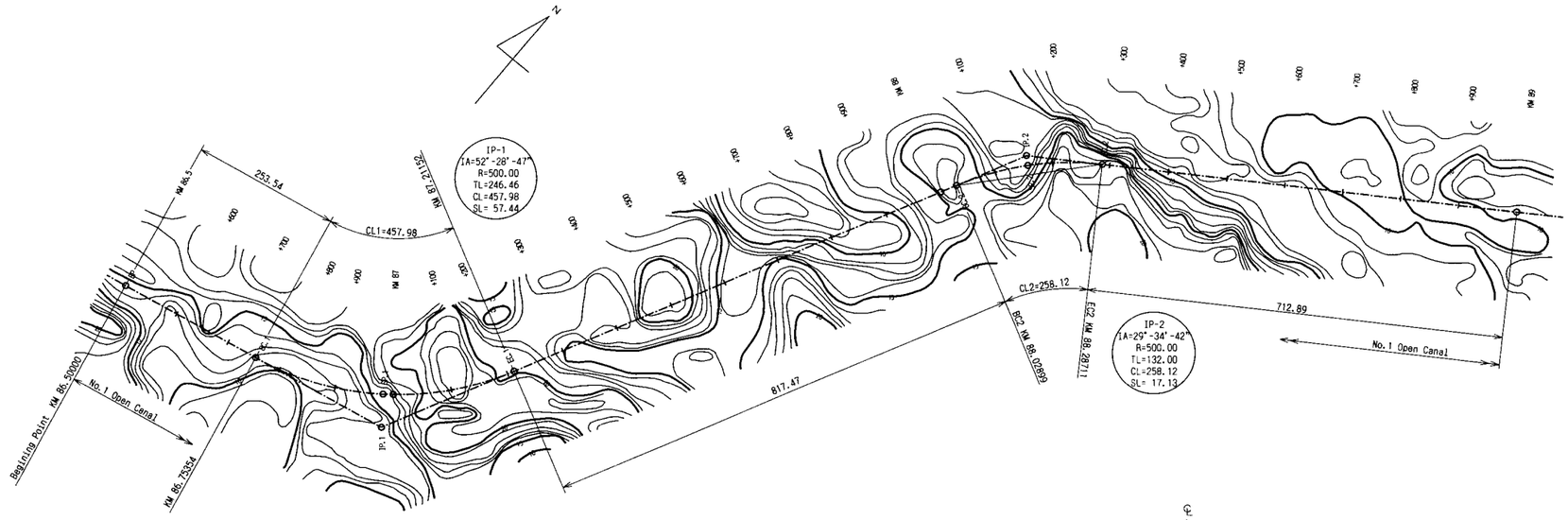
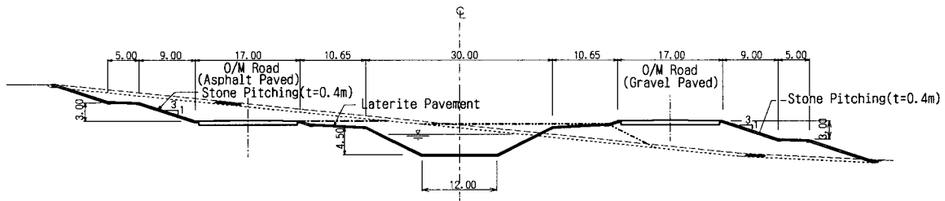
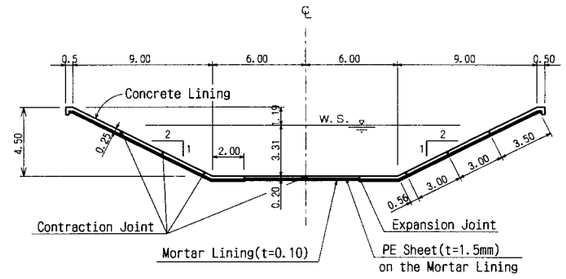




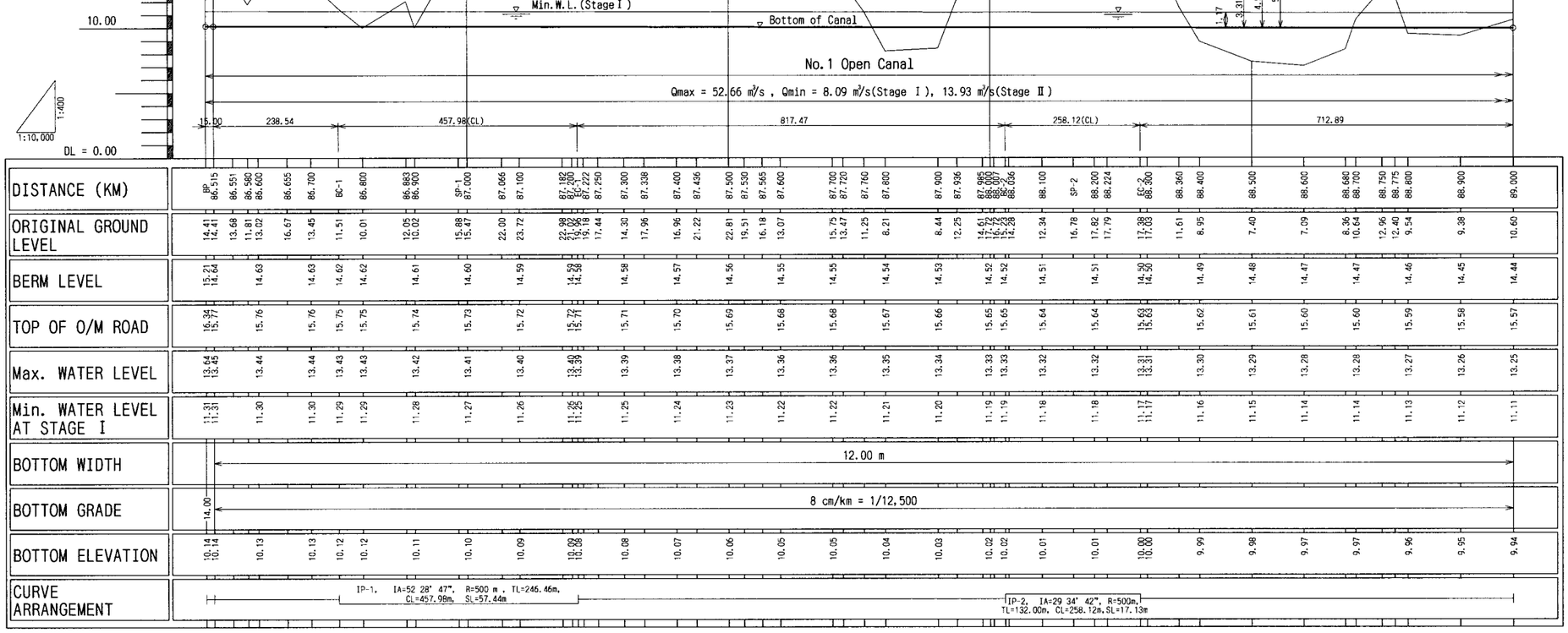
TYPICAL CROSS SECTION OF No.1 OPEN CANAL

