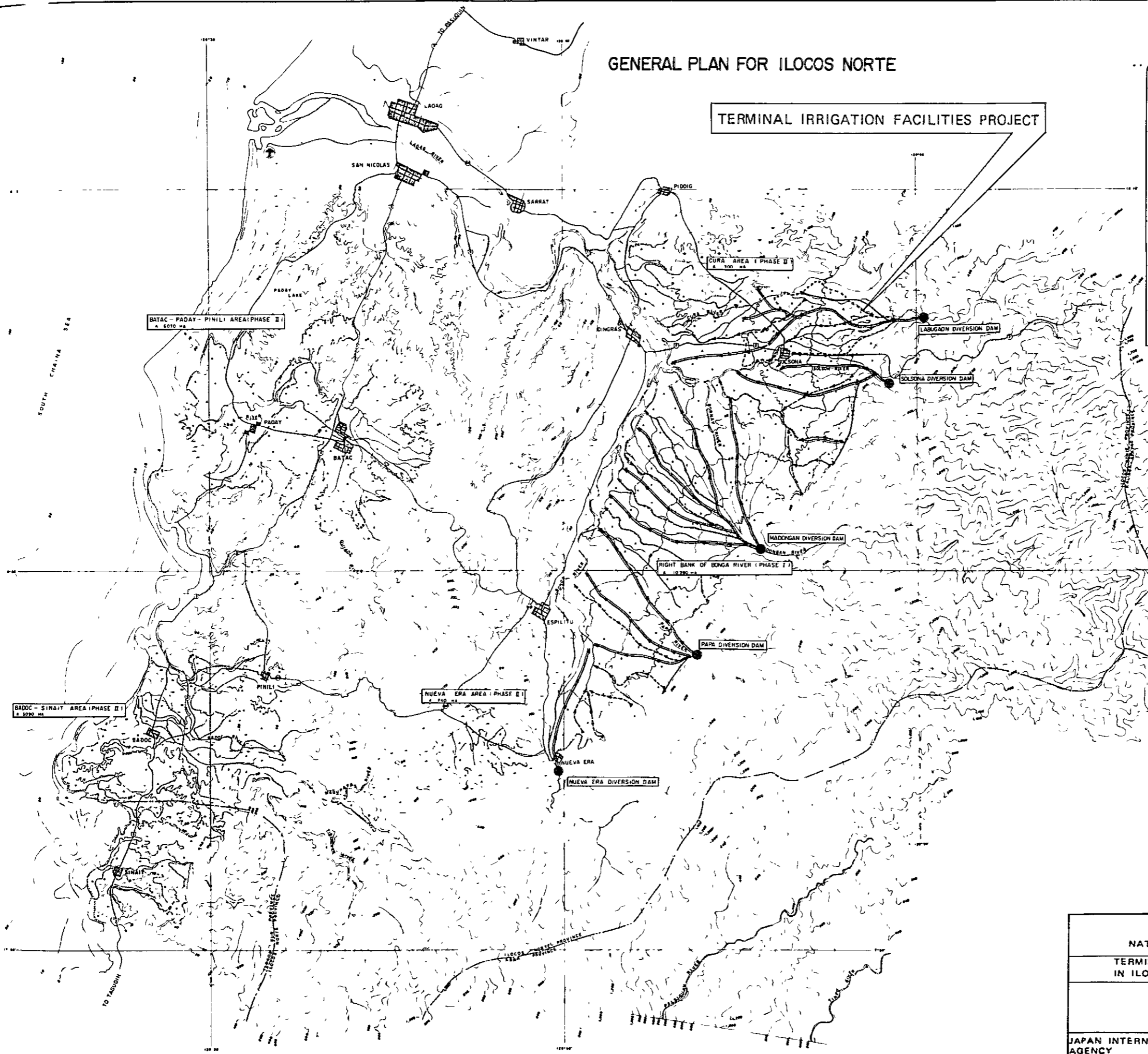
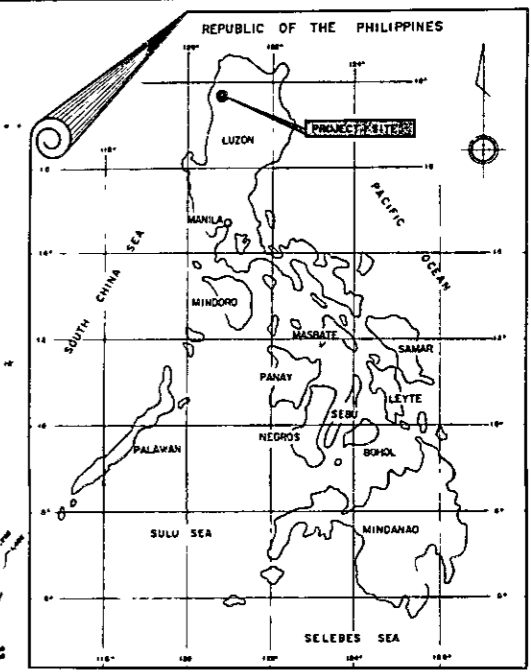


**APPENDIX**  
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	4.	TEMPORARY INTAKE FACILITIES	
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	8.	HEAD GATE AND TURNOUT	"
	9.	CHECK AND DROP	"
	10.	DROP	"
	11.	DRAINAGE CANAL	DRAINAGE
	12.	DROP	"
	13.	DRAINAGE INLET	"
	14.	TERMINAL FACILITIES	
	15.	PLAN OF PROJECT OFFICE SITE	PROJECT OFFICE
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	21.	"	No. 3/3
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	24.	"	(L-L3 & DL-3)

# GENERAL PLAN FOR ILOCOS NORTE

## TERMINAL IRRIGATION FACILITIES PROJECT

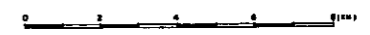


### LEGEND

- BOUNDARY OF PROVINCE
- NATIONAL AND PROVINCIAL ROADS
- RIVER AND RIVER WASHED AREA
- TOWN
- EXISTING PADDY FIELDS
- TROPICAL GRASS LAND
- CONTOUR LINE
- BOUNDARY OF BENEFICIAL AREA
- PROPOSED DIVERSION DAM
- PROPOSED MAIN IRRIGATION CANAL AND ROAD
- PROPOSED MAIN DRAINAGE CANAL (NEWLY CONSTRUCTED)
- PROPOSED MAIN DRAINAGE CANAL (EXISTING RIVER OR CREEK)

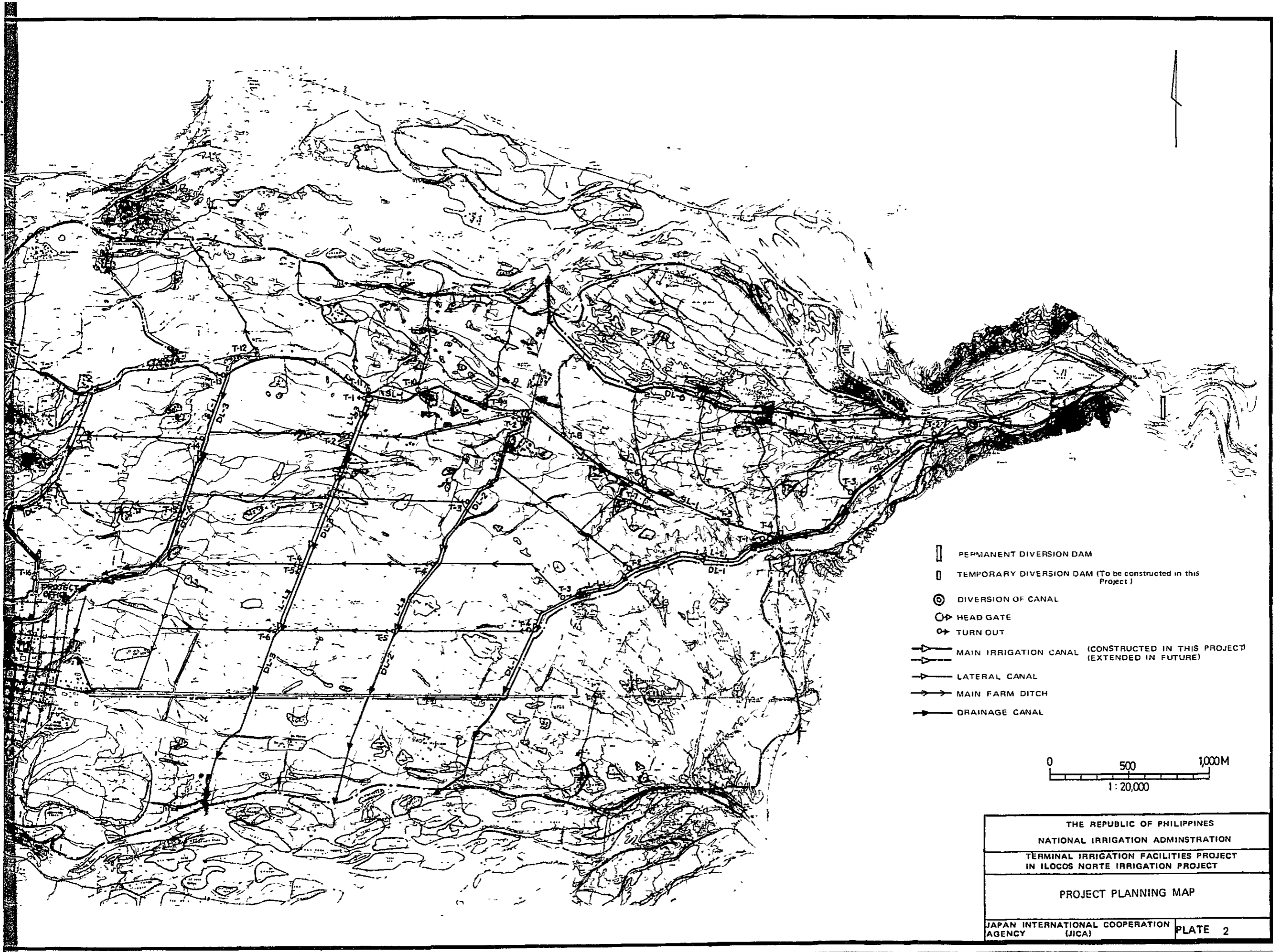
TERMINAL IRRIGATION FACILITIES PROJECT AREA

### SCALE



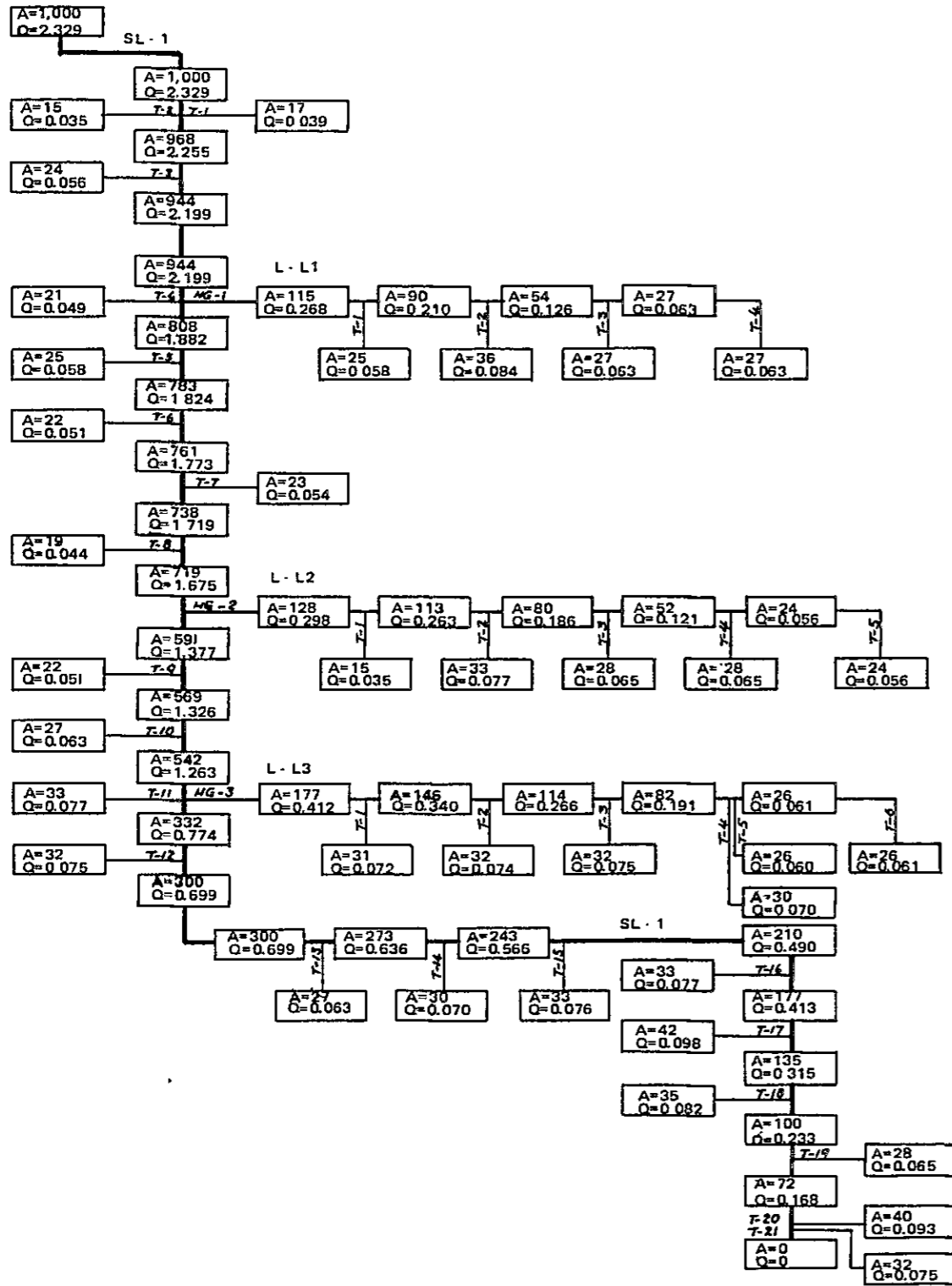
THE REPUBLIC OF PHILIPPINES	
NATIONAL IRRIGATION ADMINISTRATION	
TERMINAL IRRIGATION FACILITIES PROJECT IN ILOCOS NORTE IRRIGATION PROJECT	
LOCATION MAP	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PLATE 1





