

**THE ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE**

**THE FEASIBILITY STUDY
ON
THE IRRIGATION AND DRAINAGE
DEVELOPMENT PROJECT
IN
THE HARAZ RIVER BASIN
DRAWINGS**

JULY 1993

JAPAN INTERNATIONAL COOPERATION AGENCY

AFA
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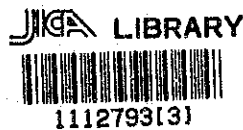
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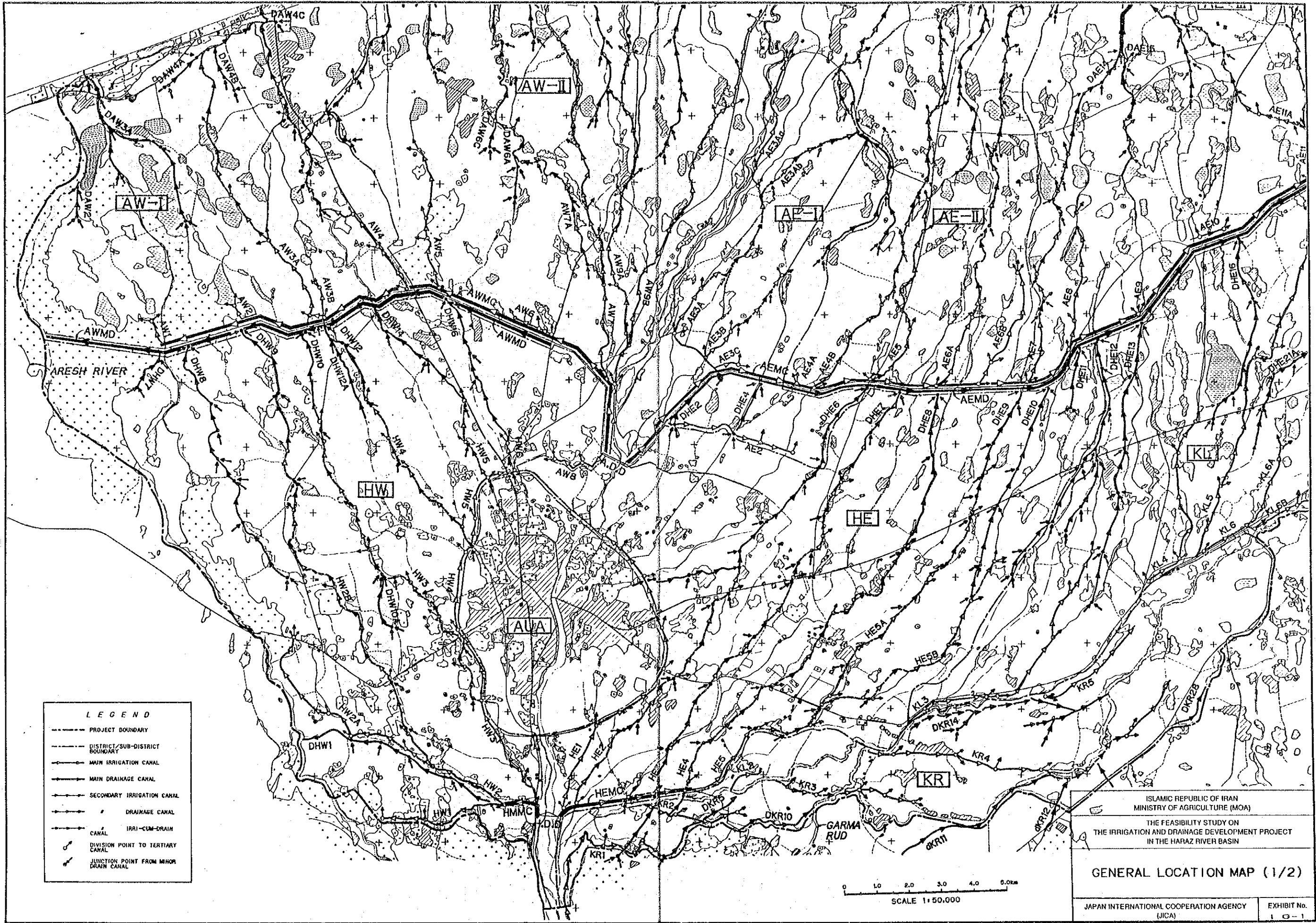
JAPAN INTERNATIONAL COOPERATION AGENCY

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- LEGEND**
- PROJECT BOUNDARY
 - - - DISTRICT/SUB-DISTRICT BOUNDARY
 - MAIN IRRIGATION CANAL
 - MAIN DRAINAGE CANAL
 - SECONDARY IRRIGATION CANAL
 - DRAINAGE CANAL
 - IRRIGUM-DRAIN CANAL
 - ⚡ DIVISION POINT TO TERTIARY CANAL
 - ⚡ JUNCTION POINT FROM MINOR DRAIN CANAL

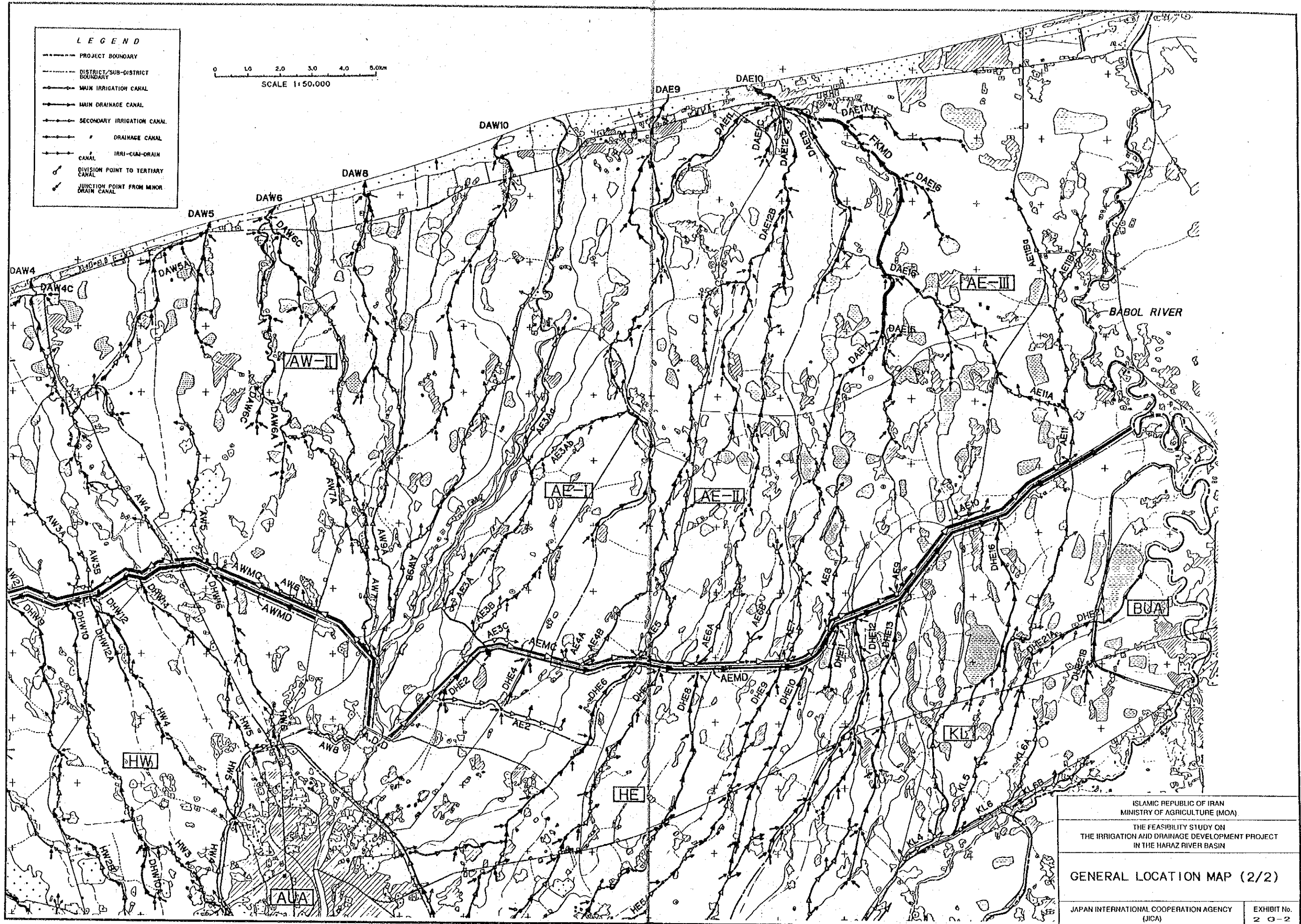
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 MINISTRY OF AGRICULTURE (MOA)
 THE FEASIBILITY STUDY ON
 THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
 IN THE HARAZ RIVER BASIN

GENERAL LOCATION MAP (1/2)

JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

EXHIBIT No.
 10-1

0 1.0 2.0 3.0 4.0 5.0km
 SCALE 1:50,000

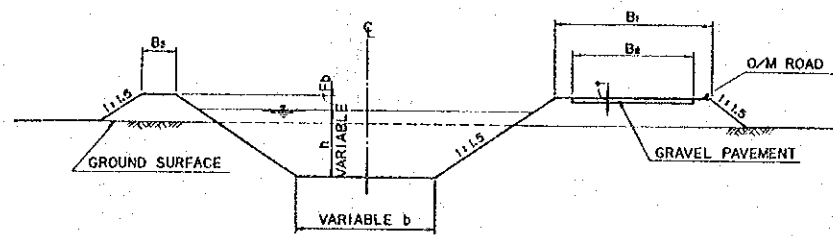


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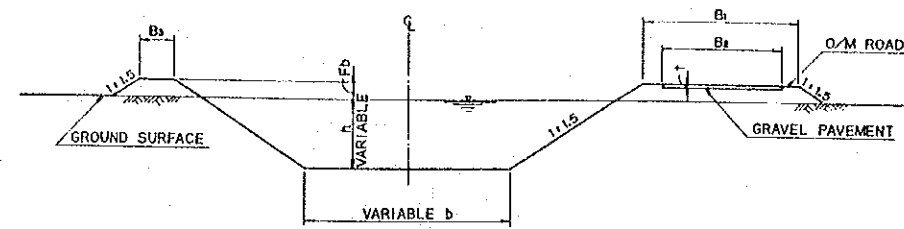
THE FEASIBILITY STUDY ON
 THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
 IN THE HARAZ RIVER BASIN

GENERAL LOCATION MAP (2/2)

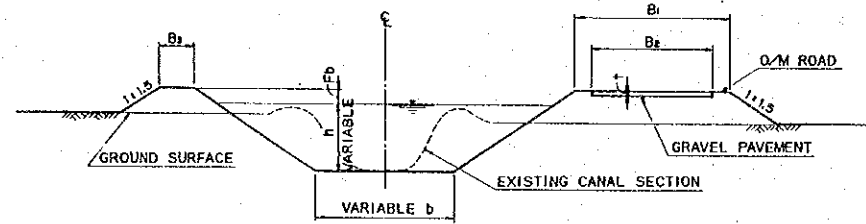
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 2 G-2



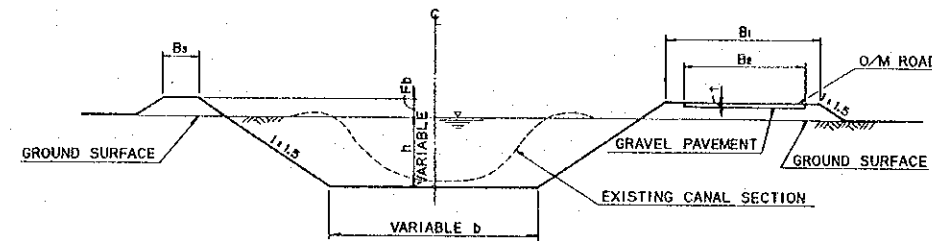
IRRIGATION CANAL
EARTH CANAL



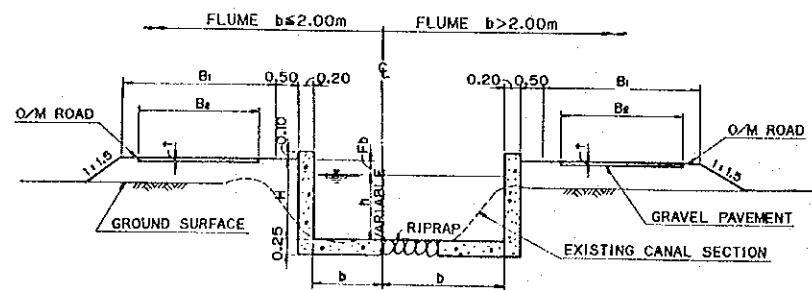
DRAINAGE CANAL



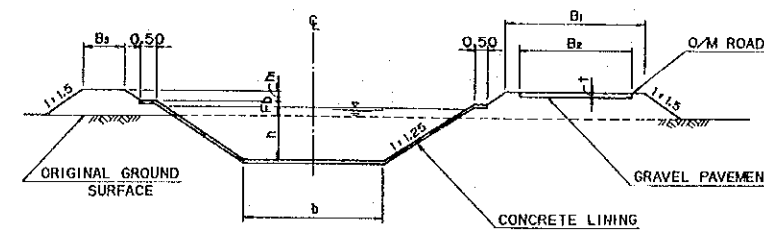
IRRIGATION CANAL
REHABILITATION
EARTH CANAL



DRAINAGE CANAL
REHABILITATION

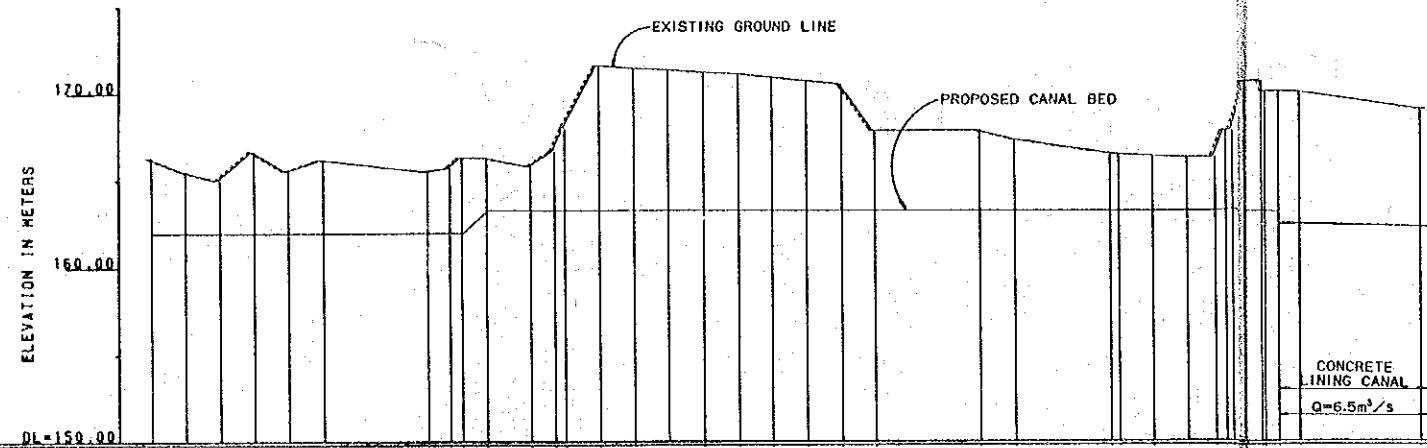


IRRIGATION CANAL
REHABILITATION



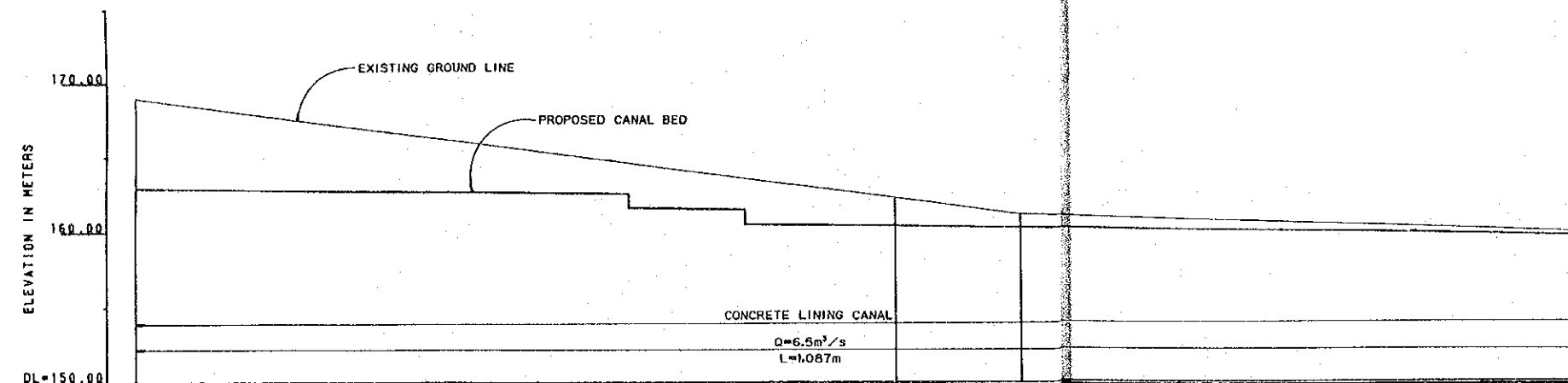
IRRIGATION CANAL
LINING CANAL

ISLAMIC REPUBLIC OF IRAN MINISTRY OF AGRICULTURE (MOA)	
THE FEASIBILITY STUDY ON THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT IN THE HARAZ RIVER BASIN	
TYPICAL SECTION OF CANALS AND O/M ROAD	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	EXHIBIT No. 3 CP-1



PROPOSED ELEVATION	EXISTING ELEVATION	CUMULATIVE DISTANCE	STATION
162.00	158.20	120.00	0+120
162.00	158.20	140.00	0+140
162.00	158.20	160.00	0+160
162.00	158.20	180.00	0+180
162.00	158.20	200.00	0+200
162.00	158.20	220.00	0+220
162.00	158.20	240.00	0+240
162.00	158.20	260.00	0+260
162.00	158.20	280.00	0+280
162.00	158.20	300.00	0+300
162.00	158.20	314.25	0+314.25
162.00	158.20	340.00	0+340
162.00	158.20	354.00	0+354
162.00	158.20	360.00	0+360
162.00	158.20	380.00	0+380
162.00	158.20	400.00	0+400
162.00	158.20	420.00	0+420
162.00	158.20	440.00	0+440
162.00	158.20	460.00	0+460
162.00	158.20	480.00	0+480
162.00	158.20	500.00	0+500
162.00	158.20	520.00	0+520
162.00	158.20	540.00	0+540
162.00	158.20	600.00	0+600
162.00	158.20	620.00	0+620
162.00	158.20	680.00	0+680
162.00	158.20	700.00	0+700
162.00	158.20	720.00	0+720
162.00	158.20	736.00	0+736
162.00	158.20	740.00	0+740
162.00	158.20	760.00	0+760
162.00	158.20	780.00	0+780
162.00	158.20	800.00	0+800
162.00	158.20	870.00	0+870

HWMC (1)



PROPOSED ELEVATION	EXISTING ELEVATION	CUMULATIVE DISTANCE	STATION
162.00	158.20	875.00	0+875
162.00	158.20	1390.00	1+390
162.00	158.20	1475.00	1+475
162.00	158.20	1500.78	1+500.78

HWMC (2)

ABBREVIATIONS

BP: BEGINNING POINT	OD: IRRIGATION DISCHARGE
EP: END POINT	OD: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

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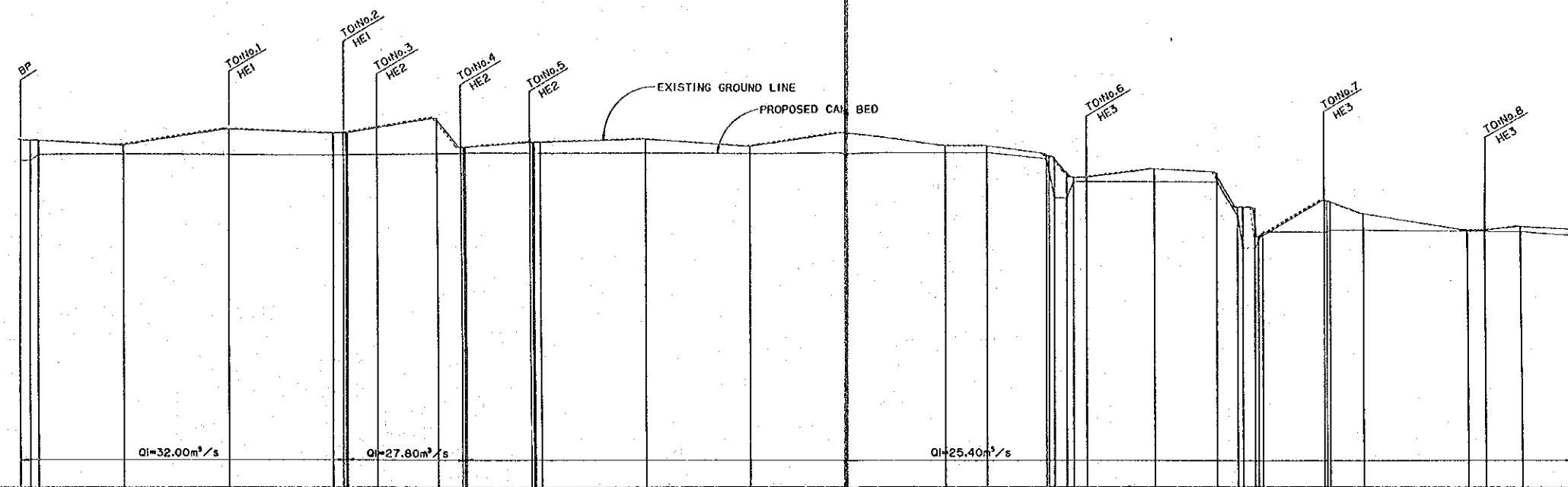
PROFILE
OF
HARAZ WEST MAIN CANAL (HWMC)

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

EXHIBIT No.
4 CP-2

ELEVATION IN METERS

170.00
160.00
150.00
140.00
130.00
120.00
110.00
DL=100.00

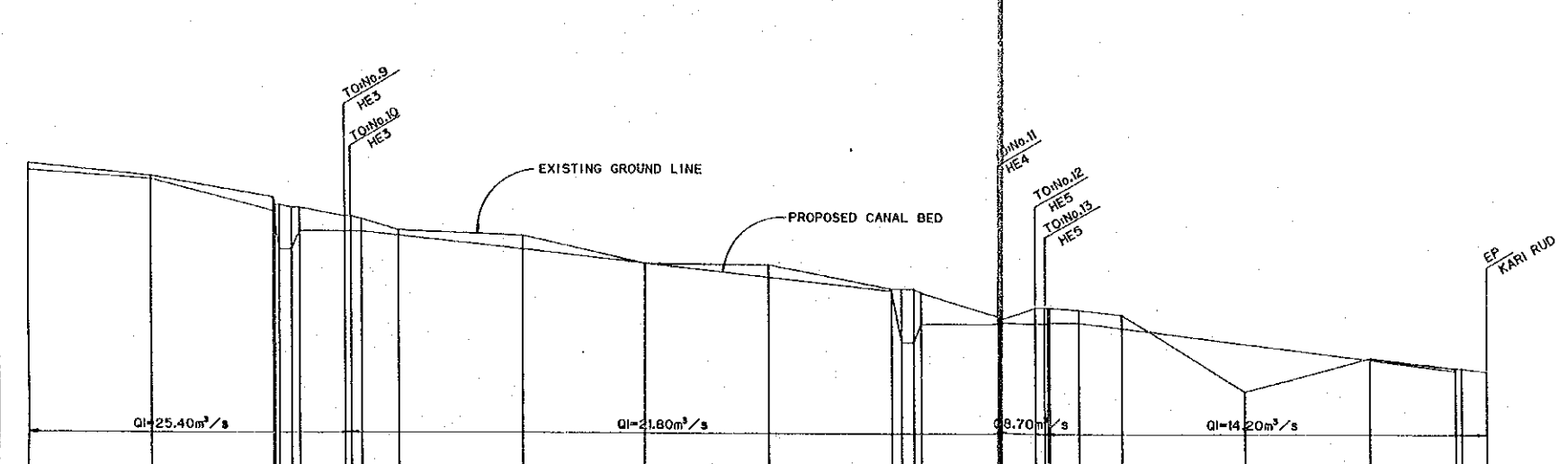


STATION	CUMULATIVE DISTANCE	EXISTING ELEVATION	PROPOSED ELEVATION	WATER DEPTH
0+0	0.00	165.44	161.49	3.95
0+10	20.00	165.23	161.28	3.95
0+20	40.00	165.23	161.28	3.95
0+300	200.00	164.20	162.67	1.53
0+400	400.00	167.40	162.64	4.76
0+500	600.00	166.70	162.61	4.09
0+510	620.00	166.70	162.61	4.09
0+520	640.00	166.70	162.61	4.09
0+530	660.00	166.70	162.61	4.09
0+540	680.00	166.70	162.61	4.09
0+550	700.00	166.70	162.61	4.09
0+600	800.00	165.40	162.45	2.95
0+610	820.00	165.40	162.45	2.95
0+620	840.00	165.40	162.45	2.95
0+630	860.00	165.40	162.45	2.95
0+640	880.00	165.40	162.45	2.95
0+650	900.00	165.40	162.45	2.95
1+200	1200.00	165.30	162.71	2.59
1+400	1400.00	164.00	162.71	1.29
1+600	1800.00	164.00	162.72	1.28
1+800	1980.00	164.00	162.72	1.28
1+850	2030.00	164.00	162.72	1.28
1+860	2040.00	164.00	162.72	1.28
1+870	2050.00	164.00	162.72	1.28
1+880	2060.00	164.00	162.72	1.28
1+890	2070.00	164.00	162.72	1.28
2+200	2200.00	159.60	157.28	2.32
2+320	2320.00	159.04	157.24	1.80
2+330	2330.00	159.04	157.24	1.80
2+340	2340.00	159.04	157.24	1.80
2+350	2350.00	159.04	157.24	1.80
2+360	2360.00	159.04	157.24	1.80
2+370	2370.00	159.04	157.24	1.80
2+380	2380.00	159.04	157.24	1.80
2+390	2390.00	159.04	157.24	1.80
2+400	2400.00	159.04	157.24	1.80
2+500	2500.00	151.30	148.20	3.10
2+850	2800.00	148.25	148.16	0.09
2+930	2892.00	148.25	148.15	0.10
2+980	2980.00	149.00	148.14	0.86
3+0	3000.00	148.50	147.42	1.08

HEMC (1)

ELEVATION IN METERS

170.00
160.00
150.00
140.00
130.00
120.00
110.00
DL=100.00



STATION	CUMULATIVE DISTANCE	EXISTING ELEVATION	PROPOSED ELEVATION	WATER DEPTH
3+0	3000.00	148.50	147.42	1.08
3+100	3100.00	148.50	148.00	0.50
3+200	3200.00	148.50	148.00	0.50
3+300	3300.00	148.50	148.00	0.50
3+400	3400.00	148.50	148.00	0.50
3+500	3500.00	148.50	148.00	0.50
3+600	3600.00	148.50	148.00	0.50
3+700	3700.00	148.50	148.00	0.50
3+800	3800.00	148.50	148.00	0.50
3+900	3900.00	148.50	148.00	0.50
4+0	4000.00	132.40	132.45	0.05
4+200	4200.00	132.20	132.22	0.02
4+400	4400.00	128.50	127.85	0.65
4+410	4410.00	128.50	127.85	0.65
4+420	4420.00	128.50	127.85	0.65
4+430	4430.00	128.50	127.85	0.65
4+440	4440.00	128.50	127.85	0.65
4+450	4450.00	128.50	127.85	0.65
4+460	4460.00	128.50	127.85	0.65
4+470	4470.00	128.50	127.85	0.65
4+480	4480.00	128.50	127.85	0.65
4+490	4490.00	128.50	127.85	0.65
4+500	4500.00	128.50	127.85	0.65
4+600	4600.00	124.20	124.04	0.16
5+0	5000.00	112.00	119.56	7.56
5+200	5200.00	117.35	117.35	0.00
5+300	5300.00	115.20	115.20	0.00
5+350	5350.00	115.20	115.20	0.00
5+390	5390.00	115.04	115.04	0.00

HEMC (2)

ABBREVIATIONS

- BP: BEGINNING POINT
- EP: END POINT
- MD: MEASURING DEVICE
- TO: TURNOUT
- CK: CHECK
- CP: CHECK AND DROP
- DR: DROP
- JC: JUNCTION
- QI: IRRIGATION DISCHARGE
- Qd: DRAINAGE DISCHARGE
- h: WATER DEPTH
- b: BOTTOM WIDTH
- Fb: FREEBOARD
- L: LENGTH

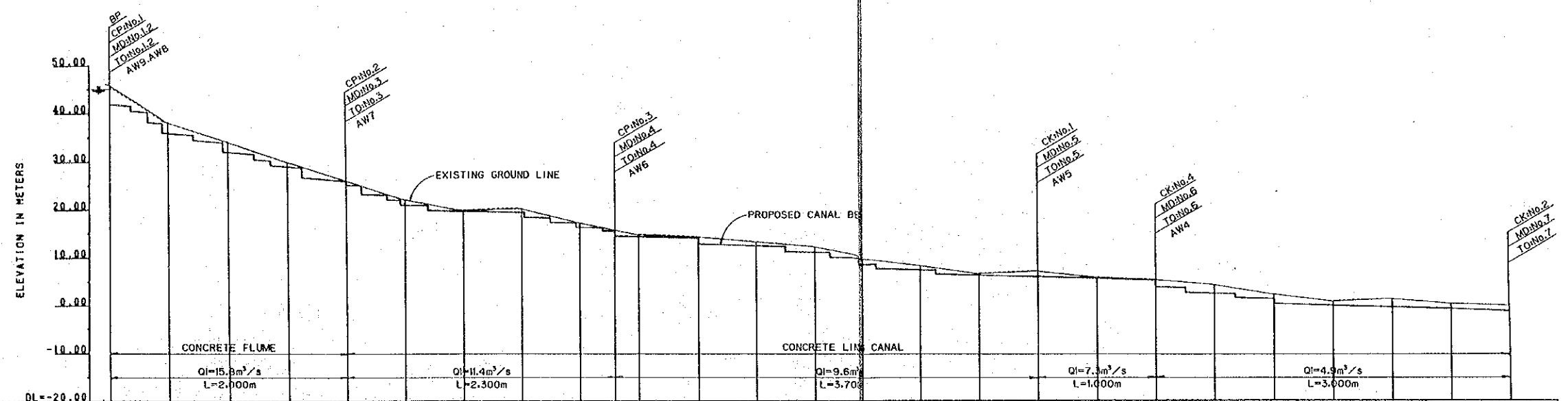
ISLAMIC REPUBLIC OF IRAN
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PROFILE
OF
HARAZ EAST MAIN CANAL (HEMC)

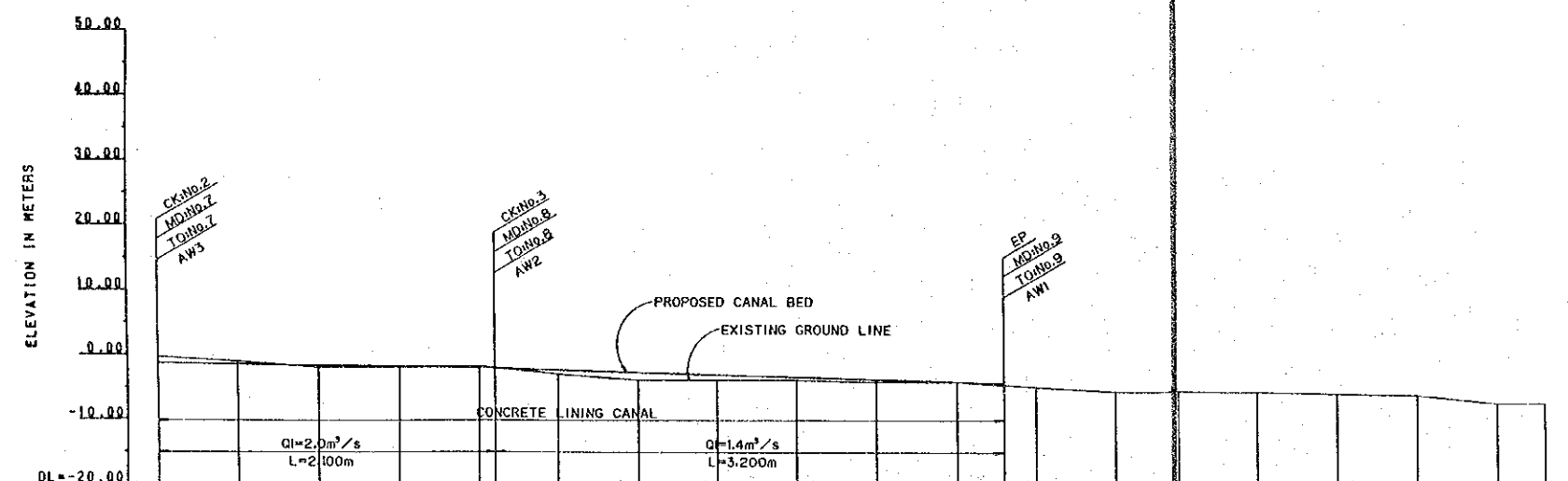
JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

EXHIBIT No.
5 CP-3



STATION	WATERLEVEL	PROPOSED ELEVATION	EXIST ELEVATION	CUMULATIVE DISTANCE
0+0	45.00	43.00	44.00	0.00
0+208	44.75	42.00	38.00	599.00
1+0	43.75	40.00	34.00	1000.00
1+500	42.75	38.00	29.00	1500.00
2+0	27.75	25.00	25.00	2000.00
2+500	27.00	25.00	22.00	2500.00
3+0	26.00	25.00	19.00	3000.00
3+500	25.00	25.00	20.00	3500.00
4+0	16.80	15.00	17.00	4000.00
4+200	16.80	15.00	15.50	4200.00
4+500	16.80	15.00	14.50	4500.00
5+0	14.00	13.00	14.00	5000.00
6+0	13.00	12.00	13.00	5500.00
7+0	12.00	11.00	12.00	6000.00
7+500	11.00	10.00	11.00	6500.00
8+0	9.00	8.00	9.00	7000.00
8+500	8.00	7.00	8.00	7500.00
9+0	7.45	6.50	6.50	8000.00
9+500	6.74	5.50	5.50	8500.00
10+0	6.00	5.00	5.00	9000.00
10+500	5.00	4.00	4.00	9500.00
11+0	4.00	3.00	3.00	10000.00
11+500	3.00	2.00	2.00	10500.00
12+0	2.00	1.00	1.00	11000.00
12+8	0.03	-1.00	-0.30	12000.00

AHMC (1)



STATION	WATERLEVEL	PROPOSED ELEVATION	EXIST ELEVATION	CUMULATIVE DISTANCE
12+0	-0.03	0.00	-0.30	12000.00
12+500	-1.00	-1.00	-1.00	12500.00
13+0	-1.00	-1.00	-1.00	13000.00
13+500	-1.00	-1.00	-1.00	13500.00
14+0	-1.00	-1.00	-1.00	14000.00
14+500	-1.00	-1.00	-1.00	14500.00
15+0	-1.00	-1.00	-1.00	15000.00
15+500	-1.00	-1.00	-1.00	15500.00
16+0	-1.00	-1.00	-1.00	16000.00
16+500	-1.00	-1.00	-1.00	16500.00
17+0	-1.00	-1.00	-1.00	17000.00
17+300	-1.00	-1.00	-1.00	17300.00
17+500	-1.00	-1.00	-1.00	17500.00
18+0	-1.00	-1.00	-1.00	18000.00
19+0	-1.00	-1.00	-1.00	19000.00
20+0	-1.00	-1.00	-1.00	20000.00
20+500	-1.00	-1.00	-1.00	20500.00
21+0	-1.00	-1.00	-1.00	21000.00
21+500	-1.00	-1.00	-1.00	21500.00
22+800	-1.00	-1.00	-1.00	22800.00

AHMC (2)