SCALE 1:1,000



CONCRETE LINED SECTION

SCALE 1:400

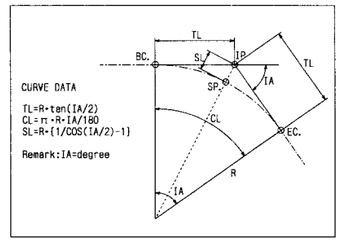


NOTES:

1. For the plan and profile of the conveyance canal, see the following drawings.
   1) No. 1 Open Canal ·····Dwg. Nos. CCL-101～CCL-104
   2) Box Culvert Conduit····Dwg. Nos. CCL-104～CCL-107
   3) No. 2 Open Canal ·····Dwg. Nos. CCL-107～CCL-109
2. The location of curvatures on the canal route are as follows:

Curvature	Distance (m)
BC-1	86,753.54
SP-1	86,982.53
EC-1	87,211.52
BC-2	88,028.99
SP-2	88,158.05
EC-2	88,287.11

3. Typical section of No. 1 Open Canal is same as that of No. 2 Open Canal.



THE ARAB REPUBLIC OF EGYPT
MINISTRY OF WATER RESOURCES AND IRRIGATION
NORTH SINAI DEVELOPMENT ORGANIZATION

THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE Ⅲ)

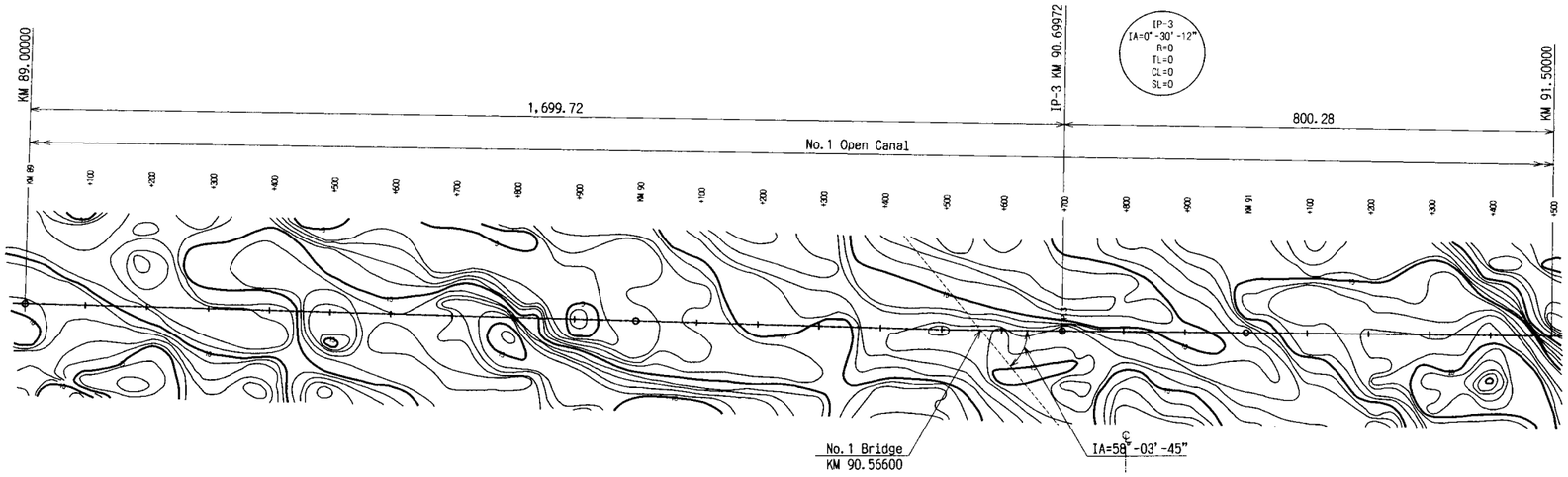
CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBAH CANAL BETWEEN KM 86.500 AND KM 108.466

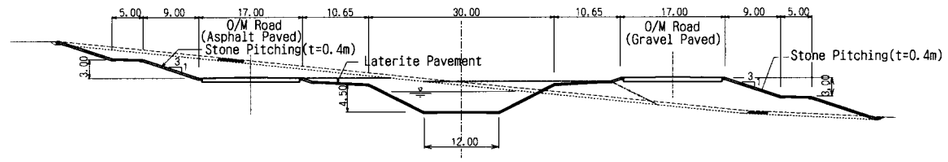
PLAN AND PROFILE

BETWEEN KM 86.500 AND KM 89.000

JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
SANYU CONSULTANTS INC, PACIFIC CONSULTANTS INTERNATIOAL

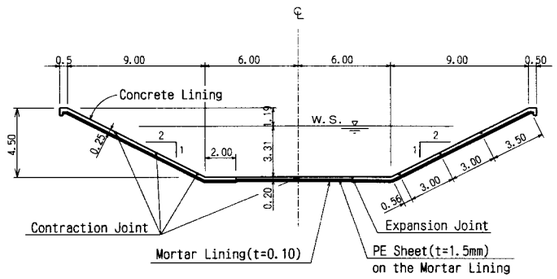
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO.	CCL-101





