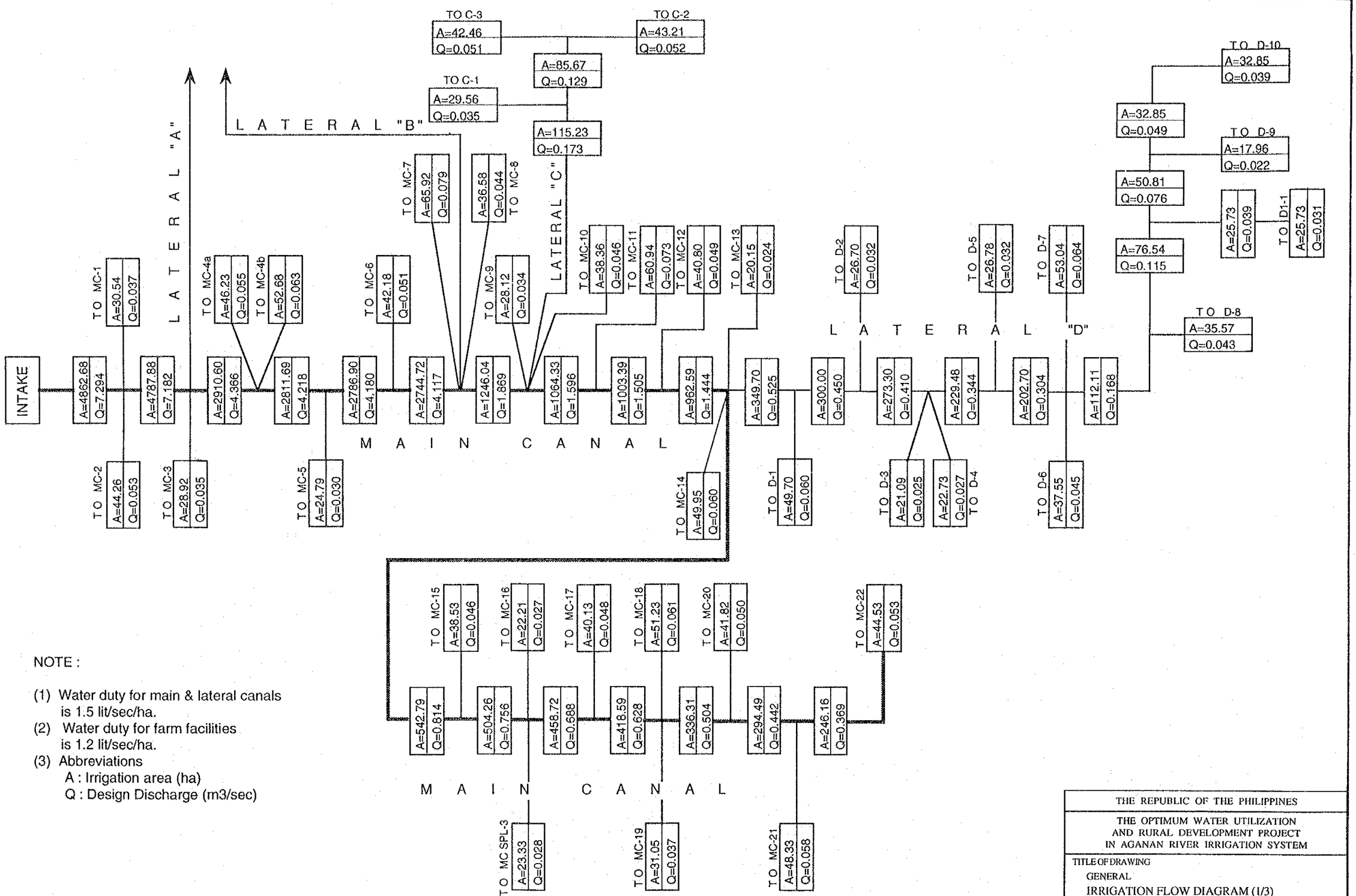
GENERAL

GENERAL PLAN

DATE		DRAWING NO.	0001

JAPAN INTERNATIONAL COOPERATION AGENCY

PLATE No. 2



NOTE :

(1) Water duty for main & lateral canals is 1.5 lit/sec/ha.
(2) Water duty for farm facilities is 1.2 lit/sec/ha.
(3) Abbreviations
A : Irrigation area (ha)
Q : Design Discharge (m3/sec)

THE REPUBLIC OF THE PHILIPPINES

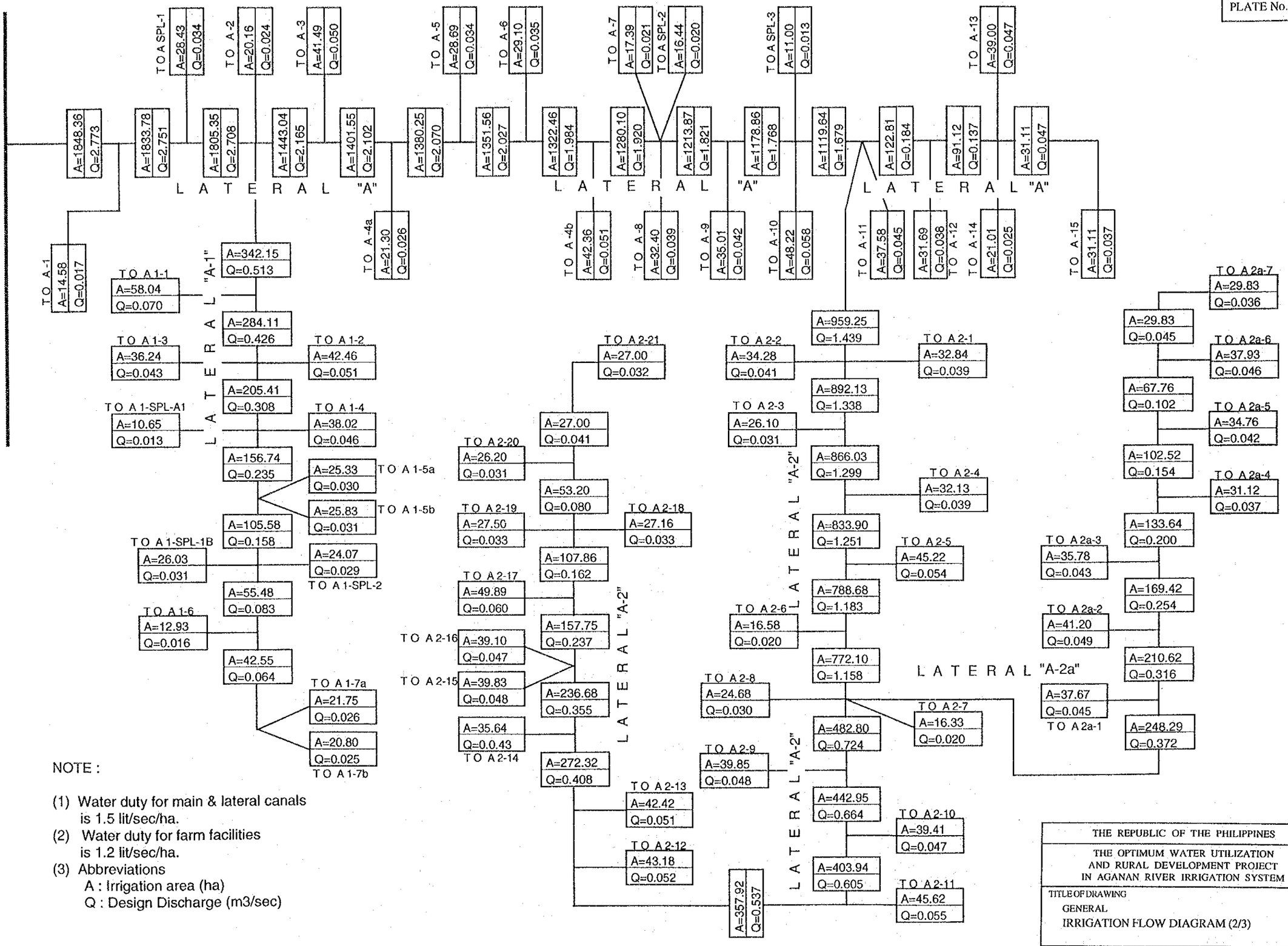
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING
GENERAL
IRRIGATION FLOW DIAGRAM (1/3)

DATE | DRAWING NO. 0002

JAPAN INTERNATIONAL COOPERATION AGENCY

PLATE No. 3



NOTE :

(1) Water duty for main & lateral canals is 1.5 lit/sec/ha.
(2) Water duty for farm facilities is 1.2 lit/sec/ha.
(3) Abbreviations
A : Irrigation area (ha)
Q : Design Discharge (m3/sec)

THE REPUBLIC OF THE PHILIPPINES

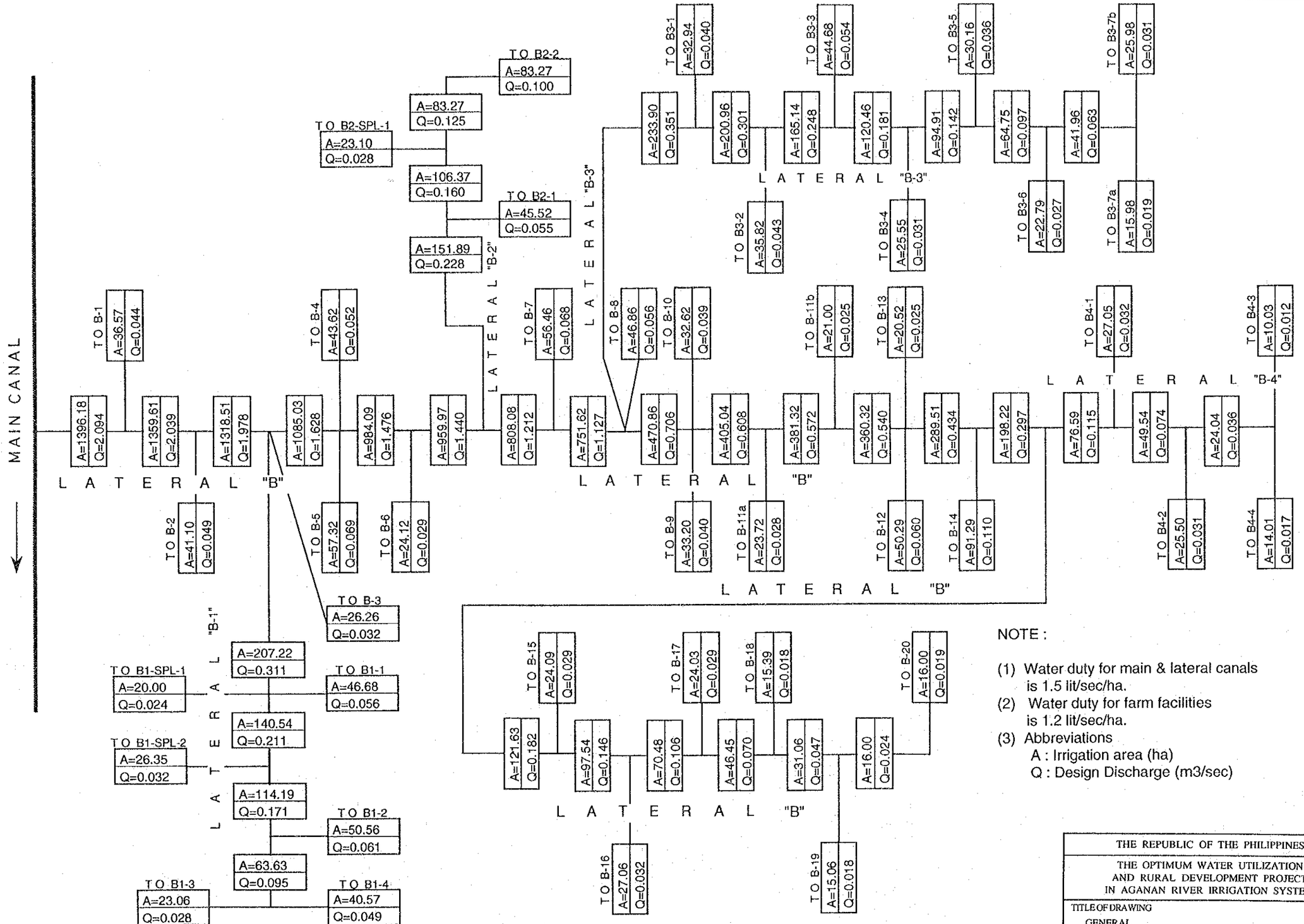
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING
GENERAL
IRRIGATION FLOW DIAGRAM (2/3)

DATE | DRAWING NO. 0003

JAPAN INTERNATIONAL COOPERATION AGENCY

PLATE No. 4



NOTE :

(1) Water duty for main & lateral canals is 1.5 lit/sec/ha.
(2) Water duty for farm facilities is 1.2 lit/sec/ha.
(3) Abbreviations
A : Irrigation area (ha)
Q : Design Discharge (m3/sec)

THE REPUBLIC OF THE PHILIPPINES

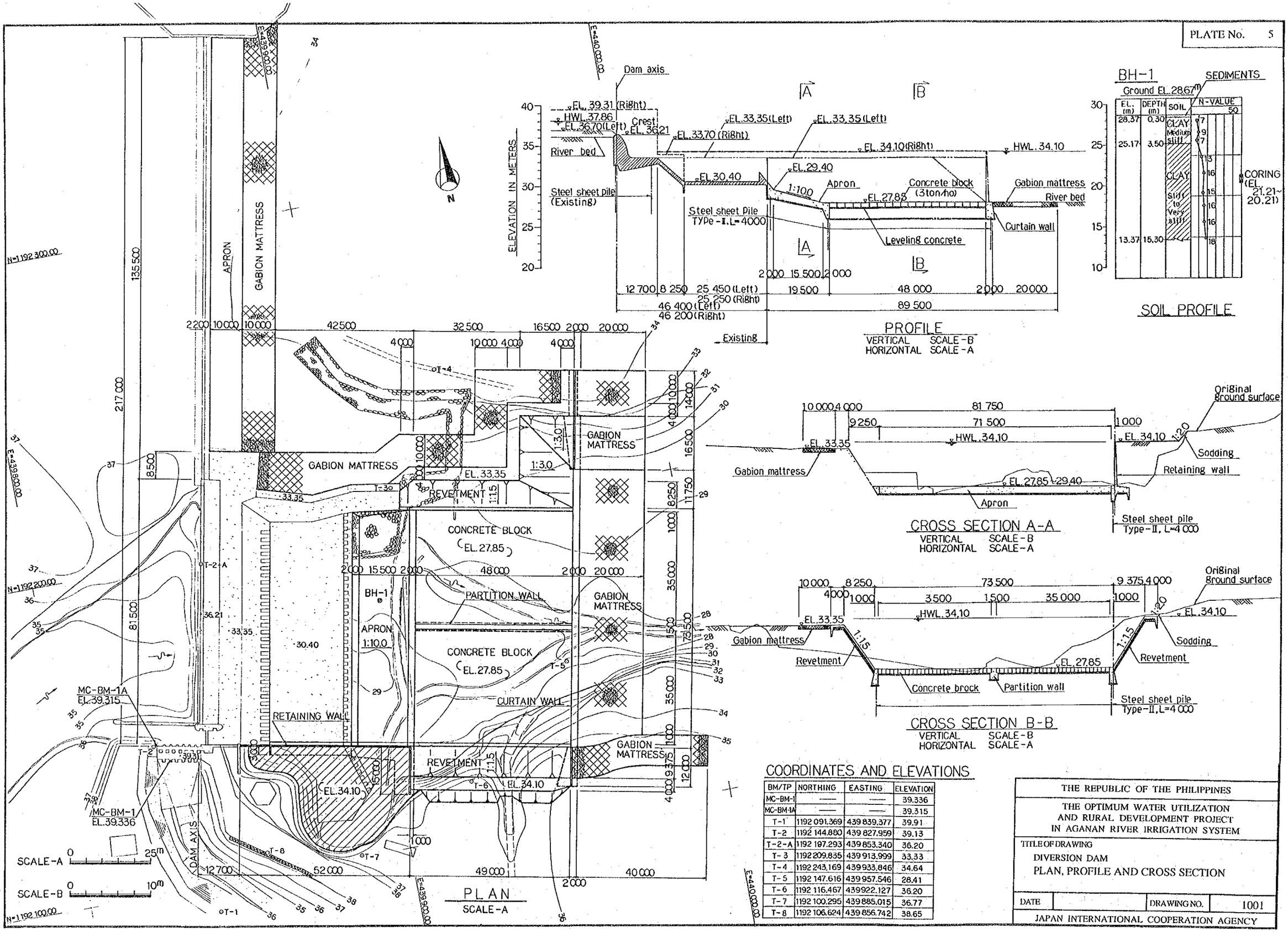
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING
GENERAL
IRRIGATION FLOW DIAGRAM (3/3)

DATE | DRAWING NO. 0004

JAPAN INTERNATIONAL COOPERATION AGENCY

PLATE No. 5



COORDINATES AND ELEVATIONS

BM/TP	NORTHING	EASTING	ELEVATION
MC-BM-1	——	——	39.336
MC-BM-1A	——	——	39.315
T-1	1192 091.369	439 839.377	39.91
T-2	1192 144.880	439 827.959	39.13
T-2-A	1192 197.293	439 853.340	36.20
T-3	1192 209.835	439 913.999	33.33
T-4	1192 243.169	439 933.846	34.64
T-5	1192 147.616	439 957.546	28.41
T-6	1192 116.467	439 922.127	36.20
T-7	1192 100.295	439 885.015	36.77
T-8	1192 106.624	439 856.742	38.65

THE REPUBLIC OF THE PHILIPPINES

THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING

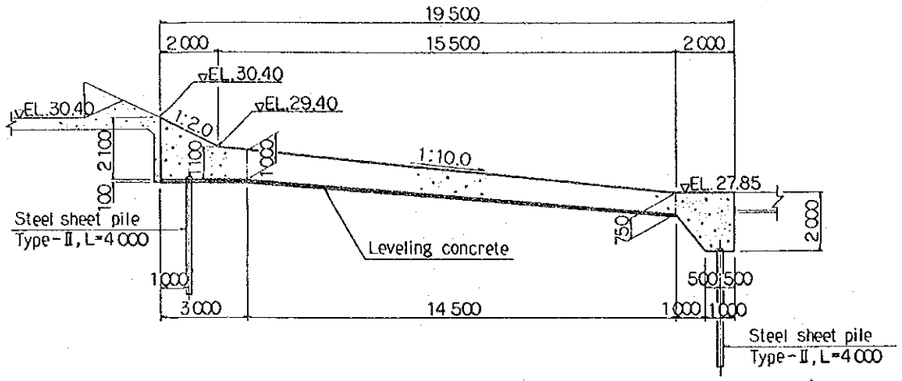
DIVERSION DAM

PLAN, PROFILE AND CROSS SECTION

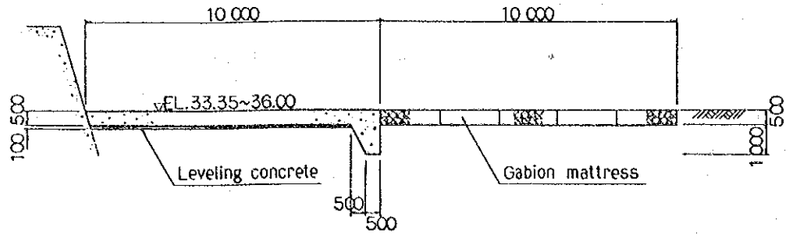
DATE		DRAWING NO.	1001

JAPAN INTERNATIONAL COOPERATION AGENCY

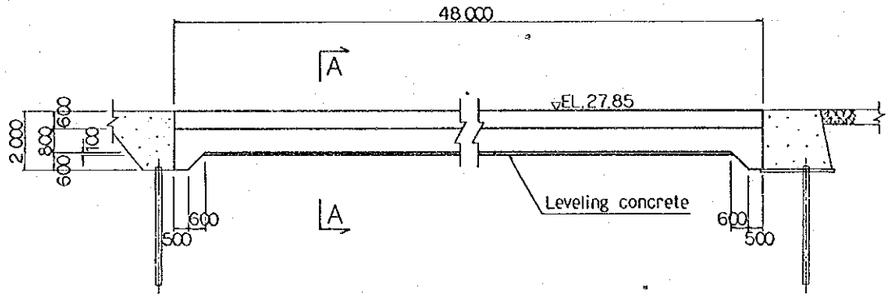
PLATE No. 6



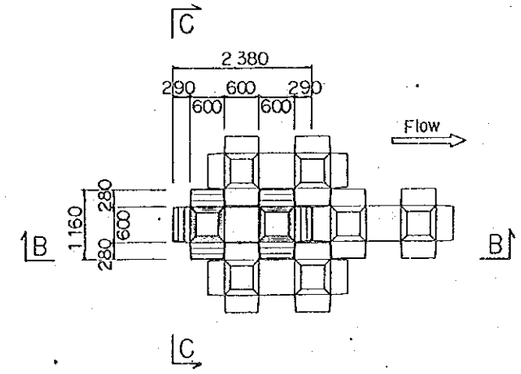
APRON (RIGHT)
SCALE - A



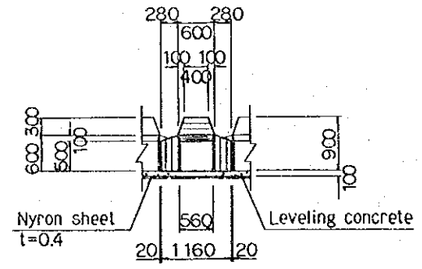
APRON (LEFT)
SCALE - A



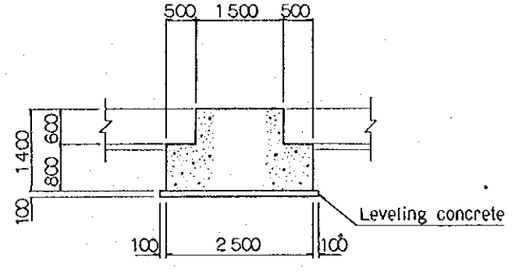
PARTITION WALL
SCALE - A



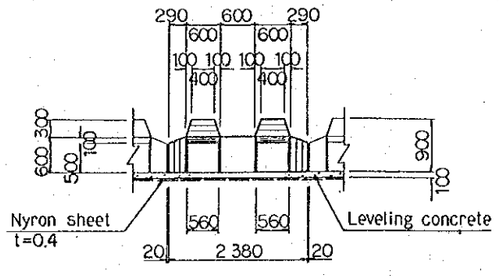
CONCRETE BLOCK
SCALE - B



SECTION C-C
SCALE - B



SECTION A-A
SCALE - B



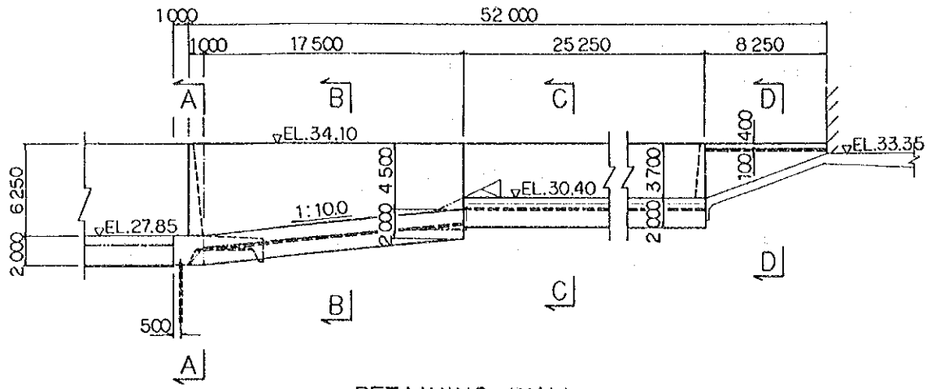
SECTION B-B
SCALE - B

SCALE-A 0 5m

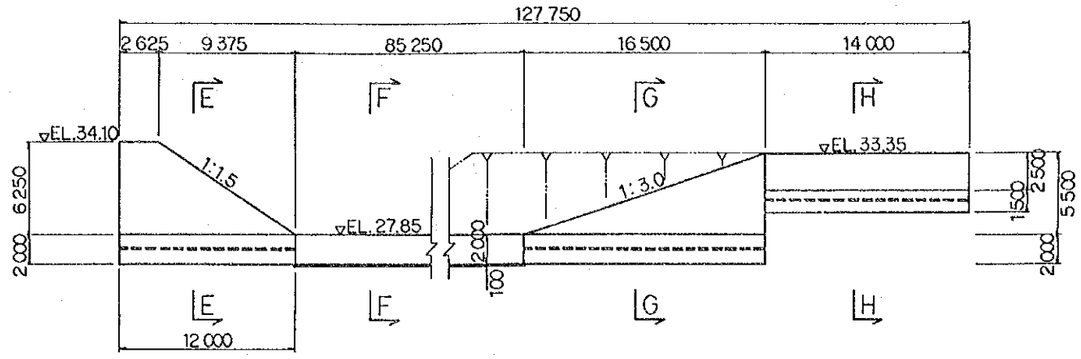
SCALE-B 0 3m

THE REPUBLIC OF THE PHILIPPINES	
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM	
TITLE OF DRAWING DIVERSION DAM APRON AND CONCRETE BLOCKS	
DATE	DRAWING NO. 1002
JAPAN INTERNATIONAL COOPERATION AGENCY	

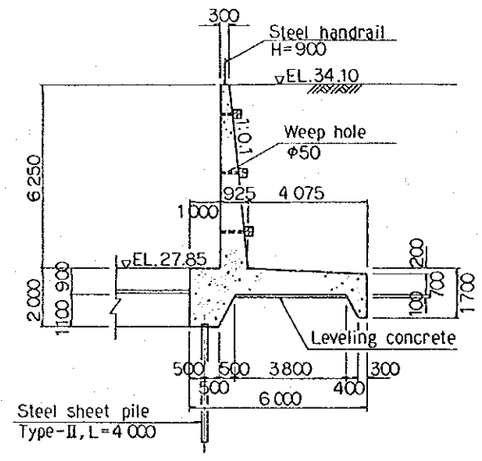
PLATE No. 7



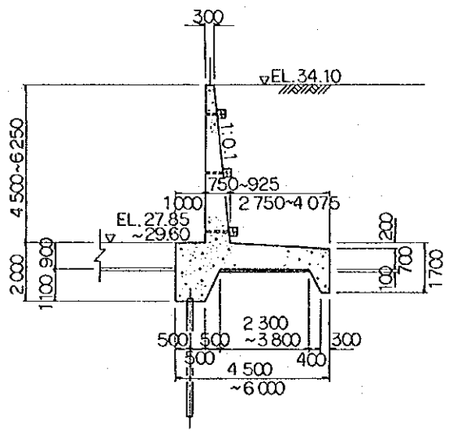
RETAINING WALL
SCALE - A



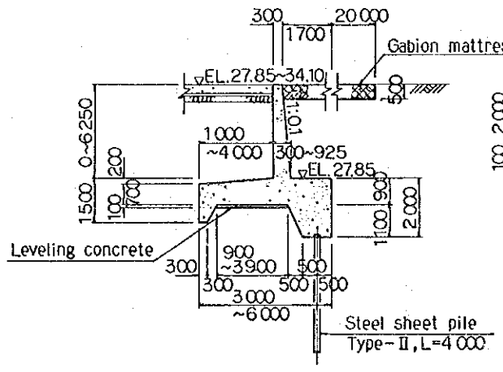
CURTAIN WALL
SCALE - A



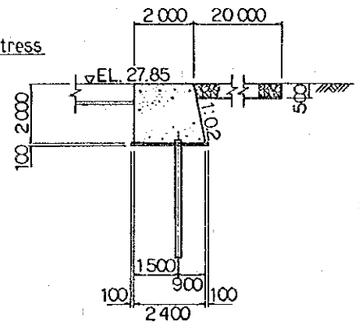
SECTION A-A
SCALE - B



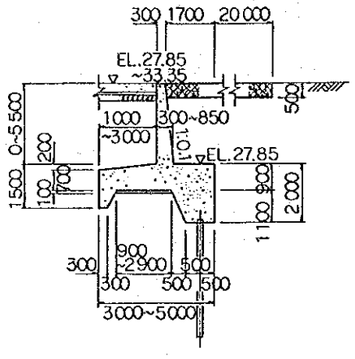
SECTION B-B
SCALE - B



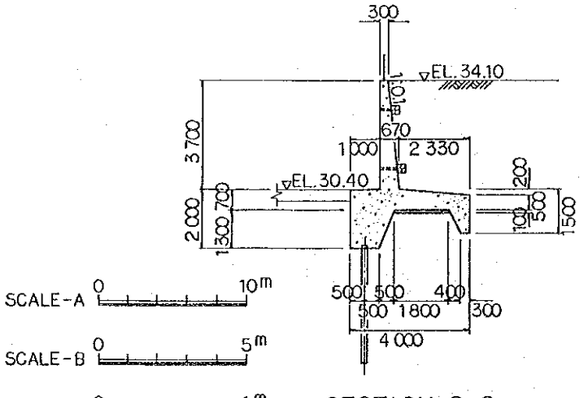
SECTION E-E
SCALE - B



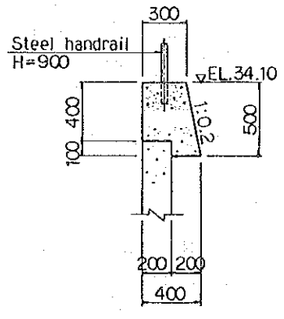
SECTION F-F
SCALE - B



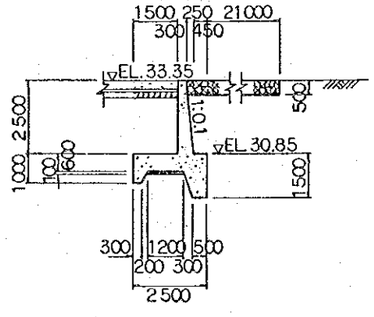
SECTION G-G
SCALE - B



SECTION C-C
SCALE - B

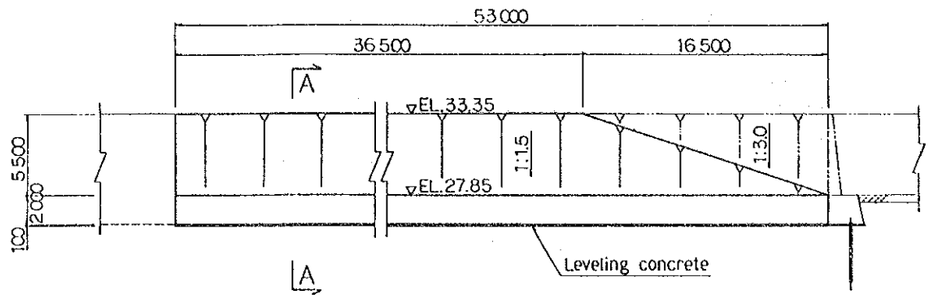


SECTION D-D
SCALE - C

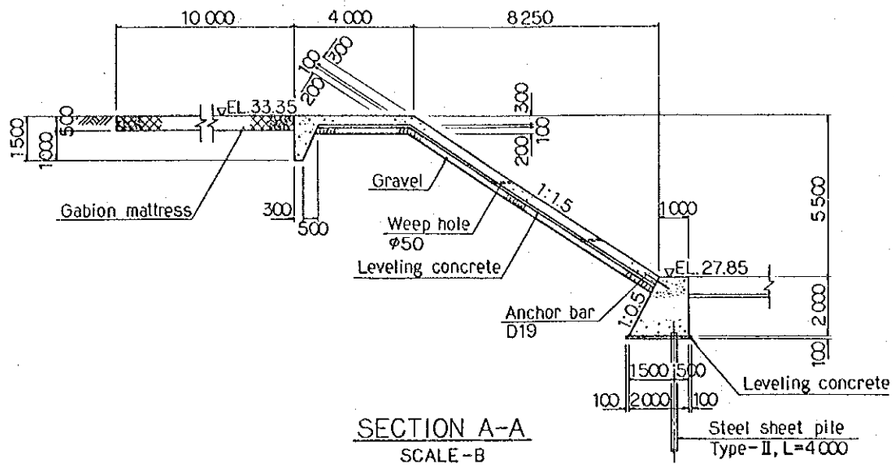


SECTION H-H
SCALE - B

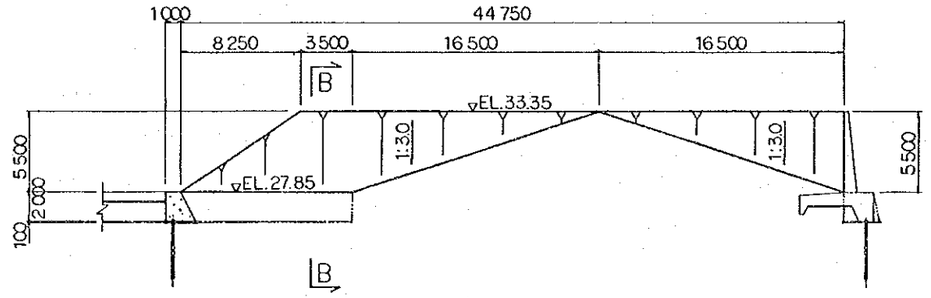
THE REPUBLIC OF THE PHILIPPINES	
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM	
TITLE OF DRAWING DIVERSION DAM REVETMENT (1/2)	
DATE	DRAWING NO. 1003
JAPAN INTERNATIONAL COOPERATION AGENCY	