ABBREVIATIONS

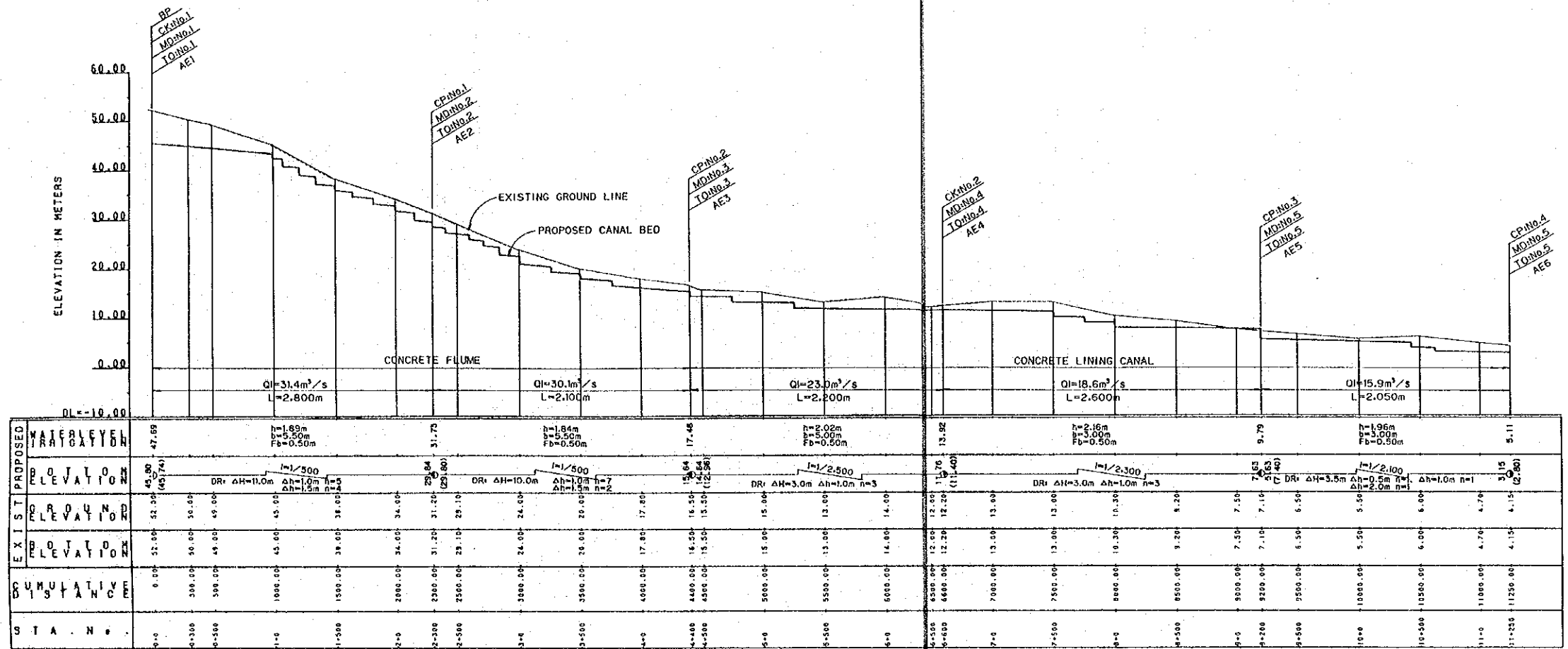
BP: BEGINNING POINT	Q: IRRIGATION DISCHARGE
EP: END POINT	Qd: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

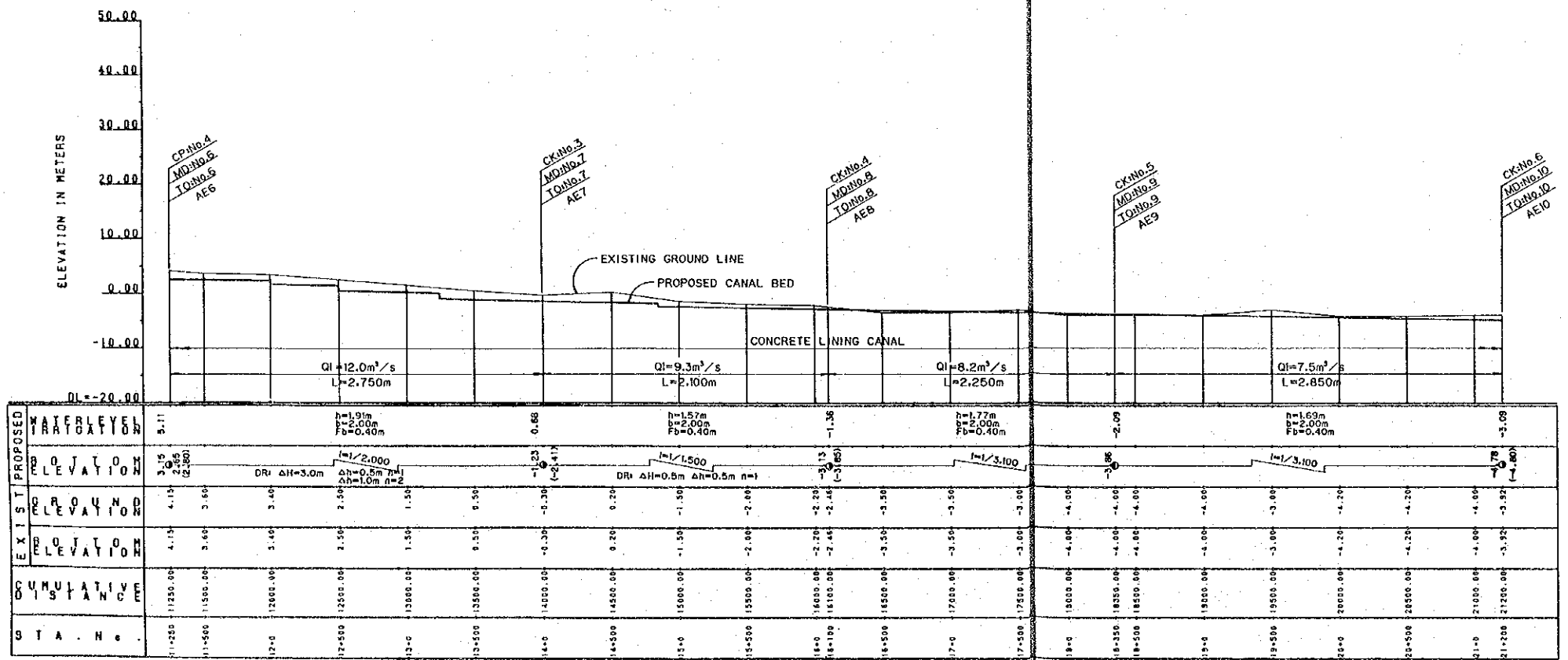
THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
AMOL WEST MAIN CANAL (AMHC)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 6 CP-4



AEMC (1)



AEMC (2)

- ABBREVIATIONS
- BP: BEGINNING POINT
 - EP: END POINT
 - MD: MEASURING DEVICE
 - TO: TURNOUT
 - CK: CHECK
 - CP: CHECK AND DROP
 - DR: DROP
 - JC: JUNCTION
 - Q: IRRIGATION DISCHARGE
 - Qd: DRAINAGE DISCHARGE
 - W: WATER DEPTH
 - b: BOTTOM WIDTH
 - Fb: FREEBOARD
 - L: LENGTH

ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
AMD EAST MAIN CANAL (AEMC) - (1/2)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 7 CP-5

ELEVATION IN METERS

40.00
30.00
20.00
10.00
0.00
-10.00
-20.00

DL = -30.00

CK No. 6
TO No. 10
MD No. 10
AETI

EXISTING GROUND LINE
PROPOSED CANAL BED

EP
TO No. 11
MD No. 11
AETI

CONCRETE LINING CANAL
QI = 7.4 m³/s
L = 4.300 m

PROPOSED WATER ELEVATION	21+200	21+500	22+000	22+500	23+000	23+500	24+000	24+500	25+000	25+500	26+000	26+500	27+000	27+800
EXISTING GROUND ELEVATION	3.92	3.80	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20
CUMULATIVE DISTANCE	0.00	300.00	600.00	900.00	1200.00	1500.00	1800.00	2100.00	2400.00	2700.00	3000.00	3300.00	3600.00	37800.00
STATION	21+200	21+500	22+000	22+500	23+000	23+500	24+000	24+500	25+000	25+500	26+000	26+500	27+000	27+800

ABBREVIATIONS

BP: BEGINNING POINT	OD: IRRIGATION DISCHARGE
EP: END POINT	Od: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	b: WATER DEPTH
TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEROARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

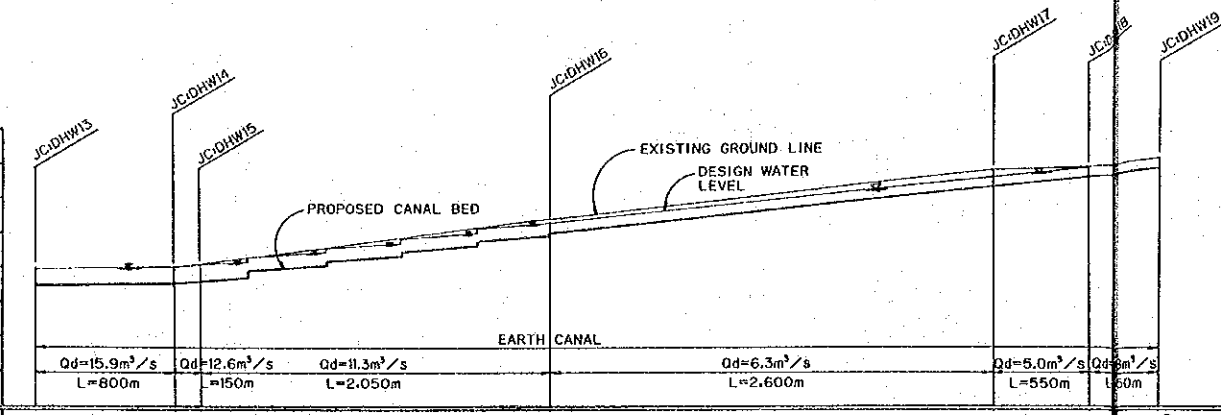
PROFILE
OF
AMOL EAST MAIN CANAL (AEMC) - (2/2)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 8 CP-6

AEMC (3)

ELEVATION IN METERS

DL = -20.00

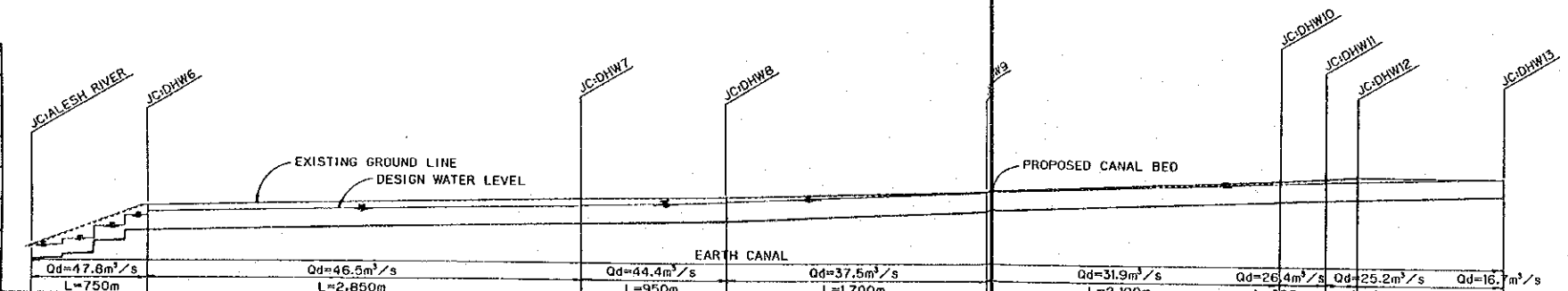


PROPOSED DRAINAGE	h=2.70m b=3.0m Fb=0.50m	h=1.94m b=2.0m Fb=0.40m	h=1.85m b=2.0m Fb=0.40m	h=1.43m b=1.5m Fb=0.40m	h=1.28m b=1.3m Fb=0.30m	h=1.35m b=1.4m Fb=0.30m	h=1.35m b=1.4m Fb=0.30m
PROPOSED ELEVATION	1.94	1.94	1.94	1.94	1.94	1.94	1.94
EXIST. GROUND ELEVATION	-0.10	-0.04	0.43	6.82	13.08	14.28	15.58
EXIST. GROUND ELEVATION	-0.10	-0.04	0.43	6.82	13.08	14.28	15.58
CUMULATIVE DISTANCE	9805.00	10655.00	10755.00	12805.00	15405.00	15555.00	15705.00
STA. No.	9805 (1140)	10655 (10+200)	10755 (10+500)	12805 (28+000)	15405 (34+000)	15555 (34+500)	15705 (34+800)

ANMD (2)

ELEVATION IN METERS

DL = -20.00



PROPOSED DRAINAGE	h=2.55m b=3.0m Fb=0.50m	h=3.04m b=10.0m Fb=0.50m	h=2.95m b=10.0m Fb=0.50m	h=2.98m b=5.0m Fb=0.50m	h=2.95m b=4.0m Fb=0.50m	h=2.76m b=3.0m Fb=0.50m	h=2.71m b=2.7m Fb=0.50m	h=2.76m b=3.0m Fb=0.50m	h=2.76m b=3.0m Fb=0.50m
PROPOSED ELEVATION	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94
EXIST. GROUND ELEVATION	-0.10	-0.04	0.43	6.82	13.08	14.28	15.58	16.88	18.18
EXIST. GROUND ELEVATION	-0.10	-0.04	0.43	6.82	13.08	14.28	15.58	16.88	18.18
CUMULATIVE DISTANCE	0.00	750.00	3450.00	4400.00	6100.00	6400.00	6600.00	7550.00	8500.00
STA. No.	0.00 (20+000)	750.00 (20+750)	3450.00 (11+200)	4400.00 (16+200)	6100.00 (22+200)	6400.00 (22+500)	6600.00 (22+800)	7550.00 (31+300)	8500.00 (40+800)

ANMD (1)

ABBREVIATIONS

BP: BEGINNING POINT	QI: IRRIGATION DISCHARGE
EP: END POINT	Qd: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
TD: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

() : VALUE OF SECONDARY CANAL
() : STA.No. OF ANMC

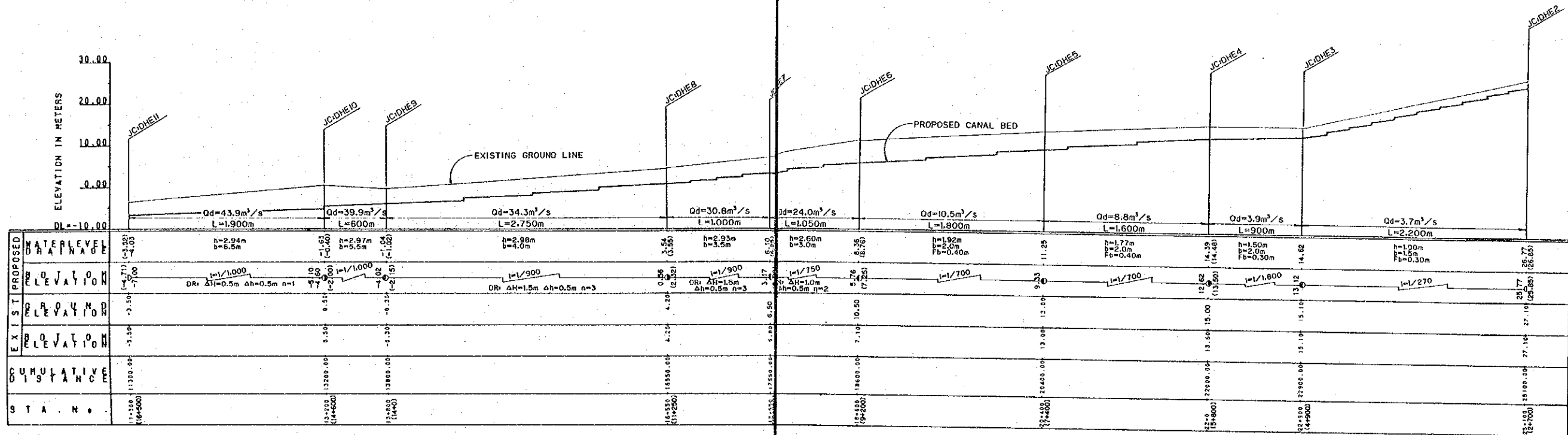
ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

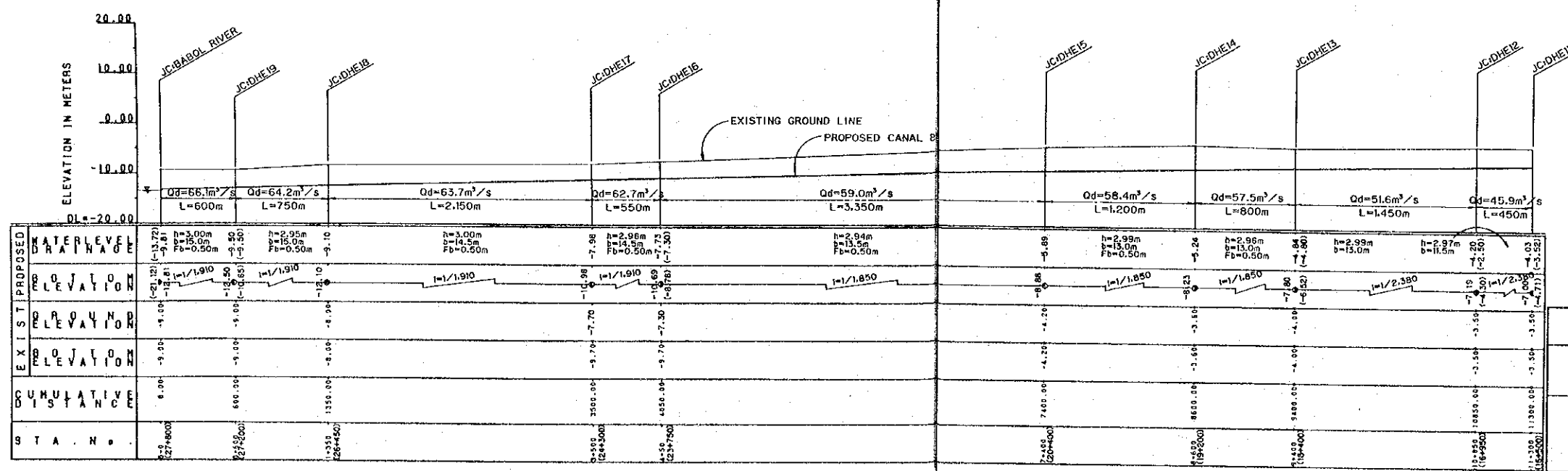
PROFILE
OF
ANMD WEST MAIN DRAIN (ANMD)

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

EXHIBIT No.
9 CP-7



AEMD (1)



AEMD (2)

- ABBREVIATIONS**
- BP: BEGINNING POINT
 - EP: END POINT
 - MD: MEASURING DEVICE
 - TO: TURNOUT
 - CK: CHECK
 - CP: CHECK AND DROP
 - DR: DROP
 - JC: JUNCTION
 - Qd: IRRIGATION DISCHARGE
 - Od: DRAINAGE DISCHARGE
 - h: WATER DEPTH
 - b: BOTTOM WIDTH
 - Fb: FREEBOARD
 - L: LENGTH

() : VALUE OF SECONDARY CANAL
 () : STA. NO. OF AEMC

ISLAMIC REPUBLIC OF IRAN
 MINISTRY OF AGRICULTURE (MOA)

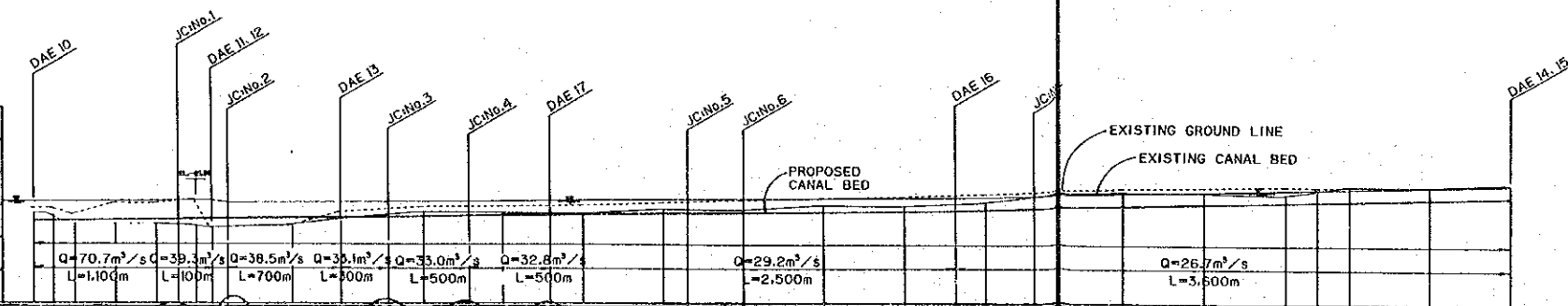
THE FEASIBILITY STUDY ON
 THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
 IN THE HARAZ RIVER BASIN

PROFILE
 OF
 AMOL EAST MAIN DRAIN (AEMD)

JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

EXHIBIT No.
 10 CP-8

ELEVATION IN METERS
 -10.00
 -20.00
 -30.00
 DL = -40.00



STATION	CUMULATIVE DISTANCE	EXIST. ELEVATION	PROPOSED ELEVATION	WATER LEVEL	PROPOSED DRAINAGE
0+0	0.00	-28.44	-27.20	-24.83	h=2.60m b=35.0m Fb=0.50m
0+100	100.00	-28.44	-27.20	-24.83	h=2.67m b=35.0m Fb=0.50m
0+200	200.00	-28.44	-27.20	-24.83	h=2.67m b=35.0m Fb=0.50m
0+300	300.00	-28.44	-27.20	-24.83	h=2.67m b=35.0m Fb=0.50m
0+400	400.00	-28.44	-27.20	-24.83	h=2.67m b=35.0m Fb=0.50m
0+500	500.00	-28.44	-27.20	-24.83	h=2.67m b=35.0m Fb=0.50m
0+600	600.00	-28.44	-27.20	-24.83	h=2.67m b=35.0m Fb=0.50m
0+700	700.00	-28.44	-27.20	-24.83	h=2.67m b=35.0m Fb=0.50m
0+800	800.00	-28.44	-27.20	-24.83	h=2.67m b=35.0m Fb=0.50m
0+900	900.00	-28.44	-27.20	-24.83	h=2.67m b=35.0m Fb=0.50m
1+0	1000.00	-28.44	-27.20	-24.83	h=2.05m b=30.0m Fb=0.50m
1+100	1100.00	-28.44	-27.20	-24.83	h=2.05m b=30.0m Fb=0.50m
1+200	1200.00	-28.44	-27.20	-24.83	h=2.05m b=30.0m Fb=0.50m
1+300	1300.00	-28.44	-27.20	-24.83	h=2.05m b=30.0m Fb=0.50m
1+400	1400.00	-28.44	-27.20	-24.83	h=2.05m b=30.0m Fb=0.50m
1+500	1500.00	-28.44	-27.20	-24.83	h=2.05m b=30.0m Fb=0.50m
1+600	1600.00	-28.44	-27.20	-24.83	h=2.05m b=30.0m Fb=0.50m
1+700	1700.00	-28.44	-27.20	-24.83	h=2.05m b=30.0m Fb=0.50m
1+800	1800.00	-28.44	-27.20	-24.83	h=2.05m b=30.0m Fb=0.50m
1+900	1900.00	-28.44	-27.20	-24.83	h=2.05m b=30.0m Fb=0.50m
2+000	2000.00	-26.63	-26.61	-24.79	h=2.02m b=25.0m Fb=0.50m
2+100	2100.00	-26.63	-26.61	-24.79	h=2.02m b=25.0m Fb=0.50m
2+200	2200.00	-26.63	-26.61	-24.79	h=2.02m b=25.0m Fb=0.50m
2+300	2300.00	-26.63	-26.61	-24.79	h=2.02m b=25.0m Fb=0.50m
2+400	2400.00	-26.63	-26.61	-24.79	h=2.02m b=25.0m Fb=0.50m
2+500	2500.00	-26.63	-26.61	-24.79	h=2.02m b=25.0m Fb=0.50m
2+600	2600.00	-26.63	-26.61	-24.79	h=2.02m b=25.0m Fb=0.50m
2+700	2700.00	-26.22	-26.71	-24.63	h=2.02m b=25.0m Fb=0.50m
2+800	2800.00	-26.22	-26.71	-24.63	h=2.02m b=25.0m Fb=0.50m
2+900	2900.00	-26.22	-26.71	-24.63	h=2.02m b=25.0m Fb=0.50m
3+000	3000.00	-26.38	-26.61	-24.55	h=2.02m b=25.0m Fb=0.50m
3+100	3100.00	-26.44	-26.61	-24.55	h=2.02m b=25.0m Fb=0.50m
3+200	3200.00	-26.44	-26.61	-24.55	h=2.02m b=25.0m Fb=0.50m
3+300	3300.00	-26.44	-26.61	-24.55	h=2.02m b=25.0m Fb=0.50m
3+400	3400.00	-26.44	-26.61	-24.55	h=2.02m b=25.0m Fb=0.50m
3+500	3500.00	-26.44	-26.61	-24.55	h=2.02m b=25.0m Fb=0.50m
3+600	3600.00	-26.44	-26.61	-24.55	h=2.02m b=25.0m Fb=0.50m
3+700	3700.00	-26.44	-26.61	-24.55	h=2.02m b=25.0m Fb=0.50m
3+800	3800.00	-26.44	-26.61	-24.55	h=2.02m b=25.0m Fb=0.50m
3+900	3900.00	-26.44	-26.61	-24.55	h=2.02m b=25.0m Fb=0.50m
4+000	4000.00	-26.81	-26.44	-24.42	h=2.02m b=25.0m Fb=0.50m
4+100	4100.00	-26.81	-26.44	-24.42	h=2.02m b=25.0m Fb=0.50m
4+200	4200.00	-26.81	-26.44	-24.42	h=2.02m b=25.0m Fb=0.50m
4+300	4300.00	-26.81	-26.44	-24.42	h=2.02m b=25.0m Fb=0.50m
4+400	4400.00	-26.81	-26.44	-24.42	h=2.02m b=25.0m Fb=0.50m
4+500	4500.00	-26.81	-26.44	-24.42	h=2.02m b=25.0m Fb=0.50m
4+600	4600.00	-26.81	-26.44	-24.42	h=2.02m b=25.0m Fb=0.50m
4+700	4700.00	-26.81	-26.44	-24.42	h=2.02m b=25.0m Fb=0.50m
4+800	4800.00	-26.81	-26.44	-24.42	h=2.02m b=25.0m Fb=0.50m
4+900	4900.00	-26.81	-26.44	-24.42	h=2.02m b=25.0m Fb=0.50m
5+000	5000.00	-25.75	-25.76	-24.03	h=2.02m b=25.0m Fb=0.50m
5+100	5100.00	-25.75	-25.76	-24.03	h=2.02m b=25.0m Fb=0.50m
5+200	5200.00	-25.75	-25.76	-24.03	h=2.02m b=25.0m Fb=0.50m
5+300	5300.00	-25.75	-25.76	-24.03	h=2.02m b=25.0m Fb=0.50m
5+400	5400.00	-25.75	-25.76	-24.03	h=2.02m b=25.0m Fb=0.50m
5+500	5500.00	-25.75	-25.76	-24.03	h=2.02m b=25.0m Fb=0.50m
5+600	5600.00	-25.75	-25.76	-24.03	h=2.02m b=25.0m Fb=0.50m
5+700	5700.00	-24.55	-23.46	-22.11	h=2.02m b=25.0m Fb=0.50m
5+800	5800.00	-24.71	-23.35	-22.00	h=2.02m b=25.0m Fb=0.50m
5+900	5900.00	-24.71	-23.35	-22.00	h=2.02m b=25.0m Fb=0.50m
6+000	6000.00	-23.85	-23.78	-21.78	h=2.02m b=25.0m Fb=0.50m
6+100	6100.00	-23.85	-23.78	-21.78	h=2.02m b=25.0m Fb=0.50m
6+200	6200.00	-23.85	-23.78	-21.78	h=2.02m b=25.0m Fb=0.50m
6+300	6300.00	-23.85	-23.78	-21.78	h=2.02m b=25.0m Fb=0.50m
6+400	6400.00	-23.85	-23.78	-21.78	h=2.02m b=25.0m Fb=0.50m
6+500	6500.00	-23.85	-23.78	-21.78	h=2.02m b=25.0m Fb=0.50m
6+600	6600.00	-23.85	-23.78	-21.78	h=2.02m b=25.0m Fb=0.50m
6+700	6700.00	-23.85	-23.78	-21.78	h=2.02m b=25.0m Fb=0.50m
6+800	6800.00	-23.85	-23.78	-21.78	h=2.02m b=25.0m Fb=0.50m
6+900	6900.00	-23.85	-23.78	-21.78	h=2.02m b=25.0m Fb=0.50m
7+000	7000.00	-23.12	-22.26	-20.08	h=2.02m b=10.0m Fb=0.50m
7+100	7100.00	-23.12	-22.26	-20.08	h=2.02m b=10.0m Fb=0.50m
7+200	7200.00	-23.12	-22.26	-20.08	h=2.02m b=10.0m Fb=0.50m
7+300	7300.00	-23.12	-22.26	-20.08	h=2.02m b=10.0m Fb=0.50m
7+400	7400.00	-23.12	-22.26	-20.08	h=2.02m b=10.0m Fb=0.50m
7+500	7500.00	-23.12	-22.26	-20.08	h=2.02m b=10.0m Fb=0.50m
7+600	7600.00	-23.12	-22.26	-20.08	h=2.02m b=10.0m Fb=0.50m
7+700	7700.00	-23.12	-22.26	-20.08	h=2.02m b=10.0m Fb=0.50m
7+800	7800.00	-23.12	-22.26	-20.08	h=2.02m b=10.0m Fb=0.50m
7+900	7900.00	-23.12	-22.26	-20.08	h=2.02m b=10.0m Fb=0.50m
8+000	8000.00	-22.80	-22.19	-20.19	h=2.02m b=10.0m Fb=0.50m
8+100	8100.00	-22.80	-22.19	-20.19	h=2.02m b=10.0m Fb=0.50m
8+200	8200.00	-22.80	-22.19	-20.19	h=2.02m b=10.0m Fb=0.50m
8+300	8300.00	-22.80	-22.19	-20.19	h=2.02m b=10.0m Fb=0.50m
8+400	8400.00	-22.80	-22.19	-20.19	h=2.02m b=10.0m Fb=0.50m
8+500	8500.00	-22.80	-22.19	-20.19	h=2.02m b=10.0m Fb=0.50m
8+600	8600.00	-22.80	-22.19	-20.19	h=2.02m b=10.0m Fb=0.50m
8+700	8700.00	-22.80	-22.19	-20.19	h=2.02m b=10.0m Fb=0.50m
8+800	8800.00	-22.80	-22.19	-20.19	h=2.02m b=10.0m Fb=0.50m
8+900	8900.00	-22.80	-22.19	-20.19	h=2.02m b=10.0m Fb=0.50m
9+000	9000.00	-21.53	-21.51	-21.68	h=2.02m b=10.0m Fb=0.50m

ABBREVIATIONS

BP: BEGINNING POINT	Qd: IRRIGATION DISCHARGE
EP: END POINT	Od: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

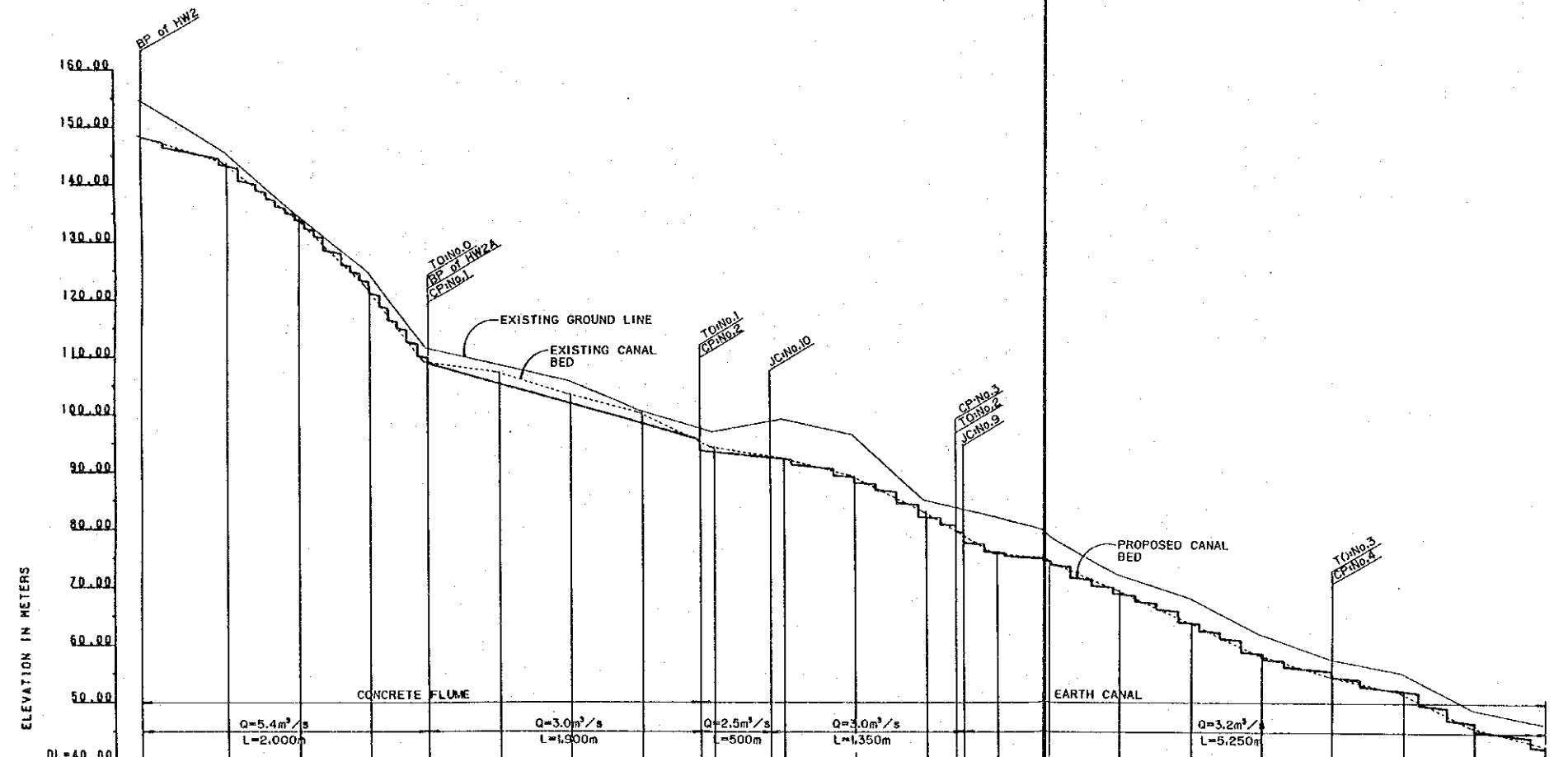
ISLAMIC REPUBLIC OF IRAN
 MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
 THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
 IN THE HARAZ RIVER BASIN

PROFILE
 OF
 FERYDON KENAR MAIN DRAIN (FKMD)

JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

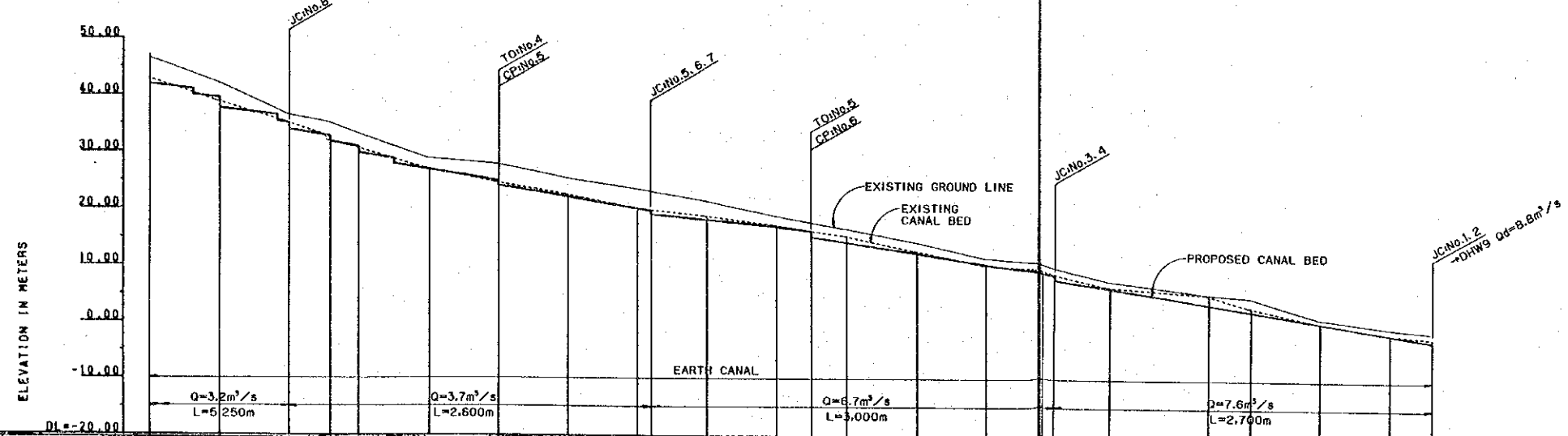
EXHIBIT No.
 11 CP-9



ABBREVIATIONS

BP: BEGINNING POINT	QI: IRRIGATION DISCHARGE
EP: END POINT	QD: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

PROPOSED WATER LEVEL DRAINAGE	148.50	149.43	151.76	154.50	158.00	161.50	165.00	168.50	172.00	175.50	179.00	182.50	186.00	189.50	193.00	196.50	200.00	203.50	207.00	210.50	214.00	217.50	221.00	224.50	228.00	231.50	235.00	238.50	242.00	245.50	249.00	252.50	256.00	259.50	263.00	266.50	270.00	273.50	277.00	280.50	284.00	287.50	291.00	294.50	298.00	301.50	305.00	308.50	312.00	315.50	319.00	322.50	326.00	329.50	333.00	336.50	340.00	343.50	347.00	350.50	354.00	357.50	361.00	364.50	368.00	371.50	375.00	378.50	382.00	385.50	389.00	392.50	396.00	399.50	403.00	406.50	410.00	413.50	417.00	420.50	424.00	427.50	431.00	434.50	438.00	441.50	445.00	448.50	452.00	455.50	459.00	462.50	466.00	469.50	473.00	476.50	480.00	483.50	487.00	490.50	494.00	497.50	501.00	504.50	508.00	511.50	515.00	518.50	522.00	525.50	529.00	532.50	536.00	539.50	543.00	546.50	550.00	553.50	557.00	560.50	564.00	567.50	571.00	574.50	578.00	581.50	585.00	588.50	592.00	595.50	599.00	602.50	606.00	609.50	613.00	616.50	620.00	623.50	627.00	630.50	634.00	637.50	641.00	644.50	648.00	651.50	655.00	658.50	662.00	665.50	669.00	672.50	676.00	679.50	683.00	686.50	690.00	693.50	697.00	700.50	704.00	707.50	711.00	714.50	718.00	721.50	725.00	728.50	732.00	735.50	739.00	742.50	746.00	749.50	753.00	756.50	760.00	763.50	767.00	770.50	774.00	777.50	781.00	784.50	788.00	791.50	795.00	798.50	802.00	805.50	809.00	812.50	816.00	819.50	823.00	826.50	830.00	833.50	837.00	840.50	844.00	847.50	851.00	854.50	858.00	861.50	865.00	868.50	872.00	875.50	879.00	882.50	886.00	889.50	893.00	896.50	900.00	903.50	907.00	910.50	914.00	917.50	921.00	924.50	928.00	931.50	935.00	938.50	942.00	945.50	949.00	952.50	956.00	959.50	963.00	966.50	970.00	973.50	977.00	980.50	984.00	987.50	991.00	994.50	998.00	1001.50	1005.00	1008.50	1012.00	1015.50	1019.00	1022.50	1026.00	1029.50	1033.00	1036.50	1040.00	1043.50	1047.00	1050.50	1054.00	1057.50	1061.00	1064.50	1068.00	1071.50	1075.00	1078.50	1082.00	1085.50	1089.00	1092.50	1096.00	1099.50	1103.00	1106.50	1110.00	1113.50	1117.00	1120.50	1124.00	1127.50	1131.00	1134.50	1138.00	1141.50	1145.00	1148.50	1152.00	1155.50	1159.00	1162.50	1166.00	1169.50	1173.00	1176.50	1180.00	1183.50	1187.00	1190.50	1194.00	1197.50	1201.00	1204.50	1208.00	1211.50	1215.00	1218.50	1222.00	1225.50	1229.00	1232.50	1236.00	1239.50	1243.00	1246.50	1250.00	1253.50	1257.00	1260.50	1264.00	1267.50	1271.00	1274.50	1278.00	1281.50	1285.00	1288.50	1292.00	1295.50	1299.00	1302.50	1306.00	1309.50	1313.00	1316.50	1320.00	1323.50	1327.00	1330.50	1334.00	1337.50	1341.00	1344.50	1348.00	1351.50	1355.00	1358.50	1362.00	1365.50	1369.00	1372.50	1376.00	1379.50	1383.00	1386.50	1390.00	1393.50	1397.00	1400.50	1404.00	1407.50	1411.00	1414.50	1418.00	1421.50	1425.00	1428.50	1432.00	1435.50	1439.00	1442.50	1446.00	1449.50	1453.00	1456.50	1460.00	1463.50	1467.00	1470.50	1474.00	1477.50	1481.00	1484.50	1488.00	1491.50	1495.00	1498.50	1502.00	1505.50	1509.00	1512.50	1516.00	1519.50	1523.00	1526.50	1530.00	1533.50	1537.00	1540.50	1544.00	1547.50	1551.00	1554.50	1558.00	1561.50	1565.00	1568.50	1572.00	1575.50	1579.00	1582.50	1586.00	1589.50	1593.00	1596.50	1600.00	1603.50	1607.00	1610.50	1614.00	1617.50	1621.00	1624.50	1628.00	1631.50	1635.00	1638.50	1642.00	1645.50	1649.00	1652.50	1656.00	1659.50	1663.00	1666.50	1670.00	1673.50	1677.00	1680.50	1684.00	1687.50	1691.00	1694.50	1698.00	1701.50	1705.00	1708.50	1712.00	1715.50	1719.00	1722.50	1726.00	1729.50	1733.00	1736.50	1740.00	1743.50	1747.00	1750.50	1754.00	1757.50	1761.00	1764.50	1768.00	1771.50	1775.00	1778.50	1782.00	1785.50	1789.00	1792.50	1796.00	1799.50	1803.00	1806.50	1810.00	1813.50	1817.00	1820.50	1824.00	1827.50	1831.00	1834.50	1838.00	1841.50	1845.00	1848.50	1852.00	1855.50	1859.00	1862.50	1866.00	1869.50	1873.00	1876.50	1880.00	1883.50	1887.00	1890.50	1894.00	1897.50	1901.00	1904.50	1908.00	1911.50	1915.00	1918.50	1922.00	1925.50	1929.00	1932.50	1936.00	1939.50	1943.00	1946.50	1950.00	1953.50	1957.00	1960.50	1964.00	1967.50	1971.00	1974.50	1978.00	1981.50	1985.00	1988.50	1992.00	1995.50	1999.00	2002.50	2006.00	2009.50	2013.00	2016.50	2020.00	2023.50	2027.00	2030.50	2034.00	2037.50	2041.00	2044.50	2048.00	2051.50	2055.00	2058.50	2062.00	2065.50	2069.00	2072.50	2076.00	2079.50	2083.00	2086.50	2090.00	2093.50	2097.00	2100.50	2104.00	2107.50	2111.00	2114.50	2118.00	2121.50	2125.00	2128.50	2132.00	2135.50	2139.00	2142.50	2146.00	2149.50	2153.00	2156.50	2160.00	2163.50	2167.00	2170.50	2174.00	2177.50	2181.00	2184.50	2188.00	2191.50	2195.00	2198.50	2202.00	2205.50	2209.00	2212.50	2216.00	2219.50	2223.00	2226.50	2230.00	2233.50	2237.00	2240.50	2244.00	2247.50	2251.00	2254.50	2258.00	2261.50	2265.00	2268.50	2272.00	2275.50	2279.00	2282.50	2286.00	2289.50	2293.00	2296.50	2300.00	2303.50	2307.00	2310.50	2314.00	2317.50	2321.00	2324.50	2328.00	2331.50	2335.00	2338.50	2342.00	2345.50	2349.00	2352.50	2356.00	2359.50	2363.00	2366.50	2370.00	2373.50	2377.00	2380.50	2384.00	2387.50	2391.00	2394.50	2398.00	2401.50	2405.00	2408.50	2412.00	2415.50	2419.00	2422.50	2426.00	2429.50	2433.00	2436.50	2440.00	2443.50	2447.00	2450.50	2454.00	2457.50	2461.00	2464.50	2468.00	2471.50	2475.00	2478.50	2482.00	2485.50	2489.00	2492.50	2496.00	2499.50	2503.00	2506.50	2510.00	2513.50	2517.00	2520.50	2524.00	2527.50	2531.00	2534.50	2538.00	2541.50	2545.00	2548.50	2552.00	2555.50	2559.00	2562.50	2566.00	2569.50	2573.00	2576.50	2580.00	2583.50	2587.00	2590.50	2594.00	2597.50	2601.00	2604.50	2608.00	2611.50	2615.00	2618.50	2622.00	2625.50	2629.00	2632.50	2636.00	2639.50	2643.00	2646.50	2650.00	2653.50	2657.00	2660.50	2664.00	2667.50	2671.00	2674.50	2678.00	2681.50	2685.00	2688.50	2692.00	2695.50	2699.00	2702.50	2706.00	2709.50	2713.00	2716.50	2720.00	2723.50	2727.00	2730.50	2734.00	2737.50	2741.00	2744.50	2748.00	2751.50	2755.00	2758.50	2762.00	2765.50	2769.00	2772.50	2776.00	2779.50	2783.00	2786.50	2790.00	2793.50	2797.00	2800.50	2804.00	2807.50	2811.00	2814.50	2818.00	2821.50	2825.00	2828.50	2832.00	2835.50	2839.00	2842.50	2846.00	2849.50	2853.00	2856.50	2860.00	2863.50	2867.00	2870.50	2874.00	2877.50	2881.00	2884.50	2888.00	2891.50	2895.00	2898.50	2902.00	2905.50	2909.00	2912.50	2916.00	2919.50	2923.00	2926.50	2930.00	2933.50	2937.00	2940.50	2944.00	2947.50	2951.00	2954.50	2958.00	2961.50	2965.00	2968.50	2972.00	2975.50	2979.00	2982.50	2986.00	2989.50	2993.00	2996.50	3000.00
PROPOSED WATER ELEVATION	148.50	149.43	151.76	154.50	158.00	161.50	165.00	168.50	172.00	175.50	179.00	182.50	186.00	189.50	193.00	196.50	200.00	203.50	207.00	210.50	214.00	217.50	221.00	224.50	228.00	231.50	235.00	238.50	242.00	245.50	249.00	252.50	256.00	259.50	263.00	266.50	270.00	273.50	277.00	280.50	284.00	287.50	291.00	294.50	298.00	301.50	305.00	308.50	312.00	315.50	319.00	322.50	326.00	329.50	333.00	336.50	340.00	343.50	347.00	350.50	354.00	357.50	361.00	364.50	368.00	371.50	375.00	378.50	382.00	385.50	389.00	392.50	396.00	399.50	403.00	406.50	410.00	413.50	417.00	420.50	424.00	427.50	431.00	434.50	438.00	441.50	445.00	448.50	452.00	455.50	459.00	462.50	466.00	469.50	473.00	476.50	480.00	483.50	487.00	490.50	494.00	497.50	501.00	504.50	508.00	511.50	515.00	518.50	522.00	525.50	529.00	532.50	536.00	539.50	543.00	546.50	550.00	553.50	557.00	560.50	564.00	567.50	571.00	574.50	578.00	581.50	585.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		



ABBREVIATIONS

BP: BEGINNING POINT	O: IRRIGATION DISCHARGE
EP: END POINT	Od: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

STATION	10+0	10+500	10+500	11+0	11+250	11+250	11+500	12+0	12+500	12+500	13+0	13+500	13+500	14+0	14+250	14+250	14+500	14+500	15+0	15+500	15+500	16+0	16+250	16+250	16+500	16+500	17+0	17+250	17+250	18+0	18+250	18+250	18+500	18+500	19+0	19+30							
PROPOSED WATERLEVEL			35.52																																								
EXISTING WATERLEVEL			35.53																																								
ELEVATION			35.53																																								
PROPOSED GROUND ELEVATION																																											
EXISTING GROUND ELEVATION																																											
CUMULATIVE DISTANCE																																											

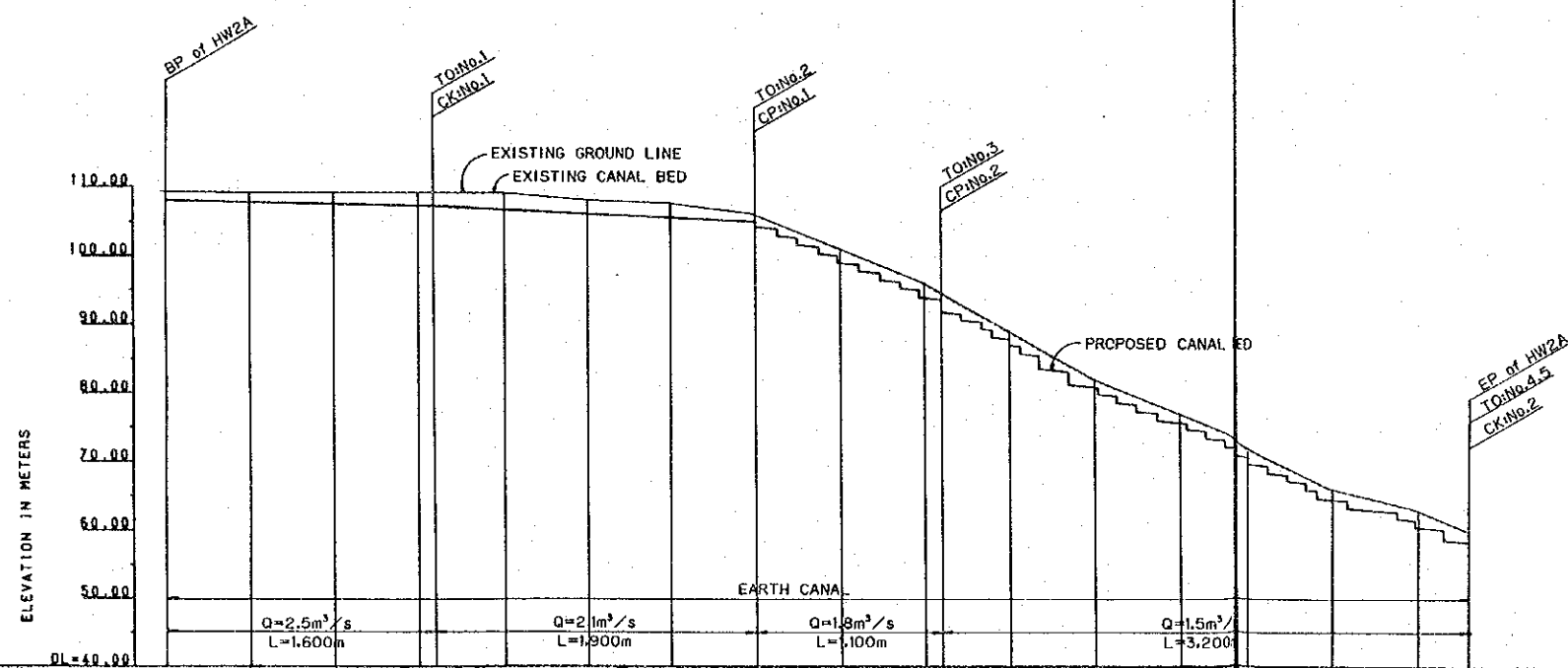
HW2/HW2B (2)

ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - HW2/2B (2/2)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	EXHIBIT No. 14 CP-12
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ABBREVIATIONS

BP: BEGINNING POINT	QI: IRRIGATION DISCHARGE
EP: END POINT	Qd: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

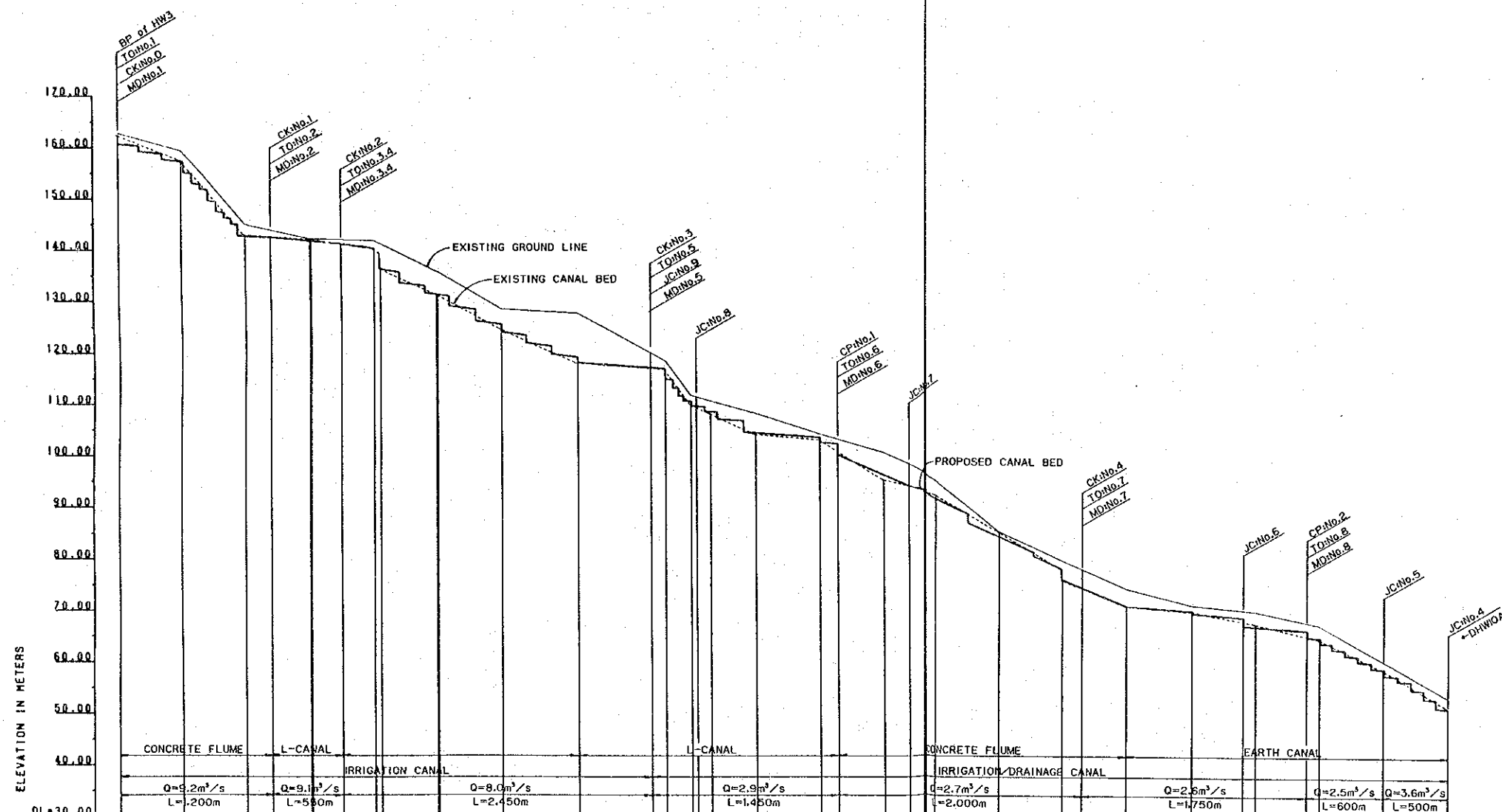
PROPOSED WATERLEVEL	108.14	108.34	108.63	94.37	55.42
EXISTING WATERLEVEL	107.50	107.70	107.90	95.52	58.62
PROPOSED ELEVATION	107.50	107.70	107.90	95.52	58.62
EXISTING ELEVATION	105.15	105.00	104.80	94.00	68.00
CUMULATIVE DISTANCE	0.00	500.00	1000.00	2000.00	5200.00
STATION	0+00	0+500	1+000	2+900	6+100

ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - HW 2A

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 15 CP-13



ABBREVIATIONS

BP: BEGINNING POINT	DI: IRRIGATION DISCHARGE
EP: END POINT	DD: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	W: WATER DEPTH
TO: TURNOUT	B: BOTTOM WIDTH
CK: CHECK	FB: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

STATION	PROPOSED WATERLEVEL	EXISTING GROUND ELEVATION	PROPOSED WATER ELEVATION	CUMULATIVE DISTANCE
0+00	162.07	162.07	162.07	0.00
0+500	161.00	162.41	157.48	566.00
1+000	142.77	142.90	142.90	1050.00
1+200	142.03	142.03	142.03	1200.00
1+500	141.08	141.28	141.28	1370.00
1+750	141.03	141.12	141.12	1475.00
2+000	138.20	138.20	138.20	1650.00
2+500	133.20	133.20	133.20	1850.00
3+000	127.60	127.60	127.60	2050.00
3+500	118.02	118.02	118.02	2300.00
4+000	116.94	116.94	116.94	2400.00
4+300	116.74	116.74	116.74	2430.00
4+500	111.76	111.76	111.76	2450.00
4+550	109.27	109.27	109.27	2455.00
4+580	108.10	108.10	108.10	2458.00
5+000	104.07	104.07	104.07	2500.00
5+500	103.42	103.42	103.42	2550.00
5+650	100.62	100.62	100.62	2565.00
6+000	95.36	95.36	95.36	2600.00
6+200	94.13	94.13	94.13	2620.00
6+300	92.37	92.37	92.37	2630.00
7+000	85.29	85.29	85.29	2700.00
7+500	72.36	72.36	72.36	2750.00
7+650	74.47	74.47	74.47	2765.00
8+000	74.46	74.46	74.46	2800.00
8+500	69.49	69.49	69.49	2850.00
8+800	68.08	68.08	68.08	2880.00
9+000	67.00	67.00	67.00	2900.00
9+400	65.21	65.21	65.21	2940.00
9+500	67.45	67.45	67.45	2950.00
10+000	58.30	58.30	58.30	3000.00
10+500	51.51	51.51	51.51	3050.00

HW3 (1)

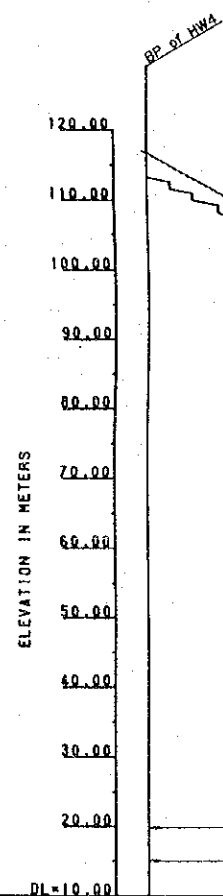
ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - HW3 (1/2)

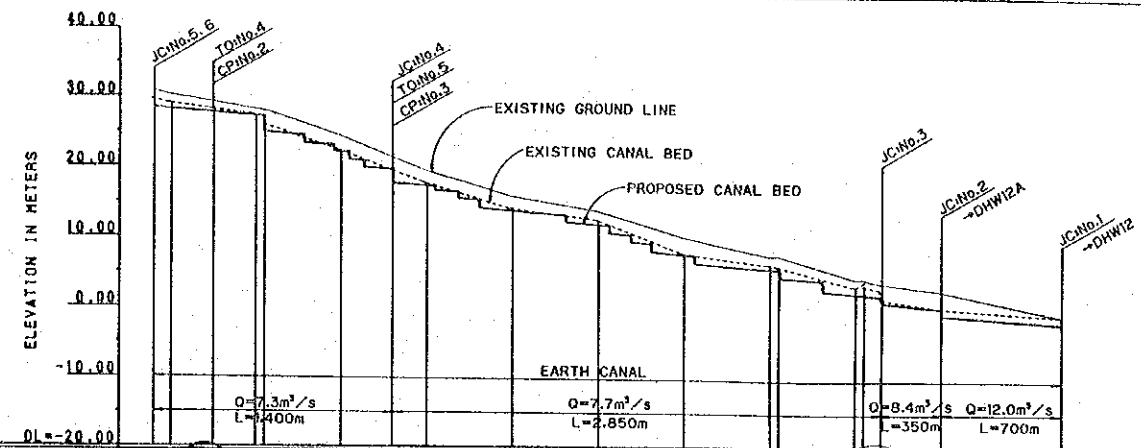
JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

EXHIBIT No.
16 CP-14



STATION	CUMULATIVE DISTANCE	EXIST. ELEVATION	PROPOSED ELEVATION	WATER DEPTH	WATER LEVEL
0+00	0.00	116.24	115.50	0.74	116.24
0+300	300.00	110.00	109.26	0.74	110.00
1+00	1000.00	105.00	104.26	0.74	105.00
1+300	1300.00	99.00	98.26	0.74	99.00
2+00	2000.00	90.00	89.26	0.74	90.00
2+300	2300.00	88.00	87.26	0.74	88.00
2+600	2600.00	88.00	87.26	0.74	88.00
3+00	3000.00	82.00	81.26	0.74	82.00
3+300	3300.00	78.00	77.26	0.74	78.00
4+00	4000.00	72.00	71.26	0.74	72.00
4+300	4300.00	68.00	67.26	0.74	68.00
4+700	4700.00	64.00	63.26	0.74	64.00
5+00	5000.00	60.00	59.26	0.74	60.00
5+300	5300.00	56.00	55.26	0.74	56.00
5+700	5700.00	52.00	51.26	0.74	52.00
6+00	6000.00	48.00	47.26	0.74	48.00
6+300	6300.00	44.00	43.26	0.74	44.00
6+700	6700.00	40.00	39.26	0.74	40.00
7+00	7000.00	36.00	35.26	0.74	36.00
7+300	7300.00	32.00	31.26	0.74	32.00
7+700	7700.00	28.00	27.26	0.74	28.00
8+00	8000.00	24.00	23.26	0.74	24.00
8+300	8300.00	20.00	19.26	0.74	20.00
8+700	8700.00	16.00	15.26	0.74	16.00
9+00	9000.00	12.00	11.26	0.74	12.00
9+300	9300.00	8.00	7.26	0.74	8.00
9+700	9700.00	4.00	3.26	0.74	4.00
10+00	10000.00	0.00	0.00	0.00	0.00

HW4(1)



STATION	CUMULATIVE DISTANCE	EXIST. ELEVATION	PROPOSED ELEVATION	WATER DEPTH	WATER LEVEL
9+00	9000.00	22.50	21.76	0.74	22.50
9+300	9300.00	21.50	20.76	0.74	21.50
9+700	9700.00	19.50	18.76	0.74	19.50
10+00	10000.00	17.60	16.86	0.74	17.60
10+300	10300.00	15.80	15.06	0.74	15.80
10+600	10600.00	14.00	13.26	0.74	14.00
10+900	10900.00	12.40	11.66	0.74	12.40
11+200	11200.00	10.80	10.06	0.74	10.80
11+500	11500.00	9.20	8.46	0.74	9.20
11+800	11800.00	7.70	6.96	0.74	7.70
12+100	12100.00	6.20	5.46	0.74	6.20
12+400	12400.00	4.70	3.96	0.74	4.70
12+700	12700.00	3.20	2.46	0.74	3.20
13+00	13000.00	1.70	0.96	0.74	1.70
13+300	13300.00	0.20	-0.54	0.74	0.20
13+600	13600.00	-1.30	-2.04	0.74	-1.30
14+00	14000.00	-2.80	-3.54	0.74	-2.80

HW4(2)

- ABBREVIATIONS**
- BP: BEGINNING POINT
 - EP: END POINT
 - MD: MEASURING DEVICE
 - TO: TURNOUT
 - CK: CHECK
 - CP: CHECK AND DROP
 - DR: DROP
 - JC: JUNCTION
 - Q: IRRIGATION DISCHARGE
 - Qd: DRAINAGE DISCHARGE
 - n: WATER DEPTH
 - b: BOTTOM WIDTH
 - Fb: FREEBOARD
 - L: LENGTH

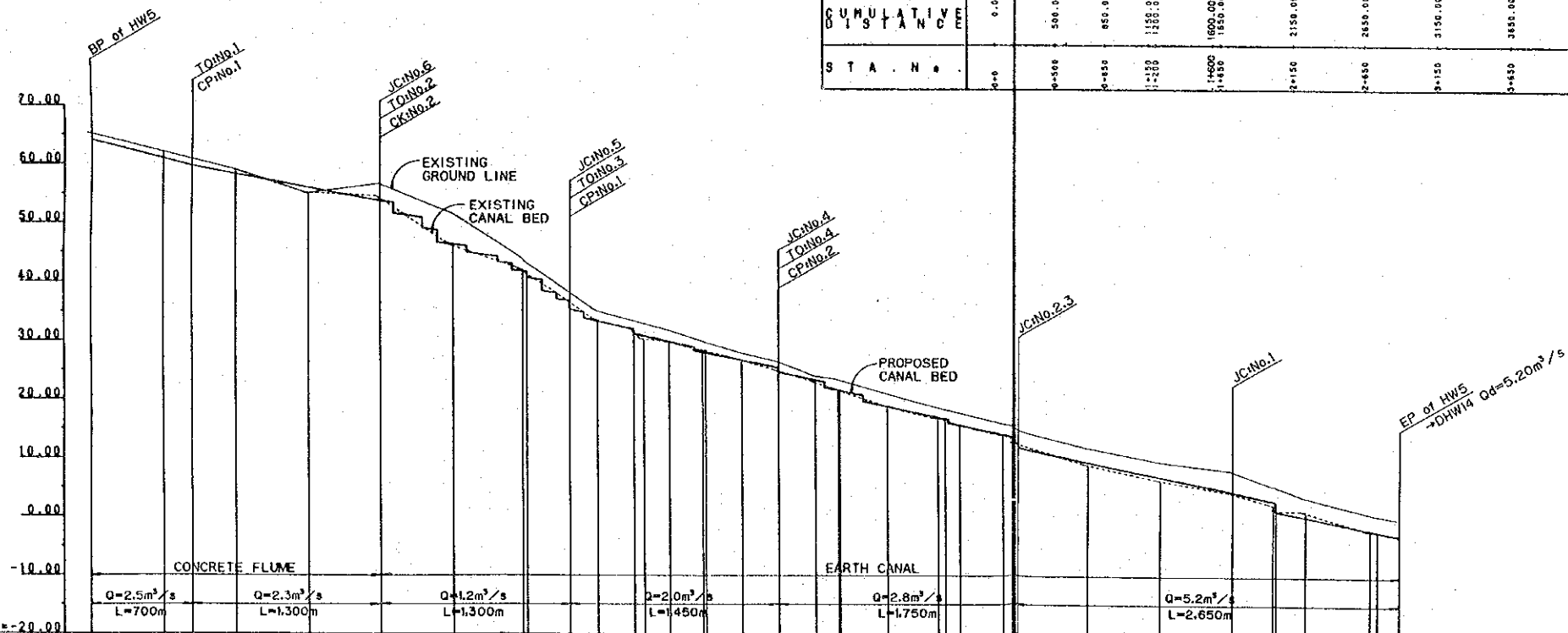
ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - HW4

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 18 CP-16

ELEVATION IN METERS



PROPOSED WATERLEVEL	PROPOSED WATER ELEVATION	PROPOSED ELEVATION	GROUND ELEVATION	EXIST ELEVATION	CUMULATIVE DISTANCE	STATION
64.58	64.58	64.00	65.07	65.07	0.00	0+00
64.58	64.58	64.00	62.00	62.00	500.00	0+500
64.58	64.58	64.00	58.00	58.00	700.00	0+700
64.58	64.58	64.00	55.00	55.00	1000.00	1+000
64.58	64.58	64.00	53.00	53.00	1500.00	1+500
64.58	64.58	64.00	54.33	54.33	2000.00	2+000
64.58	64.58	64.00	54.33	54.33	2500.00	2+500
64.58	64.58	64.00	54.33	54.33	3000.00	3+000
64.58	64.58	64.00	54.33	54.33	3500.00	3+500
64.58	64.58	64.00	54.33	54.33	4000.00	4+000
64.58	64.58	64.00	54.33	54.33	4500.00	4+500
64.58	64.58	64.00	54.33	54.33	5000.00	5+000
64.58	64.58	64.00	54.33	54.33	5500.00	5+500
64.58	64.58	64.00	54.33	54.33	6000.00	6+000
64.58	64.58	64.00	54.33	54.33	6500.00	6+500
64.58	64.58	64.00	54.33	54.33	7000.00	7+000
64.58	64.58	64.00	54.33	54.33	7500.00	7+500
64.58	64.58	64.00	54.33	54.33	8000.00	8+000
64.58	64.58	64.00	54.33	54.33	8500.00	8+500
64.58	64.58	64.00	54.33	54.33	9000.00	9+000
64.58	64.58	64.00	54.33	54.33	9500.00	9+500
64.58	64.58	64.00	54.33	54.33	10000.00	10+000

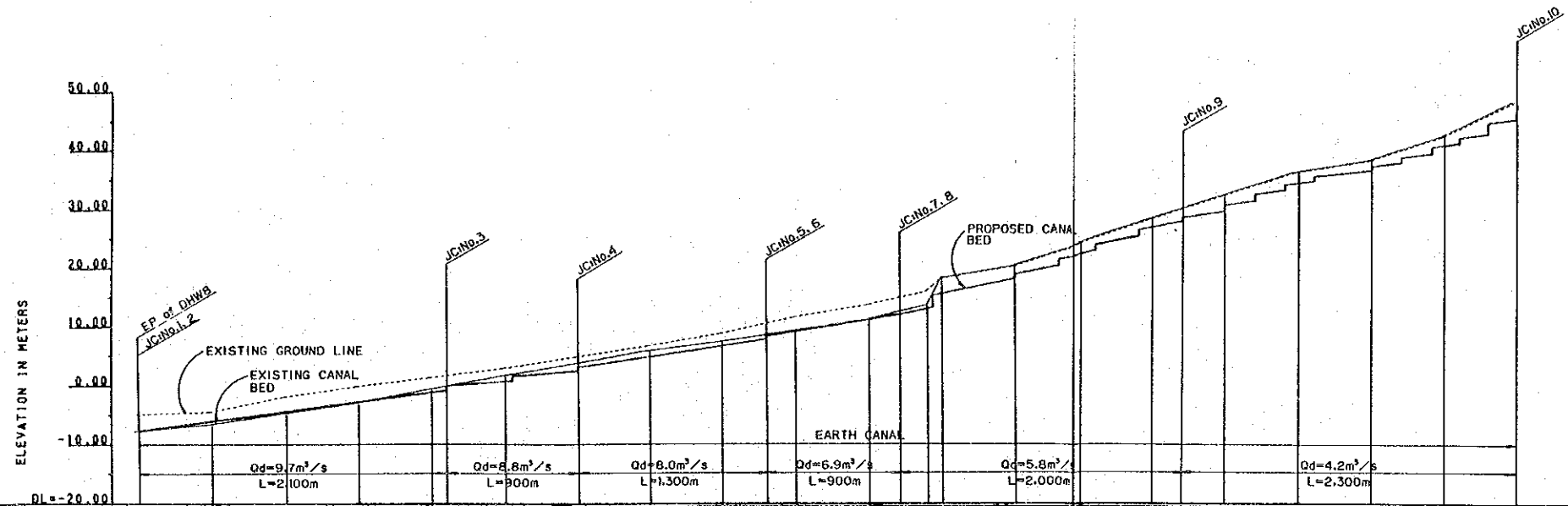
WATERLEVEL	DRAIN	IRRIG.	DISCHARGE	LENGTH	STATION
48.00	DR	IR	Q=1.2m ³ /s	L=850m	0+00
47.00	DR	IR	Q=2.3m ³ /s	L=1300m	0+500
46.00	DR	IR	Q=1.2m ³ /s	L=1300m	1+000
45.00	DR	IR	Q=2.0m ³ /s	L=1450m	1+500
44.00	DR	IR	Q=2.8m ³ /s	L=1750m	2+000
43.00	DR	IR	Q=5.2m ³ /s	L=2650m	2+650
42.00	DR	IR	Q=2.8m ³ /s	L=1500m	3+150
41.00	DR	IR	Q=5.2m ³ /s	L=2650m	3+650
40.00	DR	IR	Q=4.3m ³ /s	L=550m	4+150
39.00	DR	IR	Q=5.0m ³ /s	L=2350m	4+650
38.00	DR	IR	Q=5.0m ³ /s	L=2350m	5+000
37.00	DR	IR	Q=5.0m ³ /s	L=2350m	5+2350
36.00	DR	IR	Q=5.0m ³ /s	L=2350m	5+4700
35.00	DR	IR	Q=5.0m ³ /s	L=2350m	5+7050
34.00	DR	IR	Q=5.0m ³ /s	L=2350m	5+9400
33.00	DR	IR	Q=5.0m ³ /s	L=2350m	6+1750
32.00	DR	IR	Q=5.0m ³ /s	L=2350m	6+4100
31.00	DR	IR	Q=5.0m ³ /s	L=2350m	6+6450
30.00	DR	IR	Q=5.0m ³ /s	L=2350m	6+8800
29.00	DR	IR	Q=5.0m ³ /s	L=2350m	7+1150
28.00	DR	IR	Q=5.0m ³ /s	L=2350m	7+3500