TYPICAL CROSS SECTION OF No.1 OPEN CANAL

SCALE 1:1,000



CONCRETE LINED SECTION

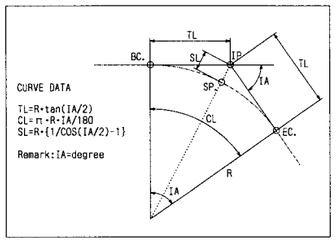
SCALE 1:400

DISTANCE (KM)	89.000	89.100	89.200	89.300	89.400	89.445	89.500	89.600	89.700	89.800	89.840	89.852	89.868	89.900	90.000	90.100	90.200	90.300	90.340	90.400	90.500	90.566	90.600	IP-3 90.700	90.750	90.800	90.900	91.000	91.060	91.100	91.200	91.300	91.380	91.400	91.475	91.500
ORIGINAL GROUND LEVEL	10.60	11.87	9.65	7.59	8.91	11.00	13.35	11.46	11.91	14.32	11.88	8.92	6.72	3.95	6.78	8.14	10.41	9.04	9.03	12.53	14.14	13.35	14.66	13.62	12.17	11.41	9.34	11.99	14.39	16.28	18.22	17.09	18.60	19.55	18.30	14.54	9.63
BERM LEVEL	14.44	14.43	14.43	14.42	14.41	14.40	14.39	14.39	14.38	14.37	14.36	14.35	14.35	14.34	14.33	14.32	14.31	14.30	14.29	14.28	14.27	14.27	14.26	14.25	14.24												
TOP OF O/M ROAD	15.57	15.56	15.56	15.55	15.54	15.53	15.52	15.52	15.51	15.50	15.49	15.48	15.48	15.47	15.46	15.45	15.44	15.43	15.42	15.41	15.40	15.40	15.39	15.38	15.37												
Max. WATER LEVEL	13.25	13.24	13.24	13.23	13.22	13.21	13.20	13.20	13.19	13.18	13.17	13.16	13.16	13.15	13.14	13.13	13.12	13.11	13.10	13.09	13.08	13.08	13.07	13.06	13.05												
Min. WATER LEVEL AT STAGE I	11.11	11.10	11.10	11.09	11.08	11.07	11.06	11.06	11.05	11.04	11.03	11.02	11.02	11.01	11.00	10.99	10.98	10.97	10.96	10.95	10.94	10.94	10.93	10.92	10.91												
BOTTOM WIDTH	12.00 m																																				
BOTTOM GRADE	8 cm/km = 1/12,500																																				
BOTTOM ELEVATION	9.94	9.93	9.93	9.92	9.91	9.90	9.89	9.89	9.88	9.87	9.86	9.85	9.85	9.84	9.83	9.82	9.81	9.80	9.79	9.78	9.77	9.77	9.76	9.75	9.74												
CURVE ARRANGEMENT	IP-3 IA=0°-30'-12"																																				

NOTES:

1. For the plan and profile of the conveyance canal, see the following drawings.
   1) No.1 Open Canal ·····Dwg. Nos. CCL-101～CCL-104
   2) Box Culvert Conduit····Dwg. Nos. CCL-104～CCL-107
   3) No.2 Open Canal·····Dwg. Nos. CCL-107～CCL-109
2. The location of IP on the canal route is as follows:

Curvature	Distance (m)
IP-3	90,699.72



THE ARAB REPUBLIC OF EGYPT
MINISTRY OF WATER RESOURCES AND IRRIGATION
NORTH SINAI DEVELOPMENT ORGANIZATION

THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE Ⅲ)

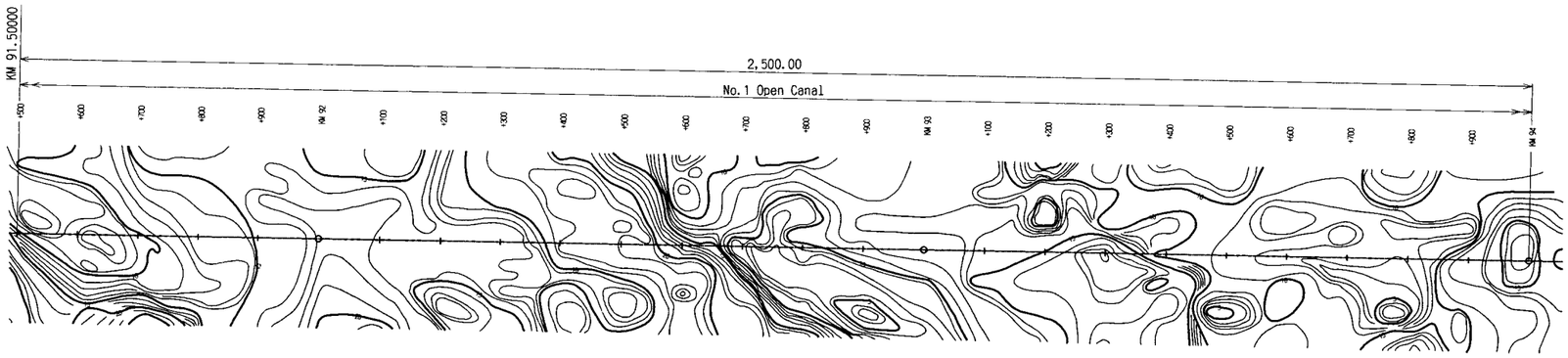
CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBAH CANAL BETWEEN KM 86.500 AND KM 108.466

PLAN AND PROFILE

BETWEEN KM 89.000 AND KM 91.500

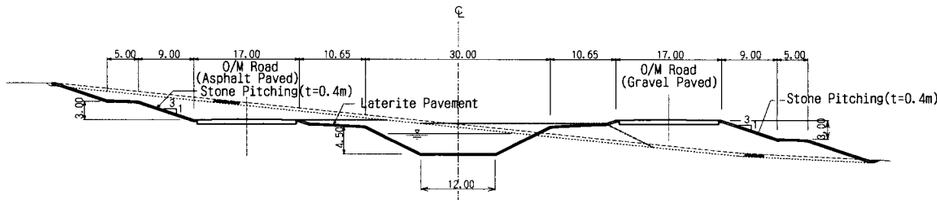
JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
SANYU CONSULTANTS INC, PACIFIC CONSULTANTS INTERNATIOAL

DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO.	CCL-102



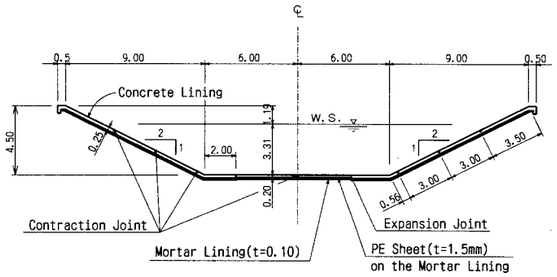
NOTES:

1. For the plan and profile of the conveyance canal, see the following drawings.
   1) No.1 Open Canal ·····Dwg. Nos. CCL-101～CCL-104
   2) Box Culvert Conduit····Dwg. Nos. CCL-104～CCL-107
   3) No.2 Open Canal·····Dwg. Nos. CCL-107～CCL-109



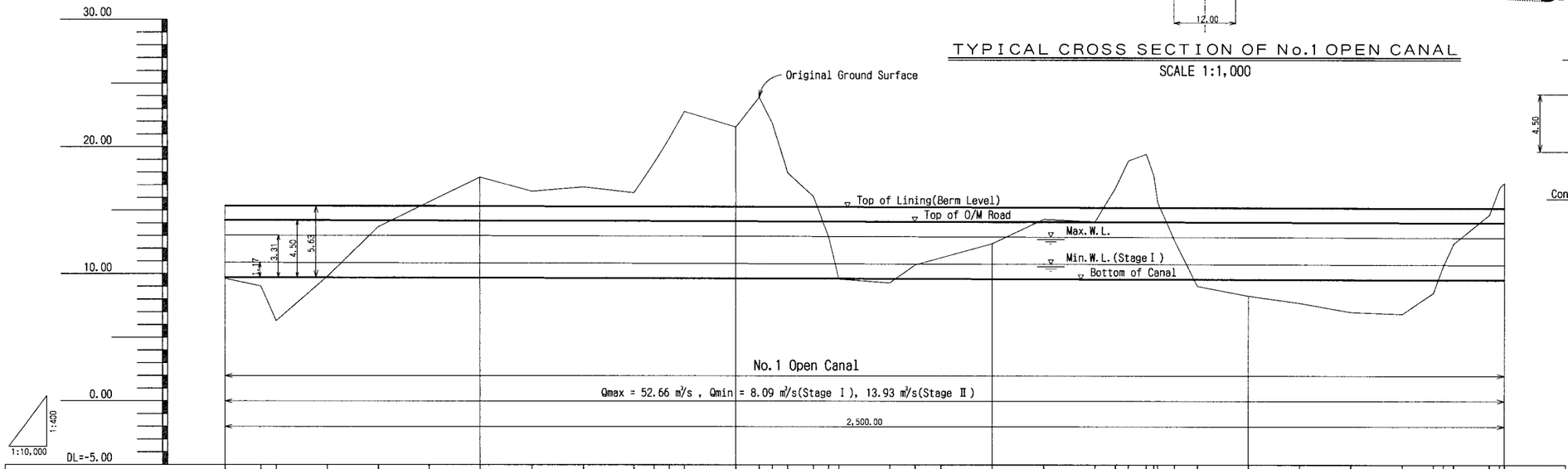
TYPICAL CROSS SECTION OF No.1 OPEN CANAL

SCALE 1:1,000

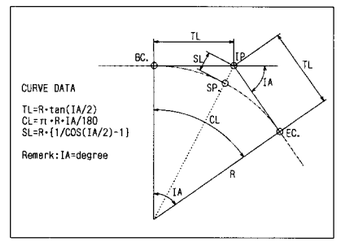


CONCRETE LINED SECTION

SCALE 1:400



DISTANCE (KM)	91.500	91.570	91.600	91.700	91.800	91.900	92.000	92.100	92.200	92.300	92.340	92.370	92.400	92.500	92.545	92.570	92.600	92.650	92.680	92.700	92.800	92.850	92.900	93.000	93.100	93.200	93.240	93.265	93.310	93.322	93.355	93.400	93.500	93.600	93.700	93.800	93.860	93.880	93.900	93.970	93.980	94.000
ORIGINAL GROUND LEVEL	9.63	9.04	6.29	9.79	13.71	15.66	17.63	16.51	16.85	16.39	18.73	20.65	22.79	21.57	23.91	21.88	17.99	16.10	12.90	9.60	9.32	10.74	11.29	12.41	14.32	14.14	16.78	18.93	19.46	15.63	12.64	9.05	8.28	7.72	7.01	6.85	8.51	10.51	12.39	14.68	16.79	17.18
BERM LEVEL	14.24	14.23	14.23	14.22	14.21	14.20	14.19	14.19	14.18	14.17	14.16	14.15	14.15	14.14	14.13	14.12	14.11	14.11	14.10	14.09	14.08	14.07	14.07	14.06	14.05	14.04																
TOP OF O/M ROAD	15.37	15.36	15.36	15.35	15.34	15.33	15.32	15.32	15.31	15.30	15.29	15.28	15.28	15.27	15.26	15.25	15.24	15.24	15.23	15.22	15.21	15.20	15.20	15.19	15.18	15.17																
Max. WATER LEVEL	13.05	13.04	13.04	13.03	13.02	13.01	13.00	13.00	12.99	12.98	12.97	12.96	12.96	12.95	12.94	12.93	12.92	12.92	12.91	12.90	12.89	12.88	12.88	12.87	12.86	12.85																
Min. WATER LEVEL AT STAGE I	10.91	10.90	10.90	10.89	10.88	10.87	10.86	10.86	10.85	10.84	10.83	10.82	10.82	10.81	10.80	10.79	10.78	10.78	10.77	10.76	10.75	10.74	10.74	10.73	10.72	10.71																
BOTTOM WIDTH	12.00 m																																									
BOTTOM GRADE	8 cm/km = 1/12,500																																									
BOTTOM ELEVATION	9.74	9.73	9.73	9.72	9.71	9.70	9.69	9.69	9.68	9.67	9.66	9.65	9.65	9.64	9.63	9.62	9.61	9.61	9.60	9.59	9.58	9.57	9.57	9.56	9.55	9.54																
CURVE ARRANGEMENT																																										



THE ARAB REPUBLIC OF EGYPT
MINISTRY OF WATER RESOURCES AND IRRIGATION
NORTH SINAI DEVELOPMENT ORGANIZATION

THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE Ⅲ)

