

REPUBLICA DEL PERU
MINISTERIO DE AGRICULTURA
INSTITUTO NACIONAL
DE
AMPLIACION DE LA FRONTERA AGRICOLA
(INAF — PE-REHATIC)

FEASIBILITY STUDY
ON
CHANCAY-HUARAL VALLEY
REHABILITATION PROJECT

DRAWING

MARCH 1985

JAPAN INTERNATIONAL COOPERATION AGENCY

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REHABILITATION PROJECT

DRAWING

MARCH 1985

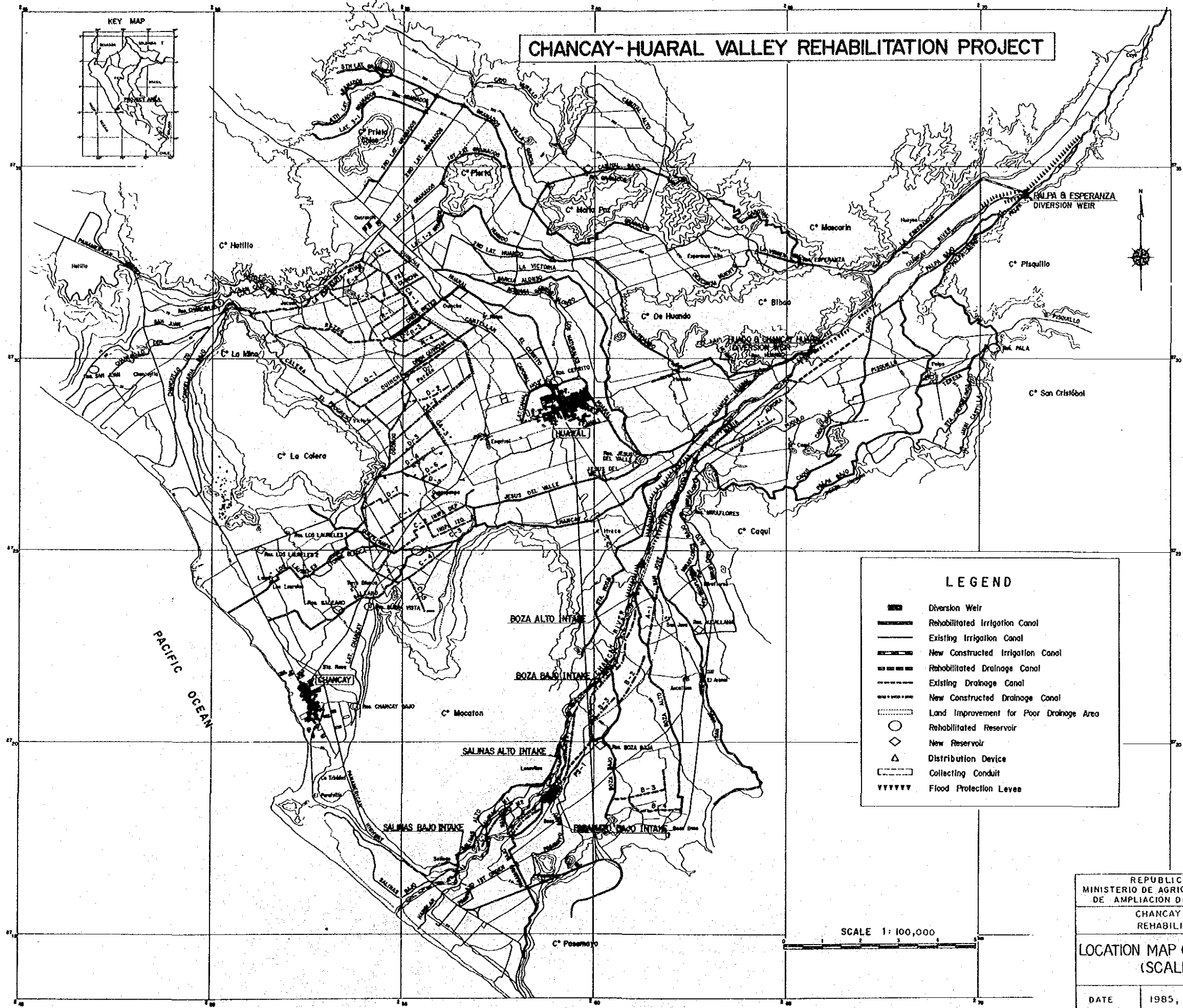
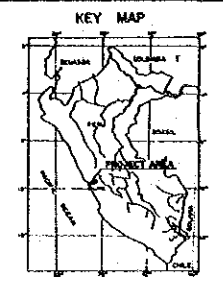
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DRAWINGS
 CHANCAY-HUARAL VALLEY
 REHABILITATION PROJECT

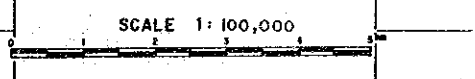
1.	LOCATION MAP OF INFRASTRUCTURES (SCALE 1:100,000)	26.	CANAL PROFILE (CABUYAL BAJO)
2.	ROAD NETWORKS IN THE PROJECT AREA	27.	- ditto - (1ST LAT. GRANADOS, 3RD LAT. GRANADOS)
3.	PLAN OF DRAINAGE SYSTEM (DONOSO)	28.	- ditto - (GRANADOS)
4.	PALPA & LA ESPERANZA DIVERSION WEIR (1/2)	29.	- ditto - (3-1 LAT. GRANADOS, 4TH LAT. GRANADOS, 5TH LAT. GRANADOS)
5.	- ditto - (2/2)	30.	- ditto - (HUANDO)
6.	HUANDO & CHANCAY-HUARAL DIVERSION WEIR (1/2)	31.	- ditto - (HUARAL)
7.	- ditto - (2/2)	32.	- ditto - (CHANCAY-HUARAL, GALEANO)
8.	PALPA & LA ESPERANZA DIVERSION WEIR (ALTERNATIVE - I)	33.	- ditto - (CHANCAY)
9.	CHANCAY-HUARAL DIVERSION WEIR (ALTERNATIVE - II)	34.	- ditto - (JESUS DEL VALLE, LOS LAURELES)
10.	INTAKE TYPE-I (SALINAS, ALTO, SALINAS BAJO)	35.	- ditto - (SALINAS ALTO, BOZA ALTO)
11.	INTAKE TYPE-II (BOZA ALTO, BOZA BAJO, PASAMAYO BAJO)	36.	- ditto - (SANTA ROSA, BOZA BAJO)
12.	COLLECTING CONDUIT	37.	- ditto - (GARCIA ALONSO, QUEPEPAMPA)
13.	IMPROVEMENT OF EXISTING RESERVOIR (1/3)	38.	- ditto - (PALPA ALTA, PASAMAYO BAJO)
14.	- ditto - (2/3)	39.	- ditto - (PALPA BAJO)
15.	- ditto - (3/3)	40.	- ditto - (CAQUI, TERASA)
16.	PLAN OF NEW RESERVOIR	41.	- ditto - (SAN JOSE)
17.	TYPICAL CANAL SECTION	42.	SOIL CLASSIFICATION AND DISTRIBUTION (1)
18.	CANAL RELATED STRUCTURES (DISTRIBUTION DEVICE - I) (1/6)	43.	- ditto - (2)
19.	- ditto - (DISTRIBUTION DEVICE - II) (2/6)	44.	PLOT LOCATION FOR SOIL OBSERVATIONS AND SAMPLINGS MAP
20.	- ditto - (TURNOUT) (3/6)	45.	POTENTIAL LAND CLASSIFICATION MAP
21.	- ditto - (DROP) (4/6)		
22.	- ditto - (BRIDGE) (5/6)		
23.	- ditto - (PARSHALL FLUME) (6/6)		
24.	TYPICAL ROAD SECTION, IMPROVEMENT OF BRIDGE (PALPA, SAN JOSE)		
25.	CANAL PROFILE (ESPERANZA, CABUYAL)		

CHANCAY-HUARAL VALLEY REHABILITATION PROJECT



LEGEND

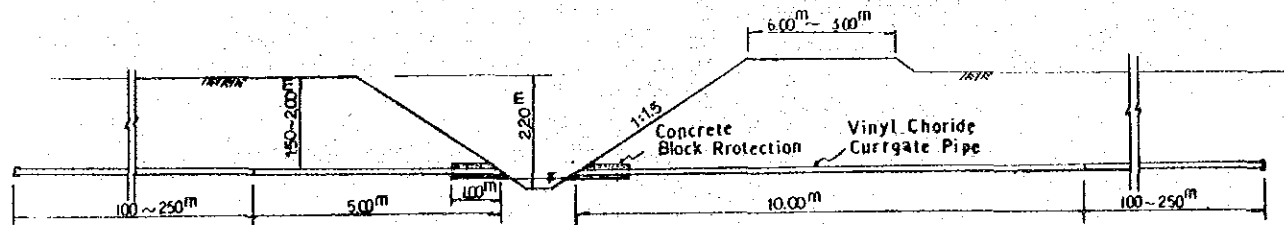
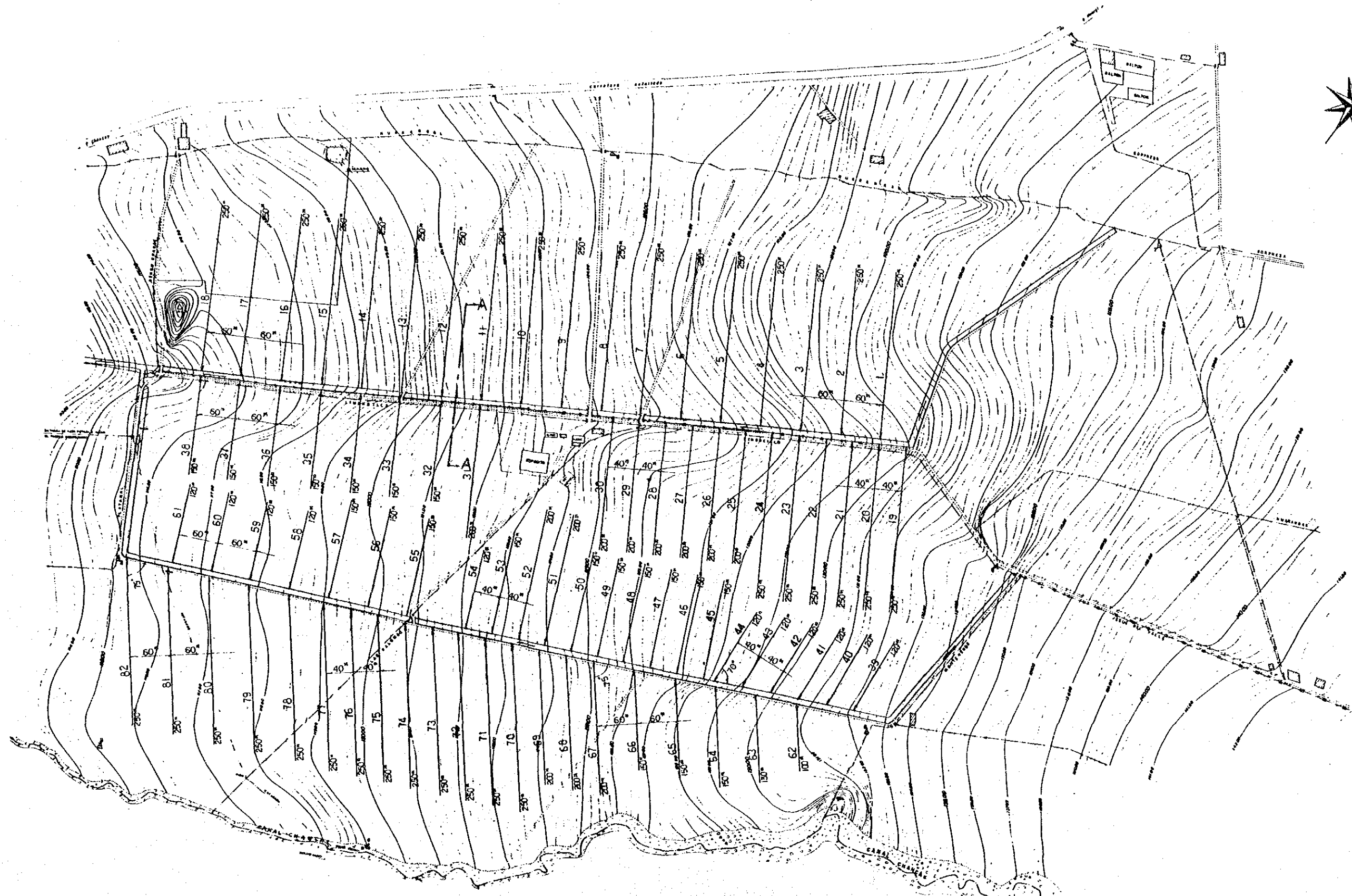
- Diversion Weir
- Rehabilitated Irrigation Canal
- Existing Irrigation Canal
- New Constructed Irrigation Canal
- Rehabilitated Drainage Canal
- Existing Drainage Canal
- New Constructed Drainage Canal
- Land Improvement for Poor Drainage Area
- Rehabilitated Reservoir
- New Reservoir
- Distribution Device
- Collecting Conduit
- Flood Protection Levee



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 CHANCAY - HUARAL VALLEY
 REHABILITATION PROJECT

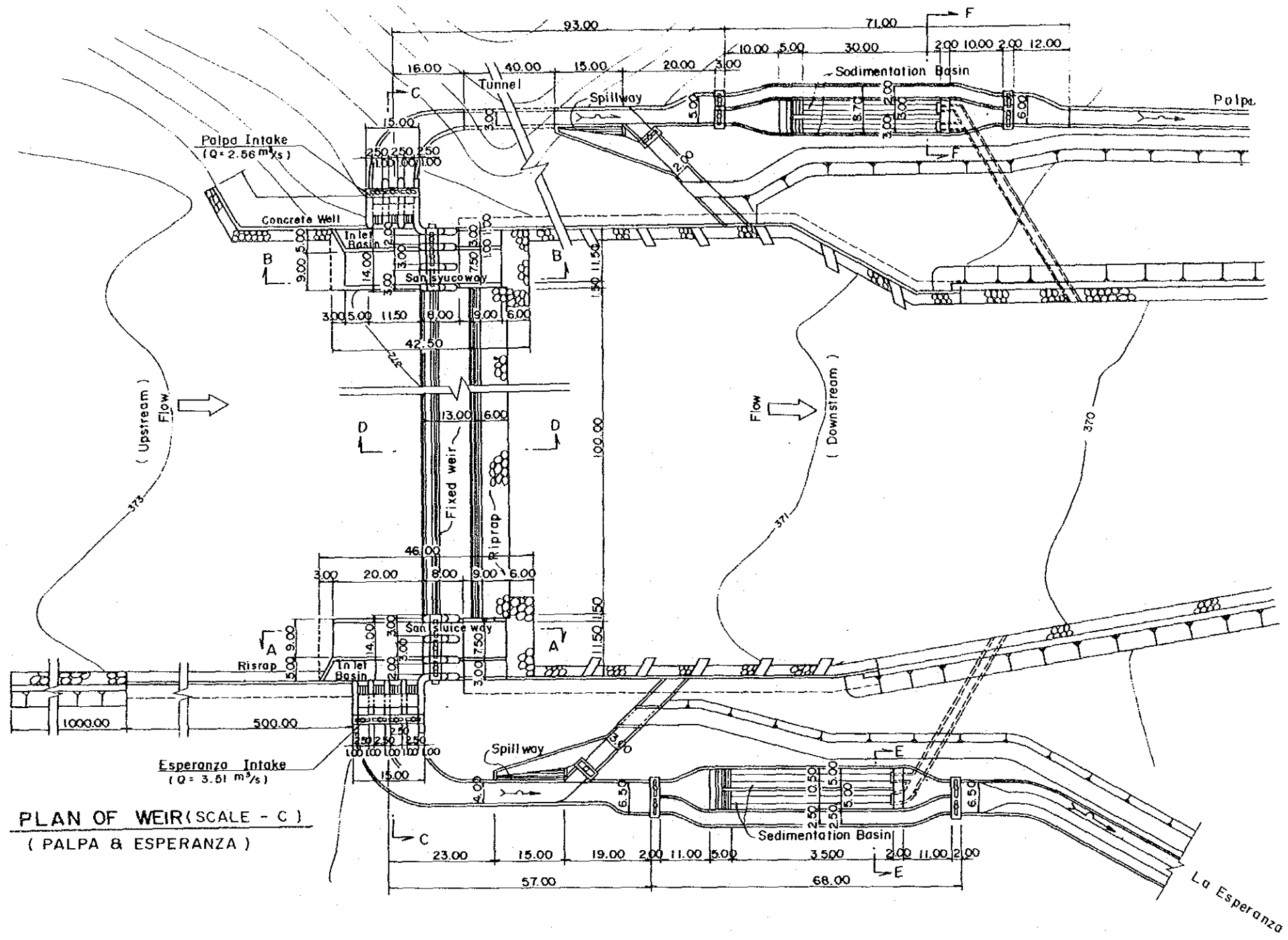
LOCATION MAP OF INFRASTRUCTURES
 (SCALE 1=100,000)

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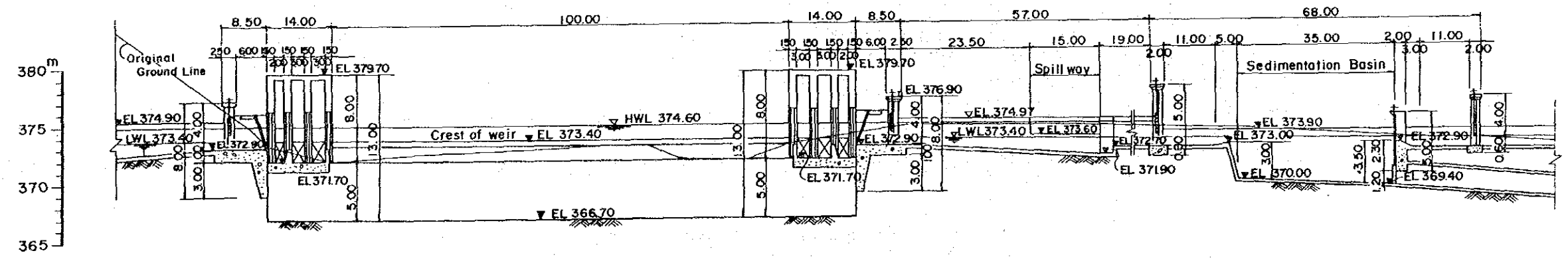
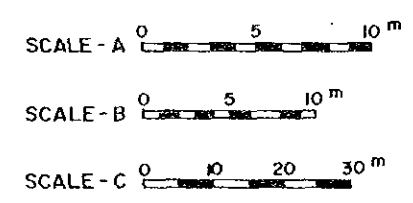
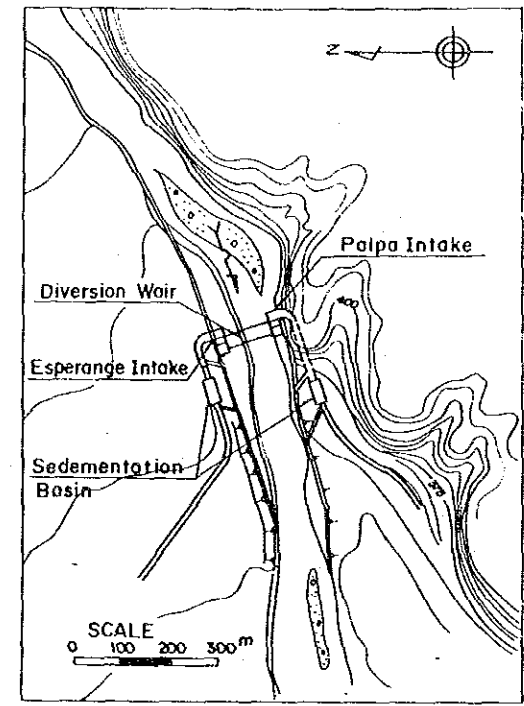


A - A SECTION

REPUBLICA DEL PERU			
MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL			
DE AMPLIACION DE LA FRONTERA AGRICOLA			
CHANCAY - HUARAL VALLEY			
REHABILITATION PROJECT			
PLAN OF DRAINAGE SYSTEM			
(DONOSO)			
DATE	1985, MARCH	DWG. NO	3
JAPAN INTERNATIONAL COOPERATION AGENCY			

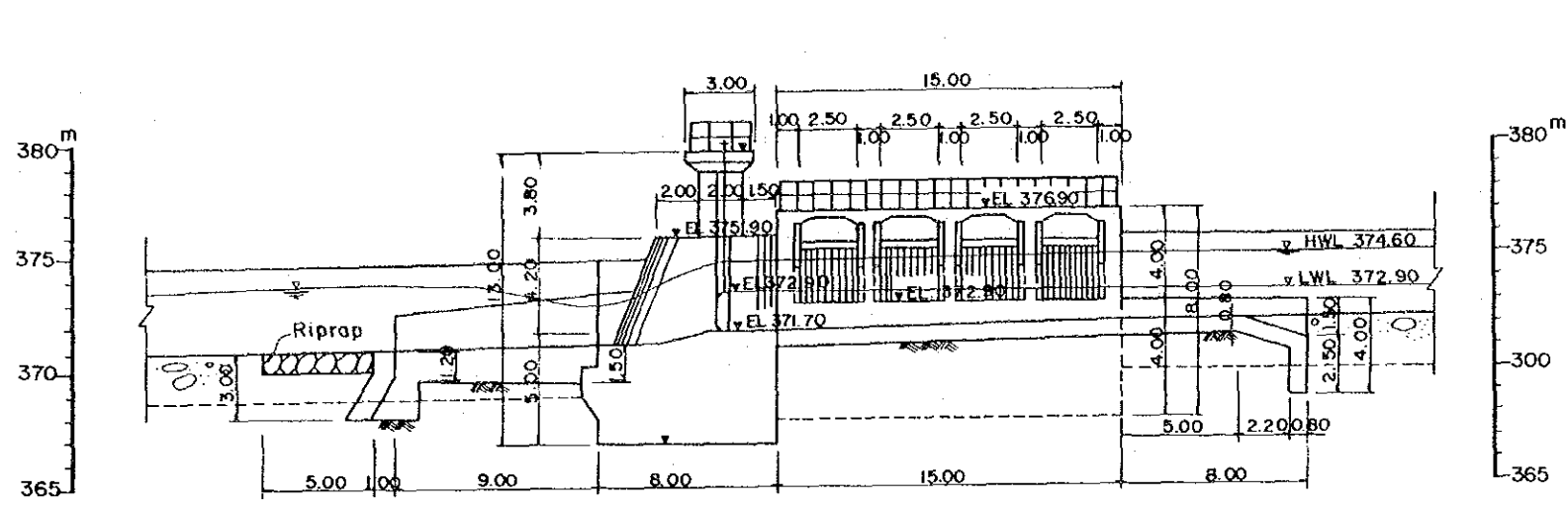


PLAN OF WEIR (SCALE - C)
(PALPA & ESPERANZA)