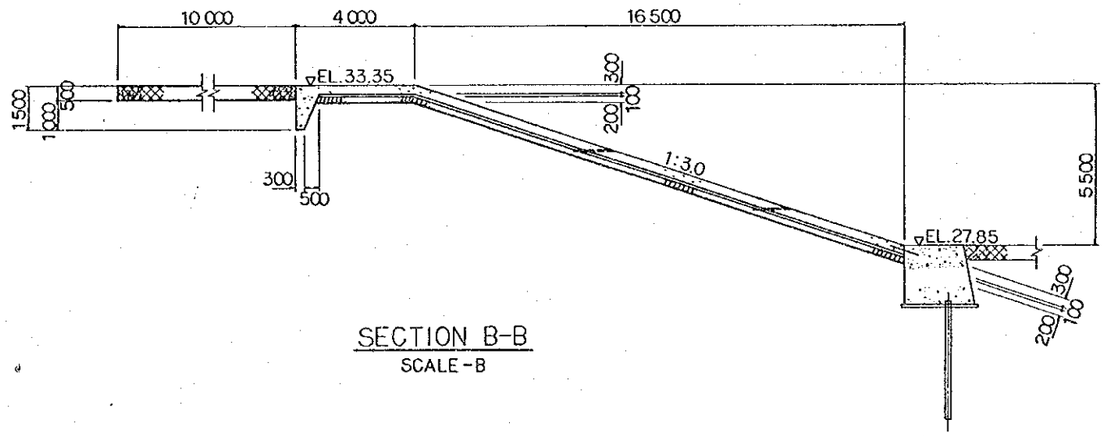
REVETMENT (LEFT)
SCALE - A



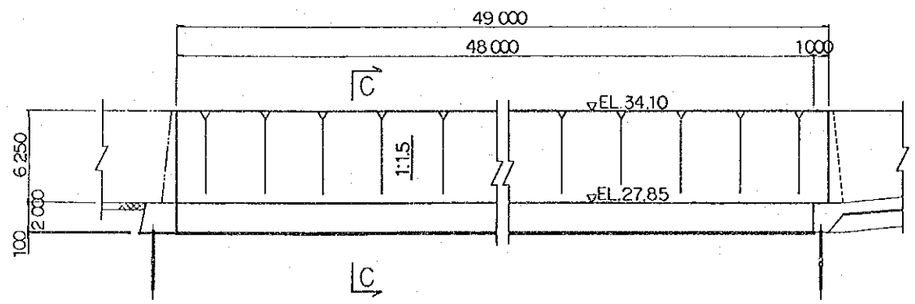
SECTION A-A
SCALE - B



REVETMENT (LEFT)
SCALE - A



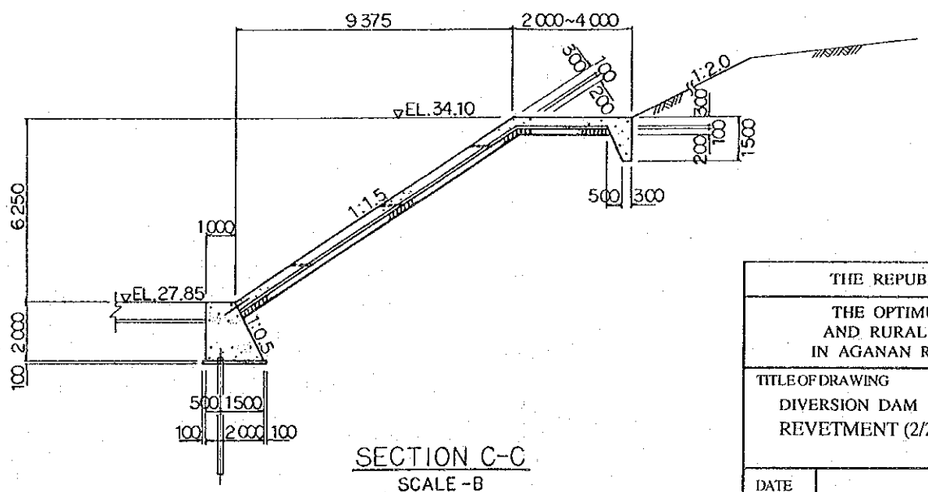
SECTION B-B
SCALE - B



REVETMENT (RIGHT)
SCALE - A

SCALE - A 0 10m

SCALE - B 0 5m

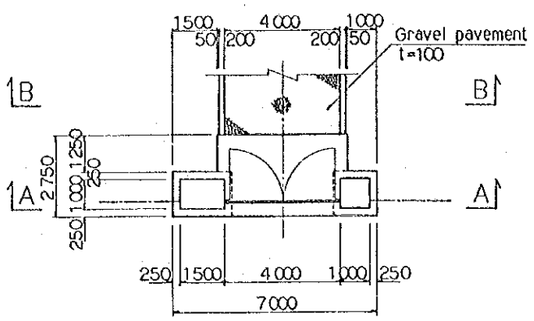


SECTION C-C
SCALE - B

THE REPUBLIC OF THE PHILIPPINES			
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM			
TITLE OF DRAWING DIVERSION DAM REVETMENT (2/2)			
DATE		DRAWING NO.	1004
JAPAN INTERNATIONAL COOPERATION AGENCY			

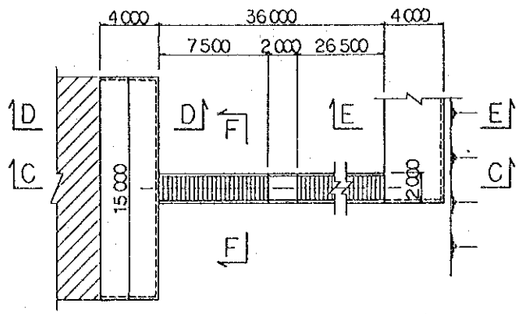
PLATE No. 9

GATE



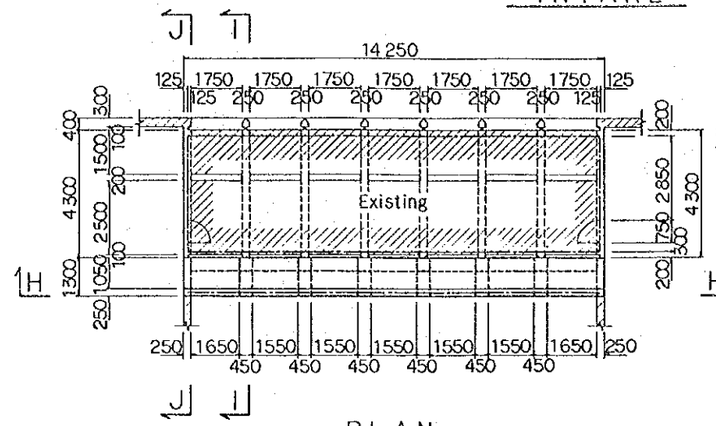
PLAN
SCALE - B

STEPS

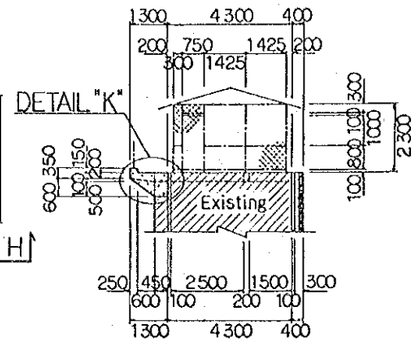


PLAN
SCALE - A

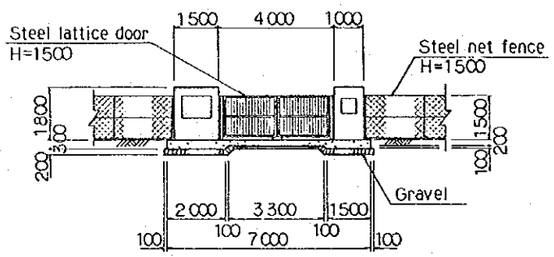
INTAKE



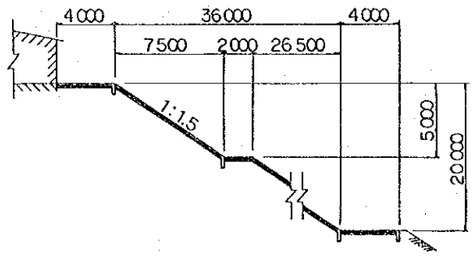
PLAN
SCALE - B



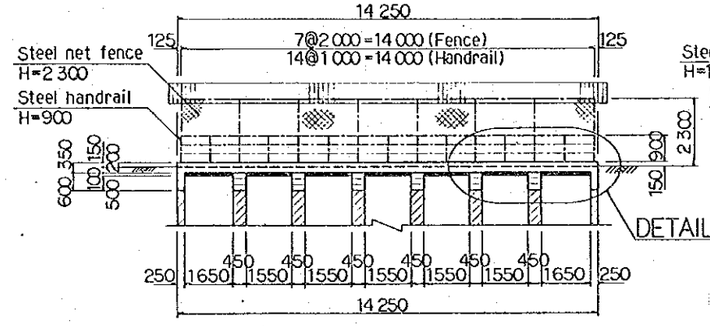
SECTION I-I
SCALE - B



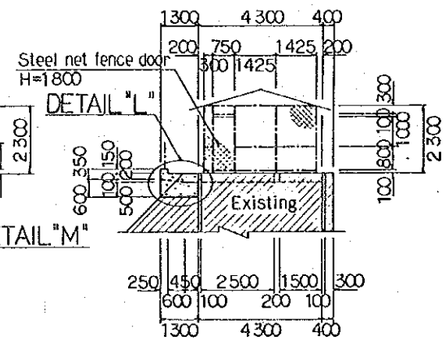
SECTION A-A
SCALE - B



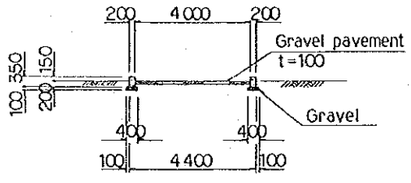
SECTION C-C
SCALE - A



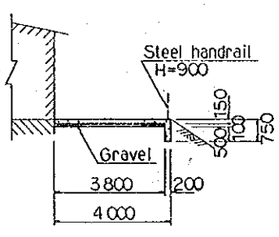
SECTION H-H
SCALE - B



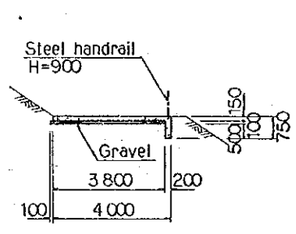
SECTION J-J
SCALE - B



SECTION B-B
SCALE - B



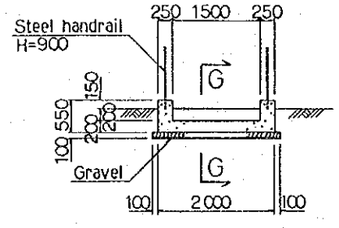
SECTION D-D
SCALE - B



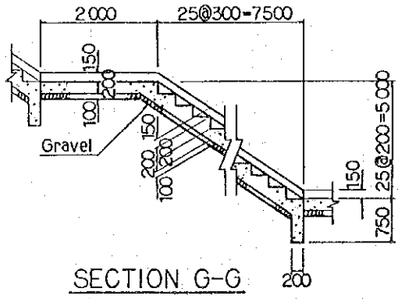
SECTION E-E
SCALE - B

DETAIL "K"
SCALE - C

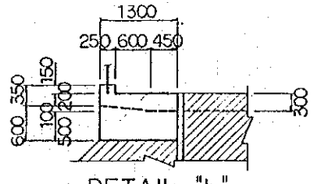
DETAIL "M"
SCALE - C



SECTION F-F
SCALE - C



SECTION G-G
SCALE - C



DETAIL "L"
SCALE - C

SCALE-A 0 10m
SCALE-B 0 5m
SCALE-C 0 3m

THE REPUBLIC OF THE PHILIPPINES

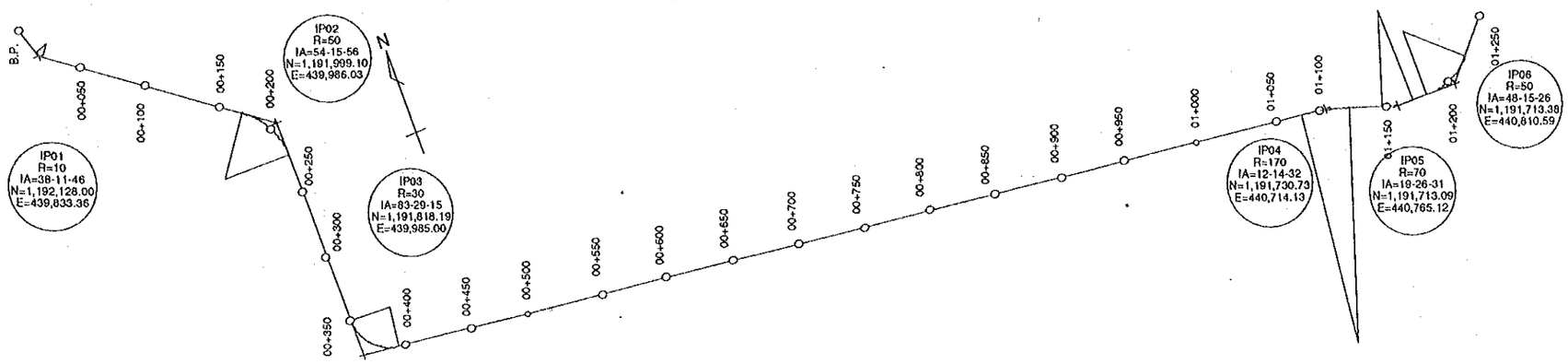
THE OPTIMUM WATER UTILIZATION
AND RURAL DEVELOPMENT PROJECT
IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING
DIVERSION DAM
ENTRANCE OF THE DIVERSION DAM SITE

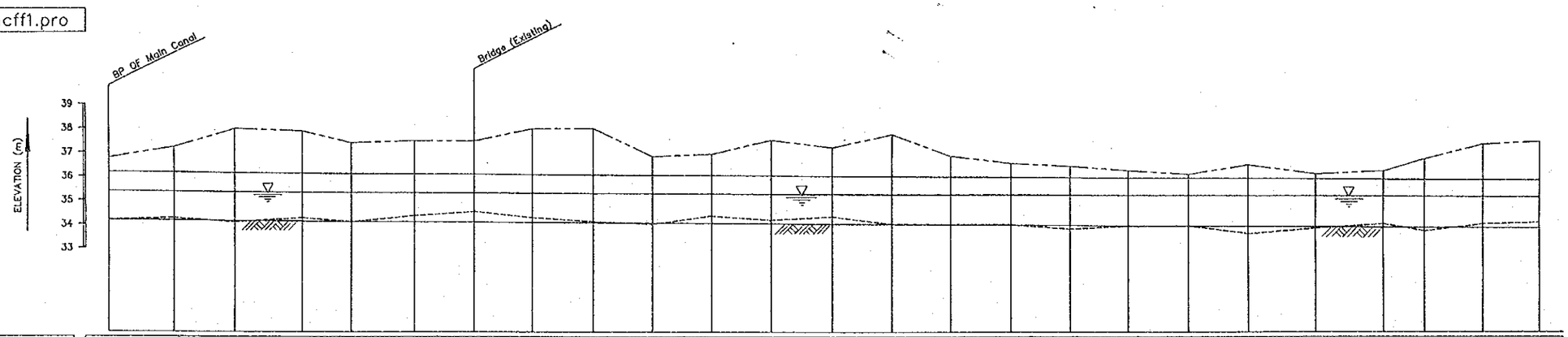
DATE		DRAWING NO.	1005

JAPAN INTERNATIONAL COOPERATION AGENCY

PLATE No. 10



mcff1.pro



		TYPE I-1 Q=7.294 m3/s I=1/3,600 B=6.0 m	TYPE I-2 Q=7.294 m3/s I=1/3,600 B=6.0 m
PROPOSED	CANAL BANK ELEVATION	36.18 36.17 36.15 36.14 36.12 36.11 36.10 36.08 36.07 36.05 36.04 36.03 36.01 36.00 35.98 35.97 35.95 35.94 35.93 35.92 35.90 35.68 35.67 35.66 35.65	
	WATER SURFACE ELEVATION	35.38 35.37 35.36 35.34 35.33 35.32 35.31 35.30 35.29 35.28 35.27 35.26 35.25 35.24 35.23 35.23 35.22 35.21 35.20 35.19 35.18 35.17 35.16 35.15 35.15	
	CANAL BASE ELEVATION	34.18 34.17 34.15 34.14 34.12 34.11 34.10 34.08 34.07 34.05 34.04 34.03 34.01 34.00 33.98 33.97 33.96 33.94 33.93 33.92 33.90 33.88 33.87 33.86 33.85	
EXISTING	CANAL BANK ELEVATION	36.77 37.23 38.00 37.91 37.41 37.49 37.48 37.89 38.01 36.83 36.93 37.51 37.20 37.75 36.84 36.54 36.43 36.25 36.09 36.48 36.10 36.23 36.74 37.35 37.47	
	CANAL BASE ELEVATION	34.18 34.27 34.10 34.28 34.11 34.37 34.53 34.28 34.12 34.01 34.35 34.18 34.32 34.01 33.99 33.98 33.81 33.93 33.93 33.61 33.84 34.02 33.72 34.02 34.09	
REDUCED CANAL DISTANCE		0.00 53.90 103.70 161.20 202.60 254.60 304.50 354.00 404.20 454.20 504.10 554.00 603.90 653.90 703.60 753.50 803.50 853.40 903.10 953.00 1010.45 1067.90 1102.10 1151.40 1201.50	
CANAL DISTANCE		0.00 53.90 49.80 57.50 41.40 52.00 49.90 49.50 50.20 50.00 49.90 49.90 49.90 50.00 49.70 49.90 50.00 49.90 49.70 49.90 57.45 57.45 34.20 49.30 50.10	
SURVEY STATION NO.		0+000.00 0+050.00 0+100.00 0+150.00 0+200.00 0+250.00 0+300.00 0+350.00 0+400.00 0+450.00 0+500.00 0+550.00 0+600.00 0+650.00 0+700.00 0+750.00 0+800.00 0+850.00 0+900.00 0+950.00 1+000.00 1+050.00 1+100.00 1+150.00 1+200.00	

HORIZONTAL SCALE (m)
0 40 80 120 160 200

LEGEND

- PROPOSED WATER SURFACE
- PROPOSED CANAL BANK
- PROPOSED CANAL BASE
- EXISTING CANAL BANK
- EXISTING CANAL BASE

THE REPUBLIC OF THE PHILIPPINES

THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING

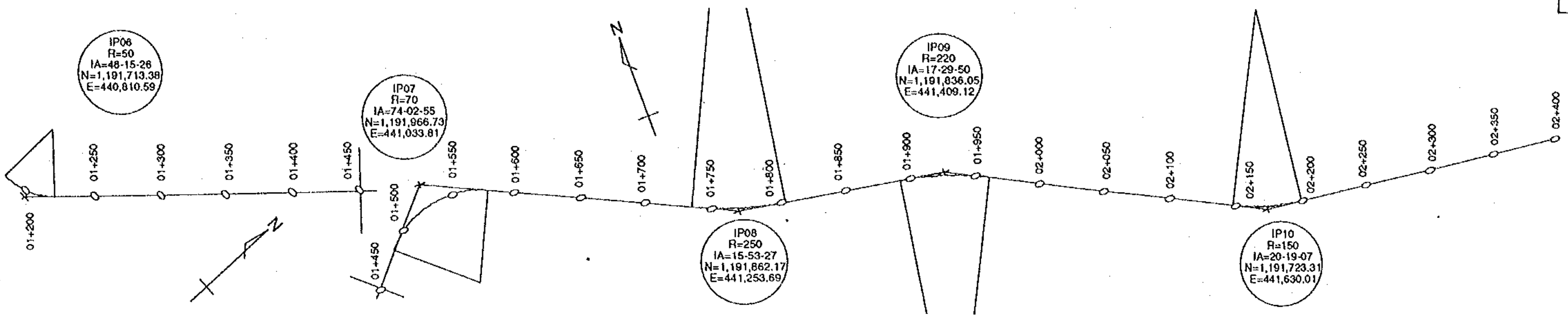
IRRIGATION CANAL

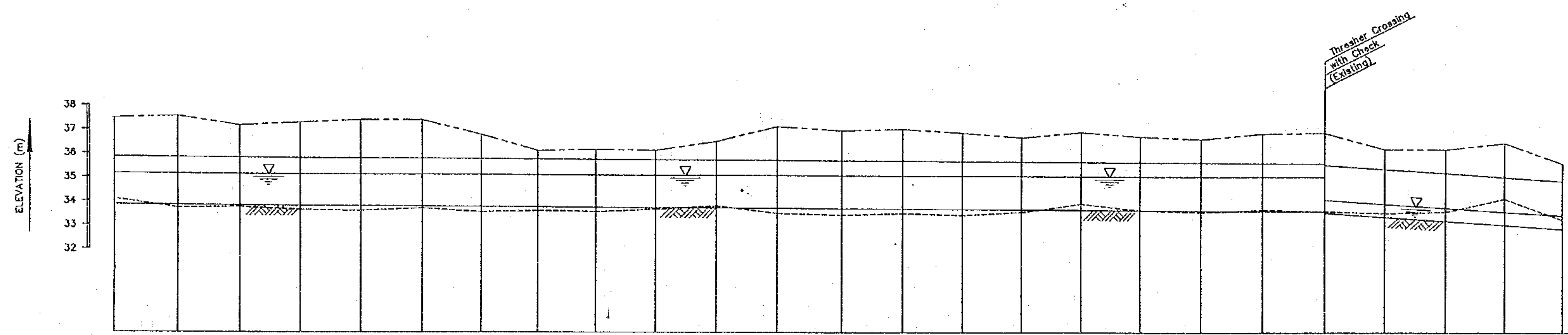
PLAN AND PROFILE OF MAIN CANAL (1/9)

DATE		DRAWING NO.	2001

JAPAN INTERNATIONAL COOPERATION AGENCY

PLATE No. 11





CANAL TYPE: TYPE I-2, Q=7.294 m3/s I=1/3,600 B=6.0 m (1+200 to 2+200); TYPE I-2, Q=7.182 m3/s I=1/300 B=6.0 m (2+200 to 2+400)

SURVEY STATION NO.	1+200.00	1+250.00	1+300.00	1+350.00	1+400.00	1+450.00	1+500.00	1+550.00	1+600.00
PROPOSED CANAL BANK ELEVATION	35.85	35.83	35.82	35.80	35.79	35.78	35.76	35.75	35.74
PROPOSED WATER SURFACE ELEVATION	35.15	35.14	35.13	35.12	35.11	35.11	35.10	35.09	35.09
PROPOSED CANAL BASE ELEVATION	33.85	33.83	33.82	33.80	33.79	33.78	33.76	33.75	33.74
EXISTING CANAL BANK ELEVATION	37.47	37.54	37.16	37.28	37.38	37.38	36.77	36.10	36.16
EXISTING CANAL BASE ELEVATION	34.09	33.71	33.75	33.63	33.59	33.69	33.53	33.59	33.55
REDUCED CANAL DISTANCE	1201.50	1254.60	1304.70	1354.70	1405.10	1455.10	1503.50	1550.40	1598.30
CANAL DISTANCE	50.10	53.10	50.10	50.00	50.40	50.00	48.40	46.90	47.90

SURVEY STATION NO.	1+650.00	1+700.00	1+750.00	1+800.00	1+850.00	1+900.00	1+950.00	2+000.00
PROPOSED CANAL BANK ELEVATION	35.72	35.71	35.70	35.68	35.67	35.65	35.64	35.63
PROPOSED WATER SURFACE ELEVATION	35.08	35.07	35.07	35.06	35.05	35.05	35.04	35.03
PROPOSED CANAL BASE ELEVATION	33.72	33.71	33.70	33.68	33.67	33.65	33.64	33.63
EXISTING CANAL BANK ELEVATION	36.12	36.49	37.11	36.94	36.99	36.84	36.65	36.88
EXISTING CANAL BASE ELEVATION	33.66	33.80	33.48	33.41	33.48	33.40	33.53	33.89
REDUCED CANAL DISTANCE	1648.10	1698.20	1748.60	1800.60	1850.50	1900.20	1948.70	1998.30
CANAL DISTANCE	49.80	50.10	50.40	52.00	49.90	49.70	48.50	49.60

SURVEY STATION NO.	2+050.00	2+100.00	2+150.00	2+200.00	2+250.00	2+300.00	2+350.00	2+400.00
PROPOSED CANAL BANK ELEVATION	35.61	35.60	35.58	35.57 / 35.51	35.34	35.18	35.01	34.84
PROPOSED WATER SURFACE ELEVATION	35.03	35.02	35.02	35.01 / 34.05	33.88	33.72	33.55	33.40
PROPOSED CANAL BASE ELEVATION	33.61	33.60	33.58	33.57 / 33.51	33.34	33.18	33.01	32.84
EXISTING CANAL BANK ELEVATION	36.70	36.58	36.82	36.85	36.17	36.17	36.44	35.57
EXISTING CANAL BASE ELEVATION	33.62	33.53	33.64	33.57	33.50	33.56	34.11	33.22
REDUCED CANAL DISTANCE	2048.10	2098.10	2148.20	2200.50	2250.60	2300.50	2350.40	2400.30
CANAL DISTANCE	49.80	50.00	50.10	52.30	50.10	49.90	49.90	49.90

HORIZONTAL SCALE (m)
0 40 80 120 160 200

LEGEND

- PROPOSED WATER SURFACE
- PROPOSED CANAL BANK
- PROPOSED CANAL BASE
- EXISTING CANAL BANK
- EXISTING CANAL BASE

THE REPUBLIC OF THE PHILIPPINES

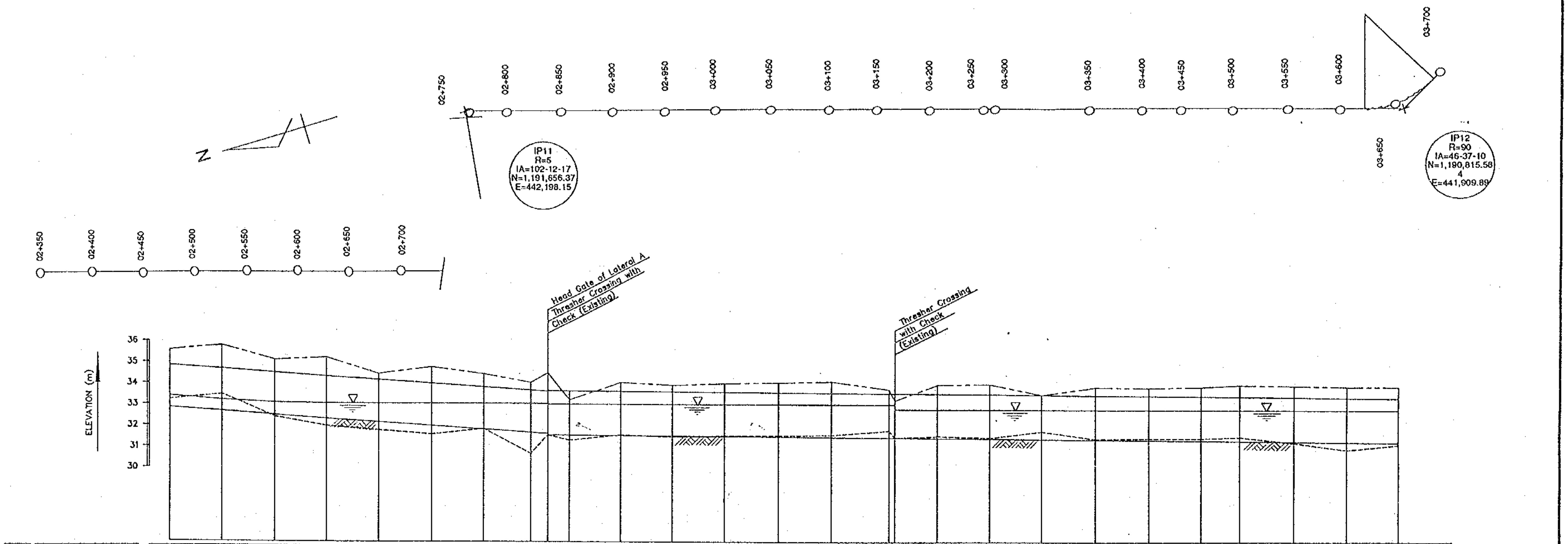
THE OPTIMUM WATER UTILIZATION
AND RURAL DEVELOPMENT PROJECT
IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING
IRRIGATION CANAL
PLAN AND PROFILE OF MAIN CANAL (2/9)

DATE		DRAWING NO.	2002

JAPAN INTERNATIONAL COOPERATION AGENCY

PLATE No. 12



CANAL TYPE (PROPOSED): TYPE I-2 — Q=7.182 m3/s, I=1/300, B=6.0 m; TYPE II-2 — Q=4.366 m3/s, I=1/2,600, B=4.0 m; TYPE II-2 — Q=4.218 m3/s, I=1/2,200, B=4.0 m

PROPOSED CANAL BANK ELEVATION	34.84	34.68	34.51	34.34	34.18	34.01	33.84	33.69	33.64 / 33.57
PROPOSED WATER SURFACE ELEVATION	33.40	33.21	33.10	33.07	33.06	33.06	33.06	33.06	33.06 / 33.03
PROPOSED CANAL BASE ELEVATION	32.84	32.68	32.51	32.34	32.18	32.01	31.84	31.69	31.64 / 31.57
EXISTING CANAL BANK ELEVATION	35.57	35.79	35.12	35.23	34.46	34.78	34.46	34.05	34.51
EXISTING CANAL BASE ELEVATION	33.22	33.47	32.42	31.99	31.79	31.60	31.86	30.68	31.58
REDUCED CANAL DISTANCE	2400.30	2450.30	2500.20	2550.20	2600.20	2650.10	2699.90	2744.80	2760.70
CANAL DISTANCE	49.90	50.00	49.90	50.00	50.00	49.90	49.80	44.90	15.90
SURVEY STATION NO.	2+400.00	2+450.00	2+500.00	2+550.00	2+600.00	2+650.00	2+700.00	2+750.00	2+773.00

PROPOSED CANAL BANK ELEVATION	33.56	33.64	33.62	33.60	33.58	33.56	33.54	33.54 / 33.54	33.52
PROPOSED WATER SURFACE ELEVATION	33.03	33.03	33.02	33.02	33.02	33.01	33.01	33.01 / 32.79	32.78
PROPOSED CANAL BASE ELEVATION	31.56	31.54	31.52	31.50	31.48	31.46	31.44	31.44 / 31.44	31.42
EXISTING CANAL BANK ELEVATION	33.24	34.06	33.93	34.01	34.05	34.10	33.21	33.73	33.95
EXISTING CANAL BASE ELEVATION	31.32	31.58	31.48	31.52	31.54	31.57	31.44	31.78	31.52
REDUCED CANAL DISTANCE	2781.00	2831.00	2881.00	2931.00	2981.10	3031.30	3091.80	3086.40	3131.50
CANAL DISTANCE	20.30	50.00	50.00	50.00	50.10	50.20	5.40	55.10	39.70
SURVEY STATION NO.	2+800.00	2+850.00	2+900.00	2+950.00	3+000.00	3+050.00	3+106.00	3+100.00	3+150.00

PROPOSED CANAL BANK ELEVATION	33.50	33.48	33.45	33.43	33.41	33.39	33.37	33.34	33.32
PROPOSED WATER SURFACE ELEVATION	32.78	32.78	32.77	32.77	32.76	32.76	32.76	32.76	32.75
PROPOSED CANAL BASE ELEVATION	31.40	31.38	31.35	31.33	31.31	31.29	31.27	31.24	31.22
EXISTING CANAL BANK ELEVATION	33.98	33.49	33.84	33.81	33.85	33.94	33.91	33.87	33.87
EXISTING CANAL BASE ELEVATION	31.44	31.75	31.39	31.42	31.42	31.48	31.21	30.88	31.12
REDUCED CANAL DISTANCE	3181.40	3231.40	3281.60	3331.80	3381.90	3418.90	3469.10	3519.10	3569.30
CANAL DISTANCE	49.90	50.00	50.20	50.20	50.10	37.00	50.20	50.00	50.20
SURVEY STATION NO.	3+200.00	3+250.00	3+300.00	3+350.00	3+400.00	3+450.00	3+500.00	3+550.00	3+600.00