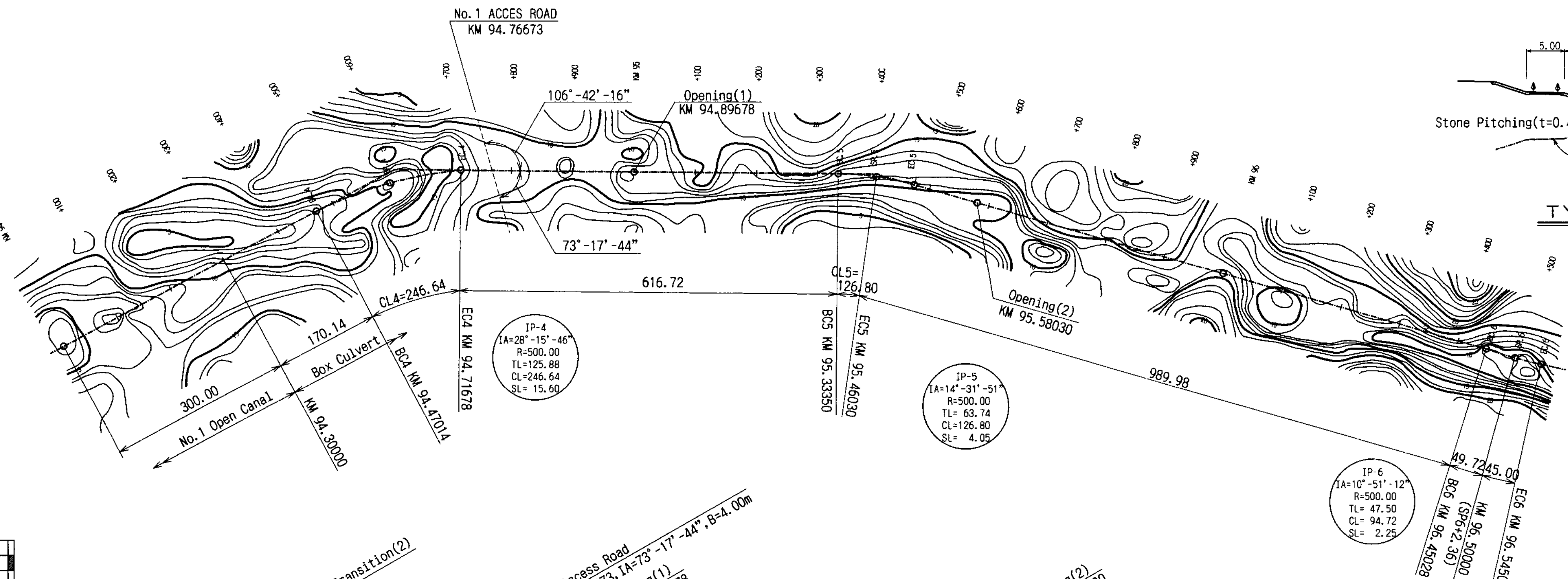
CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBAH CANAL
BETWEEN KM 86.500 AND KM 108.466

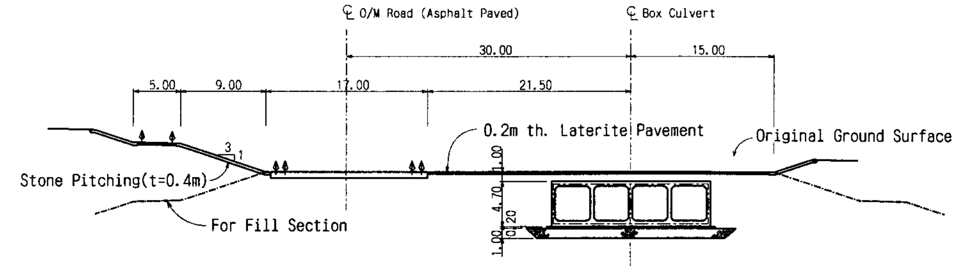
PLAN AND PROFILE

BETWEEN KM 91.500 AND KM 94.000

JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
SANYU CONSULTANTS INC, PACIFIC CONSULTANTS INTERNATIOAL

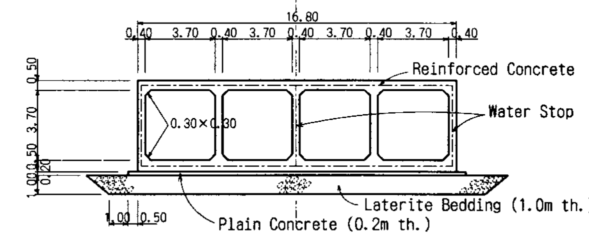
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO.	CCL-103