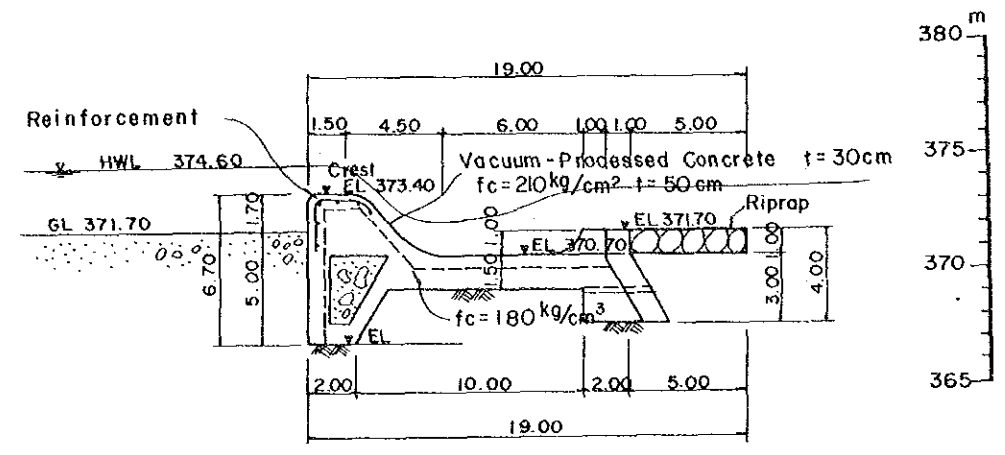


PROFILE (VERTICAL SCALE - B, HORIZONTAL SCALE - C)

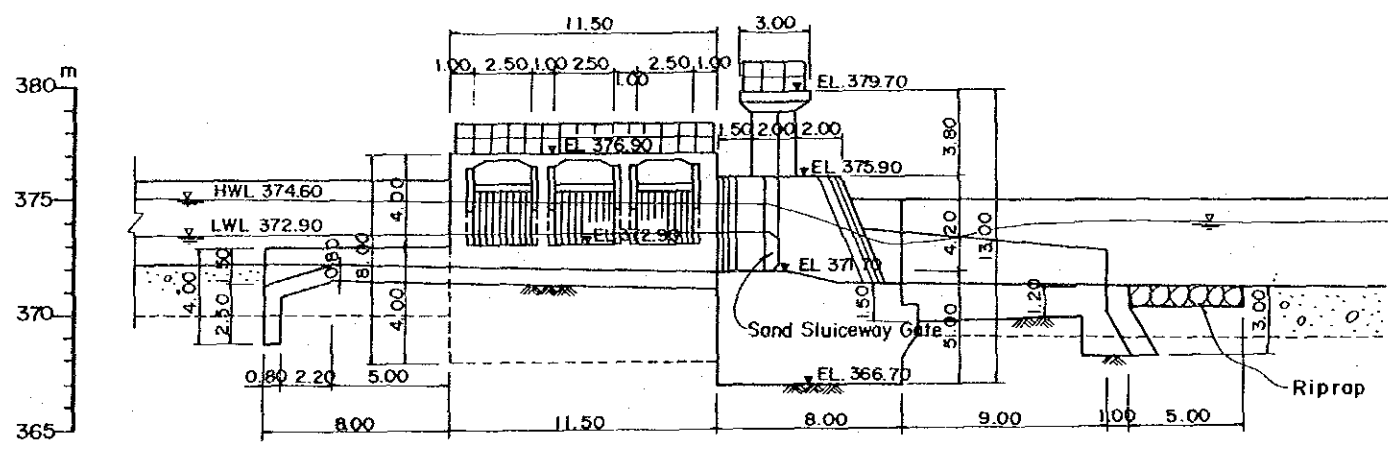
REPUBLICA DEL PERU		
MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL DE AMPLIACION DE LA FRONTERA AGRICOLA		
CHANCA Y - HUARAL VALLEY REHABILITATION PROJECT		
PALPA & LA ESPERANZA DIVERSION WEIR (1/2)		
DATE	1985, MARCH	DWG. NO 4
JAPAN INTERNATIONAL COOPERATION AGENCY		



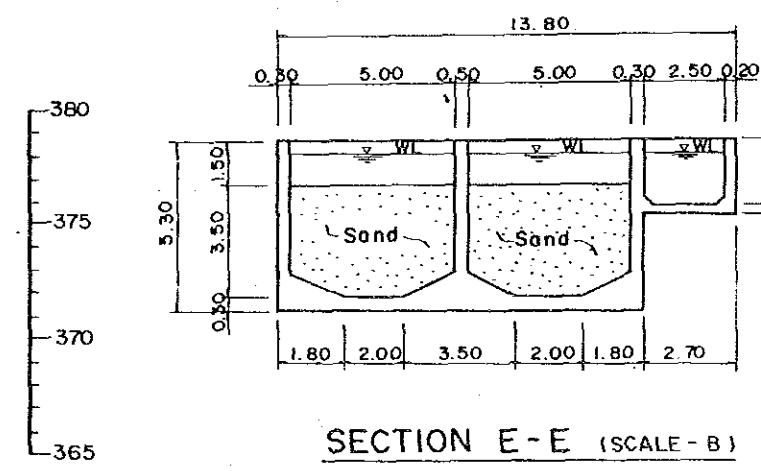
SECTION A-A (SCALE-A)



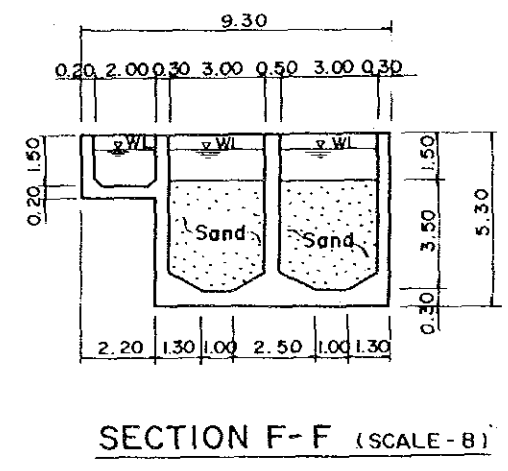
SECTION D-D (SCALE-A)



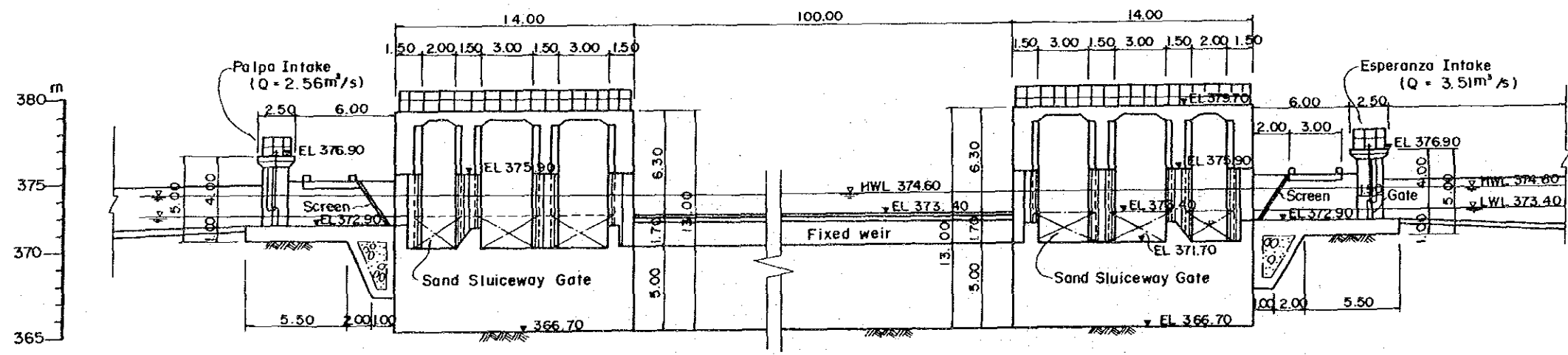
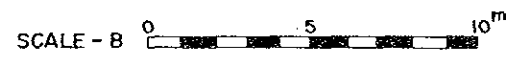
SECTION B-B (SCALE-A)



SECTION E-E (SCALE-B)

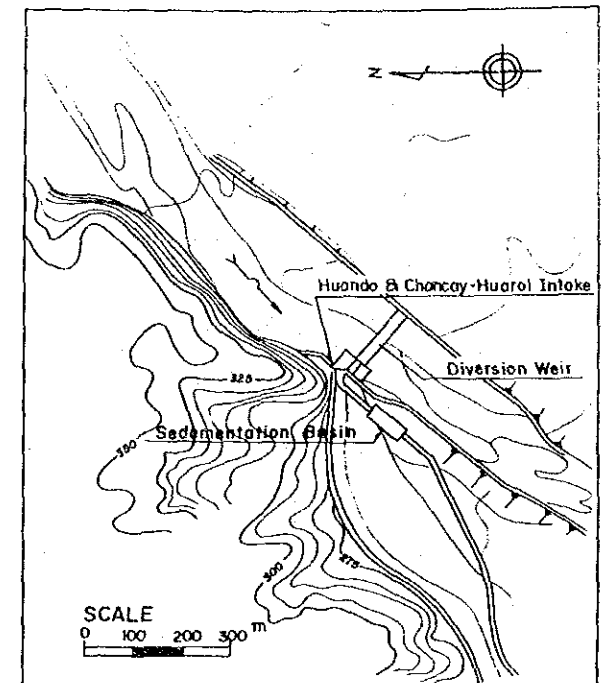
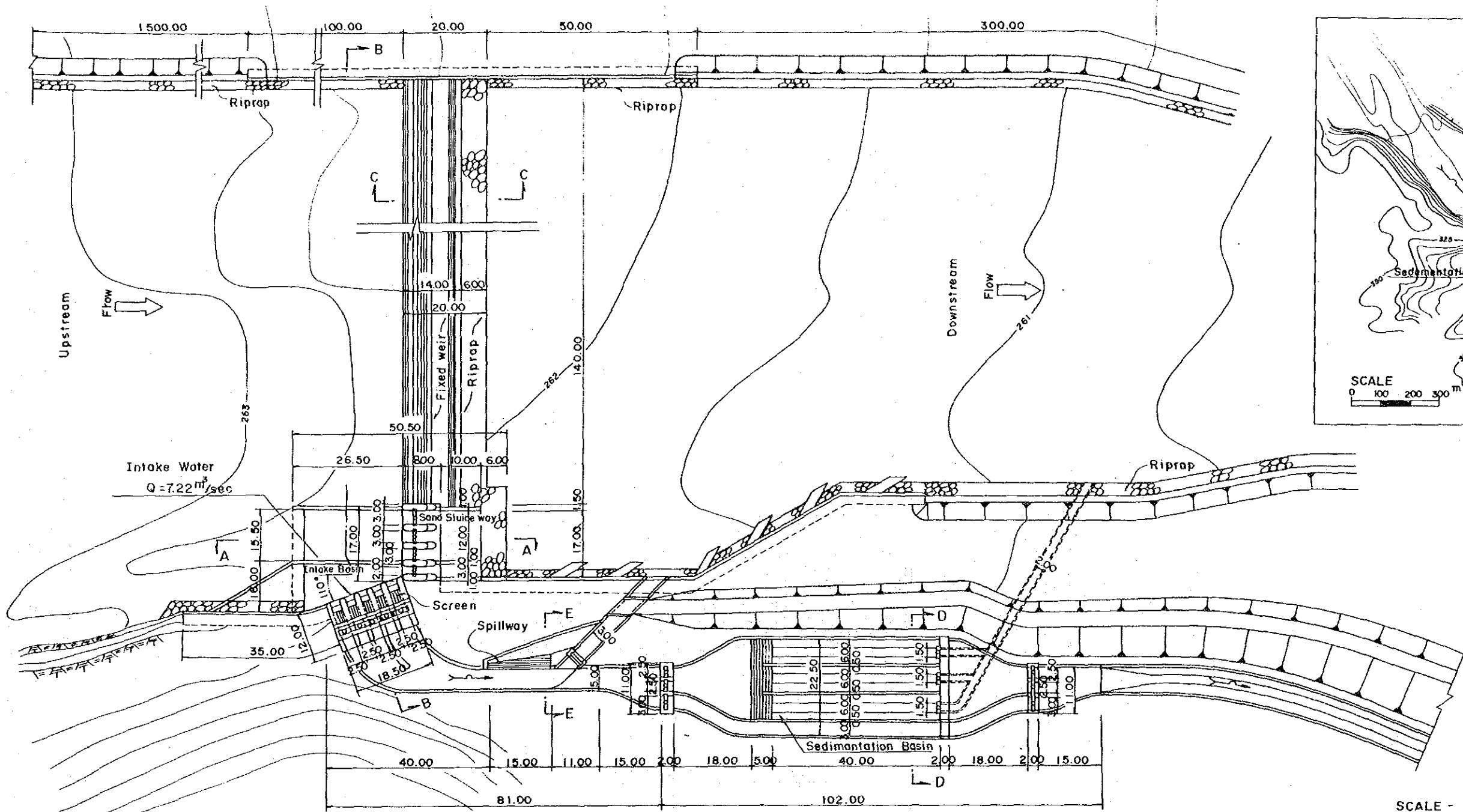


SECTION F-F (SCALE-B)

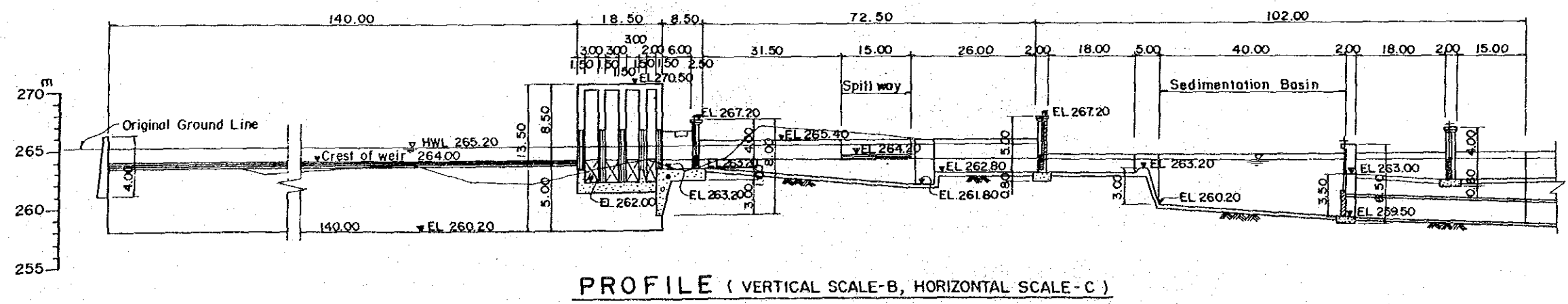
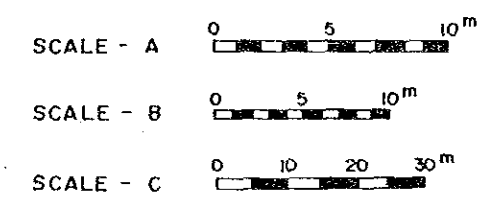


SECTION C-C (SCALE-A)

REPUBLICA DEL PERU MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL DE AMPLIACION DE LA FRONTERA AGRICOLA CHANCAY - HUARAL VALLEY REHABILITATION PROJECT			
PALPA & LA ESPRANZA DIVERSION WEIR (2/2)			
DATE	1985, MARCH	DWG. NO	5
JAPAN INTERNATIONAL COOPERATION AGENCY			



PLAN OF WEIR (SCALE-C)
(HUANDO & CHANCAY-HUARAL)



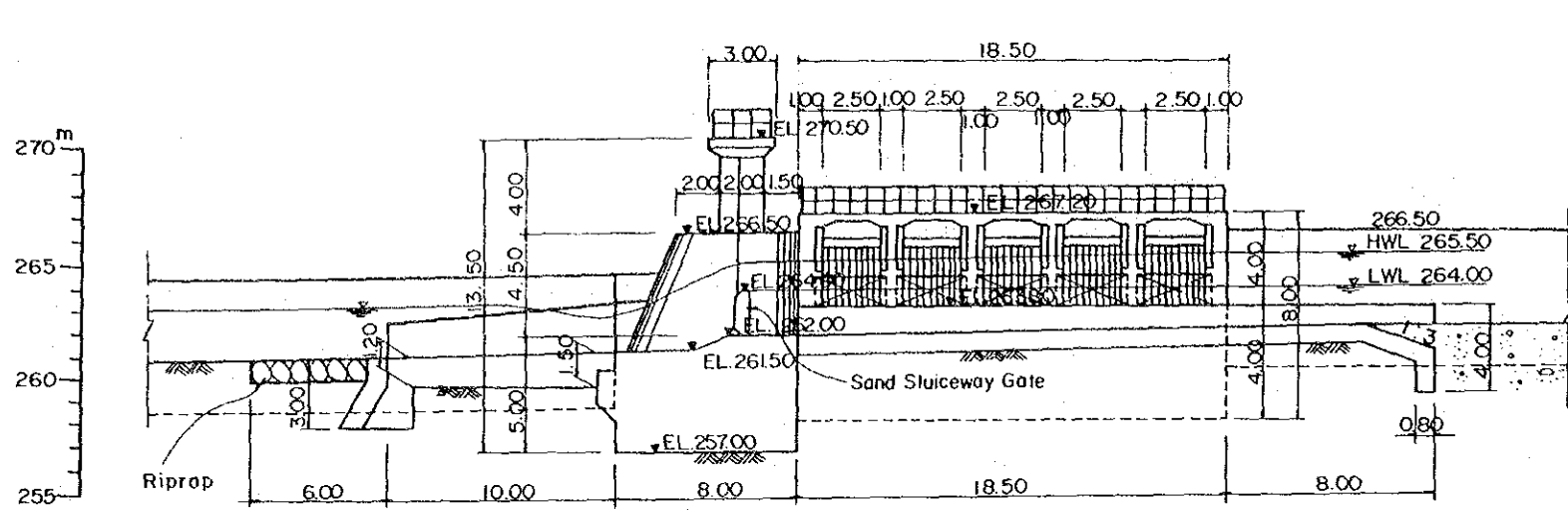
PROFILE (VERTICAL SCALE-B, HORIZONTAL SCALE-C)

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 CHANCAY - HUARAL VALLEY
 REHABILITATION PROJECT

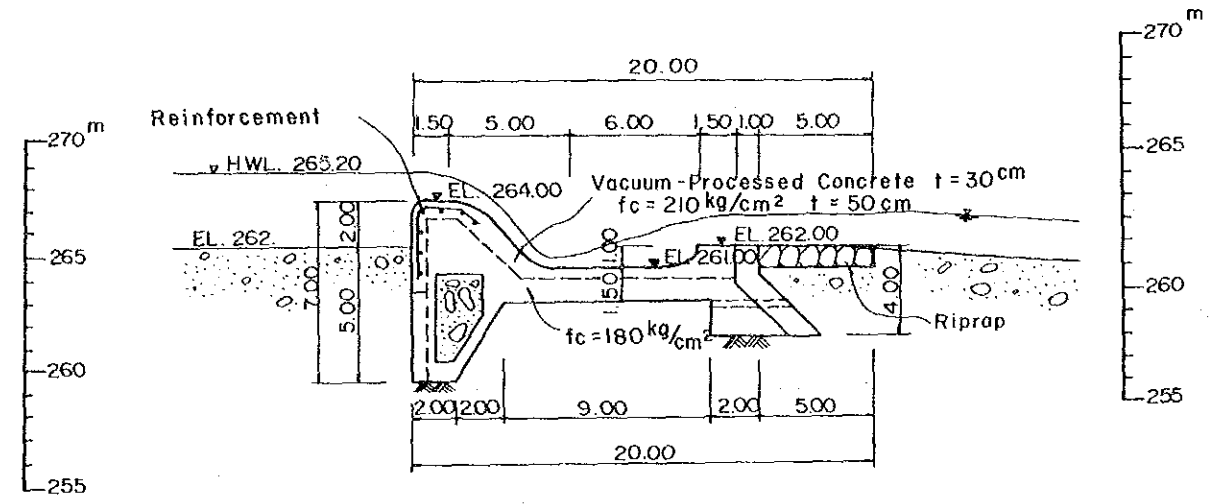
**HUANDO & CHANCAY - HUARAL
 DIVERSION WEIR (1/2)**

DATE 1985, MARCH DWG. NO 6

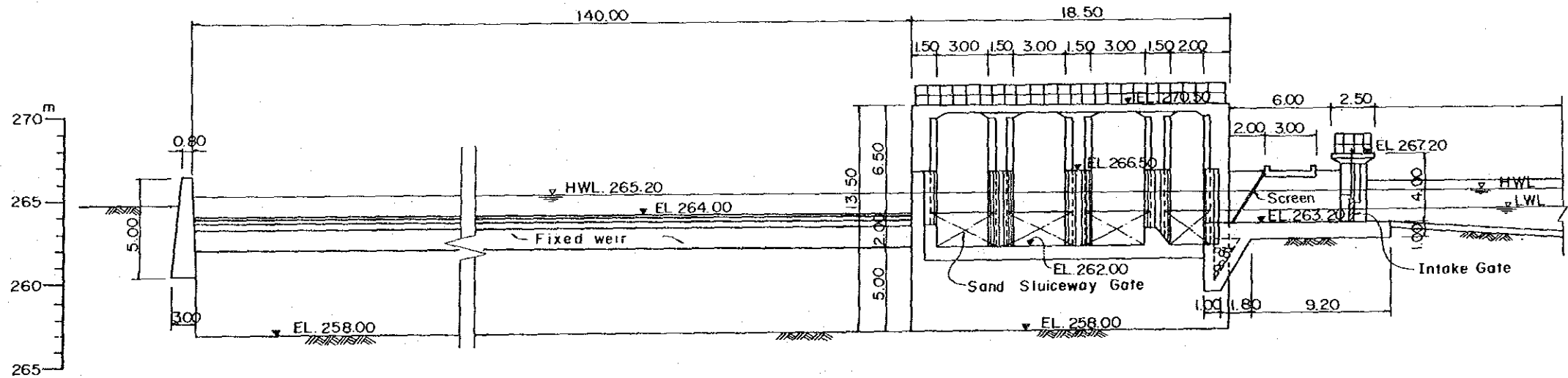
JAPAN INTERNATIONAL COOPERATION AGENCY



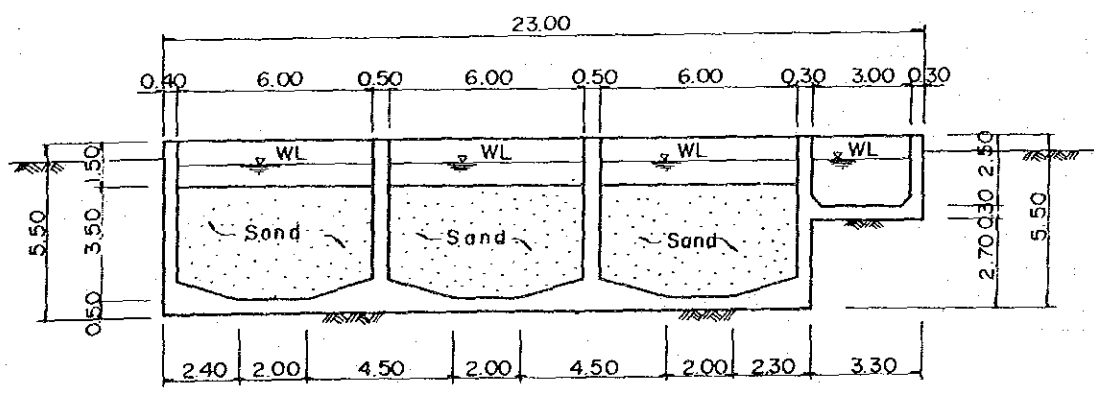
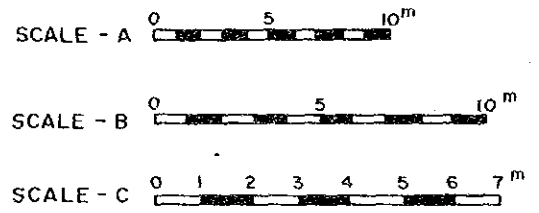
SECTION A - A (SCALE - A)