ABBREVIATIONS
 BP: BEGINNING POINT
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 TO: TURNOUT
 CK: CHECK
 CP: CHECK AND DROP
 DR: DROP
 JC: JUNCTION
 Q: IRRIGATION DISCHARGE
 Qd: DRAINAGE DISCHARGE
 h: WATER DEPTH
 b: BOTTOM WIDTH
 Fb: FREEBOARD
 L: LENGTH

ISLAMIC REPUBLIC OF IRAN
 MINISTRY OF AGRICULTURE (MOA)
 THE FEASIBILITY STUDY ON
 THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
 IN THE HARAZ RIVER BASIN
 PROFILE
 OF
 SECONDARY CANAL - HWS/6
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 19 CP-17

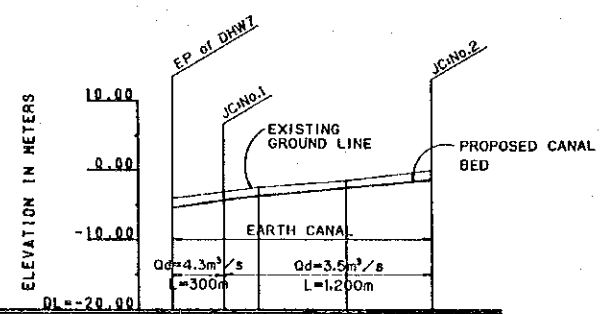
HWS

HM6



WATER LEVEL	4.27	1.26	4.37	9.45	13.28	29.16	45.83
PROPOSED ELEVATION	-7.85	-2.80	-2.33	-1.56	-1.20	27.98	44.85
EXISTING ELEVATION	-3.40	-4.40	-2.00	1.30	1.62	27.98	44.85
CUMULATIVE DISTANCE	0.00	300.00	1200.00	2100.00	3000.00	5000.00	7300.00
STATION	0+0	0+300	1+200	2+500	3+400	5400	7700

DHW6



WATER LEVEL	-1.39	-1.14	-1.14
PROPOSED ELEVATION	-4.80	-3.10	-1.25
EXISTING ELEVATION	-4.80	-3.10	-1.25
CUMULATIVE DISTANCE	0.00	300.00	1500.00
STATION	0+0	0+300	1+500

DHW7

ABBREVIATIONS

BP: BEGINNING POINT	Qd: IRRIGATION DISCHARGE
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TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

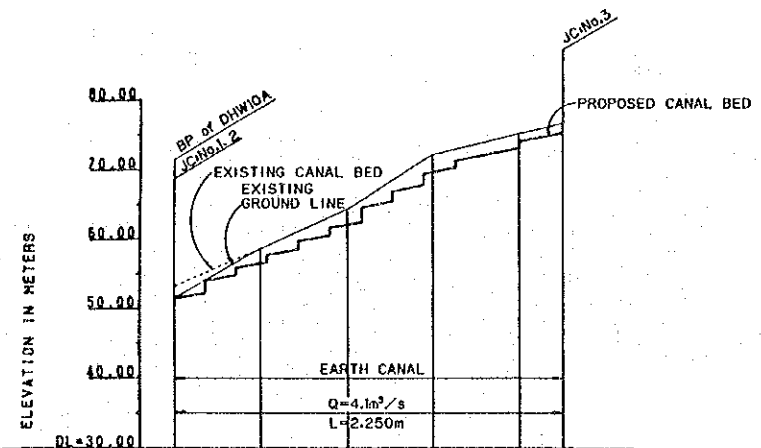
ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - DHW/8

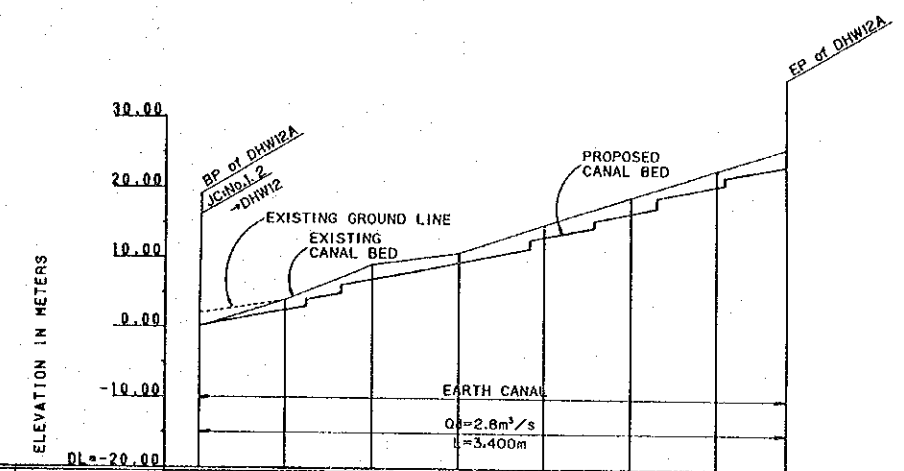
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

EXHIBIT No.
20 CP-18



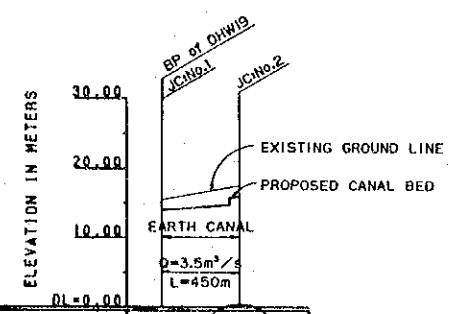
PROPOSED WATERLEVEL DRAINAGE	52.55	76.30	$n=1.05m$ $b=1.50m$ $Fb=0.30m$
PROPOSED ELEVATION	51.50	75.25	$i=1/200$ DR: $\Delta H=12.5m$ $\Delta h=1.0m$ $n=6$, $\Delta h=1.5m$ $n=3$ $\Delta h=2.0m$ $n=1$
EXIST GROUND ELEVATION	53.28	59.28	64.28
EXIST GROUND ELEVATION	51.51	51.50	72.04
CUMULATIVE DISTANCE	0+0	500.00	1000.00
STATION	0+0	5+0	7+250

DHW10A



PROPOSED WATERLEVEL DRAINAGE	1.04	25.04	$n=0.97m$ $b=1.00m$ $Fb=0.30m$
PROPOSED ELEVATION	0.07	24.07	$i=1/200$ DR: $\Delta H=9.0m$ $\Delta h=1.0m$ $n=5$, $\Delta h=0.5m$ $n=1$ $\Delta h=1.5m$ $n=1$
EXIST GROUND ELEVATION	2.00	4.00	9.10
EXIST GROUND ELEVATION	0.07	4.00	10.80
CUMULATIVE DISTANCE	0+0	500.00	1000.00
STATION	0+0	5+0	8+400

DHW12A



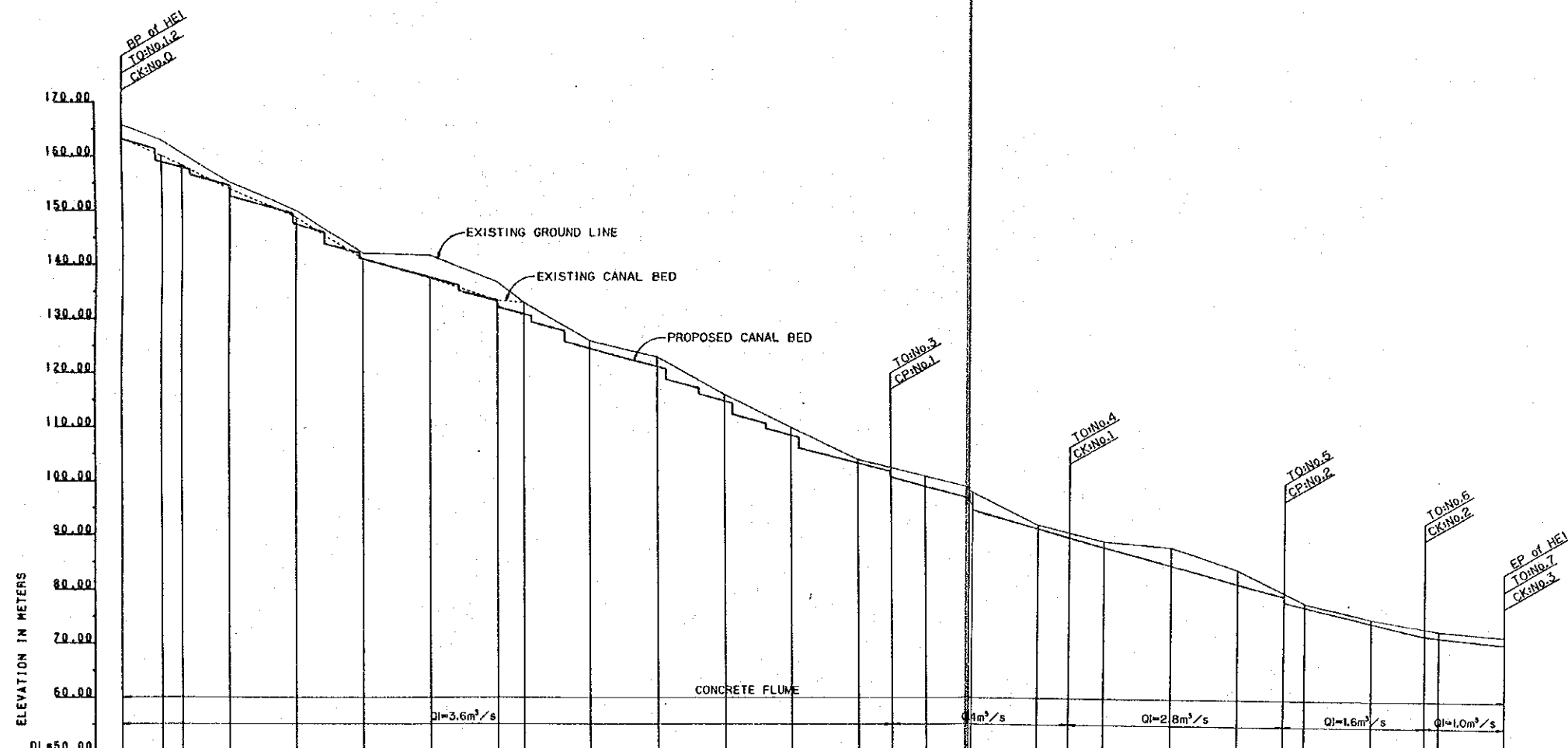
PROPOSED WATERLEVEL DRAINAGE	15.20	17.40	$n=4.4m$ $b=1.50m$ $Fb=0.30m$
PROPOSED ELEVATION	14.20	16.40	$i=1/500$ DR: $\Delta H=1.0m$ $\Delta h=1.0m$ $n=1$
EXIST GROUND ELEVATION	15.50	17.50	
EXIST GROUND ELEVATION	15.50	17.50	
CUMULATIVE DISTANCE	0+0	450.00	
STATION	0+0	0+450	

DHW19

ABBREVIATIONS

- BP: BEGINNING POINT
- EP: END POINT
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- TG: TURNOUT
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- CP: CHECK AND DROP
- DR: DROP
- JC: JUNCTION
- Od: IRRIGATION DISCHARGE
- Dd: DRAINAGE DISCHARGE
- W: WATER DEPTH
- B: BOTTOM WIDTH
- Fb: FREEBOARD
- L: LENGTH

ISLAMIC REPUBLIC OF IRAN MINISTRY OF AGRICULTURE (MOA)	
THE FEASIBILITY STUDY ON THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT IN THE HARAZ RIVER BASIN	
PROFILE OF SECONDARY CANAL - DHW10A/12A/19	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	EXHIBIT No. 21 CP-19



ABBREVIATIONS

BP: BEGINNING POINT	OD: IRRIGATION DISCHARGE
EP: END POINT	OD: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
TC: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

STATION	CUMULATIVE DISTANCE	EXIST. ELEVATION	PROPOSED ELEVATION	DEPTH	DR	ΔH	Δh	n	L	TO	Q	h	b	Fb	L
0+00	0.00	163.30	163.30	0.00							5.6				
0+300	300.00	165.00	165.00	0.00											
0+450	450.00	165.40	165.40	0.00											
0+800	800.00	155.20	155.20	0.00											
1+300	1300.00	148.70	148.70	0.00											
1+800	1800.00	141.00	141.00	0.00											
2+300	2300.00	137.50	137.50	0.00											
2+800	2800.00	133.40	133.40	0.00											
3+000	3000.00	133.00	133.00	0.00											
3+500	3500.00	126.00	126.00	0.00											
4+000	4000.00	123.00	123.00	0.00											
4+500	4500.00	116.00	116.00	0.00											
5+000	5000.00	110.00	110.00	0.00											
5+500	5500.00	104.00	104.00	0.00											
5+750	5750.00	102.50	102.50	0.00											
6+000	6000.00	101.00	101.00	0.00											
7+000	7000.00	92.00	92.00	0.00											
7+250	7250.00	90.50	90.50	0.00											
7+500	7500.00	89.00	89.00	0.00											
8+000	8000.00	88.00	88.00	0.00											
8+500	8500.00	84.00	84.00	0.00											
8+800	8800.00	79.80	79.80	0.00											
9+000	9000.00	78.00	78.00	0.00											
9+500	9500.00	75.00	75.00	0.00											
9+900	9900.00	73.40	73.40	0.00											
10+000	10000.00	73.00	73.00	0.00											
10+500	10500.00	72.00	72.00	0.00											

ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

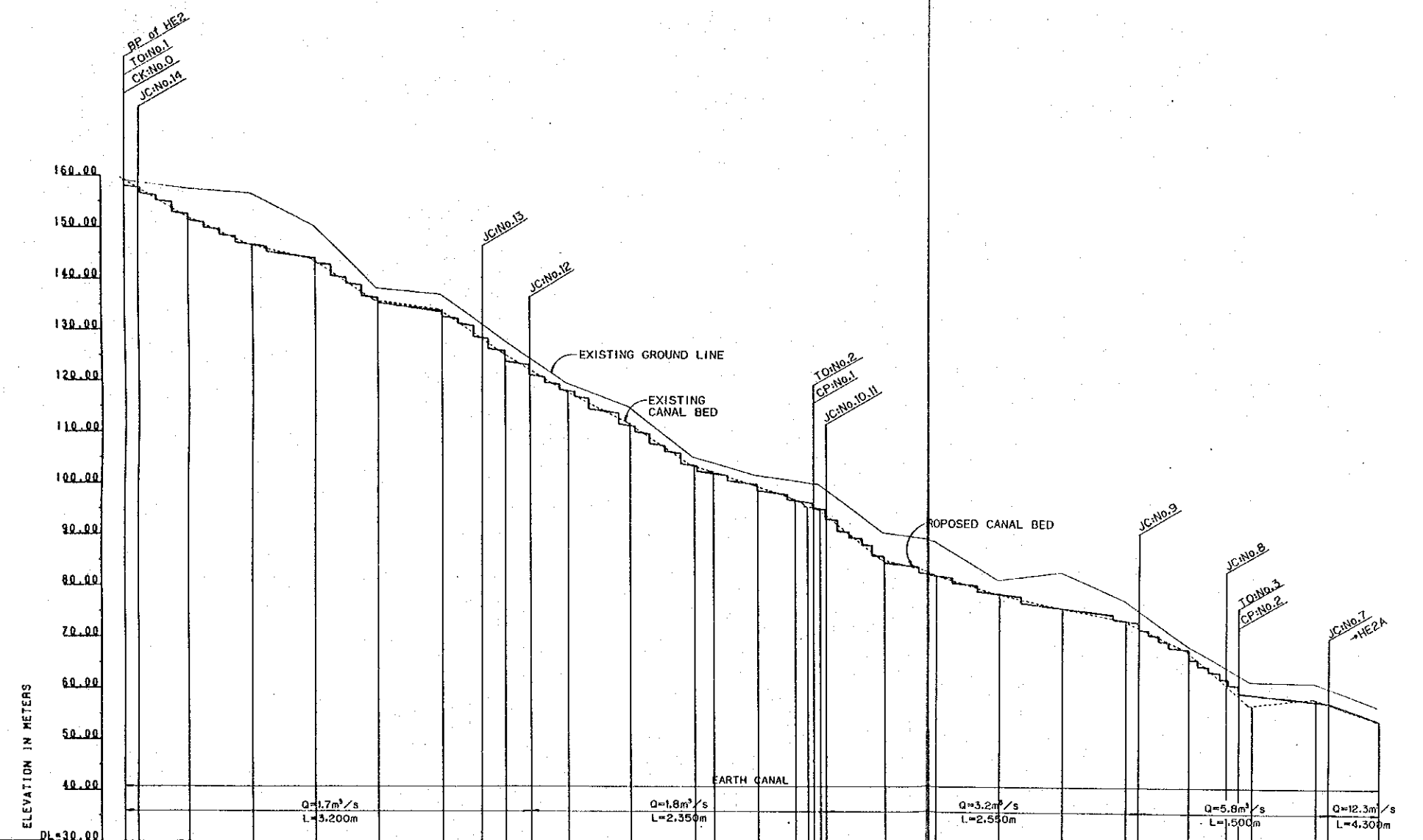
THE FEASIBILITY STUDY ON
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IN THE HAHAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - HE1

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

EXHIBIT No.
22 CP-20

HE 1



STATION	0+00	0+100	0+200	0+300	0+400	0+500	0+600	0+700	0+800	0+900	0+1000
PROPOSED WATER LEVEL	155.37	155.37	155.37	155.37	155.37	155.37	155.37	155.37	155.37	155.37	155.37
PROPOSED WATER DEPTH	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
PROPOSED ELEVATION	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00
EXISTING ELEVATION	159.36	159.00	158.40	157.40	156.40	155.40	154.40	153.40	152.40	151.40	150.40
EXISTING ELEVATION	159.36	159.00	158.40	157.40	156.40	155.40	154.40	153.40	152.40	151.40	150.40
CUMULATIVE	0.00	100.00	200.00	300.00	400.00	500.00	600.00	700.00	800.00	900.00	1000.00

ABBREVIATIONS

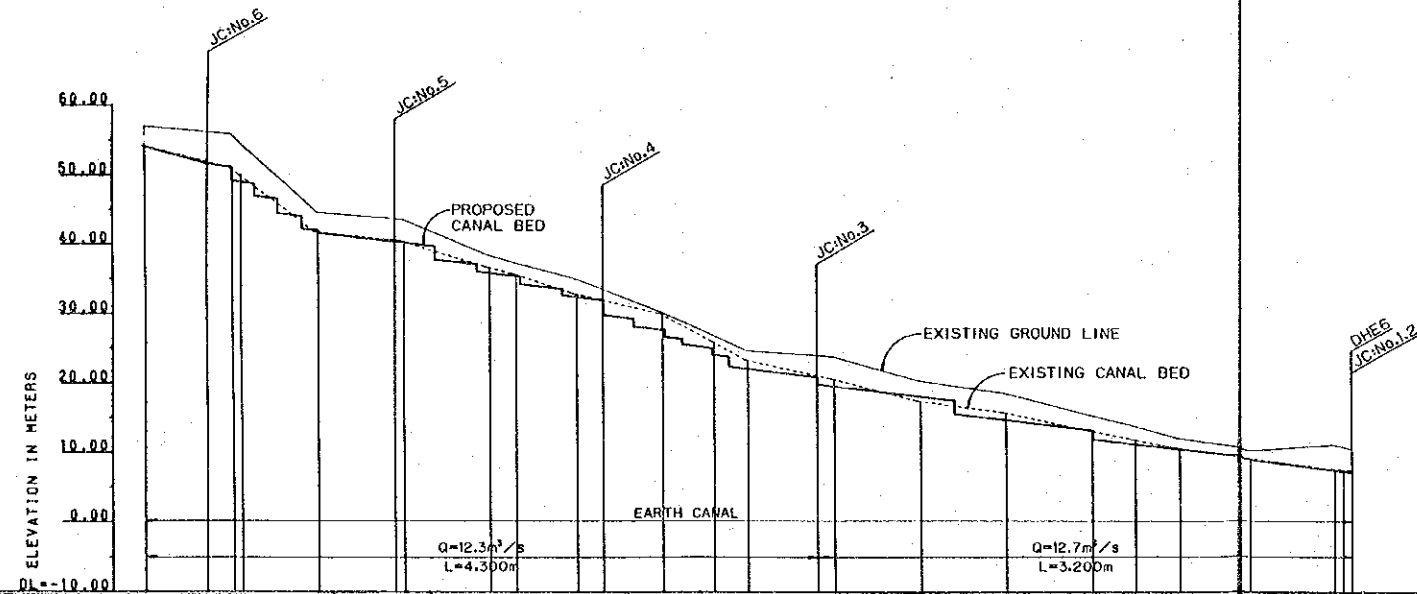
BP: BEGINNING POINT	OD: IRRIGATION DISCHARGE
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ISLAMIC REPUBLIC OF IRAN
 MINISTRY OF AGRICULTURE (MOA)

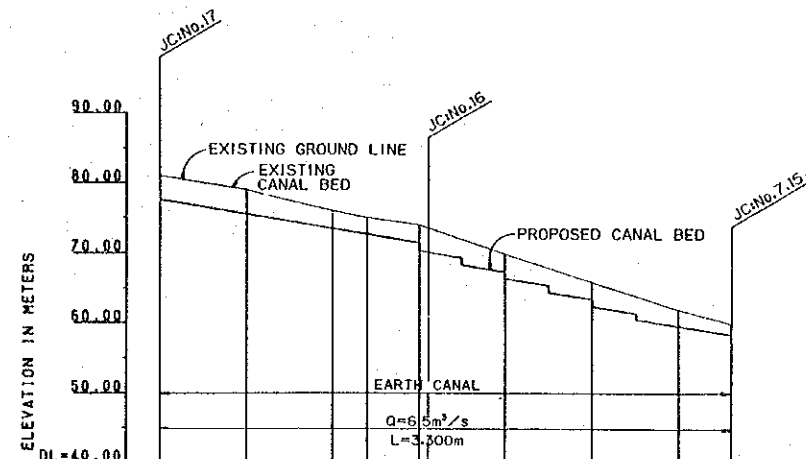
THE FEASIBILITY STUDY ON
 THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
 IN THE HARAZ RIVER BASIN

PROFILE
 OF
 SECONDARY CANAL - HE2

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 23 CP-21



PROPOSED WATER LEVEL	53.32	41.88	33.45	22.49	8.76
PROPOSED ELEVATION	55.03	43.59	35.16	24.20	7.25
EXISTING ELEVATION	54.21	42.69	34.56	23.59	7.25
EXISTING ELEVATION	54.21	42.69	34.56	23.59	7.25
CUMULATIVE DISTANCE	0+0	10+350	11+450	12+650	13+900
STATION	0+0	10+350	11+450	12+650	13+900



PROPOSED WATER LEVEL	79.77	79.20	76.00	75.00	70.00	66.00	62.00	59.00	59.57
PROPOSED ELEVATION	79.20	78.50	76.00	75.00	70.00	66.00	62.00	59.00	59.57
EXISTING ELEVATION	81.00	81.00	76.00	75.00	70.00	66.00	62.00	59.00	59.57
EXISTING ELEVATION	81.00	81.00	76.00	75.00	70.00	66.00	62.00	59.00	59.57
CUMULATIVE DISTANCE	0+0	0+500	1+000	1+200	1+500	2+000	2+500	3+000	3+300
STATION	0+0	0+500	1+000	1+200	1+500	2+000	2+500	3+000	3+300

HE2A

- ABBREVIATIONS
- BP: BEGINNING POINT
 - EP: END POINT
 - MD: MEASURING DEVICE
 - TK: CHECK
 - CP: CHECK AND DROP
 - DR: DROP
 - JC: JUNCTION
 - Q: IRRIGATION DISCHARGE
 - Qd: DRAINAGE DISCHARGE
 - n: WATER DEPTH
 - b: BOTTOM WIDTH
 - Fb: FREEBOARD
 - L: LENGTH

ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

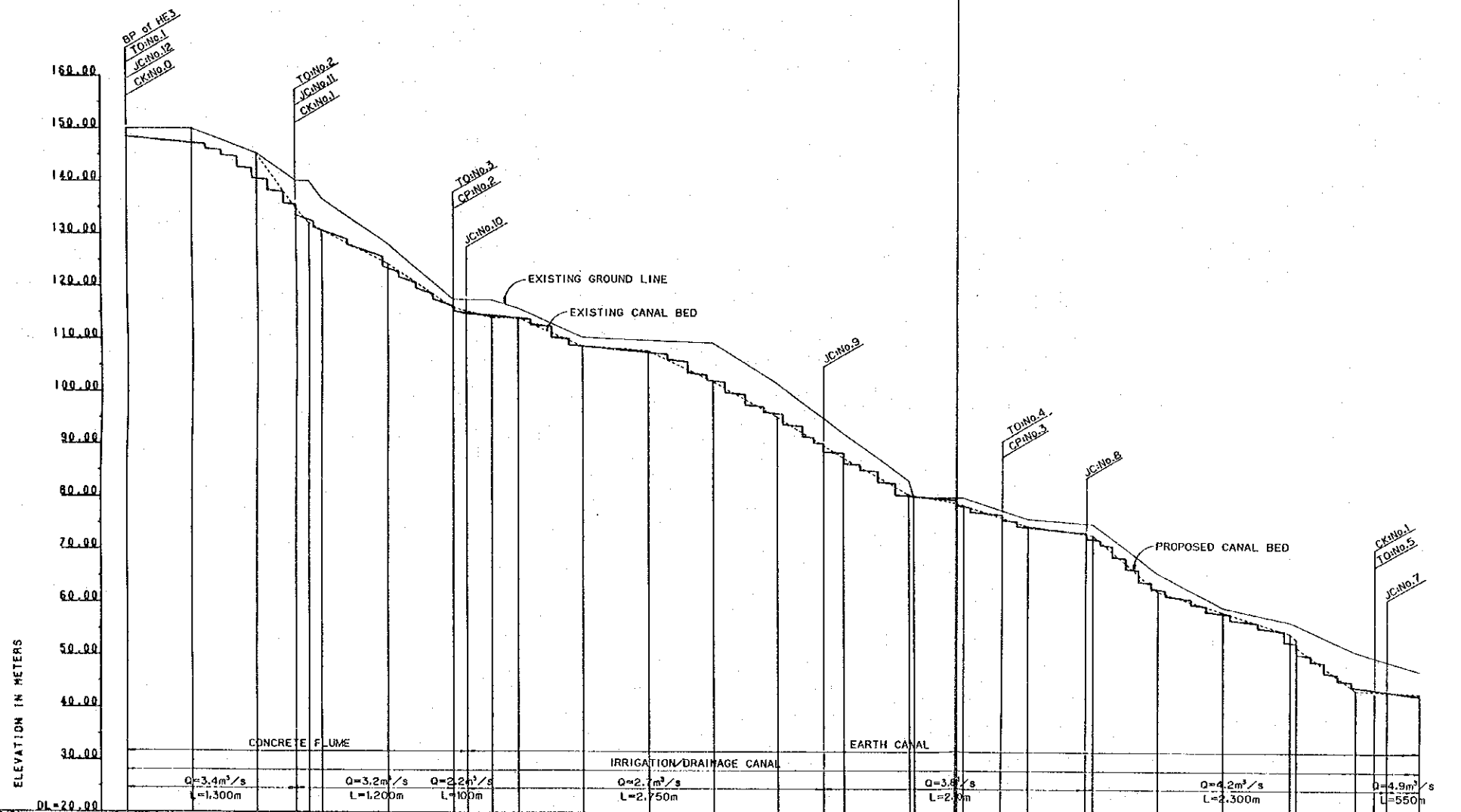
THE FEASIBILITY STUDY ON
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IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - HE2/2A

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

EXHIBIT No. 24 CP-22

HE2(2)



STATION	PROPOSED WATERLEVEL	PROPOSED WATERLEVEL	ELEVATION	EXISTING ELEVATION	CUMULATIVE DISTANCE
0+0	148.92	148.78	148.50	150.00	0.00
0+500	148.03	136.89	135.51	145.00	350.00
1+000	136.03	136.89	135.51	144.00	1000.00
1+500	135.42	136.89	135.51	144.00	1500.00
2+000	135.42	136.89	135.51	144.00	2000.00
2+500	135.42	136.89	135.51	144.00	2500.00
3+000	135.42	136.89	135.51	144.00	3000.00
3+500	135.42	136.89	135.51	144.00	3500.00
4+000	135.42	136.89	135.51	144.00	4000.00
4+500	135.42	136.89	135.51	144.00	4500.00
5+000	135.42	136.89	135.51	144.00	5000.00
5+500	135.42	136.89	135.51	144.00	5500.00
6+000	135.42	136.89	135.51	144.00	6000.00
6+500	135.42	136.89	135.51	144.00	6500.00
7+000	135.42	136.89	135.51	144.00	7000.00
7+500	135.42	136.89	135.51	144.00	7500.00
8+000	135.42	136.89	135.51	144.00	8000.00
8+500	135.42	136.89	135.51	144.00	8500.00
9+000	135.42	136.89	135.51	144.00	9000.00
9+500	135.42	136.89	135.51	144.00	9500.00
10+000	135.42	136.89	135.51	144.00	10000.00

ABBREVIATIONS

BP: BEGINNING POINT	Od: IRRIGATION DISCHARGE
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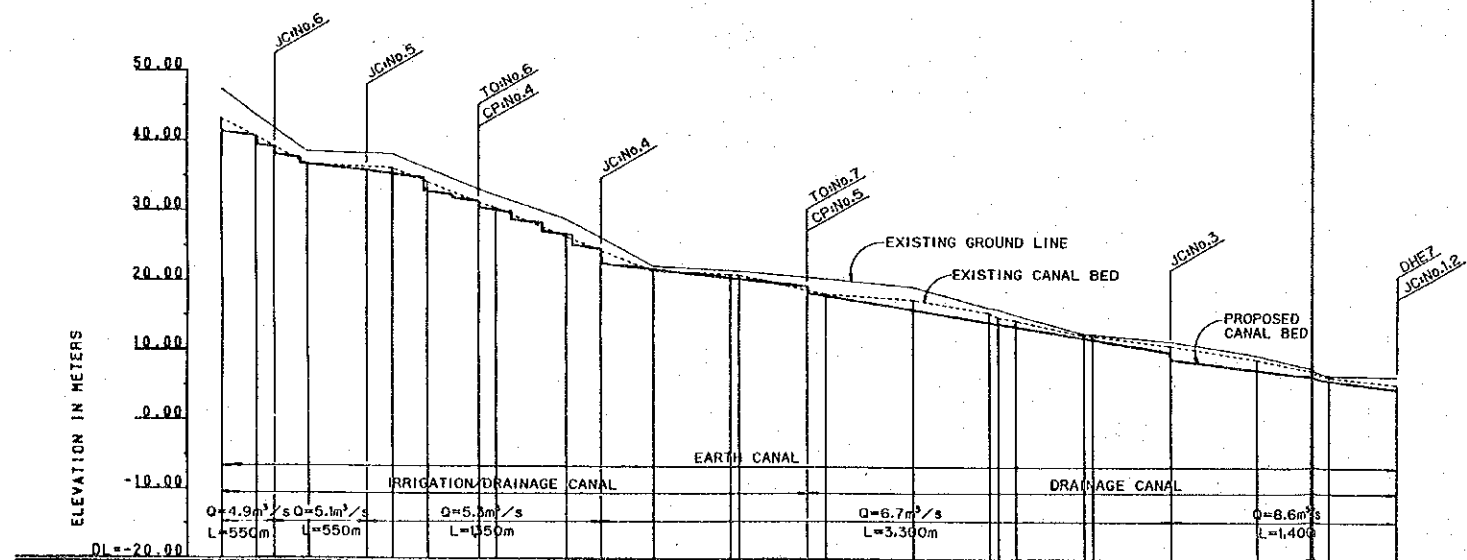
ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
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PROFILE
OF
SECONDARY CANAL - HE3 (V2)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 25 CP-23

HE3 (1)



STATION	PROPOSED WATERLEVEL	EXISTING WATERLEVEL	PROPOSED ELEVATION	EXISTING ELEVATION	CUMULATIVE DISTANCE
10+0	43.15	47.40	43.15	47.40	10000.00
10+200	43.15	47.40	43.15	47.40	10200.00
10+300	43.15	47.40	43.15	47.40	10300.00
10+500	43.15	47.40	43.15	47.40	10500.00
10+850	43.15	47.40	43.15	47.40	10850.00
11+0	43.15	47.40	43.15	47.40	11000.00
11+200	43.15	47.40	43.15	47.40	11200.00
11+500	43.15	47.40	43.15	47.40	11500.00
11+800	43.15	47.40	43.15	47.40	11800.00
12+0	43.15	47.40	43.15	47.40	12000.00
12+200	43.15	47.40	43.15	47.40	12200.00
12+500	43.15	47.40	43.15	47.40	12500.00
13+0	43.15	47.40	43.15	47.40	13000.00
13+500	43.15	47.40	43.15	47.40	13500.00
14+0	43.15	47.40	43.15	47.40	14000.00
14+400	43.15	47.40	43.15	47.40	14400.00
14+800	43.15	47.40	43.15	47.40	14800.00
15+0	43.15	47.40	43.15	47.40	15000.00
15+500	43.15	47.40	43.15	47.40	15500.00
16+0	43.15	47.40	43.15	47.40	16000.00
16+300	43.15	47.40	43.15	47.40	16300.00
16+500	43.15	47.40	43.15	47.40	16500.00
16+980	43.15	47.40	43.15	47.40	16980.00

ABBREVIATIONS

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EP: END POINT	Od: DRAINAGE DISCHARGE
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TO: TURNOUT	b: BOTTOM WIDTH
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CP: CHECK AND DROP	L: LENGTH
DR: DROP	
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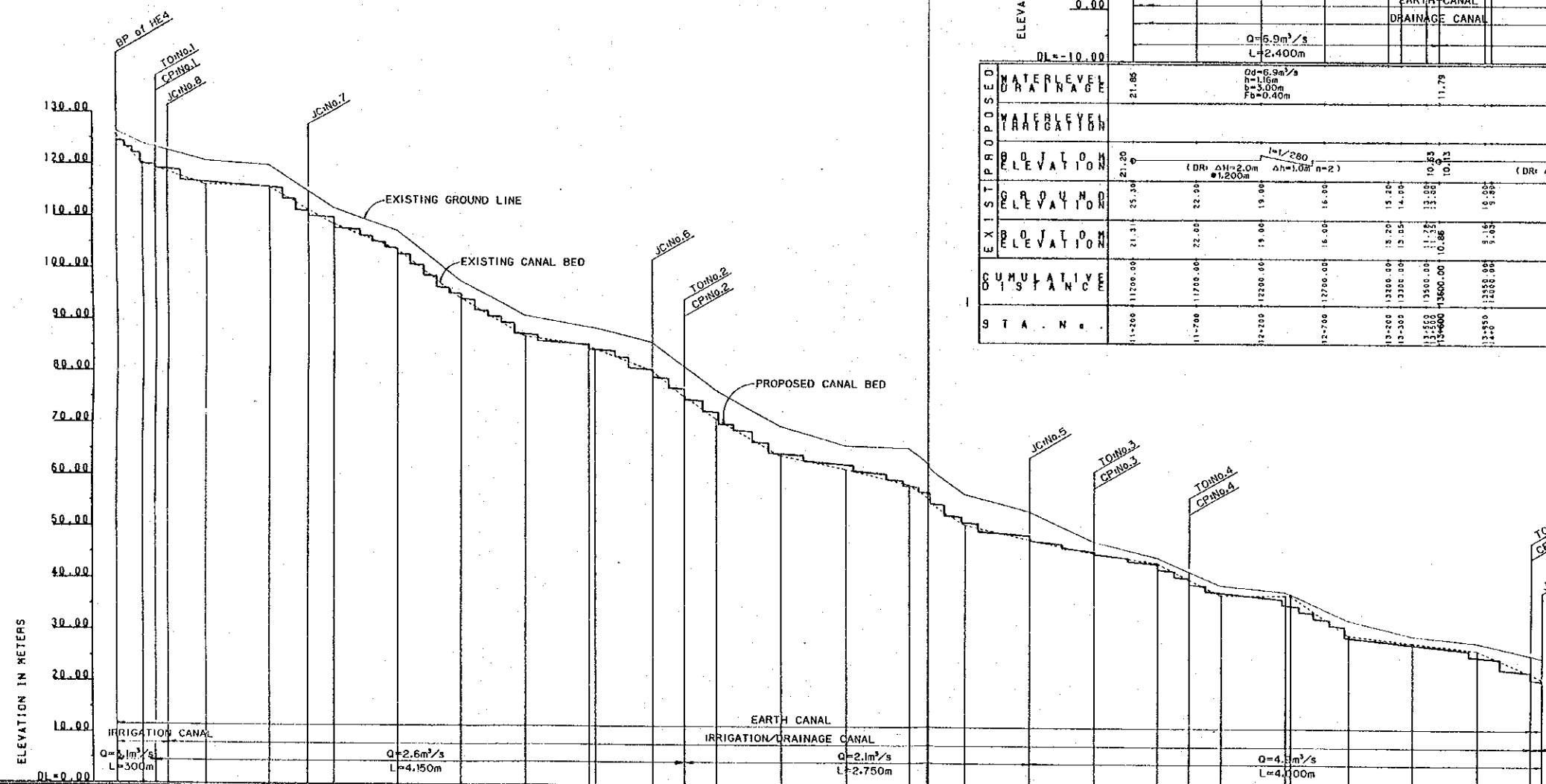
ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
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IN THE HARAZ RIVER BASIN