HORIZONTAL SCALE (m)
0 40 80 120 160 200

LEGEND

- PROPOSED WATER SURFACE
- PROPOSED CANAL BANK
- PROPOSED CANAL BASE
- EXISTING CANAL BANK
- EXISTING CANAL BASE

THE REPUBLIC OF THE PHILIPPINES

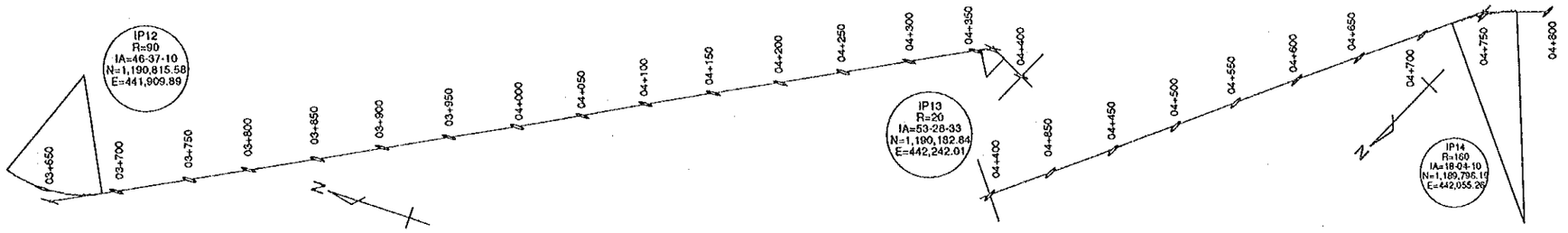
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

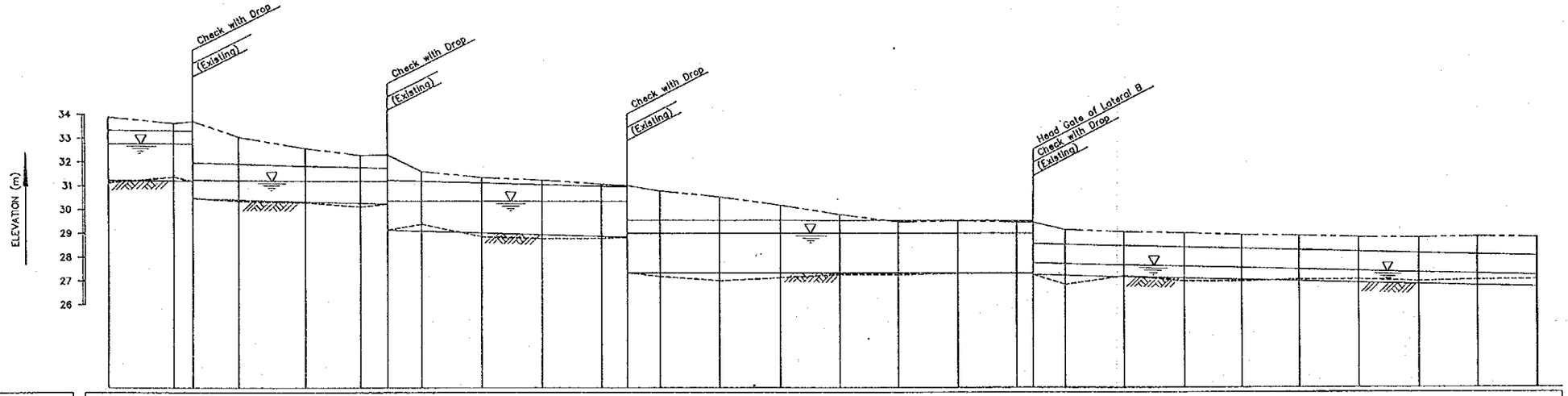
TITLE OF DRAWING
IRRIGATION CANAL
PLAN AND PROFILE OF MAIN CANAL (3/9)

DATE		DRAWING NO.	2003

JAPAN INTERNATIONAL COOPERATION AGENCY

PLATE No. 13





		TYPE II-2 Q=4.218 m3/s l=1/2,200 B=4.0 m			TYPE II-4 Q=4.218 m3/s l=1/700 B=4.0 m				TYPE II-3 Q=4.117 m3/s l=1/700 B=4.0 m							TYPE II-1 Q=4.117 m3/s l=1/11,500 B=4.0 m												TYPE III Q=1.869m3/s l=1/800 B=3.0 m													
PROPOSED	CANAL BANK ELEVATION	33.32	33.30	33.29 31.98	31.91	31.82	31.76	31.73 31.23	31.19	31.12	31.04	30.97	30.94 29.54	29.54	29.53	29.53	29.52	29.52	29.52	29.51	29.51 28.53	28.52	28.45	28.39	28.33	28.27	28.20	28.14	28.08	28.02													
	WATER SURFACE ELEVATION	32.75	32.75 31.24	31.24	31.22	31.20	31.19	31.18 30.35	30.35	30.35	30.34	30.34	30.34 28.99	28.99	28.99	28.99	28.99	28.99	28.98	28.98	28.98 27.34	27.70	27.64	27.58	27.52	27.46	27.39	27.33	27.28	27.22													
	CANAL BASE ELEVATION	31.22	31.20 30.48	30.48	30.41	30.32	30.26	30.23 29.13	29.09	29.02	28.94	28.87	28.84 27.34	27.34	27.33	27.33	27.32	27.32	27.32	27.31	27.31 27.05	27.22	27.15	27.09	27.03	26.97	26.90	26.84	26.78	26.72													
EXISTING	CANAL BANK ELEVATION	33.87	33.61	33.69	33.04	32.57	32.27	32.29	31.59	31.34	31.23	31.06	31.00	30.77	30.52	30.16	29.77	29.45	29.49	29.44	29.44	29.13	29.03	28.98	28.90	28.87	28.80	28.79	28.83	28.80													
	CANAL BASE ELEVATION	31.12	31.36	31.18	30.34	30.28	30.10	30.22	29.38	28.85	28.77	28.78	28.82	27.18	27.00	27.12	27.25	27.24	27.30	27.31	27.31	26.83	27.19	26.96	26.95	27.04	27.04	26.96	27.02	27.04													
REDUCED CANAL DISTANCE		3569.30	3622.10	3637.50	3675.70	3731.60	3775.80	3797.80	3825.80	3875.90	3926.00	3975.90	3998.00	4026.20	4076.30	4128.30	4176.40	4226.60	4276.80	4326.80	4341.00	4368.70	4418.90	4469.40	4519.00	4567.90	4618.00	4669.30	4719.20	4768.30													
CANAL DISTANCE		50.20	52.20	15.40	38.20	55.90	44.20	22.00	28.00	50.10	50.10	49.90	22.10	28.20	50.10	50.00	50.10	50.20	50.20	50.00	14.20	27.70	50.20	50.50	49.60	48.90	50.10	51.30	49.90	49.10													
SURVEY STATION NO.		3+800.00	3+850.00	3+864.00	3+700.00	3+750.00	3+950.00	4+022.00	3+850.00	3+900.00	3+950.00	4+000.00	4+022.00	4+050.00	4+100.00	4+150.00	4+200.00	4+250.00	4+300.00	4+350.00	4+367.00	4+400.00	4+450.00	4+500.00	4+550.00	4+600.00	4+650.00	4+700.00	4+750.00	4+800.00													

LEGEND

- PROPOSED WATER SURFACE
- PROPOSED CANAL BANK
- PROPOSED CANAL BASE
- EXISTING CANAL BANK
- EXISTING CANAL BASE

HORIZONTAL SCALE (m)
0 40 80 120 160 200

THE REPUBLIC OF THE PHILIPPINES

THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

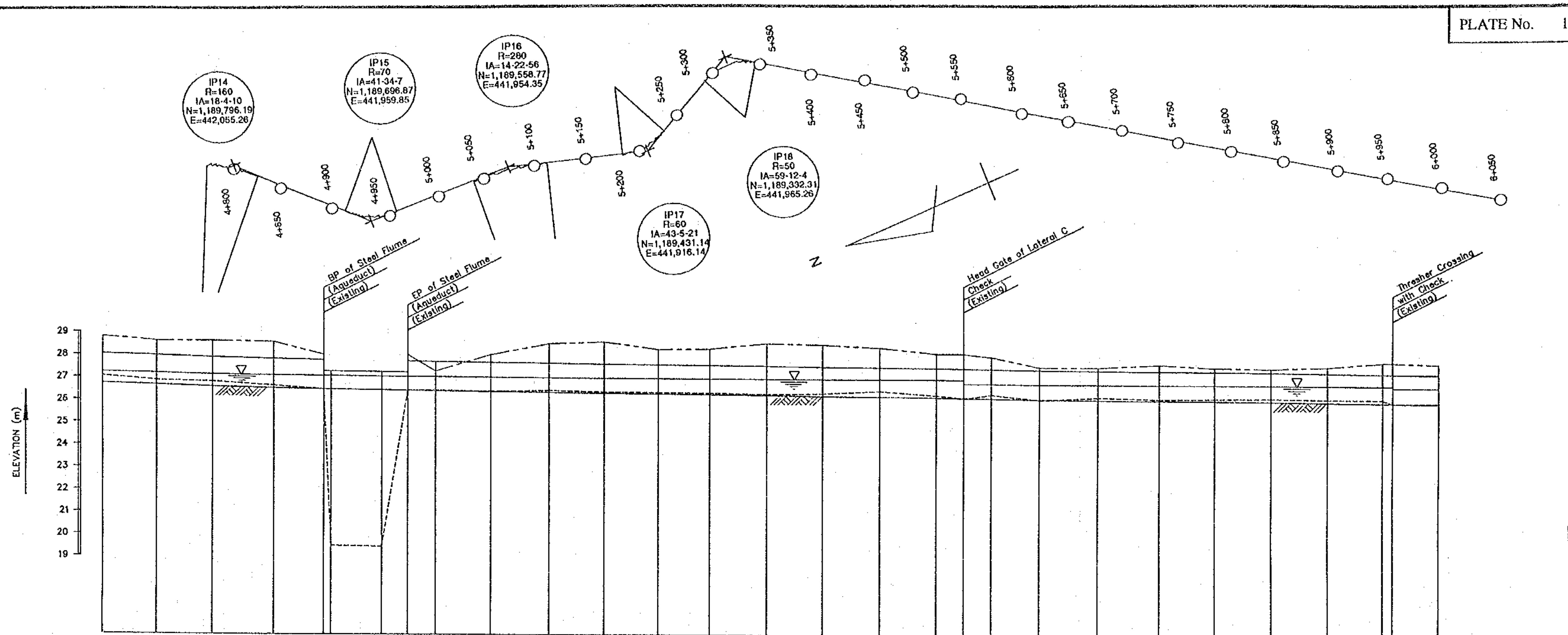
TITLE OF DRAWING

IRRIGATION CANAL

PLAN AND PROFILE OF MAIN CANAL (4/9)

DATE | DRAWING NO. 2004

JAPAN INTERNATIONAL COOPERATION AGENCY



CANAL TYPE (PROPOSED):
- 4+800.00 – 4+993.00: TYPE III, Q=1.869m3/s, I=1/800, B=3.0 m
- 4+993.00 – 5+073.00: TYPE III, Q=1.869m3/s, I=1/1,498, B=3.0 m
- 5+073.00 – 5+575.00: TYPE III, Q=1.869m3/s, I=1/1,700, B=3.0 m
- 5+575.00 – 5+950.00: TYPE III, Q=1.596m3/s, I=1/1,800, B=3.0 m
- 5+950.00 – 5+959.00: TYPE III, Q=1.505m3/s, I=1/2,600, B=3.0 m

SURVEY STATION NO.	CANAL DISTANCE	REDUCED CANAL DISTANCE	PROPOSED CANAL BANK ELEVATION	PROPOSED WATER SURFACE ELEVATION	PROPOSED CANAL BASE ELEVATION	EXISTING CANAL BANK ELEVATION	EXISTING CANAL BASE ELEVATION
4+800.00	49.10	4768.30	28.02	27.22	26.72	28.80	27.04
4+850.00	48.90	4817.20	27.96	27.18	26.66	28.61	26.85
4+900.00	49.60	4866.80	27.89	27.13	26.59	28.62	26.81
4+950.00	55.10	4921.90	27.83	27.10	26.53	28.58	26.64
4+993.00	44.10	4966.00	27.77 / 27.27	27.07 / 27.07	26.47 / 26.47	28.01	26.47
5+000.00	6.50	4972.50	27.27	27.07	26.47	27.27	19.47
5+050.00	45.00	5017.50	27.24	27.04	26.44	27.24	19.43
5+073.00	23.40	5040.90	27.23 / 27.72	27.03 / 27.03	26.42 / 26.42	27.23	26.43
5+100.00	25.10	5066.00	27.70	27.03	26.40	27.28	26.43
5+150.00	49.50	5115.50	27.67	27.01	26.37	28.02	26.38
5+200.00	51.10	5166.60	27.64	26.99	26.34	28.51	26.43
5+250.00	50.10	5216.70	27.60	26.97	26.30	28.59	26.36
5+300.00	48.60	5265.30	27.57	26.96	26.27	28.25	26.34
5+350.00	44.80	5310.10	27.54	26.94	26.24	28.27	26.31
5+400.00	50.00	5360.10	27.51	26.93	26.21	28.51	26.26
5+450.00	49.90	5410.00	27.47	26.92	26.17	28.46	26.29
5+500.00	49.90	5459.90	27.44	26.91	26.14	28.32	26.39
5+550.00	49.90	5509.80	27.41	26.90	26.11	28.05	26.20
5+575.00	25.00	5534.80	27.39 / 27.38	26.89 / 26.72	26.09 / 26.08	28.05	26.08
5+600.00	24.90	5559.70	27.37	26.72	26.07	27.91	26.24
5+650.00	43.90	5603.60	27.34	26.70	26.04	27.47	26.02
5+700.00	51.40	5655.00	27.31	26.69	26.01	27.46	26.13
5+750.00	55.10	5710.10	27.28	26.67	25.98	27.58	26.05
5+800.00	50.20	5760.30	27.26	26.66	25.96	27.44	26.06
5+850.00	49.90	5810.20	27.23	26.65	25.93	27.39	26.07
5+900.00	50.10	5860.30	27.20	26.64	25.90	27.48	26.03
5+950.00	49.60	5909.90	27.17 / 27.17	26.63 / 26.63	25.87 / 25.87	27.68	26.02
5+959.00	9.10	5919.00	27.16	26.55	25.86	27.68	25.85
6+000.00	41.20	5960.20	27.14	26.54	25.84	27.80	25.87

LEGEND

- PROPOSED WATER SURFACE
- PROPOSED CANAL BANK
- PROPOSED CANAL BASE
- EXISTING CANAL BANK
- EXISTING CANAL BASE

HORIZONTAL SCALE (m)

0 40 80 120 160 200

THE REPUBLIC OF THE PHILIPPINES

THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

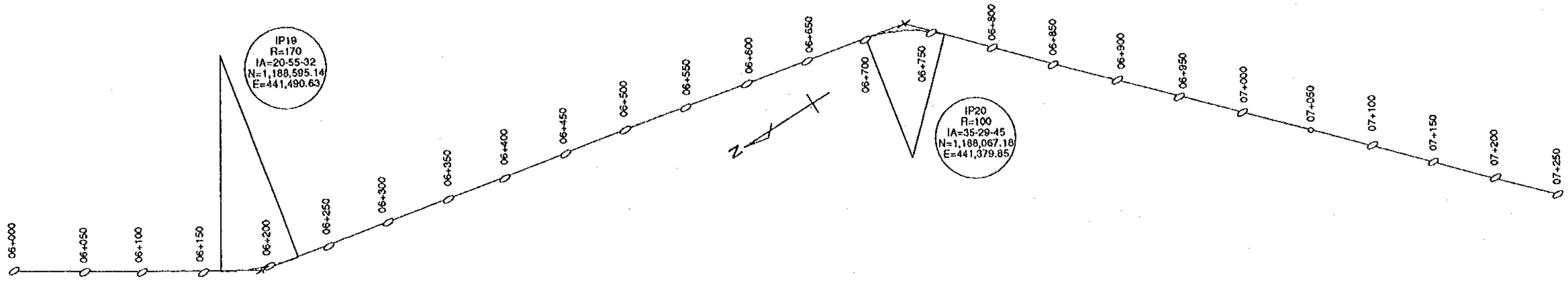
TITLE OF DRAWING

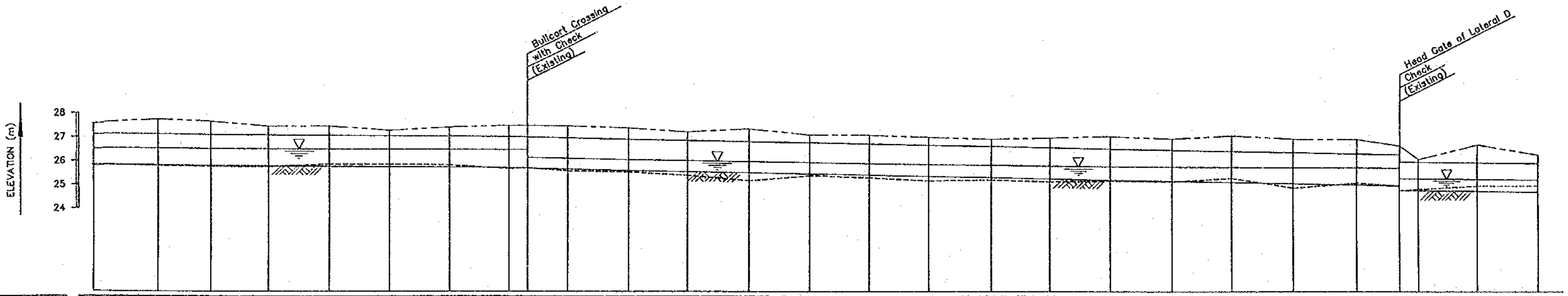
IRRIGATION CANAL

PLAN AND PROFILE OF MAIN CANAL (5/9)

DATE		DRAWING NO.	2005

JAPAN INTERNATIONAL COOPERATION AGENCY





CANAL TYPE: TYPE III, Q=1.505m3/s I=1/2,600 B=3.0 m (6+000.00 – 6+365.00); TYPE III, Q=1.444m3/s I=1/1,000 B=3.0 m (6+365.00 – 7+083.00); TYPE IV-2, Q=0.814m3/s I=1/1,900 B=2.0 m (7+083.00 – 7+200.00)

SURVEY STATION NO.	6+000.00	6+050.00	6+100.00	6+150.00	6+200.00	6+250.00	6+300.00	6+350.00	6+365.00
PROPOSED CANAL BANK ELEVATION	27.14	27.12	27.10	27.09	27.07	27.05	27.03	27.01	27.00 / 26.99
PROPOSED WATER SURFACE ELEVATION	26.54	26.53	26.52	26.51	26.50	26.49	26.48	26.47	26.47 / 26.14
PROPOSED CANAL BASE ELEVATION	25.84	25.82	25.80	25.79	25.77	25.75	25.73	25.71	25.70 / 25.69
EXISTING CANAL BANK ELEVATION	27.60	27.73	27.66	27.46	27.46	27.28	27.41	27.47	27.47
EXISTING CANAL BASE ELEVATION	25.87	25.79	25.77	25.76	25.87	25.86	25.83	25.67	25.70
REDUCED CANAL DISTANCE	5960.20	6016.10	6060.50	6109.70	6160.50	6211.00	6261.30	6310.80	6326.30
CANAL DISTANCE	41.20	55.90	44.40	49.20	50.80	50.50	50.30	49.50	15.50

SURVEY STATION NO.	6+400.00	6+450.00	6+500.00	6+550.00	6+600.00	6+650.00	6+700.00	6+750.00	6+800.00
PROPOSED CANAL BANK ELEVATION	26.96	26.90	26.85	26.80	26.75	26.70	26.65	26.60	26.55
PROPOSED WATER SURFACE ELEVATION	26.10	26.05	26.01	25.96	25.92	25.88	25.84	25.81	25.78
PROPOSED CANAL BASE ELEVATION	25.66	25.60	25.55	25.50	25.45	25.40	25.35	25.30	25.25
EXISTING CANAL BANK ELEVATION	27.46	27.38	27.21	27.33	27.08	27.07	26.99	26.90	26.96
EXISTING CANAL BASE ELEVATION	25.57	25.53	25.39	25.16	25.37	25.28	25.16	25.19	25.12
REDUCED CANAL DISTANCE	6359.20	6411.10	6461.10	6511.20	6561.20	6611.20	6661.30	6713.30	6763.10
CANAL DISTANCE	32.90	51.90	50.00	50.10	50.00	50.00	50.10	52.00	49.80

SURVEY STATION NO.	6+850.00	6+900.00	6+950.00	7+000.00	7+050.00	7+083.00	7+100.00	7+150.00	7+200.00
PROPOSED CANAL BANK ELEVATION	26.50	26.45	26.40	26.35	26.30	26.26 / 25.96	25.95	25.93	25.90
PROPOSED WATER SURFACE ELEVATION	25.76	25.74	25.73	25.71	25.71	25.70 / 25.26	25.25	25.23	25.21
PROPOSED CANAL BASE ELEVATION	25.20	25.15	25.10	25.05	25.00	24.98 / 24.76	24.75	24.73	24.70
EXISTING CANAL BANK ELEVATION	27.03	26.92	27.05	26.91	26.90	26.63	26.07	26.68	26.26
EXISTING CANAL BASE ELEVATION	25.16	25.13	25.27	24.86	25.08	24.94	24.81	24.95	24.95
REDUCED CANAL DISTANCE	6813.10	6863.10	6912.90	6964.90	7017.30	7053.30	7069.00	7118.90	7168.90
CANAL DISTANCE	50.00	50.00	49.80	52.00	52.40	36.60	15.70	49.90	50.00

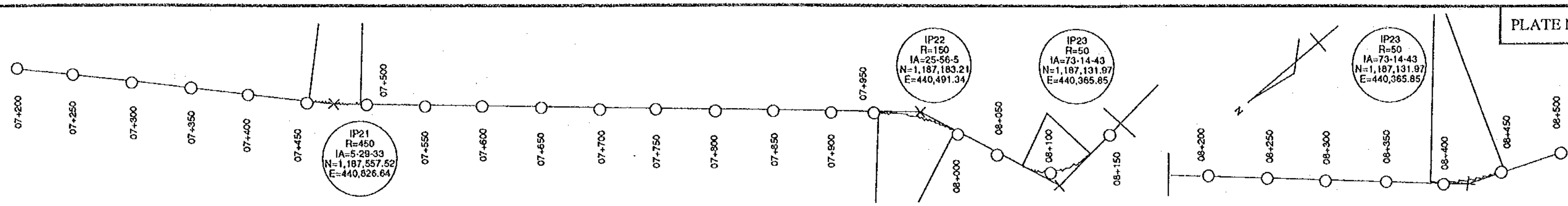
LEGEND

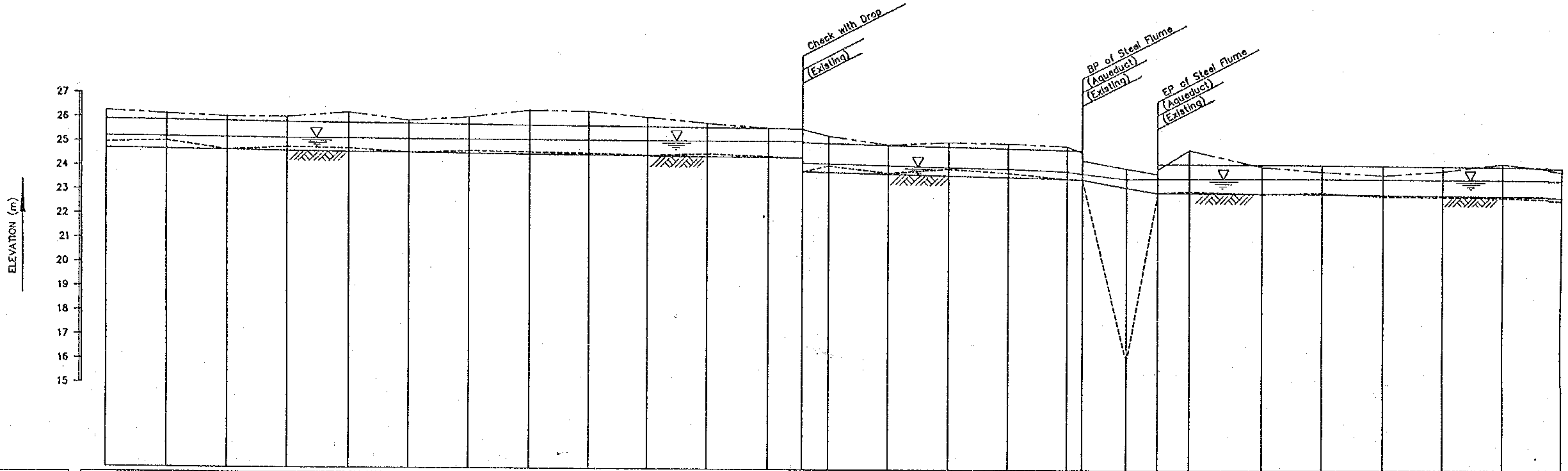
- PROPOSED WATER SURFACE
- PROPOSED CANAL BANK
- PROPOSED CANAL BASE
- EXISTING CANAL BANK
- EXISTING CANAL BASE

HORIZONTAL SCALE (m): 0 40 80 120 160 200

THE REPUBLIC OF THE PHILIPPINES			
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM			
TITLE OF DRAWING: IRRIGATION CANAL — PLAN AND PROFILE OF MAIN CANAL (6/9)			
DATE		DRAWING NO.	2006
JAPAN INTERNATIONAL COOPERATION AGENCY			

PLATE No. 16





CANAL TYPE:
- TYPE IV-2 — Q=0.814m3/s I=1/1,900 B=2.0 m (7+200 to 7+778)
- TYPE IV-2 — Q=0.756m3/s I=1/800 B=2.0 m (7+778 to 8+013)
- TYPE IV-2 — Q=0.756m3/s I=1/139 B=2.0 m (8+013 to 8+075)
- TYPE IV-2 — Q=0.756m3/s I=1/2,800 B=2.0 m (8+075 to 8+400)

	7+200.00	7+250.00	7+300.00	7+350.00	7+400.00	7+450.00	7+500.00	7+550.00	7+600.00	7+650.00	7+700.00	7+750.00	7+778.00	7+800.00
PROPOSED CANAL BANK ELEVATION	25.90	25.87	25.85	25.82	25.79	25.77	25.74	25.71	25.69	25.66	25.63	25.60	25.59 / 25.02	24.99
PROPOSED WATER SURFACE ELEVATION	25.21	25.19	25.18	25.16	25.15	25.13	25.12	25.11	25.10	25.09	25.08	25.07	25.07 / 24.18	24.15
PROPOSED CANAL BASE ELEVATION	24.70	24.67	24.65	24.62	24.59	24.57	24.54	24.51	24.49	24.46	24.43	24.40	24.39 / 23.82	23.79
EXISTING CANAL BANK ELEVATION	26.26	26.13	26.03	26.03	26.22	25.90	26.04	26.32	26.28	26.05	25.81	25.61	25.57	25.30
EXISTING CANAL BASE ELEVATION	24.95	25.01	24.66	24.78	24.73	24.57	24.64	24.60	24.56	24.48	24.55	24.44	24.38	24.06
REDUCED CANAL DISTANCE	7168.90	7218.90	7268.90	7318.80	7368.80	7418.70	7469.20	7519.00	7569.00	7619.00	7669.10	7719.10	7747.20	7769.20
CANAL DISTANCE	50.00	50.00	50.00	49.90	50.00	49.90	50.50	49.80	50.00	50.00	50.10	50.00	28.10	22.00

	7+850.00	7+900.00	7+950.00	8+000.00	8+013.00	8+050.00	8+075.00	8+100.00	8+150.00	8+200.00	8+250.00	8+300.00	8+350.00	8+400.00
PROPOSED CANAL BANK ELEVATION	24.93	24.87	24.81	24.75	24.73 / 24.33	24.01	23.79 / 24.19	24.18	24.15	24.13	24.11	24.09	24.07	24.05
PROPOSED WATER SURFACE ELEVATION	24.09	24.02	23.96	23.86	23.77 / 23.77	23.57	23.58 / 23.58	23.58	23.57	23.56	23.55	23.54	23.54	23.53
PROPOSED CANAL BASE ELEVATION	23.73	23.67	23.61	23.55	23.53 / 23.53	23.21	22.99 / 22.99	22.98	22.95	22.93	22.91	22.89	22.87	22.85
EXISTING CANAL BANK ELEVATION	24.95	25.06	25.01	24.91	24.66	24.01	23.79	24.77	24.06	23.86	23.72	23.90	24.21	23.92
EXISTING CANAL BASE ELEVATION	23.78	23.95	23.79	23.55	23.53	15.99	22.99	23.06	22.93	22.98	22.84	22.83	22.80	22.72
REDUCED CANAL DISTANCE	7819.10	7869.10	7918.80	7968.50	7981.40	8018.20	8043.70	8069.60	8130.40	8180.20	8230.50	8280.20	8330.10	8380.20
CANAL DISTANCE	49.90	50.00	49.70	49.70	12.90	36.80	25.50	25.90	60.80	49.80	50.30	49.70	49.90	50.10

(Bottom row: SURVEY STATION NO.)