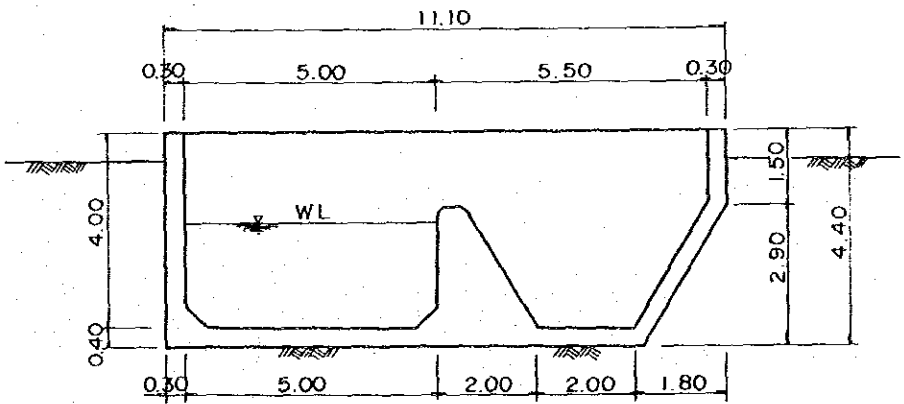
SECTION C - C (SCALE - A)



SECTION B - B (SCALE - A)

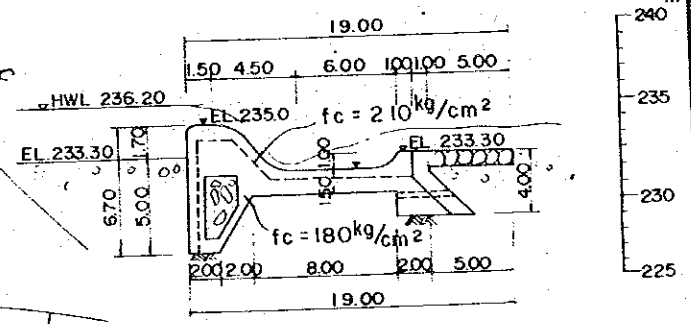
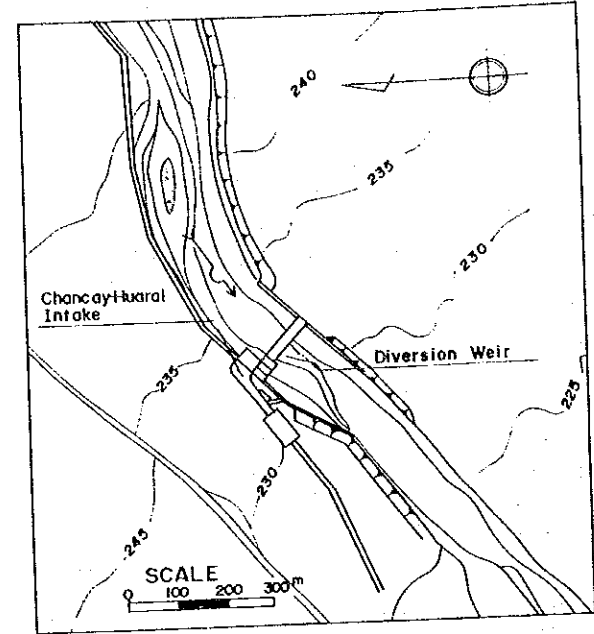
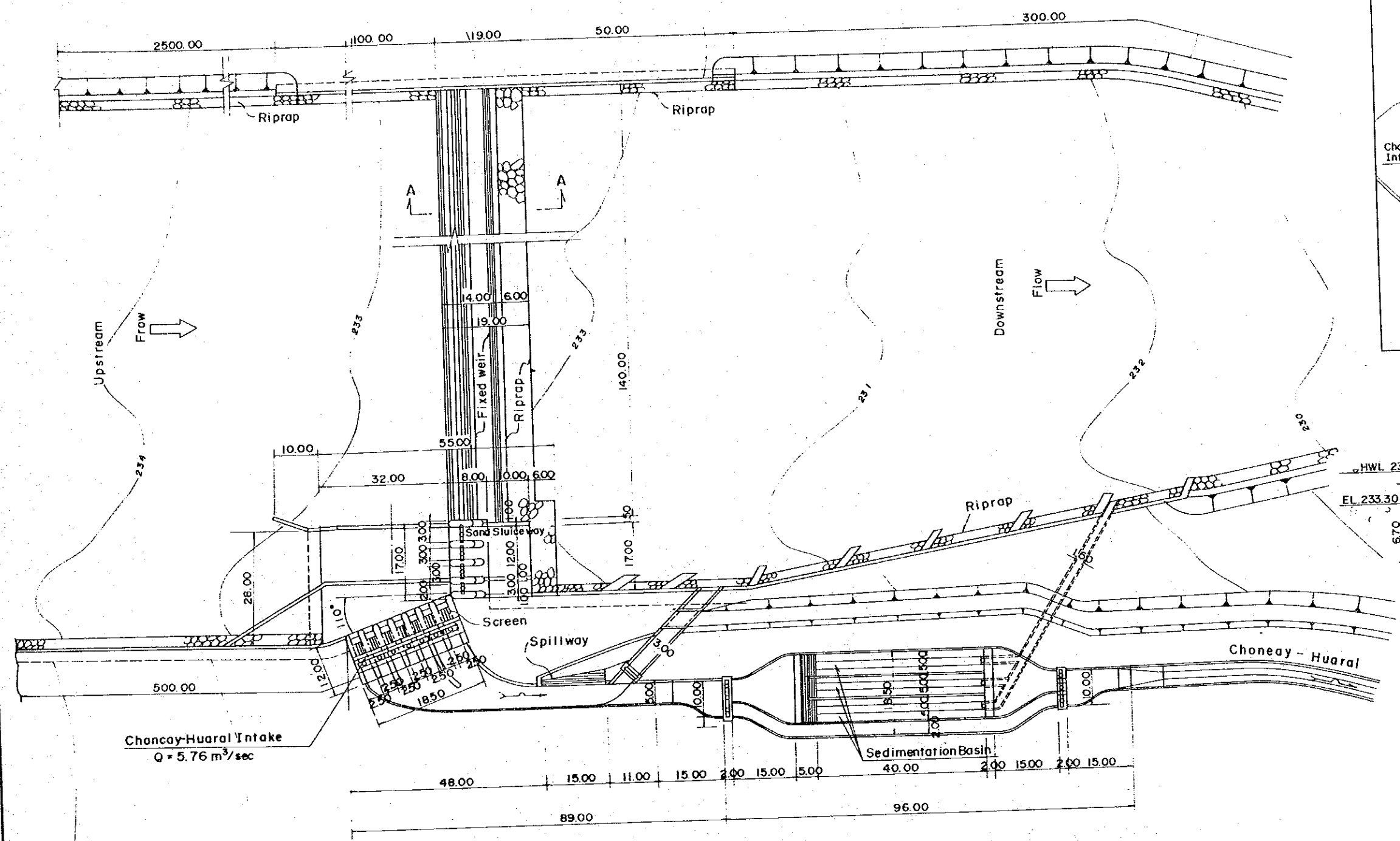


SECTION D - D (SCALE - B)
(SEDIMENTATION BASIN)

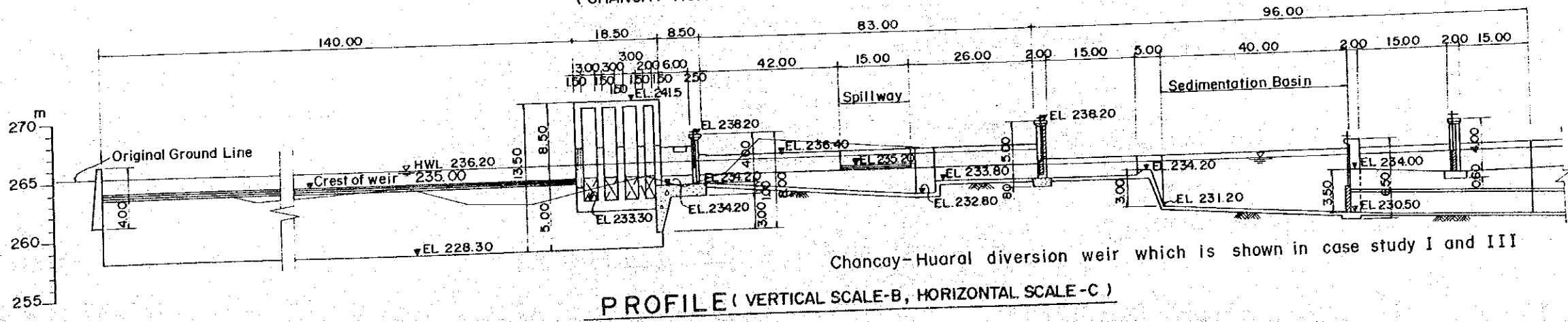
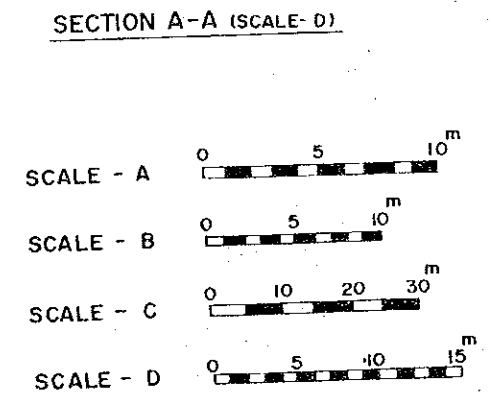


SECTION E - E (SCALE - C)
(SPILL WAY)

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DE AMPLIACION DE LA FRONTERA AGRICOLA			
CHANCAY - HUARAL VALLEY			
REHABILITATION PROJECT			
HUANDO & CHANCAY-HUARAL			
DIVERSION WEIR (2 / 2)			
DATE	1985, MARCH	DWG. NO	7
JAPAN INTERNATIONAL COOPERATION AGENCY			

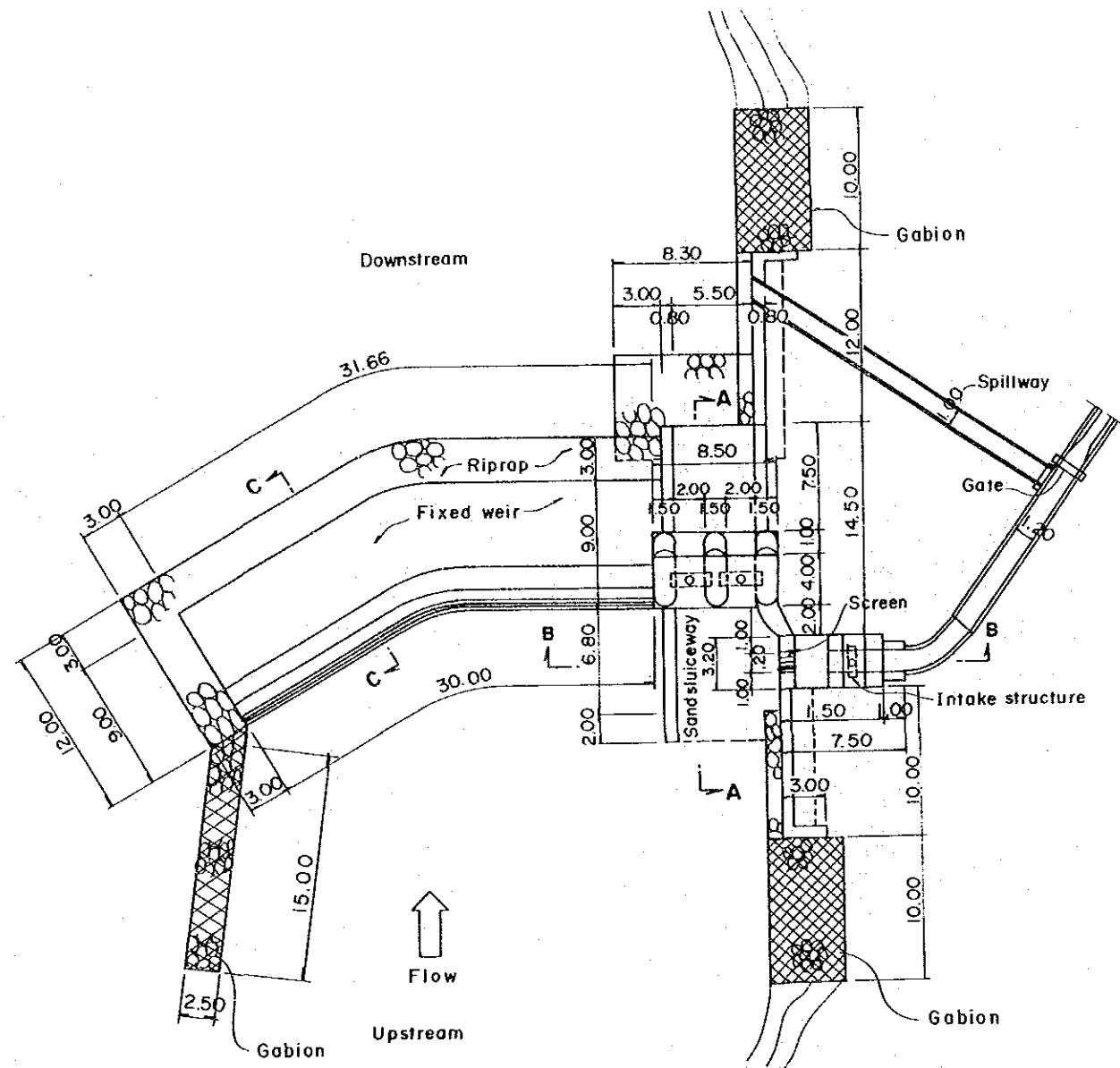


PLAN OF WEIR (SCALE - C)
(CHANCAY HUARAL)

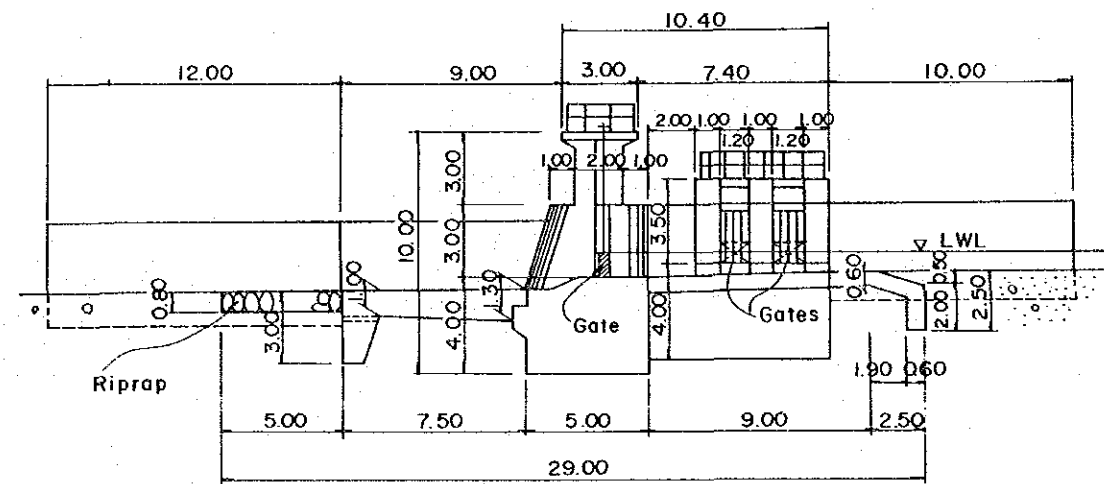
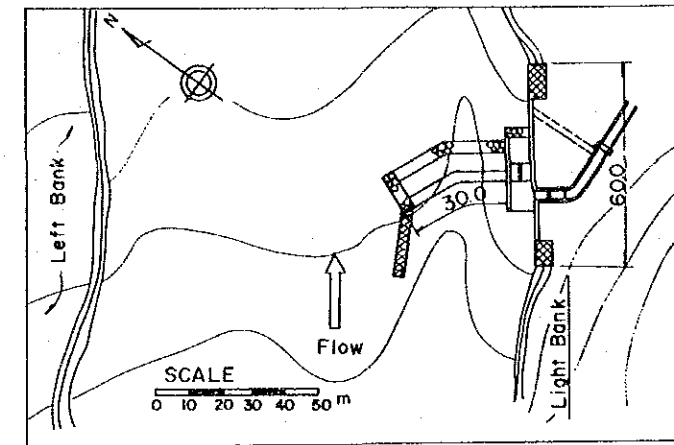


Chancay-Huaral diversion weir which is shown in case study I and III

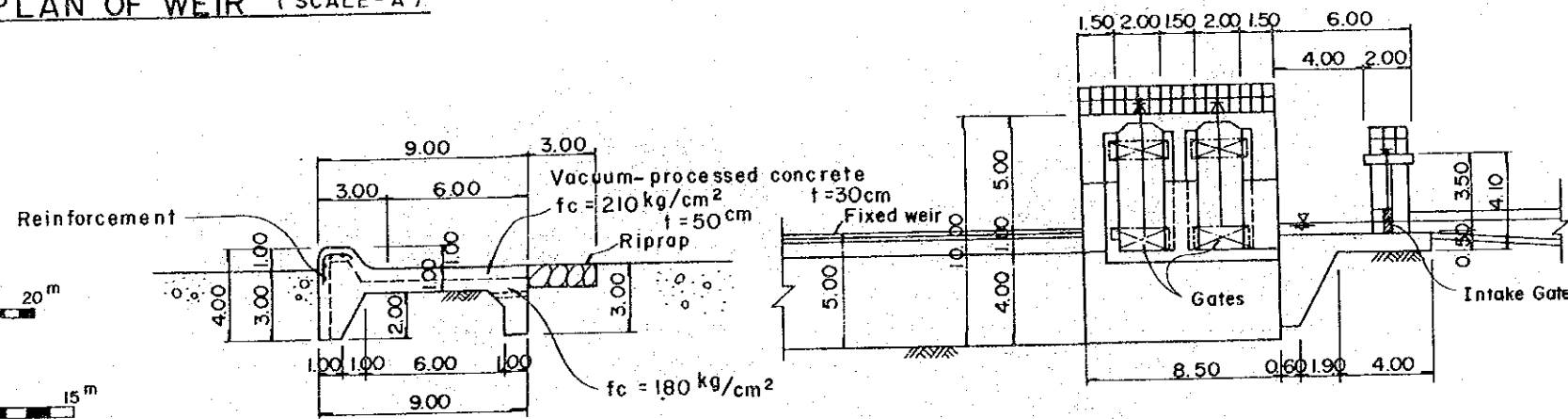
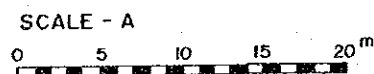
REPUBLICA DEL PERU MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL DE AMPLIACION DE LA FRONTERA AGRICOLA			
CHANCAY - HUARAL VALLEY REHABILITATION PROJECT			
CHANCAY - HUARAL DIVERSION WEIR (ALTERNATIVE - II)			
DATE	1985, MARCH	DWG. NO	9
JAPAN INTERNATIONAL COOPERATION AGENCY			



PLAN OF WEIR (SCALE - A)



SECTION A - A (SCALE - B)

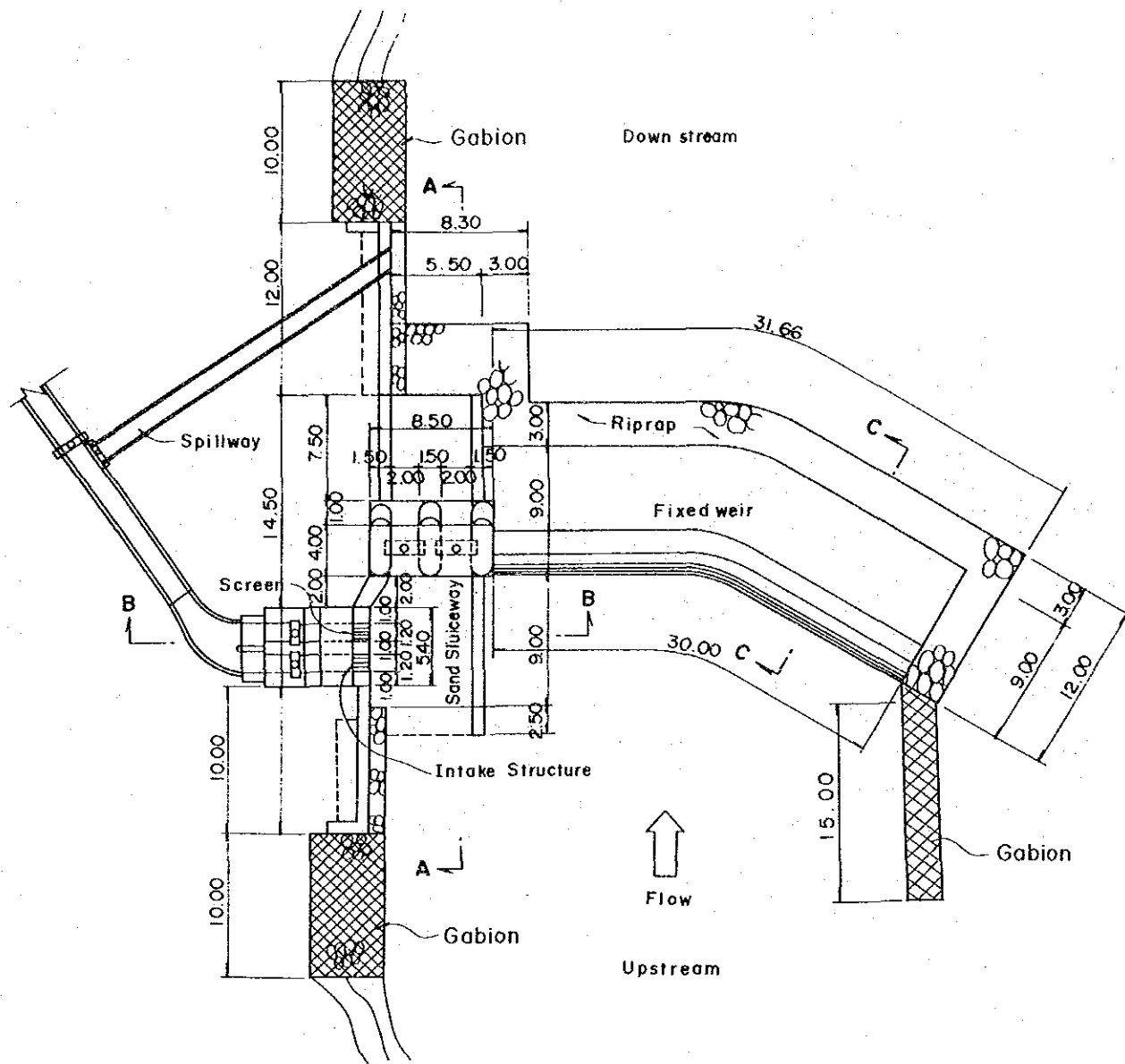


SECTION C - C (SCALE - B)