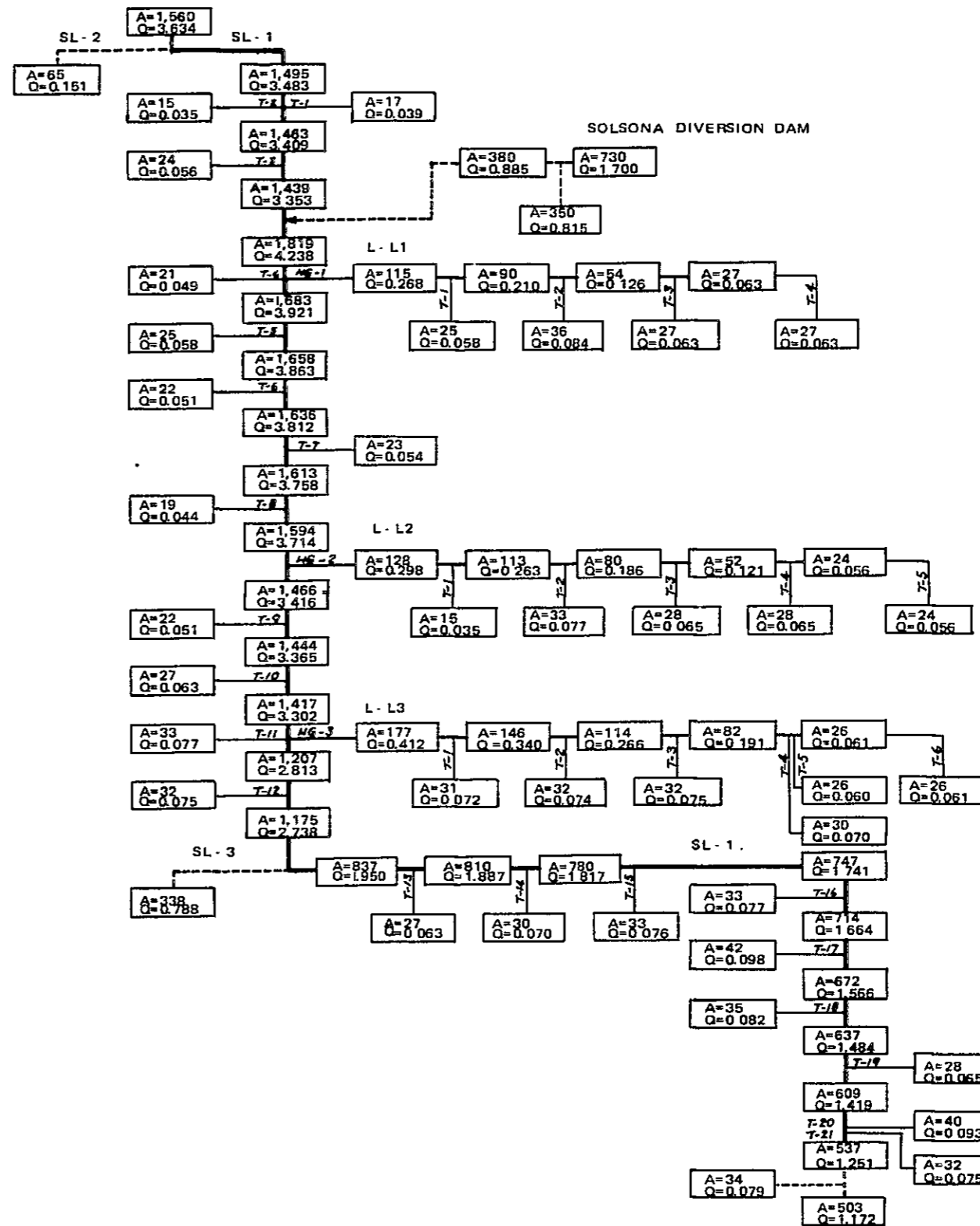
CANAL NETWORK IN THIS PROJECT

LABUGAON DIVERSION DAM

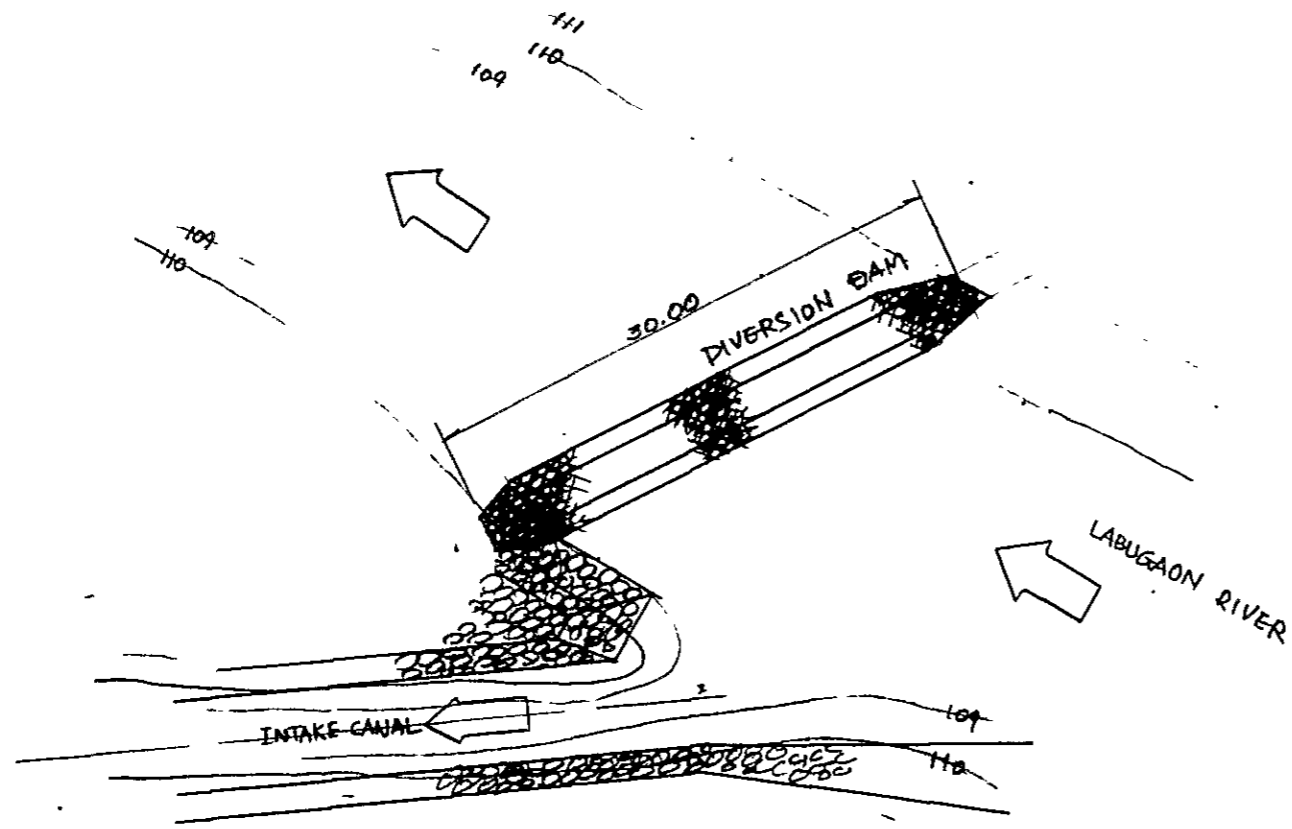


CANAL NETWORK AFTER COMPLETION OF PHASE I PROJECT

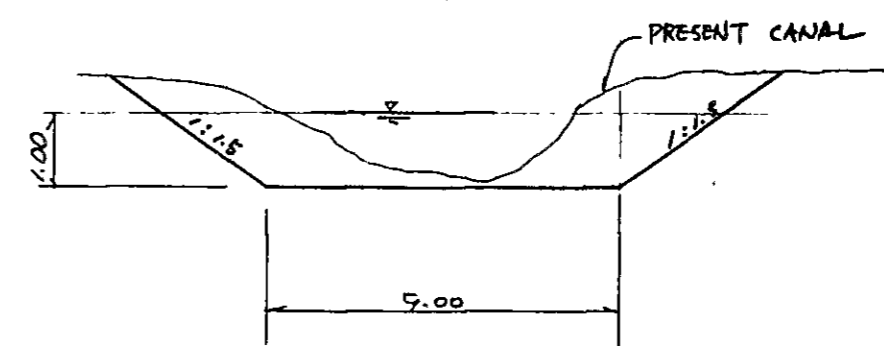
LABUGAON DIVERSION DAM



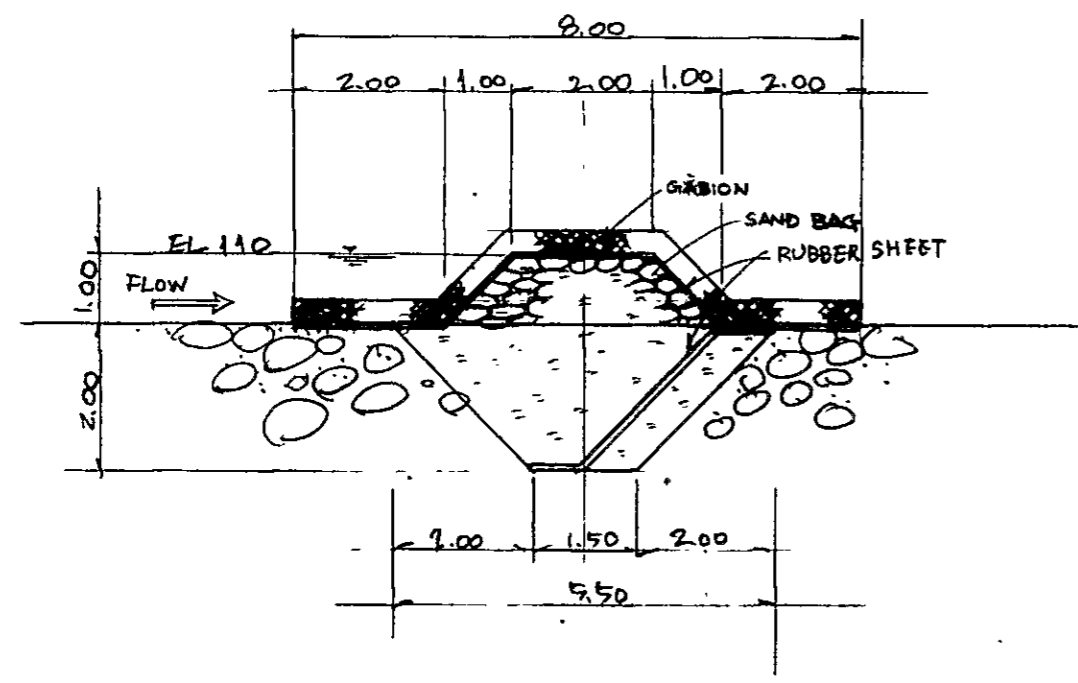
NOTE A ha  
Q cu.m/sec



PLAN  
1:400



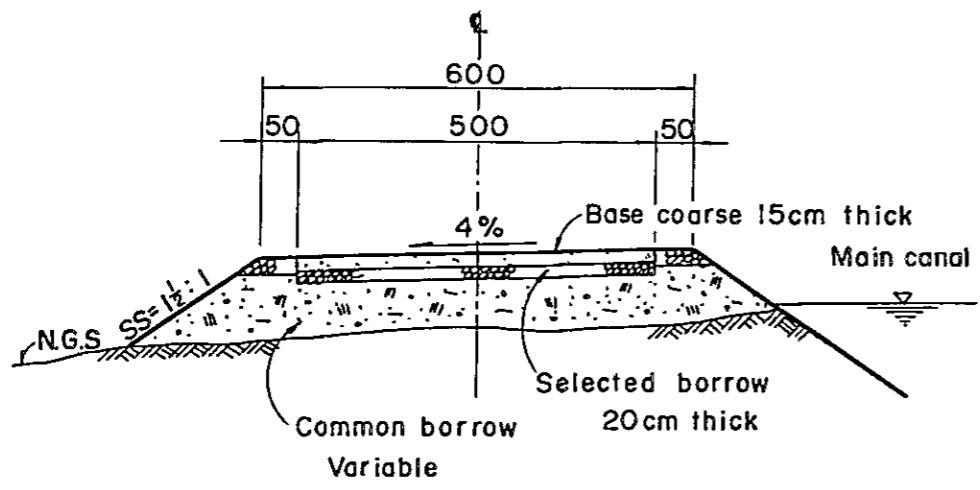
INTAKE CANAL  
1:100



DIVERSION DAM  
1:100

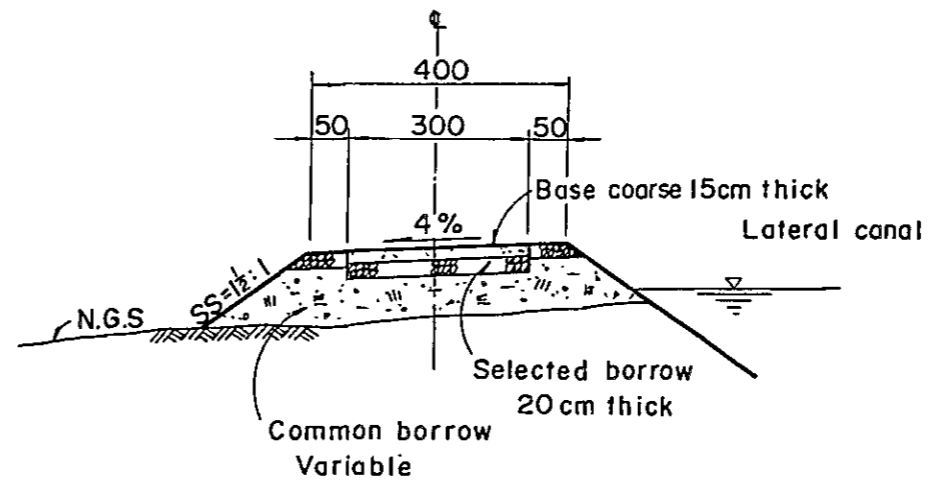
THE REPUBLIC OF PHILIPPINES	
NATIONAL IRRIGATION ADMINISTRATION	
TERMINAL IRRIGATION FACILITIES PROJECT IN ILOCOS NORTE IRRIGATION PROJECT	
TEMPORARY INTAKE FACILITIES DIVERSION DAM AND INTAKE CANAL	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PLATE 4

TYPE A



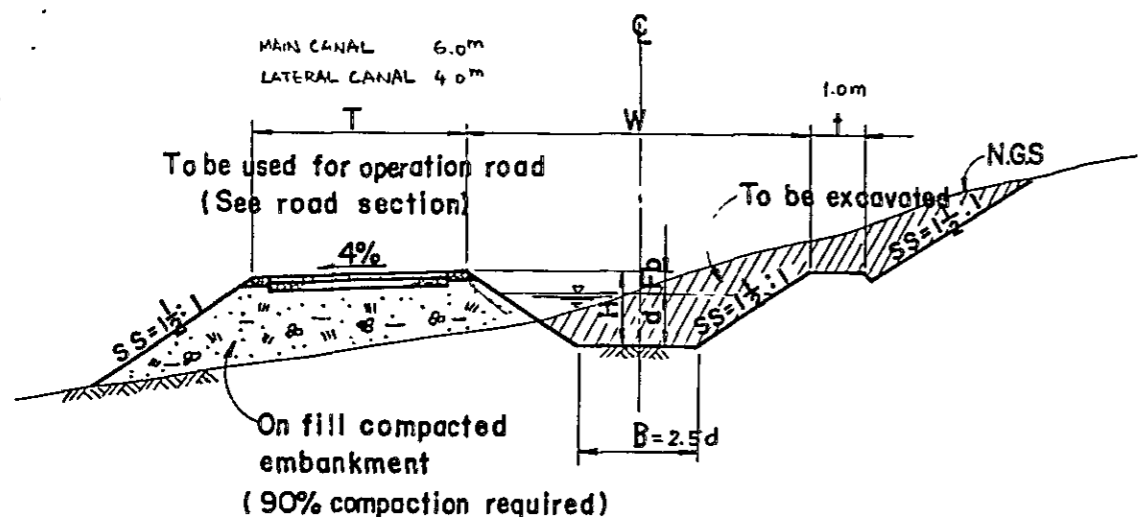
SERVICE ROAD ALONG MAIN CANALS

TYPE B

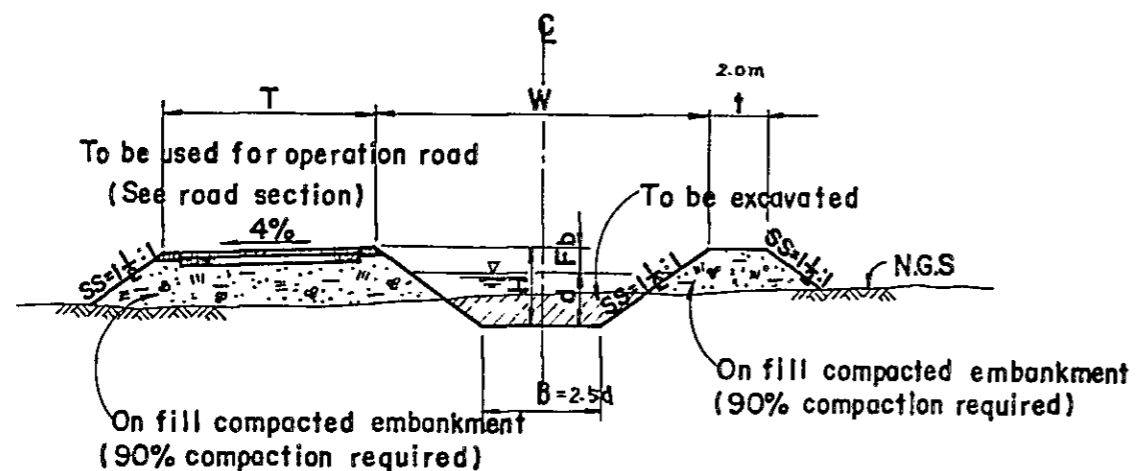


SERVICE ROAD ALONG LATERAL CANALS

THE REPUBLIC OF PHILIPPINES	
NATIONAL IRRIGATION ADMINISTRATION	
TERMINAL IRRIGATION FACILITIES PROJECT IN ILOCOS NORTE IRRIGATION PROJECT	
ROAD	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PLATE 5