HORIZONTAL SCALE (m)
0 40 80 120 160 200

LEGEND

- PROPOSED WATER SURFACE
- PROPOSED CANAL BANK
- PROPOSED CANAL BASE
- EXISTING CANAL BANK
- EXISTING CANAL BASE

THE REPUBLIC OF THE PHILIPPINES

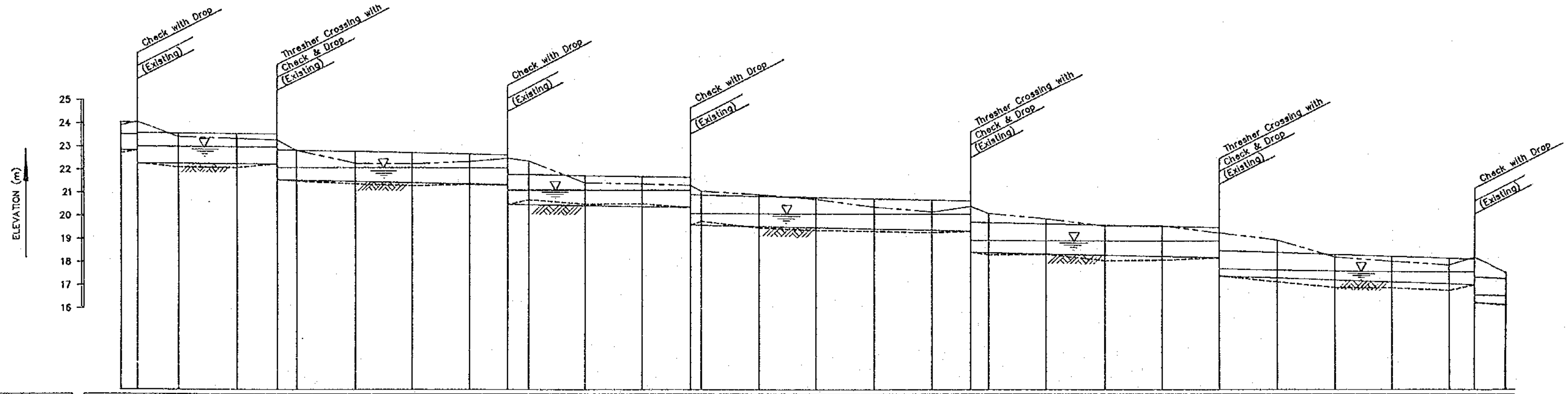
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING
IRRIGATION CANAL
PLAN AND PROFILE OF MAIN CANAL (7/9)

DATE		DRAWING NO.	2007

JAPAN INTERNATIONAL COOPERATION AGENCY

PLATE No. 17



CANAL TYPE (PROPOSED):
- TYPE IV-2: Q=0.756m3/s I=1/2,800 B=2.0 m
- TYPE IV-1: Q=0.688m3/s I=1/4,000 B=2.0 m
- TYPE IV-1: Q=0.688m3/s I=1/900 B=2.0 m
- TYPE IV-1: Q=0.688m3/s I=1/1,200 B=2.0 m
- TYPE IV-1: Q=0.688m3/s I=1/900 B=2.0 m
- TYPE IV-1: Q=0.628m3/s I=1/900 B=2.0 m
- TYPE IV-3: Q=0.628m3/s I=1/600 B=2.0 m

SURVEY STATION NO.	PROPOSED CANAL BANK ELEVATION	PROPOSED WATER SURFACE ELEVATION	PROPOSED CANAL BASE ELEVATION	EXISTING CANAL BANK ELEVATION	EXISTING CANAL BASE ELEVATION	REDUCED CANAL DISTANCE	CANAL DISTANCE
8+400.00	24.05	23.53	22.85	23.92	22.72	8380.20	50.10
8+414.00	24.04 / 23.58	23.53 / 23.00	22.84 / 22.28	24.07	22.84	8394.20	14.00
8+450.00	23.57	23.00	22.27	23.42	22.11	8429.80	35.60
8+500.00	23.56	22.99	22.26	23.35	22.09	8481.30	51.50
8+534.00	23.55 / 22.87	22.99 / 22.10	22.25 / 21.57	23.29	22.25	8516.30	35.00
8+550.00	22.85	22.10	21.55	22.84	21.51	8532.70	16.40
8+600.00	22.80	22.09	21.50	22.28	21.38	8582.50	49.80
8+650.00	22.74	22.09	21.44	22.26	21.31	8632.60	50.10
8+700.00	22.69	22.08	21.39	22.35	21.36	8682.50	49.90
8+732.00	22.65 / 21.80	22.08 / 21.12	21.35 / 20.50	22.51	21.34	8714.40	31.90
8+750.00	21.79	21.12	20.49	22.38	20.70	8732.40	18.00
8+800.00	21.74	21.12	20.44	21.43	20.51	8782.40	50.00
8+850.00	21.70	21.11	20.40	21.38	20.52	8832.40	50.00
8+891.00	21.67 / 20.91	21.11 / 20.10	20.37 / 19.61	21.32	20.37	8873.40	41.00
8+900.00	20.90	20.10	19.60	21.07	19.77	8882.40	9.00
8+950.00	20.84	20.09	19.54	20.92	19.47	8932.30	49.90
9+000.00	20.79	20.08	19.49	20.71	19.37	8982.20	49.90
9+050.00	20.73	20.08	19.43	20.38	19.33	9032.20	50.00
9+100.00	20.68	20.07	19.38	20.17	19.27	9082.10	49.90
9+134.00	20.64 / 19.73	20.07 / 18.94	19.34 / 18.43	20.41	19.33	9116.30	34.20
9+150.00	19.71	18.94	18.41	20.10	18.32	9132.40	16.10
9+200.00	19.66	18.93	18.36	19.88	18.34	9182.40	50.00
9+250.00	19.60	18.93	18.30	19.57	18.07	9232.40	50.00
9+300.00	19.55	18.92	18.25	19.57	18.09	9282.30	49.90
9+350.00	19.49 / 18.50	18.92 / 17.71	18.19 / 17.40	19.26	18.18	9332.40	50.10
9+400.00	18.42	17.65	17.32	18.95	17.14	9382.40	50.00
9+450.00	18.33	17.61	17.23	18.22	16.90	9432.40	50.00
9+500.00	18.25	17.59	17.15	18.04	16.89	9482.50	50.10
9+550.00	18.17	17.58	17.07	17.88	16.78	9532.50	50.00
9+572.00	18.13 / 17.35	17.58 / 16.58	17.03 / 16.25	18.21	17.02	9554.50	22.00
9+600.00	17.31	16.57	16.21	17.58	16.14	9582.50	28.00

LEGEND

- PROPOSED WATER SURFACE
- PROPOSED CANAL BANK
- PROPOSED CANAL BASE
- EXISTING CANAL BANK
- EXISTING CANAL BASE

HORIZONTAL SCALE (m): 0 40 80 120 160 200

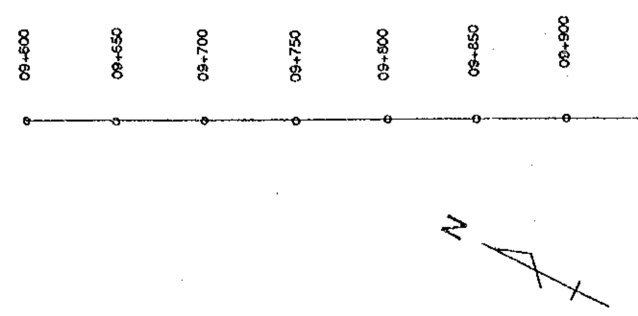
THE REPUBLIC OF THE PHILIPPINES

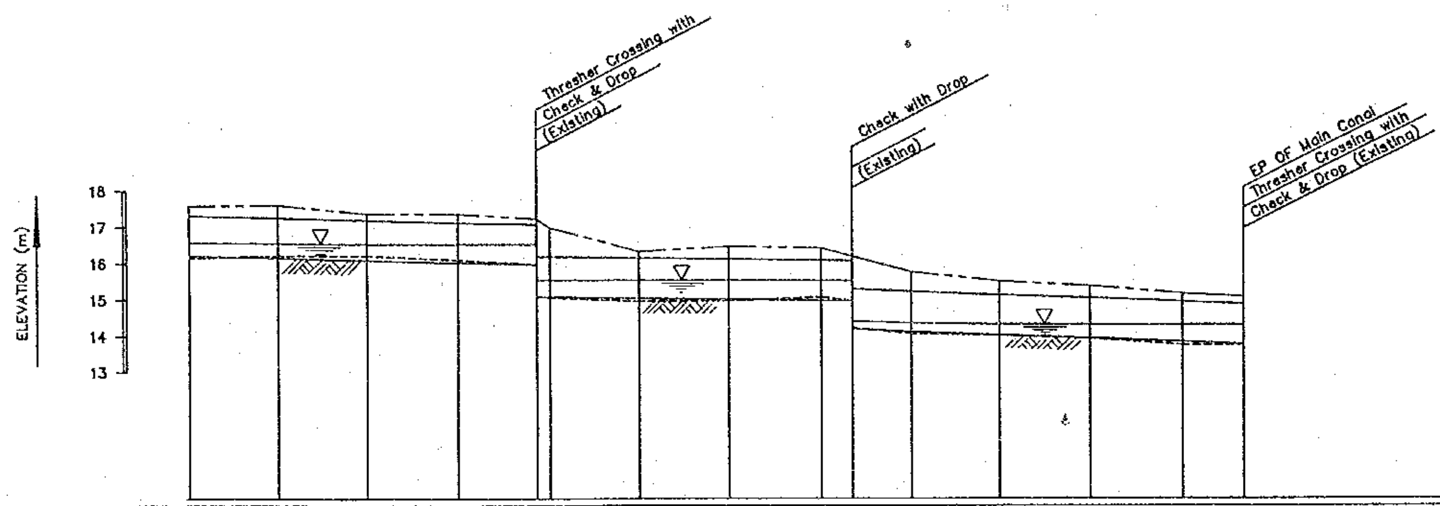
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING
IRRIGATION CANAL
PLAN AND PROFILE OF MAIN CANAL (8/9)

DATE		DRAWING NO.	2008

JAPAN INTERNATIONAL COOPERATION AGENCY





	CANAL TYPE	TYPE IV-3 Q=0.504m3/s I=1/800 B=2.0 m					TYPE IV-3 Q=0.442m3/s I=1/1,500 B=2.0 m				TYPE IV-3 Q=0.369m3/s I=1/500 B=2.0 m					
PROPOSED	CANAL BANK ELEVATION	17.31	17.25	17.19	17.12	17.07 / 16.18	16.18	16.14	16.11	16.07	16.06 / 15.29	15.22	15.12	15.03	14.93	14.86
PROPOSED	WATER SURFACE ELEVATION	16.57	16.55	16.53	16.53	16.52 / 15.54	15.54	15.53	15.53	15.52	15.52 / 14.40	14.35	14.31	14.30	14.29	14.29
PROPOSED	CANAL BASE ELEVATION	16.21	16.15	16.09	16.02	15.97 / 15.08	15.08	15.04	15.01	14.97	14.96 / 14.19	14.12	14.02	13.93	13.83	13.76
EXISTING	CANAL BANK ELEVATION	17.58	17.60	17.37	17.36	17.23	16.98	16.32	16.45	16.41	16.18	15.76	15.50	15.36	15.15	15.06
EXISTING	CANAL BASE ELEVATION	16.14	16.22	16.21	16.10	15.96	15.06	14.95	14.96	15.07	14.96	14.05	14.01	13.91	13.73	13.73
REDUCED CANAL DISTANCE		9582.50	9632.40	9682.50	9732.60	9775.40	9782.40	9832.30	9882.40	9932.30	9949.20	9982.00	10031.90	10081.70	10131.70	10164.70
CANAL DISTANCE		28.00	49.90	50.10	50.10	42.80	7.00	49.90	50.10	49.90	16.90	32.80	49.90	49.80	50.00	33.00
SURVEY STATION NO.		9+600.00	9+650.00	9+700.00	9+750.00	9+793.00	9+800.00	9+850.00	9+900.00	9+950.00	9+967.00	10+000.00	10+050.00	10+100.00	10+150.00	10+183.00

HORIZONTAL SCALE (m)
0 40 80 120 160 200

LEGEND

- PROPOSED WATER SURFACE
- PROPOSED CANAL BANK
- PROPOSED CANAL BASE
- EXISTING CANAL BANK
- EXISTING CANAL BASE

THE REPUBLIC OF THE PHILIPPINES

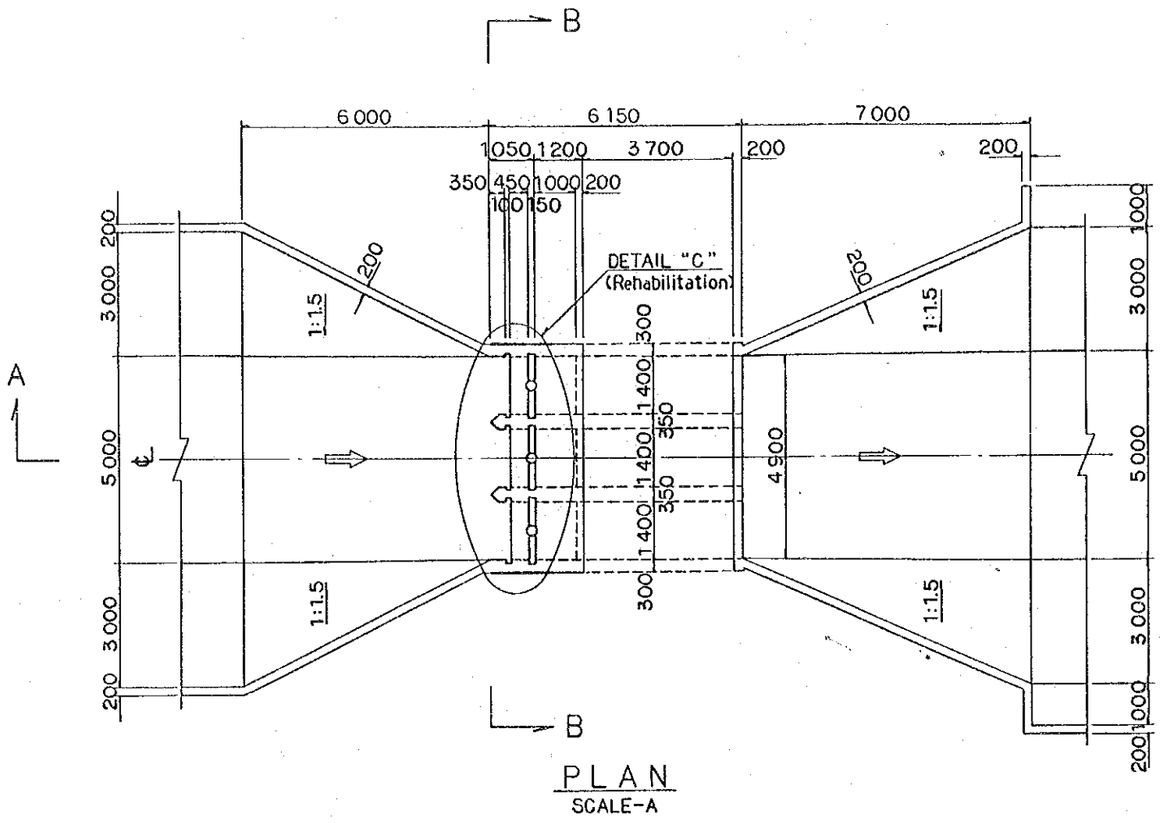
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING
IRRIGATION CANAL
PLAN AND PROFILE OF MAIN CANAL (9/9)

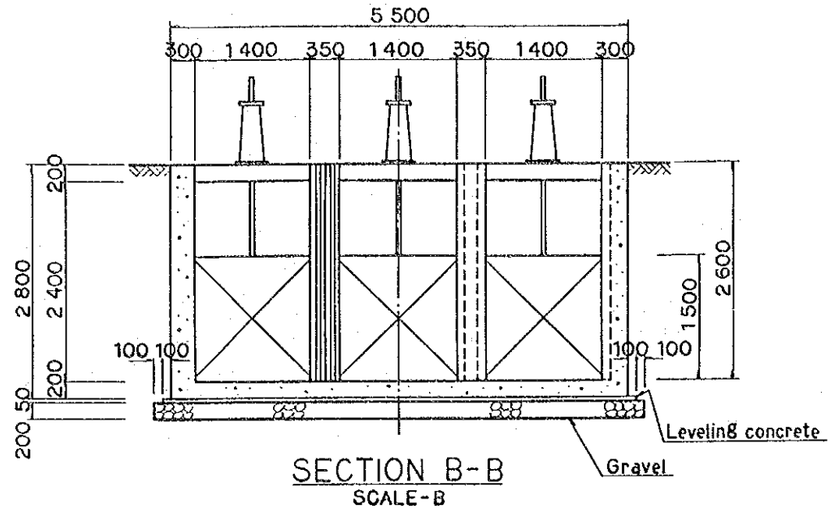
DATE		DRAWING NO.	2009

JAPAN INTERNATIONAL COOPERATION AGENCY

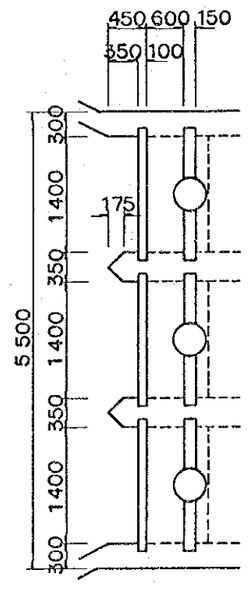
PLATE No. 19



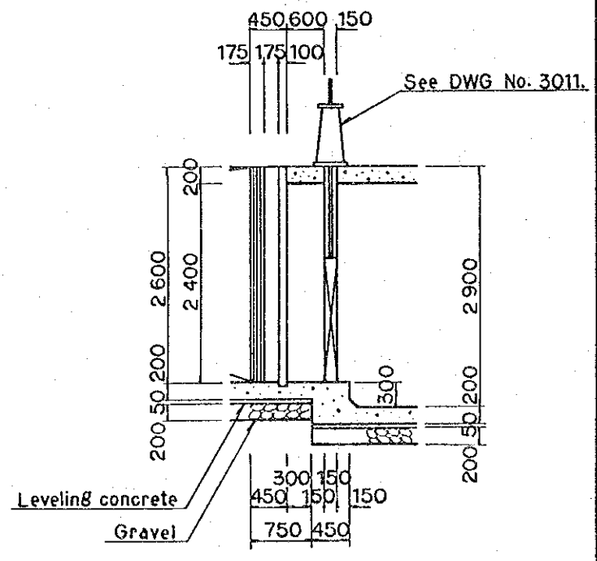
PLAN
SCALE-A



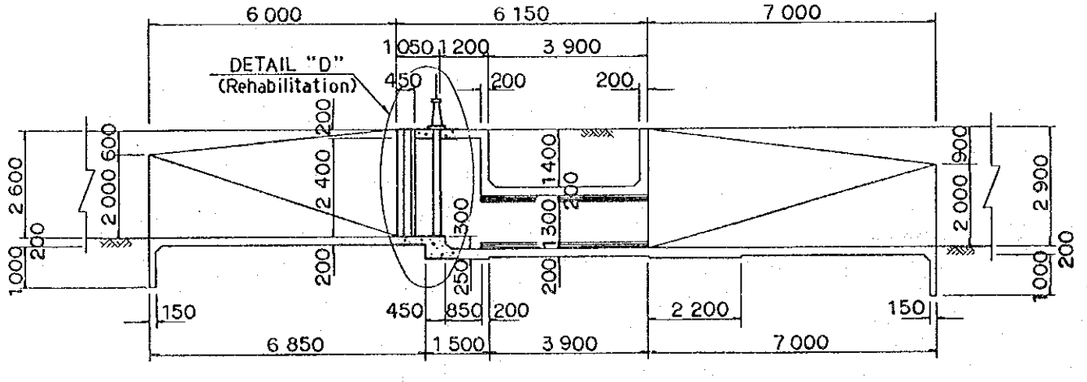
SECTION B-B
SCALE-B



DETAIL "C"
SCALE-B



DETAIL "D"
SCALE-B



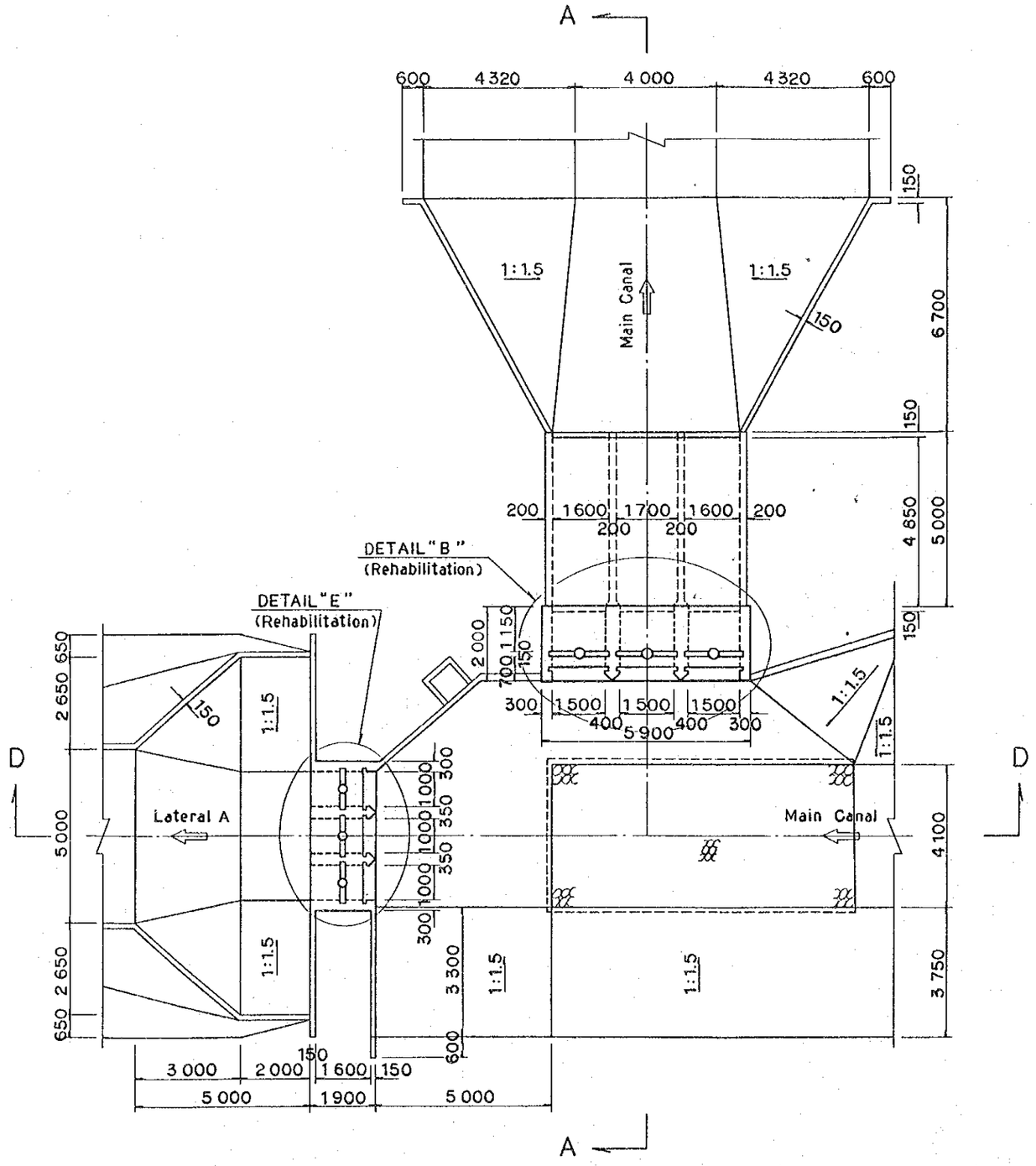
SECTION A-A
SCALE-A

SCALE-A 0 5m

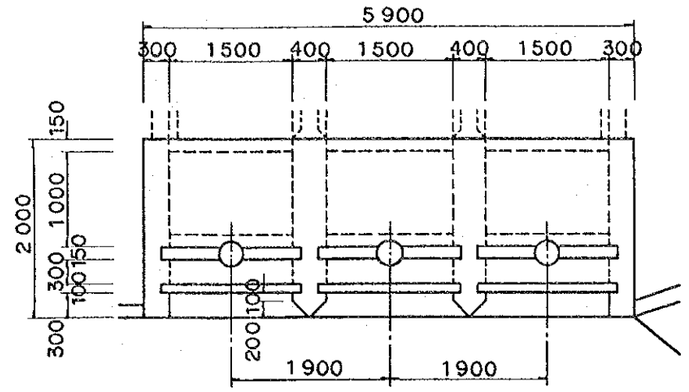
SCALE-B 0 3m

Note : The rehabilitation portion is shown in Detail "C" and "D".

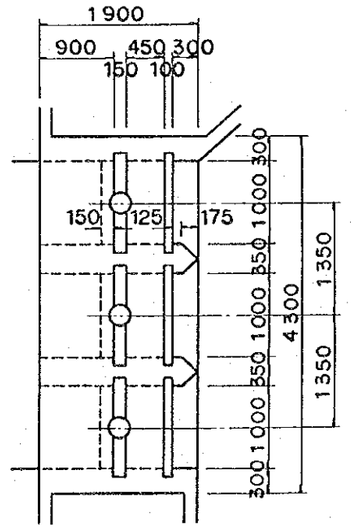
THE REPUBLIC OF THE PHILIPPINES			
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM			
TITLE OF DRAWING CANAL STRUCTURES REPLACEMENT OF CHECK GATE (MAIN CANAL, STA 2+200)			
DATE		DRAWING NO.	3001
JAPAN INTERNATIONAL COOPERATION AGENCY			



PLAN
SCALE-A



DETAIL "B"
SCALE-B



DETAIL "E"
SCALE-B

SCALE-A 0 5m

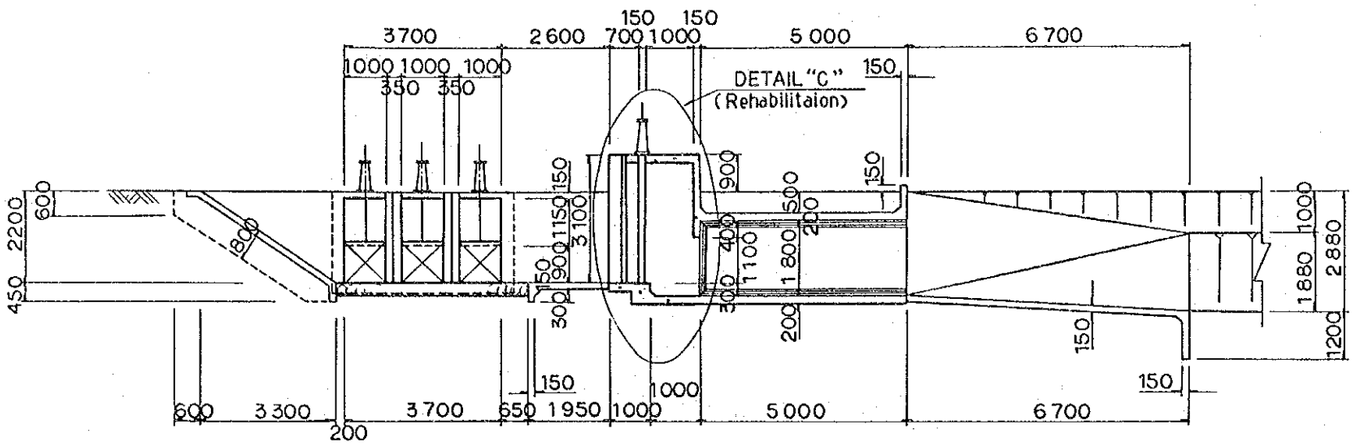
SCALE-B 0 3m

Note : Rehabilitation of Thresher Crossing with Check is shown in DETAIL "B" and "C".

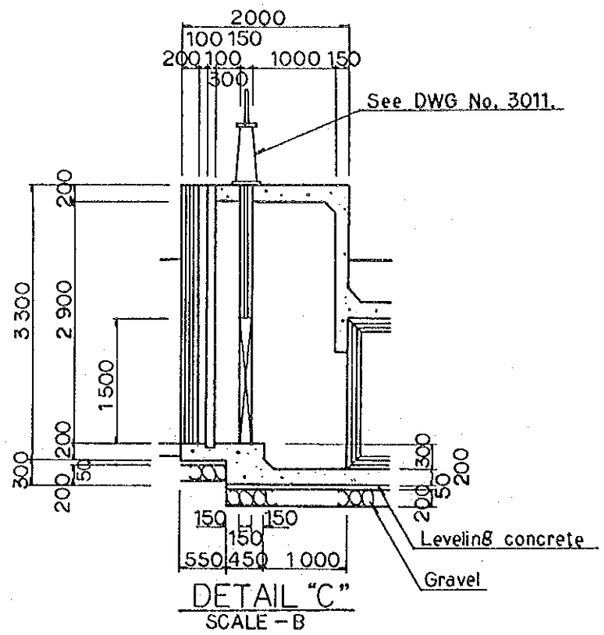
Rehabilitation of Head Gate of Lateral A is shown in DETAIL "E" and "F".

THE REPUBLIC OF THE PHILIPPINES			
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM			
TITLE OF DRAWING CANAL STRUCTURES REPLACEMENT OF COMBINED CHECK AND HEAD GATE (MAIN CANAL, STA 2+773) (1/2)			
DATE		DRAWING NO.	3002
JAPAN INTERNATIONAL COOPERATION AGENCY			

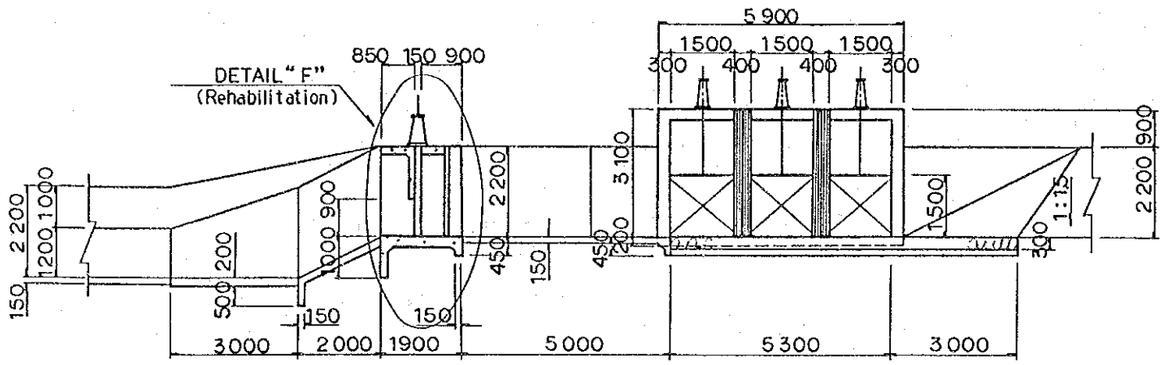
PLATE No. 21



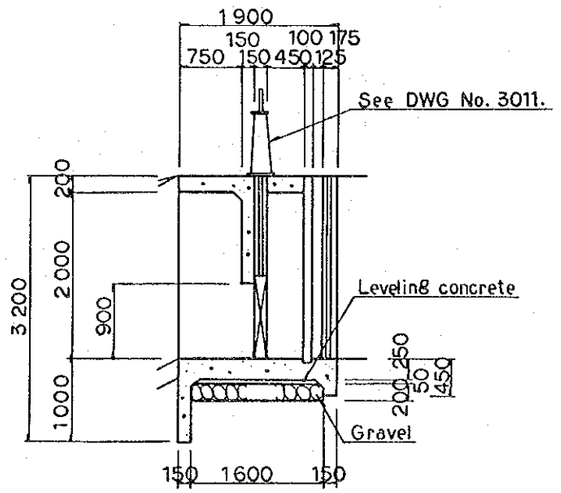
SECTION A-A
SCALE – A



DETAIL "C"
SCALE – B



SECTION D-D
SCALE – A



DETAIL "F"
SCALE – B

SCALE – A 0 5m

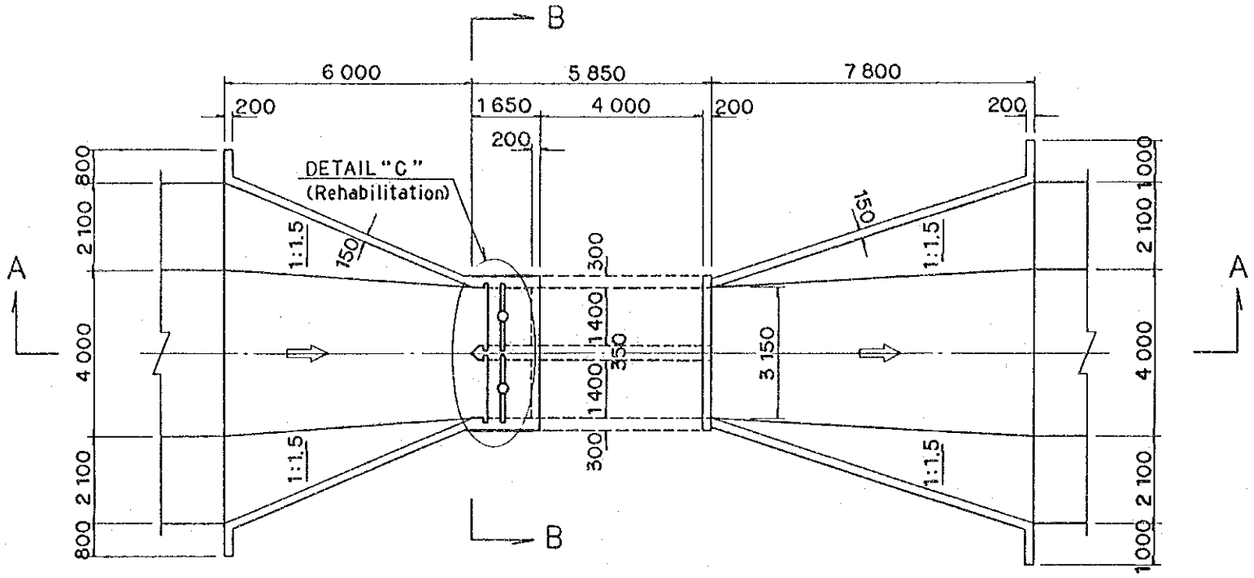
SCALE – B 0 3m

Note : Rehabilitation of Thresher Crossing with Check is shown in DETAIL "B" and "C".

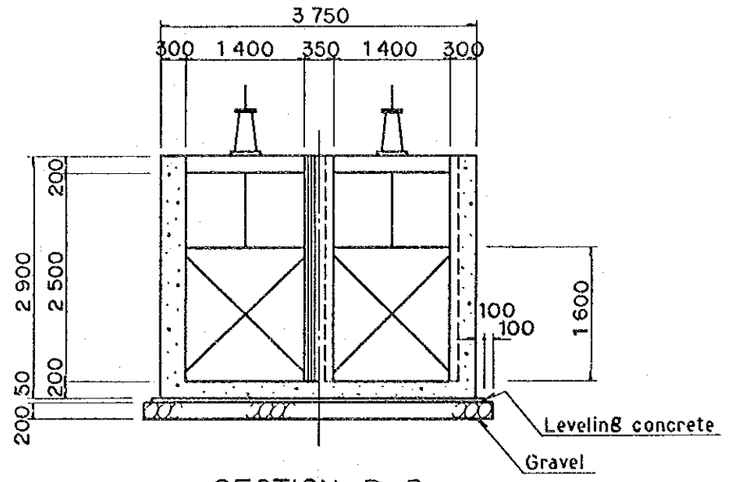
Rehabilitation of Head Gate of Lateral A is shown in DETAIL "E" and "F".