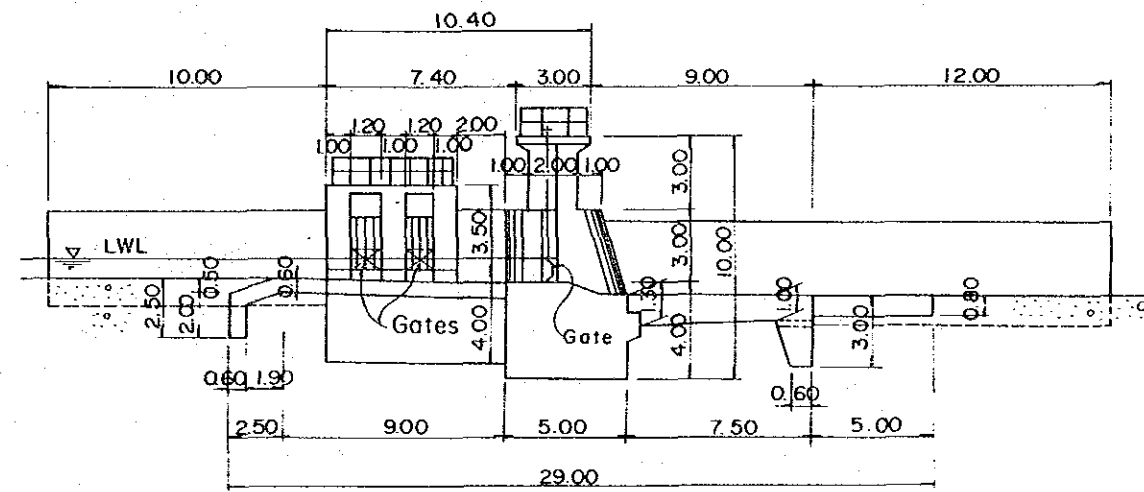
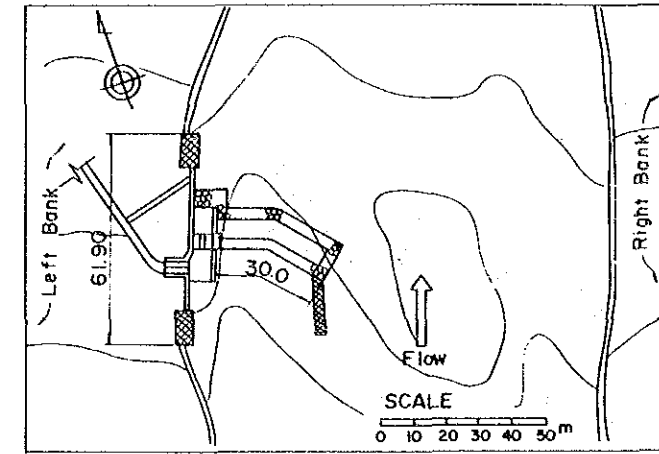
SECTION B - B (SCALE - B)

NAME OF WEIR	AMOUNT OF INTAKE WATER
SALINAS AITO	0.26 m ³ /sec
SALINAS BAJO	0.16 m ³ /sec

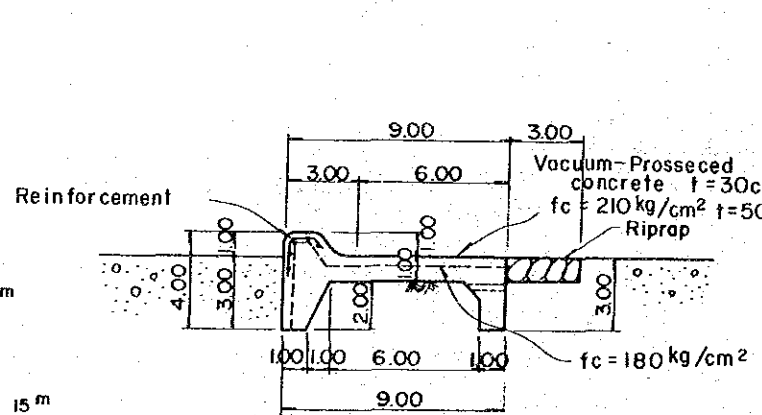
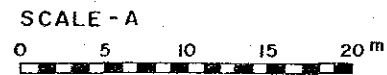
REPUBLICA DEL PERU MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL DE AMPLIACION DE LA FRONTERA AGRICOLA CHANCAY - HUARAL VALLEY REHABILITATION PROJECT			
INTAKE TYPE - I (SALINAS AITO, SALINAS BAJO)			
DATE	1985, MARCH	DWG. NO	10
JAPAN INTERNATIONAL COOPERATION AGENCY			



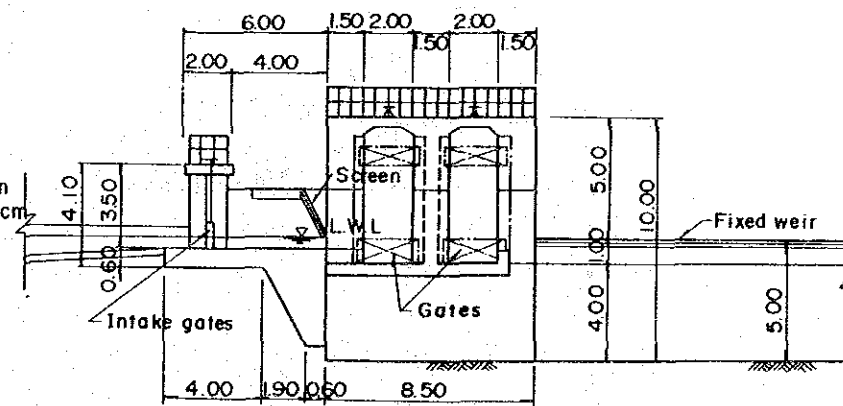
PLAN OF WEIR (SCALE - A)



SECTION A-A (SCALE - B)



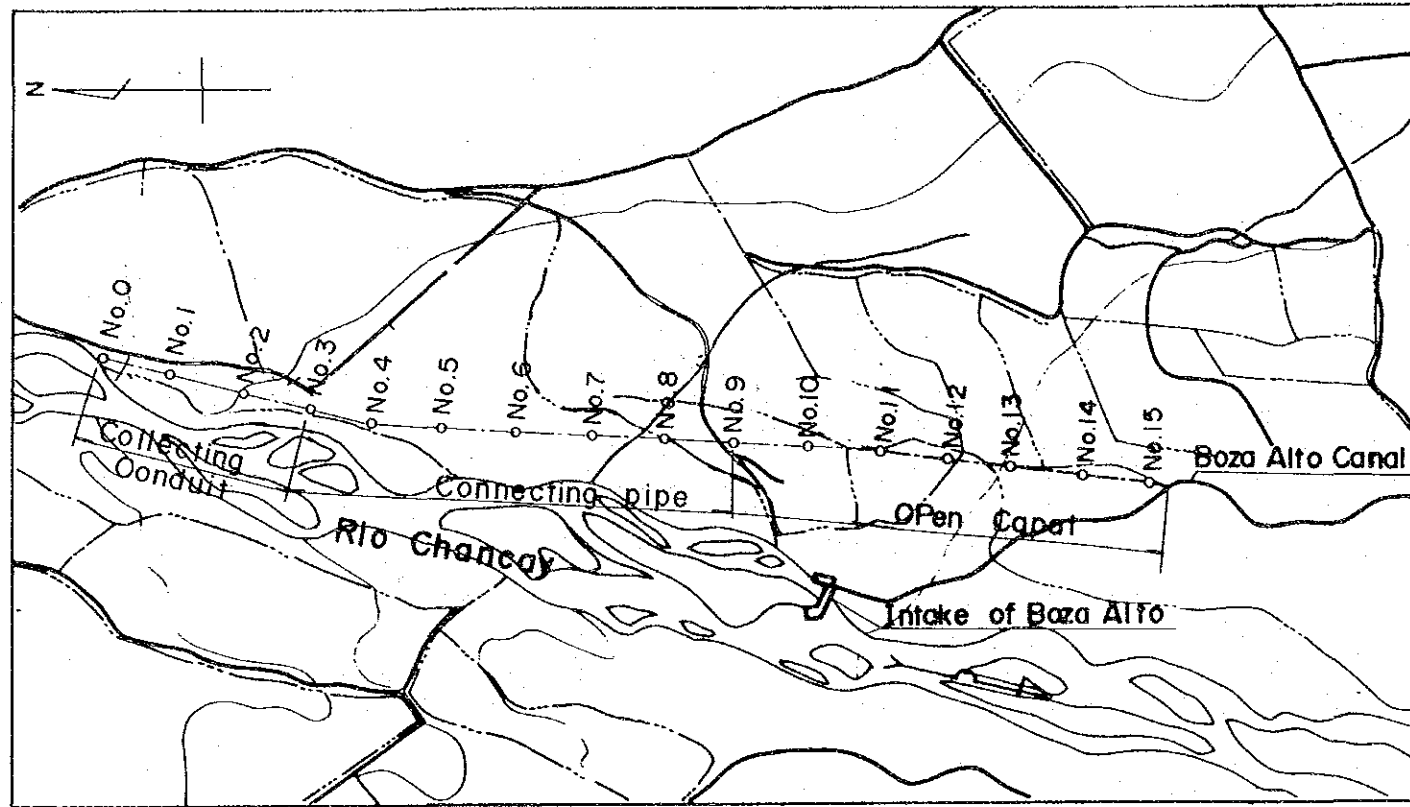
SECTION C-C (SCALE - B)



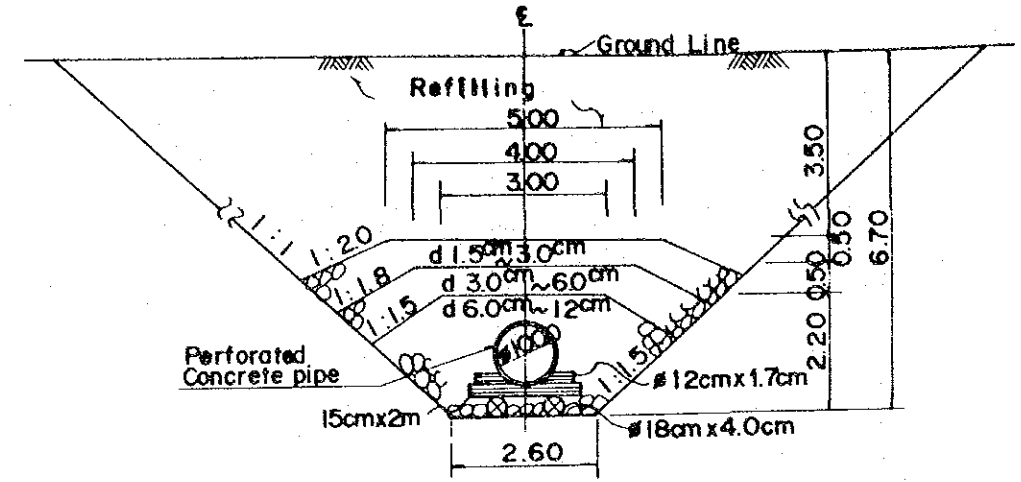
SECTION B-B (SCALE - B)

NAME OF WEIR	AMOUNT OF INTAKE WATER
BOZA AITO	0.54 m³/sec
BOZA BAJO	0.46 m³/sec
PASAMAYO BAJO	0.44 m³/sec

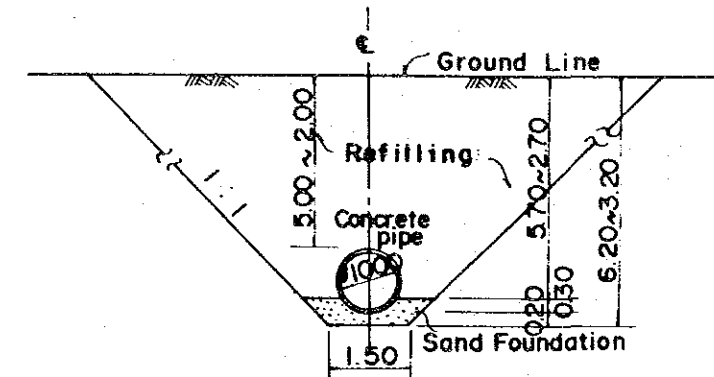
REPUBLICA DEL PERU MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL DE AMPLIACION DE LA FRONTERA AGRICOLA CHANCAY - HUARAL VALLEY REHABILITATION PROJECT			
INTAKE TYPE - II (BOZA ALTO BOZA BAJO) PASAMAYO BAJO			
DATE	1985, MARCH	DWG. NO	11
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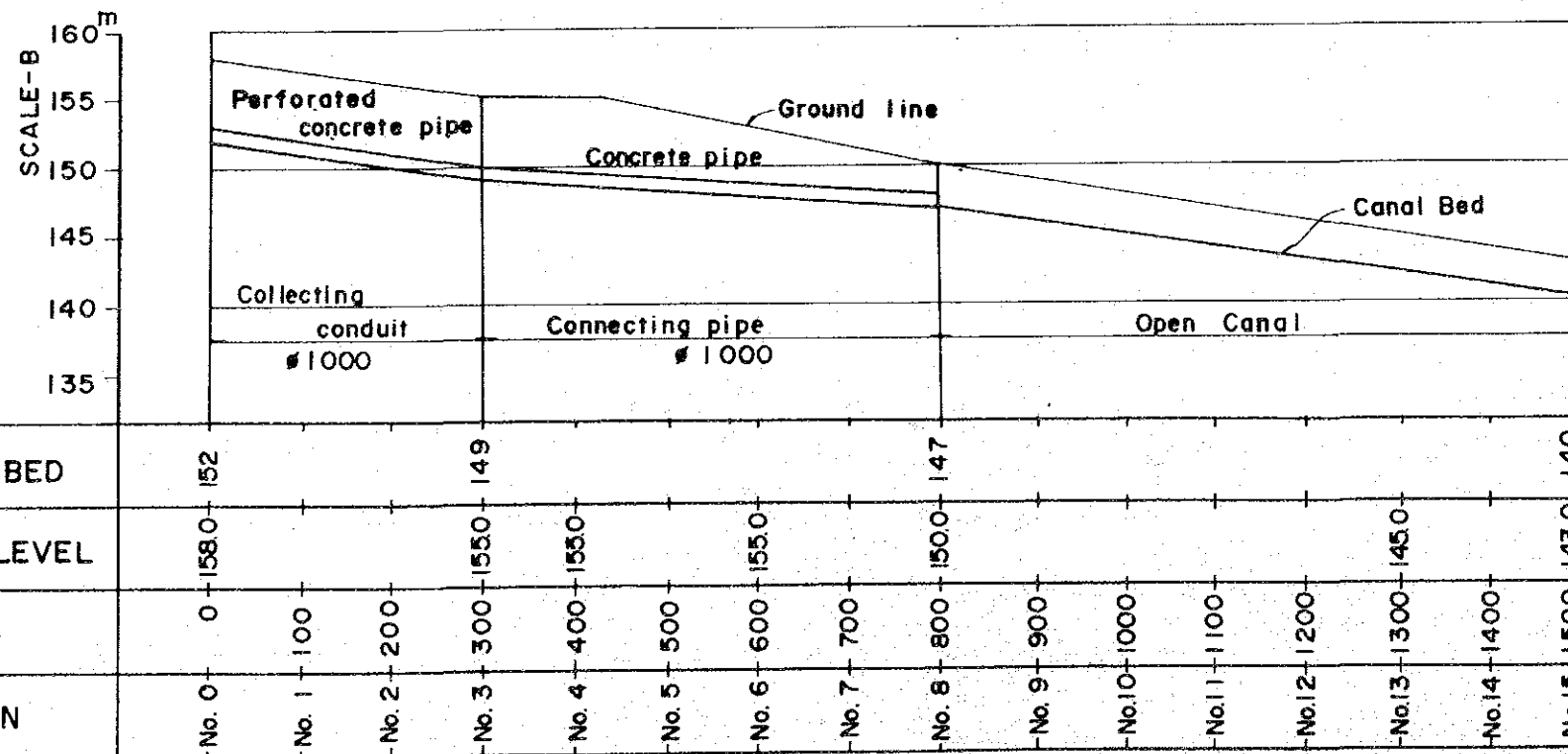
PLAN (SCALE - A)



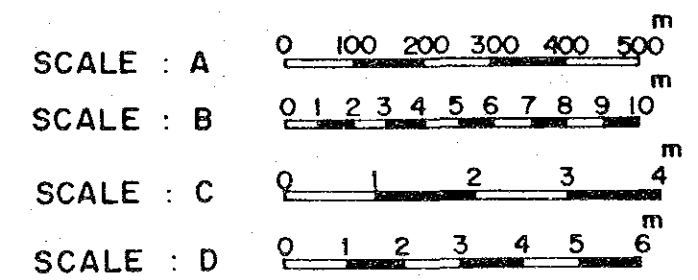
STANDARD SECTION OF COLLECTING CONDUIT (SCALE - D)



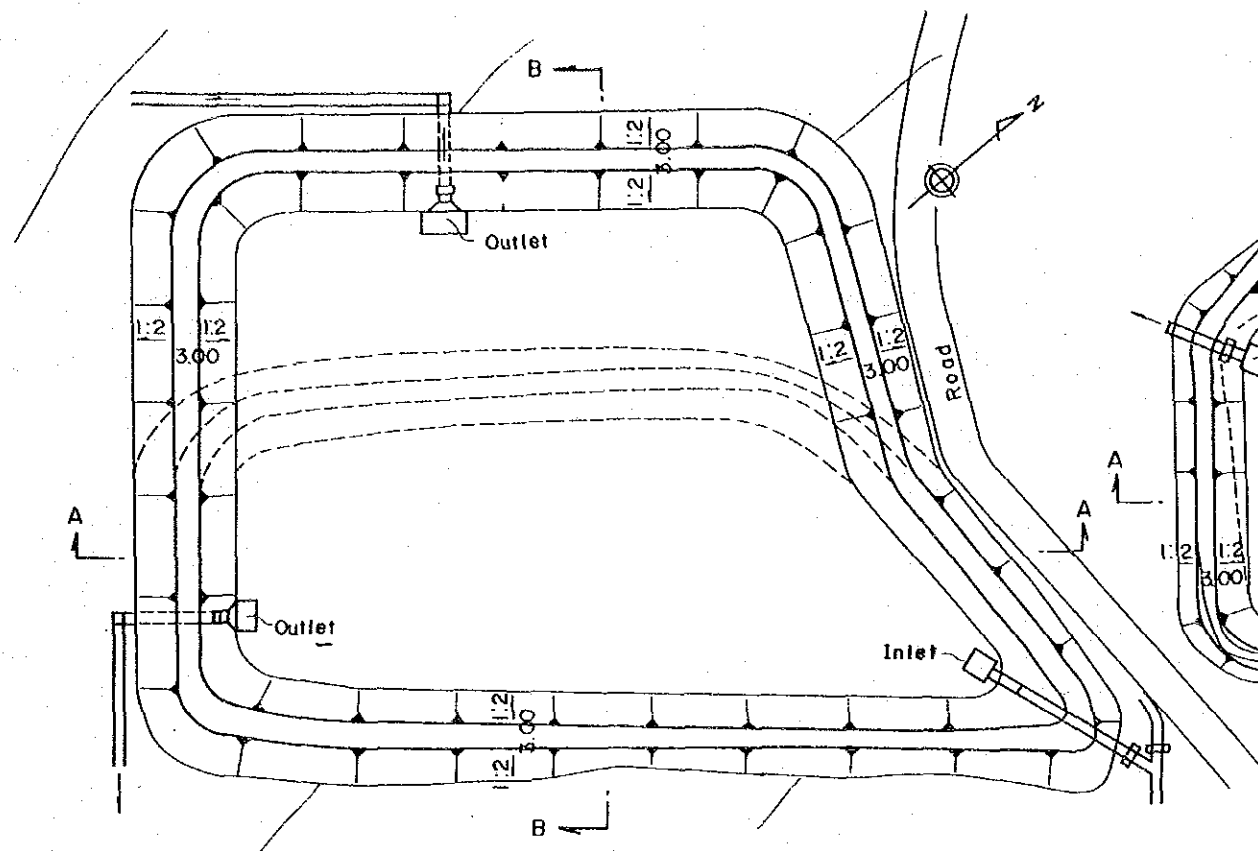
STANDARD SECTION OF CONNECTING PIPE (SCALE - D)



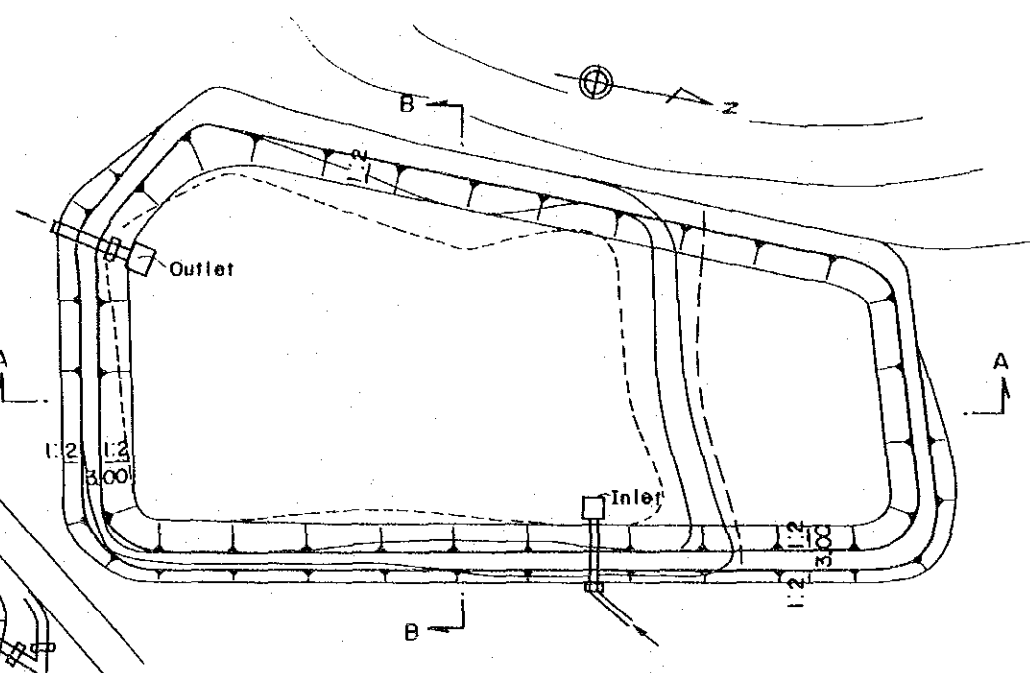
PROFILE (VERTICAL SCALE - B HORIZONTAL SCALE - C)



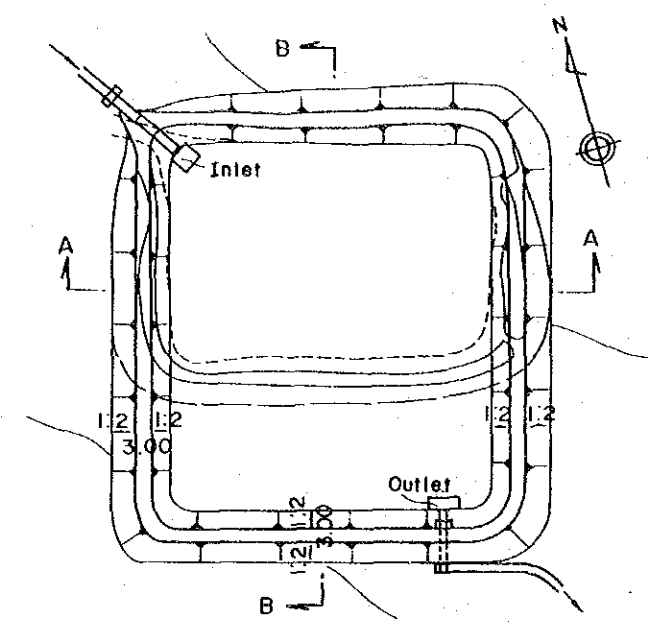
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CHANCAY - HUARAL VALLEY REHABILITATION PROJECT			
COLLECTING CONDUIT			
DATE	1985, MARCH	DWG. NO	12
JAPAN INTERNATIONAL COOPERATION AGENCY			