**TYPICAL SECTION FOR INCLINED GROUND SURFACE**

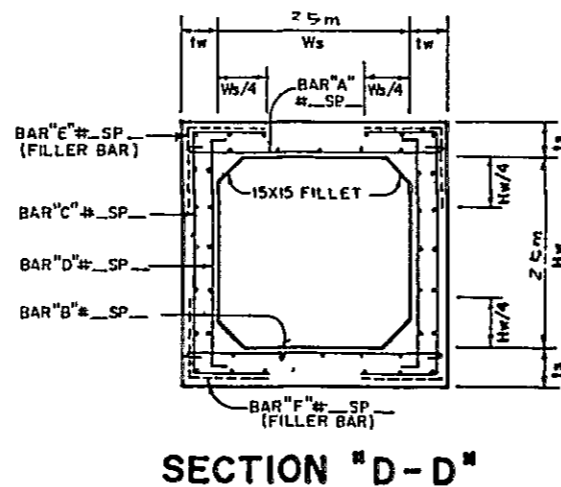
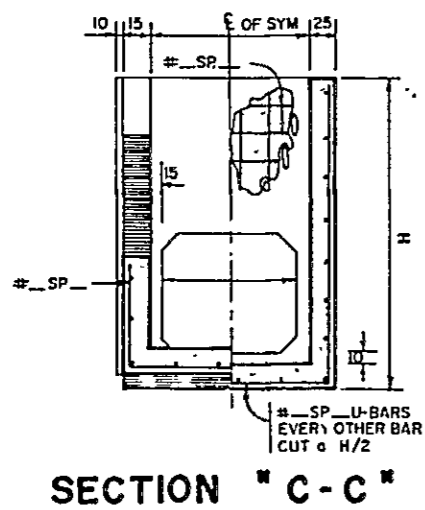
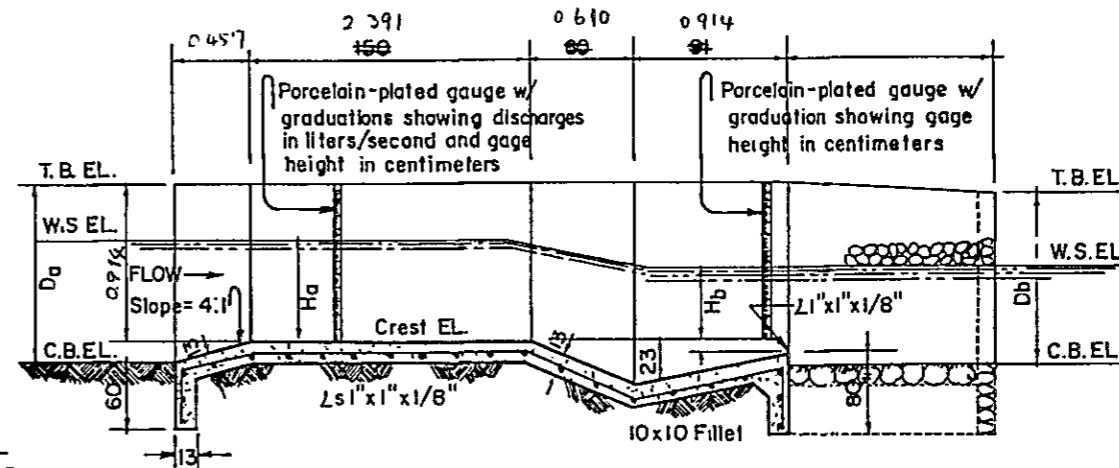
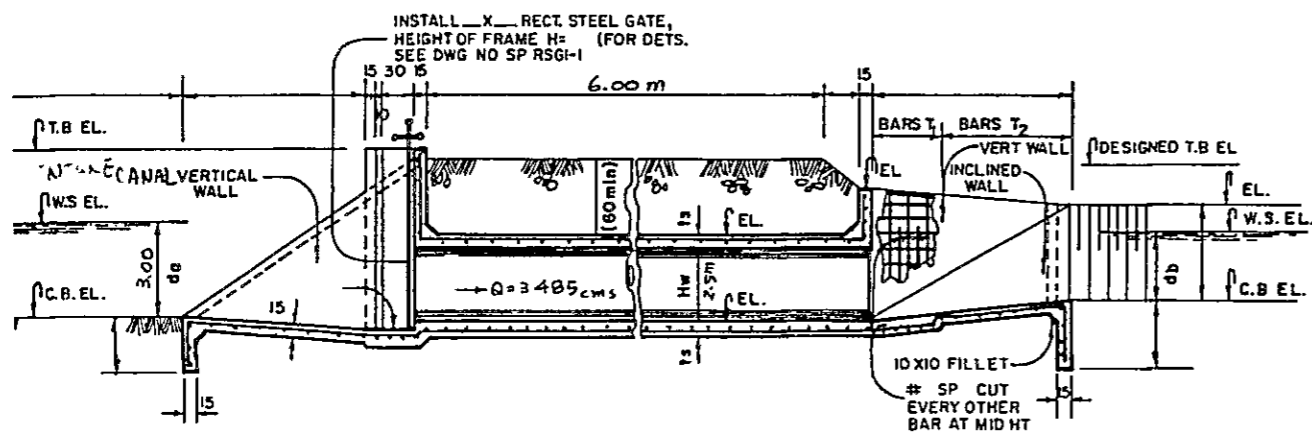
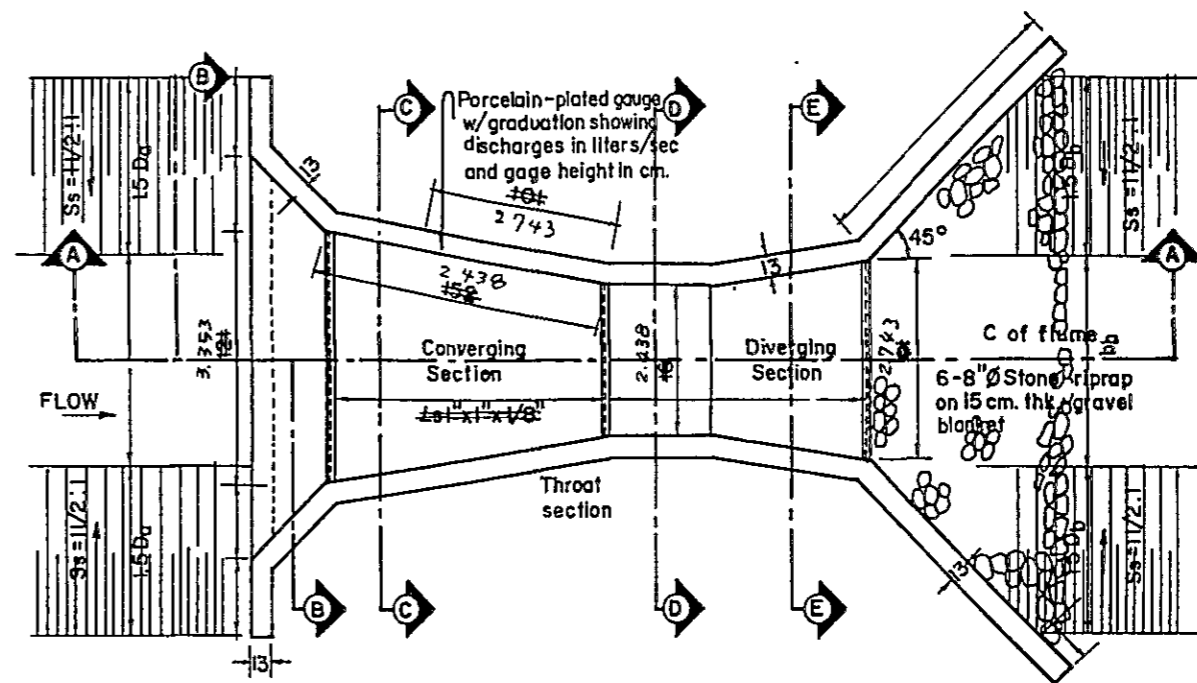
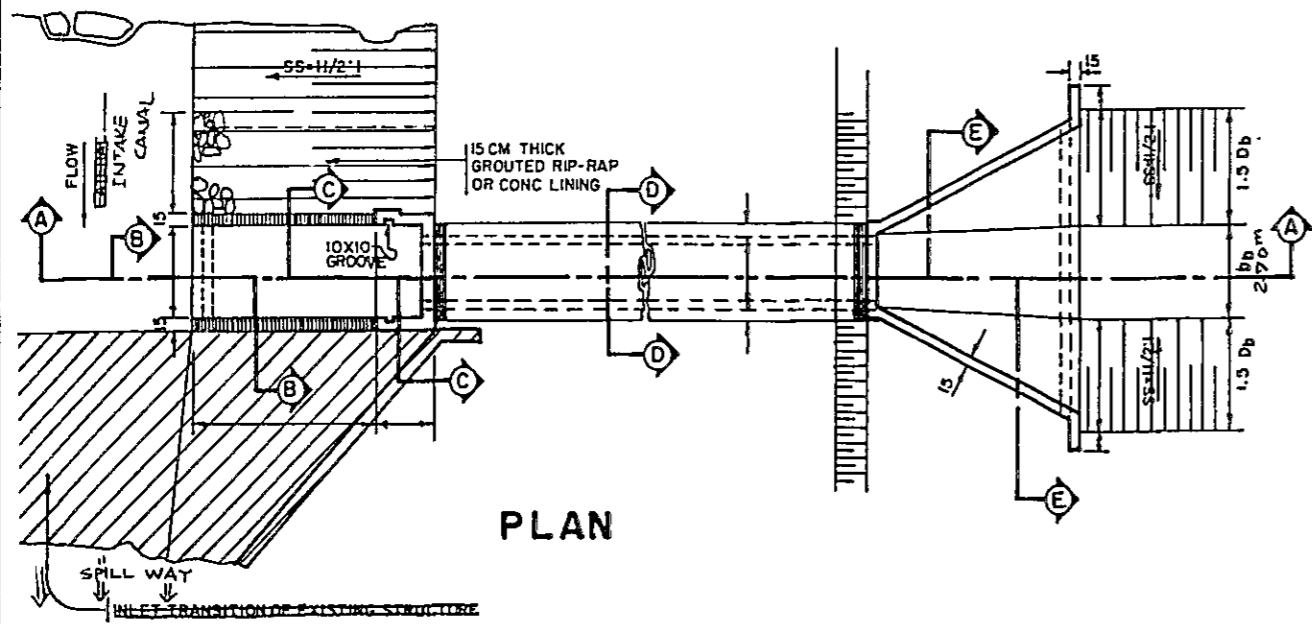


**TYPICAL SECTION FOR FLAT GROUND SURFACE**

(UNIT: m)

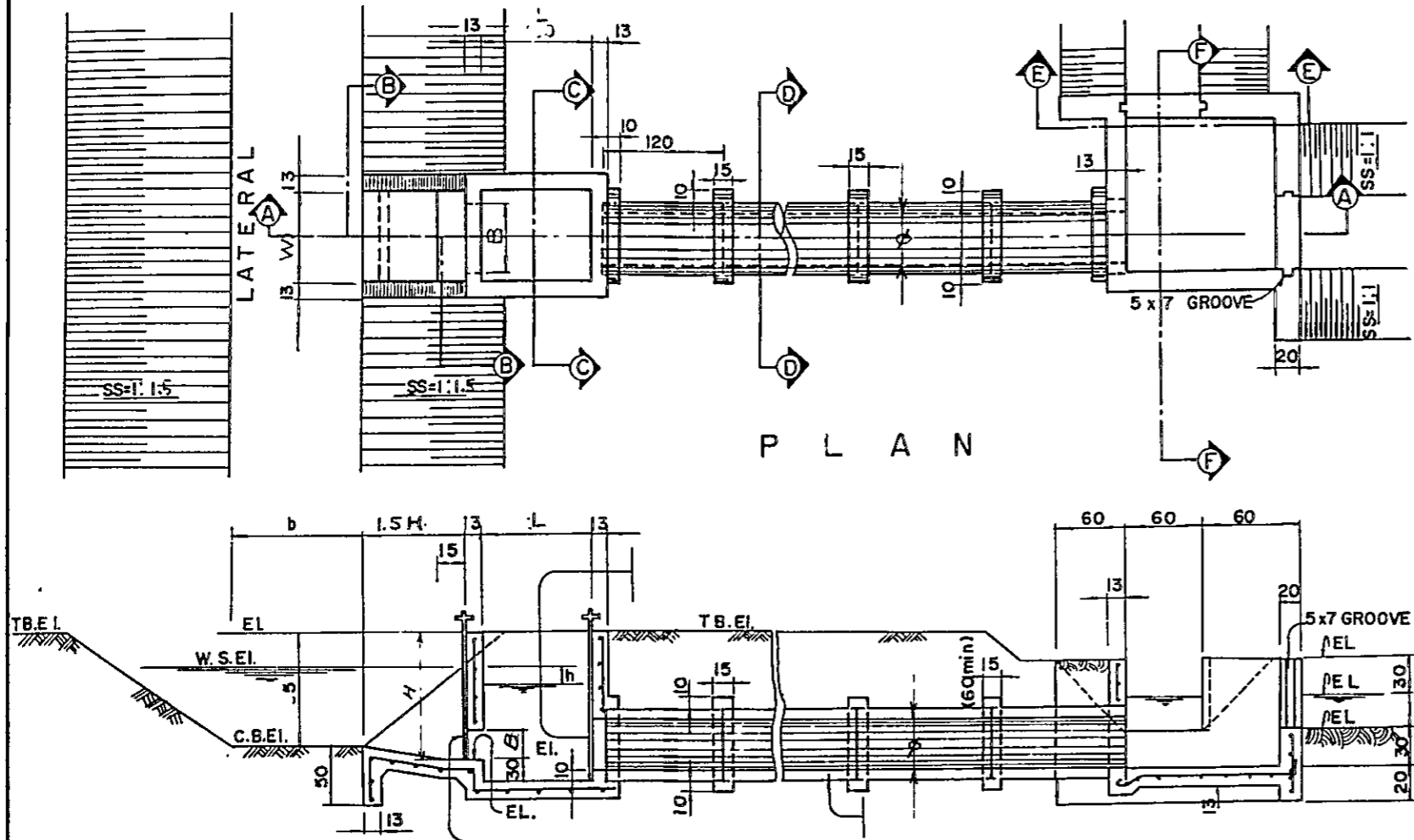
u	D	J	H	Fd	v	AV	GRT		
4.50	1.50	3.20	1.32	0.52	0.06	0.00	0.359E-03	1/	2947
4.25	1.27	3.19	1.73	0.51	0.05	0.65	0.340E-03	1/	2943
4.00	1.25	3.11	1.74	0.50	0.34	0.64	0.340E-03	1/	2940
3.75	1.22	3.04	1.70	0.49	0.63	0.63	0.341E-03	1/	2936
3.50	1.13	2.95	1.56	0.47	0.52	0.62	0.341E-03	1/	2932
3.25	1.15	2.30	1.61	0.46	0.61	0.61	0.342E-03	1/	2923
3.00	1.12	2.79	1.56	0.45	0.60	0.50	0.342E-03	1/	2923
2.75	1.03	2.70	1.51	0.43	0.59	0.59	0.343E-03	1/	2910
2.50	1.04	2.61	1.40	0.42	0.58	0.58	0.343E-03	1/	2912
2.25	1.00	2.50	1.40	0.40	0.56	0.56	0.344E-03	1/	2906
2.00	0.96	2.39	1.34	0.38	0.54	0.54	0.345E-03	1/	2899
1.75	0.91	2.28	1.28	0.36	0.53	0.53	0.346E-03	1/	2892
1.50	0.85	2.15	1.20	0.34	0.51	0.51	0.347E-03	1/	2885
1.25	0.80	2.00	1.12	0.32	0.49	0.49	0.348E-03	1/	2872
1.00	0.74	1.84	1.04	0.30	0.46	0.46	0.350E-03	1/	2859
0.75	0.66	1.65	0.96	0.30	0.43	0.43	0.352E-03	1/	2843
0.50	0.57	1.42	0.87	0.30	0.39	0.39	0.355E-03	1/	2820
0.40	0.52	1.30	0.82	0.30	0.37	0.37	0.356E-03	1/	2807
0.30	0.47	1.17	0.77	0.30	0.34	0.34	0.358E-03	1/	2791
0.20	0.40	1.00	0.70	0.30	0.31	0.31	0.361E-03	1/	2769
0.15	0.36	0.90	0.66	0.30	0.29	0.29	0.363E-03	1/	2753
0.10	0.31	0.77	0.61	0.30	0.26	0.26	0.366E-03	1/	2731
0.05	0.24	0.59	0.54	0.30	0.22	0.22	0.371E-03	1/	2693