THE REPUBLIC OF THE PHILIPPINES	
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM	
TITLE OF DRAWING CANAL STRUCTURES REPLACEMENT OF COMBINED CHECK AND HEAD GATE (MAIN CANAL, STA 2+773) (2/2)	
DATE	DRAWING NO. 3003
JAPAN INTERNATIONAL COOPERATION AGENCY	

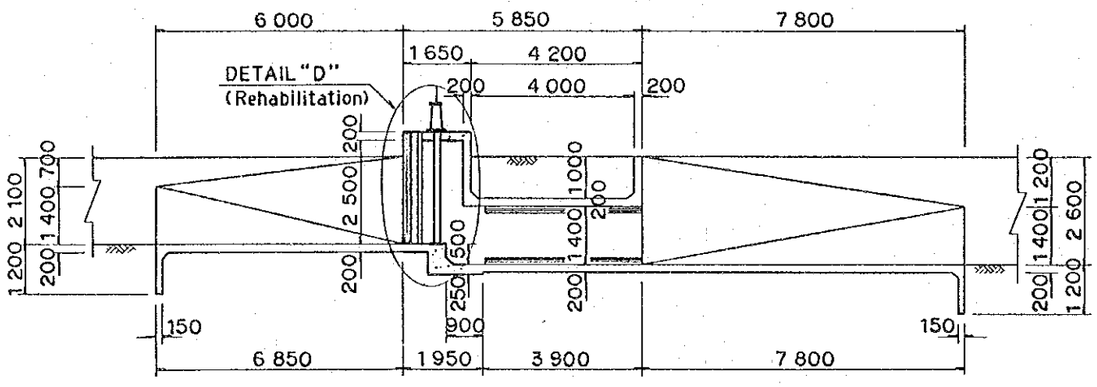
PLATE No. 22



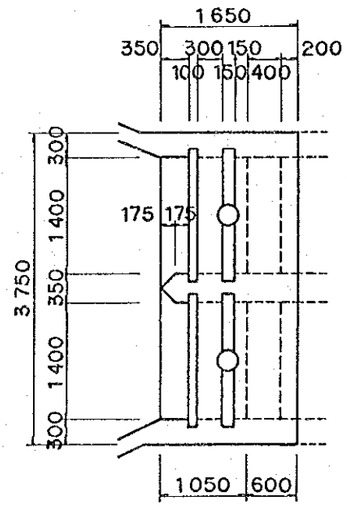
PLAN
SCALE-A



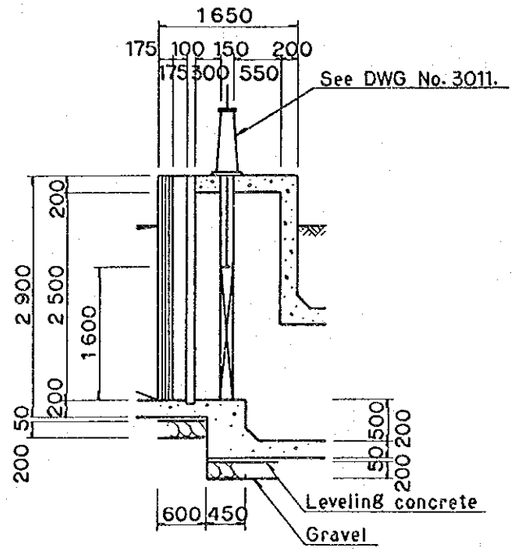
SECTION B-B
SCALE-B



SECTION A-A
SCALE-A



DETAIL "C"
SCALE-B



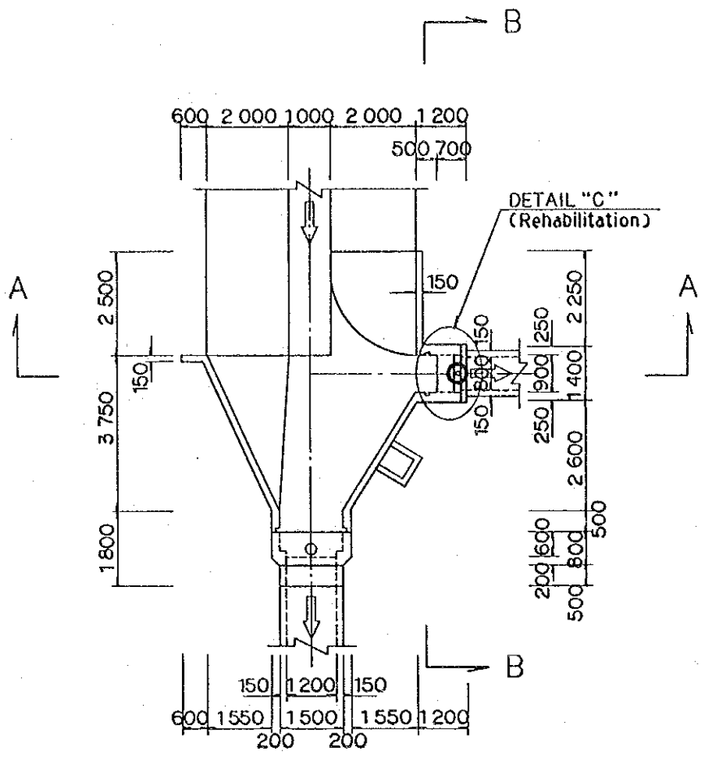
DETAIL "D"
SCALE-B

SCALE-A 0 5m

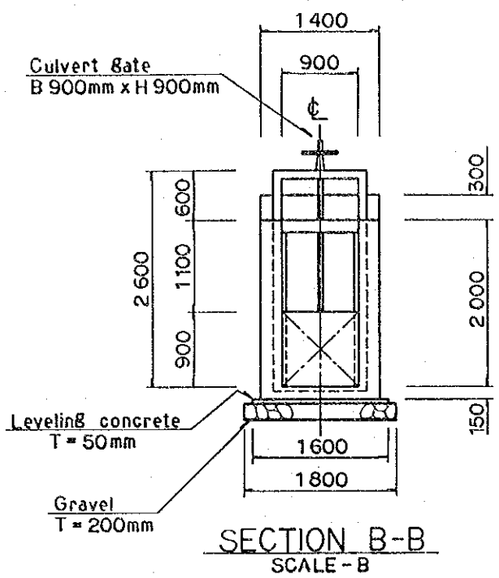
SCALE-B 0 3m

Note : Rehabilitation portion is shown in DETAIL "C" and "D".

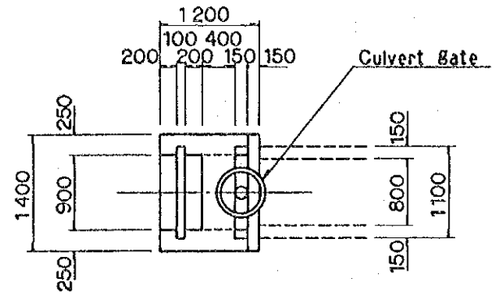
THE REPUBLIC OF THE PHILIPPINES			
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM			
TITLE OF DRAWING CANAL STRUCTURES REPLACEMENT OF CHECK GATE (MAIN CANAL, STA 3+106)			
DATE		DRAWING NO.	3004
JAPAN INTERNATIONAL COOPERATION AGENCY			



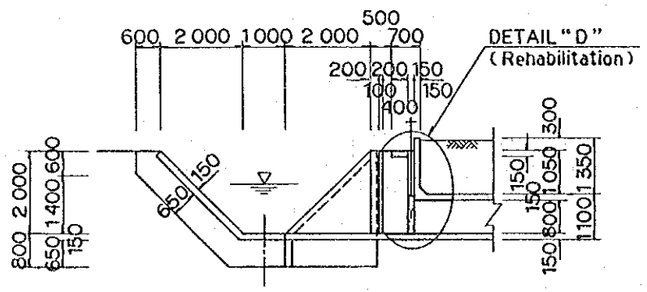
PLAN
SCALE - A



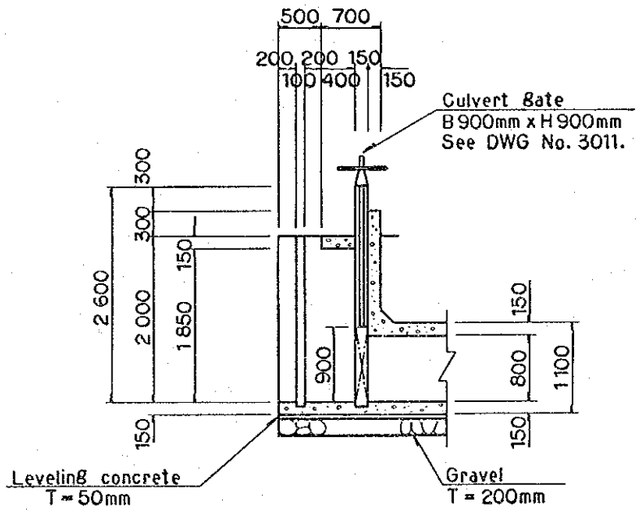
SECTION B-B
SCALE - B



DETAIL "C"
SCALE - B



SECTION A-A
SCALE - A



DETAIL "D"
SCALE = B

SCALE - A 0 5m

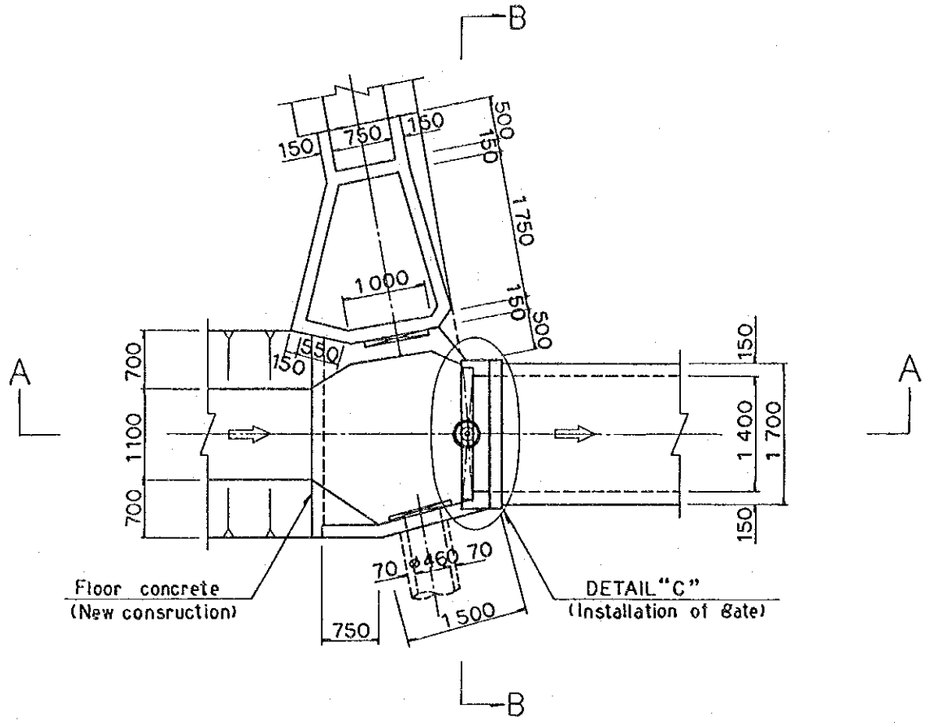
SCALE - B 0 3m

Note :

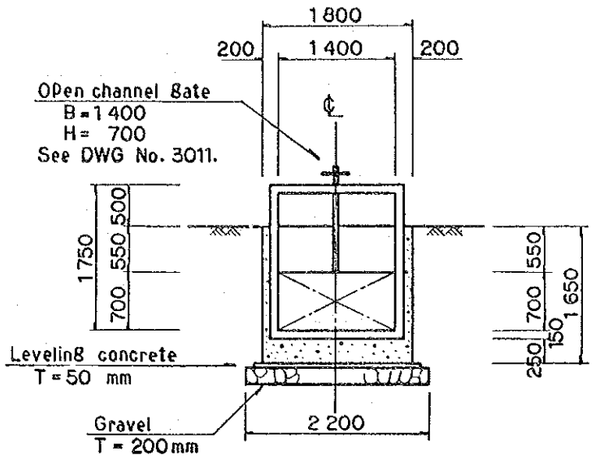
Rehabilitation portion is shown in DETAIL "C" and "D".

THE REPUBLIC OF THE PHILIPPINES			
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM			
TITLE OF DRAWING CANAL STRUCTURES REPLACEMENT OF HEAD GATE (LATERAL B, STA 3+830)			
DATE		DRAWING NO.	3005
JAPAN INTERNATIONAL COOPERATION AGENCY			

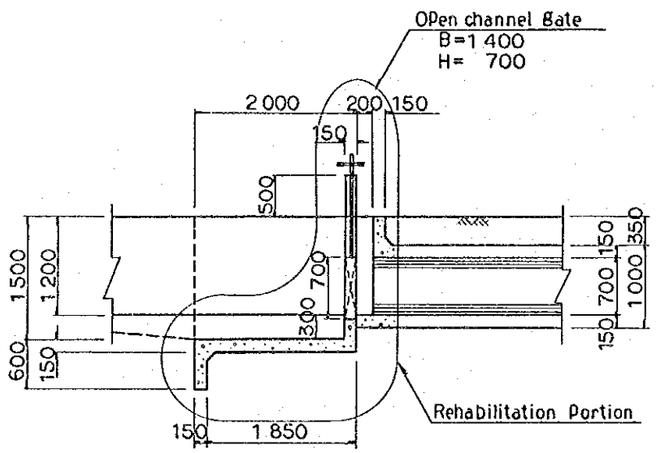
PLATE No. 24



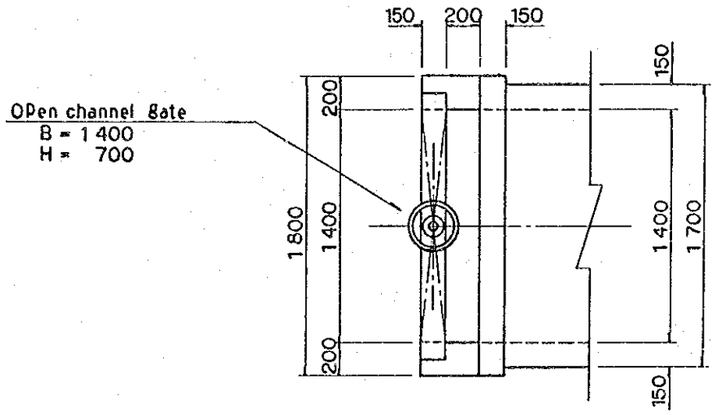
PLAN
SCALE - A



SECTION B-B
SCALE - A



SECTION A-A
SCALE - A



DETAIL "C"
SCALE - B

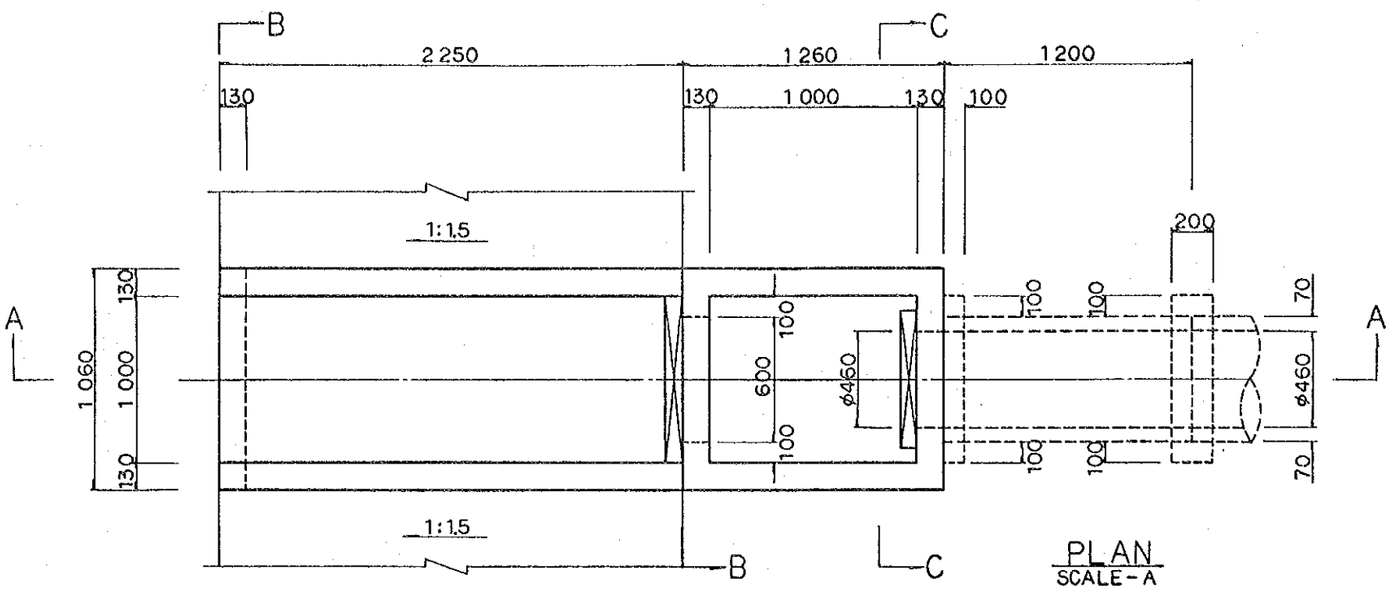
SCALE - A 0 1 2 3 4m

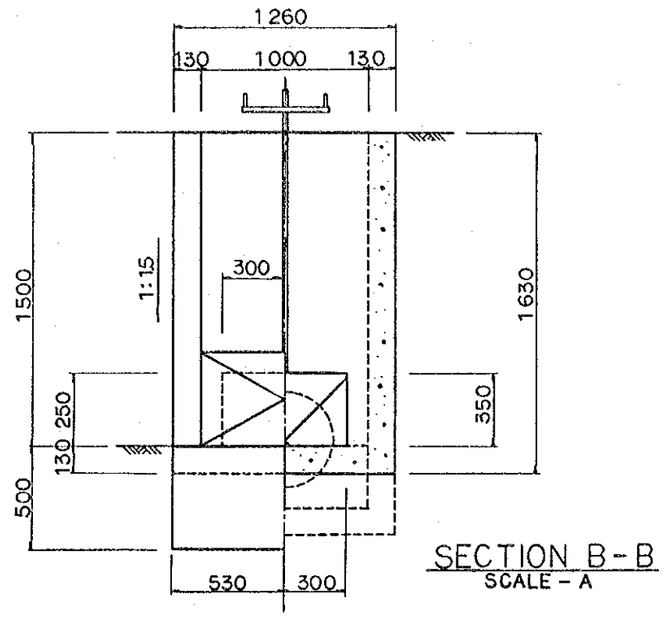
SCALE - B 0 1 2m

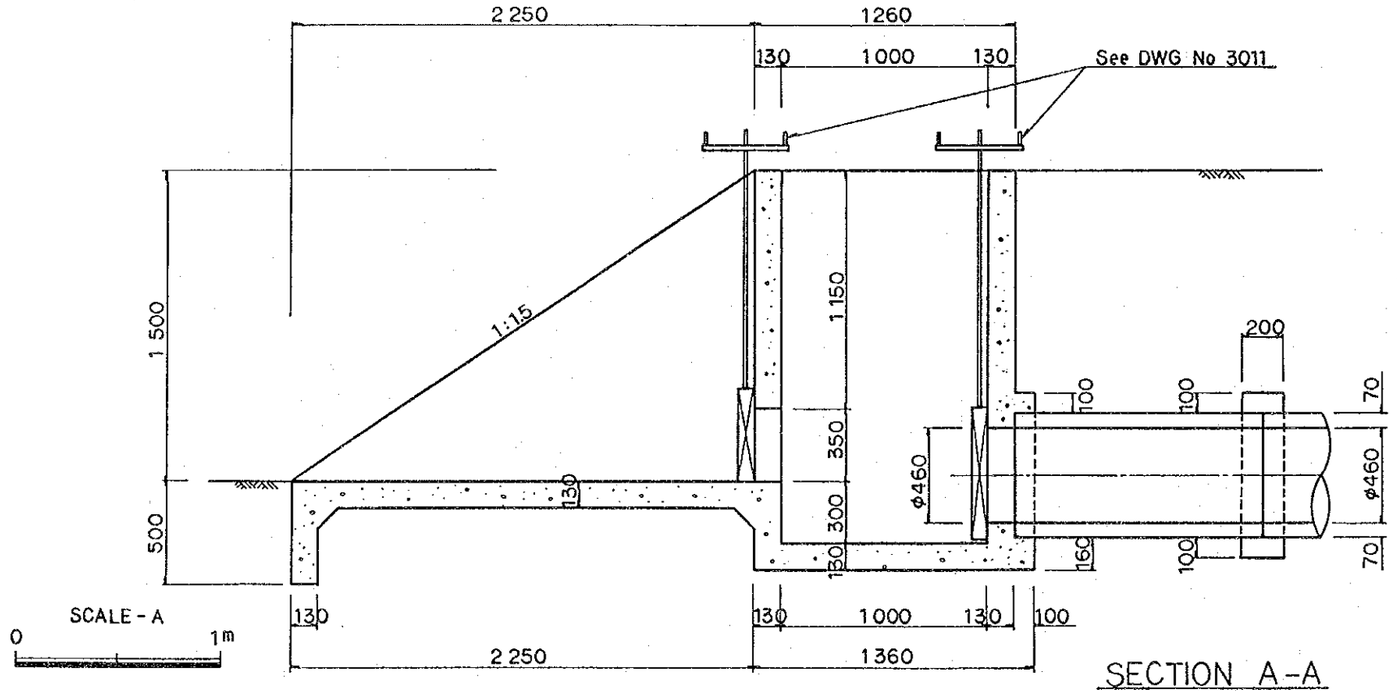
Note: Rehabilitation work consists of check Gate installation and floor concrete placing .

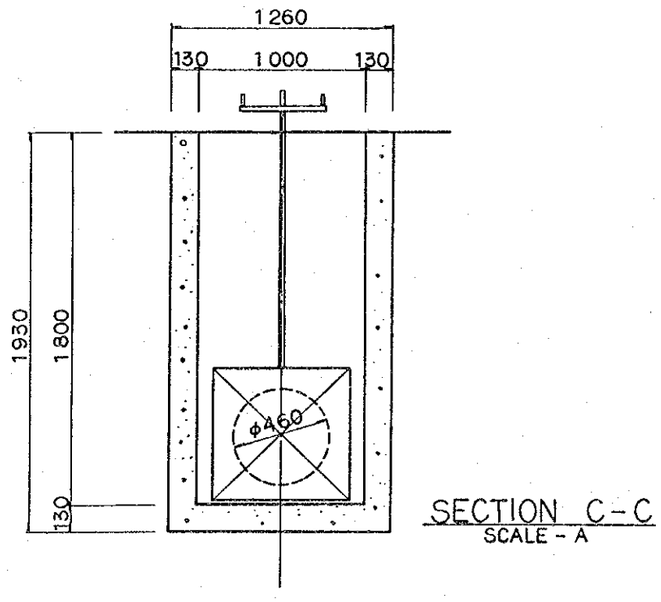
THE REPUBLIC OF THE PHILIPPINES	
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM	
TITLE OF DRAWING CANAL STRUCTURES REPLACEMENT OF CHECK GATE (LATERAL D, STA 2+890)	
DATE	DRAWING NO. 3006
JAPAN INTERNATIONAL COOPERATION AGENCY	

PLATE No. 25









LIST OF TURNOUTS TO BE REHABILITATED

Canal Name	Station No.	Nos. of Stru.	Canal Name	Station No.	Nos. of Stru.
Main	1+750 -Right	1	Lateral B	0+795 -Right and Left	2
Main	5+090 -Right	1	Lateral B	1+185 -Left	1
Main	5+500 -Right	1	Lateral B	1+510 -Right and Left	2
Main	5+995 -Left	1	Lateral B	2+610 -Right and Left	2
Main	6+330 -Right	1	Lateral B	2+770 -Right	1
Main	6+660 -Right	1	Lateral B	3+150 -Right	1
Lateral A-2	0+345 -Right and Left	2	Lateral B	3+825 -Left	1
Lateral A-2	0+965 -Left	1	Lateral B	5+545 -Left	1
Lateral A-2	3+280 -Right	1	Lateral D	2+895 -Left	1

Note: Turnout structures to be rehabilitated are 22 in number and the locations of these structures are tabulated on the left.

This drawing shows typical sections of the rehabilitation works for the 22 turnout structures.

THE REPUBLIC OF THE PHILIPPINES

THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING

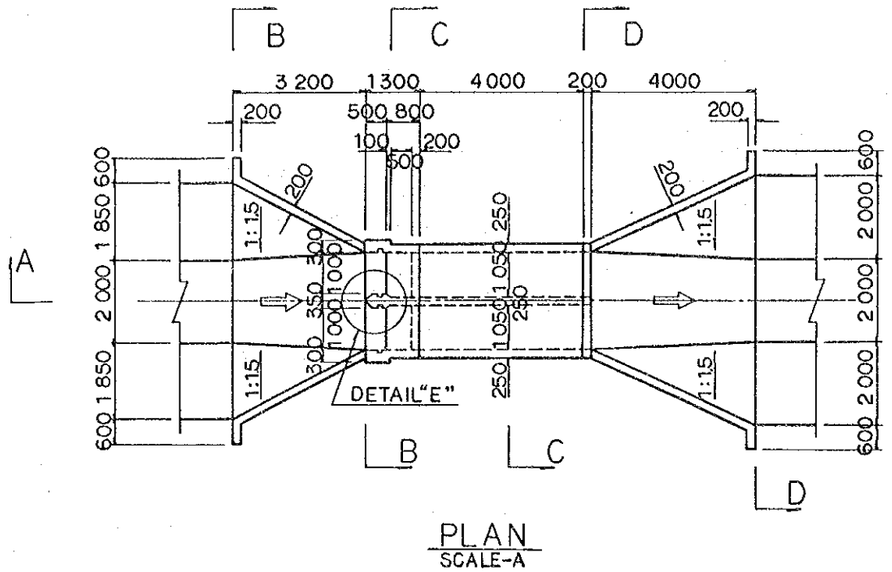
CANAL STRUCTURES

REPLACEMENT OF GATES FOR TURNOUTS

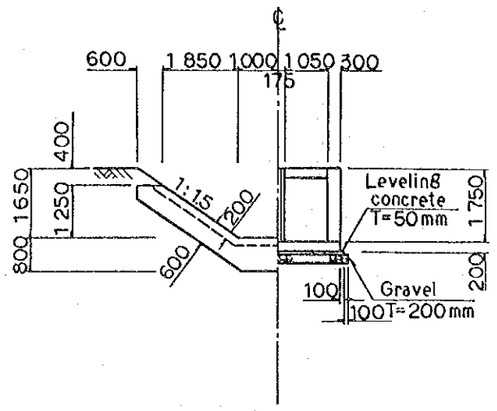
DATE		DRAWING NO.	3007

JAPAN INTERNATIONAL COOPERATION AGENCY

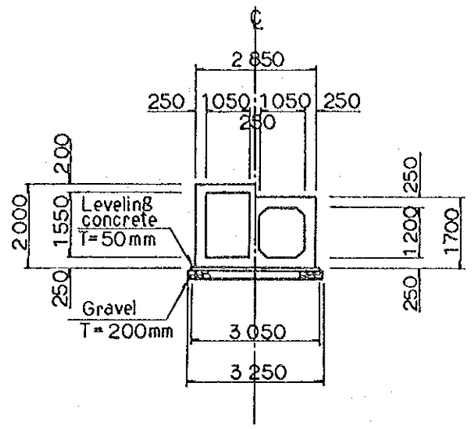
PLATE No. 26



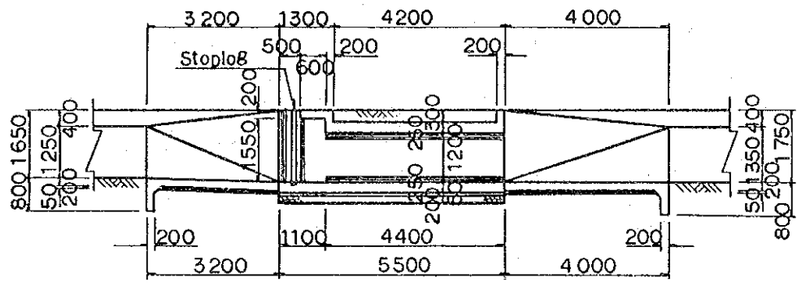
PLAN
SCALE-A



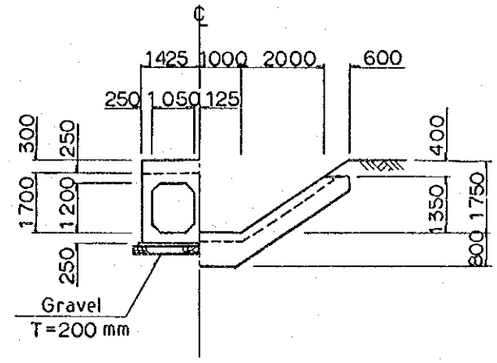
SECTON B-B
SCALE - A



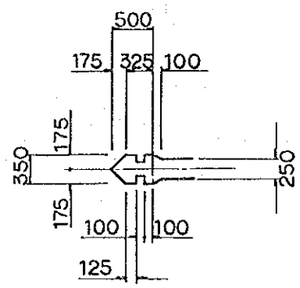
SECTON C-C
SCALE - A



SECTION A-A
SCALE - A



SECTION D-D
SCALE - A



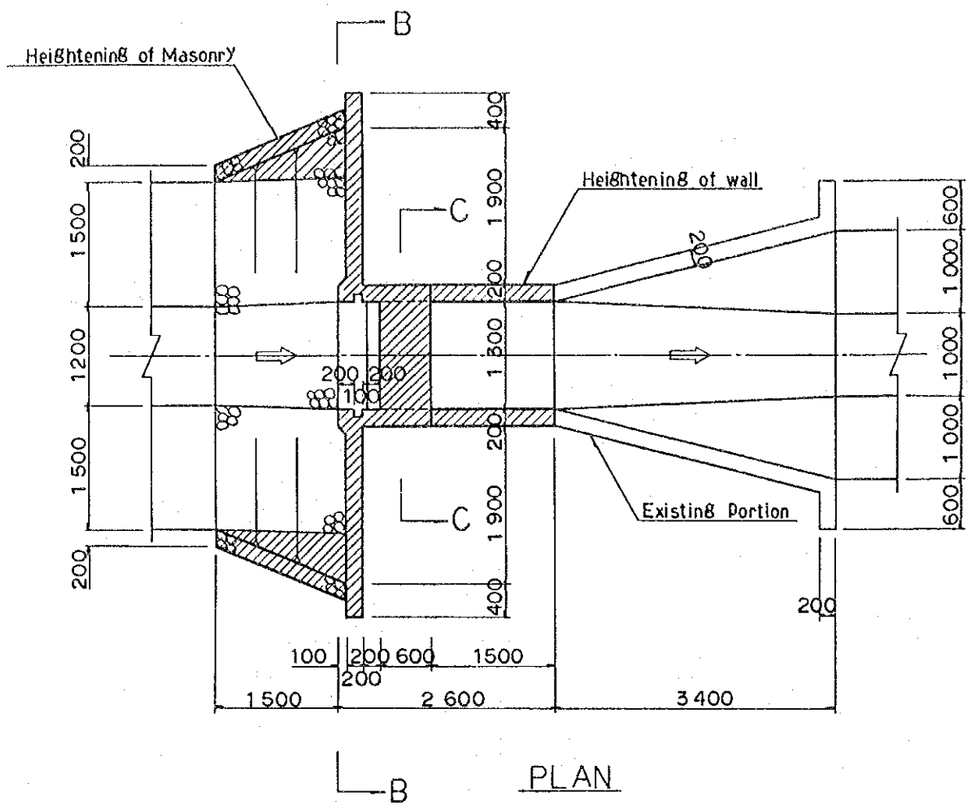
DETAIL "E"
SCALE - B

SCALE - A 0 5m

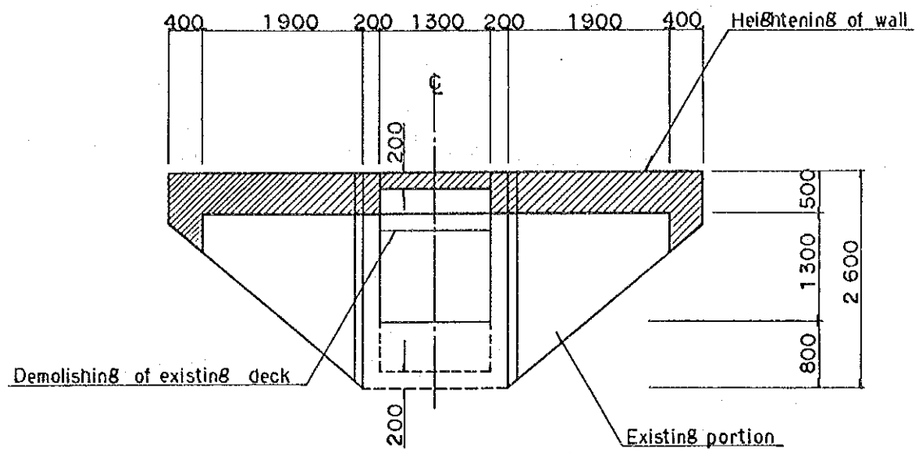
SCALE - B 0 3m

Note : This structure shall be reconstructed after demolishing existing structure.