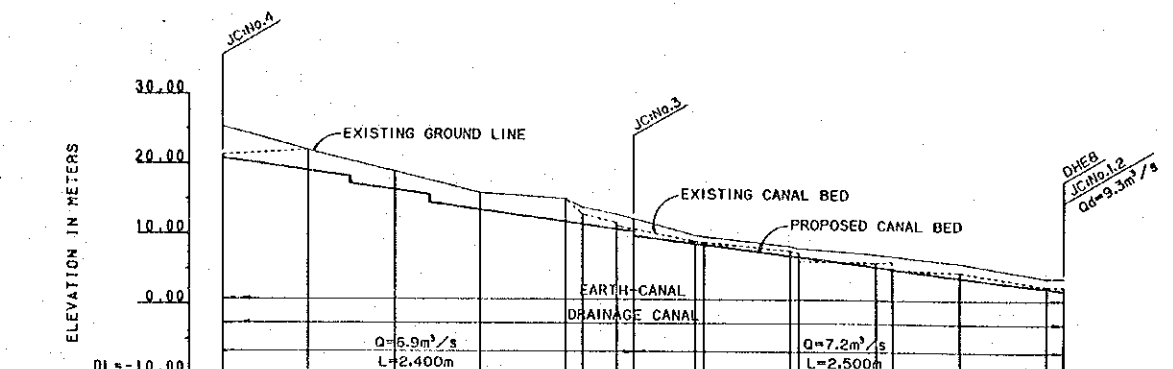
PROFILE
OF
SECONDARY CANAL - HE3 (2/2)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 26 CP-24

HE3 (2)



PROPOSED WATER LEVEL	PROPOSED WATER ELEVATION	PROPOSED ELEVATION	EXISTING ELEVATION	CUMULATIVE DISTANCE	STATION
21.85	21.85	21.85	21.85	0	0+0
21.85	21.85	21.85	21.85	300	0+300
21.85	21.85	21.85	21.85	600	0+600
21.85	21.85	21.85	21.85	900	0+900
21.85	21.85	21.85	21.85	1200	1+200
21.85	21.85	21.85	21.85	1500	1+500
21.85	21.85	21.85	21.85	1800	1+800
21.85	21.85	21.85	21.85	2100	2+100
21.85	21.85	21.85	21.85	2400	2+400
21.85	21.85	21.85	21.85	2700	2+700
21.85	21.85	21.85	21.85	3000	3+000
21.85	21.85	21.85	21.85	3300	3+300
21.85	21.85	21.85	21.85	3600	3+600
21.85	21.85	21.85	21.85	3900	3+900
21.85	21.85	21.85	21.85	4200	4+200
21.85	21.85	21.85	21.85	4500	4+500
21.85	21.85	21.85	21.85	4800	4+800
21.85	21.85	21.85	21.85	5100	5+100
21.85	21.85	21.85	21.85	5400	5+400
21.85	21.85	21.85	21.85	5700	5+700
21.85	21.85	21.85	21.85	6000	6+000
21.85	21.85	21.85	21.85	6300	6+300
21.85	21.85	21.85	21.85	6600	6+600
21.85	21.85	21.85	21.85	6900	6+900
21.85	21.85	21.85	21.85	7200	7+200
21.85	21.85	21.85	21.85	7500	7+500
21.85	21.85	21.85	21.85	7800	7+800
21.85	21.85	21.85	21.85	8100	8+100
21.85	21.85	21.85	21.85	8400	8+400
21.85	21.85	21.85	21.85	8700	8+700
21.85	21.85	21.85	21.85	9000	9+000
21.85	21.85	21.85	21.85	9300	9+300
21.85	21.85	21.85	21.85	9600	9+600
21.85	21.85	21.85	21.85	9900	9+900
21.85	21.85	21.85	21.85	10200	10+200
21.85	21.85	21.85	21.85	10500	10+500
21.85	21.85	21.85	21.85	10800	10+800
21.85	21.85	21.85	21.85	11100	11+100
21.85	21.85	21.85	21.85	11400	11+400
21.85	21.85	21.85	21.85	11700	11+700
21.85	21.85	21.85	21.85	12000	12+000



PROPOSED WATER LEVEL	PROPOSED WATER ELEVATION	PROPOSED ELEVATION	EXISTING ELEVATION	CUMULATIVE DISTANCE	STATION
21.85	21.85	21.85	21.85	0	0+0
21.85	21.85	21.85	21.85	300	0+300
21.85	21.85	21.85	21.85	600	0+600
21.85	21.85	21.85	21.85	900	0+900
21.85	21.85	21.85	21.85	1200	1+200
21.85	21.85	21.85	21.85	1500	1+500
21.85	21.85	21.85	21.85	1800	1+800
21.85	21.85	21.85	21.85	2100	2+100
21.85	21.85	21.85	21.85	2400	2+400
21.85	21.85	21.85	21.85	2700	2+700
21.85	21.85	21.85	21.85	3000	3+000
21.85	21.85	21.85	21.85	3300	3+300
21.85	21.85	21.85	21.85	3600	3+600
21.85	21.85	21.85	21.85	3900	3+900
21.85	21.85	21.85	21.85	4200	4+200
21.85	21.85	21.85	21.85	4500	4+500
21.85	21.85	21.85	21.85	4800	4+800
21.85	21.85	21.85	21.85	5100	5+100
21.85	21.85	21.85	21.85	5400	5+400
21.85	21.85	21.85	21.85	5700	5+700
21.85	21.85	21.85	21.85	6000	6+000
21.85	21.85	21.85	21.85	6300	6+300
21.85	21.85	21.85	21.85	6600	6+600
21.85	21.85	21.85	21.85	6900	6+900
21.85	21.85	21.85	21.85	7200	7+200
21.85	21.85	21.85	21.85	7500	7+500
21.85	21.85	21.85	21.85	7800	7+800
21.85	21.85	21.85	21.85	8100	8+100
21.85	21.85	21.85	21.85	8400	8+400
21.85	21.85	21.85	21.85	8700	8+700
21.85	21.85	21.85	21.85	9000	9+000
21.85	21.85	21.85	21.85	9300	9+300
21.85	21.85	21.85	21.85	9600	9+600
21.85	21.85	21.85	21.85	9900	9+900
21.85	21.85	21.85	21.85	10200	10+200
21.85	21.85	21.85	21.85	10500	10+500
21.85	21.85	21.85	21.85	10800	10+800
21.85	21.85	21.85	21.85	11100	11+100
21.85	21.85	21.85	21.85	11400	11+400
21.85	21.85	21.85	21.85	11700	11+700
21.85	21.85	21.85	21.85	12000	12+000

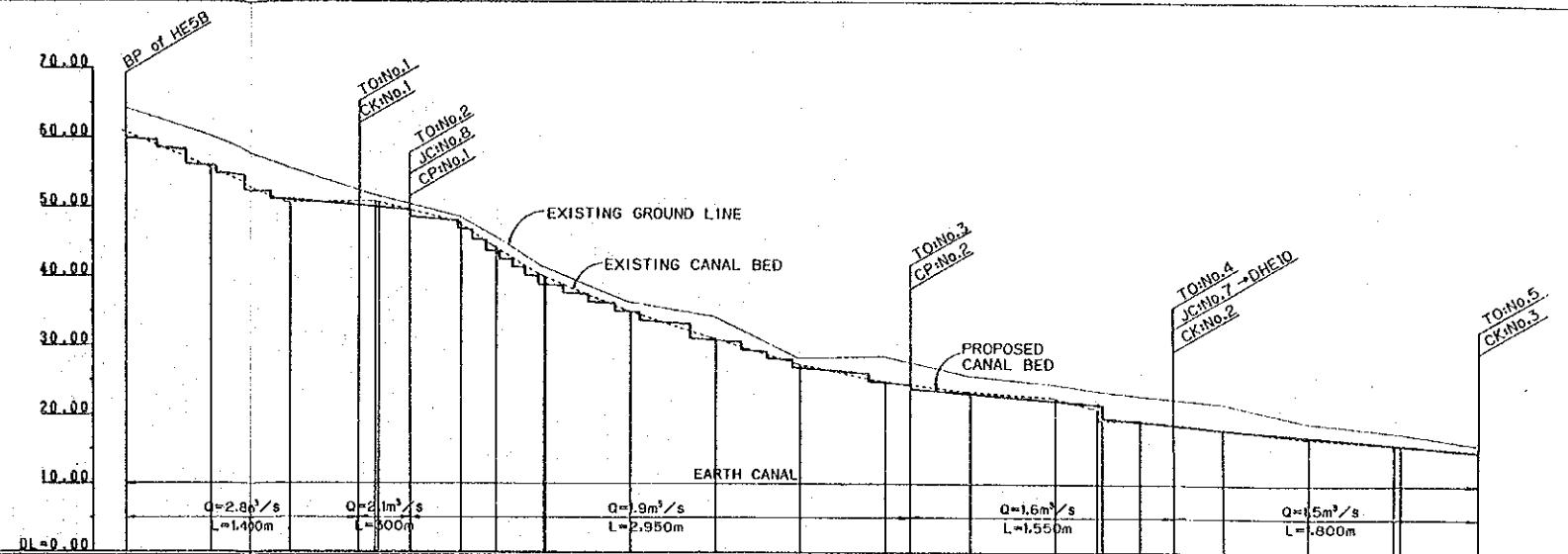
- ABBREVIATIONS**
- BP: BEGINNING POINT
 - EP: END POINT
 - MD: MEASURING DEVICE
 - TO: TURNOUT
 - CK: CHECK
 - CP: CHECK AND DROP
 - DR: DROP
 - JC: JUNCTION
 - Q: IRRIGATION DISCHARGE
 - Qd: DRAINAGE DISCHARGE
 - h: WATER DEPTH
 - b: BOTTOM WIDTH
 - Fb: FREEBOARD
 - L: LENGTH

ISLAMIC REPUBLIC OF IRAN
 MINISTRY OF AGRICULTURE (MOA)

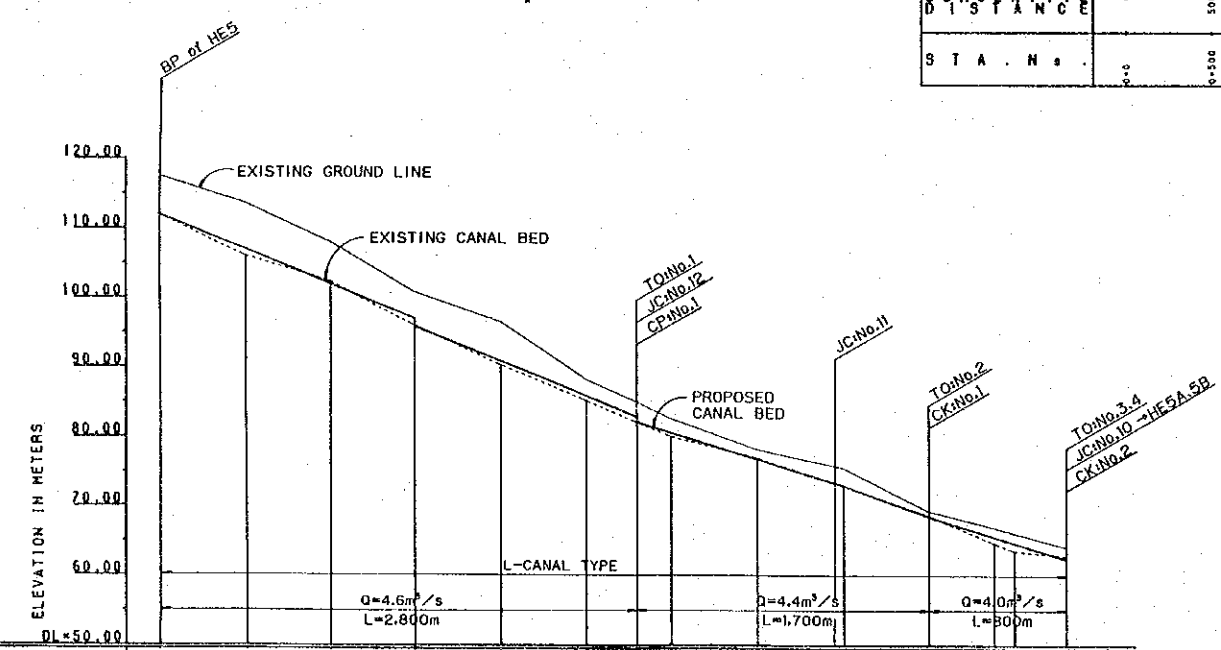
THE FEASIBILITY STUDY ON
 THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
 IN THE HARAZ RIVER BASIN

PROFILE
 OF
 SECONDARY CANAL - HE4

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 27 CP-25



STATION	Qd=0.9m³/s		Qd=0.9m³/s		Qd=0.9m³/s		Qd=0.9m³/s		Qd=0.9m³/s	
	Q	L	Q	L	Q	L	Q	L	Q	L
0+00	2.8	1400	2.1	300	1.9	2950	1.6	1550	1.5	800
1+00	2.8	1400	2.1	300	1.9	2950	1.6	1550	1.5	800
2+00	2.8	1400	2.1	300	1.9	2950	1.6	1550	1.5	800
3+00	2.8	1400	2.1	300	1.9	2950	1.6	1550	1.5	800
4+00	2.8	1400	2.1	300	1.9	2950	1.6	1550	1.5	800
5+00	2.8	1400	2.1	300	1.9	2950	1.6	1550	1.5	800
6+00	2.8	1400	2.1	300	1.9	2950	1.6	1550	1.5	800
7+00	2.8	1400	2.1	300	1.9	2950	1.6	1550	1.5	800
8+00	2.8	1400	2.1	300	1.9	2950	1.6	1550	1.5	800



STATION	Qd=1.4m³/s		Qd=2.4m³/s	
	Q	L	Q	L
0+00	4.6	2800	4.4	1700
1+00	4.6	2800	4.4	1700
2+00	4.6	2800	4.4	1700
3+00	4.6	2800	4.4	1700
4+00	4.6	2800	4.4	1700
5+00	4.6	2800	4.4	1700
6+00	4.6	2800	4.4	1700
7+00	4.6	2800	4.4	1700
8+00	4.6	2800	4.4	1700

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 - DR: DROP
 - JC: JUNCTION
 - OK: IRRIGATION DISCHARGE
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ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

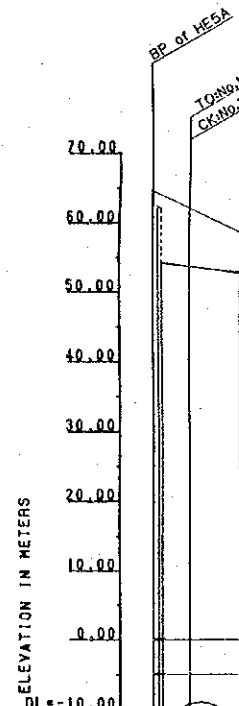
PROFILE
OF
SECONDARY CANAL - HE5/8

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

EXHIBIT No.
28 CP-26

HE5

HE5/8



STATION	DISCHARGE (Q)	LENGTH (L)	WATER LEVEL	FREEBOARD (Fb)	WATER DEPTH (h)	DR	ΔH	n	EXIST. GROUND ELEV.	EXIST. CANAL BED ELEV.	PROPOSED CANAL BED ELEV.	CUMULATIVE DISTANCE
0+00	3.8 m³/s	1,600m	55.00	0.30m	1.00m	DR	ΔH=3.0m	n=1.00	55.00	55.00	55.00	0+00
1+600	4.6 m³/s	2,080m	48.30	0.30m	1.00m	DR	ΔH=6.0m	n=1.00	55.00	55.00	55.00	1+600
3+680	5.3 m³/s	2,020m	27.52	0.40m	0.40m	DR	ΔH=5.0m	n=1.00	55.00	55.00	55.00	3+680
5+700	5.9 m³/s	2,100m	20.30	0.40m	0.30m	DR	ΔH=3.0m	n=1.00	55.00	55.00	55.00	5+700

STATION	DISCHARGE (Q)	LENGTH (L)	WATER LEVEL	FREEBOARD (Fb)	WATER DEPTH (h)	DR	ΔH	n	EXIST. GROUND ELEV.	EXIST. CANAL BED ELEV.	PROPOSED CANAL BED ELEV.	CUMULATIVE DISTANCE
7+800	6.6 m³/s	1,600m	10.76	0.40m	1.07m	DR	ΔH=1.0m	n=1.00	11.22	11.22	11.22	7+800
9+400	7.0 m³/s	1,100m	6.97	0.40m	1.03m	DR	ΔH=1.0m	n=1.00	11.22	11.22	11.22	9+400
10+500	7.4 m³/s	800m	6.97	0.40m	1.03m	DR	ΔH=1.0m	n=1.00	11.22	11.22	11.22	10+500
11+350	7.6 m³/s	1,450m	4.75	0.40m	1.07m	DR	ΔH=1.5m	n=1.00	11.22	11.22	11.22	11+350
11+750	8.2 m³/s	350m	0.06	0.40m	1.03m	DR	ΔH=1.0m	n=1.00	11.22	11.22	11.22	11+750

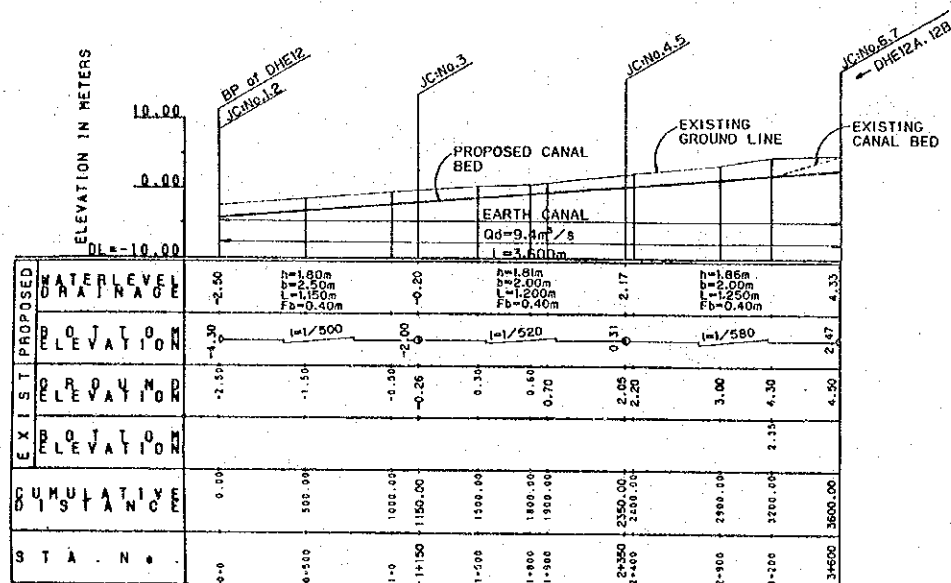
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ISLAMIC REPUBLIC OF IRAN
 MINISTRY OF AGRICULTURE (MOA)

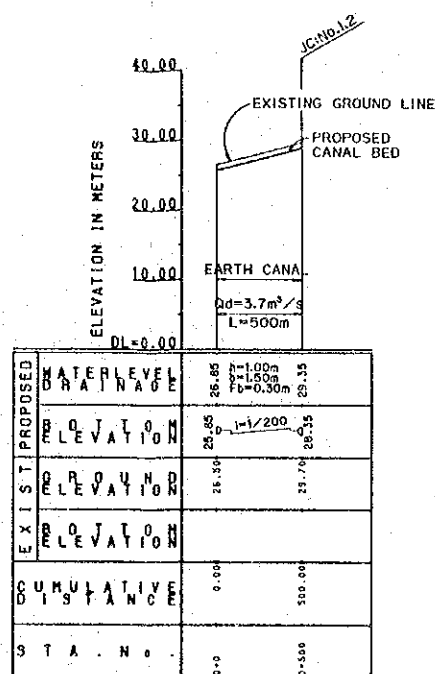
THE FEASIBILITY STUDY ON
 THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
 IN THE HARAZ RIVER BASIN

PROFILE
 OF
 SECONDARY CANAL - HESA

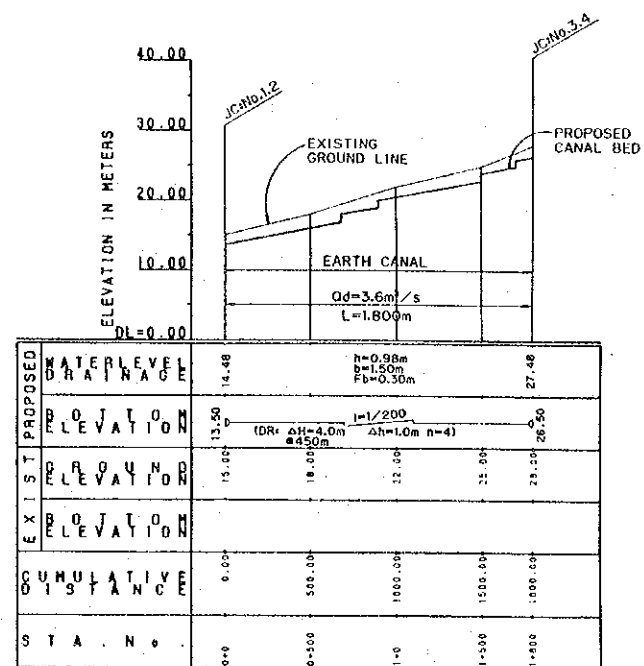
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 29 CP-27



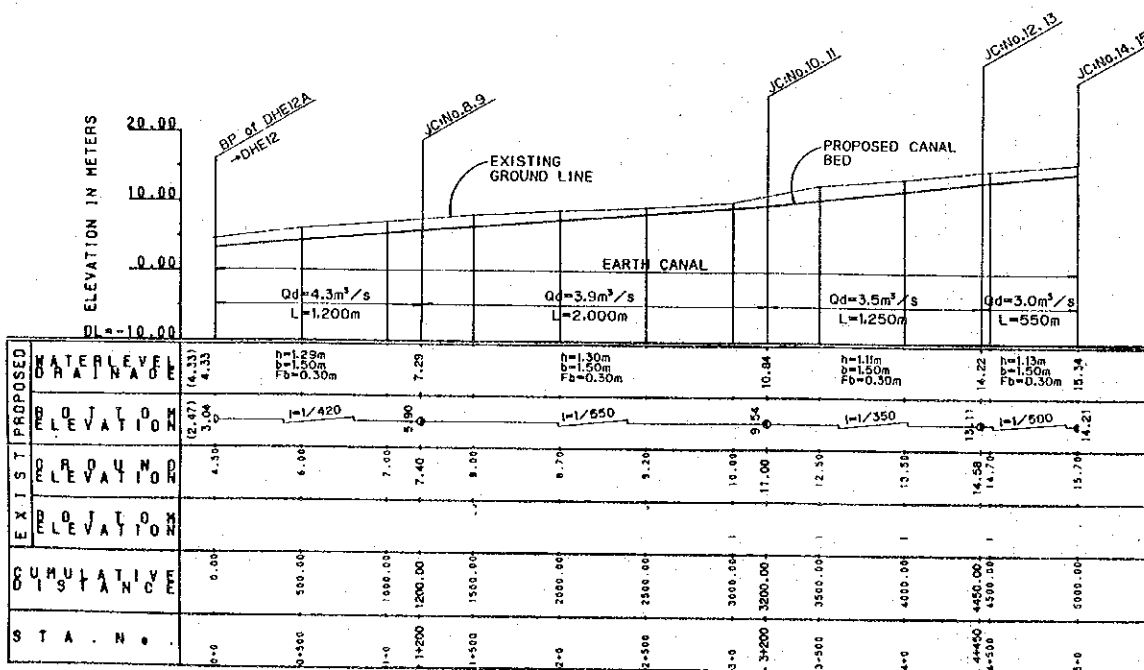
DHE12



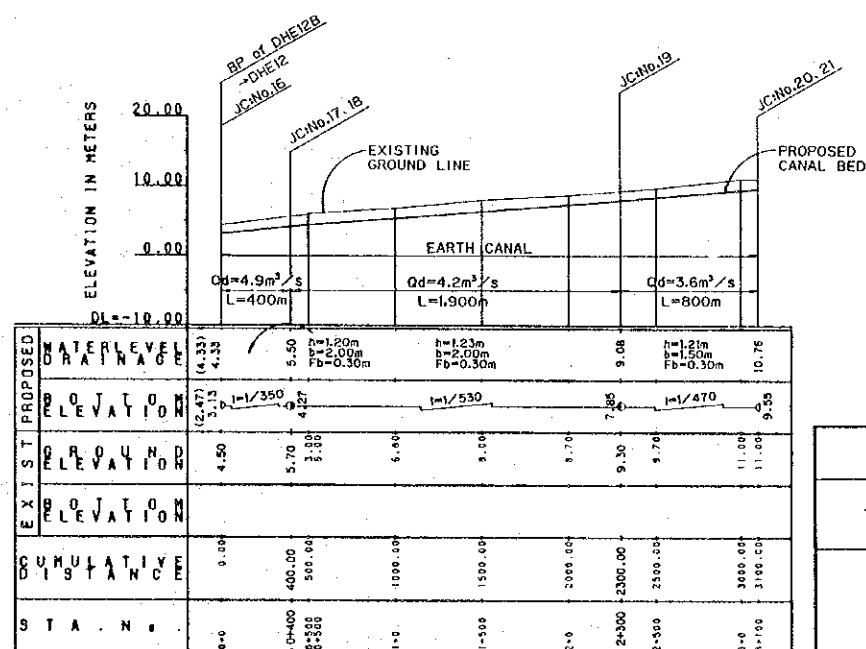
DHE2



DHE4



DHE12A



DHE12E

- ABBREVIATIONS
- BP: BEGINNING POINT
 - EP: END POINT
 - MD: MEASURING DEVICE
 - TD: TURNOUT
 - CK: CHECK
 - CP: CHECK AND DROP
 - DR: DROP
 - JC: JUNCTION
 - Qd: IRRIGATION DISCHARGE
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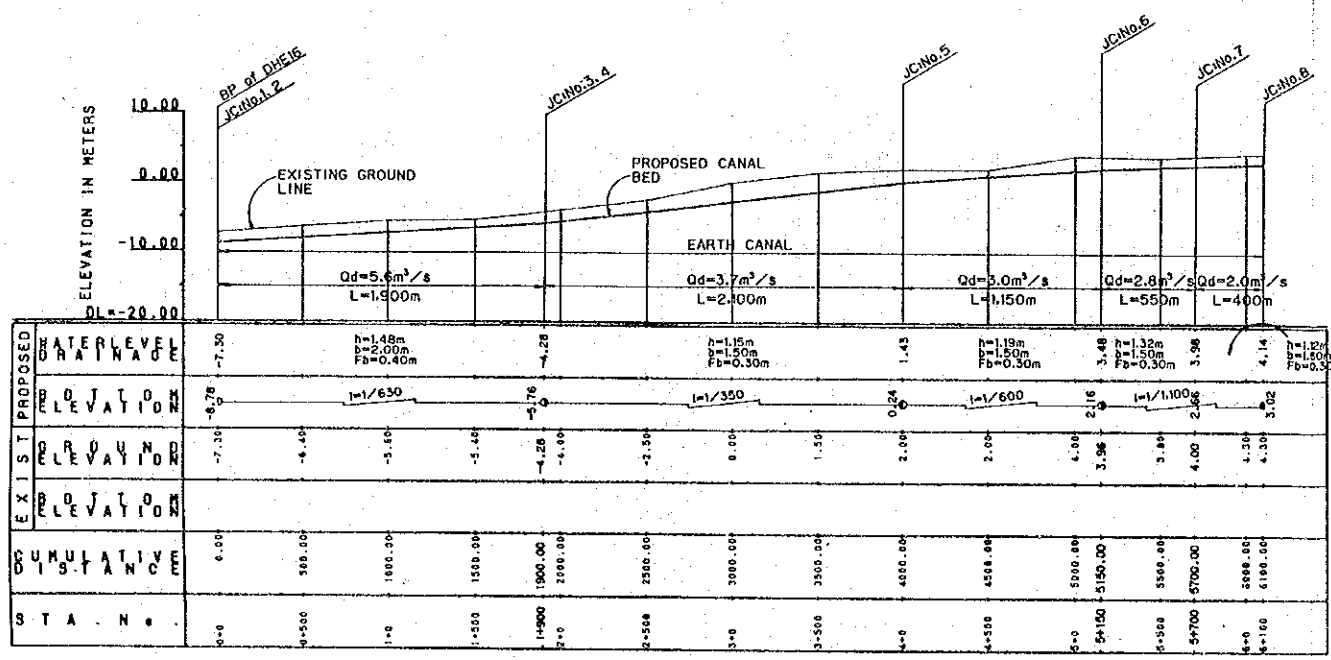
ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

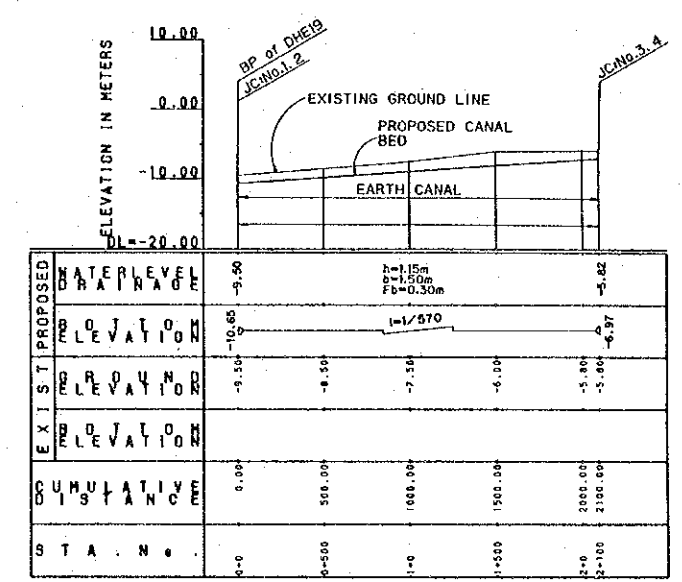
PROFILE
OF
SECONDARY CANAL - DHE2/4/12/12A/12B

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

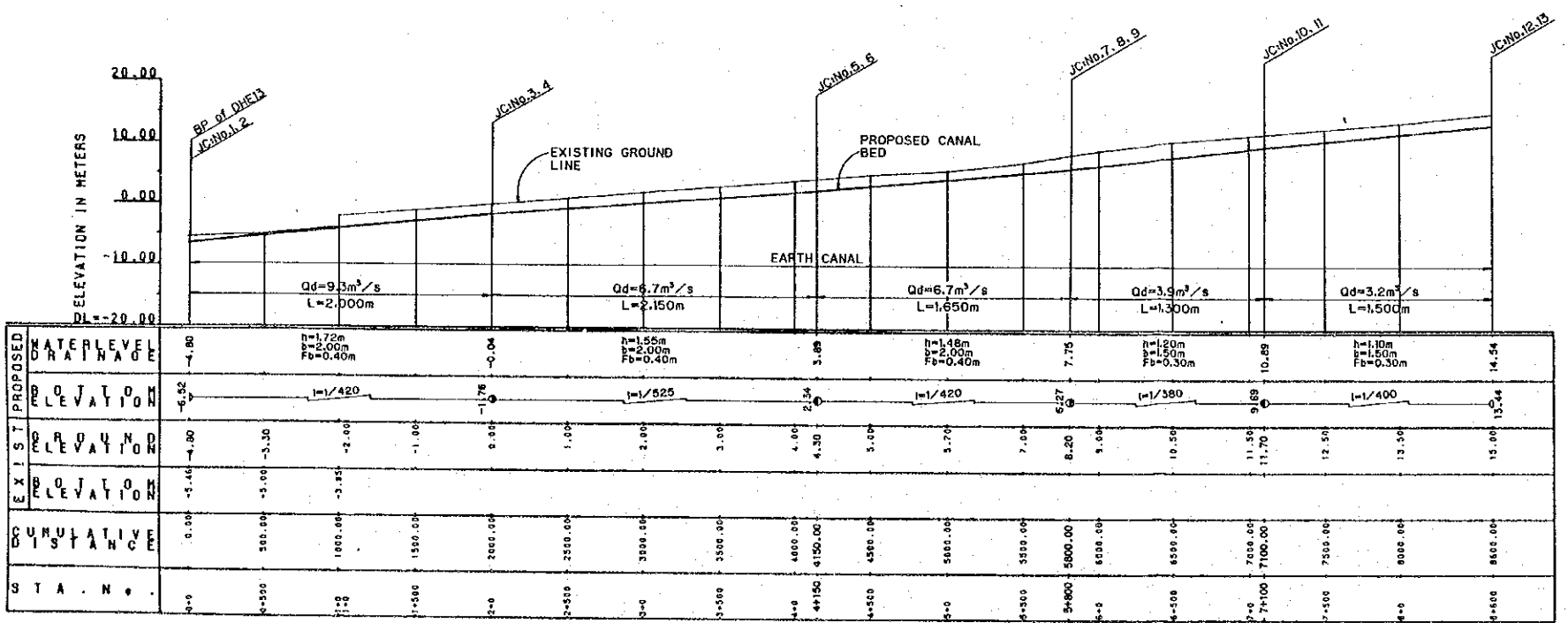
EXHIBIT No.
30 CP-28



DHE16



DHE19



DHE13

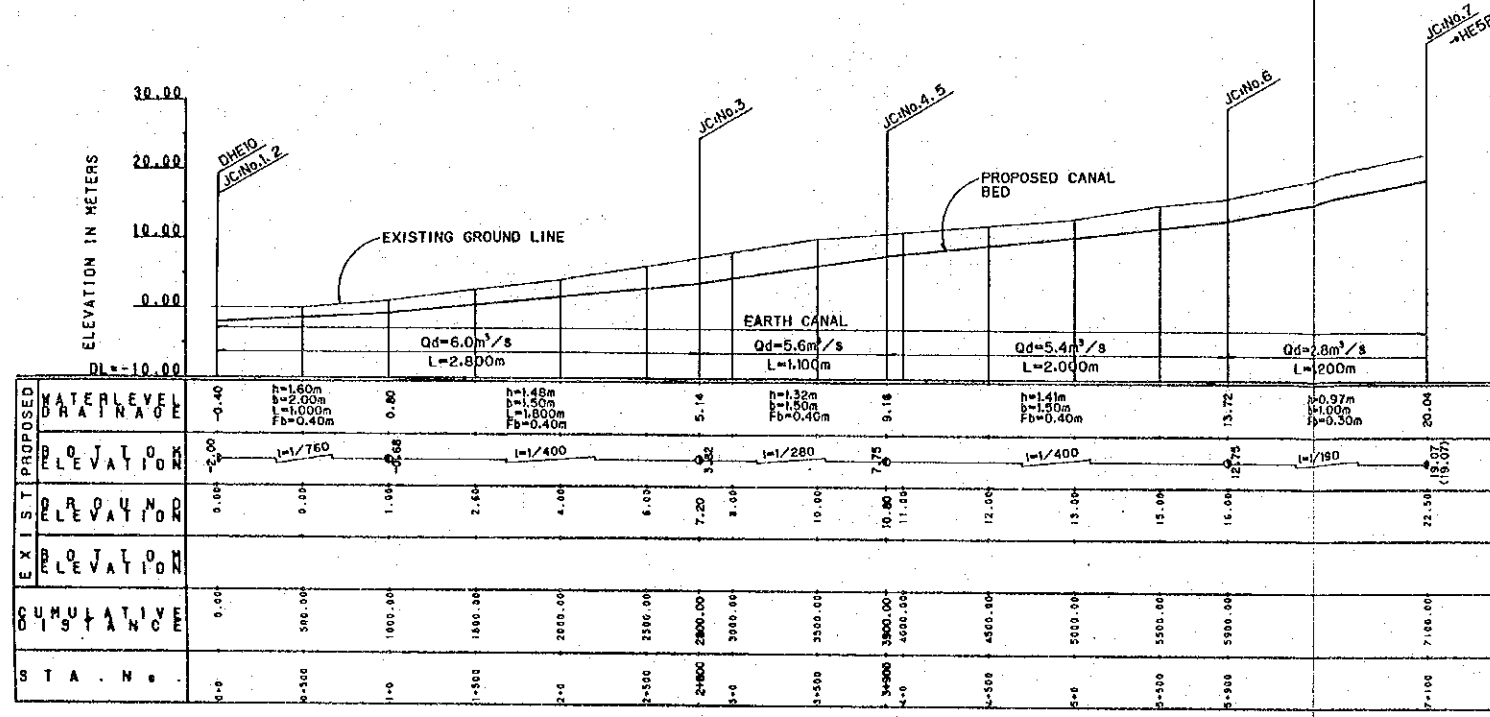
- ABBREVIATIONS
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 - MD: MEASURING DEVICE
 - TO: TURNOUT
 - CK: CHECK
 - CP: CHECK AND DROP
 - DR: DROP
 - JC: JUNCTION
 - QI: IRRIGATION DISCHARGE
 - Qd: DRAINAGE DISCHARGE
 - h: WATER DEPTH
 - b: BOTTOM WIDTH
 - Fb: FREEBOARD
 - L: LENGTH

ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

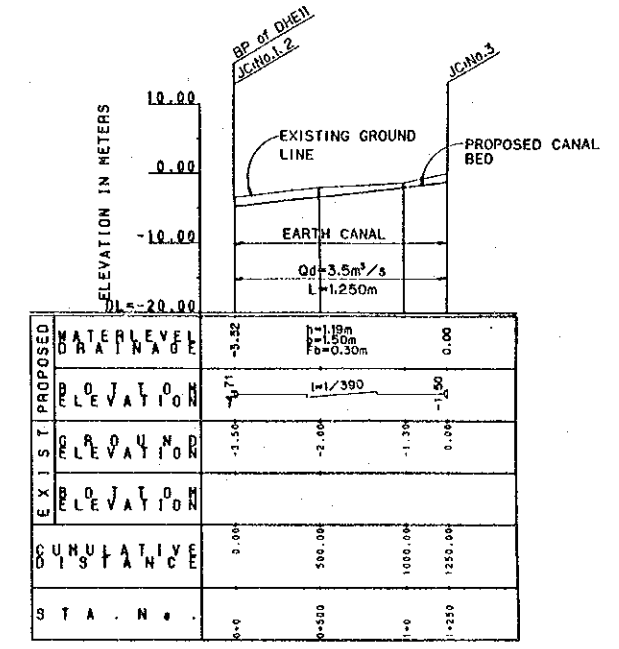
THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - DHE13/16/19

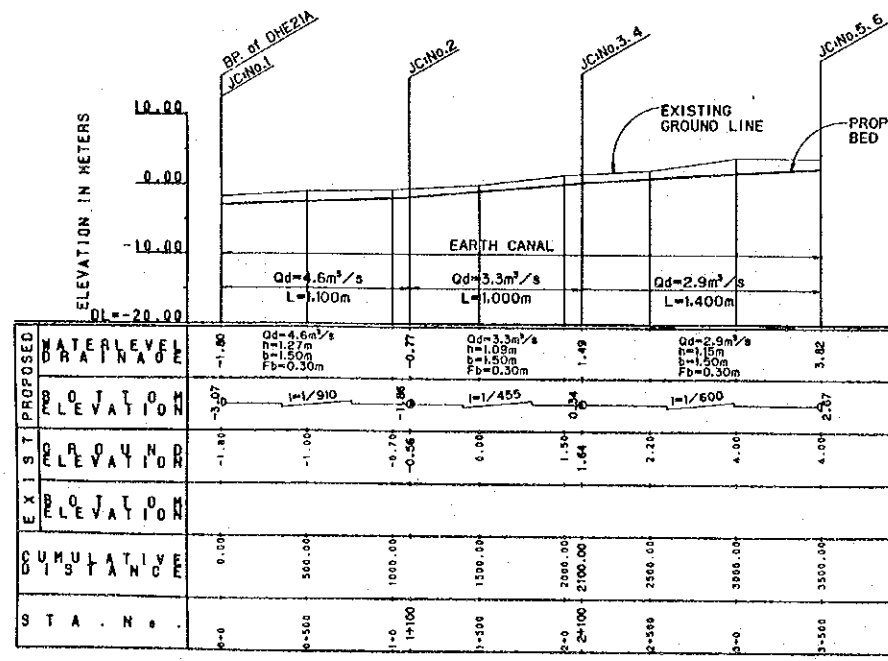
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 31 CP-29



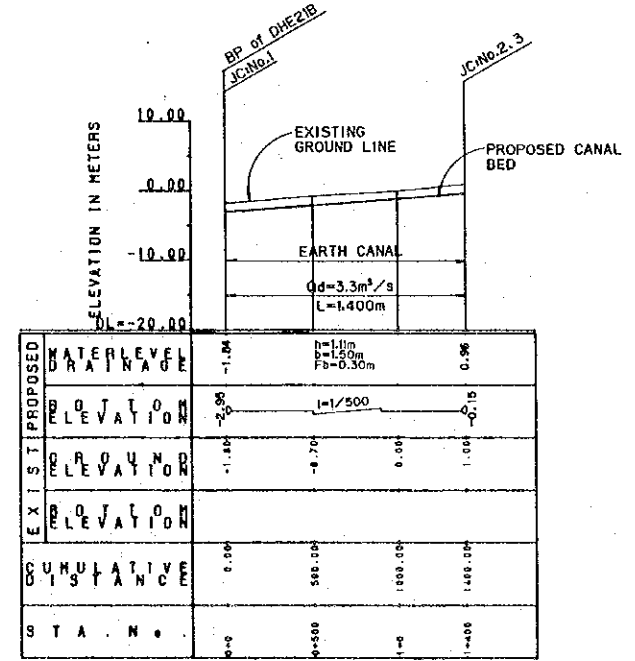
DHE10



DHE11



DHE21A



DHE21B

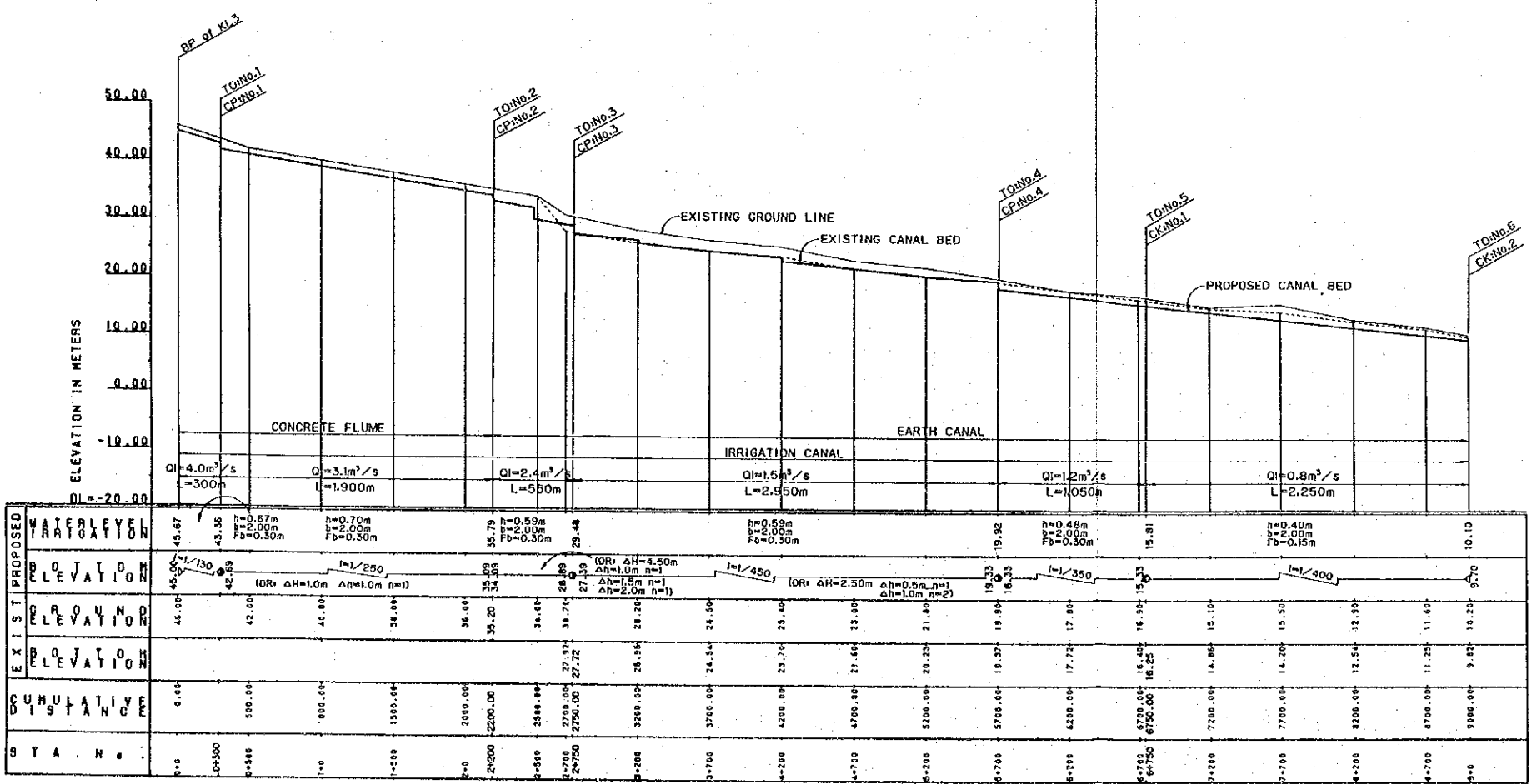
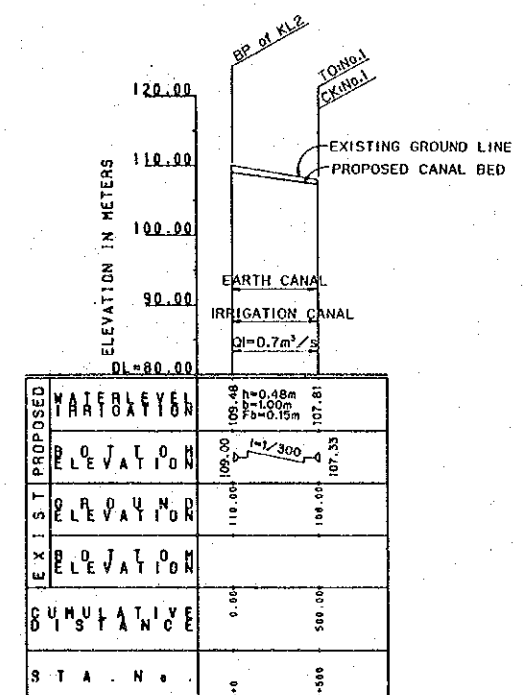
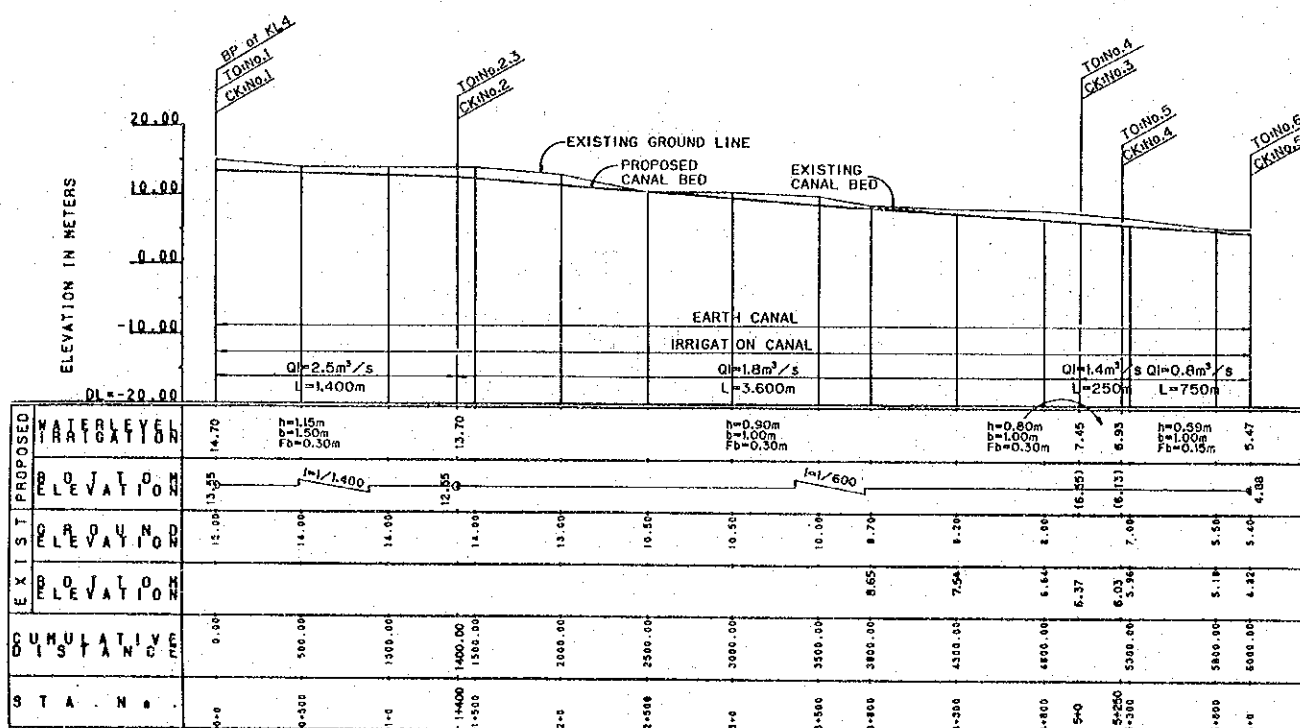
- ABBREVIATIONS**
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ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - DHE10/11/21A/21B

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 32 CP-30



- ABBREVIATIONS**
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 - EP: END POINT
 - MD: MEASURING DEVICE
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 - Fb: FREEBOARD
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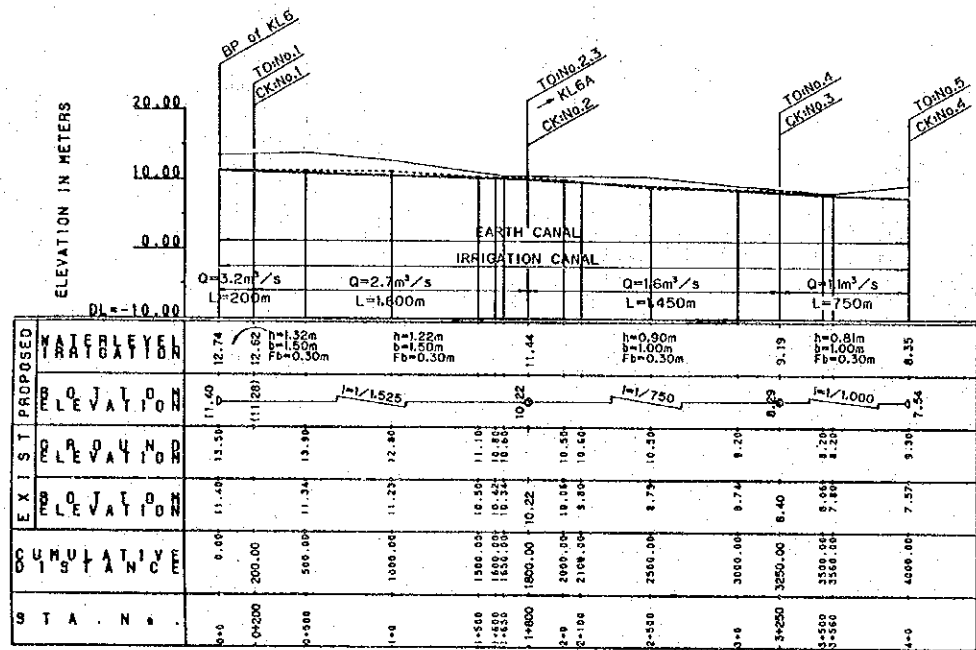
ISLAMIC REPUBLIC OF IRAN
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THE FEASIBILITY STUDY ON
 THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
 IN THE HARAZ RIVER BASIN

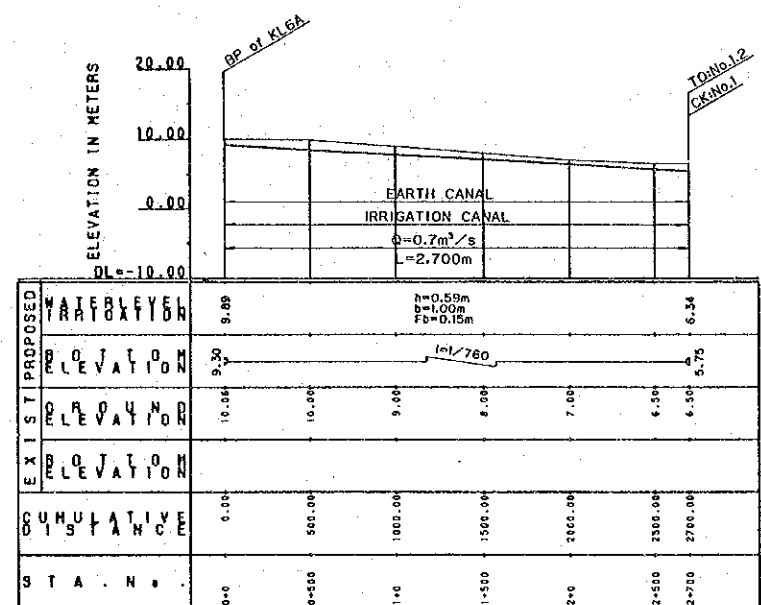
PROFILE
 OF
 SECONDARY CANAL - KL2/3/4

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 33 CP-31

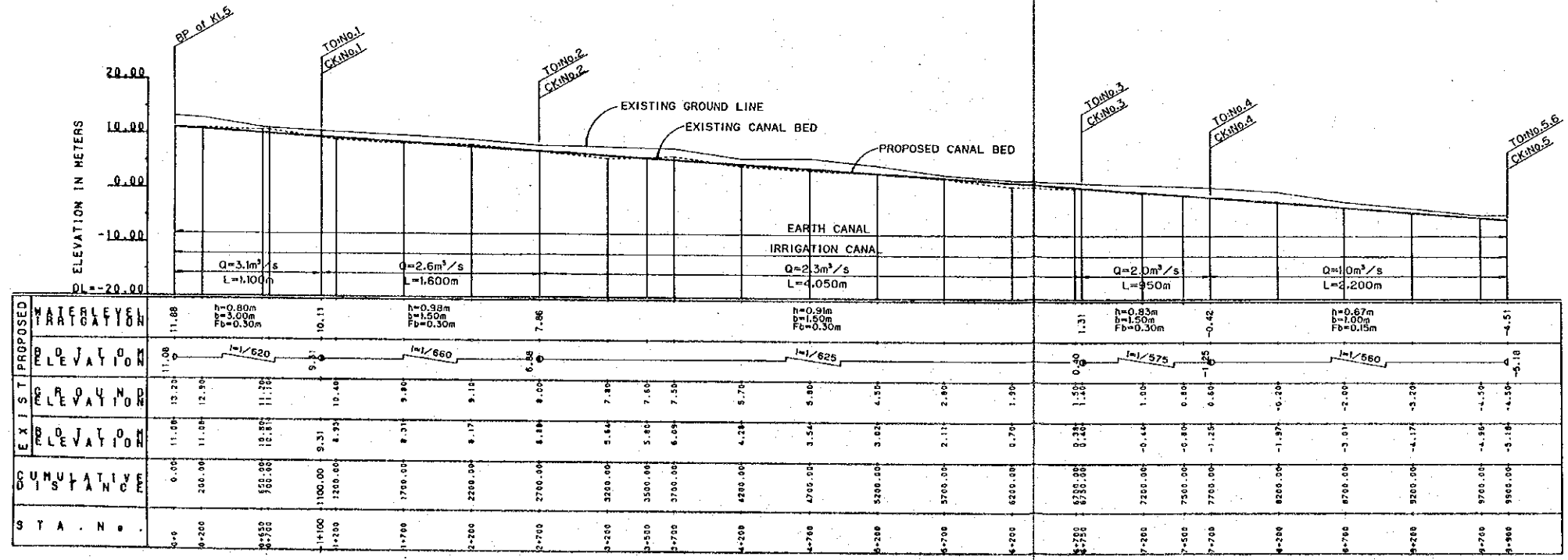
KL3



KL5/6B



KL6A



KL5

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- BP: BEGINNING POINT
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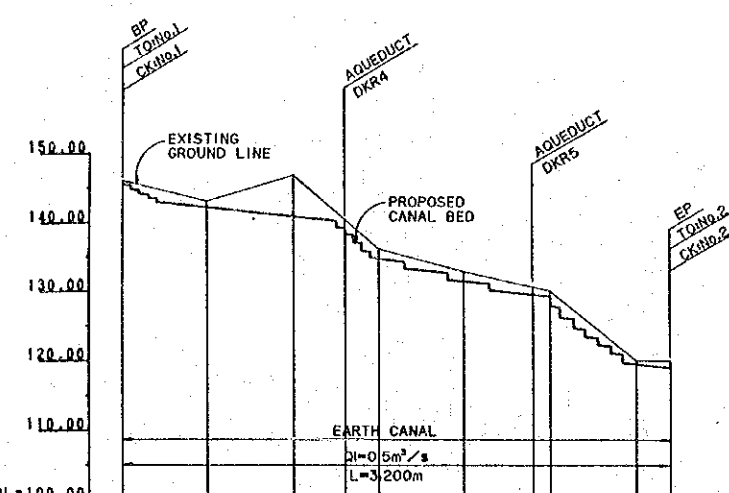
ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HIRAZ RIVER BASIN

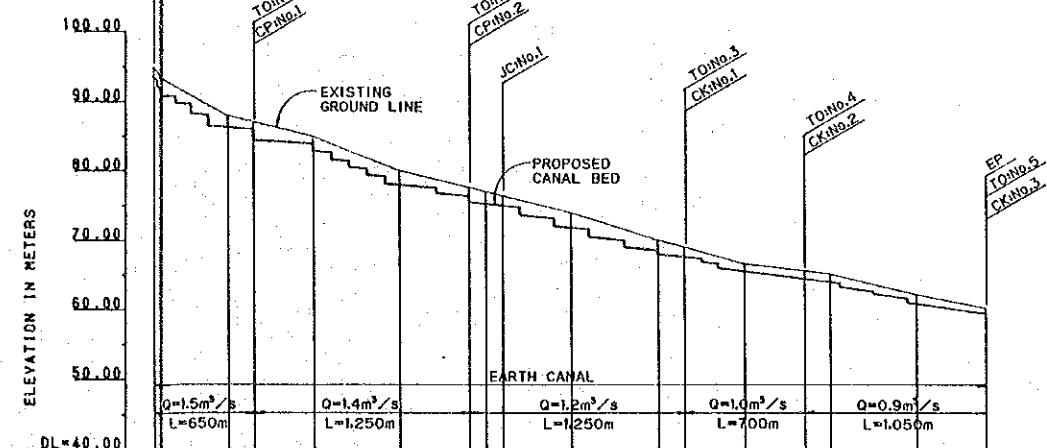
PROFILE
OF
SECONDARY CANAL - KL5/6/6A/6B

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

EXHIBIT No.
34 CP-32

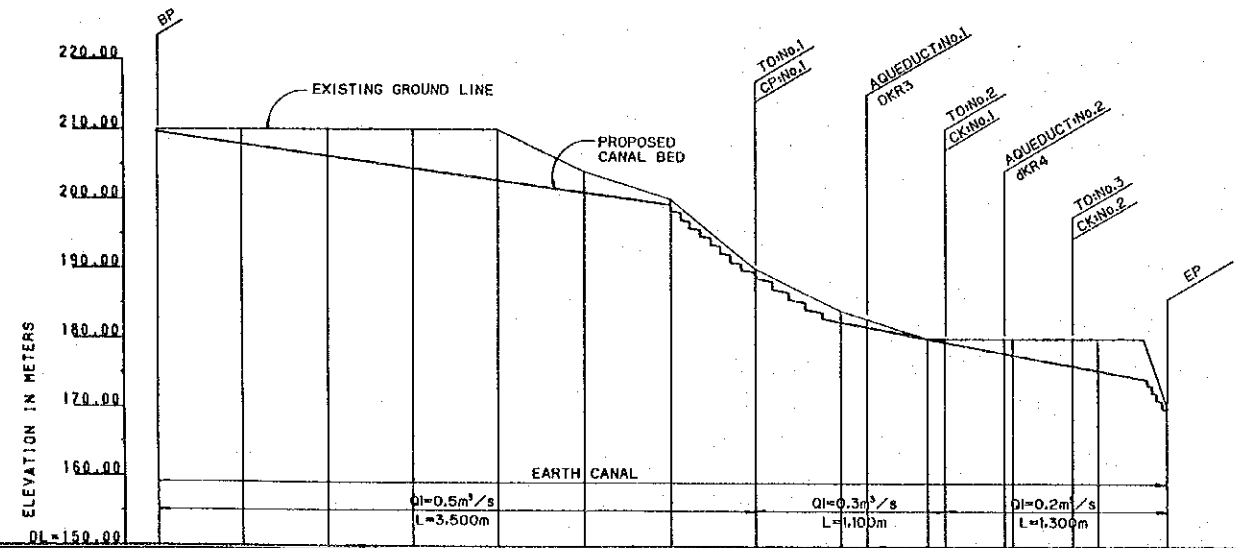


STATION	PROPOSED WATER ELEVATION	EXISTING GROUND ELEVATION	PROPOSED CANAL BED ELEVATION	CUMULATIVE DISTANCE
0+0	146.00	145.00	145.00	0.00
0+500	142.40	143.00	143.00	500.00
1+0	145.79	145.79	145.79	1000.00
1+300	140.34	140.34	140.34	1300.00
1+500	136.10	136.10	136.10	1500.00
2+0	132.80	132.80	132.80	2000.00
2+400	130.56	130.56	130.56	2400.00
2+500	130.00	130.00	130.00	2500.00
3+0	120.00	120.00	120.00	3000.00
3+200	119.90	120.00	120.00	3200.00



STATION	PROPOSED WATER ELEVATION	EXISTING GROUND ELEVATION	PROPOSED CANAL BED ELEVATION	CUMULATIVE DISTANCE
0+0	94.24	94.24	94.24	0.00
0+500	87.06	88.00	87.06	500.00
0+650	85.53	87.10	85.53	650.00
1+0	85.53	85.00	85.53	1000.00
1+850	77.06	77.40	77.06	1850.00
2+0	76.16	77.00	76.16	2050.00
2+150	76.40	76.40	76.40	2150.00
2+500	74.00	74.00	74.00	2500.00
3+0	70.00	70.00	70.00	3000.00
3+150	69.01	69.01	69.01	3150.00
3+500	66.50	66.50	66.50	3500.00
3+850	65.45	65.45	65.45	3850.00
4+0	65.00	65.00	65.00	4000.00
4+1500	62.00	62.00	62.00	4500.00
4+1650	60.00	60.00	60.00	4500.00

KR3



STATION	PROPOSED WATER ELEVATION	EXISTING GROUND ELEVATION	PROPOSED CANAL BED ELEVATION	CUMULATIVE DISTANCE
0+0	209.82	210.00	209.82	0.00
0+500	210.00	210.00	210.00	500.00
1+0	210.00	210.00	210.00	1000.00
1+500	210.00	210.00	210.00	1500.00
2+0	210.00	210.00	210.00	2000.00
2+500	204.00	204.00	204.00	2500.00
3+0	200.00	200.00	200.00	3000.00
3+500	190.00	190.00	190.00	3500.00
4+0	184.00	184.00	184.00	4000.00
4+150	182.00	182.00	182.00	4150.00
4+500	180.00	180.00	180.00	4500.00
4+600	180.00	180.00	180.00	4600.00
4+850	180.00	180.00	180.00	5350.00
5+0	180.00	180.00	180.00	5500.00
5+900	170.00	170.00	170.00	5900.00

KR1

- ABBREVIATIONS**
- BP: BEGINNING POINT
 - EP: END POINT
 - MD: MEASURING DEVICE
 - TO: TURNOUT
 - CK: CHECK
 - CP: CHECK AND DROP
 - DR: DROP
 - JC: JUNCTION
 - Q: IRRIGATION DISCHARGE
 - Qd: DRAINAGE DISCHARGE
 - h: WATER DEPTH
 - b: BOTTOM WIDTH
 - Fb: FREEBOARD
 - L: LENGTH

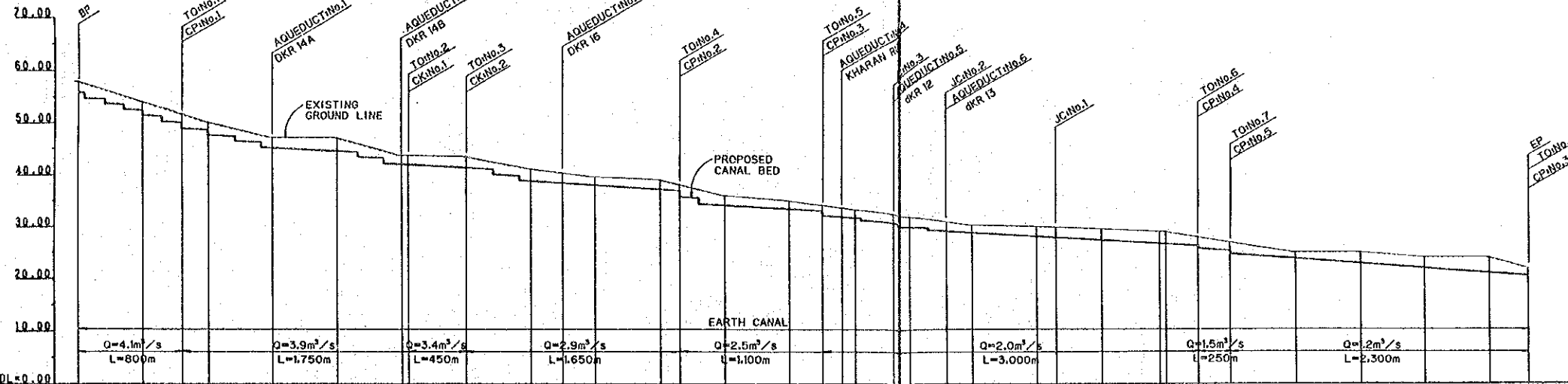
ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - KR1/2/3

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 35 CP-33

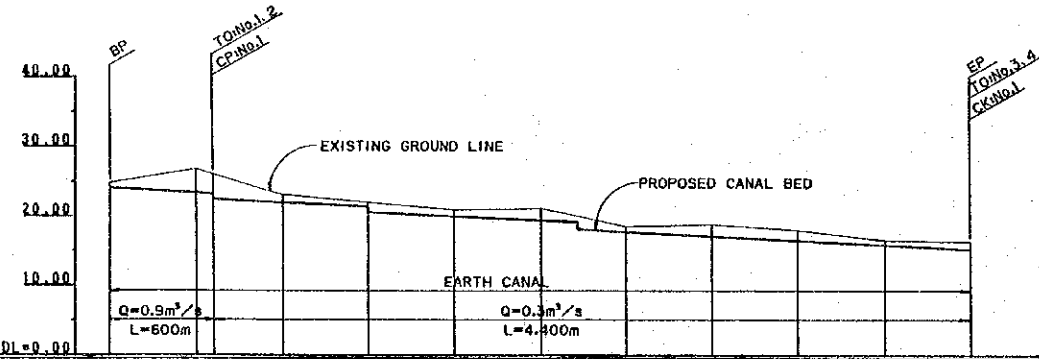
ELEVATION IN METERS



STATION	WATERLEVEL DRAINAGE	WATERLEVEL	PROPOSED ELEVATION	EXISTING GROUND ELEVATION	CUMULATIVE DISTANCE
0+0		57.45	55.00	58.00	0.00
0+500	Q=4.1m ³ /s L=800m	51.51	49.00	54.00	500.00
0+800		50.47	48.00	51.50	800.00
1+0			48.00	50.00	1000.00
1+500	Q=3.9m ³ /s L=1750m		47.00	47.00	1500.00
2+0			47.00	47.00	2000.00
2+500	Q=3.4m ³ /s L=450m	42.92	41.00	43.50	2450.00
3+0		42.92	41.00	43.50	2900.00
3+500	Q=2.9m ³ /s L=1650m	37.91	35.00	41.00	3500.00
4+0		36.81	35.00	40.25	3750.00
4+500	Q=2.5m ³ /s L=1100m	32.88	30.00	39.00	4000.00
5+0		32.88	30.00	38.10	4300.00
5+500	Q=2.0m ³ /s L=3000m	27.87	25.00	36.00	5300.00
6+0		27.87	25.00	35.00	5800.00
6+500	Q=1.5m ³ /s L=250m	23.86	22.00	33.50	6050.00
7+0		23.86	22.00	33.50	6300.00
7+500	Q=1.2m ³ /s L=2300m	18.85	18.00	32.00	8600.00
8+0		18.85	18.00	31.50	8800.00
8+500	Q=1.0m ³ /s L=1000m	13.84	13.00	30.00	9800.00
9+0		13.84	13.00	29.50	10800.00
9+500	Q=1.0m ³ /s L=2300m	8.83	8.00	28.00	13100.00
10+0		8.83	8.00	27.00	13300.00
10+500	Q=1.0m ³ /s L=2300m	3.82	3.00	26.00	15600.00
11+0		3.82	3.00	25.00	15800.00
11+500	Q=1.0m ³ /s L=2300m	-1.19	-1.00	24.00	18100.00
12+0		-1.19	-1.00	23.00	18300.00

KR4

ELEVATION IN METERS



STATION	WATERLEVEL DRAINAGE	WATERLEVEL	PROPOSED ELEVATION	EXISTING GROUND ELEVATION	CUMULATIVE DISTANCE
0+0		24.30	23.00	24.00	0.00
0+500	Q=0.9m ³ /s L=600m	23.18	22.00	24.00	500.00
1+0		23.18	22.00	23.00	1000.00
1+500	Q=0.3m ³ /s L=4300m	18.81	18.00	21.00	1500.00
2+0		18.81	18.00	20.00	2000.00
2+500		18.81	18.00	21.00	2500.00
3+0		18.81	18.00	19.00	3000.00
3+500		18.81	18.00	18.00	3500.00
4+0		18.81	18.00	18.00	4000.00
4+500		18.81	18.00	16.50	4500.00
5+0		18.81	18.00	16.50	5000.00

KR5

ABBREVIATIONS

BP: BEGINNING POINT	Q: IRRIGATION DISCHARGE
EP: END POINT	Qd: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

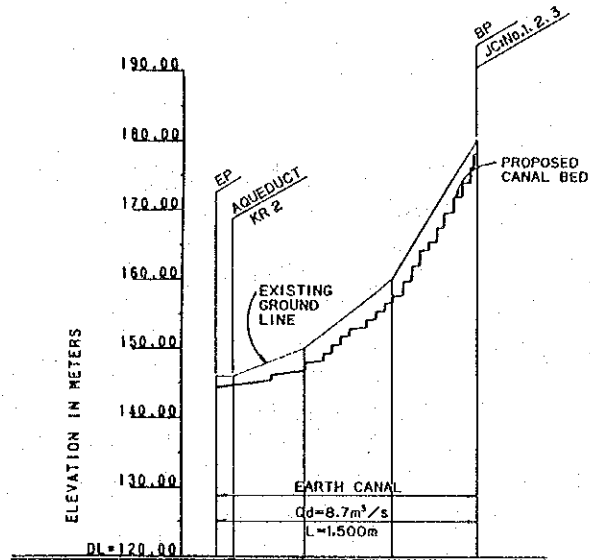
ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - KR4/5

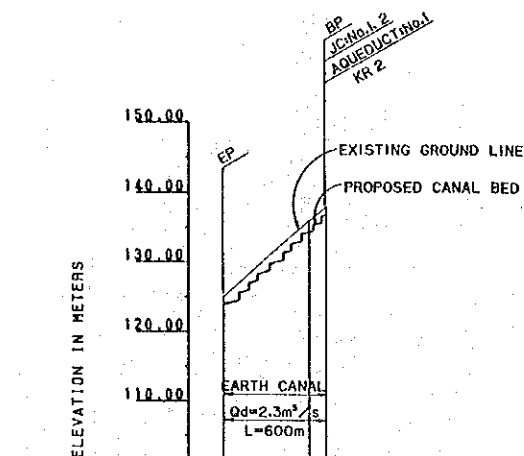
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