NOTE: DIMENSION IN METERS

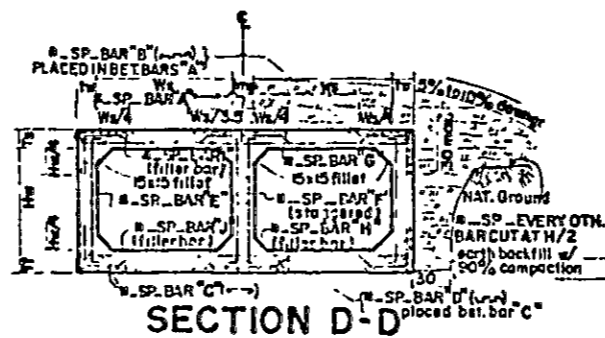
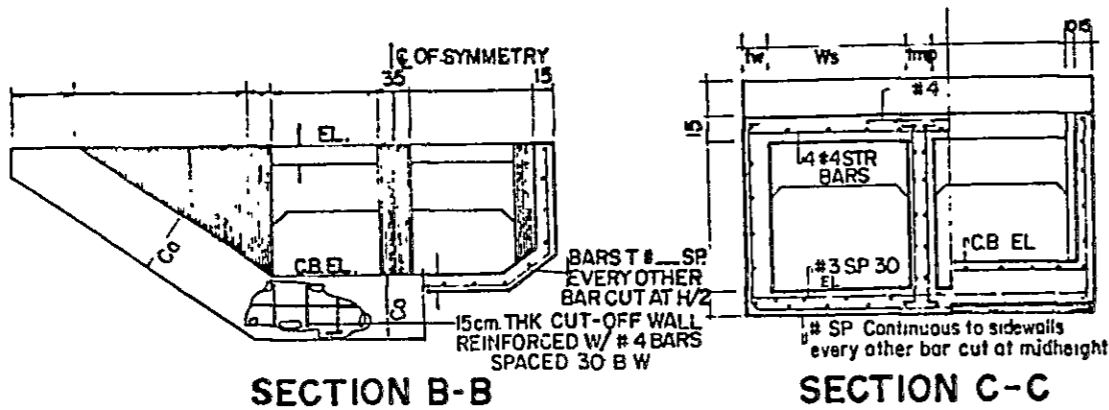
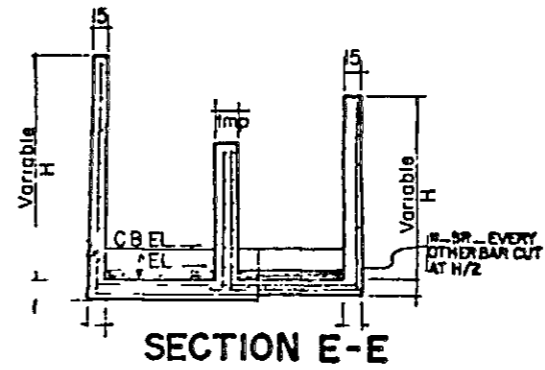
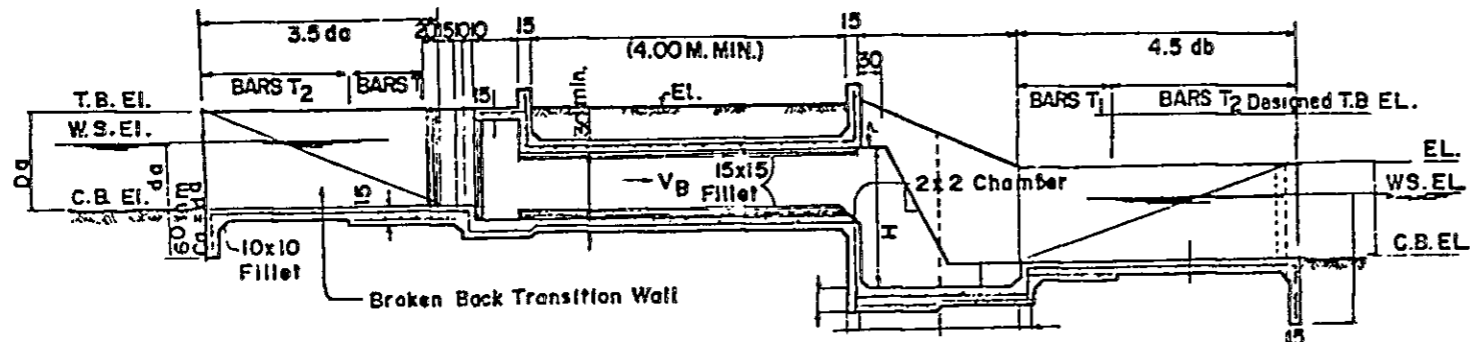
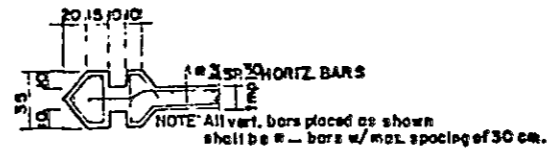
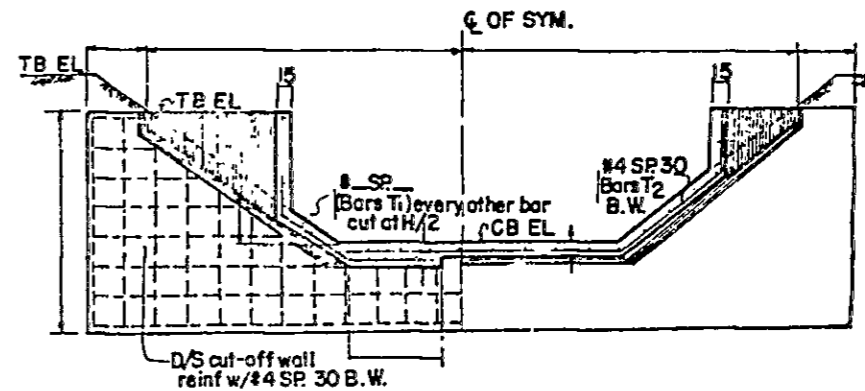
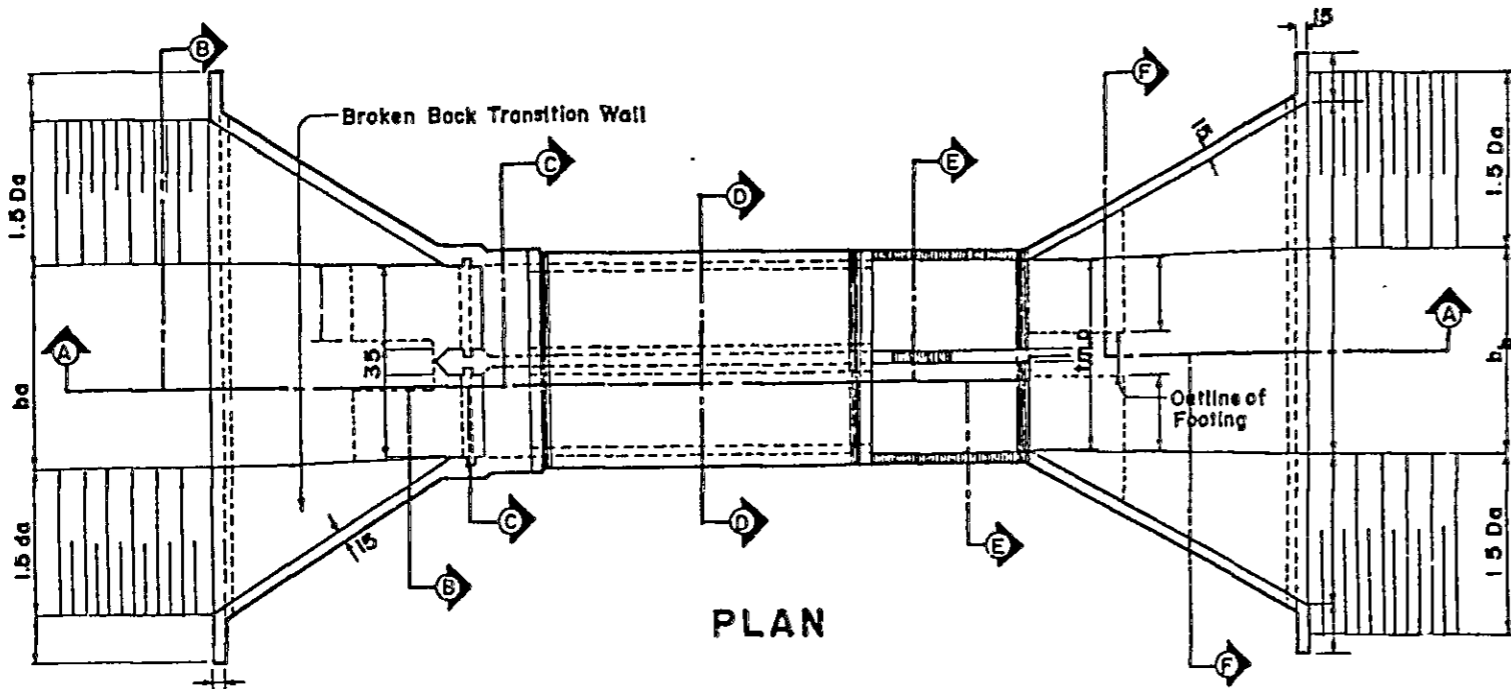
THE REPUBLIC OF PHILIPPINES	
NATIONAL IRRIGATION ADMINISTRATION	
TERMINAL IRRIGATION FACILITIES PROJECT IN ILOCOS NORTE IRRIGATION PROJECT	
DIVERSION	
IRRIGATION	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PLATE 7

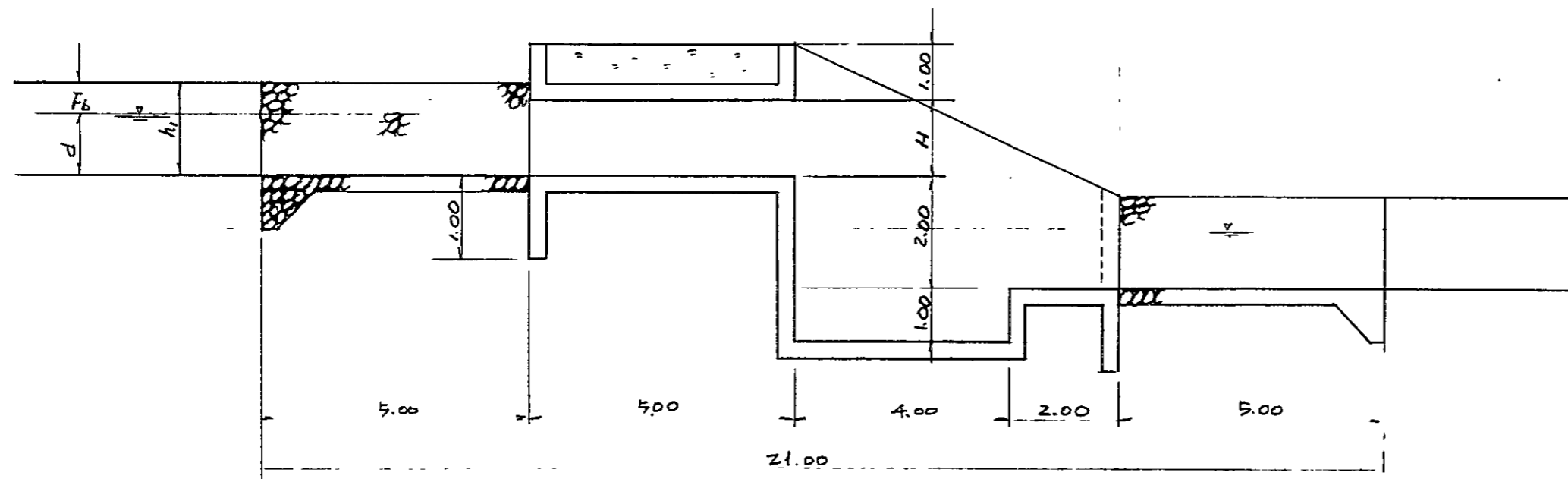
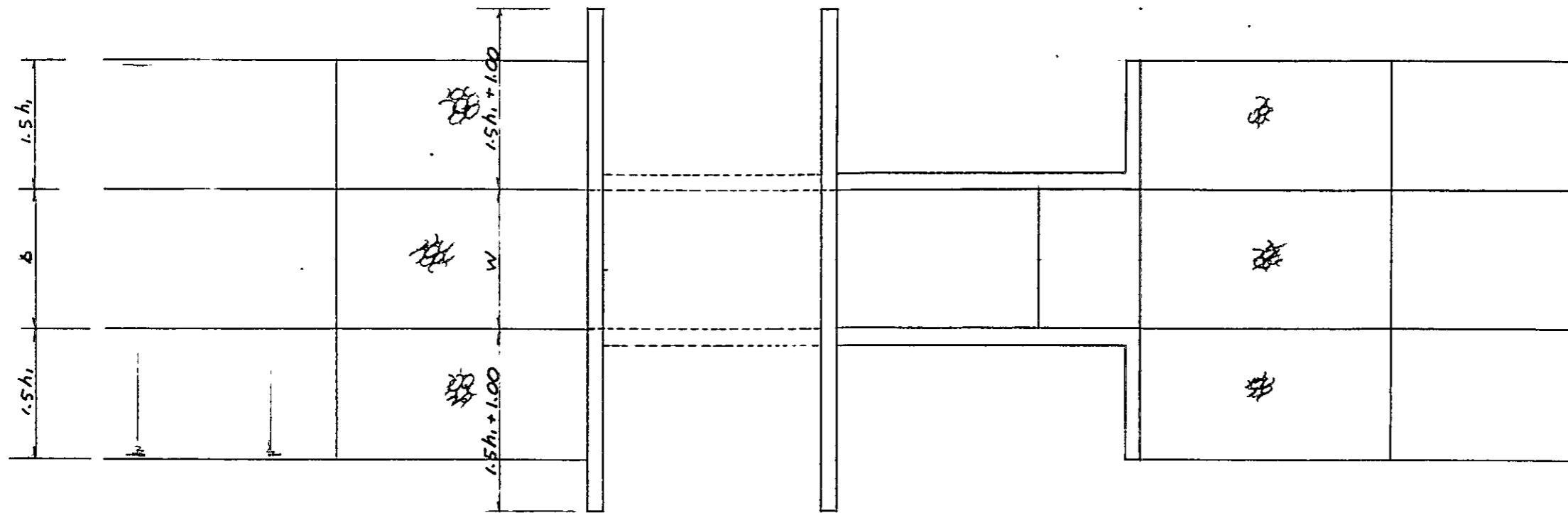


UNIT: cm

DISCHARGE	H	L	W	B	$\phi$	
Q = 0.689 cms	200	250	140	110	90	HEAD GATE
Q = 0.350	180	175	110	80	60	
Q = 0.140	120	110	80	50	40	TURNOUT

THE REPUBLIC OF PHILIPPINES NATIONAL IRRIGATION ADMINISTRATION	
TERMINAL IRRIGATION FACILITIES PROJECT IN ILOCOS NORTE IRRIGATION PROJECT	
HEAD GATE AND TURNOUT IRRIGATION	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PLATE 8

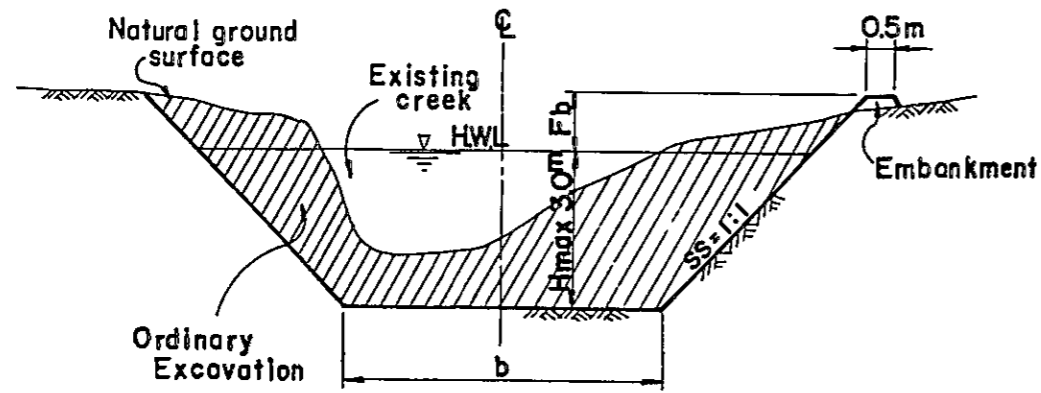




DIMENSION IN METERS

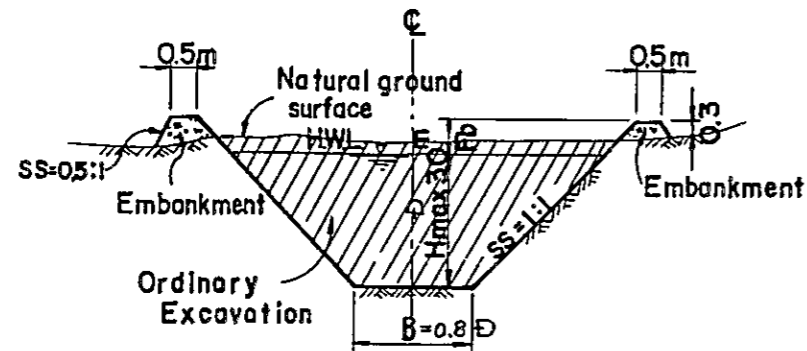
Q cms	b	d	Fb	h <sub>1</sub>	W	H
3.25	3.00	1.30	0.55	1.85	3.00	1.60
2.76	2.70	1.10	0.45	1.55	2.70	1.40
1.71	2.30	0.95	0.40	1.35	2.30	1.20

THE REPUBLIC OF PHILIPPINES NATIONAL IRRIGATION ADMINISTRATION TERMINAL IRRIGATION FACILITIES PROJECT IN ILOCOS NORTE IRRIGATION PROJECT	
DROP	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PLATE 10