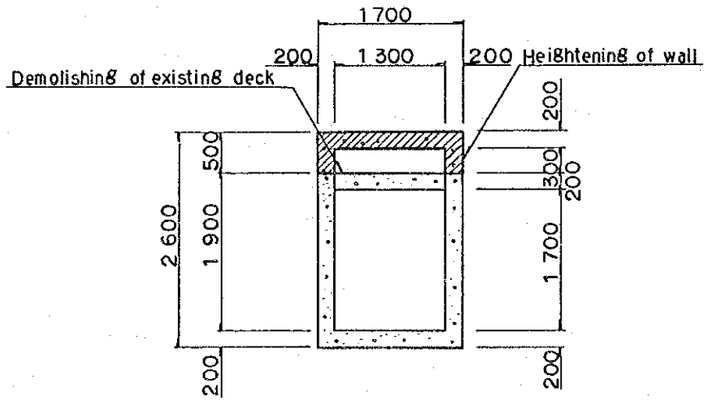
THE REPUBLIC OF THE PHILIPPINES	
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM	
TITLE OF DRAWING CANAL STRUCTURES REHABILITATION OF THRESHER CROSSING WITH CHECK (LATERAL A-2, STA 1+540)	
DATE	DRAWING NO. 3008
JAPAN INTERNATIONAL COOPERATION AGENCY	



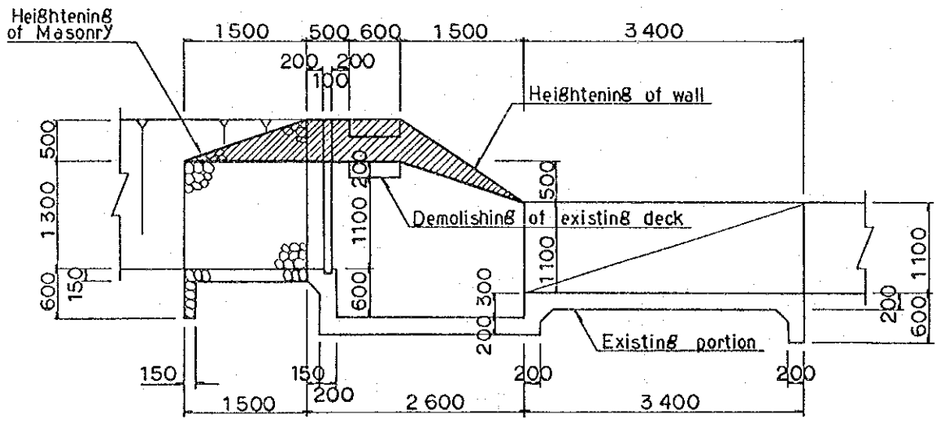
PLAN



SECTION B-B



SECTION C-C



SECTION A-A

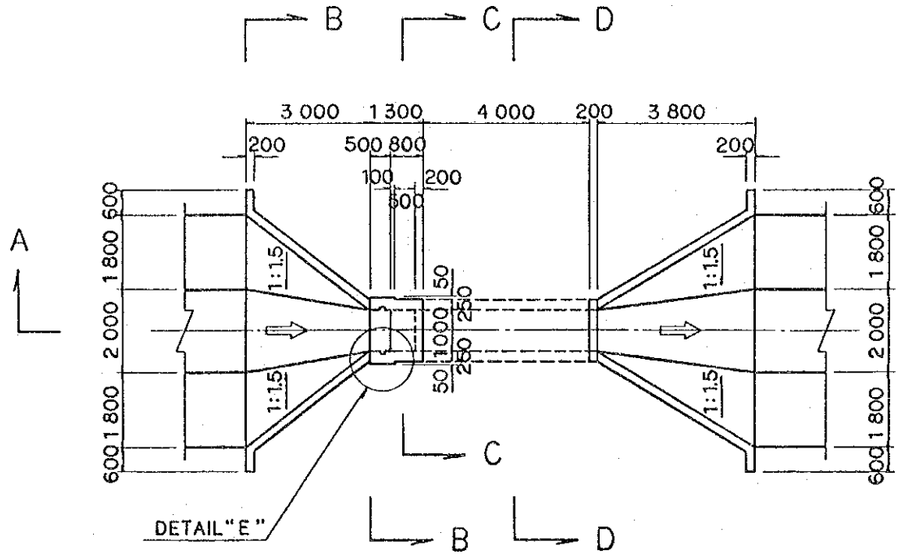
SCALE 0 3m

Note: This structure requires heightening work of masonry, wall and concrete deck after demolishing existing concrete deck.

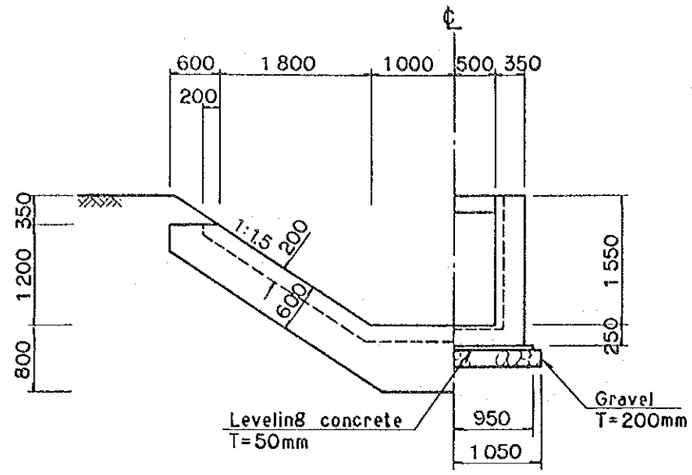
Structures to be heightened are hatched.

THE REPUBLIC OF THE PHILIPPINES	
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM	
TITLE OF DRAWING CANAL STRUCTURES REHABILITATION OF CHECK WITH DROP (LATERAL B, STA 4+510)	
DATE	DRAWING NO. 3009
JAPAN INTERNATIONAL COOPERATION AGENCY	

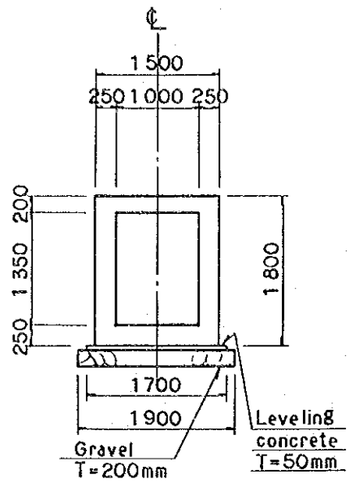
PLATE No. 28



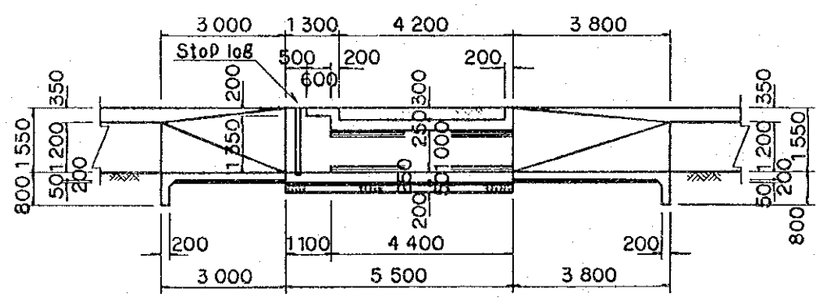
PLAN
SCALE - A



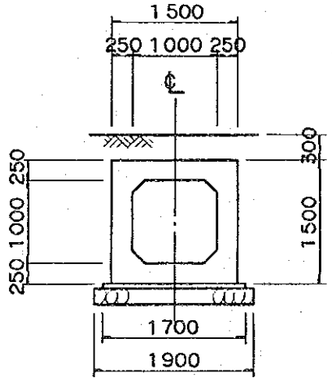
SECTION B-B
SCALE - B



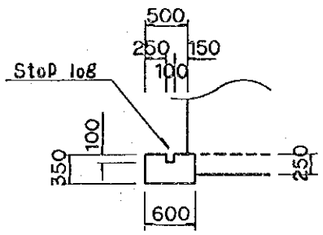
SECTION C-C
SCALE - B



SECTION A-A
SCALE - A



SECSON D-D
SCALE - B



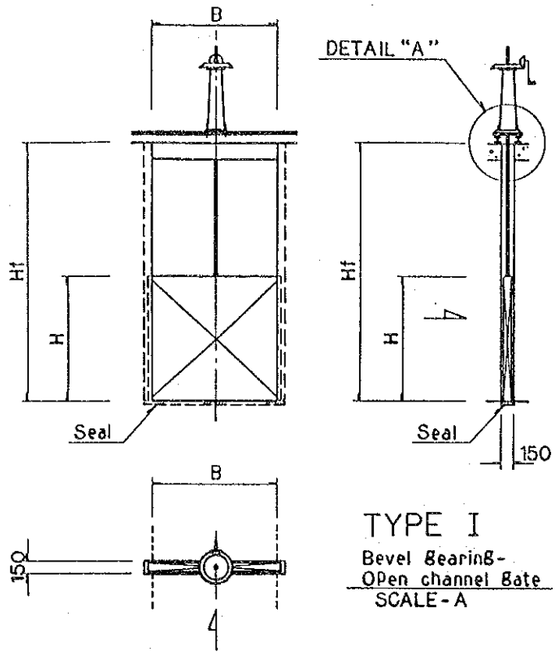
DETAIL "E"
SCALE - B

SCALE - A 0 5m

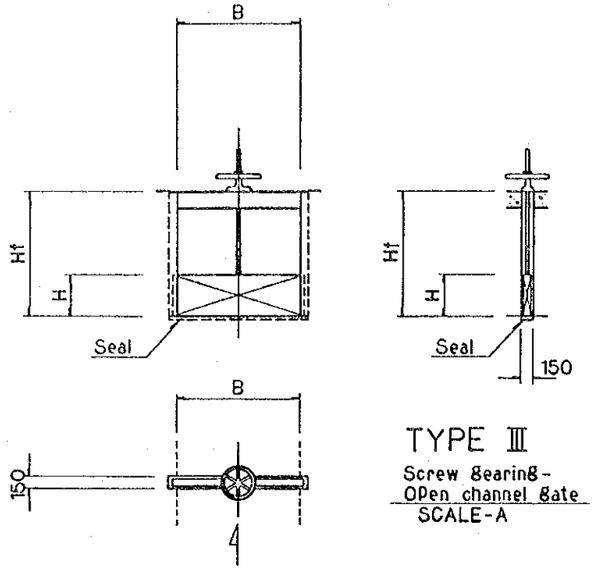
SCALE - B 0 3m

Note : This structure shall be newly constructed.

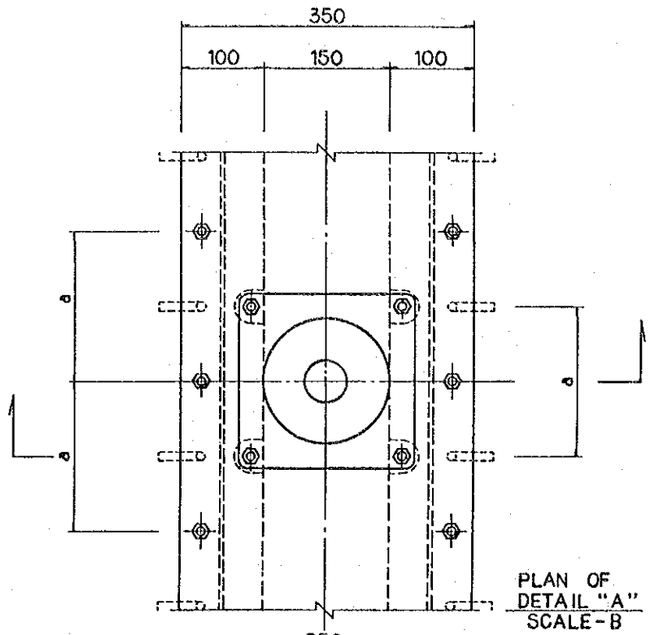
THE REPUBLIC OF THE PHILIPPINES			
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM			
TITLE OF DRAWING CANAL STRUCTURES NEW CONSTRUCTION OF THRESHER CROSSING WITH CHECK (LATERAL A-2, STA 3+830)			
DATE		DRAWING NO.	3010
JAPAN INTERNATIONAL COOPERATION AGENCY			

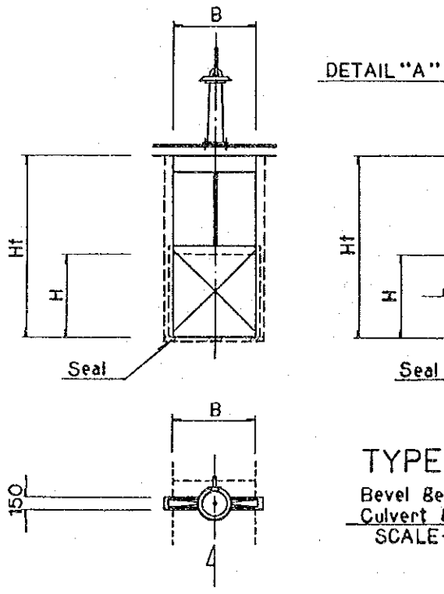


TYPE I
Bevel Bearing-
OPen channel Gate
SCALE-A

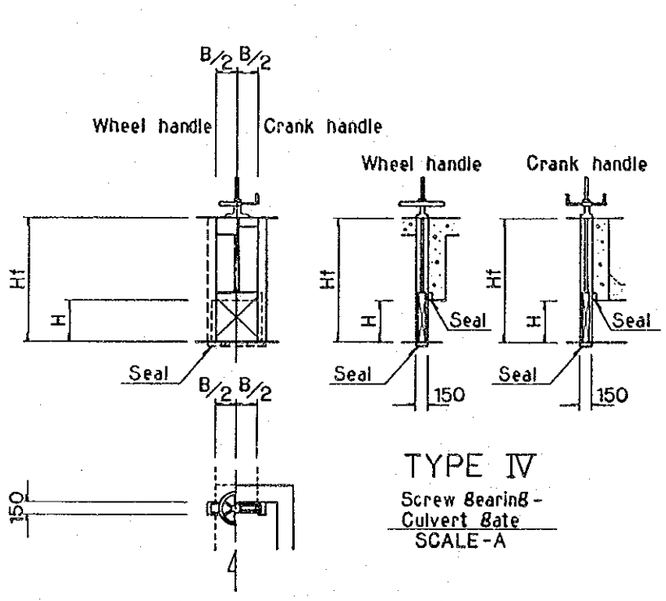


TYPE III
Screw Bearing-
OPen channel Gate
SCALE-A

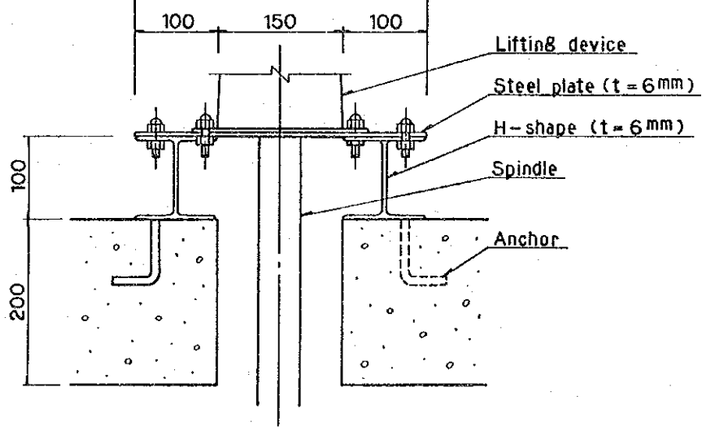




TYPE II
Bevel Bearing-
Culvert Gate
SCALE-A



TYPE IV
Screw Bearing-
Culvert Gate
SCALE-A



DETAIL "A"
SCALE-B

SCALE-A 0 3m

SCALE-B 0 30cm

DIMENSION TABLE OF STEEL SLIDE GATE

Name of Structures			Check Gate	Check Gate	Head Gate of Lateral A	Check Gate	Head Gate of Lateral B-3	Check Gate	Turnouts (The followings are typical dimensions.)	
Name of Canal Station No.			Main 2+200	Main 2+773	Main 2+773	Main 3+106	Lateral B 3+830	Lateral D 2+890	See DWG No. 3007. (22 units)	
Gate Type			I	I	II	I	IV	III	IV	IV
Numbers of Gates		(nos.)	3	3	3	2	1	1	22	22
B	effective width	(mm)	1 400	1 500	1 000	1 400	800	1 400	600	460
H	effective height	(mm)	1 500	1 500	900	1 600	800	700	350	460
Hf	guide frame h.	(mm)	2 600	2 900	2 200	2 700	2 600	1 750	1 500	1 800
Water Depth		(m)	2.4	2.0	2.0	2.0	0.9	0.9	1.3	1.5
Handle Type			Crank	Crank	Crank	Crank	Wheel	Wheel	Crank	Crank

THE REPUBLIC OF THE PHILIPPINES

THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

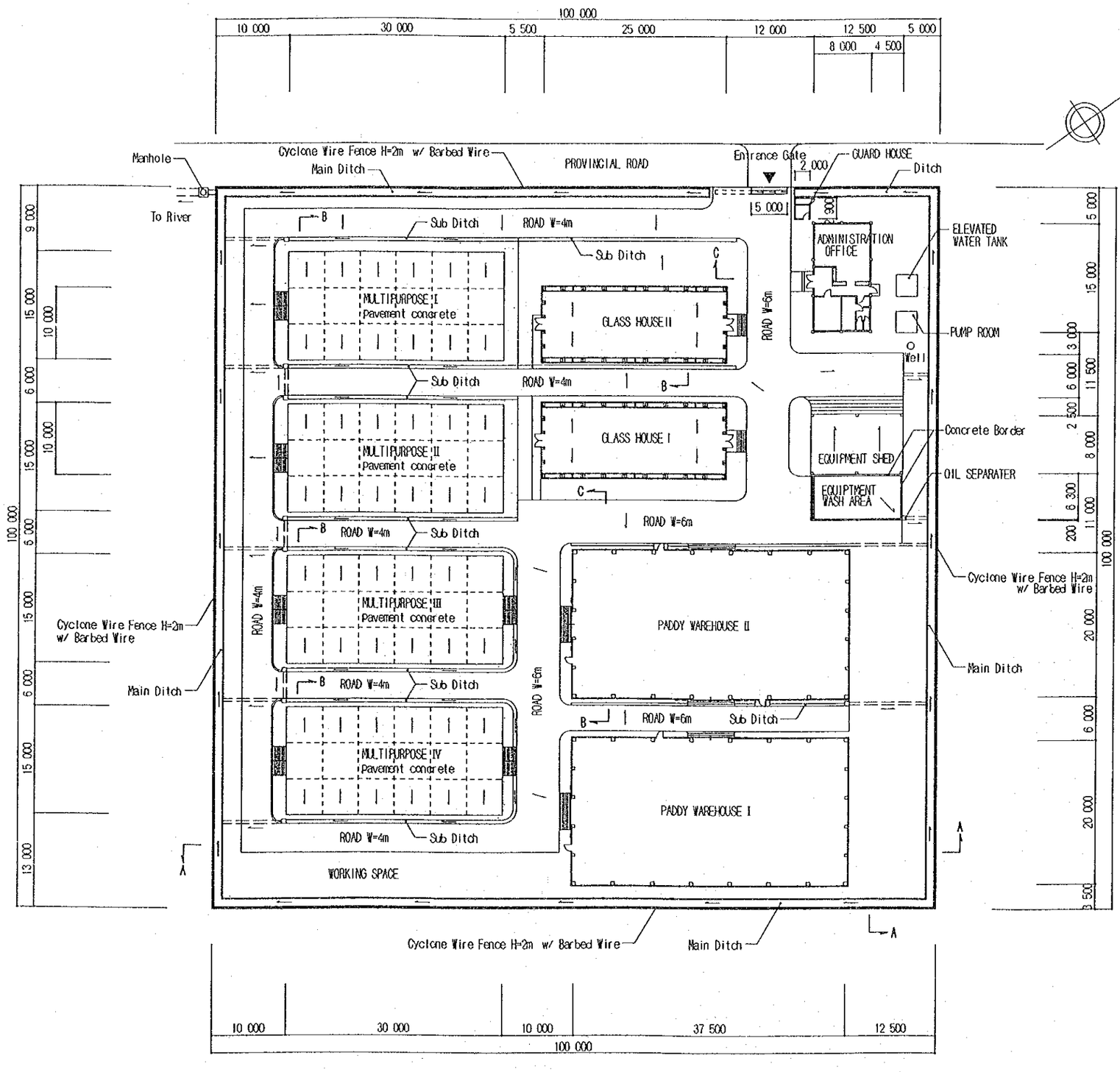
TITLE OF DRAWING

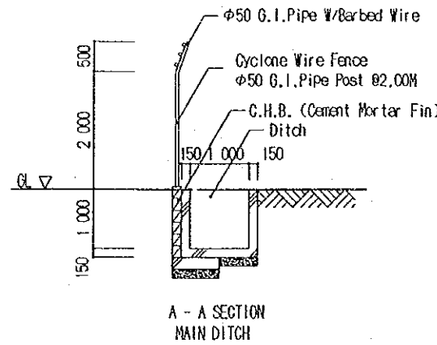
CANAL STRUCTURES
STEEL SLIDE GATE

DATE | DRAWING NO. 3011

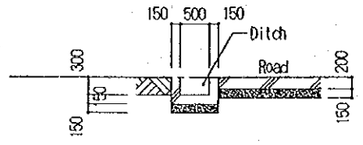
JAPAN INTERNATIONAL COOPERATION AGENCY

PLATE No. 30

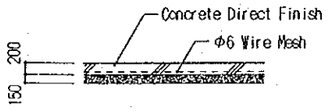




A - A SECTION
MAIN DITCH

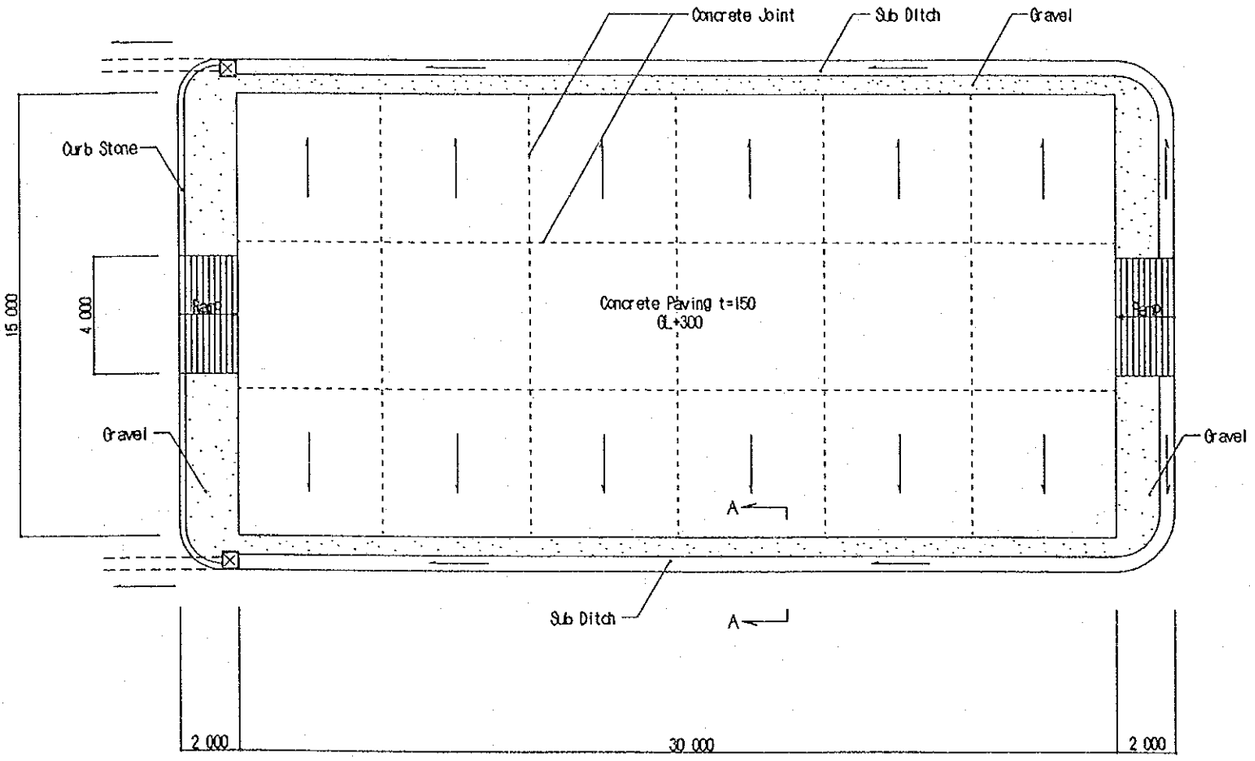


B - B SECTION
SUB DITCH

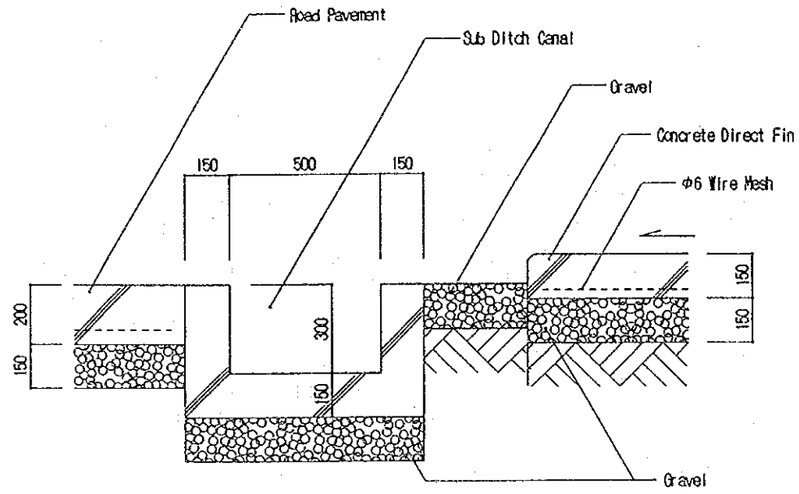


C - C SECTION
ROAD PAVEMENT

THE REPUBLIC OF THE PHILIPPINES	
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM	
TITLE OF DRAWING POST HARVEST FACILITY GENERAL PLAN	
DATE	DRAWING NO. 4001
JAPAN INTERNATIONAL COOPERATION AGENCY	



FLOOR PLAN

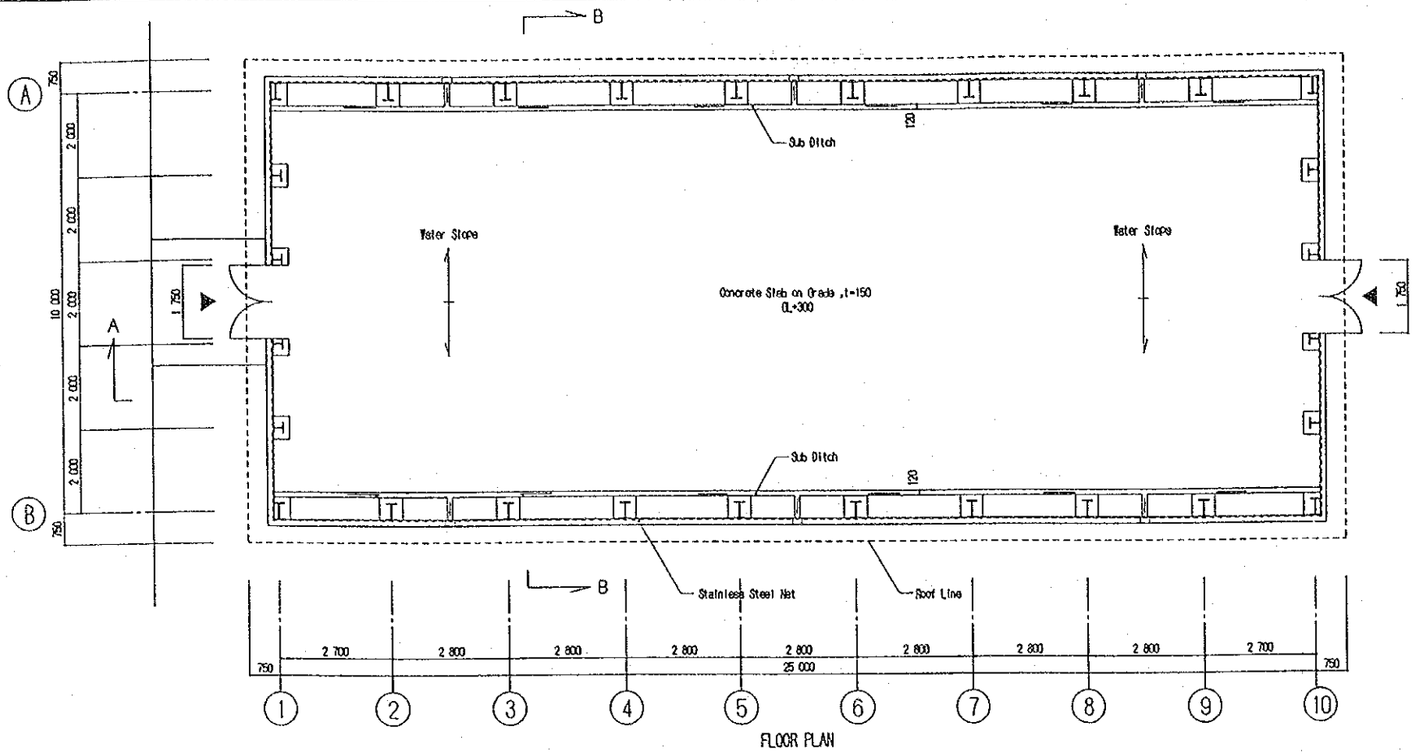


A - A SECTION

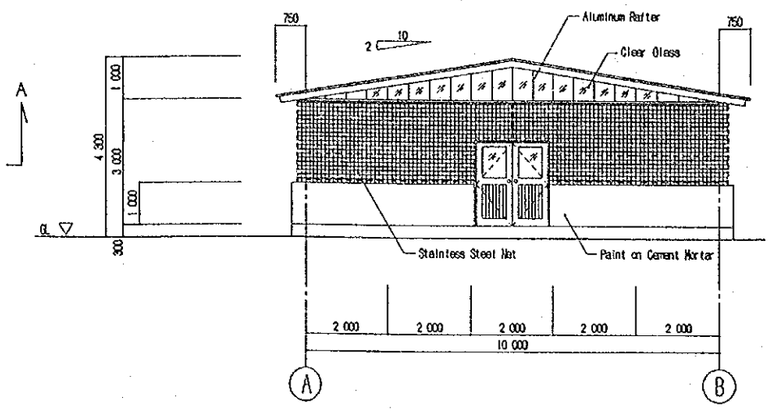
0 5m

THE REPUBLIC OF THE PHILIPPINES			
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM			
TITLE OF DRAWING POST HARVEST FACILITY MULTIPURPOSE PAVEMENT			
DATE		DRAWING NO.	4002
JAPAN INTERNATIONAL COOPERATION AGENCY			