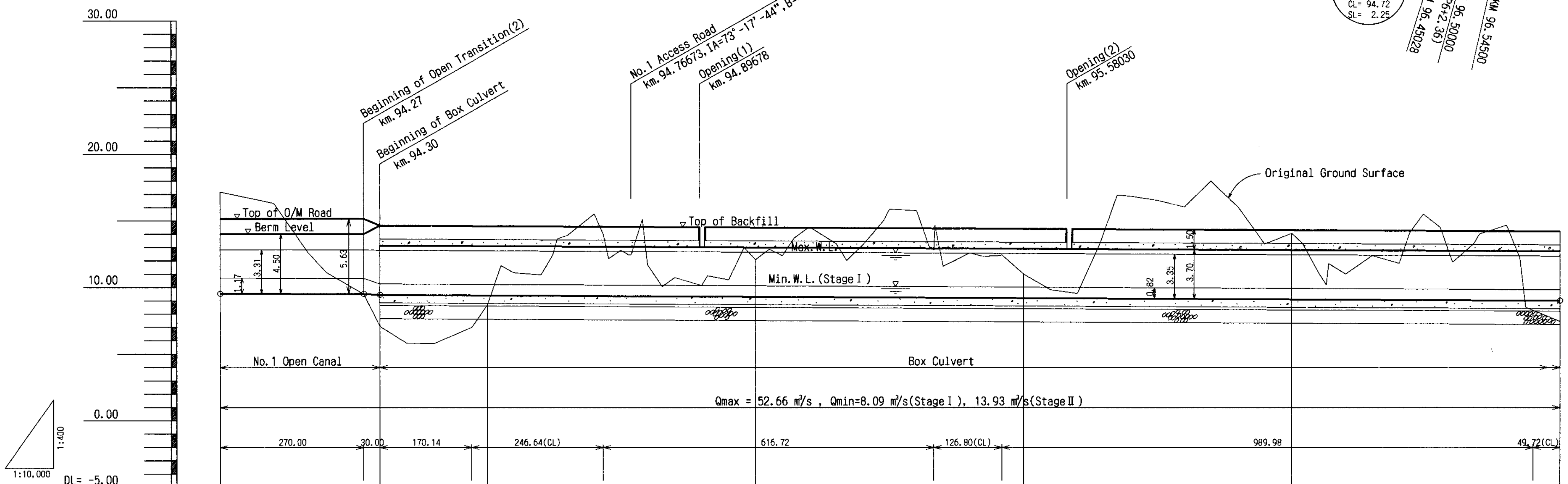
TYPICAL CROSS SECTION OF BOX CULVERT

SCALE = 1:800



FOUR-CELL BOX

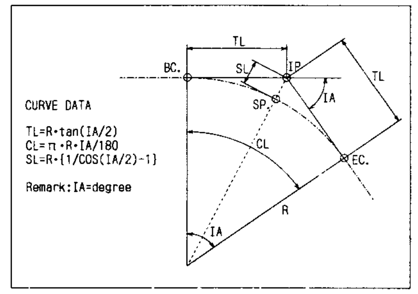
SCALE = 1:400



DISTANCE (KM)	ORIGINAL GROUND SURFACE	TOP OF BACKFILL (BERM LEVEL)	TOP OF O/M ROAD	Max. WATER LEVEL	Min. WATER LEVEL AT STAGE I	BOTTOM ELEVATION
94.000	17.18	14.04	15.17	12.85	10.71	9.54
94.100	16.33	14.03	15.16	12.84	10.70	9.53
94.130	14.66					
94.165	12.63					
94.200	11.12	14.03	15.16	12.84	10.70	9.53
94.270	9.52	14.02	15.15	12.83	10.69	9.52
94.300	7.39	14.65	14.78	12.80	10.27	9.45
94.350	5.80					
94.400	5.48	14.63	14.76	12.78	10.25	9.43
BC-4	7.00	14.62	14.75	12.77	10.24	9.42
94.500	8.72	14.61	14.74	12.76	10.23	9.41
94.525	11.65					
94.543	11.24					
94.550	11.11					
SP-4	11.05					
94.600	10.95	14.59	14.72	12.74	10.21	9.39
94.622	12.45					
94.631	13.66					
94.650	13.92					
94.700	15.53	14.57	14.70	12.72	10.19	9.37
EC-4	14.01	14.57	14.70	12.72	10.19	9.37
94.727	12.17					
94.750	12.80					
94.765	12.45					
Access	12.46					
94.790	15.12					
94.800	11.69	14.55	14.68	12.70	10.17	9.35
94.827	10.08					
94.850	10.75					
94.900	10.16	14.53	14.66	12.68	10.15	9.33
94.911	10.89					
94.950	10.58					
94.979	13.01					
95.000	12.09	14.51	14.64	12.66	10.13	9.31
95.026	12.89					
95.050	12.40					
95.072	13.73					
95.100	14.55	14.49	14.62	12.64	10.11	9.29
95.150	13.30					
95.170	12.03					
95.200	13.21	14.47	14.60	12.62	10.09	9.27
95.239	15.03					
95.250	15.88					
95.300	15.78	14.45	14.58	12.60	10.07	9.25
BC-5	12.81	14.44	14.57	12.59	10.06	9.24
95.335	14.68					
95.350	11.60					
SP-5	12.55					
95.400	12.59	14.43	14.56	12.58	10.05	9.23
95.423	12.35					
95.450	12.37	14.42	14.55	12.57	10.04	9.22
EC-5	12.45					
95.500	11.00	14.41	14.54	12.56	10.03	9.21
95.550	9.84					
95.600	9.57	14.39	14.52	12.54	10.01	9.19
95.642	13.31					
95.674	16.96					
95.700	16.87	14.37	14.50	12.52	9.99	9.17
95.750	16.55					
95.800	16.05	14.35	14.48	12.50	9.97	9.15
95.850	18.00					
95.900	16.08	14.33	14.46	12.48	9.95	9.13
95.950	13.27					
96.000	14.07	14.31	14.44	12.46	9.93	9.11
96.020	13.32					
96.050	11.07					
96.064	10.21					
96.068	11.80					
96.100	11.02	14.29	14.42	12.44	9.91	9.09
96.150	12.39					
96.200	11.81	14.27	14.40	12.42	9.89	9.07
96.220	14.13					
96.245	15.50					
96.277	14.51					
96.300	11.90	14.25	14.38	12.40	9.87	9.05
96.340	13.30					
96.350	14.02					
96.400	14.67	14.23	14.36	12.38	9.85	9.03
96.425	12.25					
96.436	8.51					
BC-6	8.21	14.22	14.35	12.37	9.84	9.02
96.450	8.21					
SP-6	7.48					
96.500	7.44	14.21	14.34	12.36	9.83	9.01

	No. 1 Open Canal	Box Culvert
BOTTOM WIDTH	12m	16m = Four-Cell Box Culvert = 3.7m(cell width)×3.7m(cell height)×4cells
BOTTOM GRADE	8 cm/km = 1/12,500	20 cm/km = 1/5,000

CURVE ARRANGEMENT			
	IP-4, IA=28°15'46", R=500m, TL=125.88m, CL=246.64m, SL=15.60m	IP-5, IA=14°31'51", R=500m, TL=63.74m, CL=126.80m, SL=4.05m	IP6, IA=10°51'12", R=500, TL=47.50m, CL=94.72m, SL=2.25m



NOTES:

1. For the plan and profile of the conveyance canal, see the following drawings.
   1) No.1 Open Canal········Dwg. Nos. CCL-101～CCL-104
   2) Box Culvert Conduit····Dwg. Nos. CCL-104～CCL-107
   3) No.2 Open Canal········Dwg. Nos. CCL-107～CCL-109
2. The location of curvatures on the canal route are as follows:

Curvature	Distance (m)
BC-4	94,470.14
SP-4	94,593.46
EC-4	94,716.78
BC-5	95,333.50
SP-5	95,396.90
EC-5	95,460.30
BC-6	96,450.28
SP-6	96,497.64