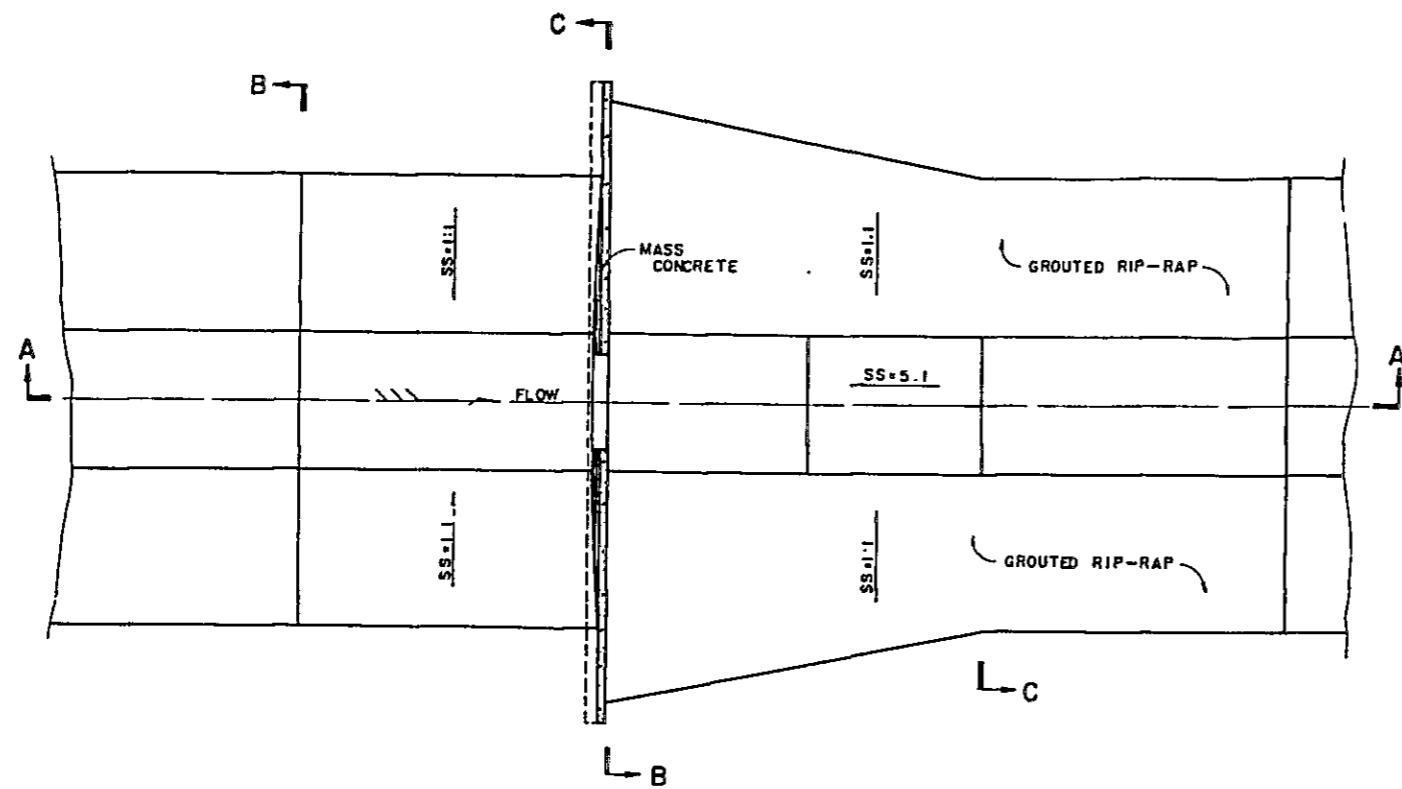


TYPICAL SECTION OF IMPROVEMENT CANALS

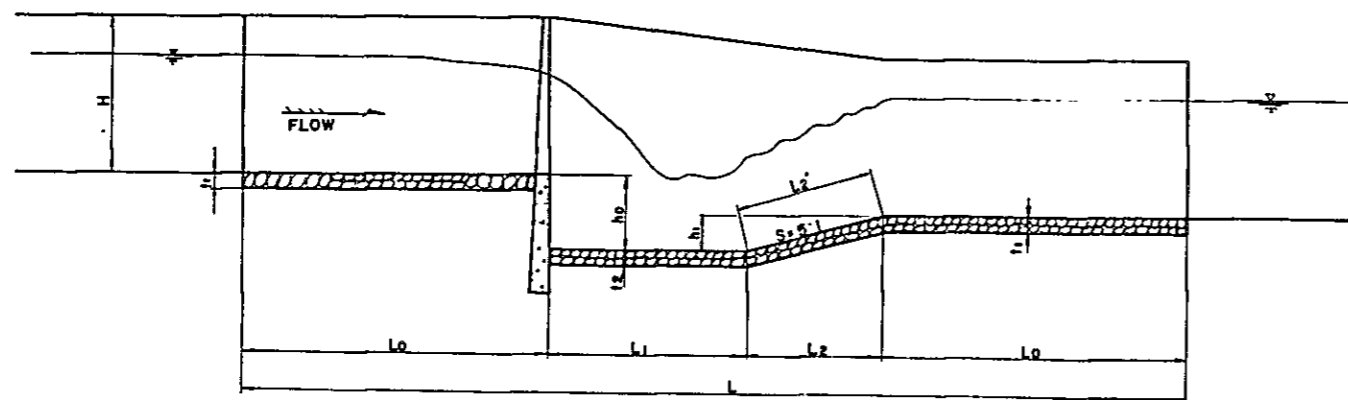
Q	D	B	H	F	V	AV	GRT		
9.00	1.96	1.57	2.26	0.30	1.30	1.29	0.109E-02	1/	919
8.00	1.86	1.50	2.13	0.30	1.26	1.26	0.109E-02	1/	917
7.00	1.79	1.43	2.09	0.30	1.22	1.22	0.109E-02	1/	914
6.00	1.63	1.35	1.93	0.30	1.17	1.17	0.110E-02	1/	911
5.00	1.57	1.26	1.87	0.30	1.12	1.12	0.110E-02	1/	908
4.00	1.44	1.16	1.74	0.30	1.06	1.06	0.111E-02	1/	904
3.50	1.37	1.10	1.67	0.30	1.03	1.03	0.111E-02	1/	902
3.00	1.30	1.04	1.60	0.30	0.99	0.99	0.111E-02	1/	899
2.50	1.21	0.97	1.51	0.30	0.95	0.95	0.112E-02	1/	896
2.00	1.11	0.89	1.41	0.30	0.90	0.90	0.112E-02	1/	892
1.75	1.06	0.85	1.36	0.30	0.87	0.87	0.112E-02	1/	889
1.50	1.00	0.80	1.30	0.30	0.84	0.84	0.113E-02	1/	886
1.25	0.93	0.74	1.23	0.30	0.80	0.80	0.113E-02	1/	883
1.00	0.85	0.68	1.15	0.30	0.76	0.76	0.114E-02	1/	879
0.75	0.77	0.61	1.07	0.30	0.71	0.71	0.114E-02	1/	874
0.50	0.66	0.53	0.96	0.30	0.64	0.64	0.115E-02	1/	867
0.25	0.51	0.40	0.81	0.30	0.54	0.54	0.117E-02	1/	855



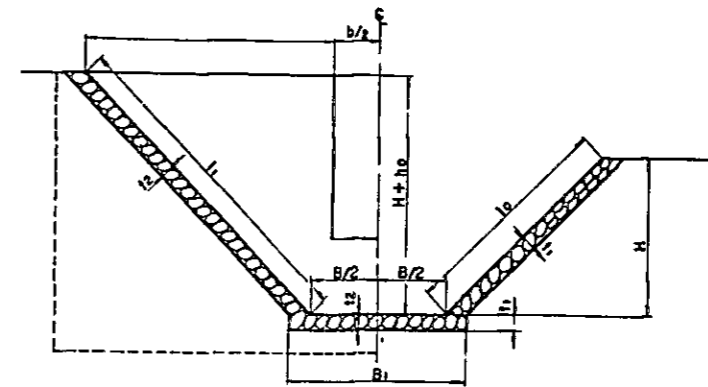
TYPICAL SECTION OF NEWLY CONSTRUCTED CANALS



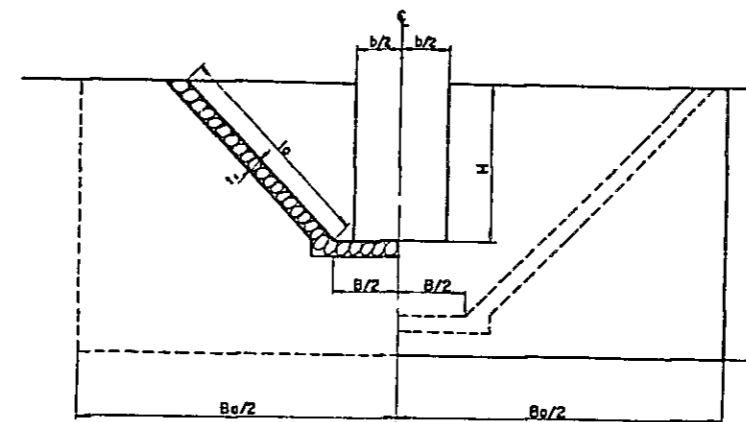
PLAN



SECTION "A-A"



SECTION "B-B"



SECTION "C-C"

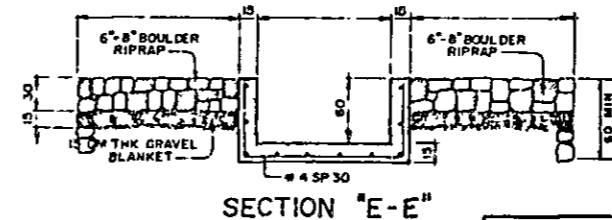
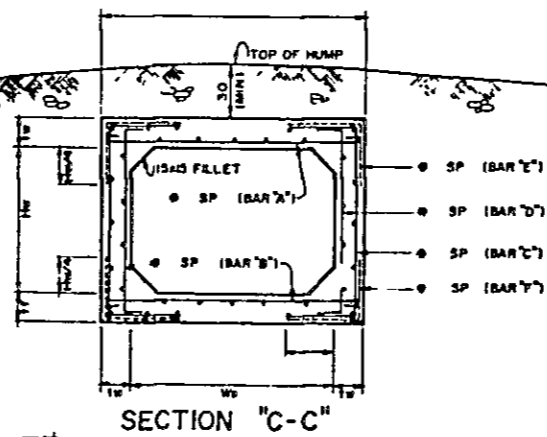
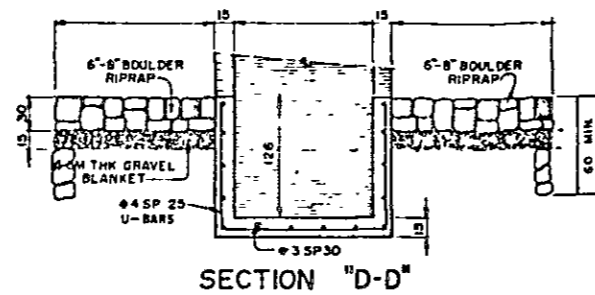
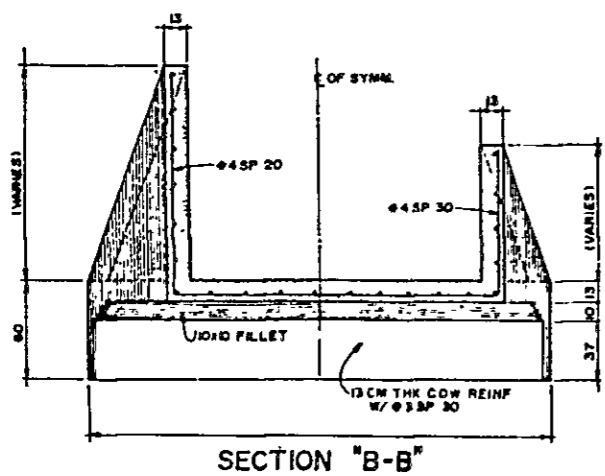
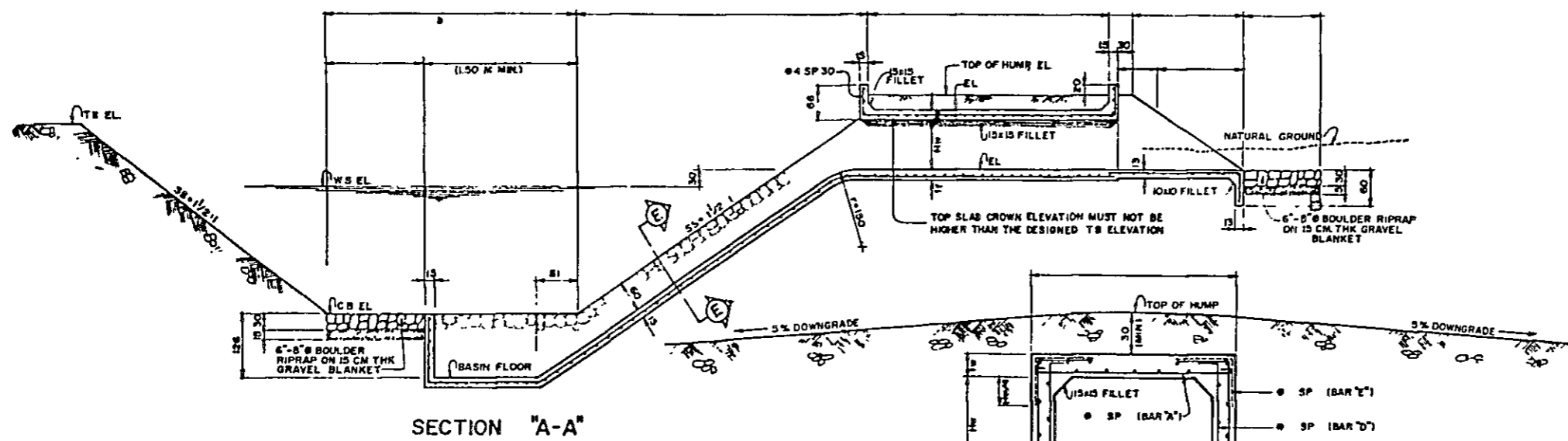
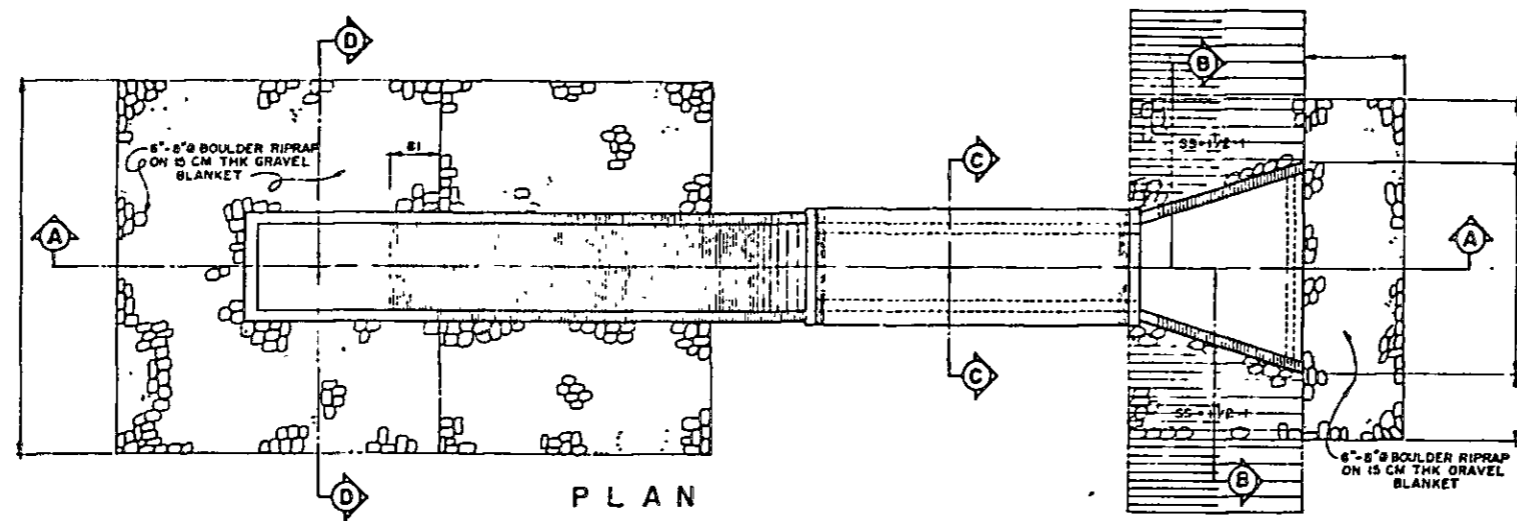
DIMENSION

TYPE	H	L <sub>0</sub>	L <sub>1</sub>	L <sub>2</sub>	L	H	h <sub>0</sub>	h <sub>1</sub>	f <sub>1</sub>	f <sub>2</sub>	B	b	l <sub>0</sub>	H <sub>1</sub>	B <sub>0</sub>	l <sub>1</sub>	B <sub>1</sub>	l <sub>2</sub>	l <sub>4</sub>	L <sub>2</sub>	(UNIT m)	
I	3.0	8.0	5.2	4.5	25.7	4.0	1.9	0.9	0.4	0.4	3.5	2.4	4.0	7.3	16.3	5.9	4.63	0.15	0.6	4.59		
II	1.3	3.6	3.5	3.0	10.1	1.7	1.6	0.6	0.3	0.3	1.1	1.0	1.7	4.6	8.7	3.3	1.95	0.15	0.5	3.06		
III	0.9	2.8	2.9	2.5	8.2	1.2	1.5	0.5	0.3	0.3	0.9	0.7	1.2	4.0	7.3	2.7	1.55	0.15	0.4	2.55		