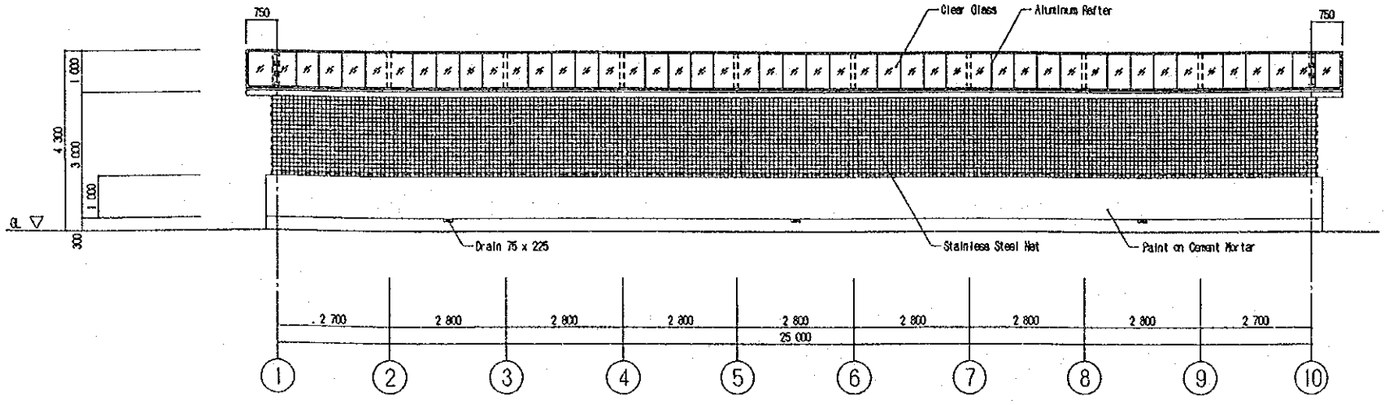
PLATE No. 32



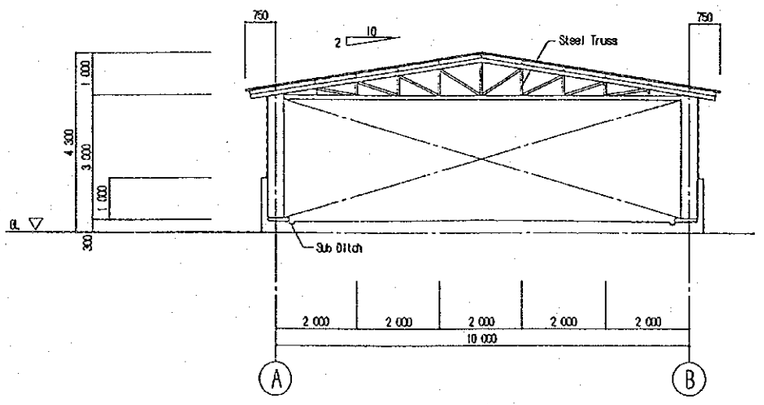
FLOOR PLAN



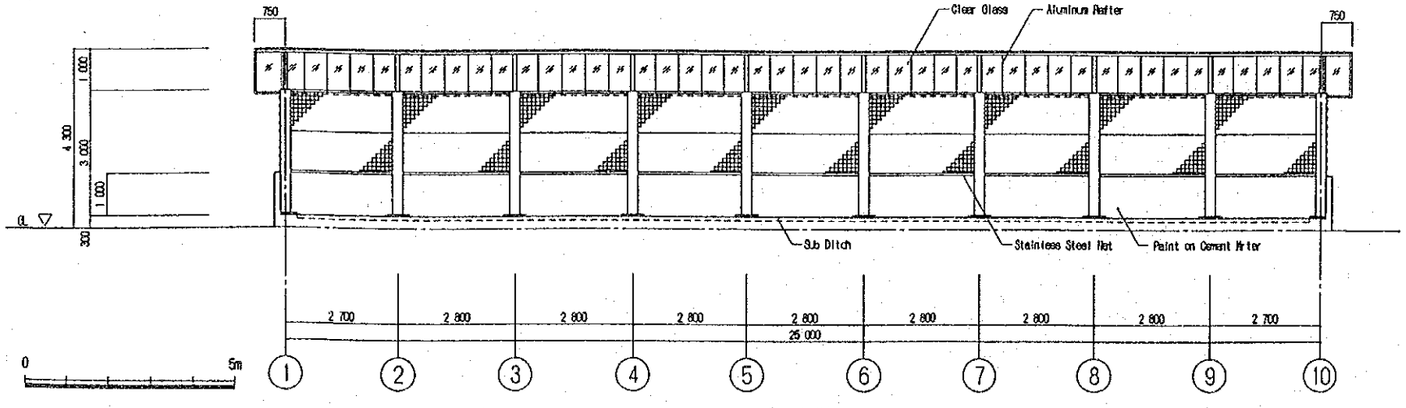
FRONT ELEVATION



SIDE ELEVATION



B - B SECTION



A - A SECTION

THE REPUBLIC OF THE PHILIPPINES

THE OPTIMUM WATER UTILIZATION
AND RURAL DEVELOPMENT PROJECT
IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING

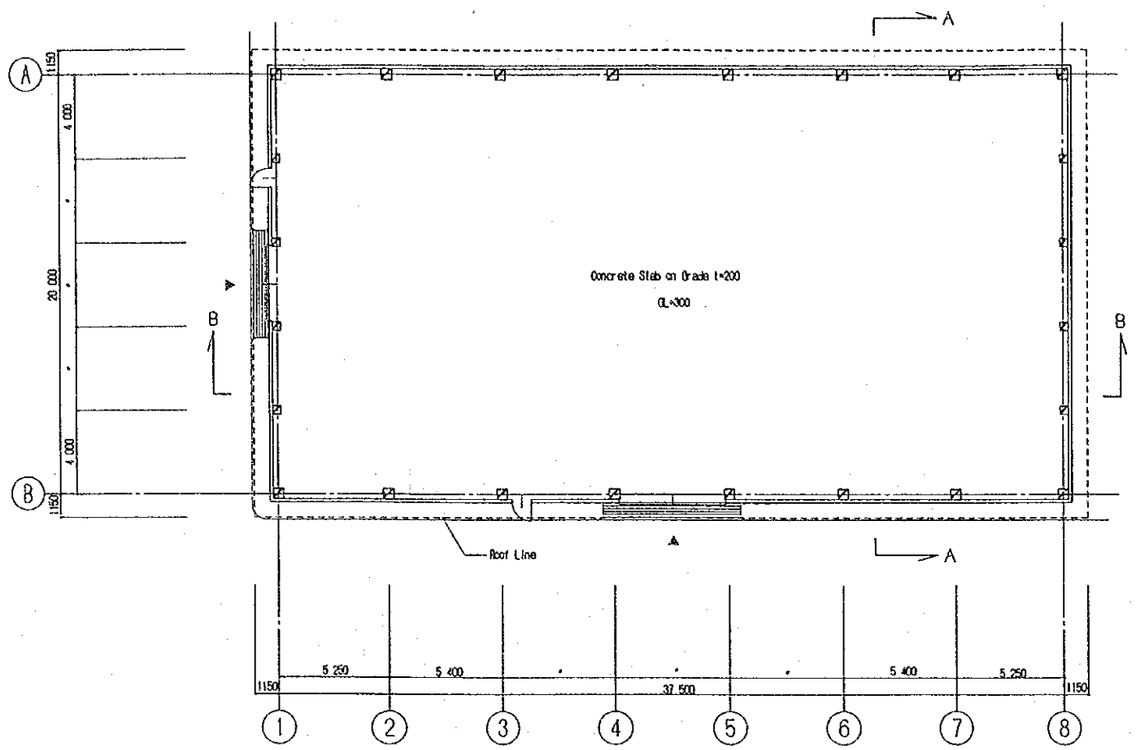
POST HARVEST FACILITY

GLASS HOUSE

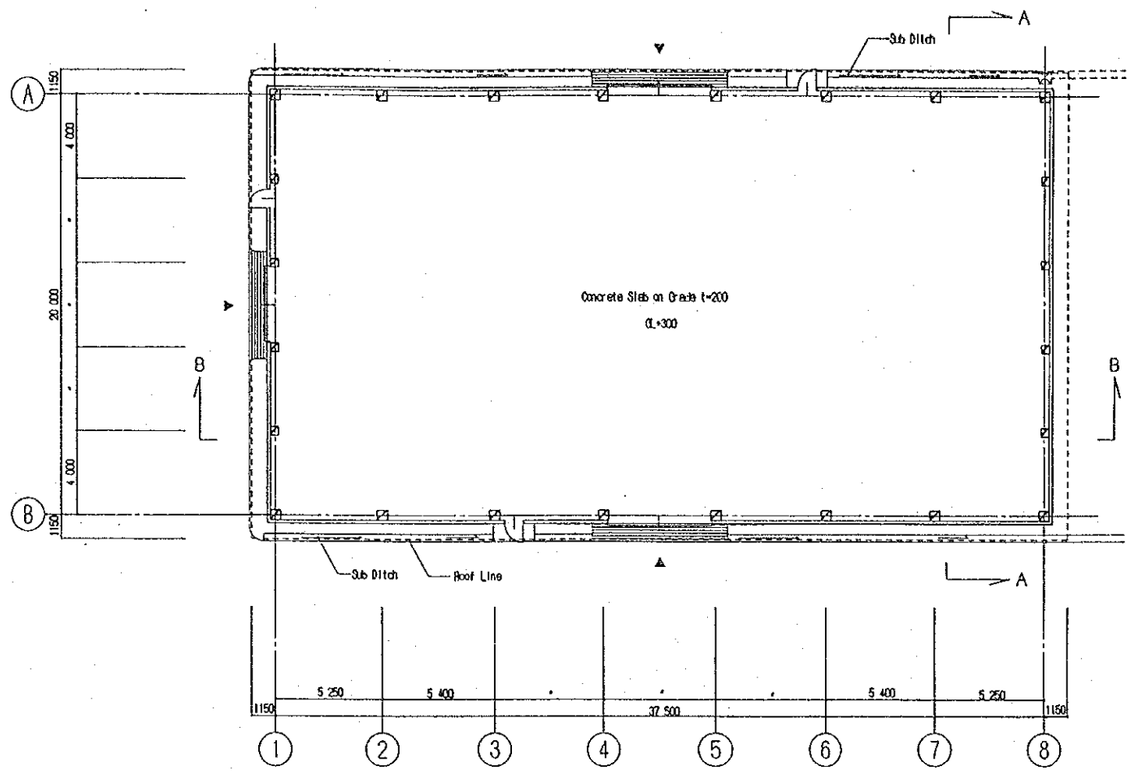
DATE		DRAWING NO.	4003

JAPAN INTERNATIONAL COOPERATION AGENCY

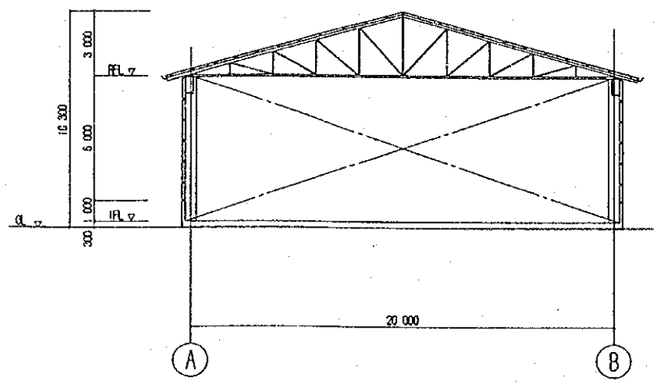
PLATE No. 33



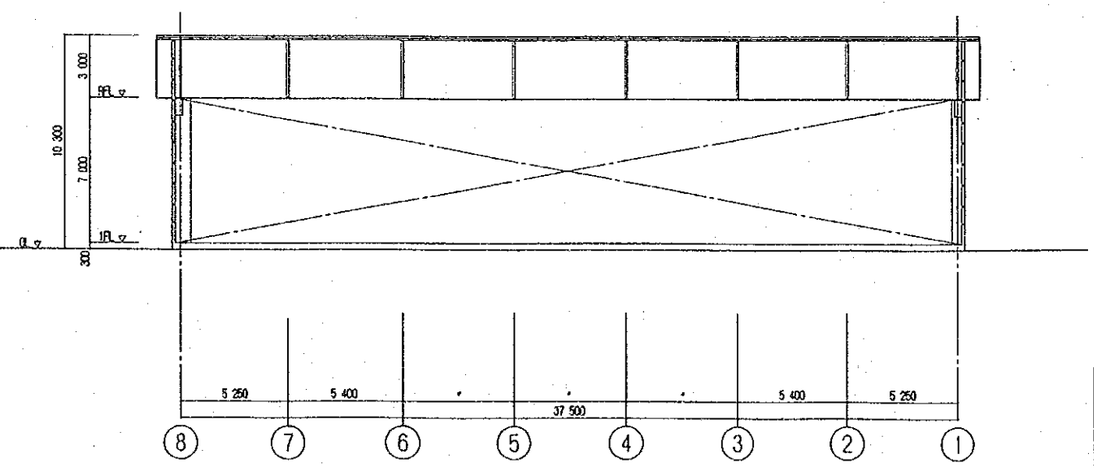
FLOOR PLAN (I)



FLOOR PLAN (II)



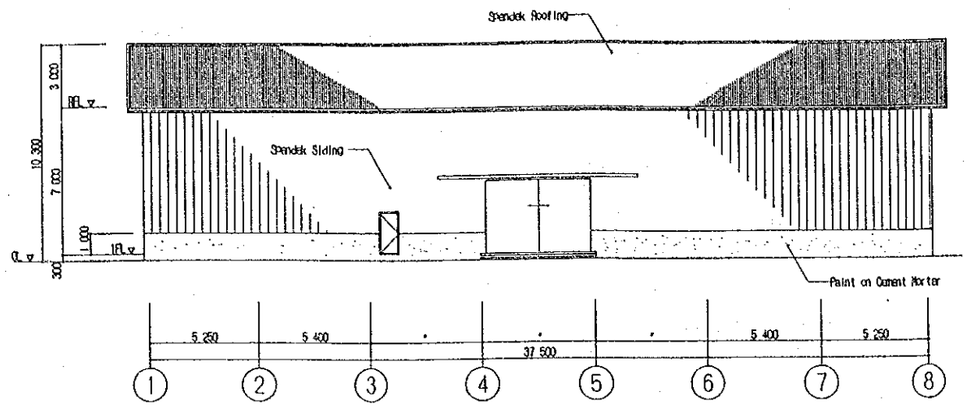
A-A SECTION



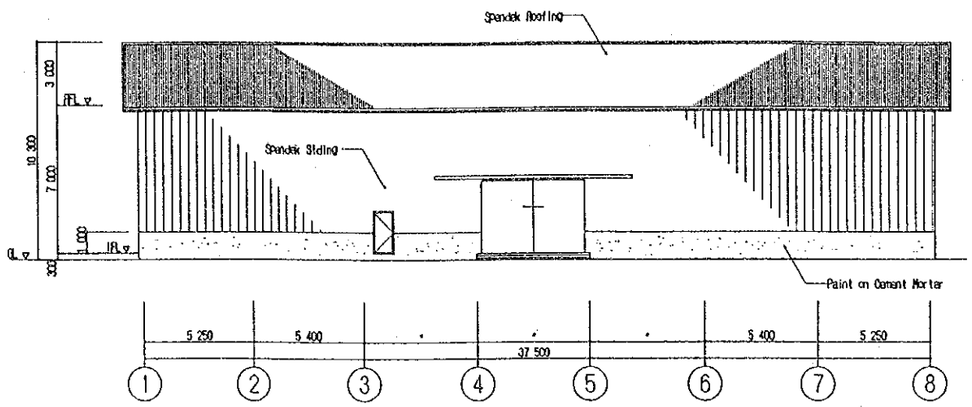
B-B SECTION

0 10m

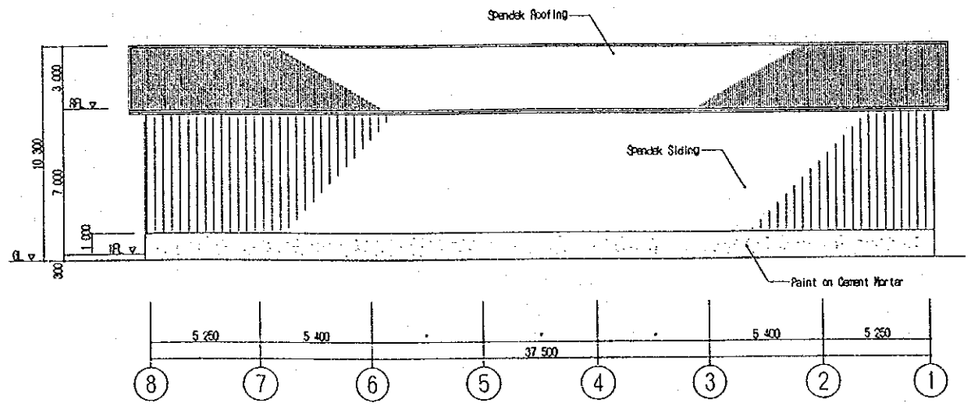
THE REPUBLIC OF THE PHILIPPINES	
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM	
TITLE OF DRAWING POST HARVEST FACILITY PADDY WAREHOUSE (1/2)	
DATE	DRAWING NO. 4004
JAPAN INTERNATIONAL COOPERATION AGENCY	



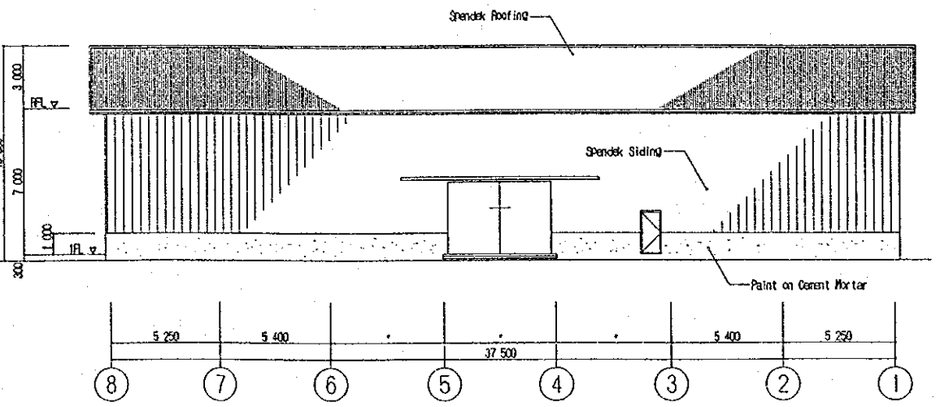
SOUTH ELEVATION (I)



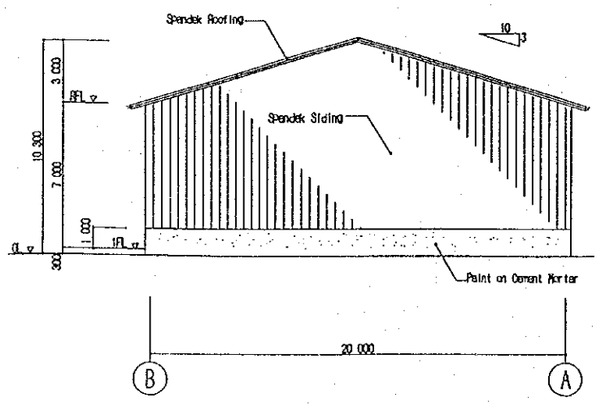
SOUTH ELEVATION (II)



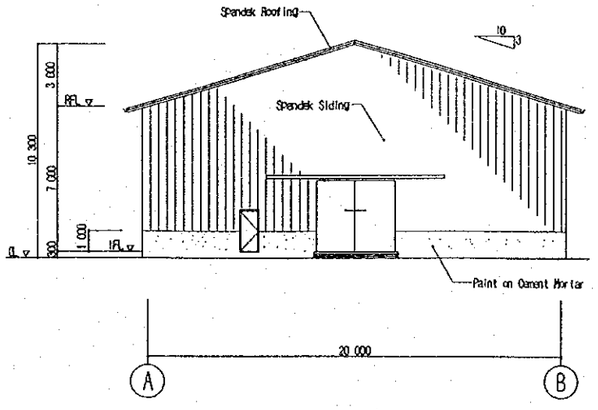
NORTH ELEVATION (I)



NORTH ELEVATION (II)



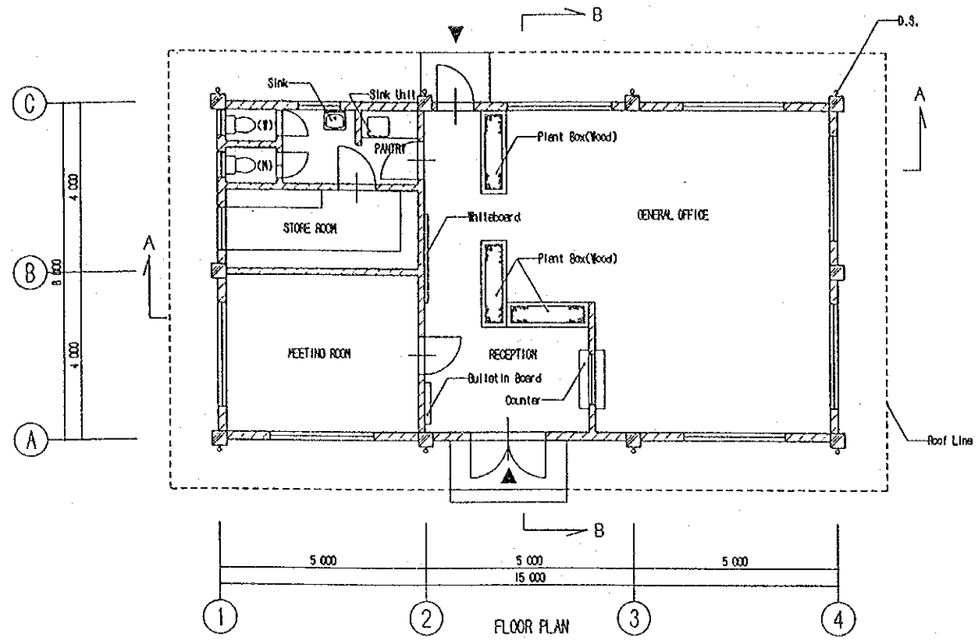
EAST ELEVATION (I, II)



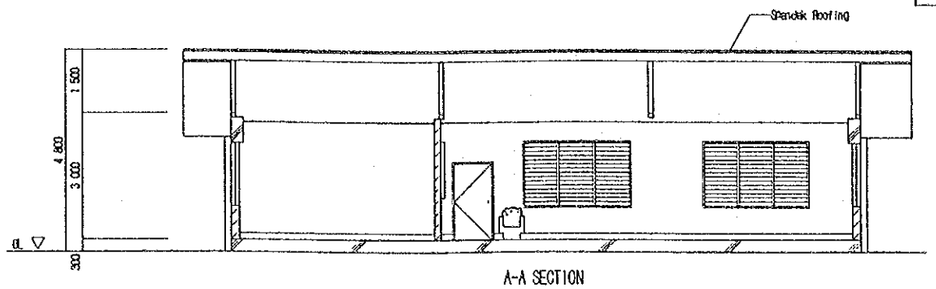
WEST ELEVATION (I, II)

0 10m

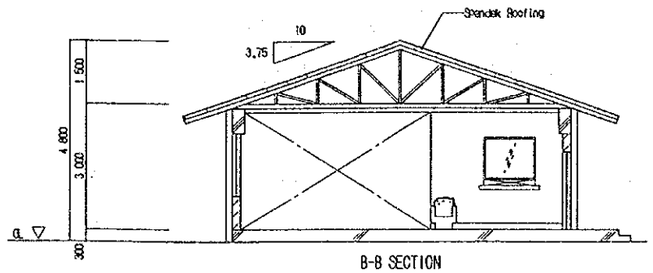
THE REPUBLIC OF THE PHILIPPINES	
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM	
TITLE OF DRAWING POST HARVEST FACILITY PADDY WAREHOUSE (2/2)	
DATE	DRAWING NO. 4004
JAPAN INTERNATIONAL COOPERATION AGENCY	



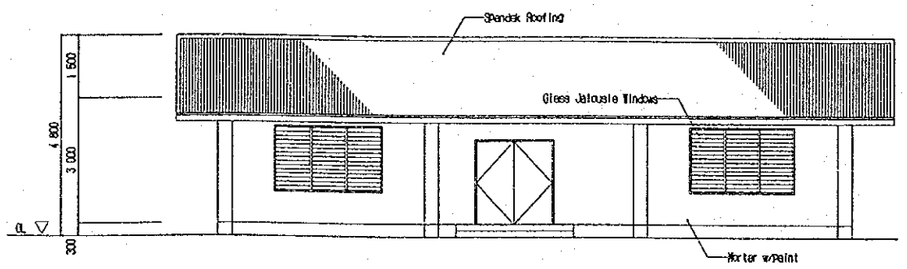
FLOOR PLAN



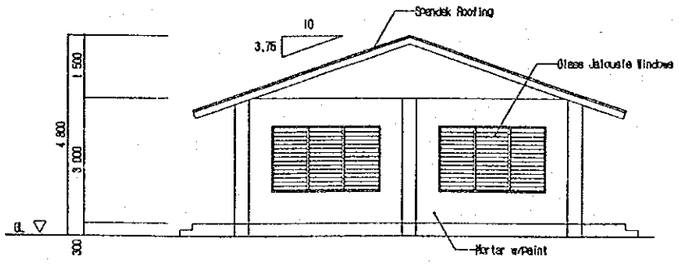
A-A SECTION



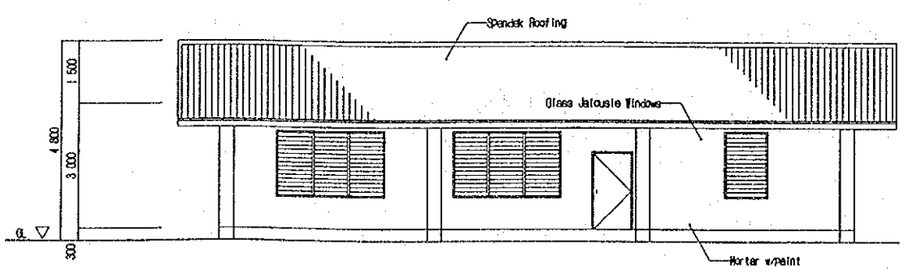
B-B SECTION



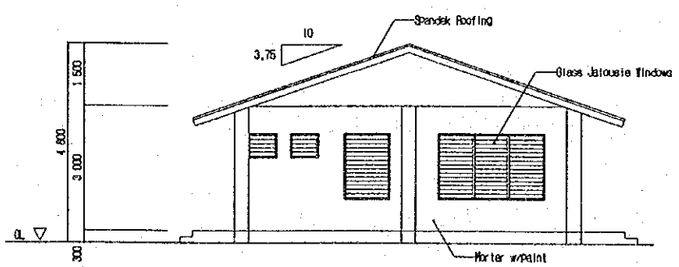
SOUTH ELEVATION



EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION

0 5m

THE REPUBLIC OF THE PHILIPPINES

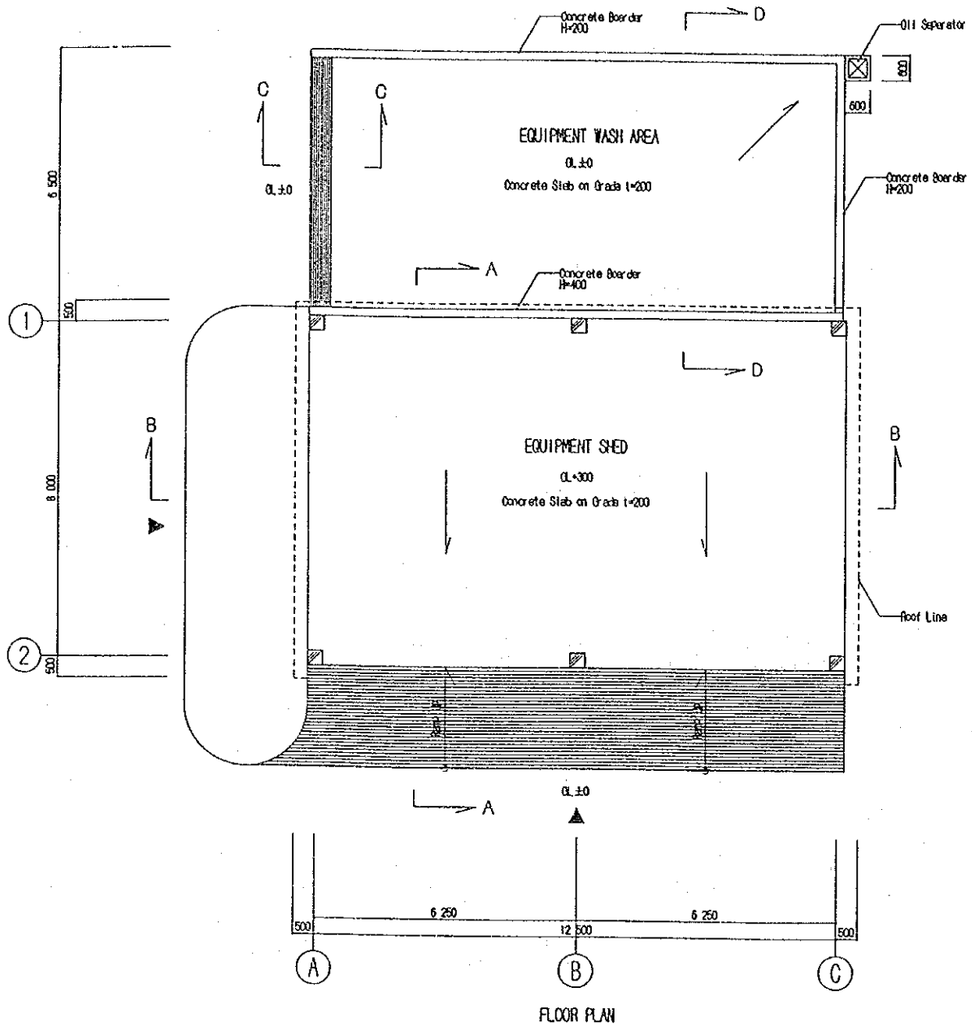
THE OPTIMUM WATER UTILIZATION
AND RURAL DEVELOPMENT PROJECT
IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING

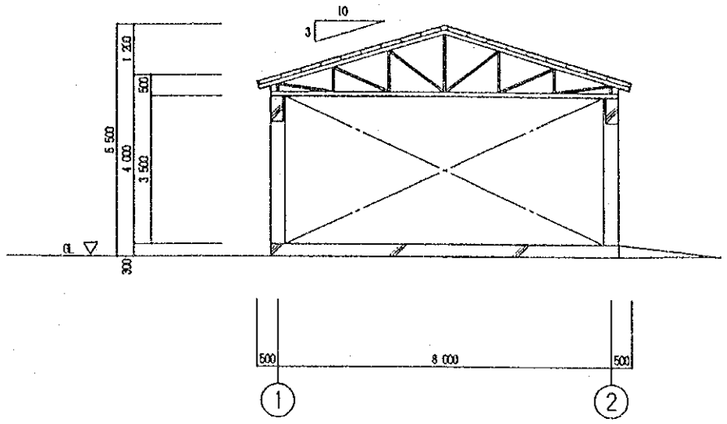
POST HARVEST FACILITY
ADMINISTRATION OFFICE

DATE		DRAWING NO.	4006

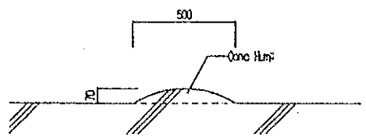
JAPAN INTERNATIONAL COOPERATION AGENCY



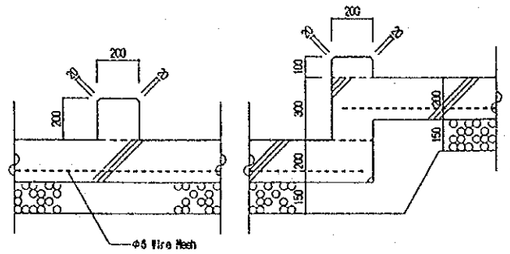
FLOOR PLAN



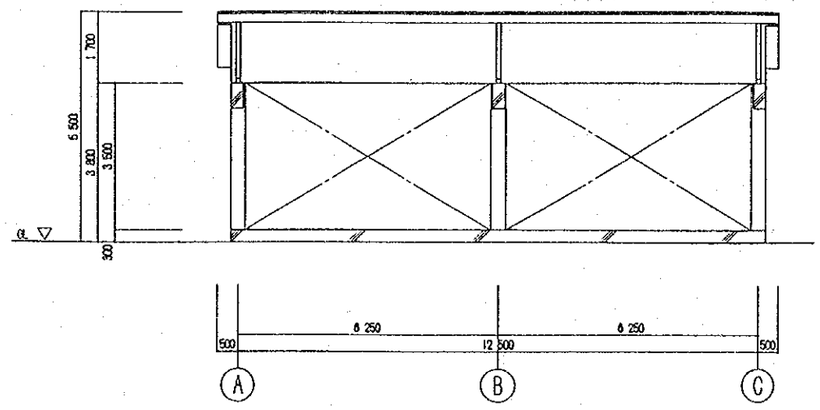
A-A SECTION



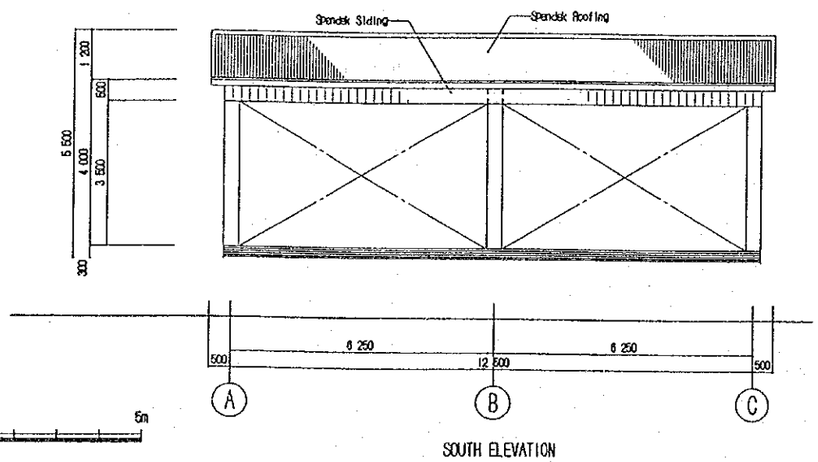
C-C SECTION



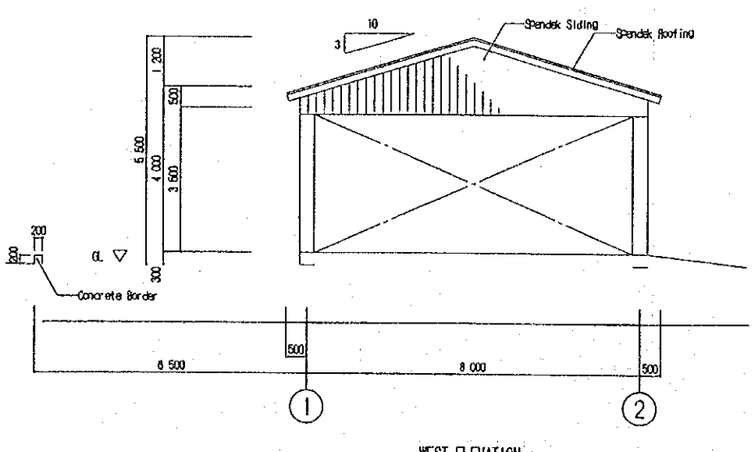
D-D SECTION



B-B SECTION

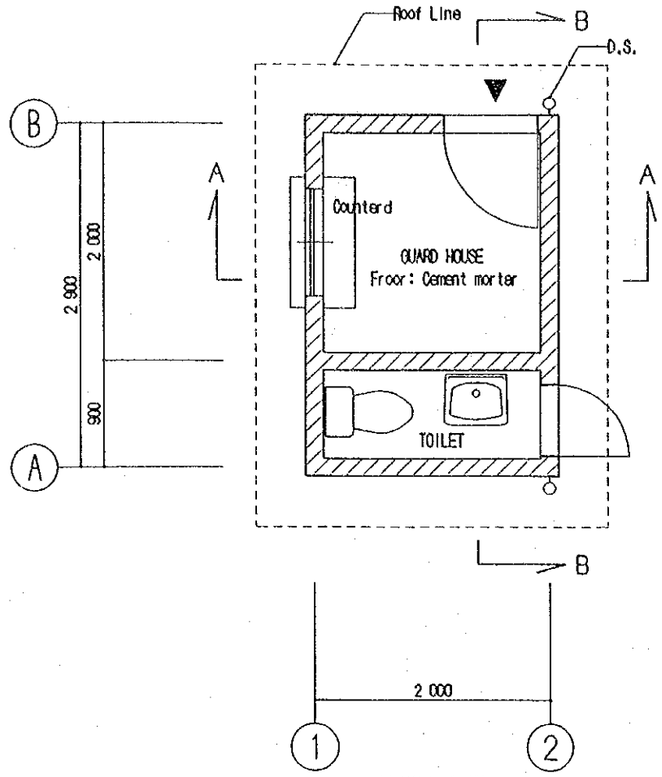


SOUTH ELEVATION

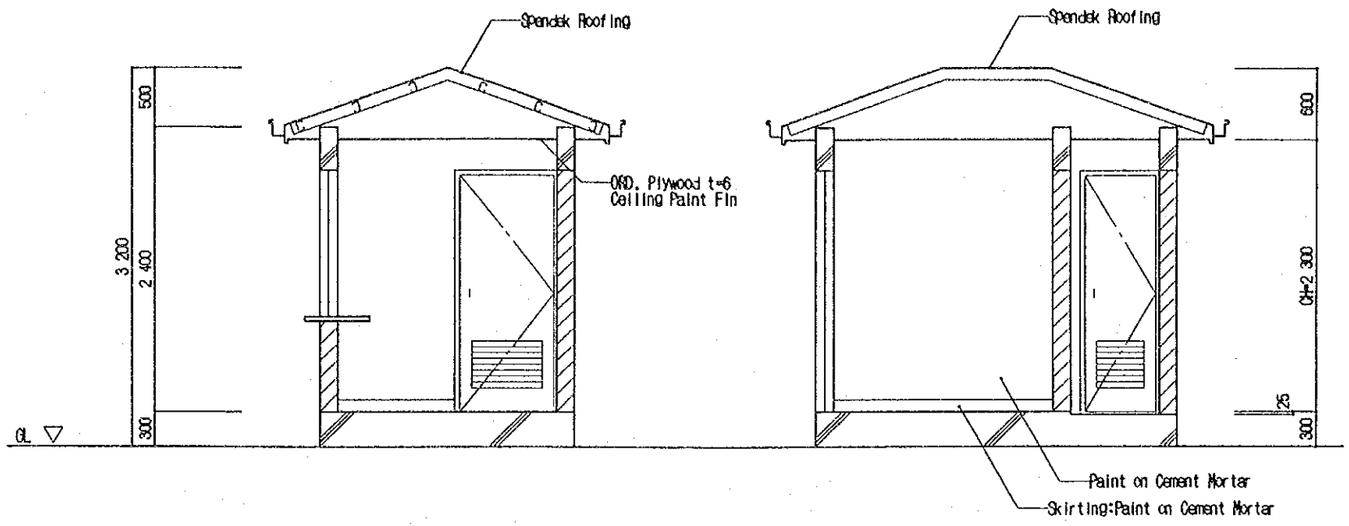


WEST ELEVATION

THE REPUBLIC OF THE PHILIPPINES	
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM	
TITLE OF DRAWING POST HARVEST FACILITY EQUIPMENT SHED	
DATE	DRAWING NO. 4007
JAPAN INTERNATIONAL COOPERATION AGENCY	