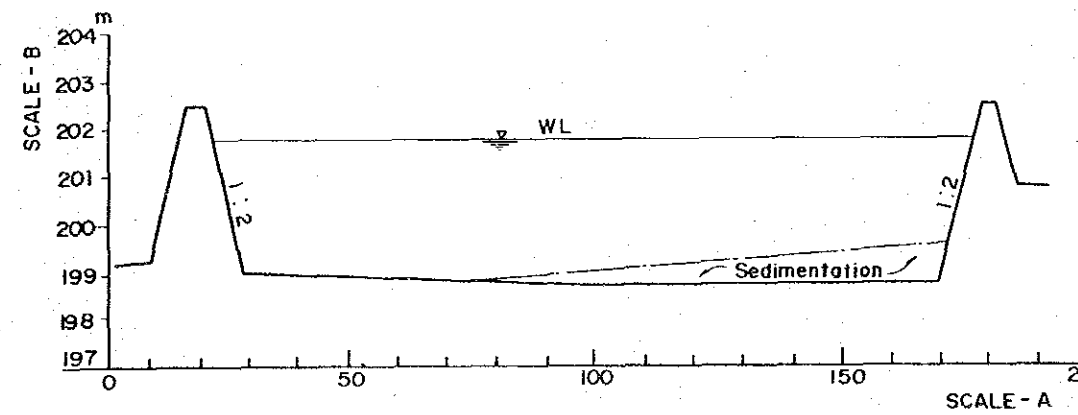
PLAN OF JESUS DEL VALLE
SCALE - A



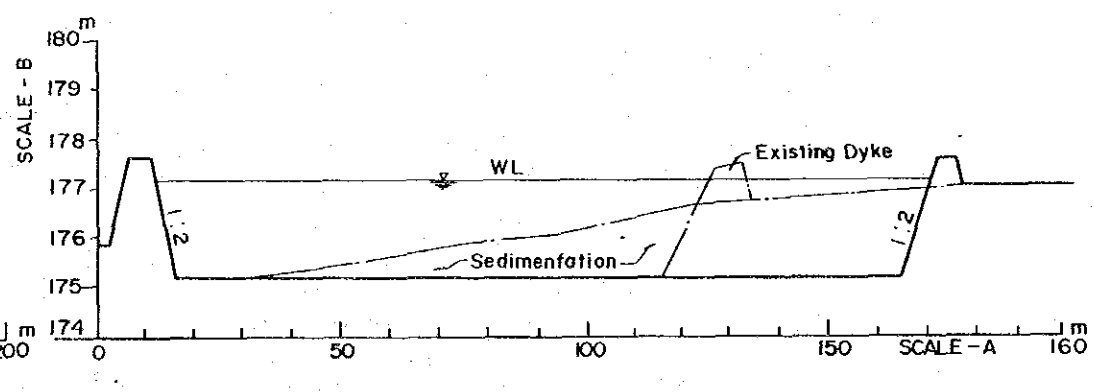
PLAN OF CERRITO
SCALE - A



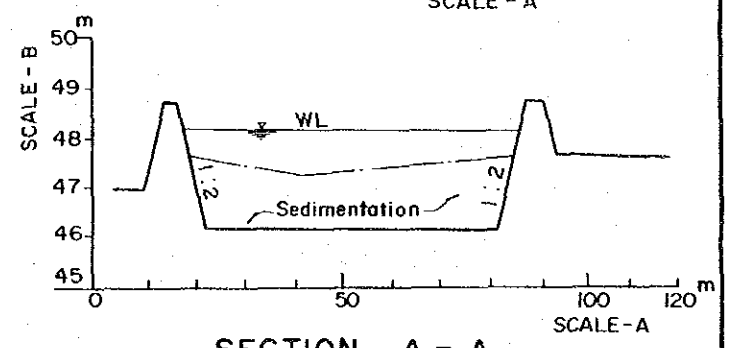
PLAN OF CHACAY BAJO
SCALE - A



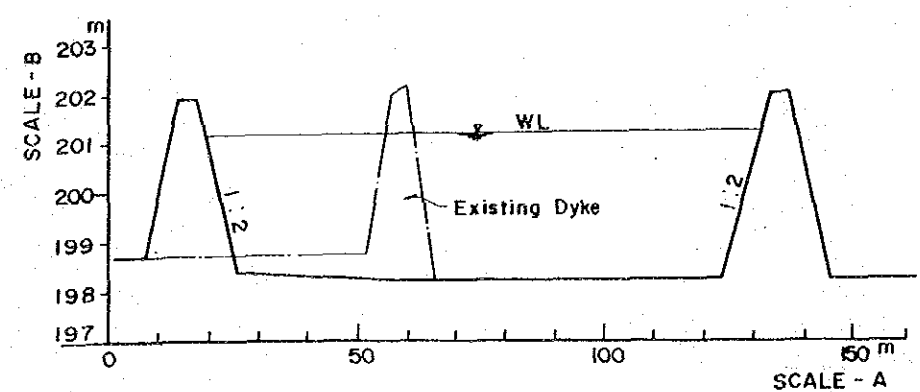
SECTION A - A



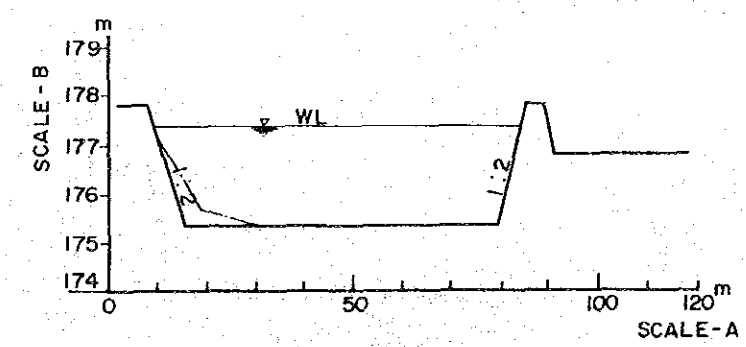
SECTION A - A



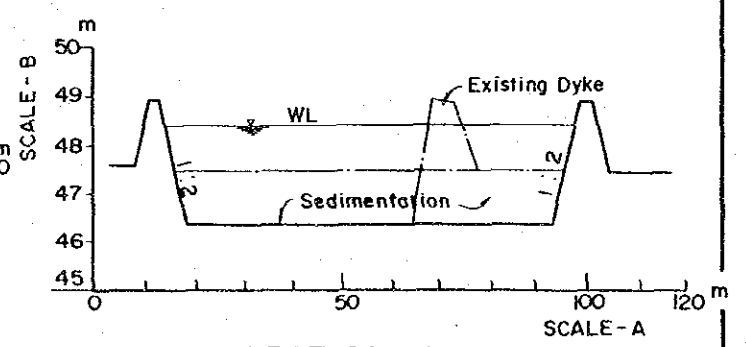
SECTION A - A



SECTION B - B

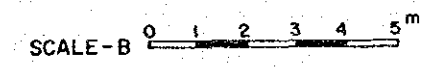
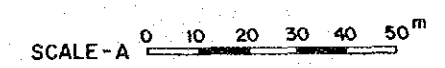


SECTION B - B

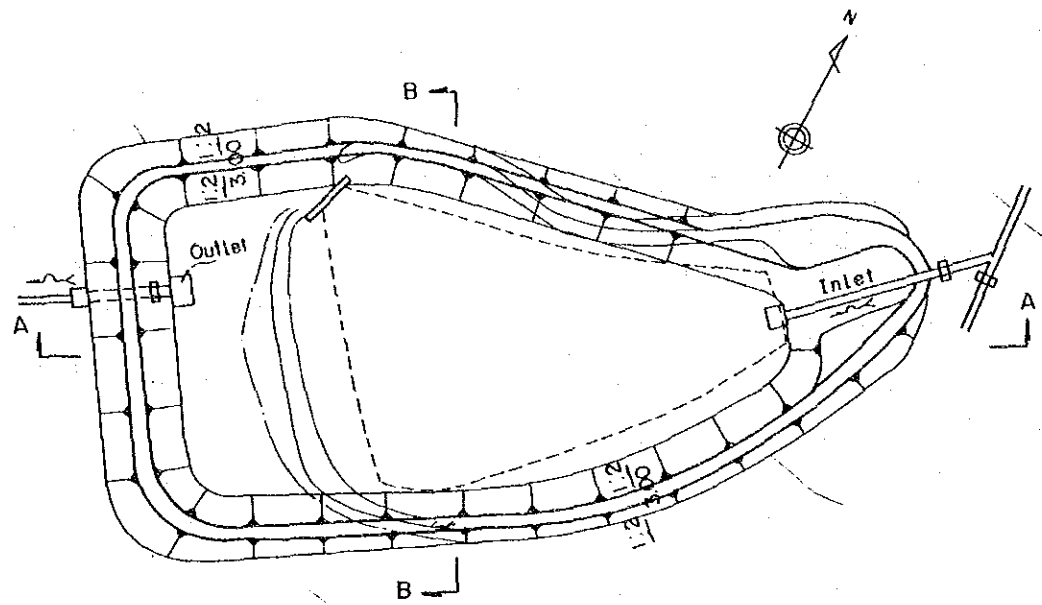


SECTION B - B

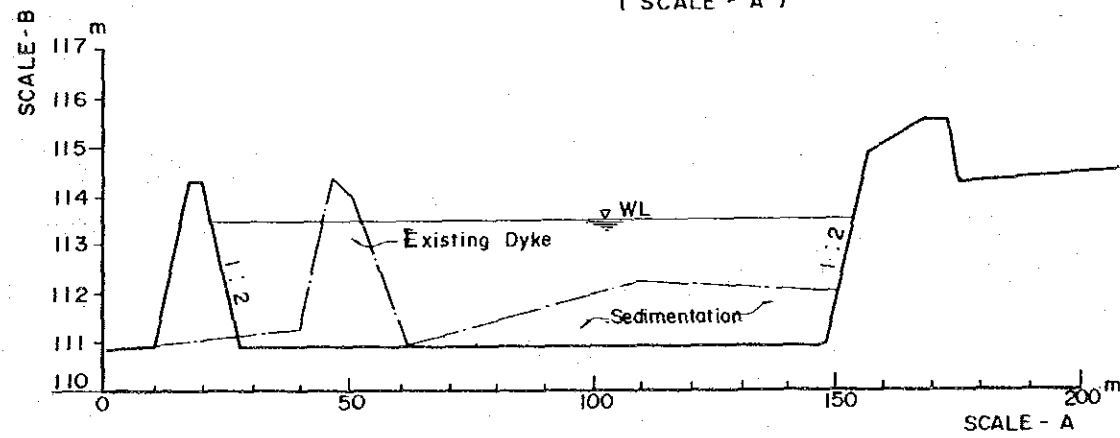
RESERVOIR	STORAGE CAPACITY (m ³)
JESUS DEL VALLE	35 000
CERRITO	18 000
CHACAY BAJO	11 000



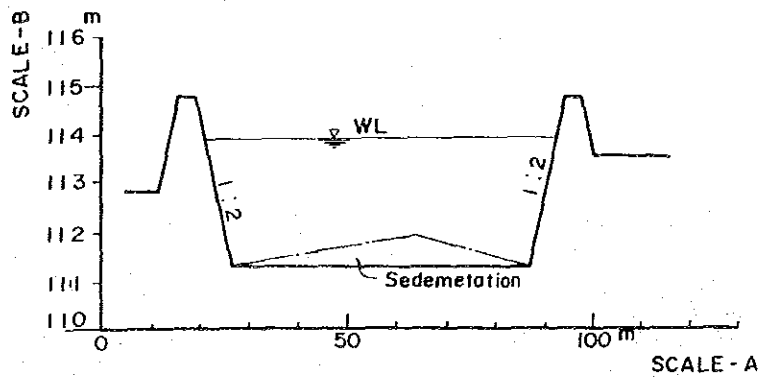
REPUBLICA DEL PERU
MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL
DE AMPLIACION DE LA FRONTERA AGRICOLA
CHANCAY - HUARAL VALLEY
REHABILITATION PROJECT
**IMPROVEMENT OF EXISTING
RESERVOIR (1/3)**
DATE 1985, MARCH DWG. NO. 13
JAPAN INTERNATIONAL COOPERATION AGENCY



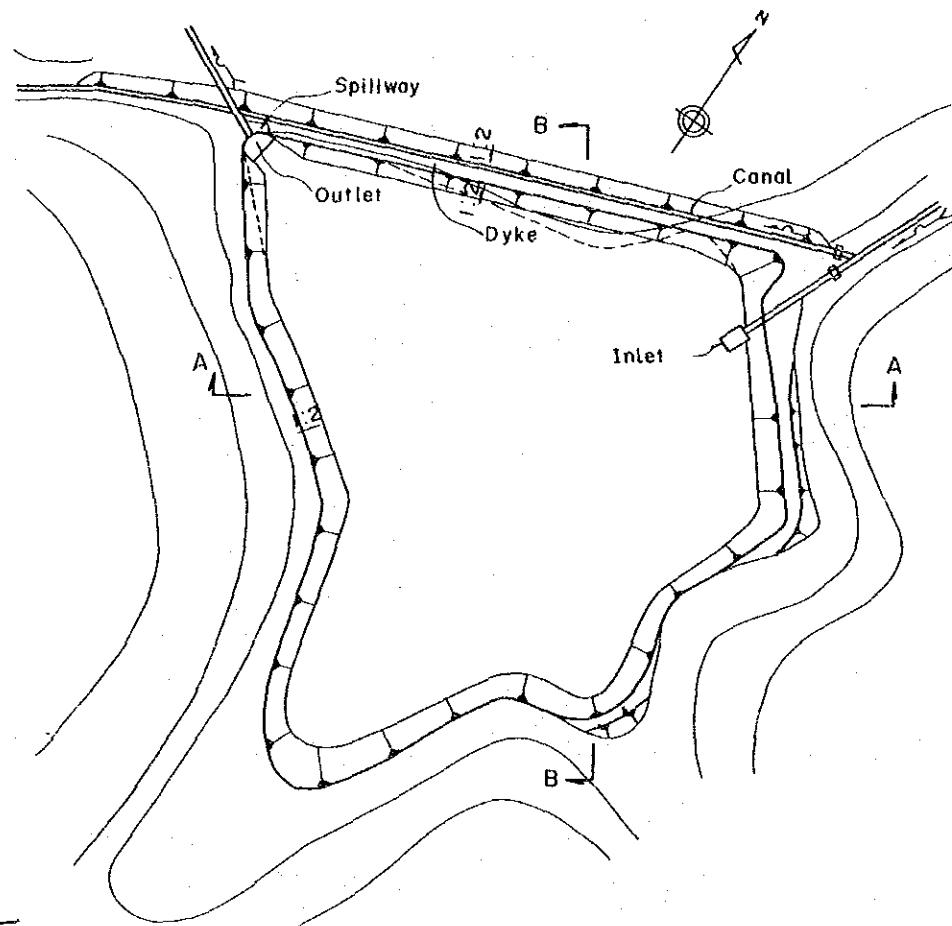
PLAN OF QUEPEPAMPA
(SCALE - A)



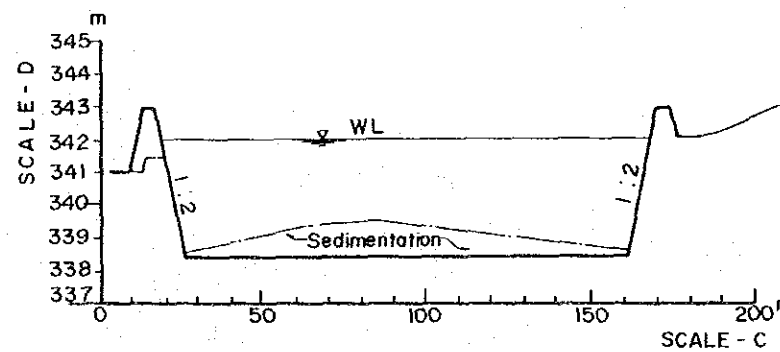
SECTION A - A



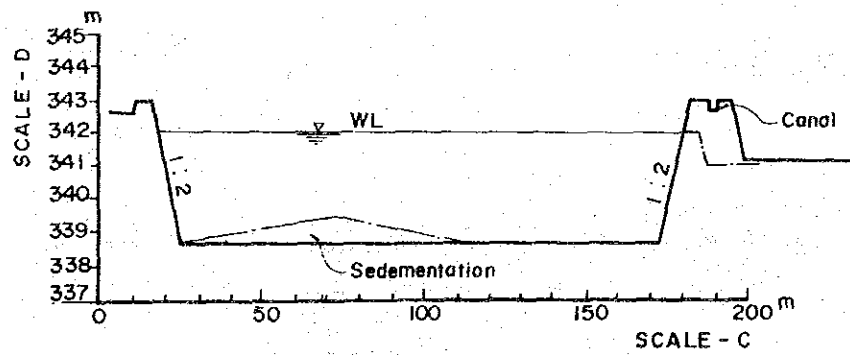
SECTION B - B



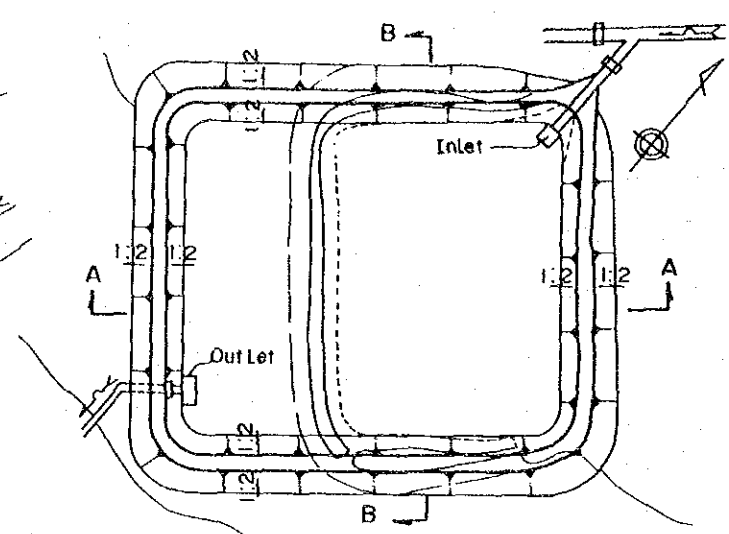
PLAN OF PALPA
(SCALE - C)



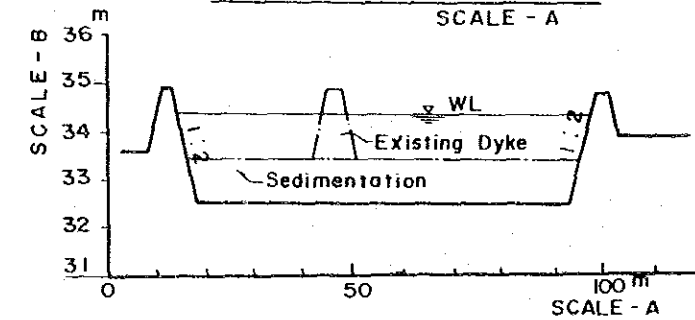
SECTION A - A



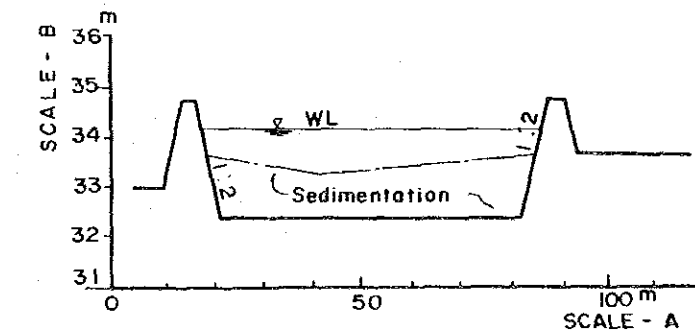
SECTION B - B



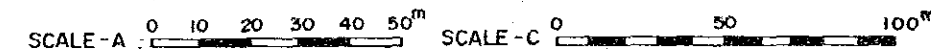
PLAN OF SAN JUAN
SCALE - A



SECTION A - A



SECTION B - B



RESERVOIR	STORAGE CAPACITY (m ³)
QUEPEPAMPA	14 000
PALPA	42 000
SAN JUAN	7 600

REPUBLICA DEL PERU
MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL
DE AMPLIACION DE LA FRONTERA AGRICOLA
CHANCAY - HUARAL VALLEY
REHABILITATION PROJECT

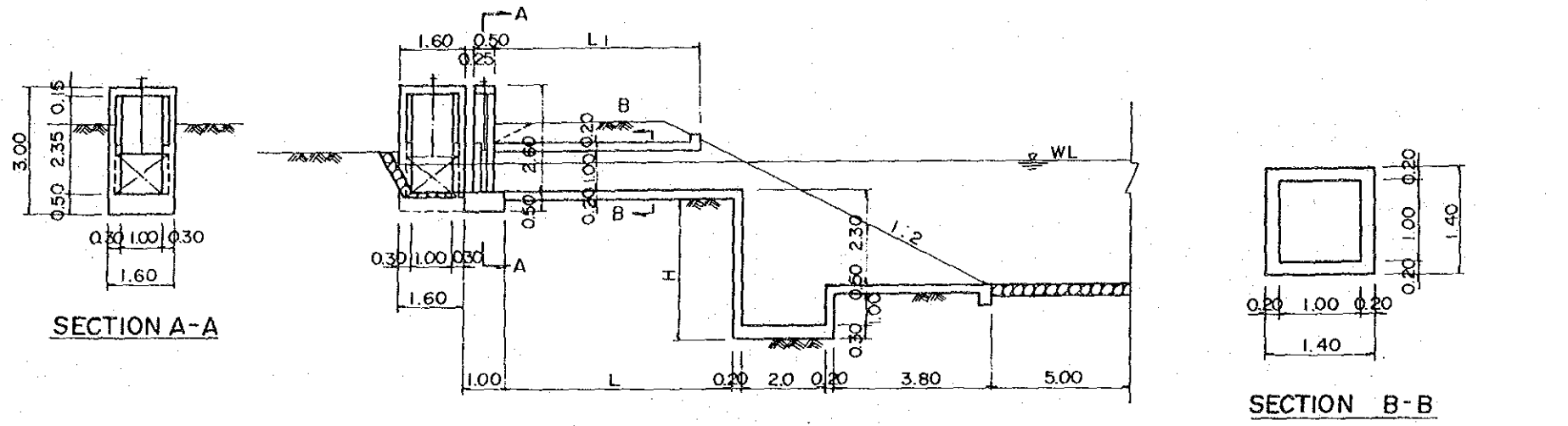
**IMPROVEMENT OF EXISTING
RESERVOIR (2 / 3)**