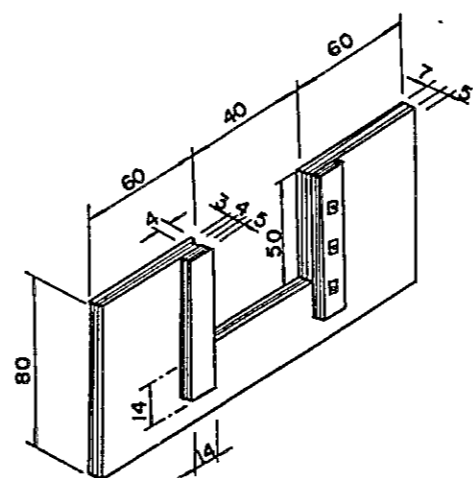
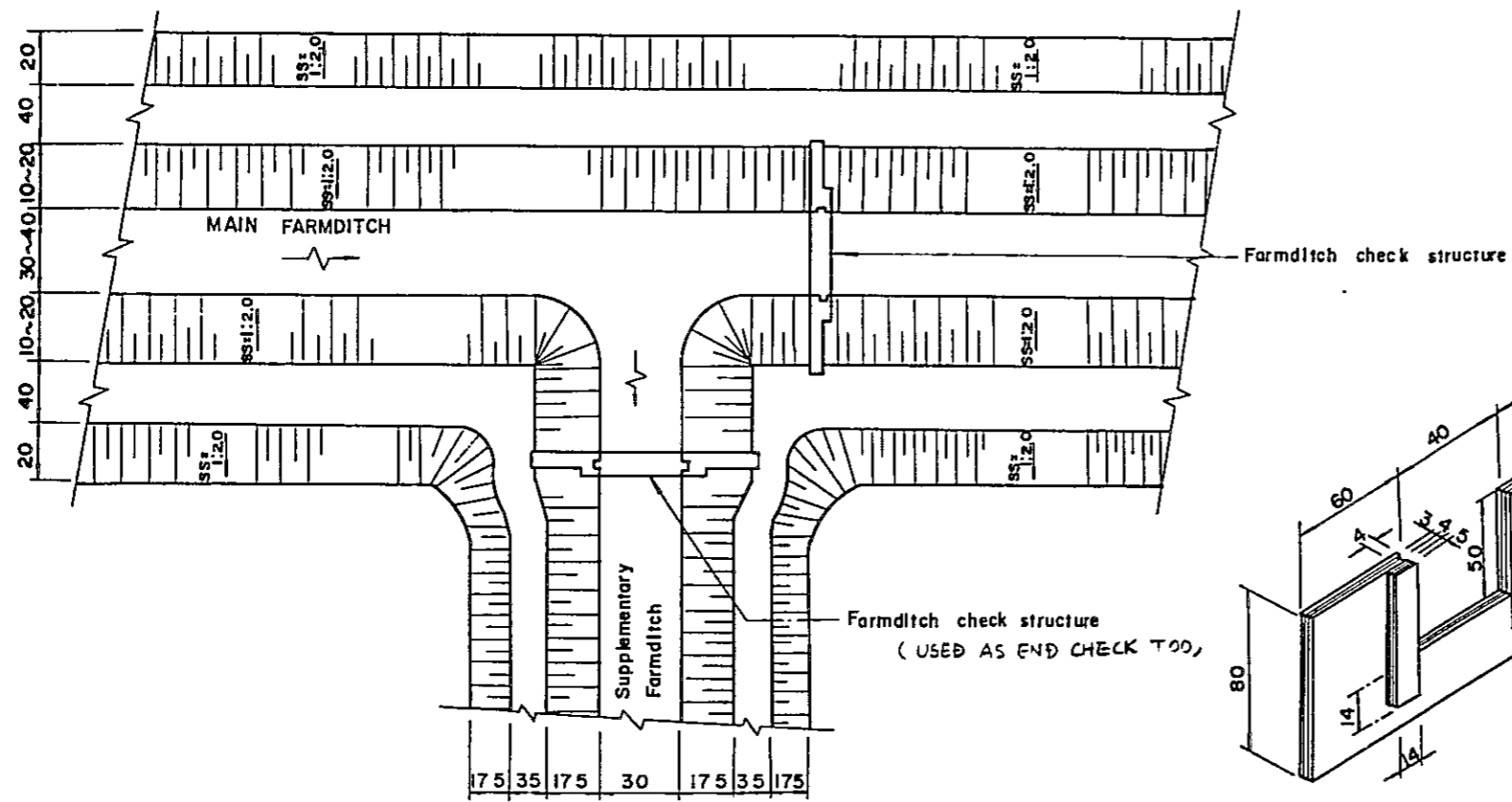
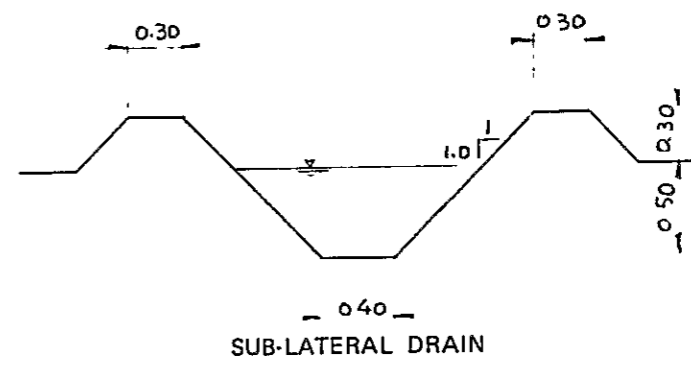
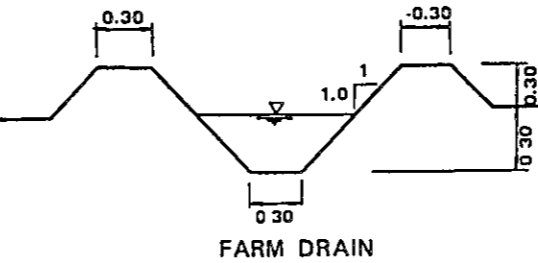
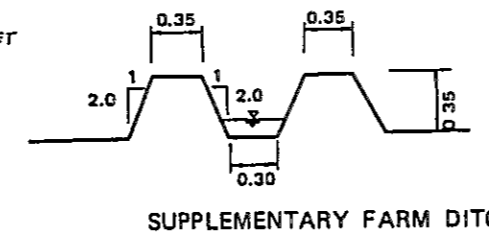
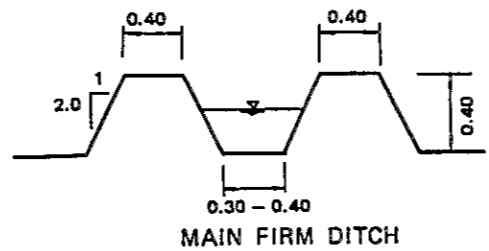
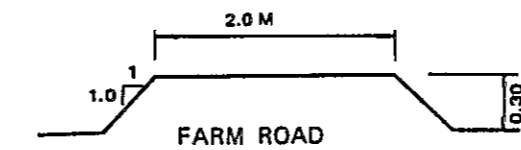
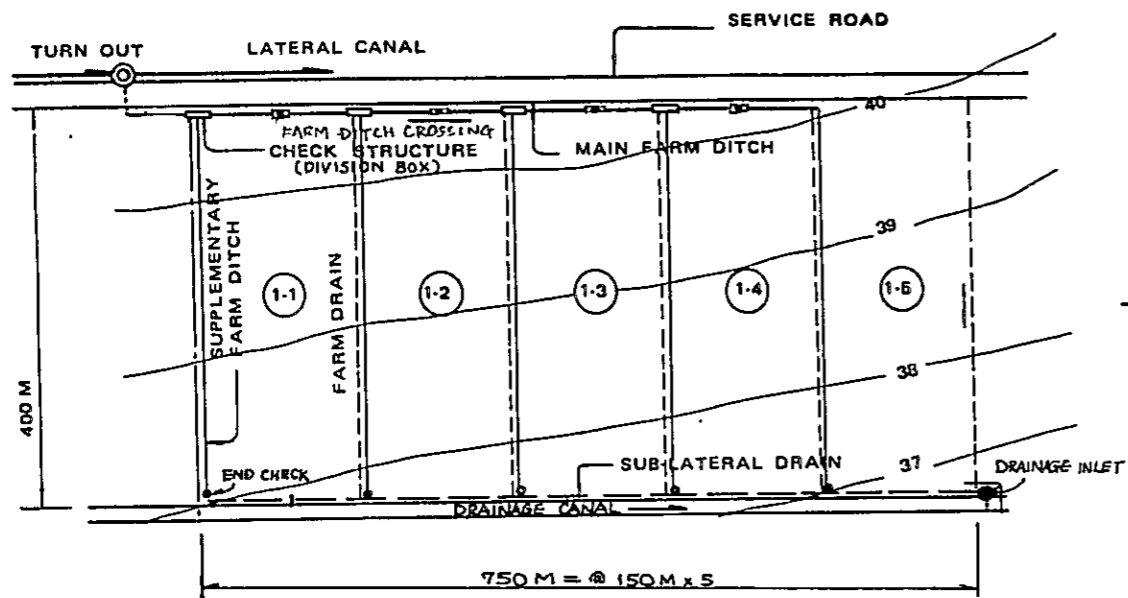
THE REPUBLIC OF PHILIPPINES  
 NATIONAL IRRIGATION ADMINISTRATION  
 TERMINAL IRRIGATION FACILITIES PROJECT  
 IN ILOCOS NORTE IRRIGATION PROJECT

DROP  
 DRAINAGE

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) | PLATE 12

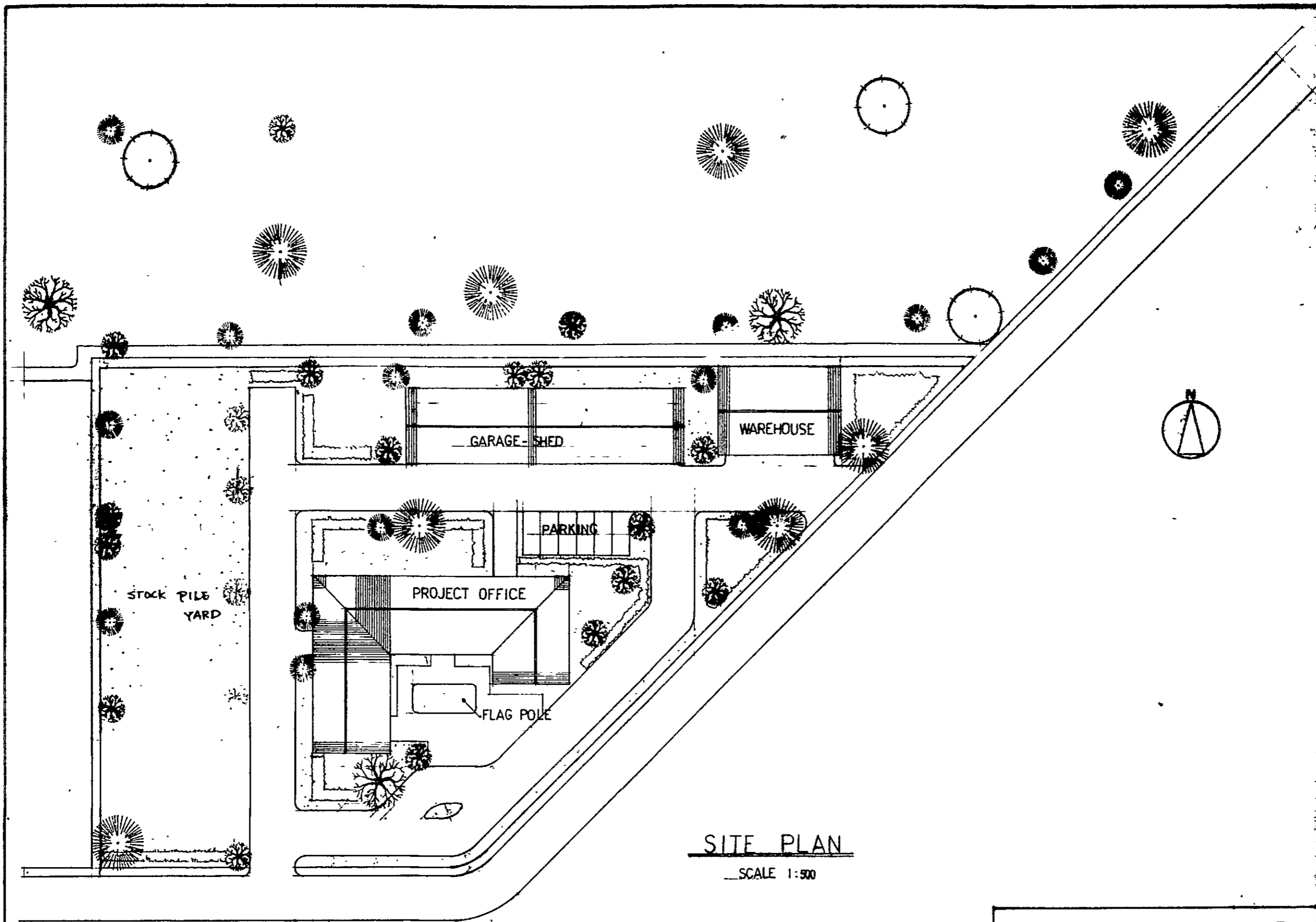


THE REPUBLIC OF PHILIPPINES	
NATIONAL IRRIGATION ADMINISTRATION	
TERMINAL IRRIGATION FACILITIES PROJECT IN ILOCOS NORTE IRRIGATION PROJECT	
DRAINAGE INLET DRAINAGE	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PLATE 13