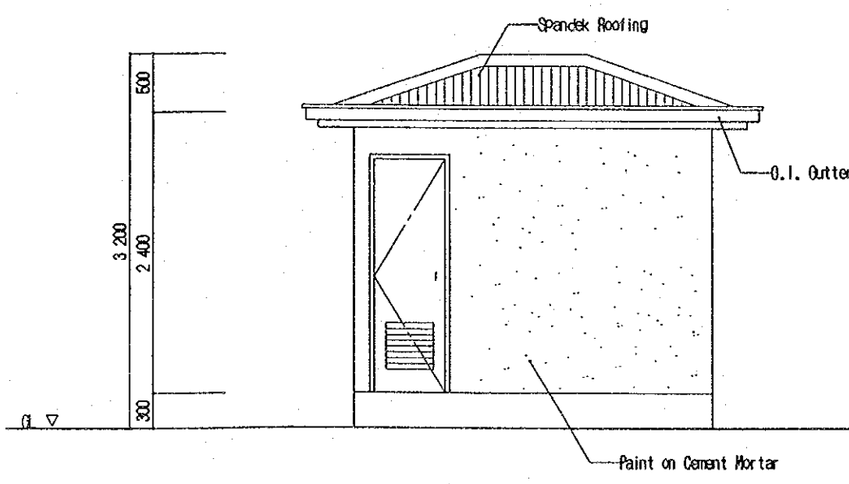


FLOOR PLAN

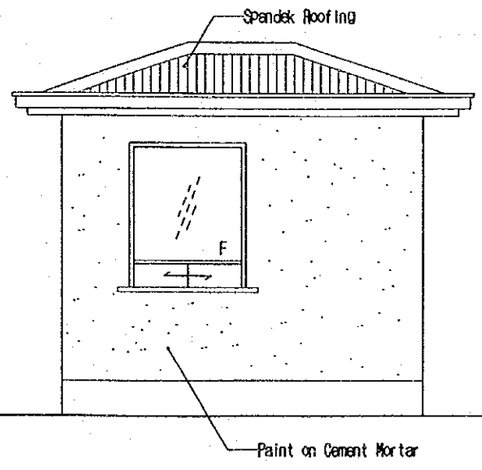


A-A SECTION

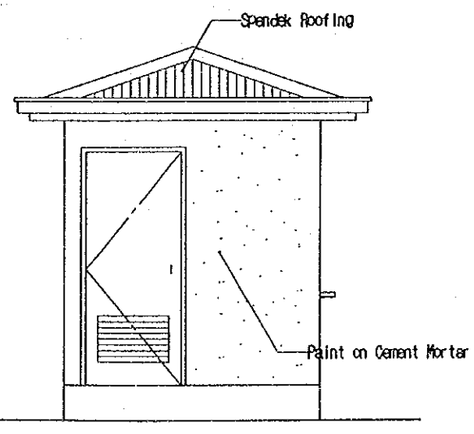
B-B SECTION



EAST ELEVATION



WEST ELEVATION



NORTH ELEVATION

0 5m

THE REPUBLIC OF THE PHILIPPINES

THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

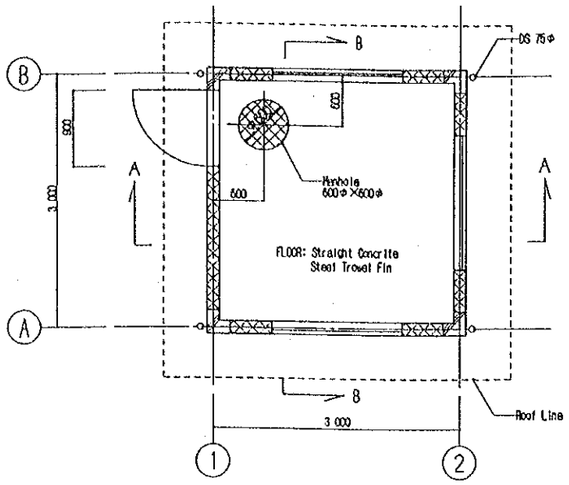
TITLE OF DRAWING

POST HARVEST FACILITY

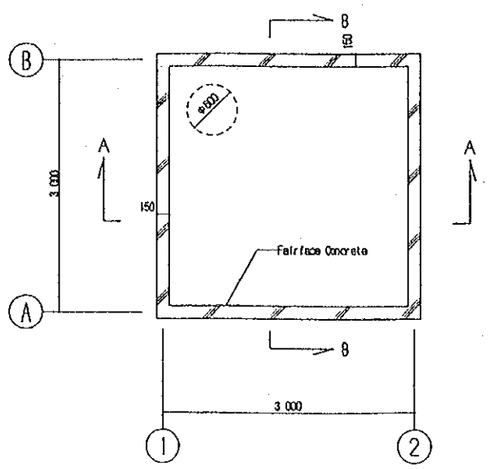
GUARD HOUSE

DATE		DRAWING NO.	4008

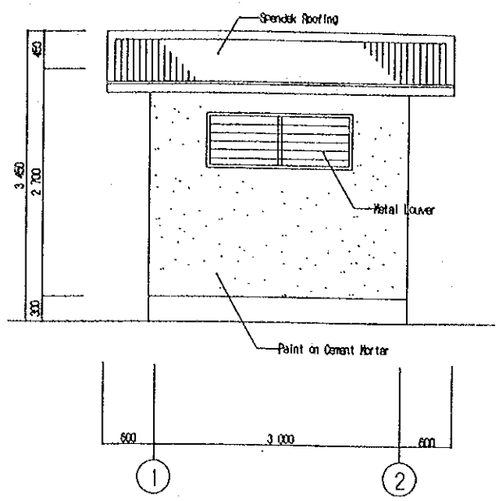
JAPAN INTERNATIONAL COOPERATION AGENCY



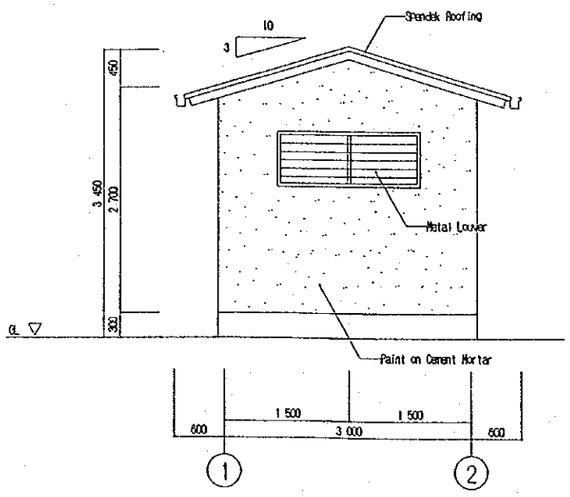
PLAN: PUMPROOM FLOOR



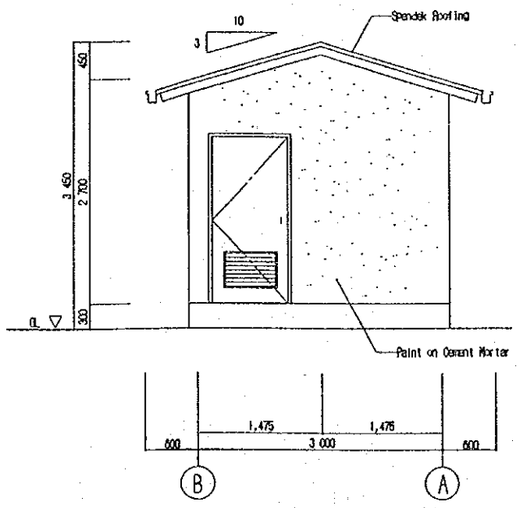
PLAN WAER RESERVOIR



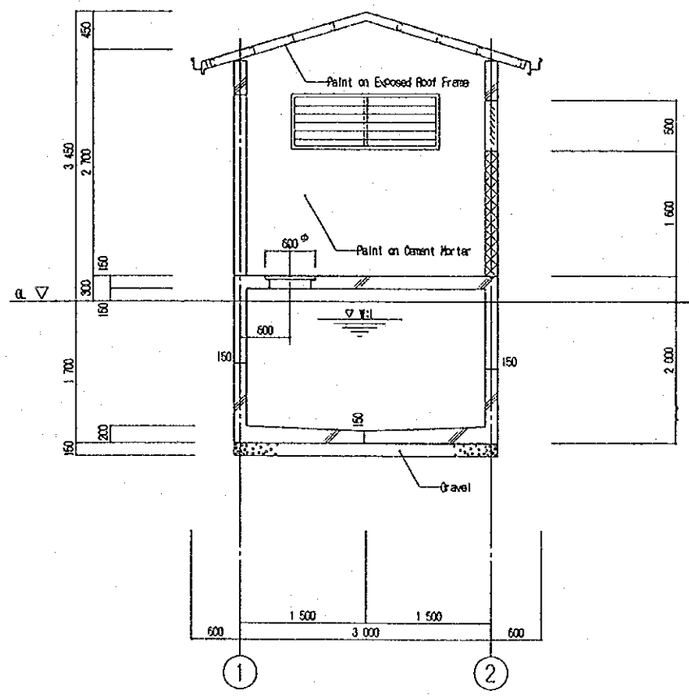
SOUTH ELEVATION



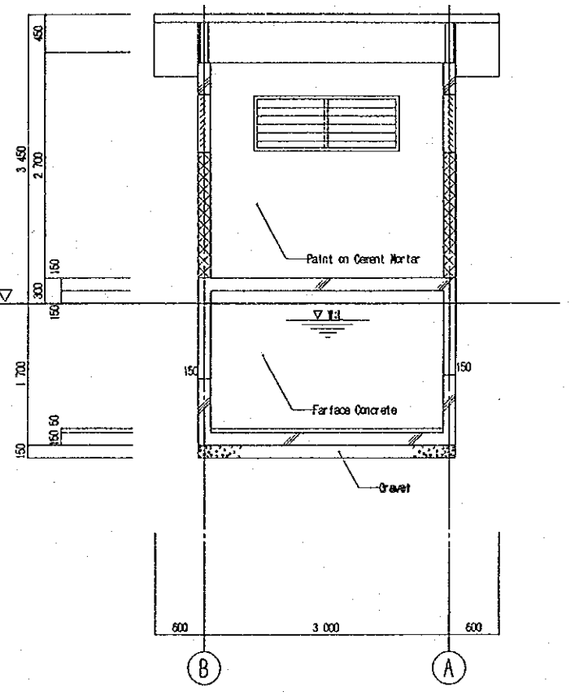
EAST ELEVATION



WEST ELEVATION



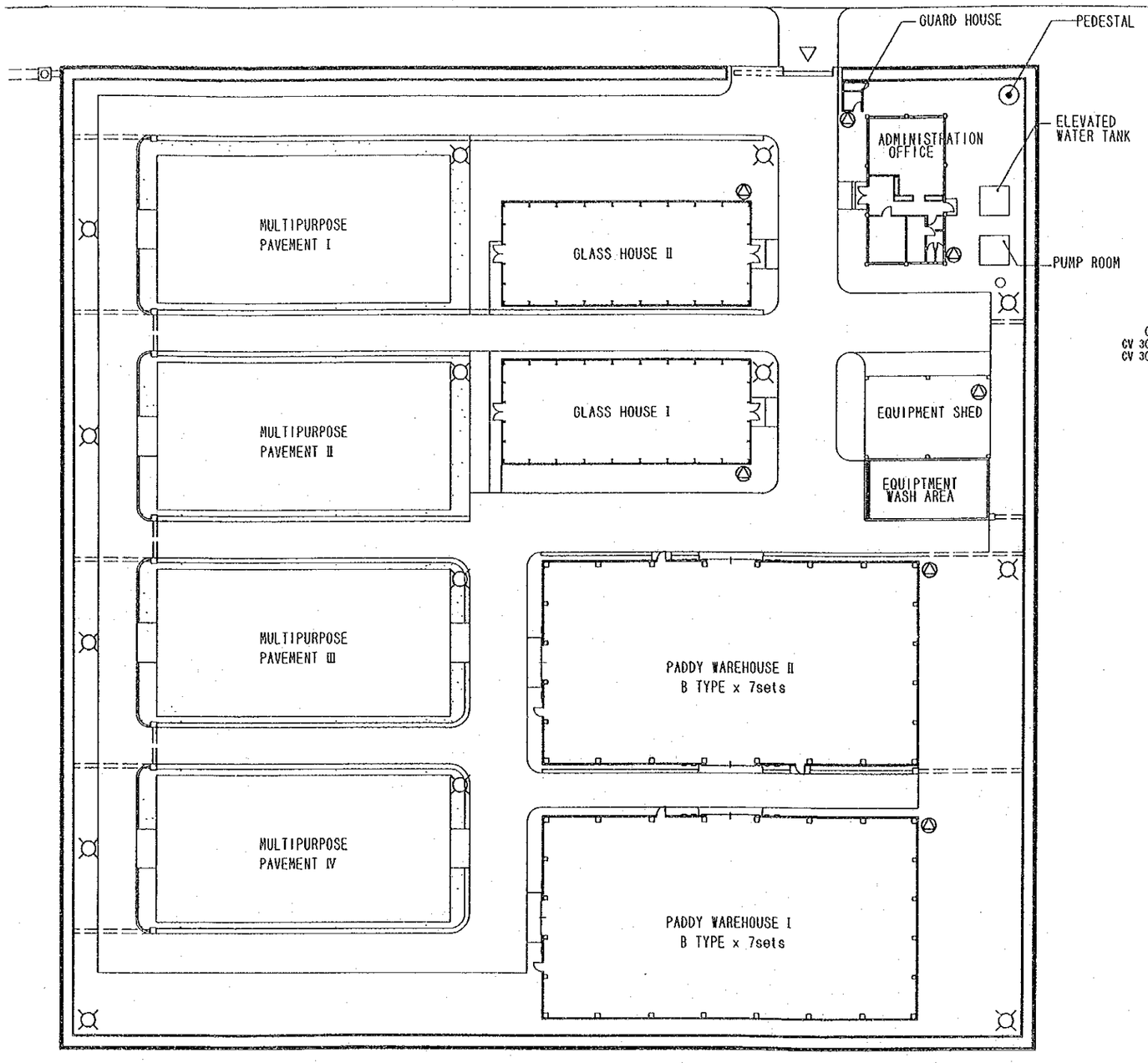
A-A SECTION

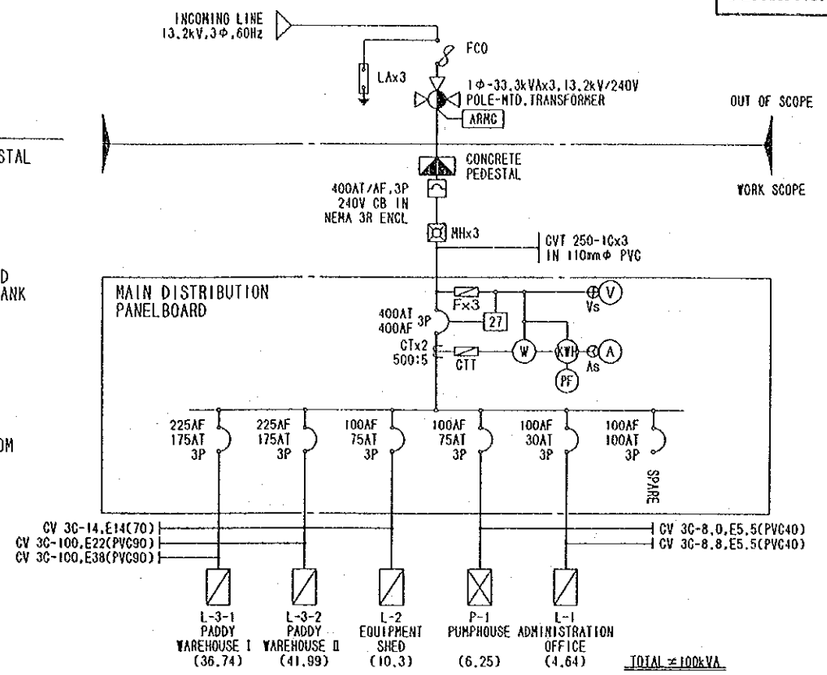


B-B SECTION

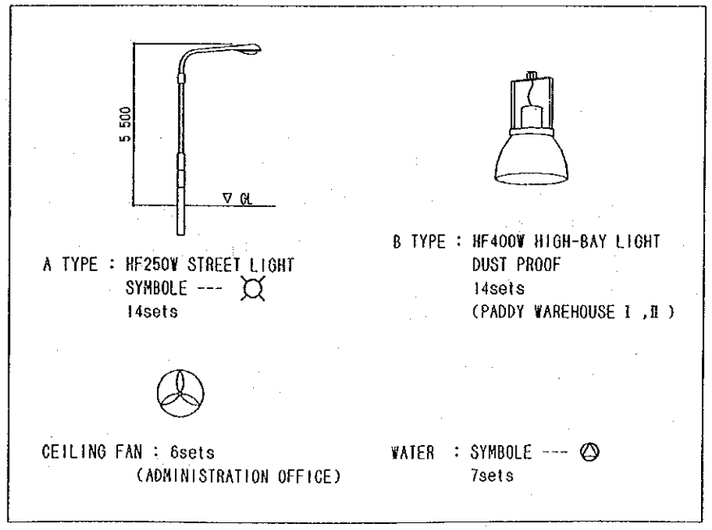
0 6m

THE REPUBLIC OF THE PHILIPPINES	
THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM	
TITLE OF DRAWING POST HARVEST FACILITY PUMP ROOM	
DATE	DRAWING NO. 4009
JAPAN INTERNATIONAL COOPERATION AGENCY	





POWER SINGLE LINE DIAGRAM



THE REPUBLIC OF THE PHILIPPINES

THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

TITLE OF DRAWING

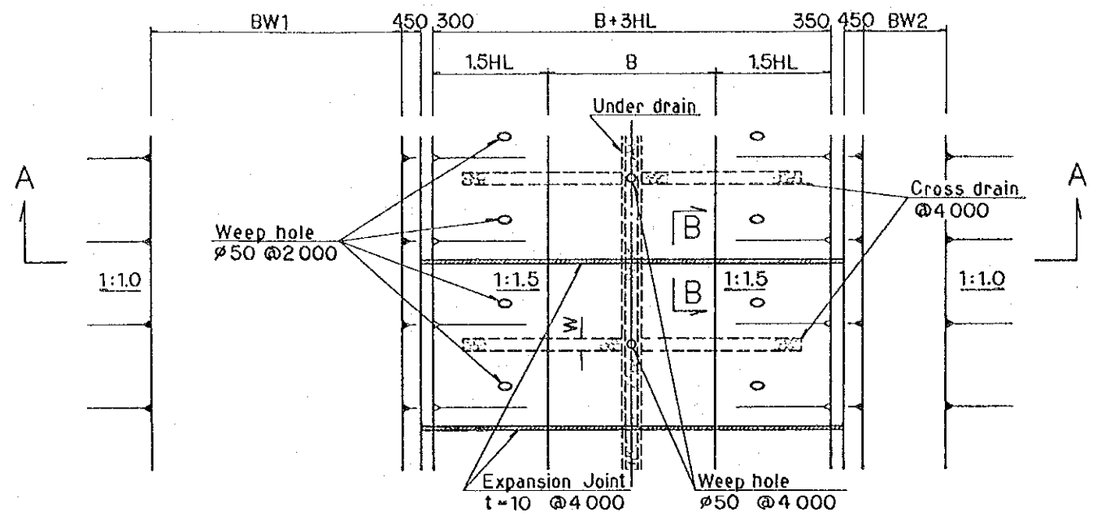
POST HARVEST FACILITY

ELECTRICAL AND LIGHTING SYSTEM

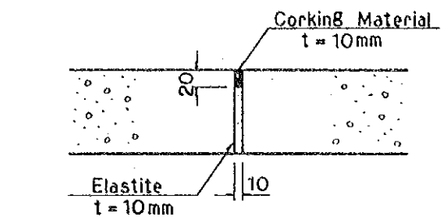
DATE		DRAWING NO.	4010

JAPAN INTERNATIONAL COOPERATION AGENCY

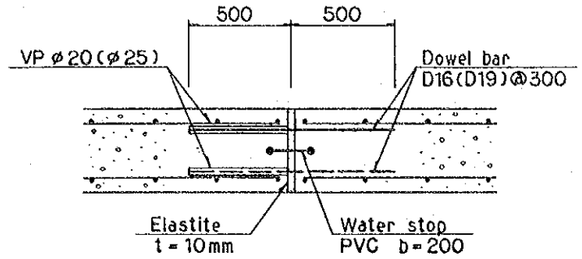
CONCRETE CANAL LINING OF MAIN CANAL



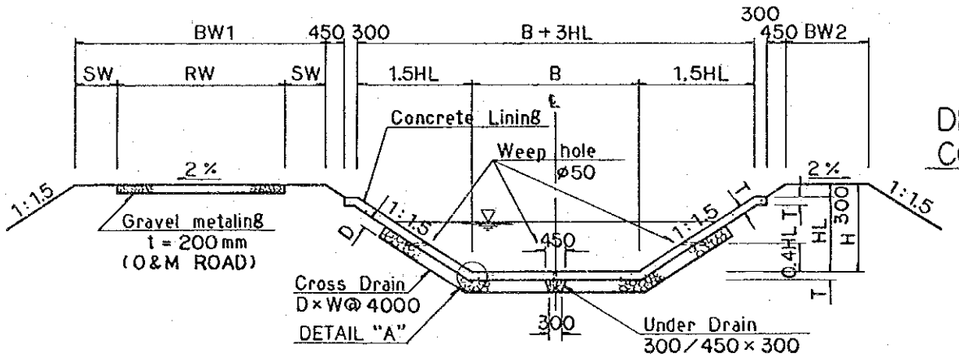
PLAN
SCALE - A



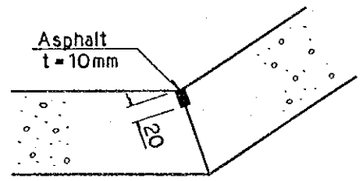
SECTION B-B
EXPANSION JOINT (Concrete Lining)
NOT TO SCALE



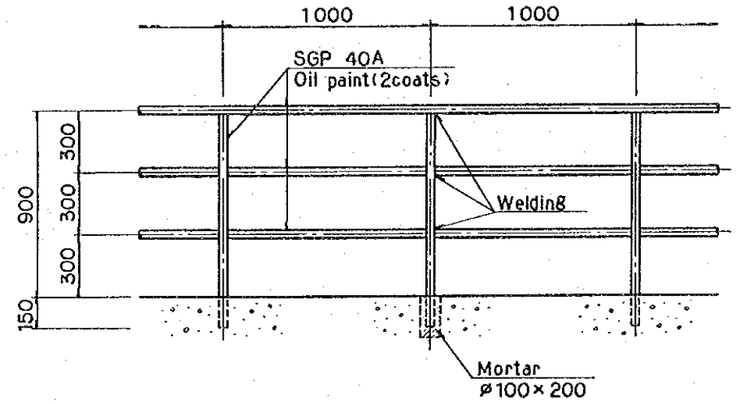
EXPANSION JOINT (Structure)
NOT TO SCALE



SECTION A-A
SCALE - A



DETAIL "A"
CONSTRUCTION JOINT (Concrete lining)
NOT TO SCALE



HAND RAIL
SCALE-B

DIMESION TABLE OF MAIN CANAL

(Unit : m)

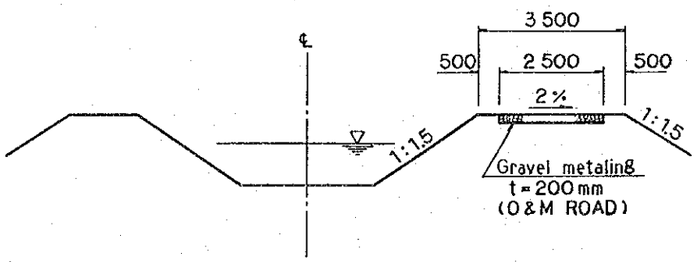
TYPE	B	HL	H	T	W	D	BW1	BW2	O&M ROAD		
									RW	SW	LOCATION
I-1	6.0	1.7	2.0	0.10	0.30	0.30	6.0	2.5	4.0	1.0	LEFT BANK
I-2	6.0	1.7	2.0	0.10	0.30	0.30	6.0	2.5	4.0	1.0	RIGHT BANK
II-1	4.0	1.9	2.2	0.10	0.30	0.30	6.0	2.0	4.0	1.0	LEFT BANK
II-2	4.0	1.8	2.1	0.10	0.30	0.30	6.0	2.0	4.0	1.0	LEFT BANK
II-3	4.0	1.7	2.0	0.10	0.30	0.30	6.0	2.0	4.0	1.0	LEFT BANK
II-4	4.0	1.2	1.5	0.10	0.30	0.30	6.0	2.0	4.0	1.0	LEFT BANK
III	3.0	1.0	1.3	0.08	0.20	0.20	4.0	1.5	3.0	0.5	LEFT BANK
IV-1	2.0	1.0	1.3	0.08	0.20	0.20	4.0	1.0	3.0	0.5	RIGHT BANK
IV-2	2.0	0.9	1.2	0.08	0.20	0.20	4.0	1.0	3.0	0.5	RIGHT BANK
IV-3	2.0	0.8	1.1	0.08	0.20	0.20	4.0	1.0	3.0	0.5	RIGHT BANK

SCALE - A 0 5m

SCALE - B 0 1m

TYPICAL CROSS SECTION OF LATERAL-A

STA. 3+270~STA. 4+990 SCALE - A



THE REPUBLIC OF THE PHILIPPINES

THE OPTIMUM WATER UTILIZATION AND RURAL DEVELOPMENT PROJECT IN AGANAN RIVER IRRIGATION SYSTEM

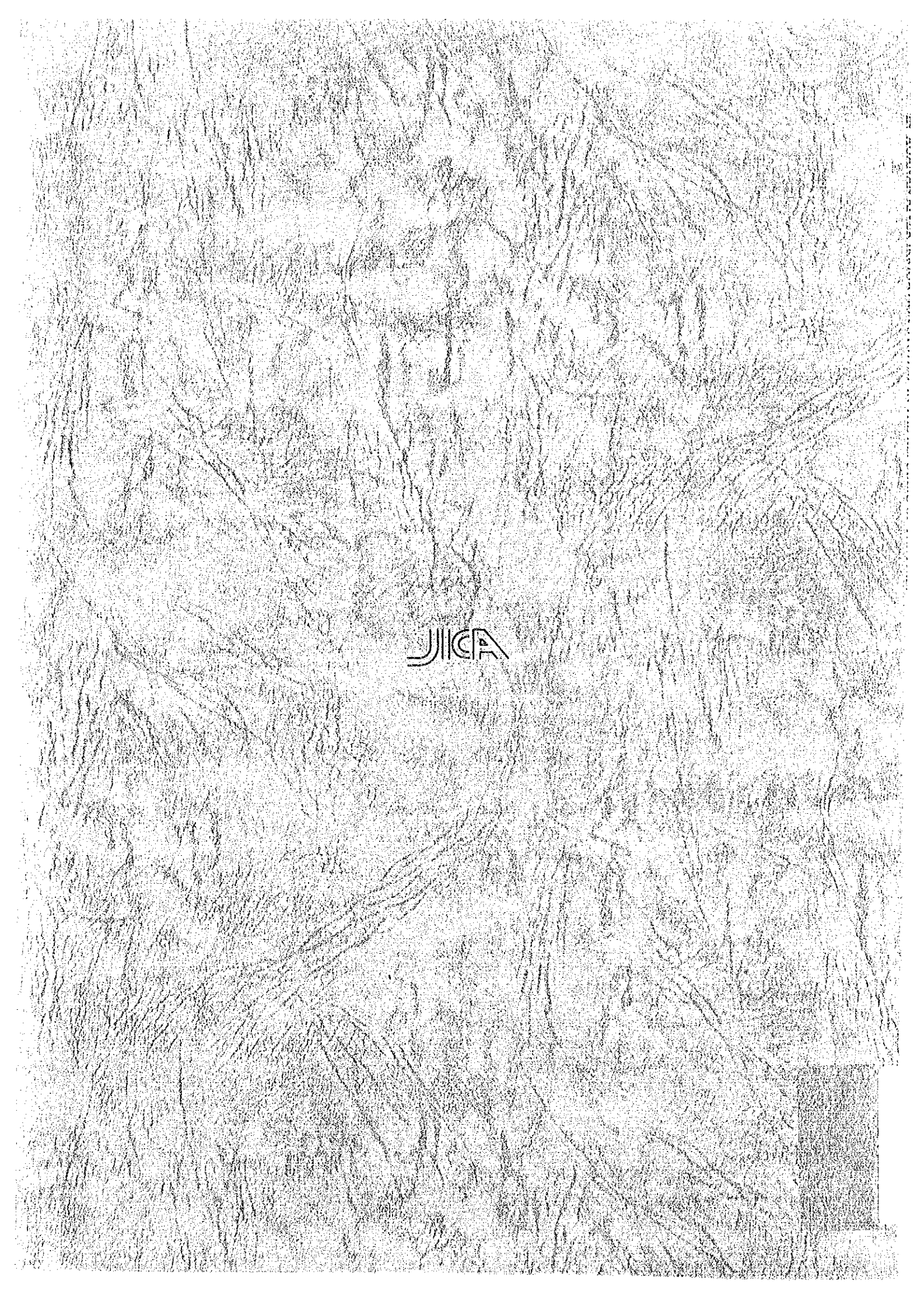
TITLE OF DRAWING

MISCELLANEOUS

TYPICAL CROSS SECTIONS OF CANALS AND O&M ROAD, MISCELLANEOUS

DATE		DRAWING NO.	5001

JAPAN INTERNATIONAL COOPERATION AGENCY


JICA