DATE 1985, MARCH DWG. NO 14

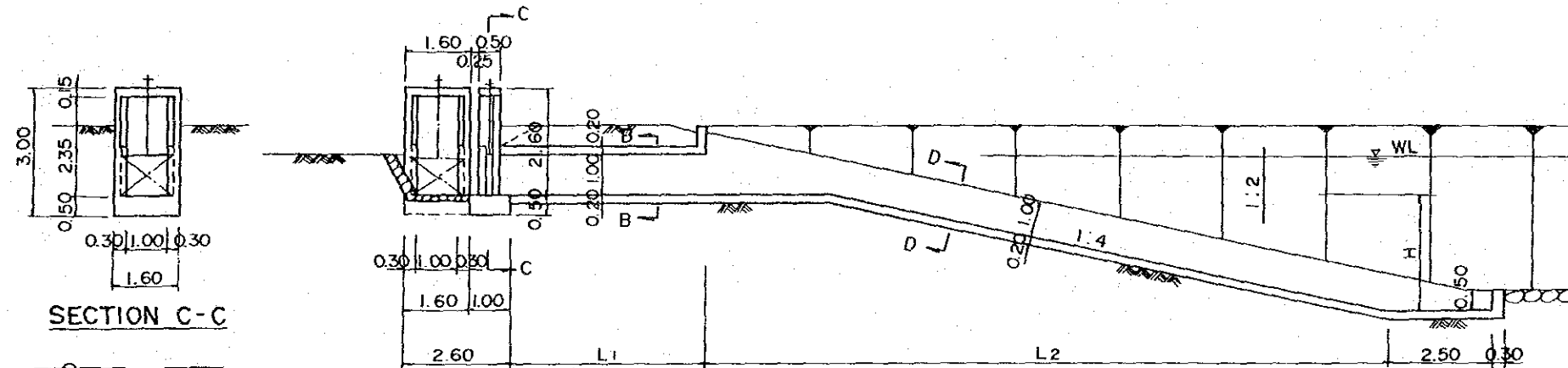
JAPAN INTERNATIONAL COOPERATION AGENCY

DIMENSIONS OF RESERVOIR

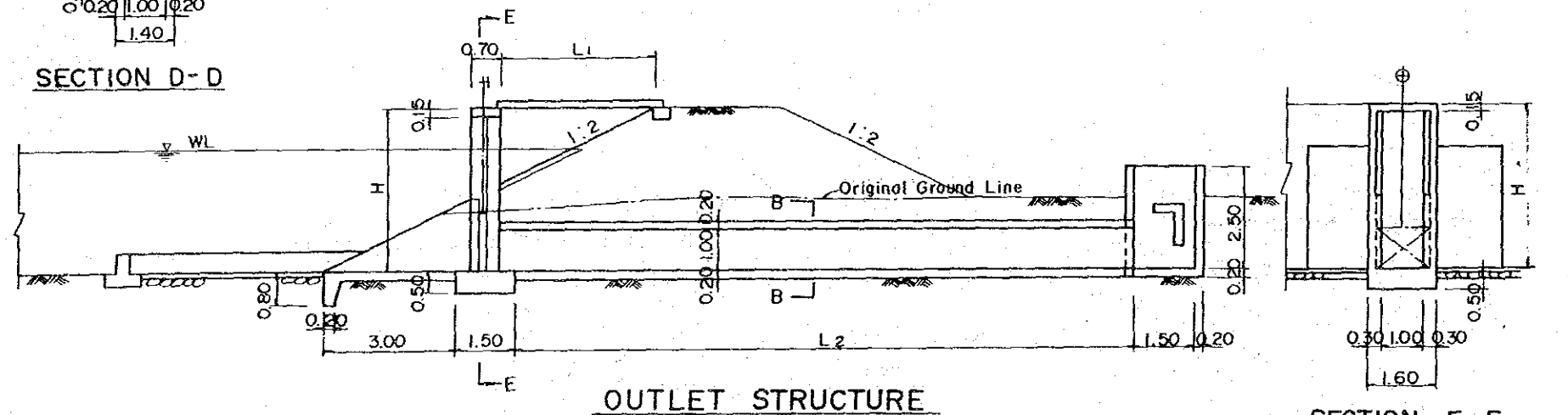
RESERVOIR	HIGHT OF DYKE		INLET STRUCTURE			OUTLET STRUCTURE			
	H ₁ (m)	H ₂ (m)	TYPE	H (m)	L ₁ (m)	L ₂ (m)	H (m)	L ₁ (m)	L ₂ (m)
ESPERANZA	6.5	7.5	II	5.3	5.0	24.2	6.5	10.0	30.0
HUANDO	3.0	3.8	I	2.1	5.0	5.5	3.0	3.6	13.7
JESVS DEL VALLE	2.8	3.6	I	1.9	5.0	25.0	2.8	3.2	12.9
CERRITO	2.0	2.8	I	1.1	5.0	5.5	2.0	1.6	9.7
QUEPEPANPA	2.5	3.2	I	1.5	5.0	25.0	2.5	2.4	11.3
BUENA VISTA	2.6	3.4	I	1.7	5.0	5.5	2.6	2.8	12.1
GALEANO	2.8	3.6	I	1.9	5.0	5.5	2.8	3.2	12.9
LAURELES	3.5	4.3	II	3.1	5.0	15.4	3.5	3.6	15.2
CHANCAY BAJO	2.3	3.1	I	1.4	5.0	7.0	2.3	2.2	10.9
CHANCAYHO-I	3.6	5.0	II	3.6	5.0	5.5	4.5	5.6	19.2
SAN JUAN	1.8	2.5	I	0.8	5.0	10.0	1.8	1.0	8.5
PALPA	3.5	4.3	II	3.1	5.0	15.4	3.5	3.6	15.2
MIRAFLORES	6.5	7.5	II	6.3	5.0	28.2	6.5	10.0	30.0



INLET STRUCTURE TYPE I

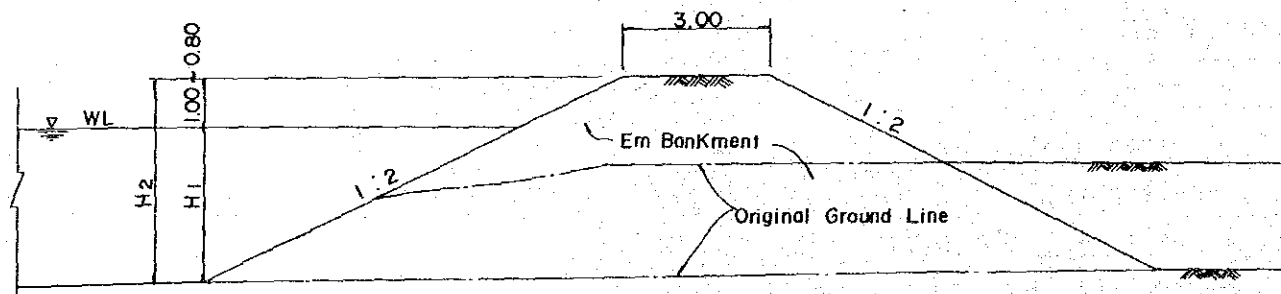


INLET STRUCTURE TYPE II

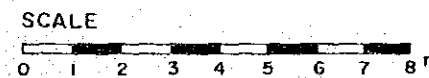


OUTLET STRUCTURE

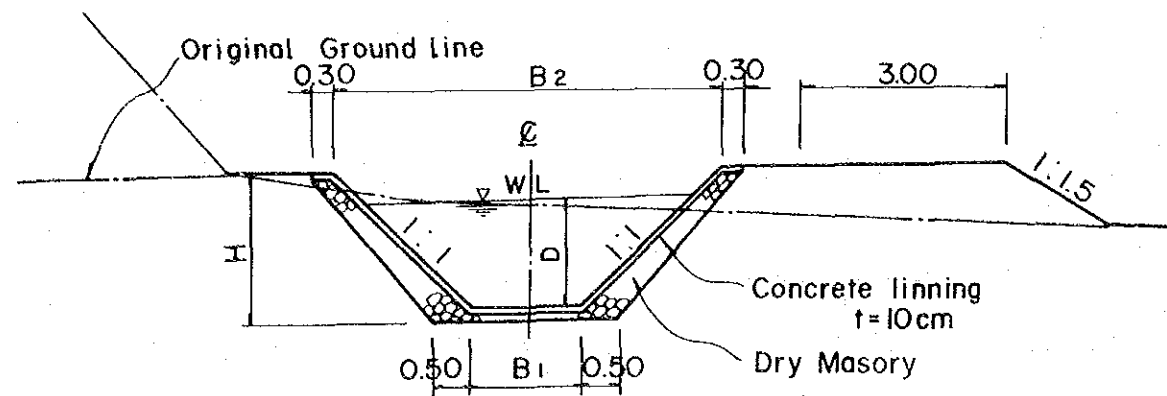
SECTION E-E



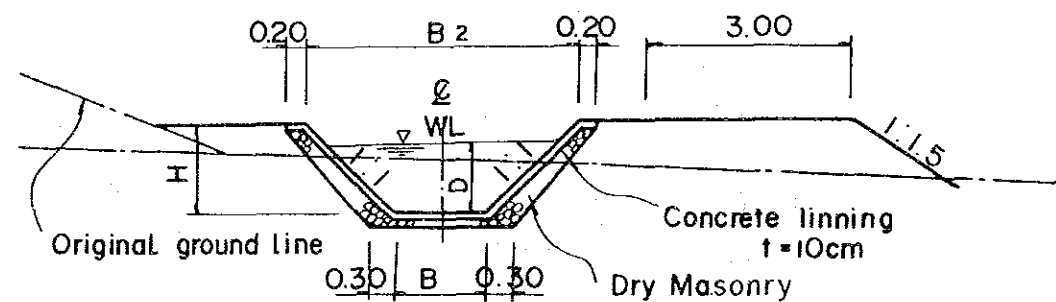
STANDARD SECTION OF EMBANKMENT



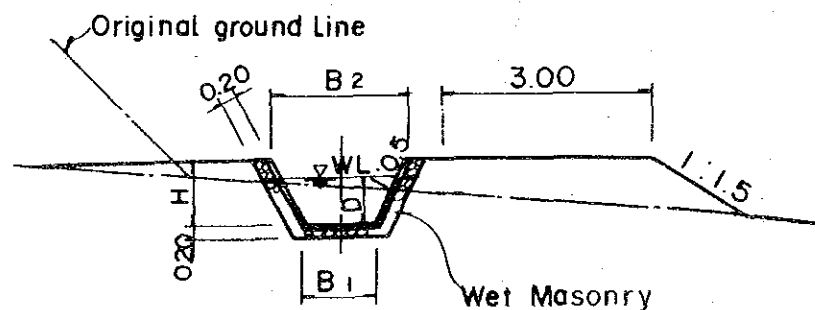
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 MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL
 DE AMPLIACION DE LA FRONTERA AGRICOLA
 CHANCAY - HUARAL VALLEY
 REHABILITATION PROJECT
 IMPROVEMENT OF EXISTING
 RESERVOIR (3/3)
 (INLET & OUTLET STRUCTURE)
 DATE 1985, MARCH DWG. NO 15
 JAPAN INTERNATIONAL COOPERATION AGENCY



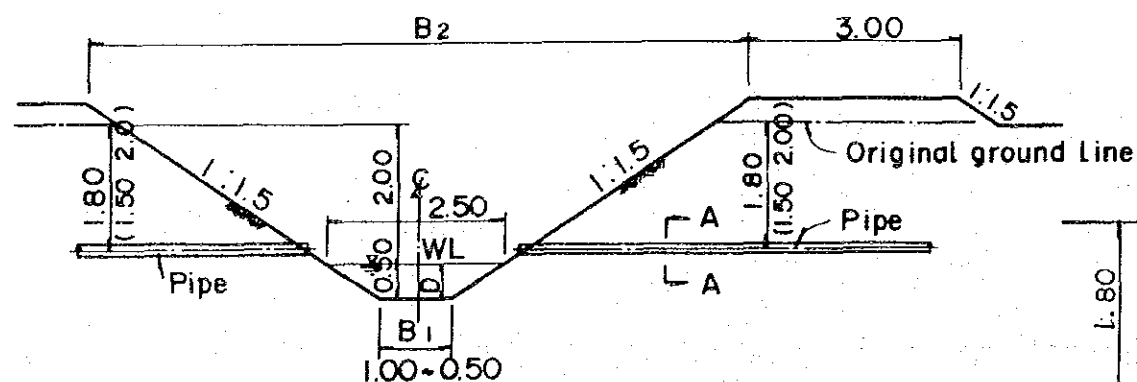
IRRIGATION CANAL TYPE - I (SCALE - A)



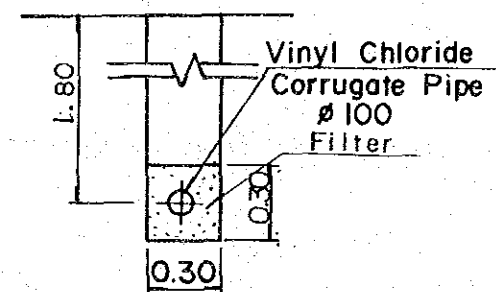
TYPE - II (SCALE - A)



TYPE - III (SCALE - A)



DRAINAGE CANAL TYPE - IV, V (SCALE - B)

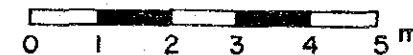


SECTION A - A

DIMENSIONS OF IRRIGATION & DRAINAGE CANAL

TYPE	Discharge (Peak) (m ³ /s)	Velocity (m/s)	B ₁ (m)	B ₂ (m)	D (m)	H (m)	Slope I
Irrigation Canal							
TYPE - I	7.22	1.58	1.6	5.6	1.48	2.00	1/1300
TYPE - I	5.76	1.49	1.40	5.0	1.39	1.80	1/1300
TYPE - II	3.51	1.46	1.10	4.1	1.10	1.50	1/1000
TYPE - II	3.25	1.49	1.10	3.9	1.03	1.40	1/900
TYPE - II	2.70	1.48	1.00	3.6	0.94	1.30	1/800
TYPE - II	2.70	1.17	0.90	3.9	1.13	1.50	1/500
TYPE - II	2.56	1.46	0.90	3.5	0.95	1.30	1/800
TYPE - III	1.80	1.15	1.20	2.5	0.94	1.30	1/1100
TYPE - III	1.67	1.17	1.20	2.4	0.87	1.20	1/1000
TYPE - III	1.55 ~1.36	1.19 ~1.15	1.20	2.2	0.81 ~0.75	1.10	1/900
TYPE - III	1.16 ~1.10	1.16 ~1.20	1.10	2.1	0.69 ~0.65	1.00	1/800 ~1/700
TYPE - III	1.06 ~1.00	1.19 ~1.17	1.00	2.0	0.67 ~0.65	1.00	1/700
TYPE - III	0.88	1.03	1.00	1.9	0.65	0.90	1/900
TYPE - III	0.71	0.98	0.90	1.8	0.60	0.90	1/900
TYPE - III	0.61	1.00	0.90	1.7	0.56	0.80	1/800
TYPE - III	0.62 ~0.54	1.04 ~1.06	0.80	1.6	0.55 ~0.49	0.80	1/700 ~1/600
TYPE - III	0.52 ~0.48	1.05 ~1.03	0.80	1.5	0.48 ~0.45	0.70	1/600
TYPE - III	0.44	1.01	0.70	1.4	0.47	0.70	1/600
TYPE - III	0.26	0.84	0.60	1.2	0.39	0.60	1/600
TYPE - III	0.18 ~0.16	0.94 ~0.91	0.50	1.0	0.30 ~0.28	0.50	1/400
TYPE - III	0.08	0.48	0.40	0.9	0.30	0.50	1/1400
Drainage Canal							
TYPE - IV Main		Max. 0.80	1.00	9.40	0.50	2.50	
TYPE - V Secondary		Max. 0.80	0.50	7.55	0.50	2.20	

SCALE - A



SCALE - B

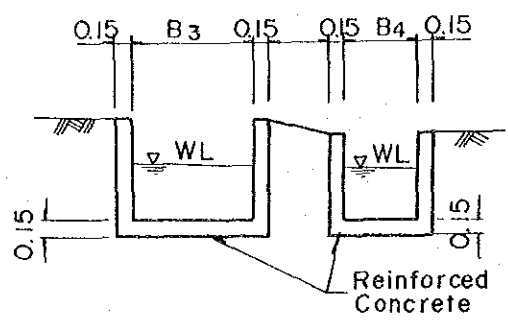
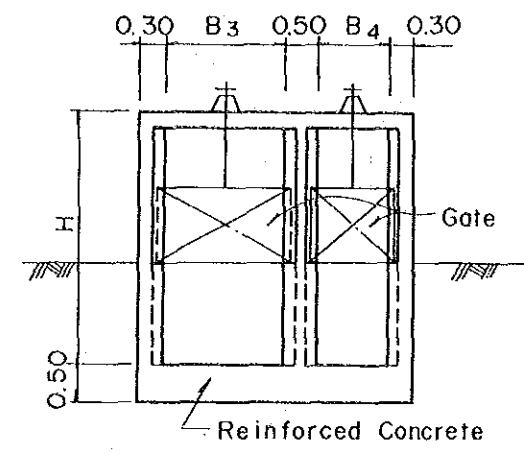
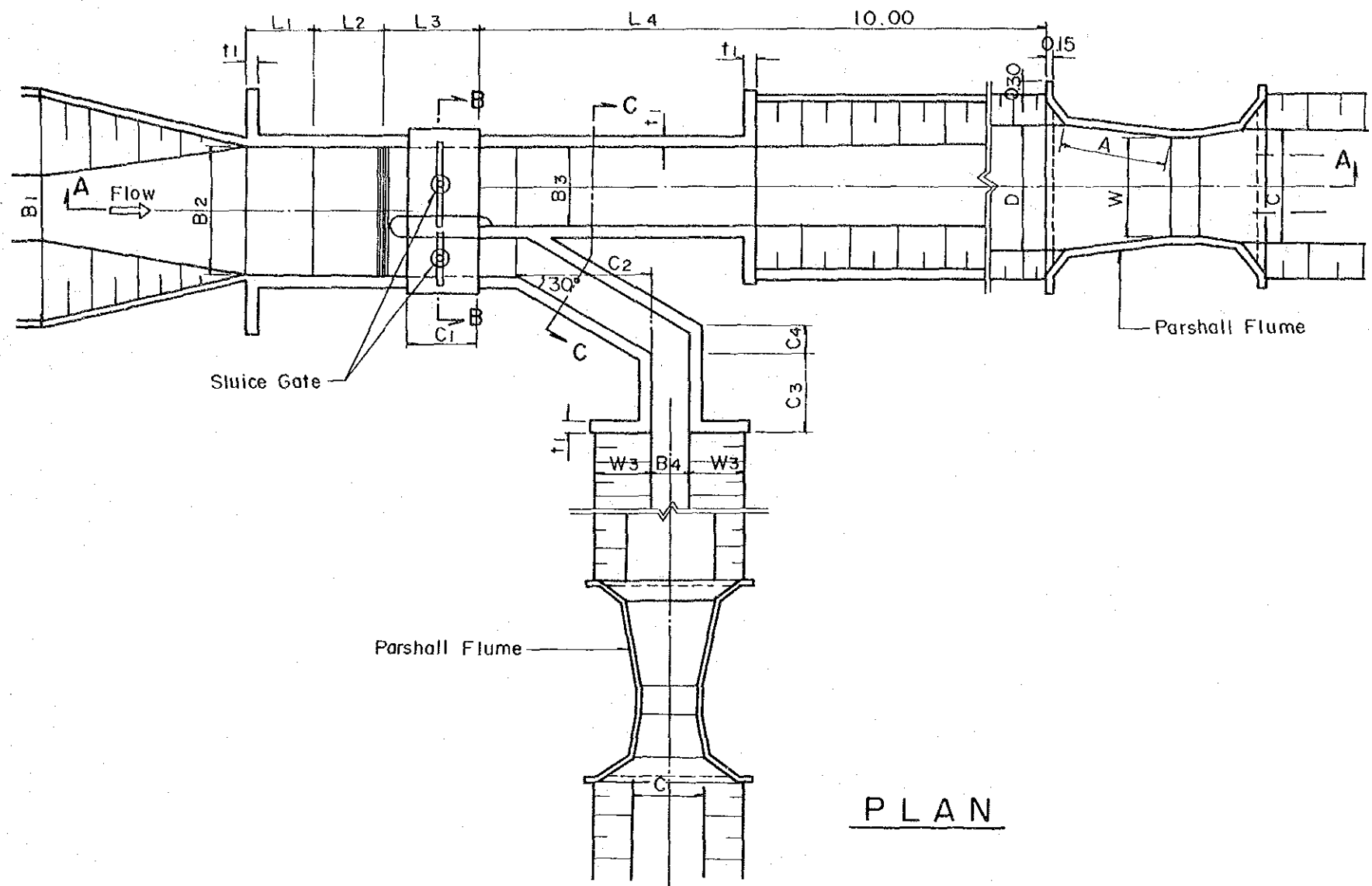


REPUBLICA DEL PERU
MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL
DE AMPLIACION DE LA FRONTERA AGRICOLA
CHANCAY - HUARAL VALLEY
REHABILITATION PROJECT