DIVISION BOX



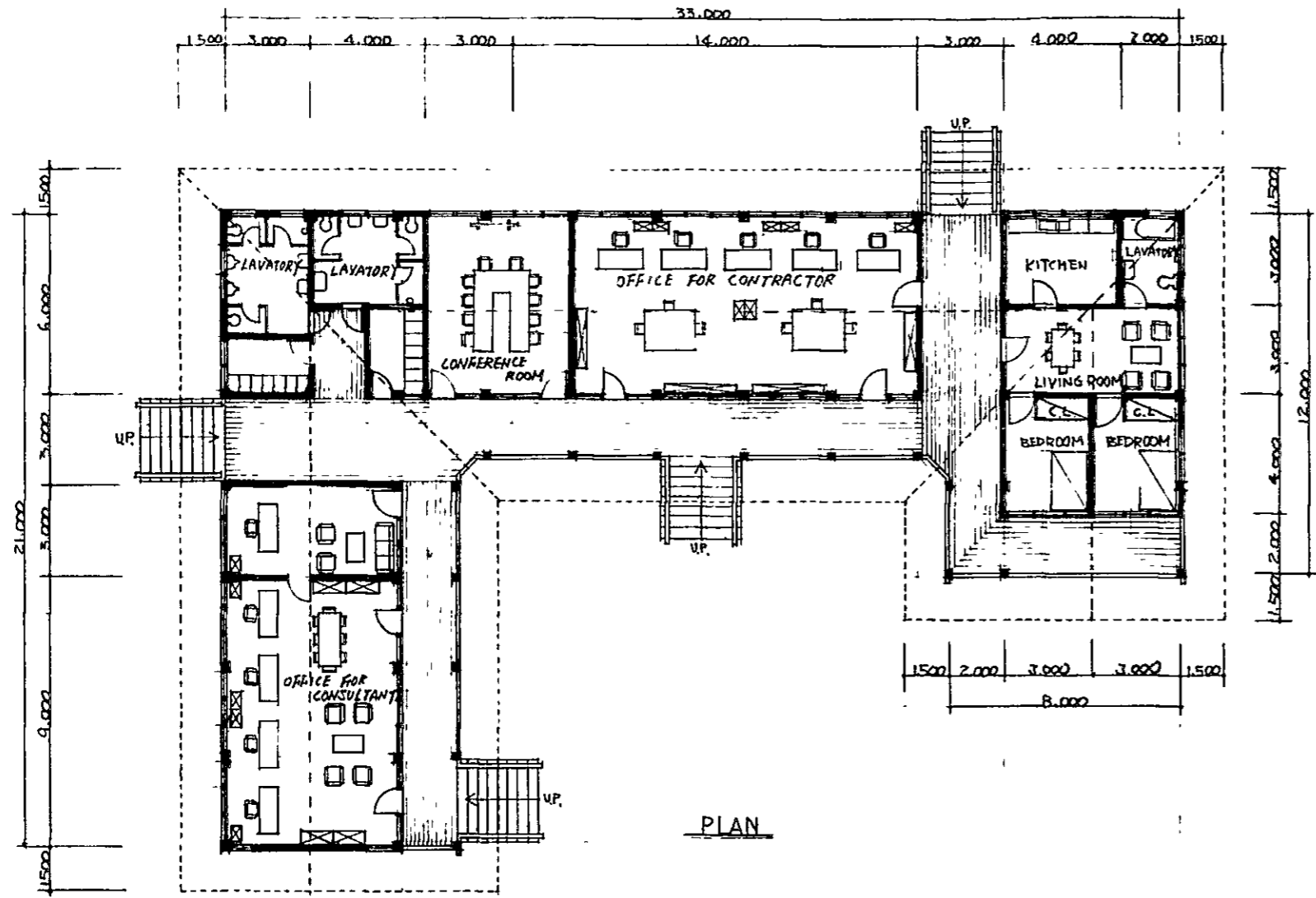


SITE PLAN  
SCALE 1:500

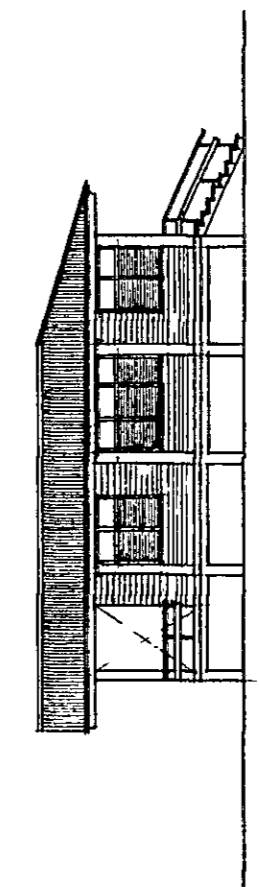
PLAN OF PROJECT OFFICE SITE

PLATE 16

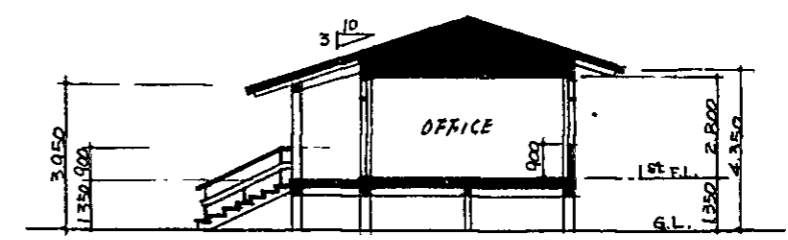
PROJECT OFFICE



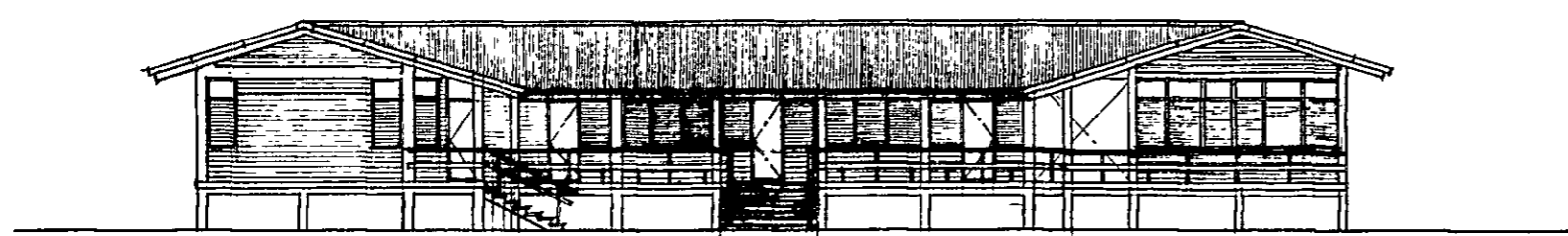
PLAN



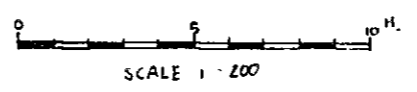
EAST ELEVATION



SECTION



SOUTH ELEVATION

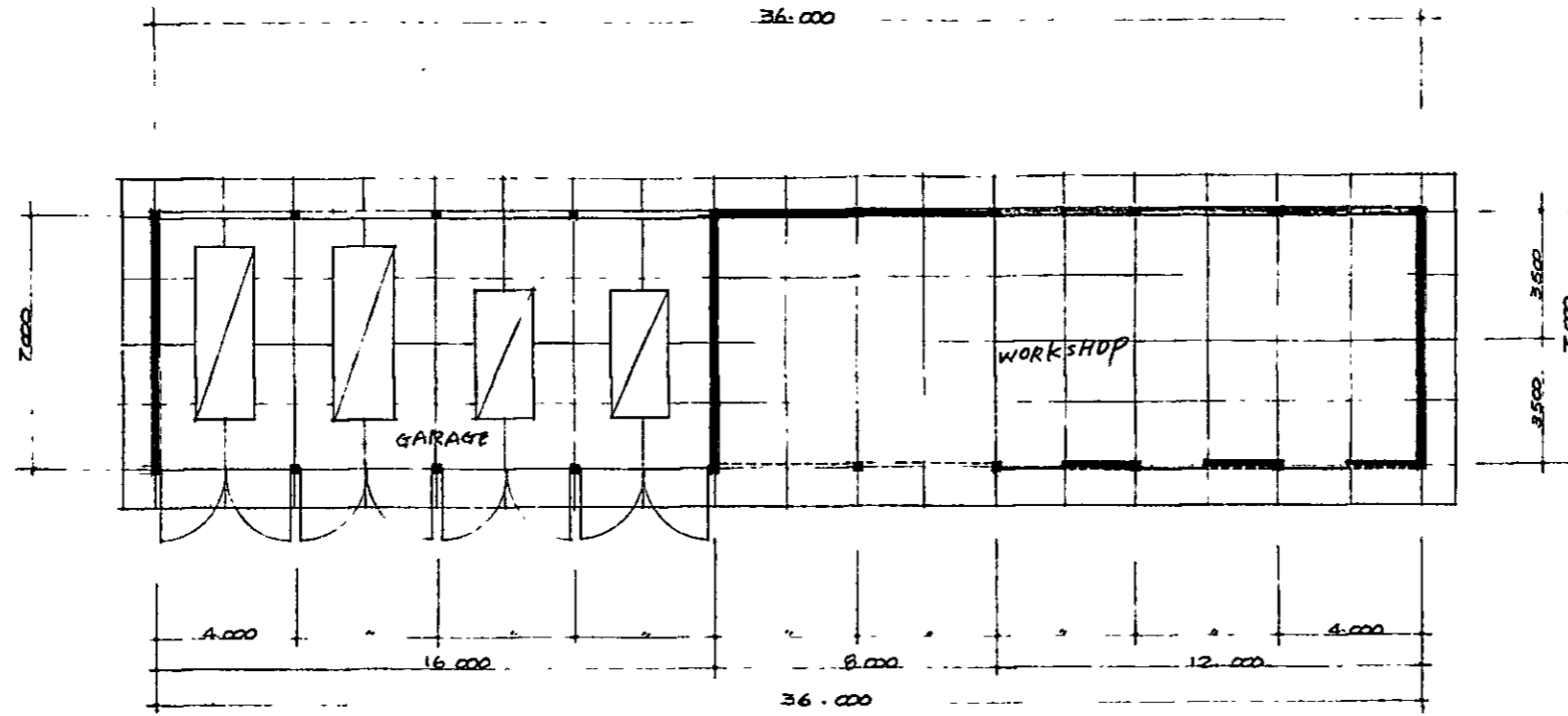


PLAN OF PROJECT OFFICE

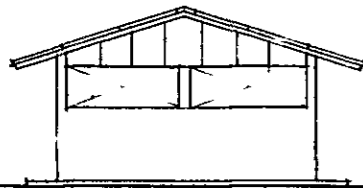
PLATE 16

GARAGE - SHED

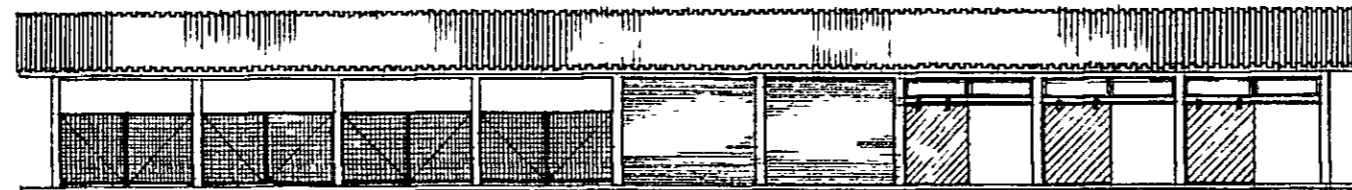
SCALE 1:200



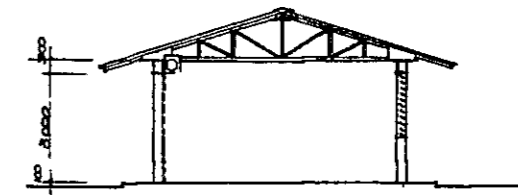
PLAN



ELEVATION



ELEVATION

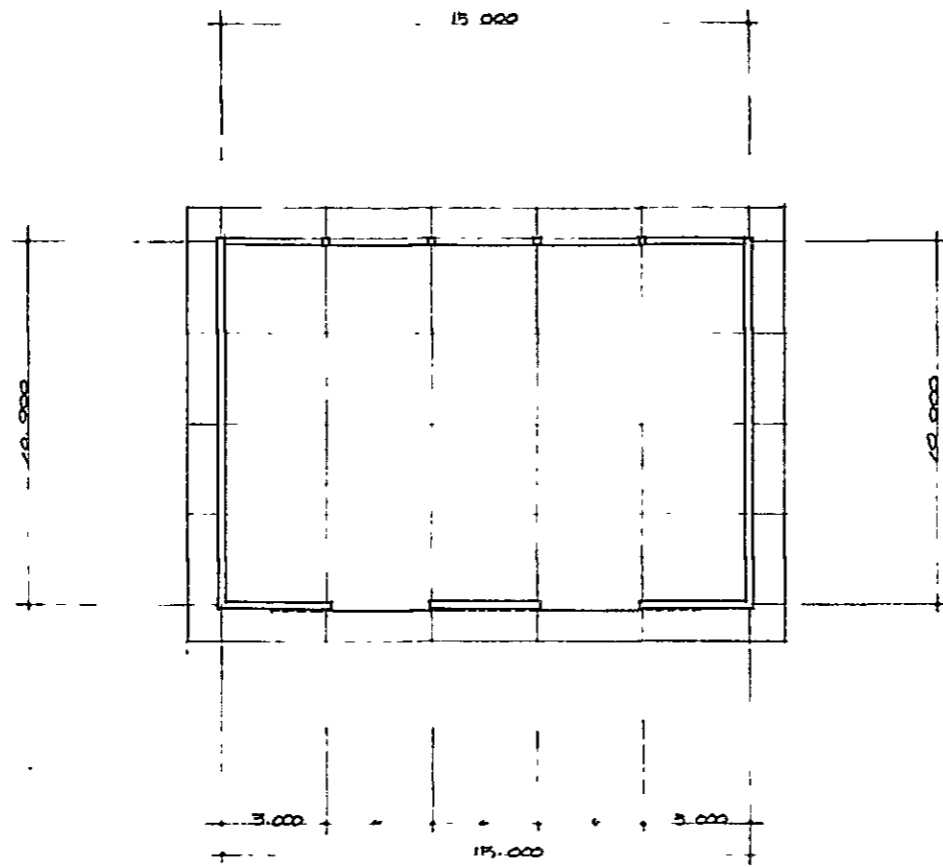


SECTION

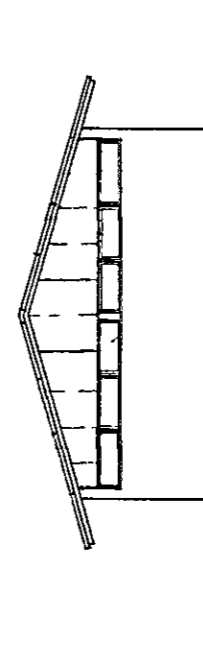
PLAN OF GARAGE-SHED

WAREHOUSE

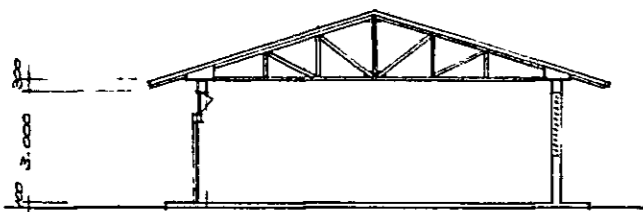
SCALE 1:200



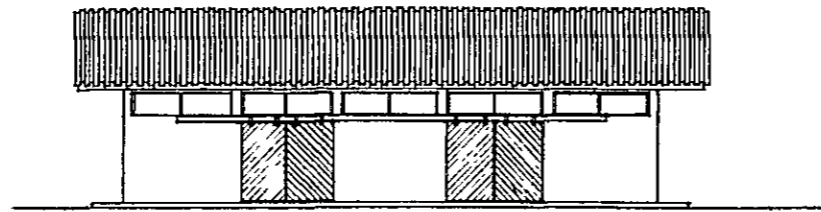
PLAN



ELEVATION

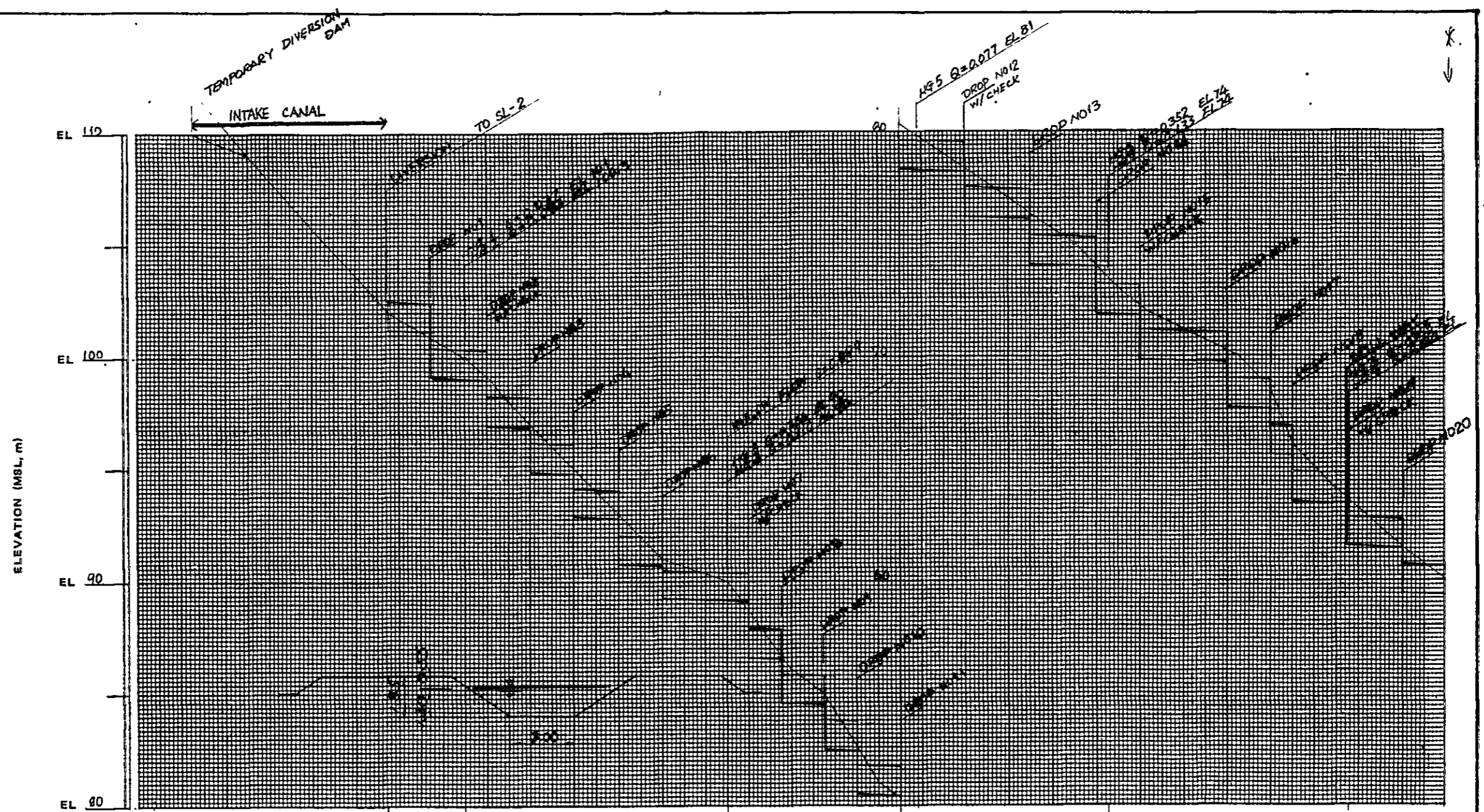


SECTION



ELEVATION

PLAN OF WAREHOUSE



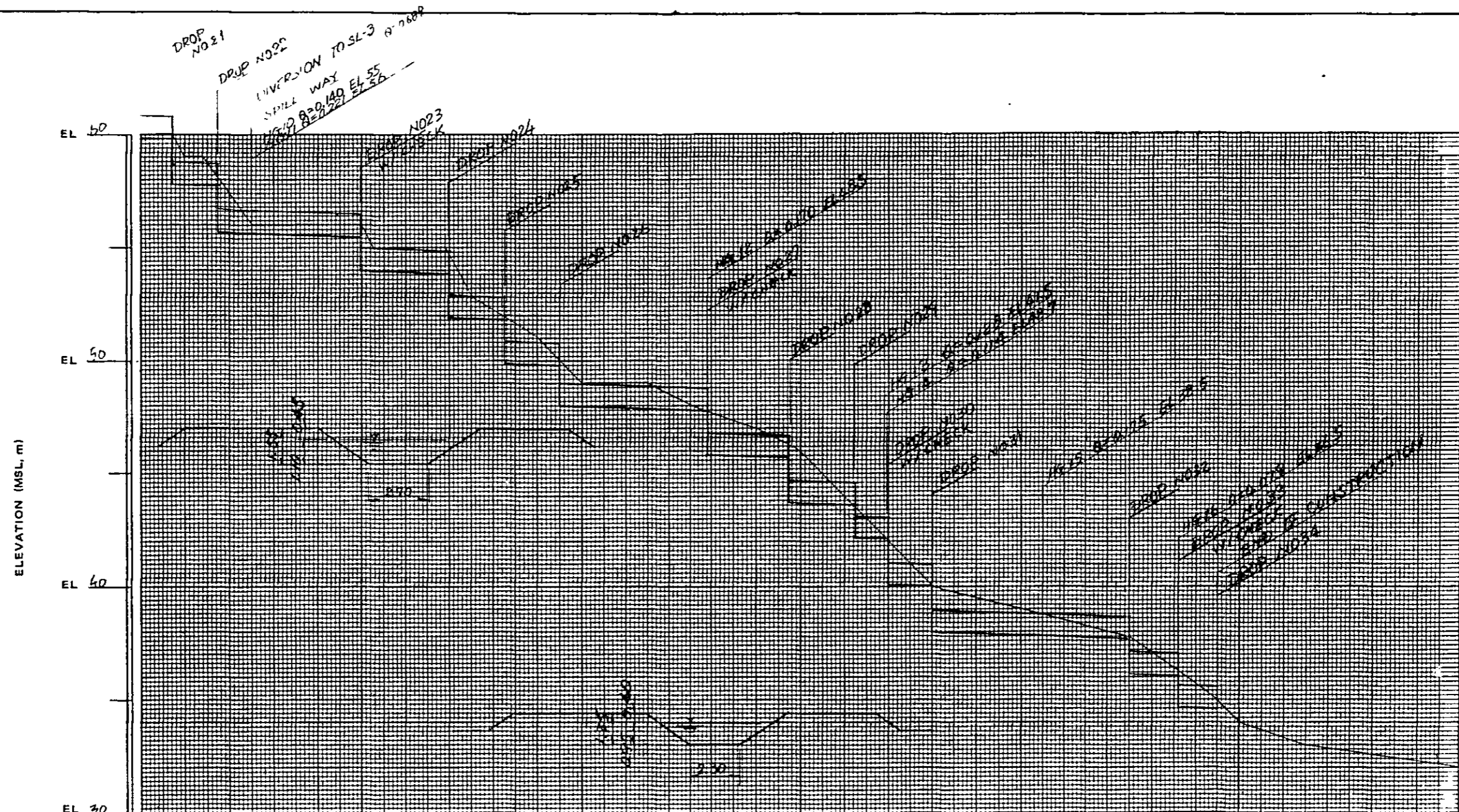
IRRIGATION	DISCHARGE (cms)	3485	3455	3210	3133	3248	2761	
	CANAL CAPACITY & CANAL TYPE	Q=3810					Q=2761	
DRAINAGE	DISCHARGE	-----						
	CANAL CAPACITY & CANAL TYPE	-----						
GROUND ELEVATION		-----						
STATION		3+000	3+500	4+000	4+500	5+000	5+500	6+000

THE REPUBLIC OF PHILIPPINES  
 NATIONAL IRRIGATION ADMINISTRATION  
 TERMINAL IRRIGATION FACILITIES PROJECT  
 IN ILOCOS NORTE IRRIGATION PROJECT

CANAL PROFILE  
 OF MAIN CANAL (SL-1)