EXHIBIT No. 36 CP-34



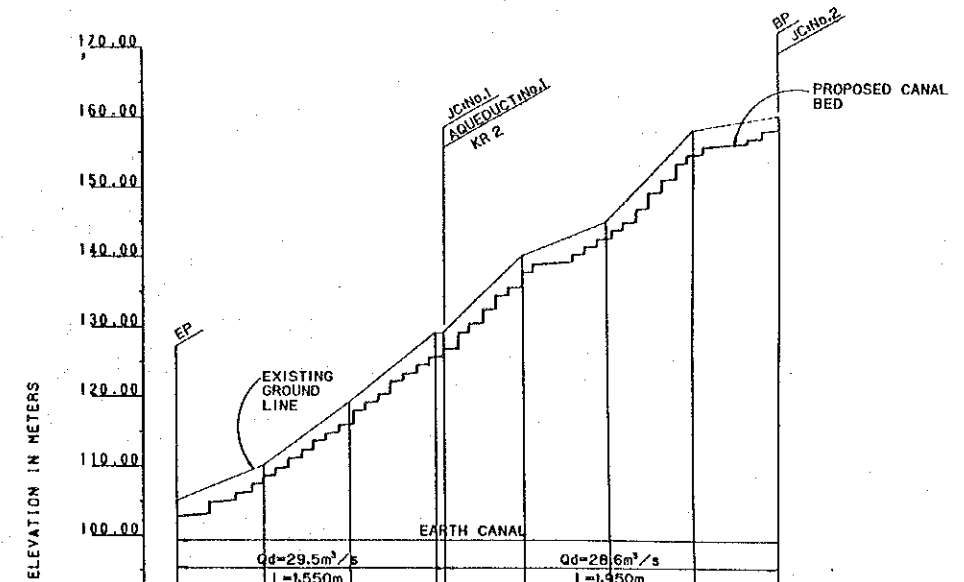
DL=120.00		h=1.55m b=2.00m Fb=0.40m		h=1.55m b=2.00m Fb=0.40m	
PROPOSED WATERLEVEL DRAINAGE	146.00	146.00	146.00	146.00	146.00
PROPOSED ELEVATION	144.05	144.05	144.05	144.05	144.05
EXIST GROUND ELEVATION	144.00	144.00	144.00	144.00	144.00
EXIST GROUND ELEVATION	144.00	144.00	144.00	144.00	144.00
CUMULATIVE DISTANCE	0.00	100.00	500.00	1000.00	1500.00
STATION	0+0	0+100	0+500	1+000	1+500

DKR3



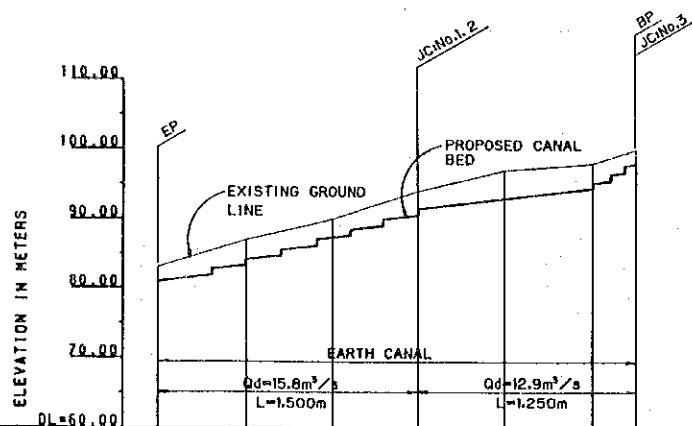
DL=100.00		h=0.93m b=1.00m Fb=0.30m		h=0.93m b=1.00m Fb=0.30m	
PROPOSED WATERLEVEL DRAINAGE	125.00	125.00	125.00	125.00	125.00
PROPOSED ELEVATION	123.87	123.87	123.87	123.87	123.87
EXIST GROUND ELEVATION	123.00	123.00	123.00	123.00	123.00
EXIST GROUND ELEVATION	123.00	123.00	123.00	123.00	123.00
CUMULATIVE DISTANCE	0.00	500.00	600.00	600.00	600.00
STATION	0+0	0+500	0+600	0+600	0+600

DKR4



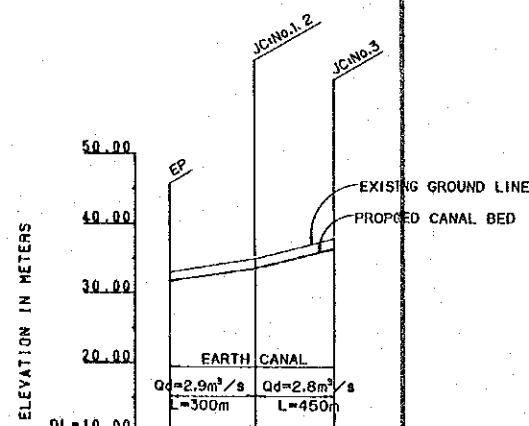
DL=90.00		h=1.65m b=1.00m Fb=0.50m		h=1.62m b=1.00m Fb=0.50m	
PROPOSED WATERLEVEL DRAINAGE	105.00	105.00	105.00	105.00	105.00
PROPOSED ELEVATION	102.85	102.85	102.85	102.85	102.85
EXIST GROUND ELEVATION	105.00	105.00	105.00	105.00	105.00
EXIST GROUND ELEVATION	105.00	105.00	105.00	105.00	105.00
CUMULATIVE DISTANCE	0.00	500.00	1000.00	1550.00	2900.00
STATION	0+0	0+500	1+000	1+550	2+900

DKR5



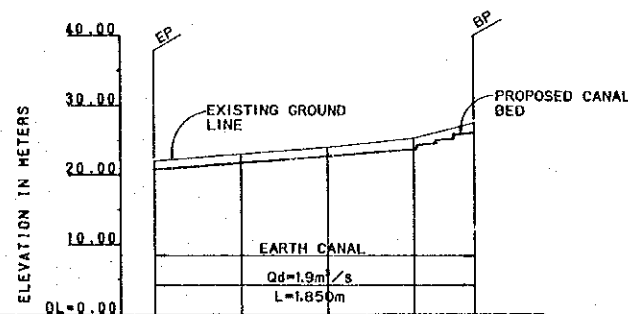
DL=60.00		h=1.61m b=2.00m Fb=0.50m		h=1.45m b=4.60m Fb=0.40m	
PROPOSED WATERLEVEL DRAINAGE	85.01	85.01	85.01	85.01	85.01
PROPOSED ELEVATION	82.8	82.8	82.8	82.8	82.8
EXIST GROUND ELEVATION	83.00	83.00	83.00	83.00	83.00
EXIST GROUND ELEVATION	83.00	83.00	83.00	83.00	83.00
CUMULATIVE DISTANCE	0.00	500.00	1000.00	1500.00	2750.00
STATION	0+0	0+500	1+000	1+500	2+750

DKR10



DL=10.00		h=0.93m b=1.00m Fb=0.30m		h=0.93m b=1.00m Fb=0.30m	
PROPOSED WATERLEVEL DRAINAGE	30.00	30.00	30.00	30.00	30.00
PROPOSED ELEVATION	27.77	27.77	27.77	27.77	27.77
EXIST GROUND ELEVATION	33.00	33.00	33.00	33.00	33.00
EXIST GROUND ELEVATION	33.00	33.00	33.00	33.00	33.00
CUMULATIVE DISTANCE	0.00	500.00	800.00	950.00	950.00
STATION	0+0	0+500	0+800	0+950	0+950

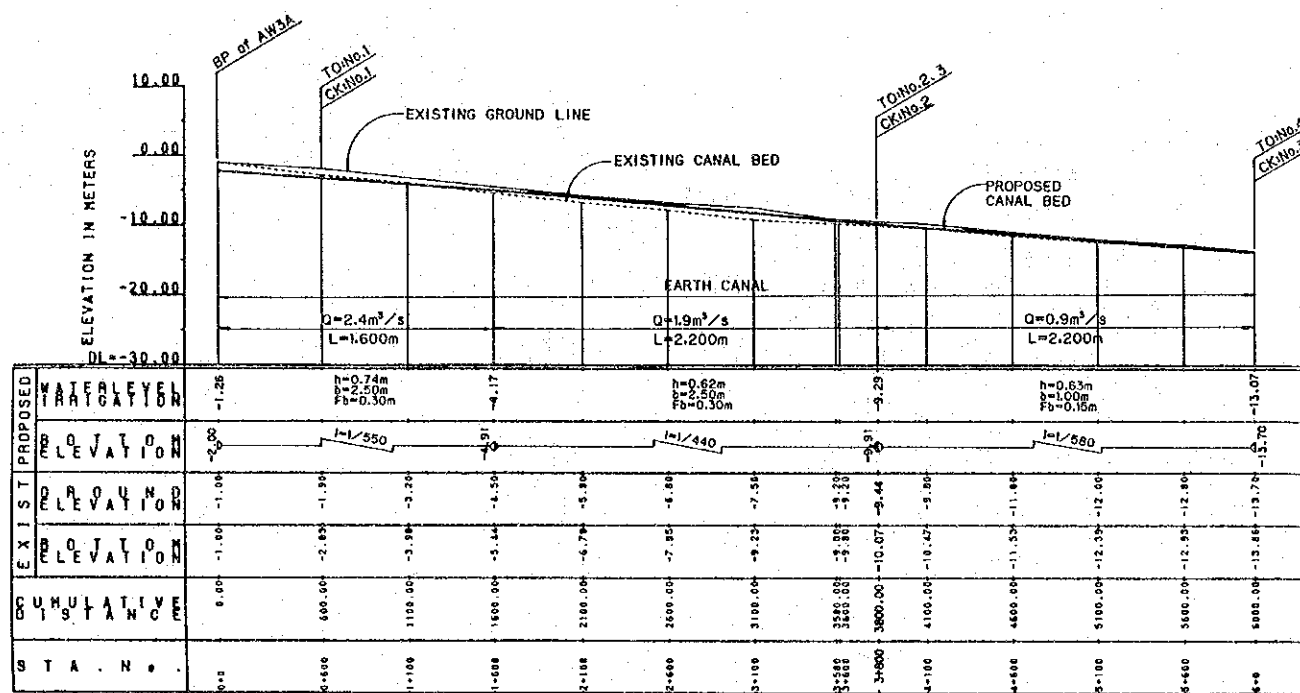
DKR11



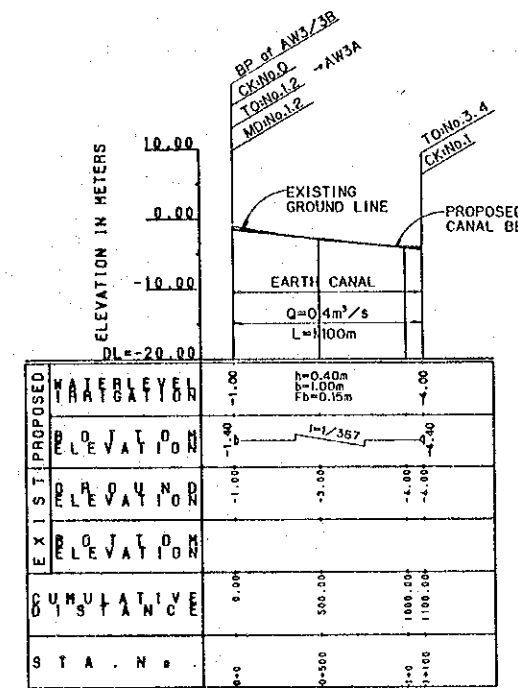
DL=0.00		h=0.89m b=1.90m Fb=0.30m		h=0.89m b=1.90m Fb=0.30m	
PROPOSED WATERLEVEL DRAINAGE	22.00	22.00	22.00	22.00	22.00
PROPOSED ELEVATION	20.81	20.81	20.81	20.81	20.81
EXIST GROUND ELEVATION	23.00	23.00	23.00	23.00	23.00
EXIST GROUND ELEVATION	23.00	23.00	23.00	23.00	23.00
CUMULATIVE DISTANCE	0.00	500.00	1000.00	1360.00	1850.00
STATION	0+0	0+500	1+000	1+360	1+850

DKR28

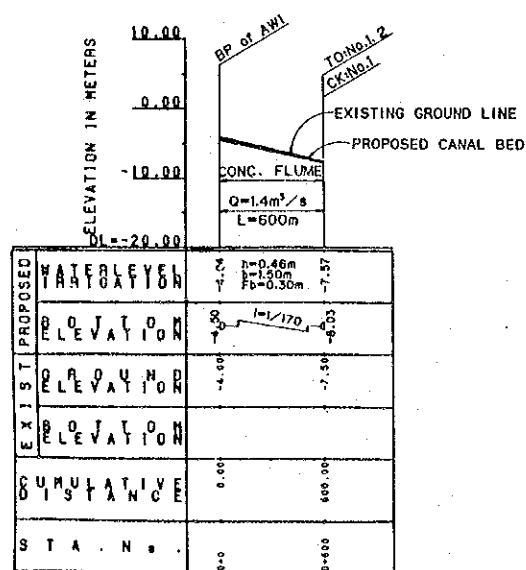
- ABBREVIATIONS
- BP: BEGINNING POINT
 - EP: END POINT
 - MD: MEASURING DEVICE
 - TD: TURNOUT
 - CK: CHECK
 - CP: CHECK AND DROP
 - DR: DROP
 - JC: JUNCTION
 - QI: IRRIGATION DISCHARGE
 - QD: DRAINAGE DISCHARGE
 - h: WATER DEPTH
 - b: BOTTOM WIDTH
 - Fb: FREEBOARD
 - L: LENGTH



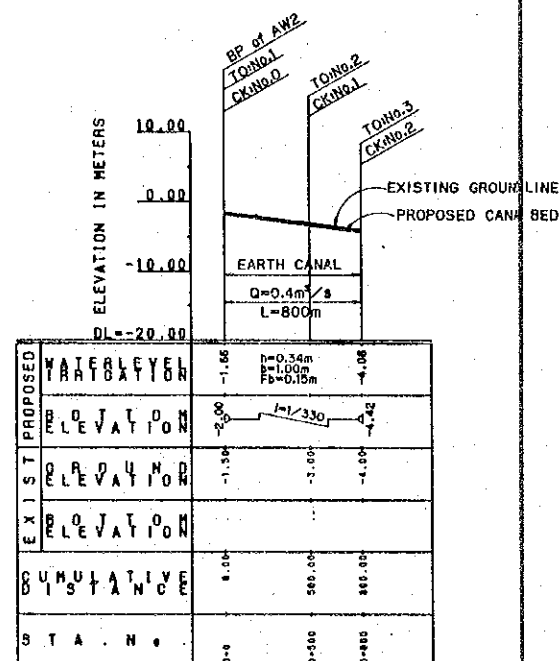
AW3A



AW3B



AW1



AW2

ABBREVIATIONS

- BP: BEGINNING POINT
- EP: END POINT
- MD: MEASURING DEVICE
- TO: TURNOUT
- CK: CHECK
- CD: CHECK AND DROP
- DR: DROP
- JC: JUNCTION
- Q: IRRIGATION DISCHARGE
- OD: DRAINAGE DISCHARGE
- h: WATER DEPTH
- b: BOTTOM WIDTH
- Fb: FREEBOARD
- L: LENGTH

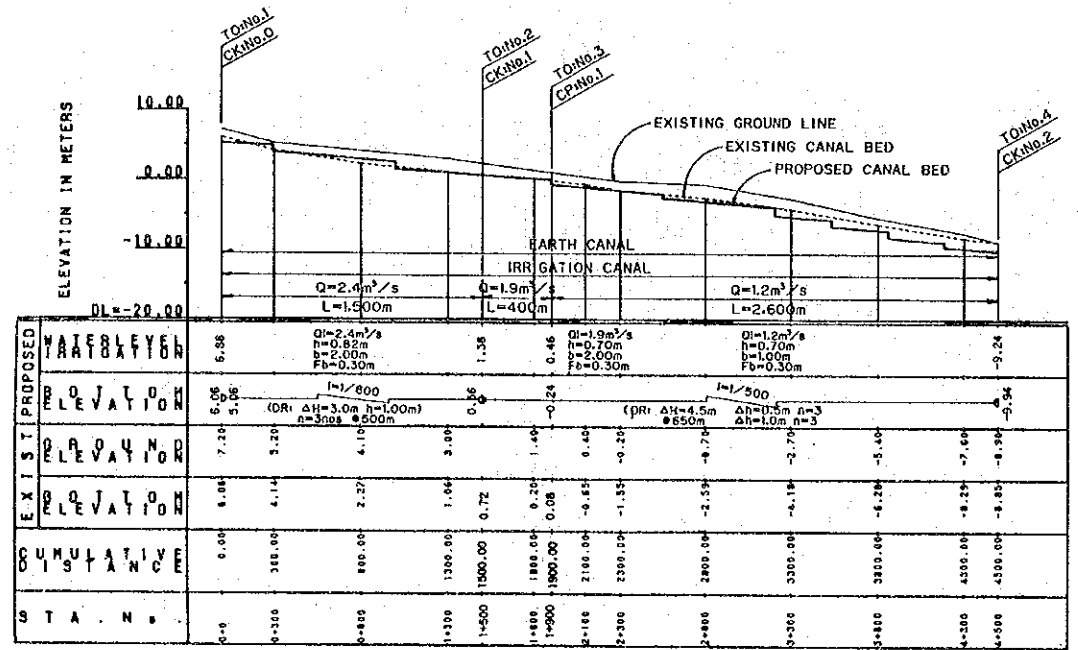
ISLAMIC REPUBLIC OF IRAN
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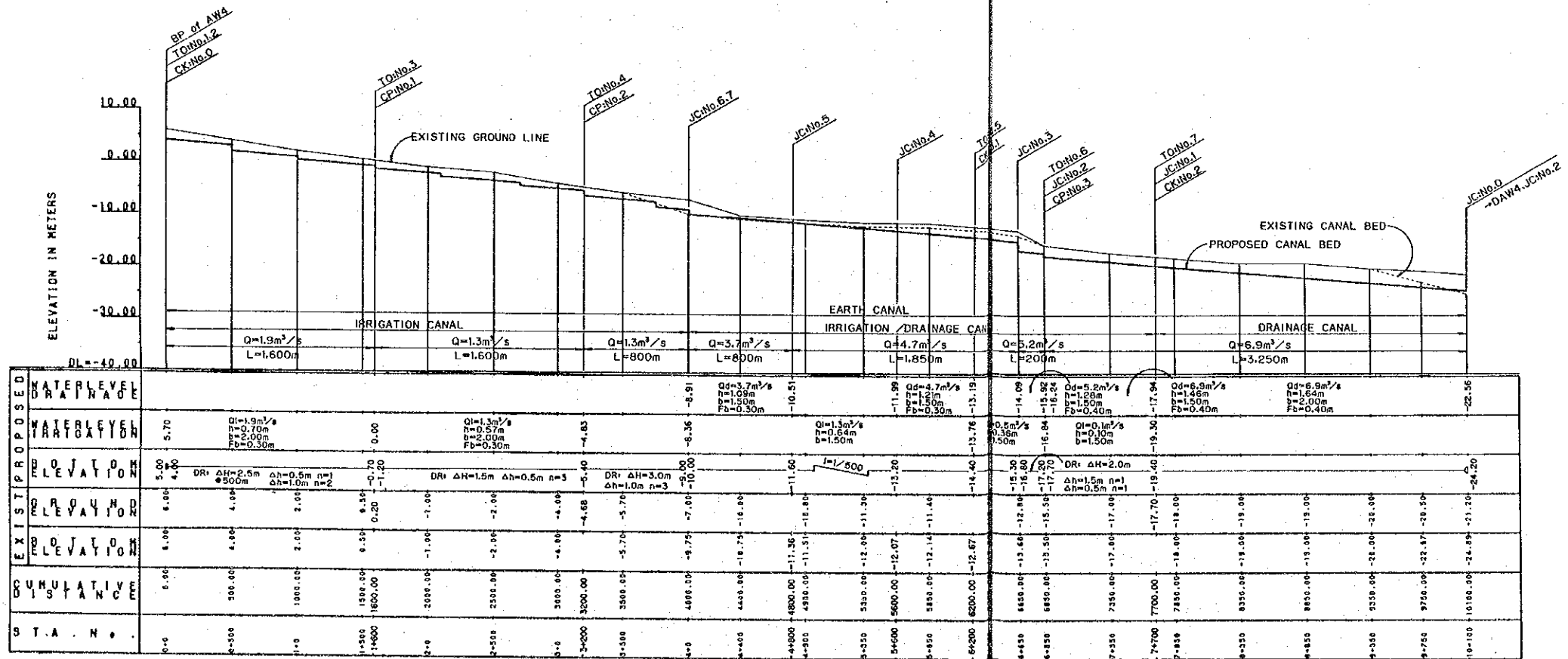
PROFILE
OF
SECONDARY CANAL - AW1/2/3/3A/3B

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

EXHIBIT No.
38 CP-36



AW5



AW4

ABBREVIATIONS

BP: BEGINNING POINT	Qd: IRRIGATION DISCHARGE
EP: END POINT	Qd: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	n: WATER DEPTH
TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

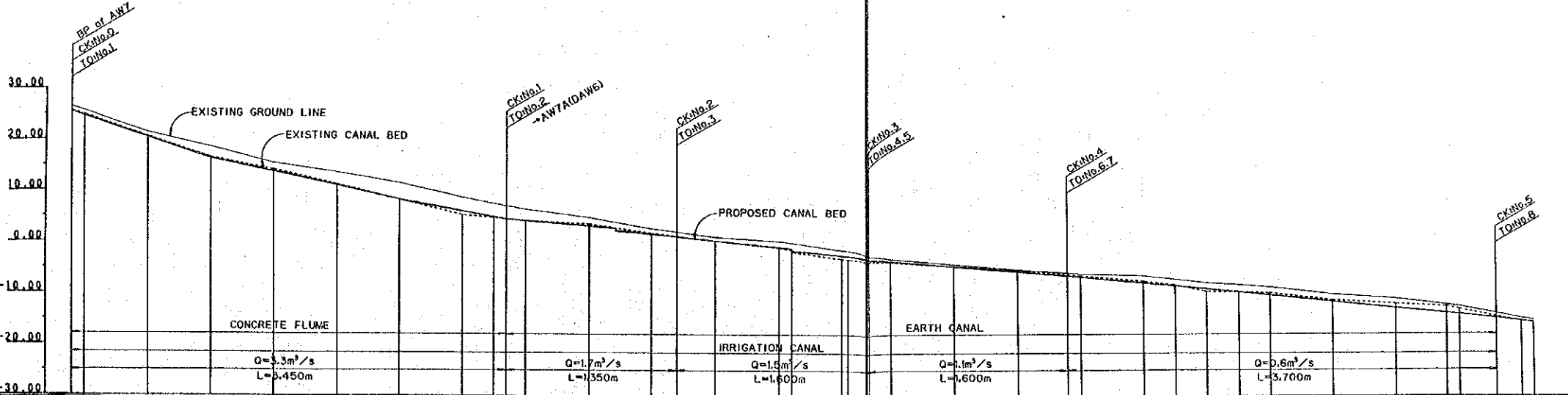
THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - AW4/5

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

EXHIBIT No. 39 CP-37

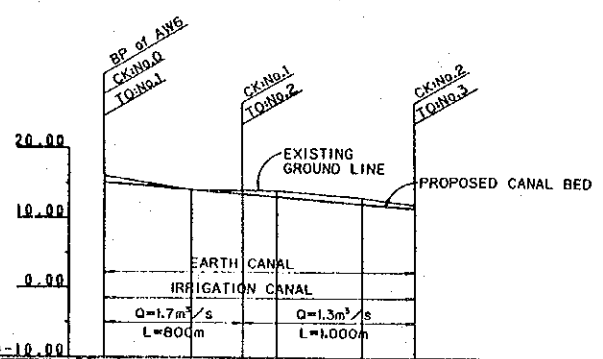
ELEVATION IN METERS
DL = -30.00



STATION	PROPOSED WATERLEVEL	PROPOSED ELEVATION	EXISTING GROUND ELEVATION	EXISTING ELEVATION	CUMULATIVE DISTANCE
0+00	25.58	25.35	25.35	25.35	0.00
0+100	25.35	25.35	24.74	25.35	100.00
0+600	21.30	21.30	20.35	21.30	600.00
1+000	18.95	18.95	16.44	18.95	1100.00
1+600	15.45	15.45	14.12	15.45	1600.00
2+100	13.30	13.30	11.18	13.30	2100.00
2+600	9.92	9.92	8.29	11.38	2600.00
3+100	8.78	8.78	5.32	9.78	3100.00
3+350	7.50	7.50	4.74	7.50	3350.00
3+450	7.06	7.06	4.38	7.06	3450.00
3+888	5.40	5.40	4.20	5.40	3888.00
4+100	4.88	4.88	3.32	4.88	4100.00
4+600	2.70	2.70	1.84	2.70	4600.00
4+800	2.06	2.06	1.27	2.06	4800.00
5+100	1.10	1.10	0.41	1.10	5100.00
5+600	0.30	0.30	-0.96	0.30	5600.00
5+750	0.00	0.00	-1.72	0.00	5750.00
6+100	-1.50	-1.50	-3.02	-1.50	6100.00
6+200	-2.10	-2.10	-3.15	-2.10	6200.00
6+400	-3.10	-3.10	-3.77	-3.10	6400.00
7+100	-4.20	-4.20	-4.68	-4.20	7100.00
7+600	-5.30	-5.30	-5.44	-5.30	7600.00
8+000	-5.94	-5.94	-6.25	-5.94	8000.00
8+100	-6.12	-6.12	-6.45	-6.12	8100.00
8+400	-6.50	-6.50	-7.53	-6.50	8400.00
8+850	-7.20	-7.20	-8.30	-7.20	8850.00
9+100	-7.95	-7.95	-9.60	-7.95	9100.00
9+350	-8.30	-8.30	-9.70	-8.30	9350.00
9+600	-8.80	-8.80	-9.90	-8.80	9600.00
10+100	-10.20	-10.20	-11.20	-10.20	10100.00
10+600	-11.90	-11.90	-12.90	-11.90	10600.00
11+00	-12.20	-12.20	-13.20	-12.20	11000.00
11+100	-13.30	-13.30	-13.30	-13.30	11100.00
11+400	-13.82	-13.82	-14.41	-13.82	11400.00
11+600	-14.70	-14.70	-15.33	-14.70	11600.00
11+700	-15.30	-15.30	-15.30	-15.30	11700.00

AW7

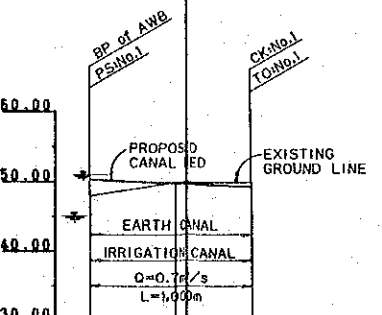
ELEVATION IN METERS
DL = -10.00



STATION	PROPOSED WATERLEVEL	PROPOSED ELEVATION	EXISTING GROUND ELEVATION	EXISTING ELEVATION	CUMULATIVE DISTANCE
0+00	16.00	15.17	16.00	16.00	0.00
0+500	14.40	13.57	14.00	14.00	500.00
0+800	12.30	11.57	13.00	13.00	800.00
1+000	11.57	11.57	12.00	12.00	1000.00
1+500	10.00	10.00	10.00	10.00	1500.00
1+800	9.00	9.00	9.00	9.00	1800.00

AW6

ELEVATION IN METERS
DL = -30.00



STATION	PROPOSED WATERLEVEL	PROPOSED ELEVATION	EXISTING GROUND ELEVATION	EXISTING ELEVATION	CUMULATIVE DISTANCE
0+00	45.00	45.00	45.00	45.00	0.00
0+500	49.50	49.50	48.00	48.00	500.00
1+000	50.15	50.15	49.00	49.00	1000.00

AW5

ABBREVIATIONS

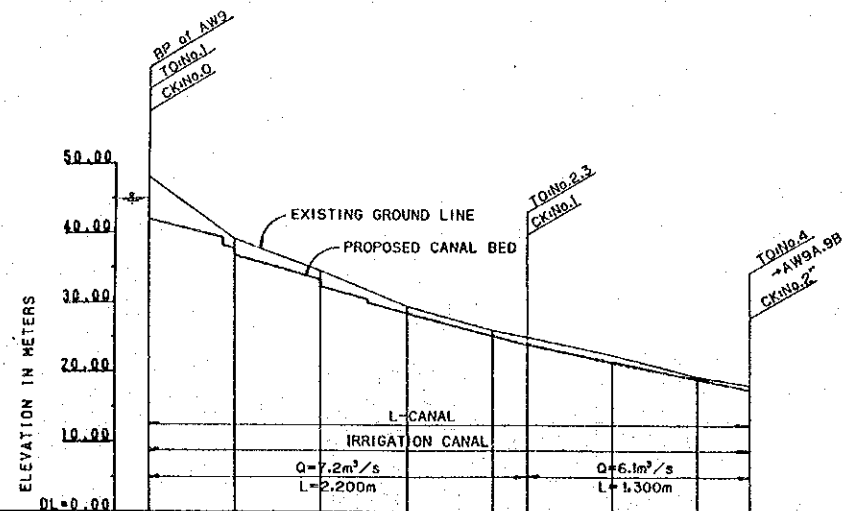
BP: BEGINNING POINT	Q: IRRIGATION DISCHARGE
EP: END POINT	Qd: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

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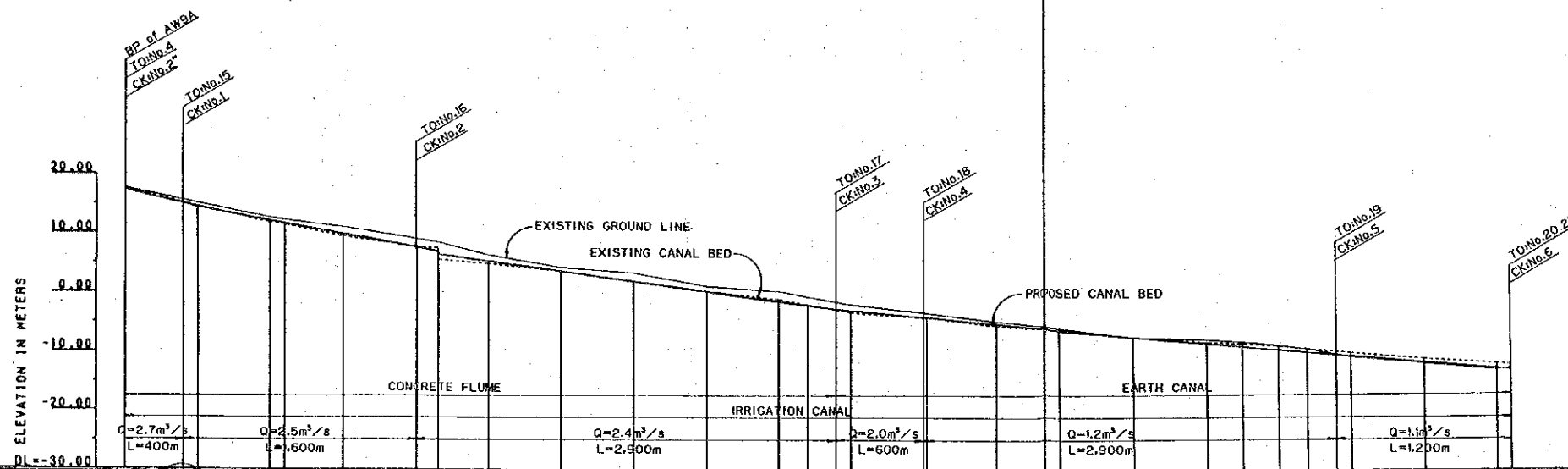
PROFILE
OF
SECONDARY CANAL - AW6/7/8

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 40 CP-38



PROPOSED WATERLEVEL	45.00	44.21	42.21	34.50	24.83	18.47
PROPOSED ELEVATION	44.21	42.21	34.50	24.83	18.47	17.45
EXIST ELEVATION	44.00	31.00	34.50	24.00	35.00	22.40
EXIST ELEVATION	44.00	31.00	34.50	24.00	35.00	22.40
CUMULATIVE DISTANCE	0.00	300.00	1000.00	1300.00	2600.00	3200.00
STATION	0+0	0+300	1+0	1+500	2+800	3+500

AW9



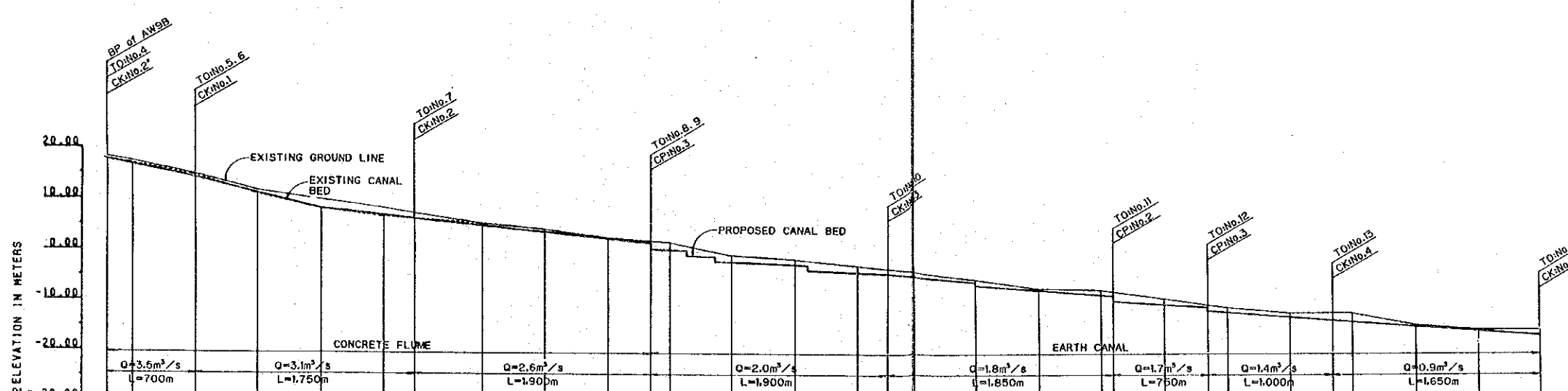
PROPOSED WATERLEVEL	16.70	15.75	15.75	11.16	8.33	2.08	0.54	-0.54	-12.16
PROPOSED ELEVATION	17.00	15.75	15.75	11.16	8.33	2.08	0.54	-0.54	-12.16
EXIST ELEVATION	17.53	15.70	15.14	12.70	12.30	11.16	11.16	11.16	11.16
EXIST ELEVATION	17.53	15.70	15.14	12.70	12.30	11.16	11.16	11.16	11.16
CUMULATIVE DISTANCE	0.00	400.00	580.00	1000.00	1500.00	2000.00	2500.00	3000.00	3500.00
STATION	0+0	0+400	0+580	1+000	1+500	2+000	2+500	3+000	3+500

AW9A

ABBREVIATIONS

BP: BEGINNING POINT	Q: IRRIGATION DISCHARGE
EP: END POINT	Od: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
T: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

ISLAMIC REPUBLIC OF IRAN MINISTRY OF AGRICULTURE (MOA)
THE FEASIBILITY STUDY ON THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT IN THE HARAZ RIVER BASIN
PROFILE OF SECONDARY CANAL - AW9/9A
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
EXHIBIT No. 41 CP-39



ABBREVIATIONS

BP: BEGINNING POINT	Q: IRRIGATION DISCHARGE
EP: END POINT	Qd: DRAINAGE DISCHARGE
MO: MEASURING DEVICE	h: WATER DEPTH
TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