TYPICAL CANAL SECTION

DATE 1985, MARCH DWG. NO. 17

JAPAN INTERNATIONAL COOPERATION AGENCY



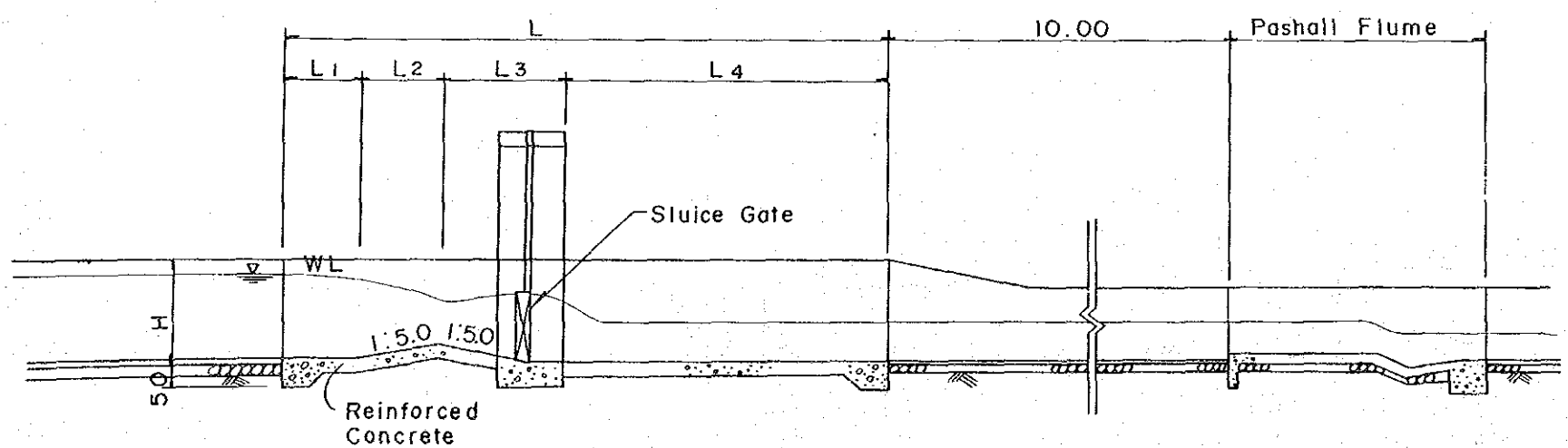
SECTION B - B

SECTION C - C

DIMENSION OF DISTRIBUTION DEVICE Unit: Meter

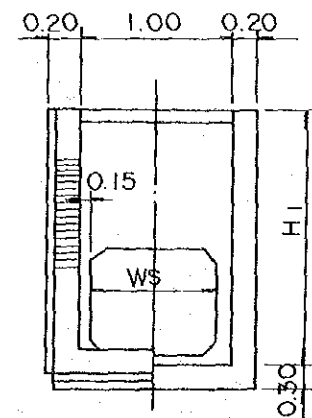
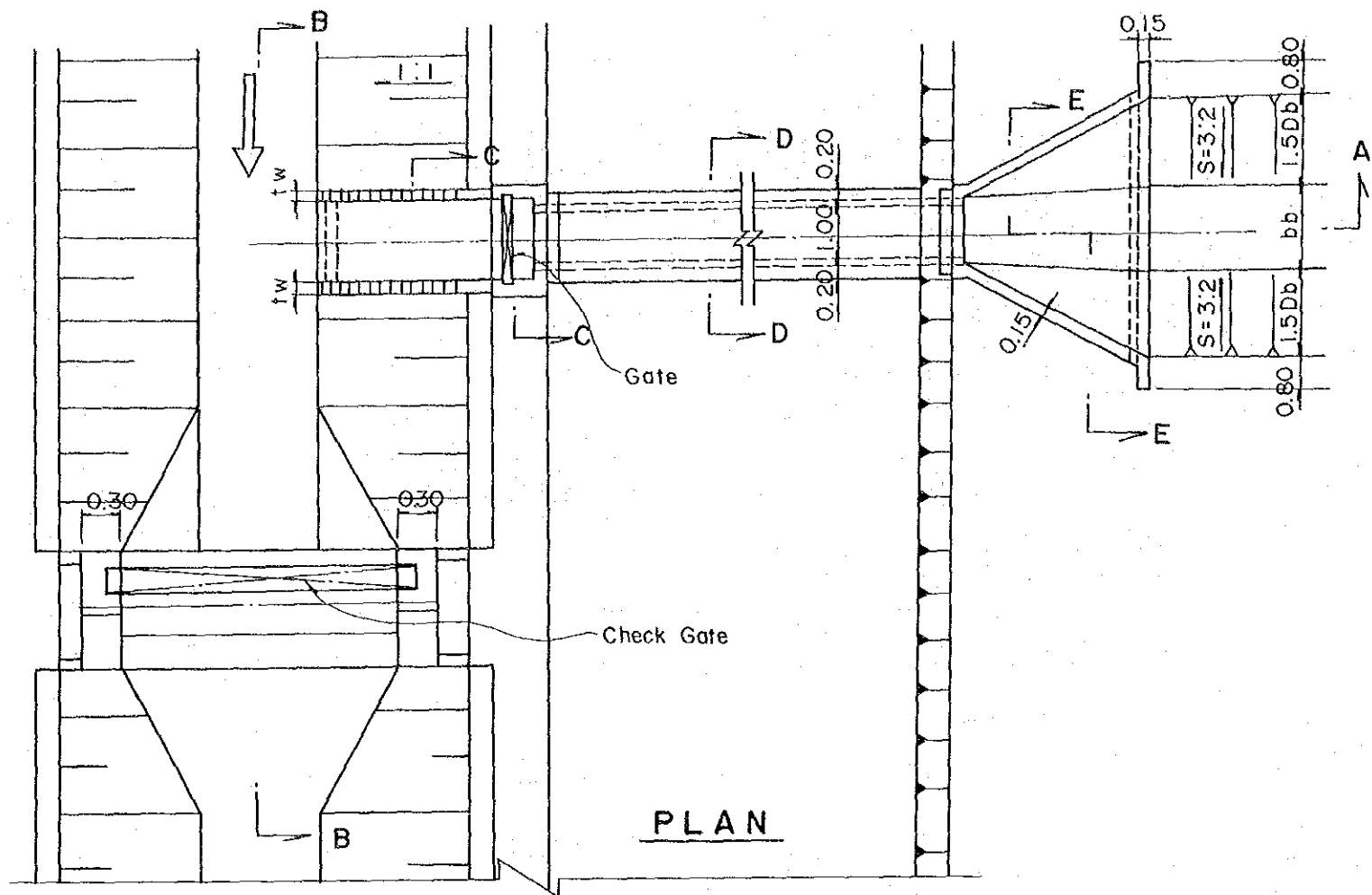
Type	A	B	C	D
L1	1.60	1.40	1.20	1.00
L2	1.50	1.50	1.50	1.50
L3	2.00	2.00	2.00	2.00
L4	5.00	5.00	4.00	4.00
L	10.10	9.90	9.20	8.50
H	3.50	3.00	2.50	2.00
B1	1.60	1.40	1.20	1.10
B2	2.70	2.50	2.30	2.10
B3	1.40	1.20	1.10	0.90
B4	1.20	1.10	1.00	0.70
t1	0.25	0.20	0.20	0.20
C1	1.00	0.90	0.80	0.70
C2	3.95	3.60	3.45	2.72
C3	1.67	1.57	1.46	1.15
C4	0.60	0.50	0.45	0.45

PLAN

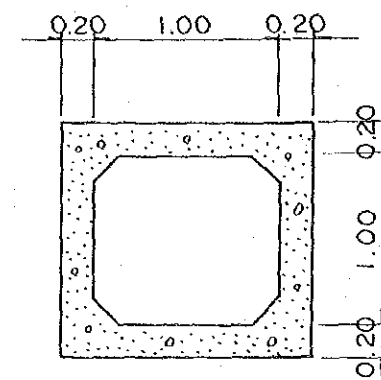


PROFILE (A-A)

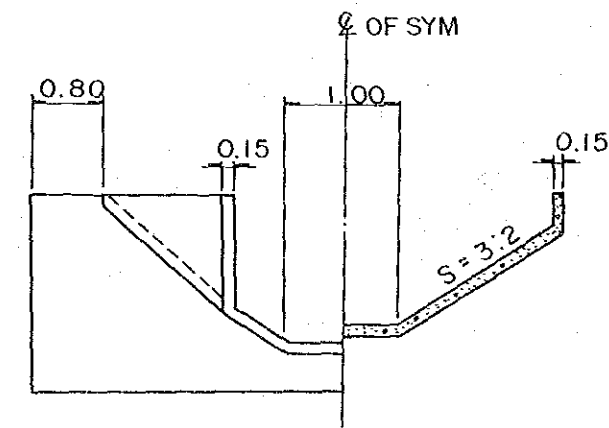
REPUBLICA DEL PERU
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 CHANCAY - HUARAL VALLEY
 REHABILITATION PROJECT
 CANAL RELATED STRUCTURES (1/6)
 (DISTRIBUTION DEVICE - I)
 DATE 1985, MARCH DWG,NO 18
 JAPAN INTERNATIONAL COOPERATION AGENCY



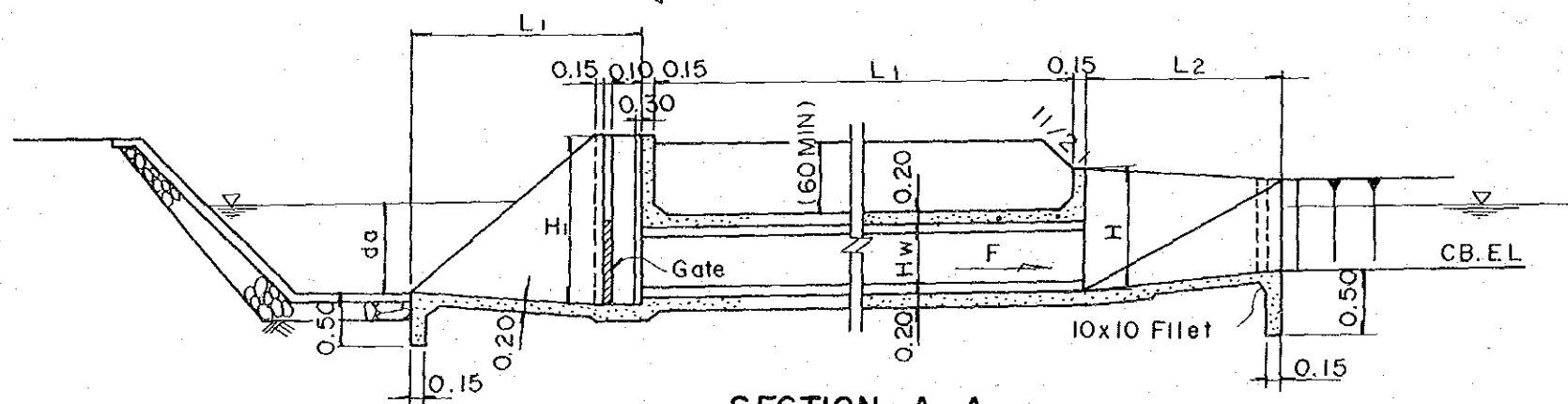
SECTION C-C



SECTION D-D

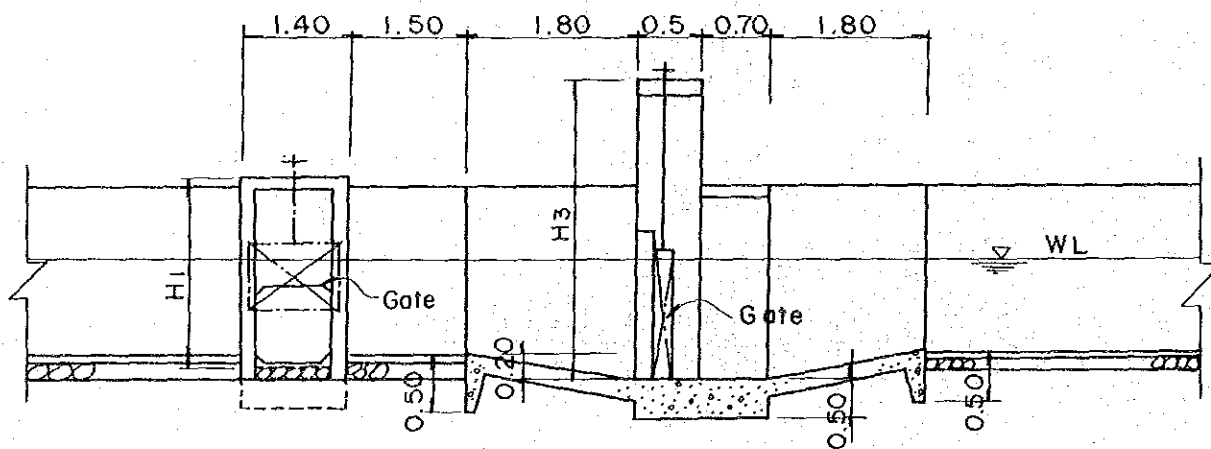


SECTION E-E



SECTION A-A

All Dimensions Are Shown in Meter



SECTION B-B

DIMENSIONS

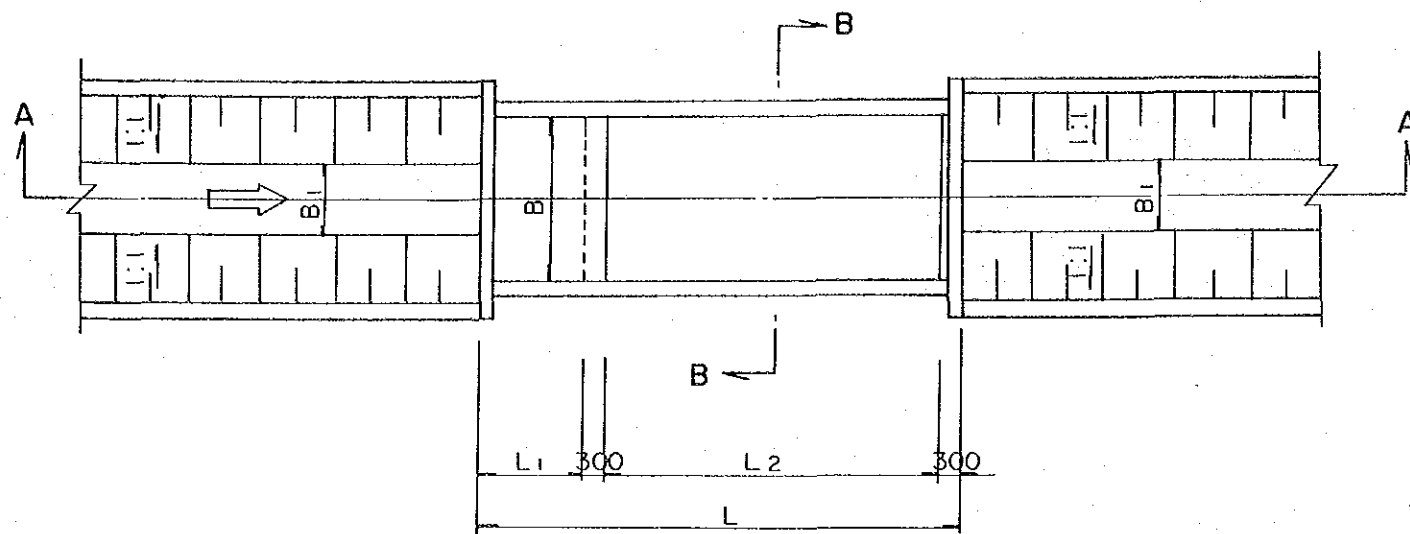
TYPE	H ₁	H ₂	H ₃	L	L ₁	L ₂	da
I	1.0	1.0	2.5	9.0	1.0	1.5	0.60
II	2.0	1.5	3.0	9.0	2.0	2.0	1.43

REPUBLICA DEL PERU
 MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL
 DE AMPLIACION DE LA FRONTERA AGRICOLA
 CHANCAY - HUARAL VALLEY
 REHABILITATION PROJECT

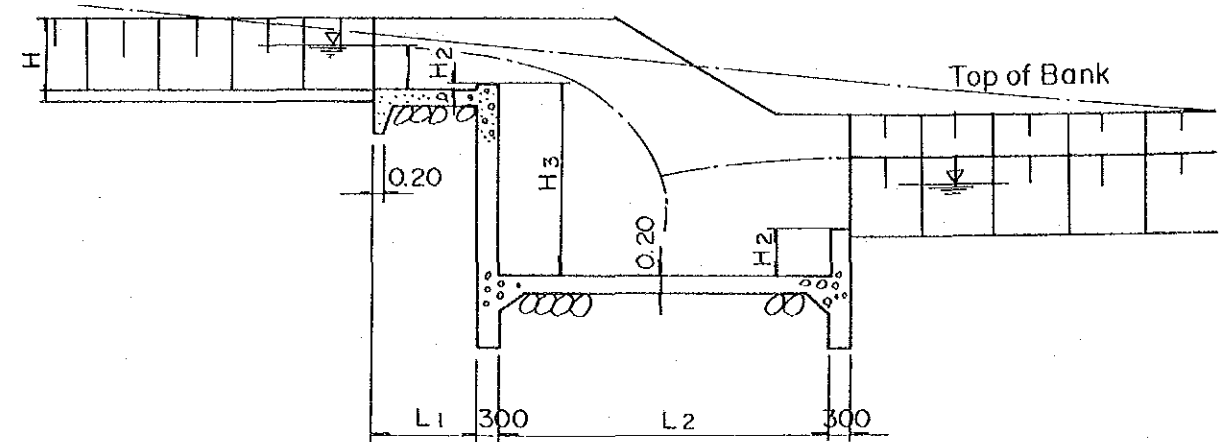
CANAL RELATED STRUCTURES(2/6)
 (DISTRIBUTION DEVICE - II)

DATE 1985, MARCH DWG. NO 19

JAPAN INTERNATIONAL COOPERATION AGENCY



PLAN (IRRIGATION CANAL)



SECTION A-A

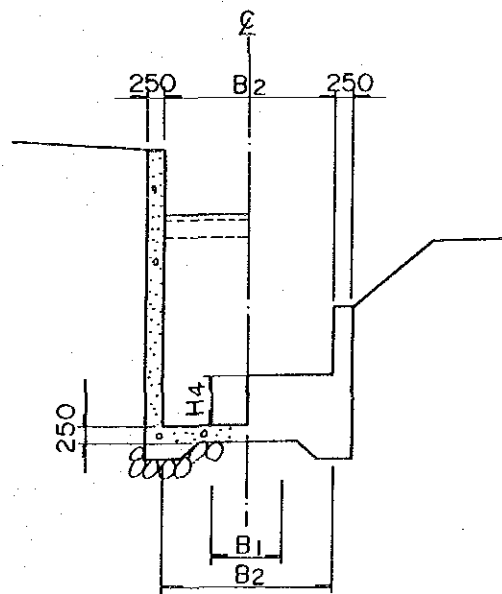
DIMENSIONS FOR DROP (IRRIGATION CANAL)

Type	Discharge (m ³ /sec)	L ₁ (m)	Canal B ₁ (m)	Drop B ₂ (m)	H (m)	H ₁ (m)	H ₃ (m)		H ₂ (m)		H ₄ (m)		H ₅ (m)	L ₂ (m)		L (m)	
							Drop 2.00	Drop 1.50	Drop 2.00	Drop 1.50	Drop 2.00	Drop 1.50		Drop 2.00	Drop 1.50		
I	6.0-4.0	3.00	1.60	4.00	1.20	0.79	2.86	2.26	0.06	0.06	0.80	0.70	0.79	5.74	5.10	8.74	8.10
II	4.0-3.0	2.00	1.40	3.60	1.10	0.65	2.75	2.15	0.05	0.05	0.70	0.60	0.65	5.16	4.52	7.16	9.16
III	3.0-2.0	1.50	1.20	3.40	1.05	0.56	2.74	2.14	0.84	0.04	0.70	0.60	0.56	4.79	4.18	6.29	5.68
IV	2.0-1.0	1.00	1.00	2.40	1.10	0.56	2.75	2.15	0.05	0.05	0.70	0.60	0.56	4.79	4.17	5.79	5.17
V	1.0-0.5	1.00	1.00	2.00	0.80	0.41	2.64	2.09	0.04	0.04	0.60	0.50	0.41	4.01	3.54	5.01	4.54
VI	0.5-0.2	1.00	0.80	1.50	0.55	0.36	2.57	1.97	0.07	0.07	0.50	0.40	0.36	3.88	3.34	4.88	4.34

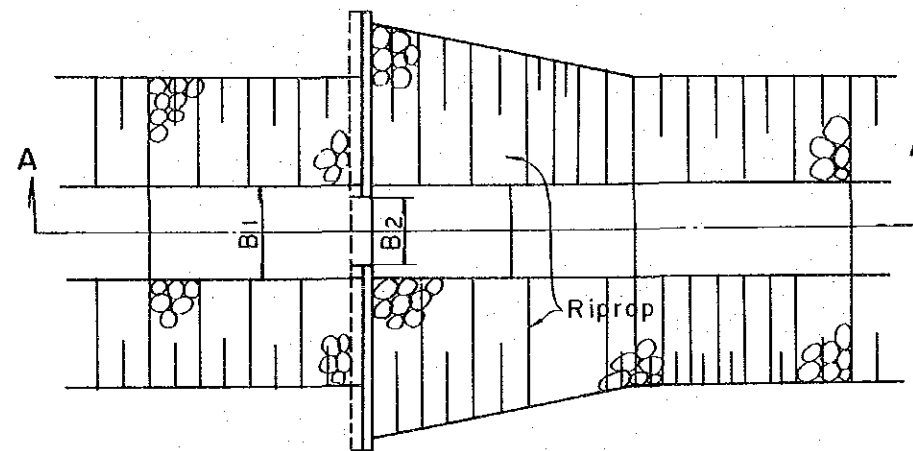
DIMENSIONS FOR DROP (DRAINAGE CANAL)

TYPE	H ₁	H ₂	H ₃	B ₁	B ₂	L ₀	L ₁	L ₂	L
I	1.5	1.5	0.6	1.0	0.9	3.0	3.0	2.0	8.0
II	1.0	1.0	0.4	0.8	0.7	2.0	2.0	1.5	5.5

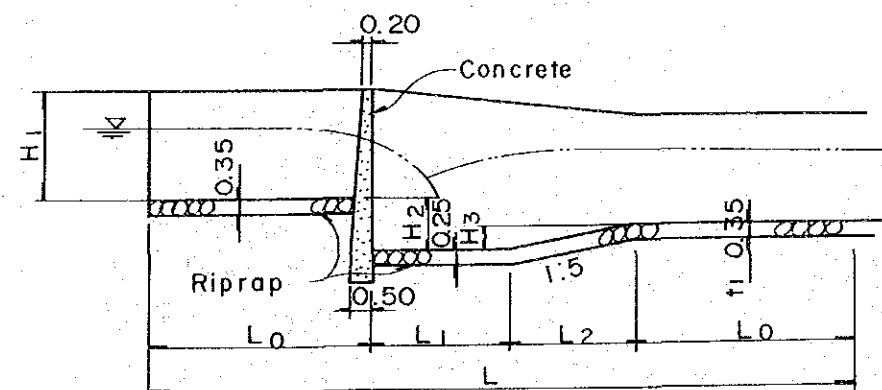
All Dimensions Are Shown in Meter



SECTION B-B

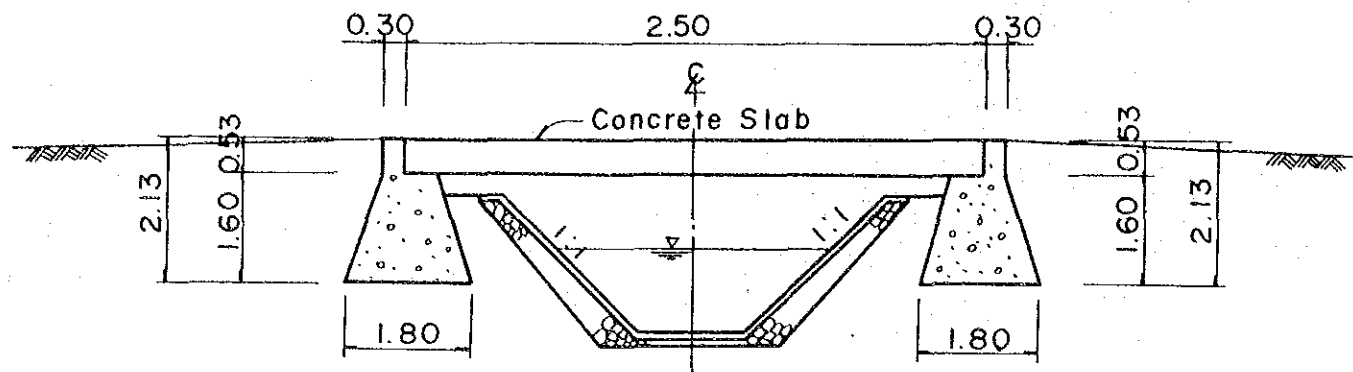


PLAN (DRAINAGE CANAL)

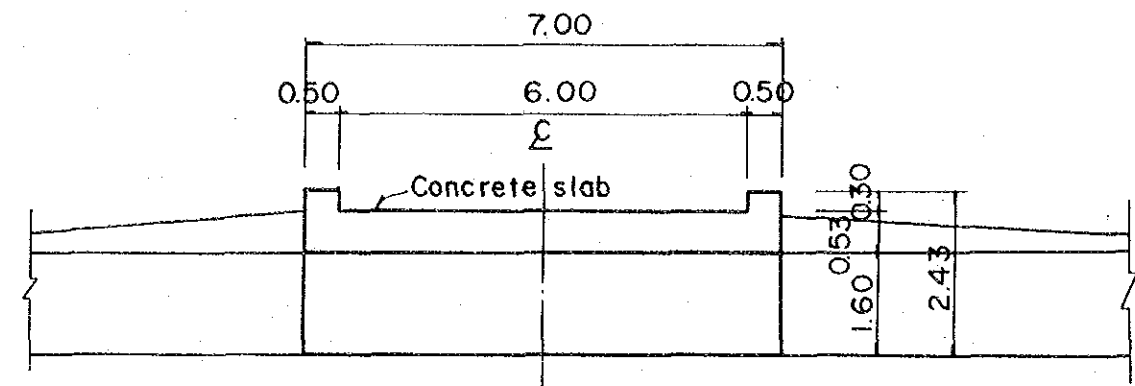


SECTION A-A

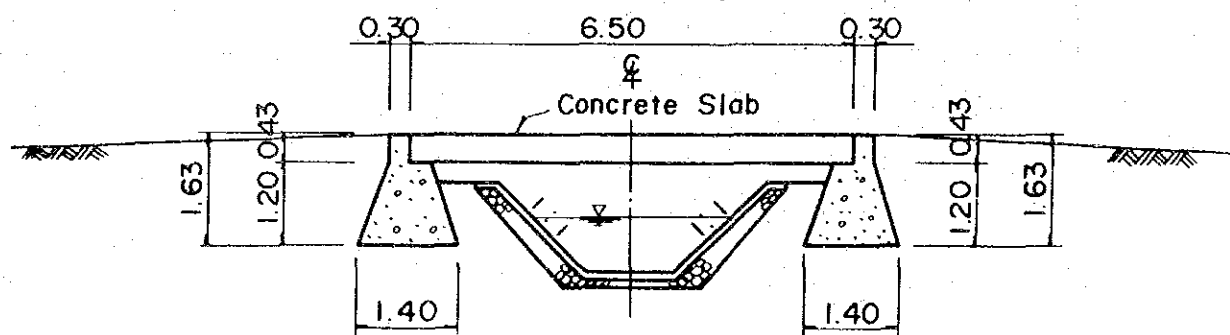
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CHANCAY - HUARAL VALLEY REHABILITATION PROJECT			
CANAL RELATED STRUCTURES (4/6) (DROP)			
DATE	1985, MARCH	DWG, NO	21
JAPAN INTERNATIONAL COOPERATION AGENCY			