THE ARAB REPUBLIC OF EGYPT
MINISTRY OF WATER RESOURCES AND IRRIGATION
NORTH SINAI DEVELOPMENT ORGANIZATION

THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE Ⅲ)

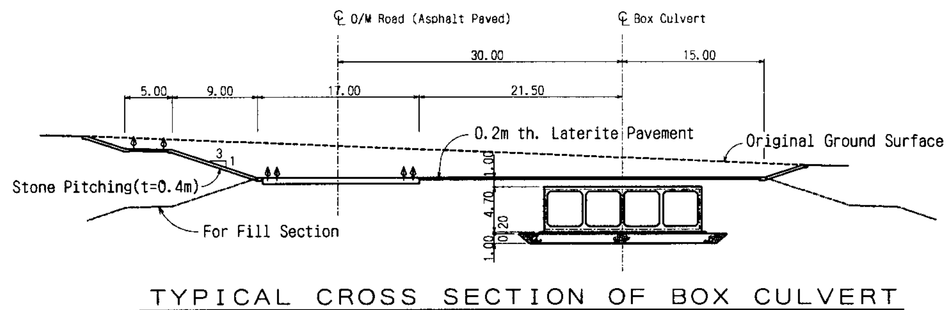
CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBAH CANAL BETWEEN KM 86.500 AND KM 108.466

PLAN AND PROFILE

BETWEEN KM 94.000 AND KM 96.500

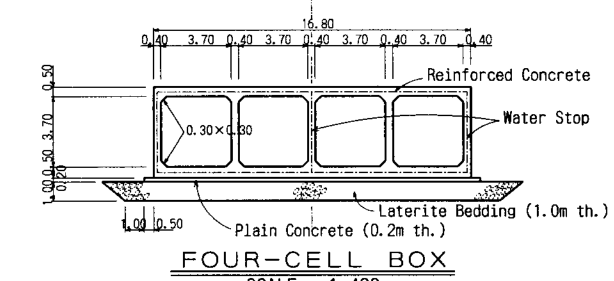
JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
SANYU CONSULTANTS INC. PACIFIC CONSULTANTS INTERNATIOAL

DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO.	CCL-104



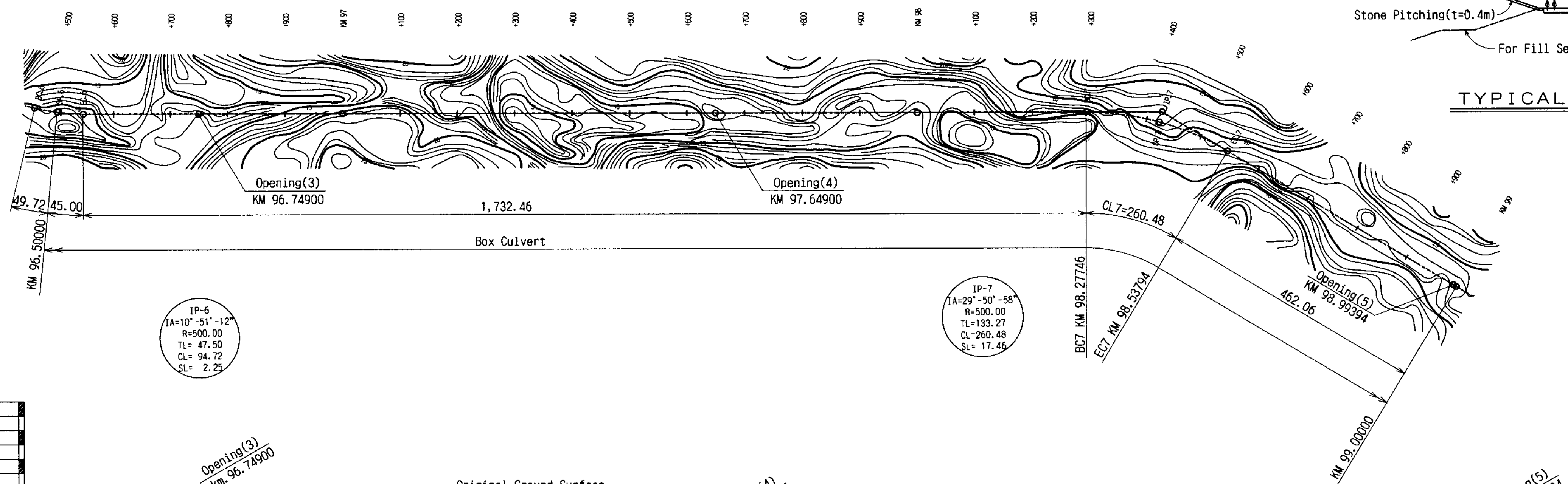
TYPICAL CROSS SECTION OF BOX CULVERT

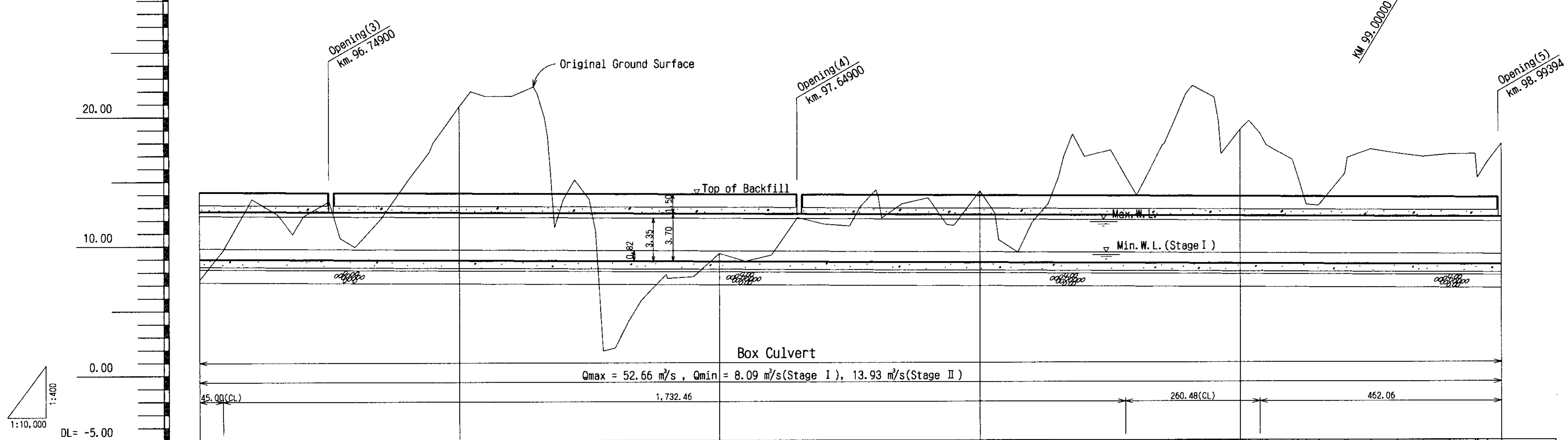
SCALE = 1:800



FOUR-CELL BOX

SCALE = 1:400



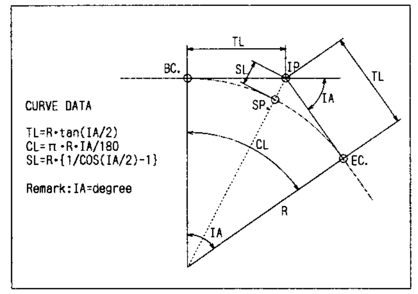


DISTANCE (KM)	ORIGINAL GROUND LEVEL	TOP OF BACKFILL (BERM LEVEL)	TOP OF O/M ROAD	Max. WATER LEVEL	Min. WATER LEVEL AT STAGE I	BOTTOM ELEVATION
96.500	7.44	14.21	14.34	12.36	9.83	9.01
EC-6	9.70	14.20	14.33	12.35	9.82	9.00
96.550	10.09					
96.600	13.67	14.19	14.32	12.34	9.81	8.99
96.650	12.47					
96.679	10.95					
96.700	12.35	14.17	14.30	12.32	9.79	8.97
96.750	13.50					
96.771	10.65					
96.800	10.11	14.15	14.28	12.30	9.77	8.95
96.850	12.13					
96.900	15.01	14.13	14.26	12.28	9.75	8.93
96.943	17.31					
96.950	18.03					
97.000	20.83	14.11	14.24	12.26	9.73	8.91
97.022	21.98					
97.050	21.60					
97.100	21.60	14.09	14.22	12.24	9.71	8.89
97.143	22.33					
97.150	21.83					
97.164	19.92					
97.170	18.47					
97.183	11.46					
97.200	13.62	14.07	14.20	12.22	9.69	8.87
97.222	15.14					
97.250	13.66					
97.262	11.18					
97.277	1.93					
97.300	2.15	14.05	14.18	12.20	9.67	8.85
97.326	4.24					
97.350	5.80					
97.398	7.83					
97.400	7.51	14.03	14.16	12.18	9.65	8.83
97.450	7.63					
97.500	9.43	14.01	14.14	12.16	9.63	8.81
97.550	8.82					
97.600	9.30	13.99	14.12	12.14	9.61	8.79
97.650	12.20					
97.700	11.70	13.97	14.10	12.12	9.59	8.77
97.750	11.55					
97.770	13.06					
97.800	14.34	13.95	14.08	12.10	9.57	8.75
97.804	13.87					
97.811	12.15					
97.850	13.25					
97.900	13.72	13.93	14.06	12.08	9.55	8.73
97.936	11.65					
97.950	11.58					
98.000	14.24	13.91	14.04	12.06	9.53	8.71
98.029	12.52					
98.036	10.47					
98.073	9.50					
98.100	11.81	13.89	14.02	12.04	9.51	8.69
98.131	13.24					
98.150	15.29					
98.160	16.89					
98.177	18.63					
98.200	16.88	13.87	14.00	12.02	9.49	8.67
98.250	17.39					
BC-7	15.35	13.85	13.98	12.00	9.47	8.65
98.300	13.89	13.85	13.98	12.00	9.47	8.65
98.350	17.79					
98.353	17.85					
98.394	21.65					
98.400	21.99	13.83	13.96	11.98	9.45	8.63
SP-7	22.34					
98.450	21.45					
98.458	19.61					
98.463	17.09					
98.500	18.96	13.81	13.94	11.96	9.43	8.61
98.517	19.65					
EC-7	18.66	13.80	13.93	11.95	9.42	8.60
98.550	17.77					
98.600	16.62	13.79	13.92	11.94	9.41	8.59
98.610	15.36					
98.626	13.17					
98.650	13.09					
98.700	15.54	13.77	13.90	11.92	9.39	8.57
98.705	16.78					
98.750	17.44					
98.800	17.11	13.75	13.88	11.90	9.37	8.55
98.850	16.84					
98.900	17.03	13.73	13.86	11.88	9.35	8.53
98.950	17.07					
98.954	15.23					
98.973	16.42					
99.000	17.87	13.71	13.84	11.86	9.33	8.51

BOTTOM WIDTH: 16m = Four-Cell Box Culvert = 3.7m(cell width)×3.7m(cell height)×4cells

BOTTOM GRADE: 20 cm/km = 1/5,000

CURVE ARRANGEMENT: IP6, IA=10 51' 12" R=500, TL=47.50m, CL=94.72m, SL=2.25m; IP7, IA=29 50' 58", R=500, TL=133.27m, CL=260.48m, SL=17.46m



NOTES:

1. For the plan and profile of the conveyance canal, see the following drawings.
   1) No.1 Open Canal・・・・・・・・Dwg. Nos. CCL-101～CCL-104
   2) Box Culvert Conduit・・・・Dwg. Nos. CCL-104～CCL-107
   3) No.2 Open Canal・・・・・・・・Dwg. Nos. CCL-107～CCL-109

2. The location of curvatures on the canal route are as follows:

Principal peg	Distance (M)
EC-6	96,545.00
BC-7	98,277.46
SP-7	98,407.70
EC-7	98,537.94

THE ARAB REPUBLIC OF EGYPT
MINISTRY OF WATER RESOURCES AND IRRIGATION
NORTH SINAI DEVELOPMENT ORGANIZATION

THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE Ⅲ)

CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBAH CANAL BETWEEN KM 86.500 AND KM 108.466

PLAN AND PROFILE
BETWEEN KM 96.500 AND KM 99.000

JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
SANYU CONSULTANTS INC. PACIFIC CONSULTANTS INTERNATIOAL

DESIGNED	
TRACED	
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DRAWING NO.	CCL-105