PROPOSED WATER LEVEL	18.47	18.20	17.95	17.70	17.45	17.20	16.95	16.70	16.45	16.20	15.95	15.70	15.45	15.20	14.95	14.70	14.45	14.20	13.95	13.70	13.45	13.20	12.95	12.70	12.45	12.20	11.95	11.70	11.45	11.20	10.95	10.70	10.45	10.20	9.95	9.70	9.45	9.20	8.95	8.70	8.45	8.20	7.95	7.70	7.45	7.20	6.95	6.70	6.45	6.20	5.95	5.70	5.45	5.20	4.95	4.70	4.45	4.20	3.95	3.70	3.45	3.20	2.95	2.70	2.45	2.20	1.95	1.70	1.45	1.20	0.95	0.70	0.45	0.20	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
EXIST ELEVATION	18.47	18.20	17.95	17.70	17.45	17.20	16.95	16.70	16.45	16.20	15.95	15.70	15.45	15.20	14.95	14.70	14.45	14.20	13.95	13.70	13.45	13.20	12.95	12.70	12.45	12.20	11.95	11.70	11.45	11.20	10.95	10.70	10.45	10.20	9.95	9.70	9.45	9.20	8.95	8.70	8.45	8.20	7.95	7.70	7.45	7.20	6.95	6.70	6.45	6.20	5.95	5.70	5.45	5.20	4.95	4.70	4.45	4.20	3.95	3.70	3.45	3.20	2.95	2.70	2.45	2.20	1.95	1.70	1.45	1.20	0.95	0.70	0.45	0.20	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
CUMULATIVE STATION	0+0	0+200	0+700	0+2000	0+3700	0+5400	0+7100	0+8800	0+10500	0+12200	0+13900	0+15600	0+17300	0+19000	0+20700	0+22400	0+24100	0+25800	0+27500	0+29200	0+30900	0+32600	0+34300	0+36000	0+37700	0+39400	0+41100	0+42800	0+44500	0+46200	0+47900	0+49600	0+51300	0+53000	0+54700	0+56400	0+58100	0+59800	0+61500	0+63200	0+64900	0+66600	0+68300	0+70000	0+71700	0+73400	0+75100	0+76800	0+78500	0+80200	0+81900	0+83600	0+85300	0+87000	0+88700	0+90400	0+92100	0+93800	0+95500	0+97200	0+98900	0+100600	0+102300	0+104000	0+105700	0+107400	0+109100	0+110800	0+112500	0+114200	0+115900	0+117600	0+119300	0+121000	0+122700	0+124400	0+126100	0+127800	0+129500	0+131200	0+132900	0+134600	0+136300	0+138000	0+139700	0+141400	0+143100	0+144800	0+146500	0+148200	0+149900	0+151600	0+153300	0+155000	0+156700	0+158400	0+160100	0+161800	0+163500	0+165200	0+166900	0+168600	0+170300	0+172000	0+173700	0+175400	0+177100	0+178800	0+180500	0+182200	0+183900	0+185600	0+187300	0+189000	0+190700	0+192400	0+194100	0+195800	0+197500	0+199200	0+200900	0+202600	0+204300	0+206000	0+207700	0+209400	0+211100	0+212800	0+214500	0+216200	0+217900	0+219600	0+221300	0+223000	0+224700	0+226400	0+228100	0+229800	0+231500	0+233200	0+234900	0+236600	0+238300	0+240000	0+241700	0+243400	0+245100	0+246800	0+248500	0+250200	0+251900	0+253600	0+255300	0+257000	0+258700	0+260400	0+262100	0+263800	0+265500	0+267200	0+268900	0+270600	0+272300	0+274000	0+275700	0+277400	0+279100	0+280800	0+282500	0+284200	0+285900	0+287600	0+289300	0+291000	0+292700	0+294400	0+296100	0+297800	0+299500	0+301200	0+302900	0+304600	0+306300	0+308000	0+309700	0+311400	0+313100	0+314800	0+316500	0+318200	0+319900	0+321600	0+323300	0+325000	0+326700	0+328400	0+330100	0+331800	0+333500	0+335200	0+336900	0+338600	0+340300	0+342000	0+343700	0+345400	0+347100	0+348800	0+350500	0+352200	0+353900	0+355600	0+357300	0+359000	0+360700	0+362400	0+364100	0+365800	0+367500	0+369200	0+370900	0+372600	0+374300	0+376000	0+377700	0+379400	0+381100	0+382800	0+384500	0+386200	0+387900	0+389600	0+391300	0+393000	0+394700	0+396400	0+398100	0+399800	0+401500	0+403200	0+404900	0+406600	0+408300	0+410000	0+411700	0+413400	0+415100	0+416800	0+418500	0+420200	0+421900	0+423600	0+425300	0+427000	0+428700	0+430400	0+432100	0+433800	0+435500	0+437200	0+438900	0+440600	0+442300	0+444000	0+445700	0+447400	0+449100	0+450800	0+452500	0+454200	0+455900	0+457600	0+459300	0+461000	0+462700	0+464400	0+466100	0+467800	0+469500	0+471200	0+472900	0+474600	0+476300	0+478000	0+479700	0+481400	0+483100	0+484800	0+486500	0+488200	0+489900	0+491600	0+493300	0+495000	0+496700	0+498400	0+500100	0+501800	0+503500	0+505200	0+506900	0+508600	0+510300	0+512000	0+513700	0+515400	0+517100	0+518800	0+520500	0+522200	0+523900	0+525600	0+527300	0+529000	0+530700	0+532400	0+534100	0+535800	0+537500	0+539200	0+540900	0+542600	0+544300	0+546000	0+547700	0+549400	0+551100	0+552800	0+554500	0+556200	0+557900	0+559600	0+561300	0+563000	0+564700	0+566400	0+568100	0+569800	0+571500	0+573200	0+574900	0+576600	0+578300	0+580000	0+581700	0+583400	0+585100	0+586800	0+588500	0+590200	0+591900	0+593600	0+595300	0+597000	0+598700	0+600400	0+602100	0+603800	0+605500	0+607200	0+608900	0+610600	0+612300	0+614000	0+615700	0+617400	0+619100	0+620800	0+622500	0+624200	0+625900	0+627600	0+629300	0+631000	0+632700	0+634400	0+636100	0+637800	0+639500	0+641200	0+642900	0+644600	0+646300	0+648000	0+649700	0+651400	0+653100	0+654800	0+656500	0+658200	0+659900	0+661600	0+663300	0+665000	0+666700	0+668400	0+670100	0+671800	0+673500	0+675200	0+676900	0+678600	0+680300	0+682000	0+683700	0+685400	0+687100	0+688800	0+690500	0+692200	0+693900	0+695600	0+697300	0+699000	0+700700	0+702400	0+704100	0+705800	0+707500	0+709200	0+710900	0+712600	0+714300	0+716000	0+717700	0+719400	0+721100	0+722800	0+724500	0+726200	0+727900	0+729600	0+731300	0+733000	0+734700	0+736400	0+738100	0+739800	0+741500	0+743200	0+744900	0+746600	0+748300	0+750000	0+751700	0+753400	0+755100	0+756800	0+758500	0+760200	0+761900	0+763600	0+765300	0+767000	0+768700	0+770400	0+772100	0+773800	0+775500	0+777200	0+778900	0+780600	0+782300	0+784000	0+785700	0+787400	0+789100	0+790800	0+792500	0+794200	0+795900	0+797600	0+799300	0+801000	0+802700	0+804400	0+806100	0+807800	0+809500	0+811200	0+812900	0+814600	0+816300	0+818000	0+819700	0+821400	0+823100	0+824800	0+826500	0+828200	0+829900	0+831600	0+833300	0+835000	0+836700	0+838400	0+840100	0+841800	0+843500	0+845200	0+846900	0+848600	0+850300	0+852000	0+853700	0+855400	0+857100	0+858800	0+860500	0+862200	0+863900	0+865600	0+867300	0+869000	0+870700	0+872400	0+874100	0+875800	0+877500	0+879200	0+880900	0+882600	0+884300	0+886000	0+887700	0+889400	0+891100	0+892800	0+894500	0+896200	0+897900	0+899600	0+901300	0+903000	0+904700	0+906400	0+908100	0+909800	0+911500	0+913200	0+914900	0+916600	0+918300	0+920000	0+921700	0+923400	0+925100	0+926800	0+928500	0+930200	0+931900	0+933600	0+935300	0+937000	0+938700	0+940400	0+942100	0+943800	0+945500	0+947200	0+948900	0+950600	0+952300	0+954000	0+955700	0+957400	0+959100	0+960800	0+962500	0+964200	0+965900	0+967600	0+969300	0+971000	0+972700	0+974400	0+976100	0+977800	0+979500	0+981200	0+982900	0+984600	0+986300	0+988000	0+989700	0+991400	0+993100	0+994800	0+996500	0+998200	0+1000000

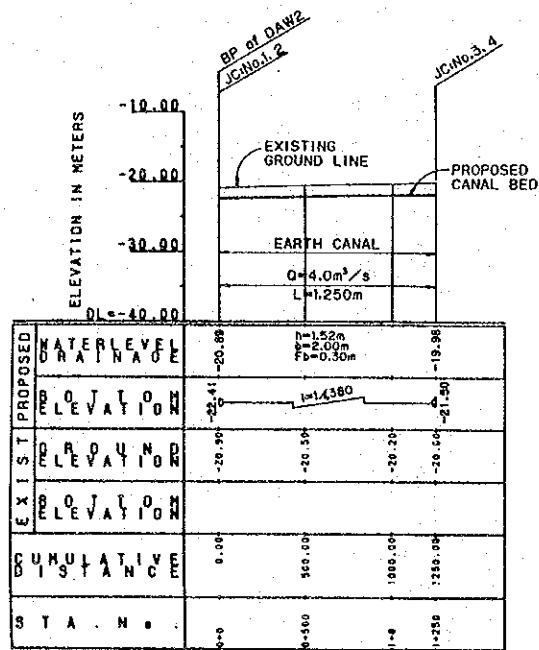
ISLAMIC REPUBLIC OF IRAN
 MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
 THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
 IN THE HARAZ RIVER BASIN

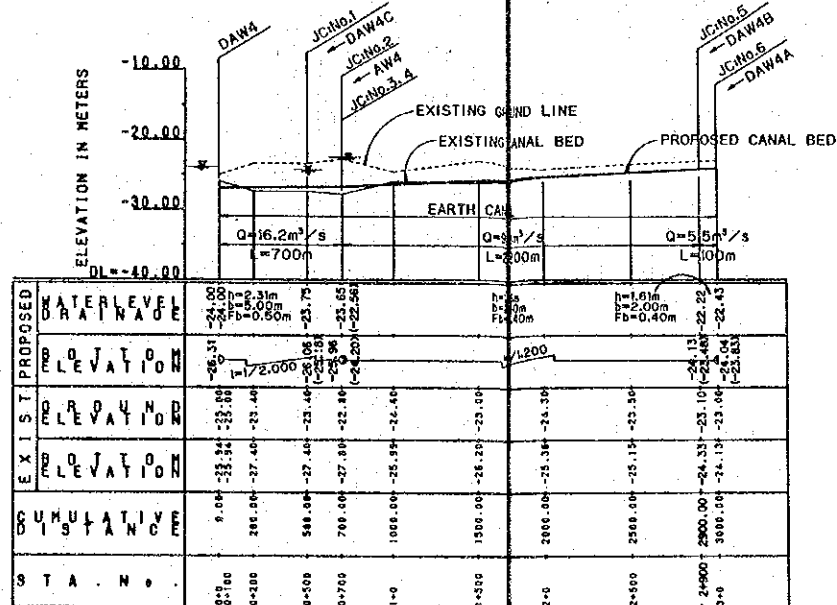
PROFILE
 OF
 SECONDARY CANAL - AW9B

JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

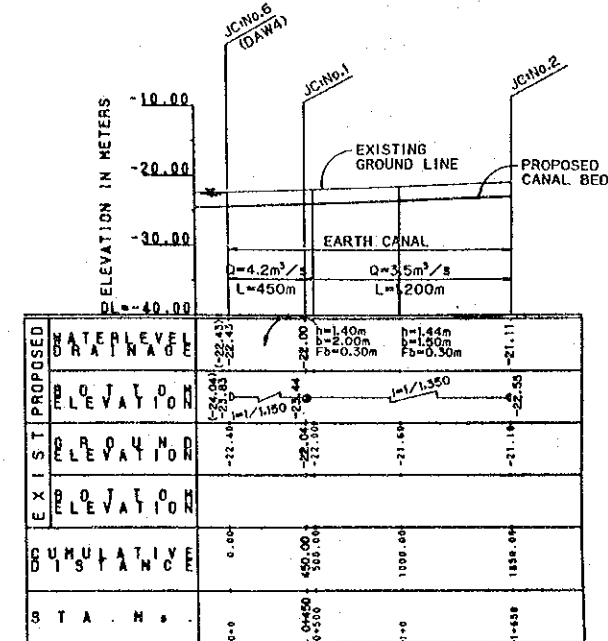
EXHIBIT No.
 42 CP-40



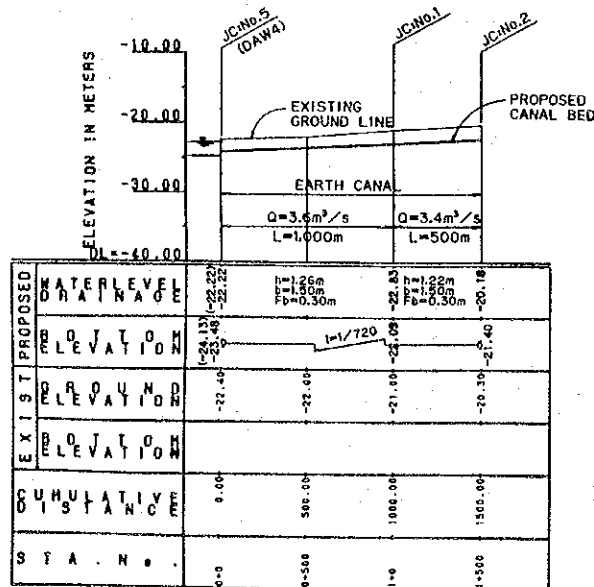
DAW2



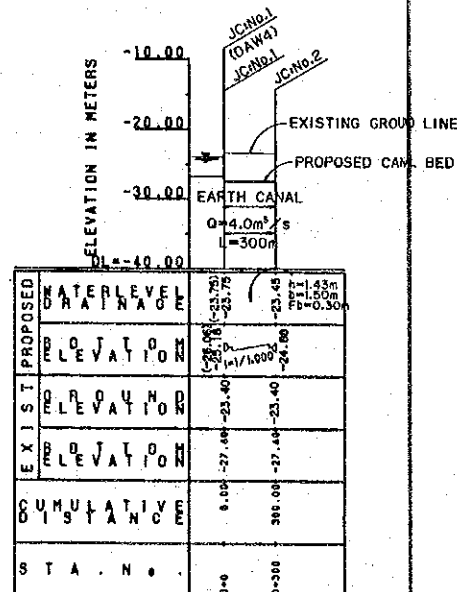
DAW4



DAW4A



DAW4B



DAW4C

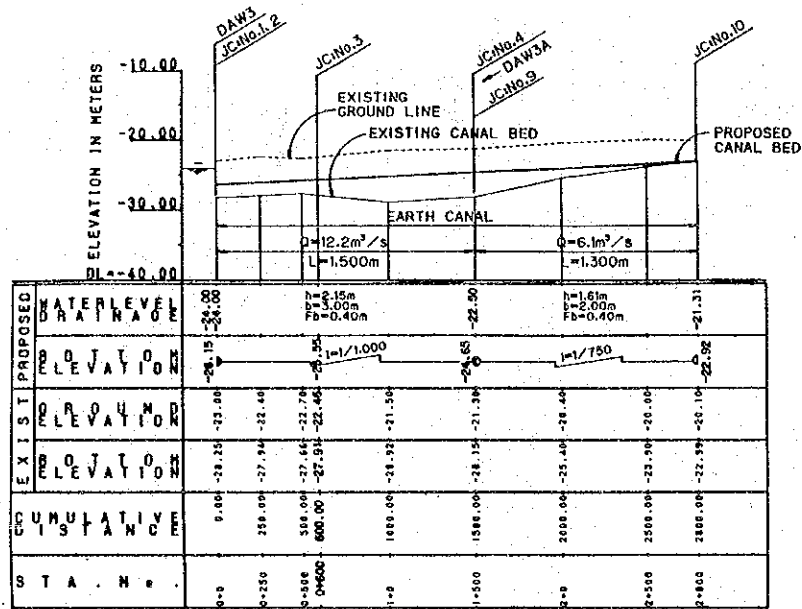
- ABBREVIATIONS**
- BP: BEGINNING POINT
 - EP: END POINT
 - MD: MEASURING DEVICE
 - TO: TURNOUT
 - CK: CHECK
 - CP: CHECK AND DROP
 - DR: DROP
 - JC: JUNCTION
 - QR: IRRIGATION DISCHARGE
 - Qd: DRAINAGE DISCHARGE
 - n: WATER DEPTH
 - b: BOTTOM WIDTH
 - FB: FREEBOARD
 - L: LENGTH

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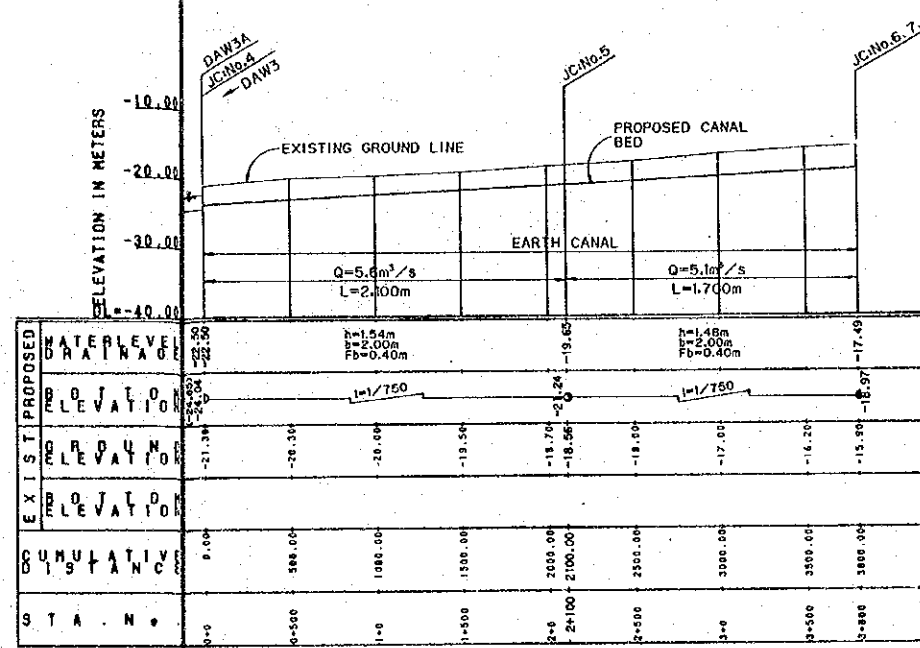
THE FEASIBILITY STUDY ON
 THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
 IN THE HAFAZ RIVER BASIN

PROFILE
 OF
 SECONDARY CANAL - DAW2/A/AA/AB/AC

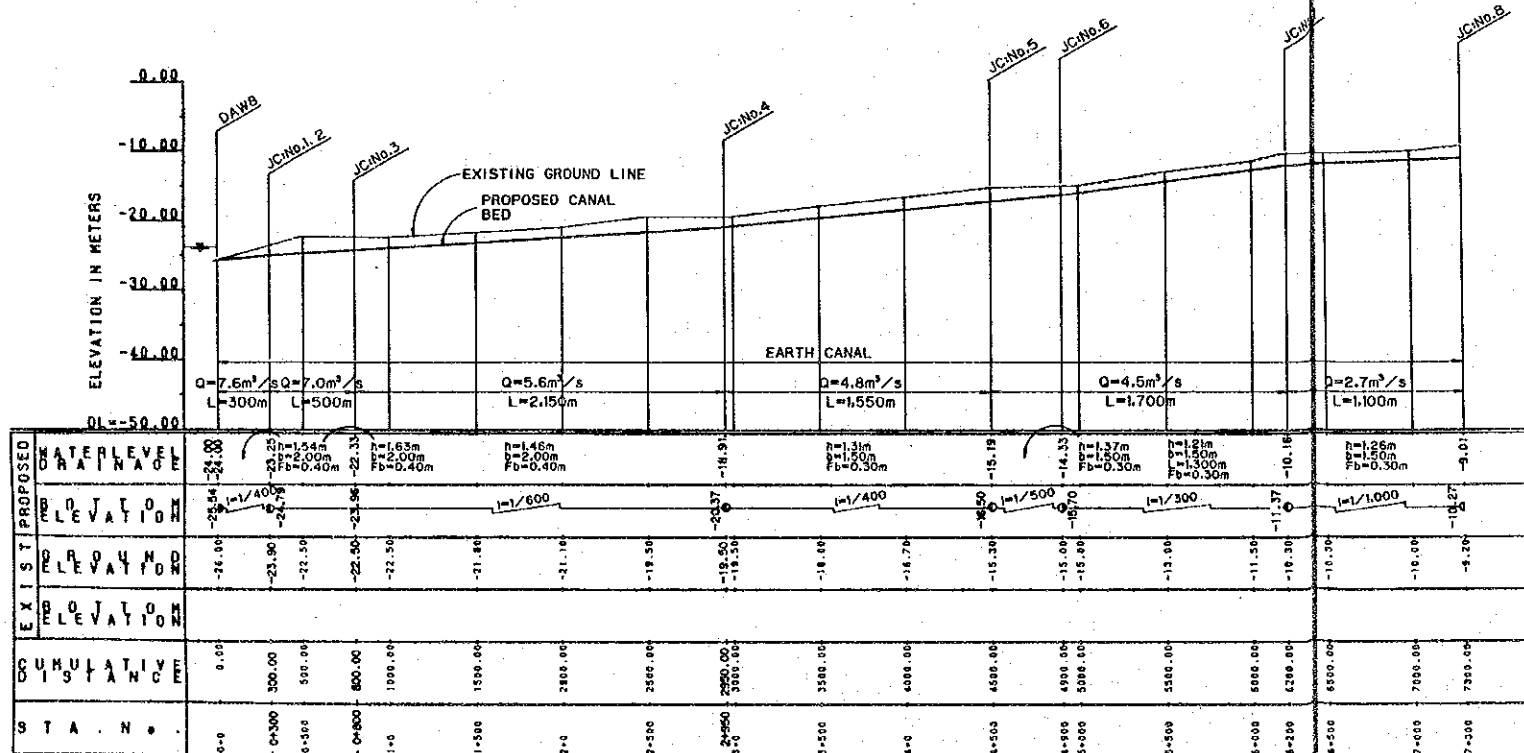
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 43 CP-41



DAW3



DAW3A



DAW8

ABBREVIATIONS

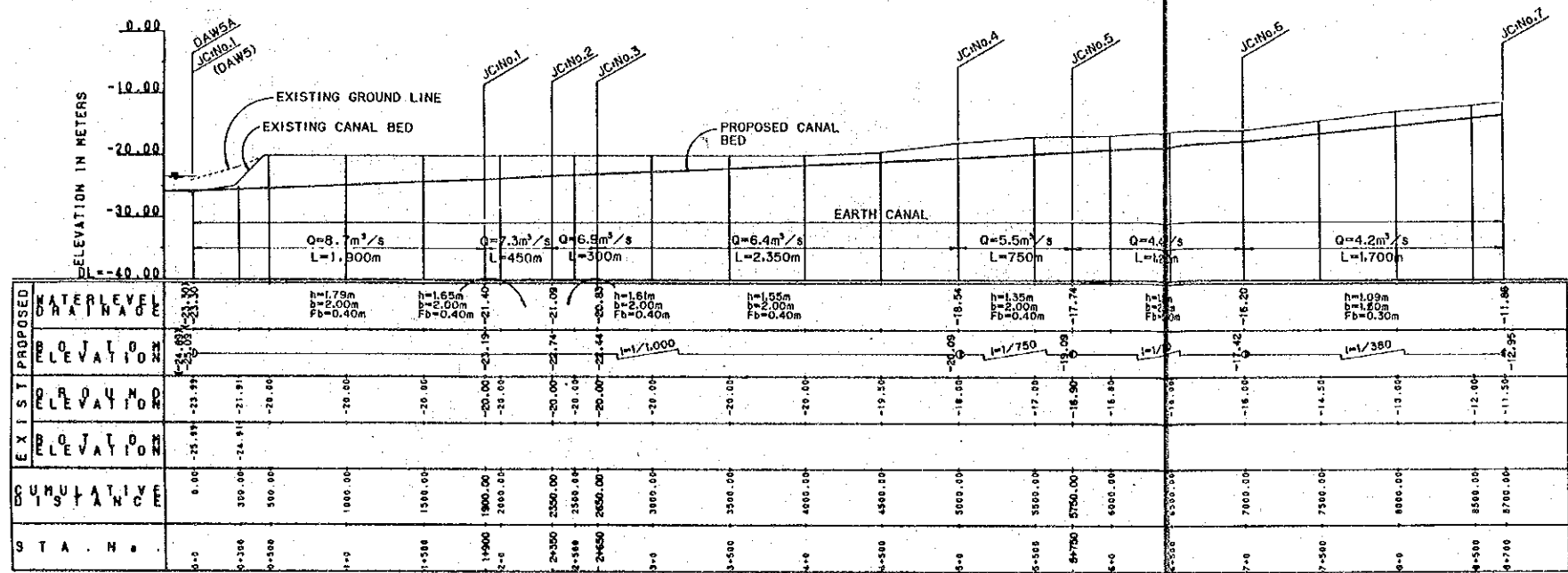
BP: BEGINNING POINT	Q: IRRIGATION DISCHARGE
EP: END POINT	Qd: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
TO: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CP: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

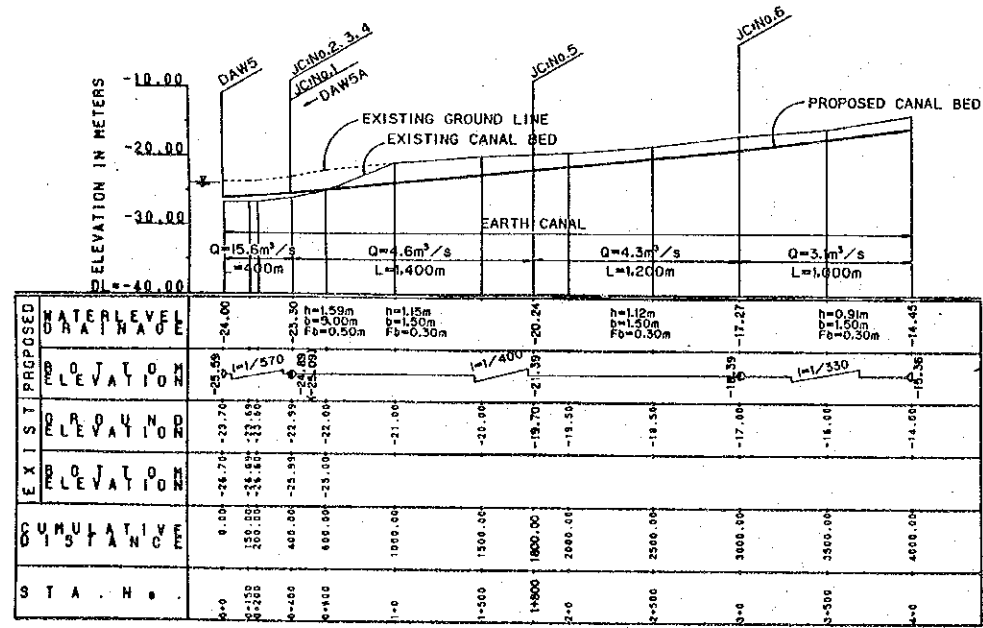
THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - DAW3/3A/8

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 44 CP-42



DAW5A



DAW5

ABBREVIATIONS

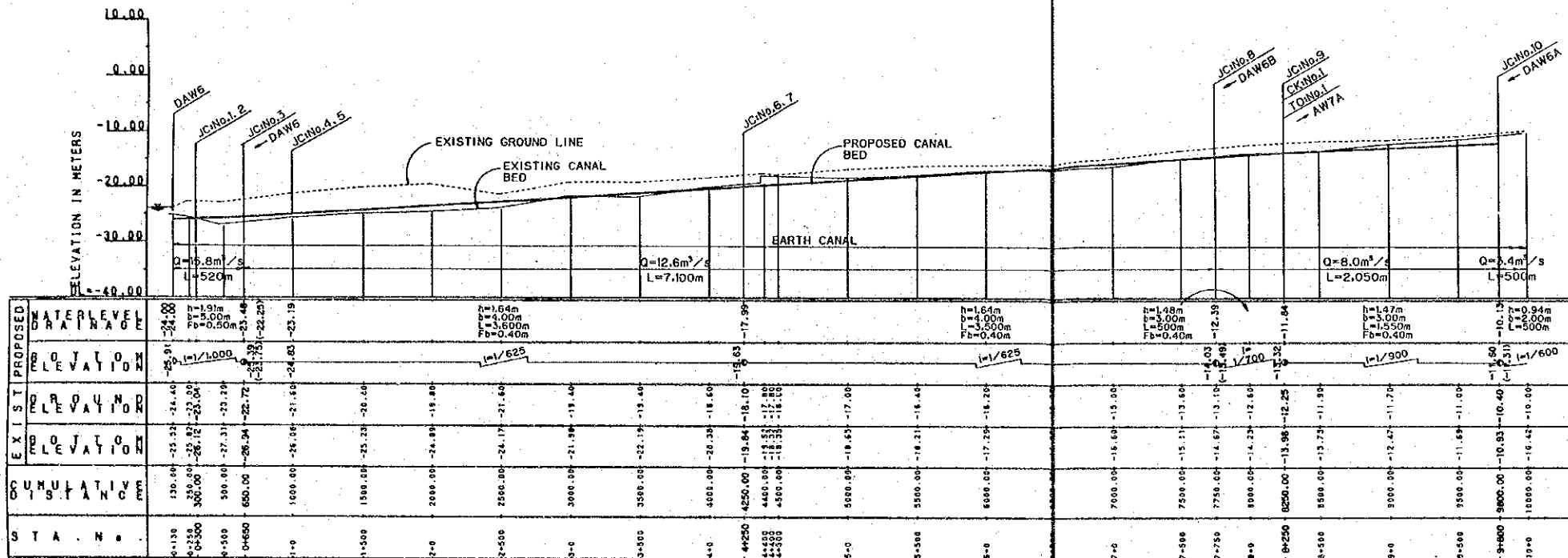
BP: BEGINNING POINT	CI: IRRIGATION DISCHARGE
EP: END POINT	OD: DRAINAGE DISCHARGE
MD: MEASURING DEVICE	h: WATER DEPTH
TC: TURNOUT	b: BOTTOM WIDTH
CK: CHECK	Fb: FREEBOARD
CD: CHECK AND DROP	L: LENGTH
DR: DROP	
JC: JUNCTION	

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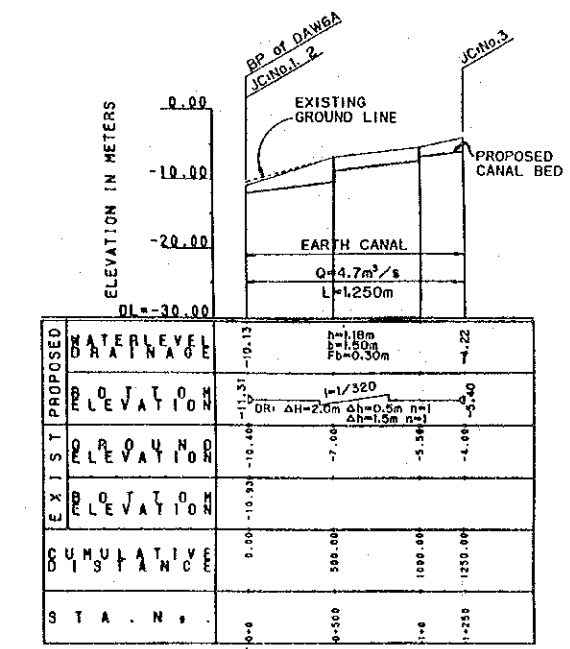
THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - DAW5/5A

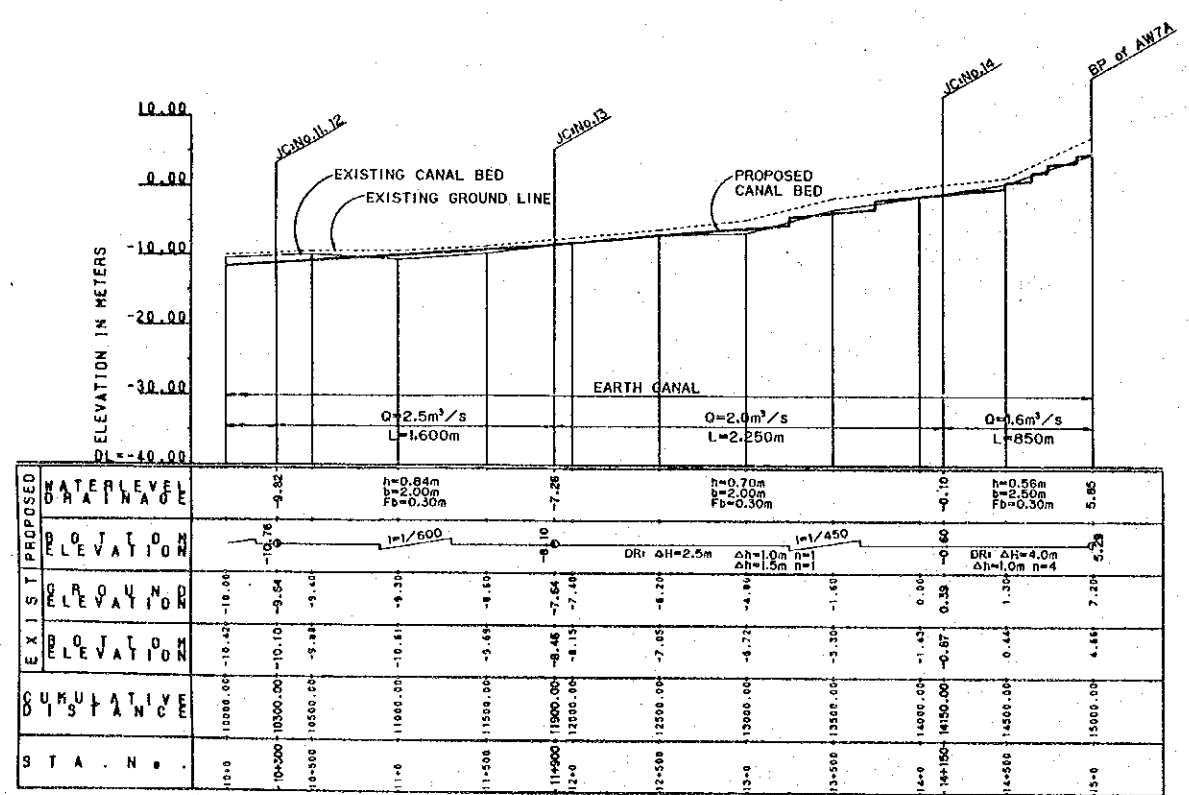
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) EXHIBIT No. 45 CP-43



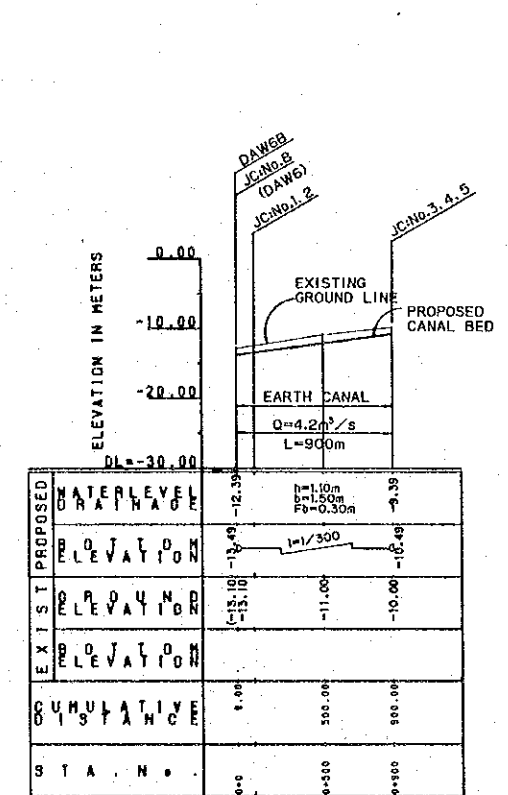
DAW6 (1)



DAW6A



DAW6 (2) - AW7A



DAW6B

- ABBREVIATIONS**
- BP: BEGINNING POINT
 - EP: END POINT
 - MD: MEASURING DEVICE
 - TC: TURNOUT
 - CK: CHECK
 - CP: CHECK AND DROP
 - DR: DROP
 - JC: JUNCTION
 - QI: IRRIGATION DISCHARGE
 - Qd: DRAINAGE DISCHARGE
 - h: WATER DEPTH
 - b: BOTTOM WIDTH
 - Fb: FREEBOARD
 - L: LENGTH

ISLAMIC REPUBLIC OF IRAN
MINISTRY OF AGRICULTURE (MOA)

THE FEASIBILITY STUDY ON
THE IRRIGATION AND DRAINAGE DEVELOPMENT PROJECT
IN THE HARAZ RIVER BASIN

PROFILE
OF
SECONDARY CANAL - DAW6/BA/BB

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

EXHIBIT No. 48 CP-44