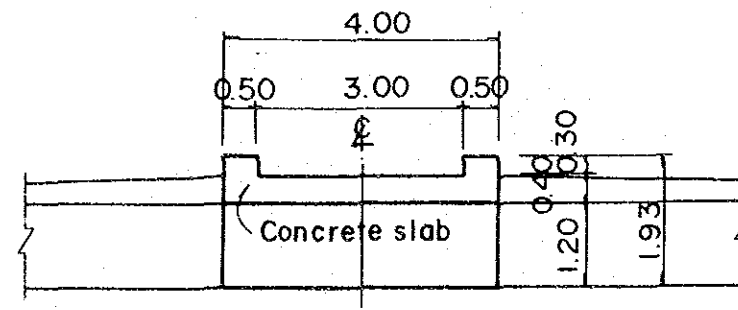
TYPE - I



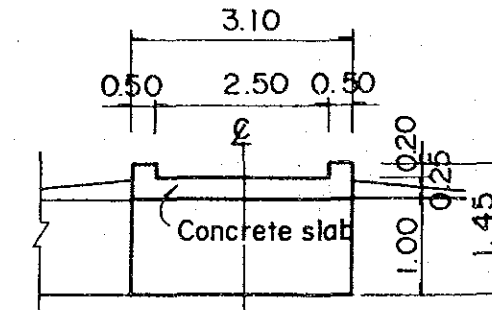
SECTION OF TRUNK ROAD



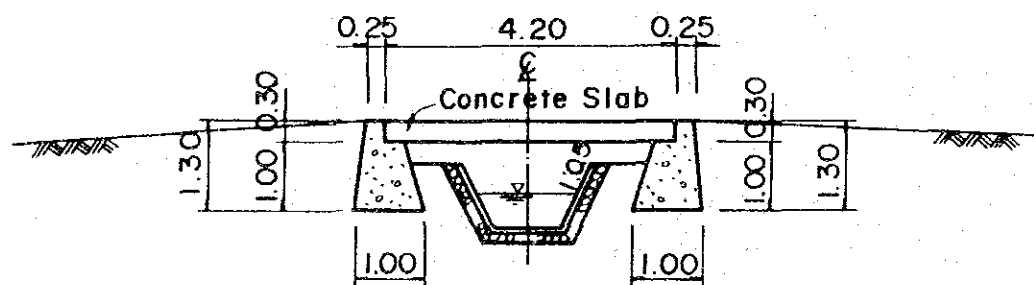
TYPE - II



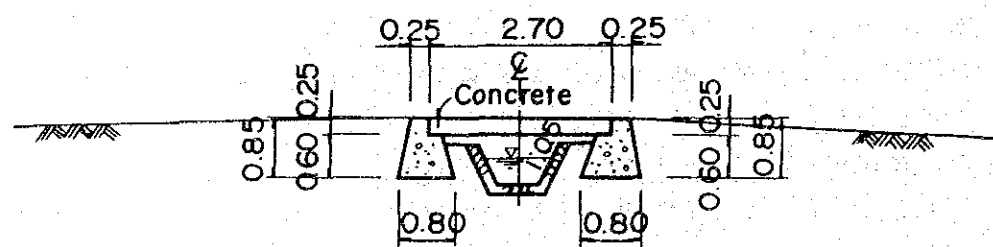
SECTION OF SECONDARY ROAD



SECTION OF FARM ROAD



TYPE - III

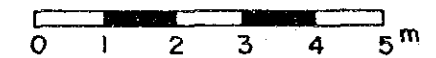


TYPE - IV

NUMBER OF BRIDGES

TYPE	TRUNK ROAD	SECONDARY ROAD	FARM ROAD
TYPE - I	4	6	20
TYPE - II	10	20	40
TYPE - III	10	20	40
TYPE - IV	16	22	45
TOTAL	40	68	145

SCALE

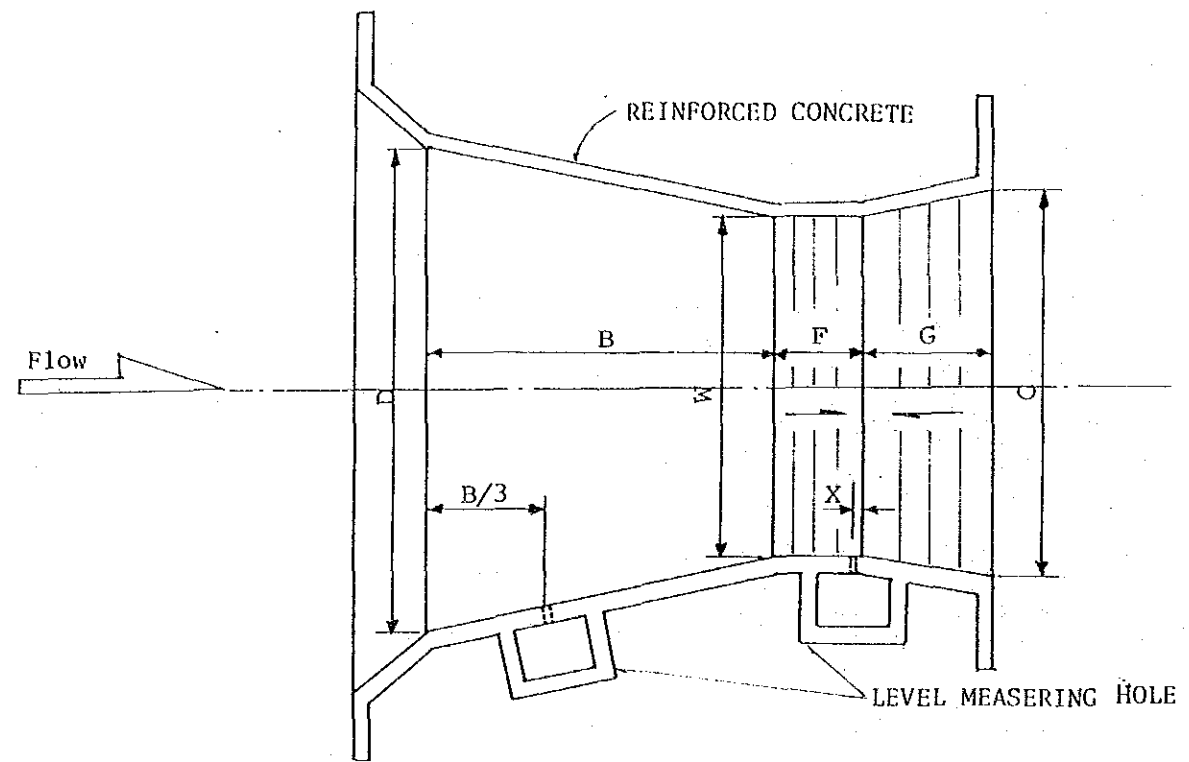


REPUBLICA DEL PERU
 MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL
 DE AMPLIACION DE LA FRONTERA AGRICOLA
 CHANCAY - HUARAL VALLEY
 REHABILITATION PROJECT

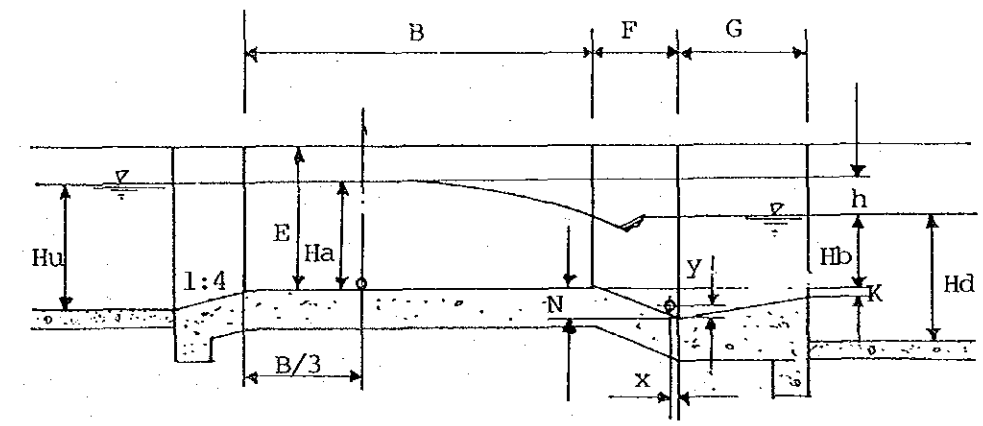
CANAL RELATED STRUCTURE
 BRIDGE (5/6)

DATE 1985, MARCH DWG. NO 22

JAPAN INTERNATIONAL COOPERATION AGENCY



PLAN



PROFILE

DIMENSION AND HYDRAULIC PROPERTY OF PARSHALL FLUME

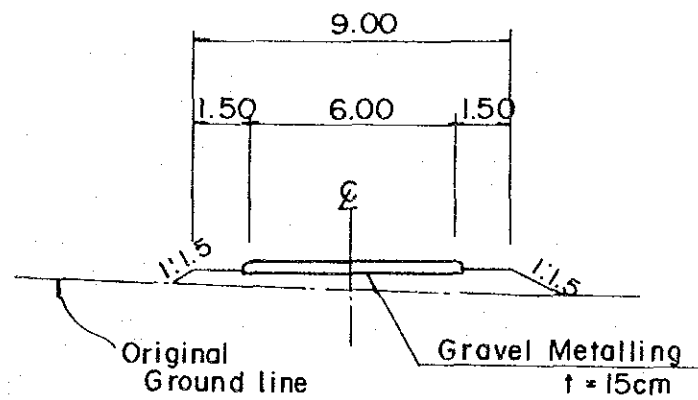
Unit: Meter

Type	Dimension of Parshall flume in mm										Free discharge in m ³ /sec			Applicable range of Ha Max. Min.	Limit of free flow condition (Ha/Hb)	Draw down equation for free Discharge "Q" h = Ha - Hb m	Remarks
	W	B	F	G	D	C	E	N	K	Qmax	Qmin	Equation of Q					
A (6")	152	610	305	610	397	394	610	114	76	0.111	0.0015	0.3812 Ha ^{1.580}	0.45	0.03	60 %	0.7365 Q ^{0.6329}	
B (9")	229	864	305	457	575	381	762	114	76	0.251	0.0025	0.5341 Ha ^{1.530}	0.61	0.03	60 %	0.6017 Q ^{0.6536}	
C (1')	305	1,348	610	714	845	610	914	229	76	0.456	0.003	0.6909 Ha ^{1.522}	0.76	0.03	70 %	0.3825 Q ^{0.6570}	x = 51 mm
D (2')	610	1,495	610	914	1,206	914	914	229	76	0.937	0.012	1.429 Ha ^{1.550}	0.76	0.046	70 %	0.2384 Q ^{0.6452}	y = 76 mm
E (3')	914	1,645	610	914	1,572	1,219	914	229	76	1.427	0.017	2.184 Ha ^{1.566}	0.76	0.046	70 %	0.1822 Q ^{0.6386}	
F (4')	1,219	1,794	610	914	1,937	1,524	914	229	76	1.923	0.037	2.954 Ha ^{1.578}	0.76	0.06	70 %	0.1511 Q ^{0.6337}	
G (5')	1,524	1,943	610	914	2,302	1,829	914	229	76	2.424	0.045	3.732 Ha ^{1.587}	0.76	0.06	70 %	0.1308 Q ^{0.6301}	
H (6')	1,829	2,092	610	914	2,667	2,134	914	229	76	2.931	0.074	4.521 Ha ^{1.595}	0.76	0.076	70 %	0.1165 Q ^{0.6270}	
I (7')	2,134	2,242	610	914	3,032	2,438	914	229	76	3.438	0.085	5.312 Ha ^{1.601}	0.76	0.076	70 %	0.1057 Q ^{0.6246}	
J (8')	2,438	2,391	610	914	3,397	2,743	914	229	76	3.950	0.099	6.115 Ha ^{1.607}	0.76	0.076	70 %	0.0973 Q ^{0.6223}	
K (10')	3,408	4,267	914	1,829	4,756	3,658	1,219	343	152	5.7	0.17	7.462 Ha ^{1.600}	0.845	0.094	80 %	0.0570 Q ^{0.625}	x = 229 mm
L (12')	3,658	4,877	914	2,438	5,607	4,470	1,524	343	152	10.0	0.23	8.859 Ha ^{1.600}	1.079	0.102	80 %	0.0512 Q ^{0.625}	y = 305 mm

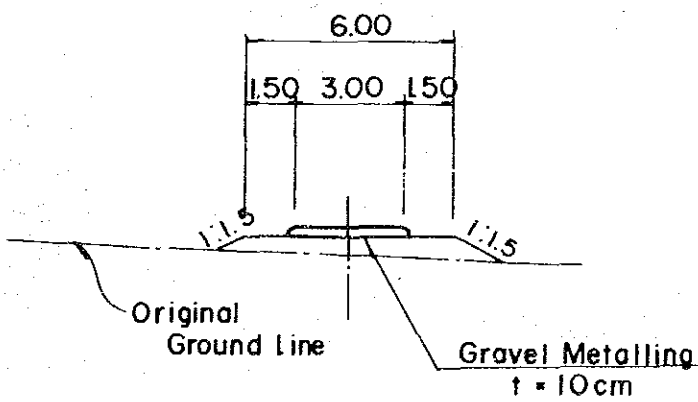
REPUBLICA DEL PERU
 MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL
 DE AMPLIACION DE LA FRONTERA AGRICOLA
 CHANCAY - HUARAL VALLEY
 REHABILITATION PROJECT

CANAL RELATED STRUCTURES(6/6)
 (PARSHALL FLUME)

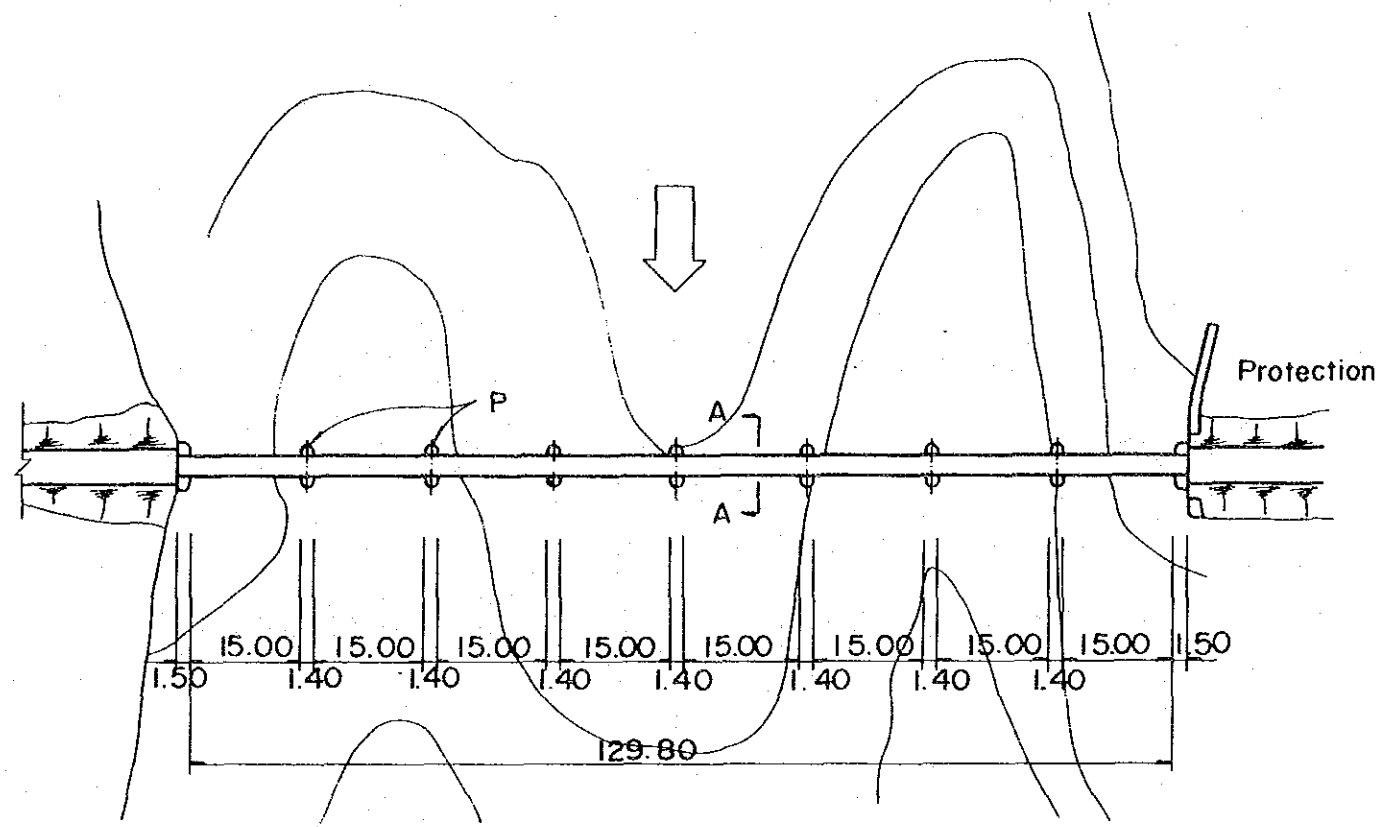
DATE 1985, MARCH DWG,NO 23
 JAPAN INTERNATIONAL COOPERATION AGENCY



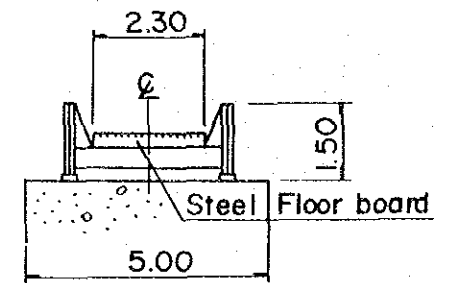
MAIN ROAD
SCALE - A



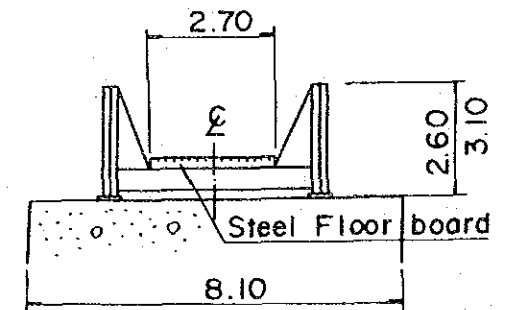
SECONDARY ROAD
SCALE - A



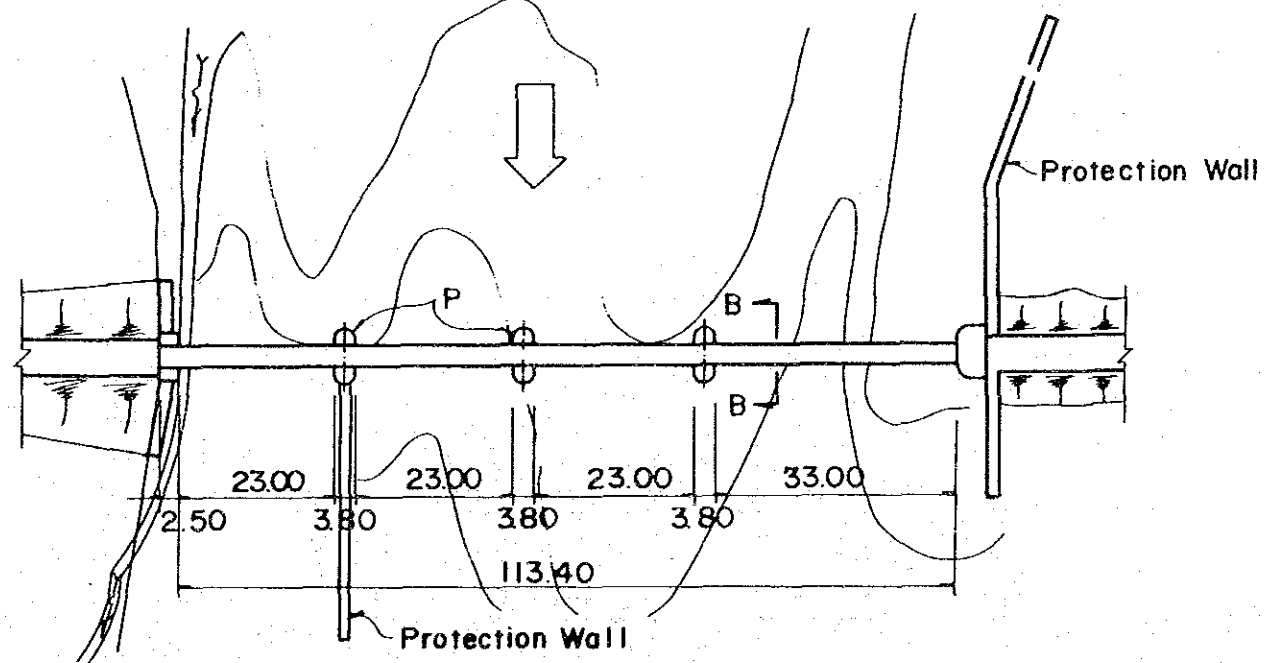
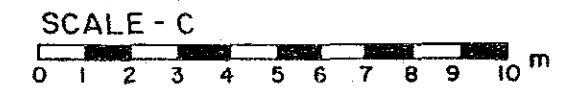
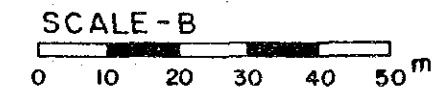
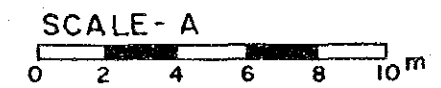
PLAN OF SAN JOSE BRIDGE
SCALE - B



SECTION A - A
SCALE - C



SECTION B - B
SCALE - C



PLAN OF PALPA BRIDGE
SCALE - B

REPUBLICA DEL PERU MINISTERIO DE AGRICULTURA INSTITUTO NACIONAL DE AMPLIACION DE LA FRONTERA AGRICOLA			
CHANCAY - HUARAL VALLEY REHABILITATION PROJECT			
TYPICAL ROAD SECTION IMPROVEMENT OF BRIDGE (PALPA , SAN JOSE)			
DATE	1985, MARCH	DWG. NO	24
JAPAN INTERNATIONAL COOPERATION AGENCY			