NO 1/3

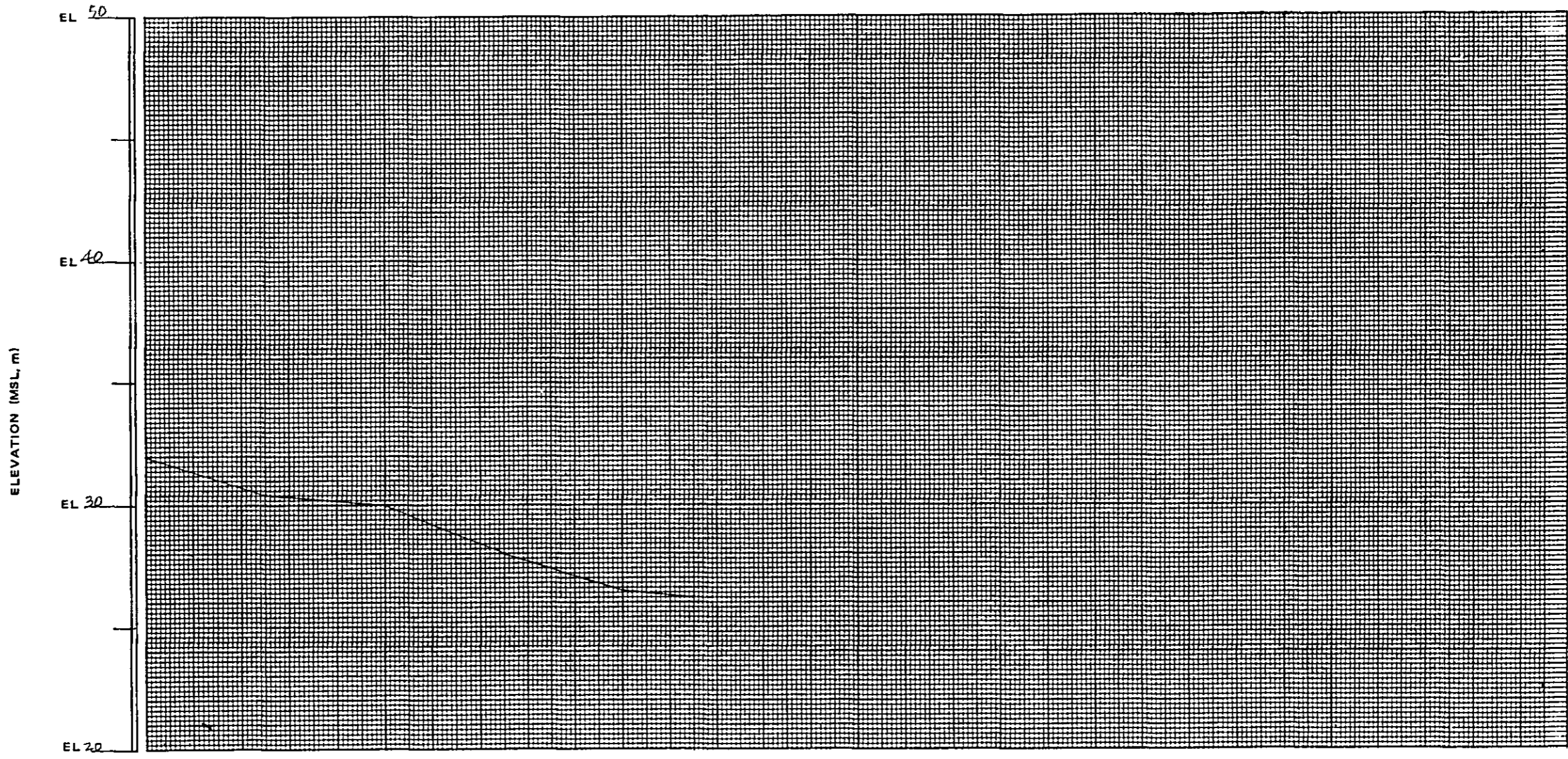
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) PLATE 19



IRRIGATION	DISCHARGE (cms)	2.761	1.110	1.940	1.298	1.123	1.044
	CANAL CAPACITY & CANAL TYPE	2.761		R=1710			
DRAINAGE	DISCHARGE						
	CANAL CAPACITY & CANAL TYPE						
GROUND ELEVATION							
STATION		0+000	3000	6000	9000	12000	

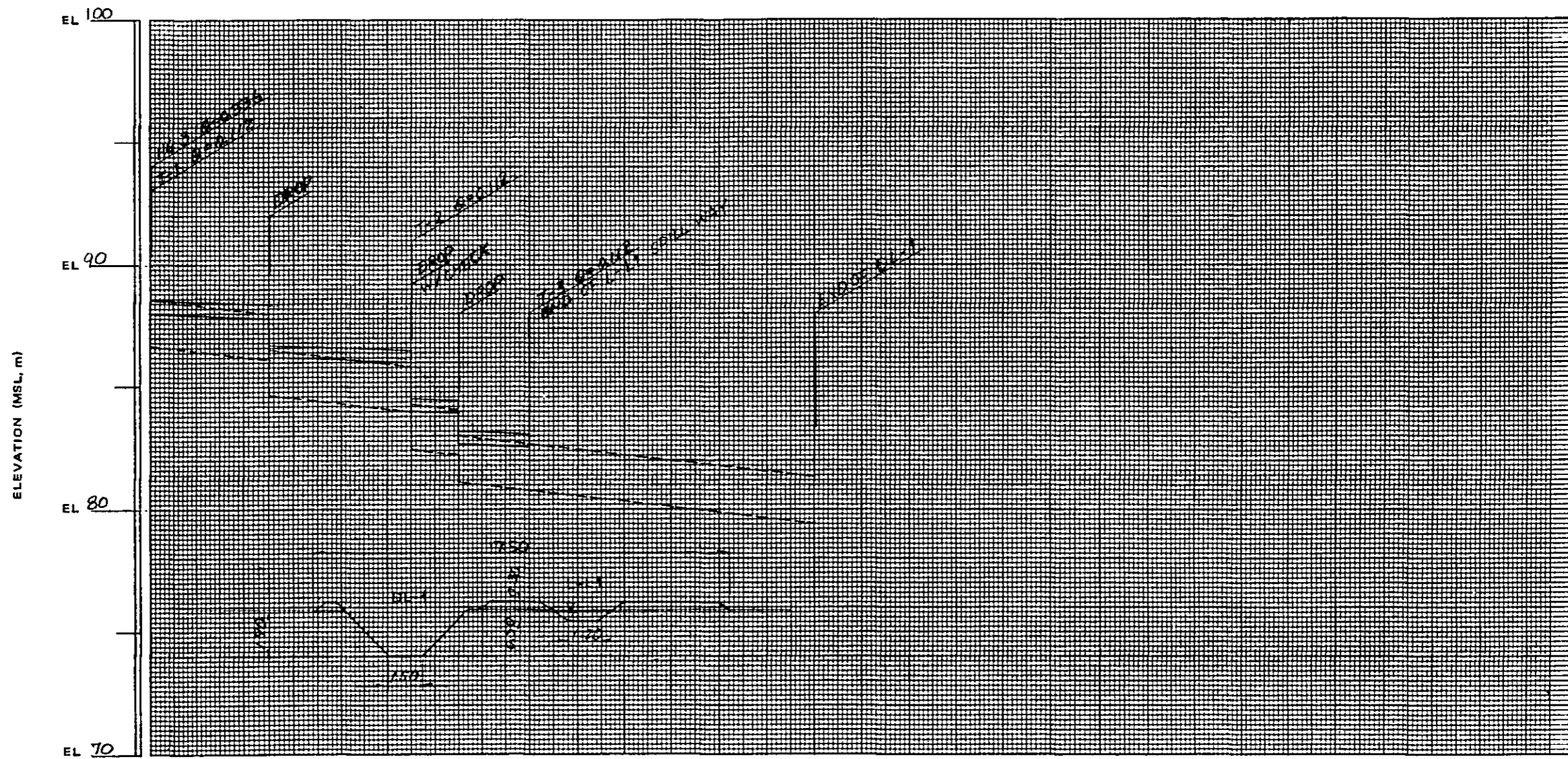
THE REPUBLIC OF PHILIPPINES  
 NATIONAL IRRIGATION ADMINISTRATION  
 TERMINAL IRRIGATION FACILITIES PROJECT  
 IN ILOCOS NORTE IRRIGATION PROJECT  
  
 CANAL PROFILE  
 OF MAIN CANAL (SL-1) NO 2/3  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) PLATE 20





IRRIGATION	DISCHARGE	
	CANAL CAPACITY & CANAL TYPE	
DRAINAGE	DISCHARGE	
	CANAL CAPACITY & CANAL TYPE	
GROUND ELEVATION		
STATION		12+000      13+000      14+000      14+300

THE REPUBLIC OF PHILIPPINES  
 NATIONAL IRRIGATION ADMINISTRATION  
 TERMINAL IRRIGATION FACILITIES PROJECT  
 IN ILOCOS NORTE IRRIGATION PROJECT  
  
 CANAL PROFILE  
 OF MAIN CANAL (SL-1)      NO 3/3  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)      PLATE 21

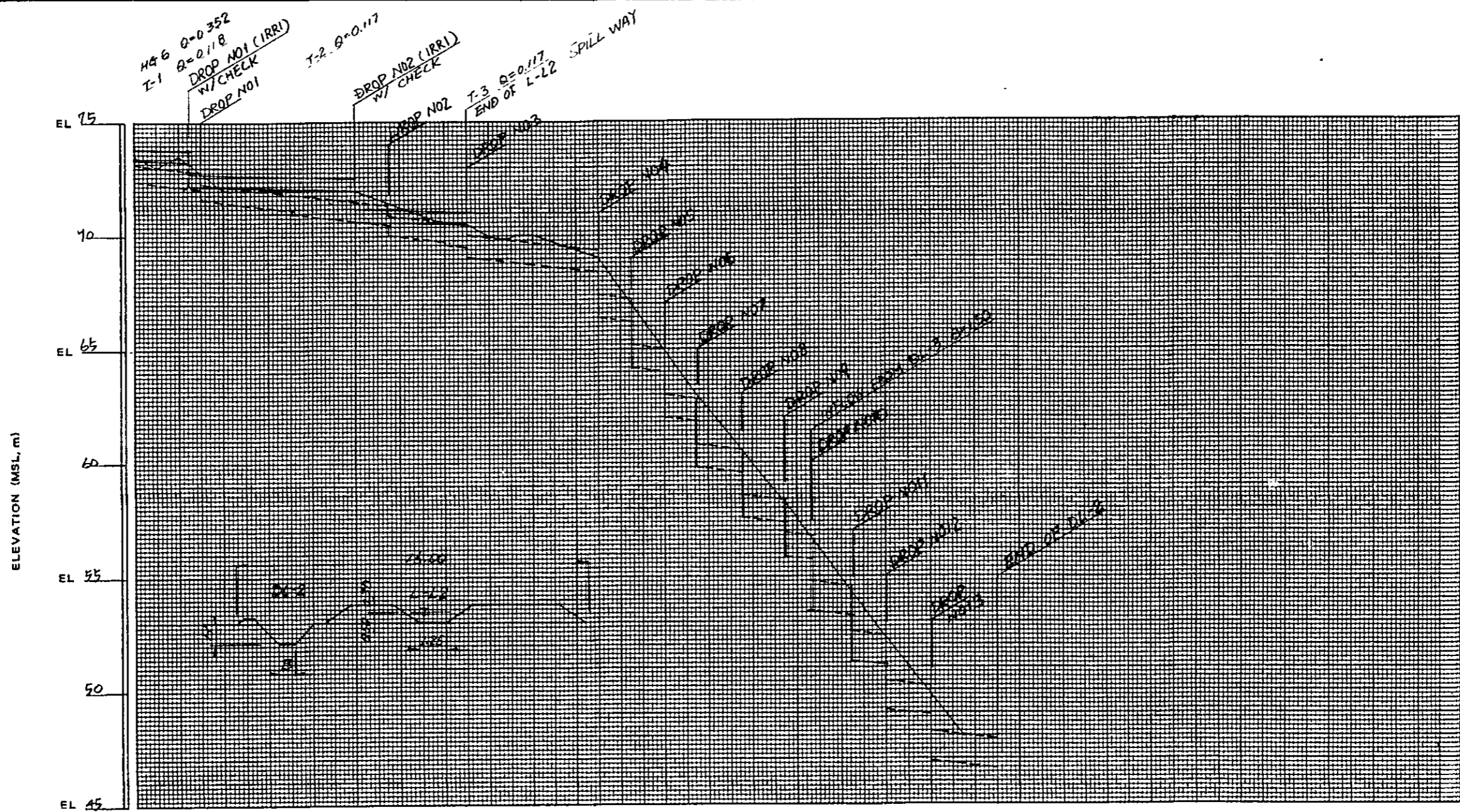


IRRIGATION	DISCHARGE	0.224	0.112
	CANAL CAPACITY & CANAL TYPE	$Q = 0.336$	
DRAINAGE	DISCHARGE	8.46	
	CANAL CAPACITY & CANAL TYPE	$Q = 8.50$	
GROUND ELEVATION			
STATION		0+000	+500 1+000 +500 2+000 +500 +800

Note: HG Head Gate  
Turnout

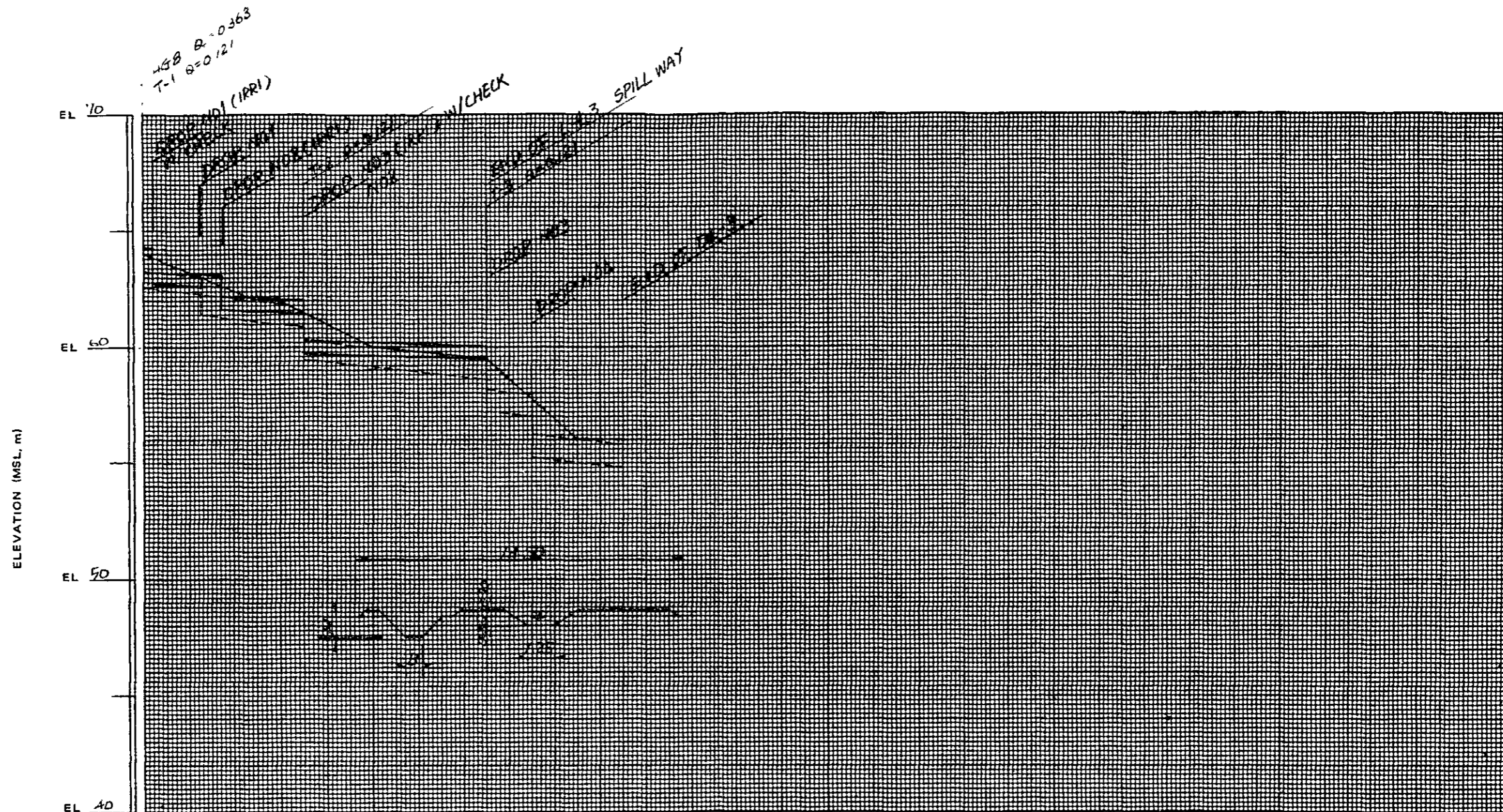
THE REPUBLIC OF PHILIPPINES  
 NATIONAL IRRIGATION ADMINISTRATION  
 TERMINAL IRRIGATION FACILITIES PROJECT  
 IN ILOCOS NORTE IRRIGATION PROJECT  
 CANAL PROFILE  
 OF LATERAL AND DRAINAGE CANALS  
 (L-L1 & DL-1)  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) | PLATE 22





IRRIGATION	DISCHARGE	- 0.234 - 0.117	
	CANAL CAPACITY & CANAL TYPE	- Q=0.352	-
DRAINAGE	DISCHARGE	- 0.52 + 1.05	- 1.53 + 3.03 -
	CANAL CAPACITY & CANAL TYPE	- Q=0.55 B=0.50 H=0.70 - 1.10 B=0.70 H=1.85	+ S=1.50 B=0.80 H=1.00 - S=3.00 B=1.00 H=1.30
GROUND ELEVATION			
STATION		0+000	1500 1+000 1500 2+000 1500 3+000 1500 3+000

THE REPUBLIC OF PHILIPPINES  
 NATIONAL IRRIGATION ADMINISTRATION  
 TERMINAL IRRIGATION FACILITIES PROJECT  
 IN ILOCOS NORTE IRRIGATION PROJECT  
  
 CANAL PROFILE  
 OF LATERAL AND DRAINAGE CANALS  
 (L-22 & DL-2)  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)



IRRIGATION	DISCHARGE	0.121	0.121				
	CANAL CAPACITY & CANAL TYPE	Q=0.363					
DRAINAGE	DISCHARGE	0.50	1.00	1.50			
	CANAL CAPACITY & CANAL TYPE	Q=0.50 B=0.50 H=0.70	Q=1.00 B=0.70 H=0.85	Q=1.50 B=0.80 H=1.00			
GROUND ELEVATION							
STATION		0+000	0+500	1+000	1+500	2+000	2+500

THE REPUBLIC OF PHILIPPINES  
 NATIONAL IRRIGATION ADMINISTRATION  
 TERMINAL IRRIGATION FACILITIES PROJECT  
 IN ILOCOS NORTE IRRIGATION PROJECT

CANAL PROFILE  
 OF LATERAL AND DRAINAGE CANALS  
 (L-L3 & DL-3)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) | PLATE 24







JICA