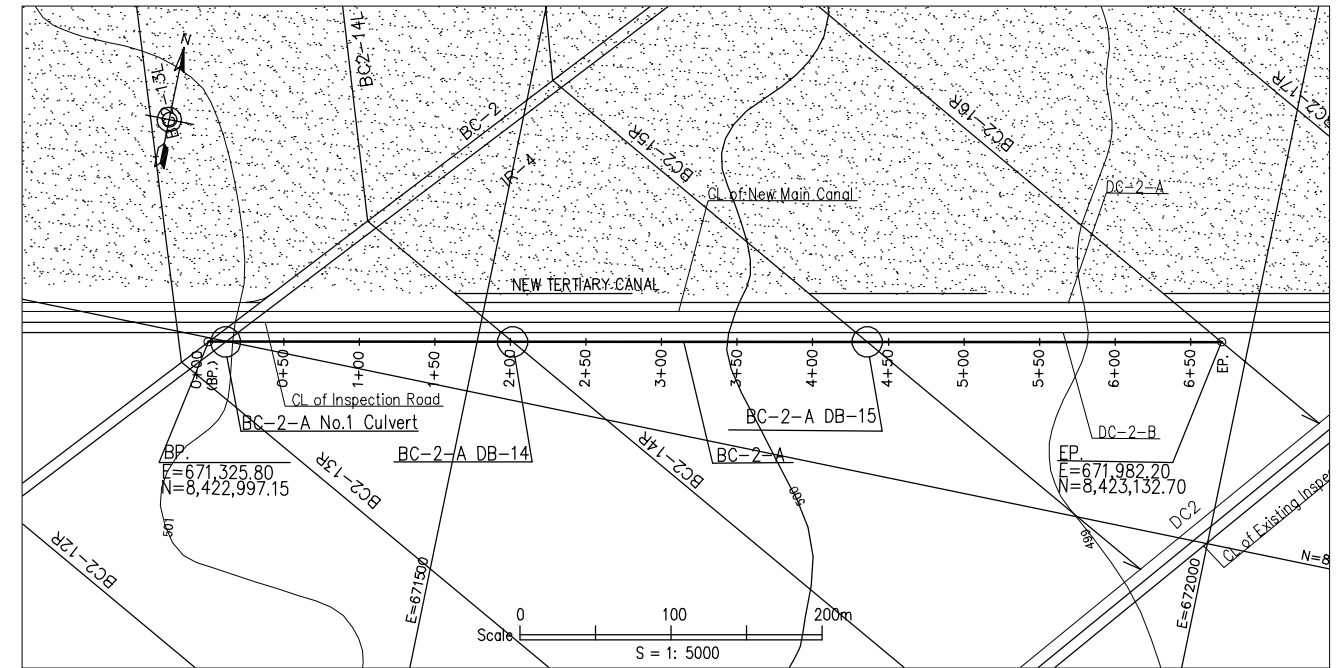
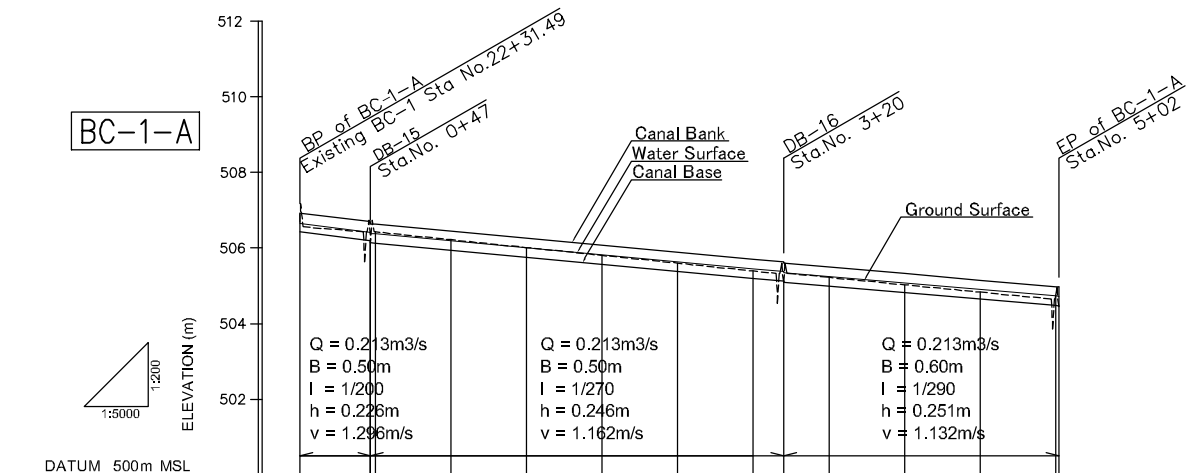


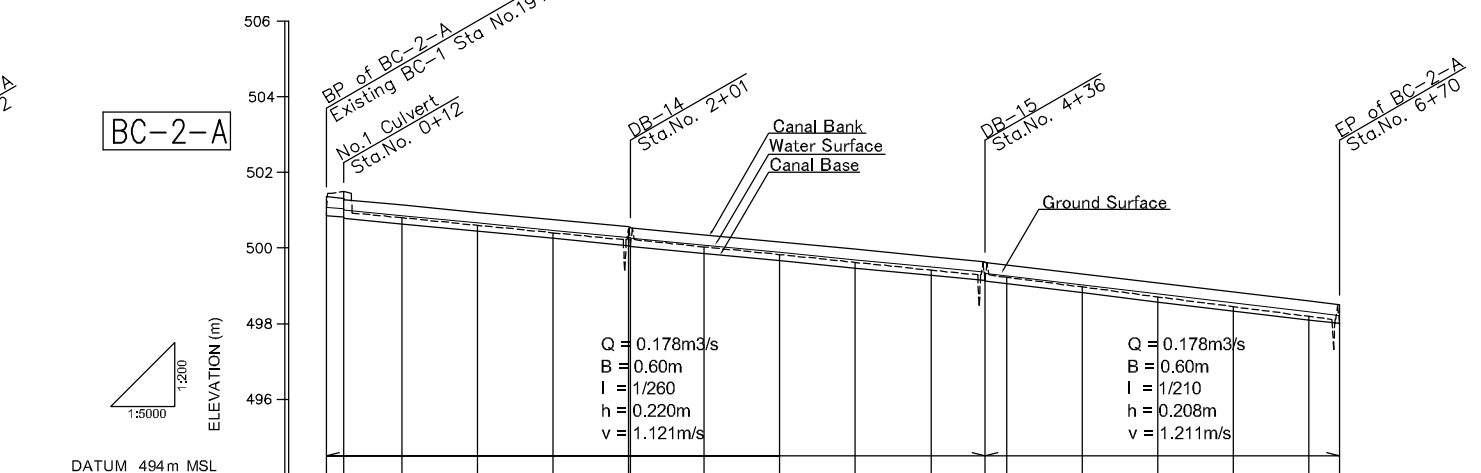
PLAN of BC-1-A



PLAN of BC-2-A



PROFILE of BC-1-A

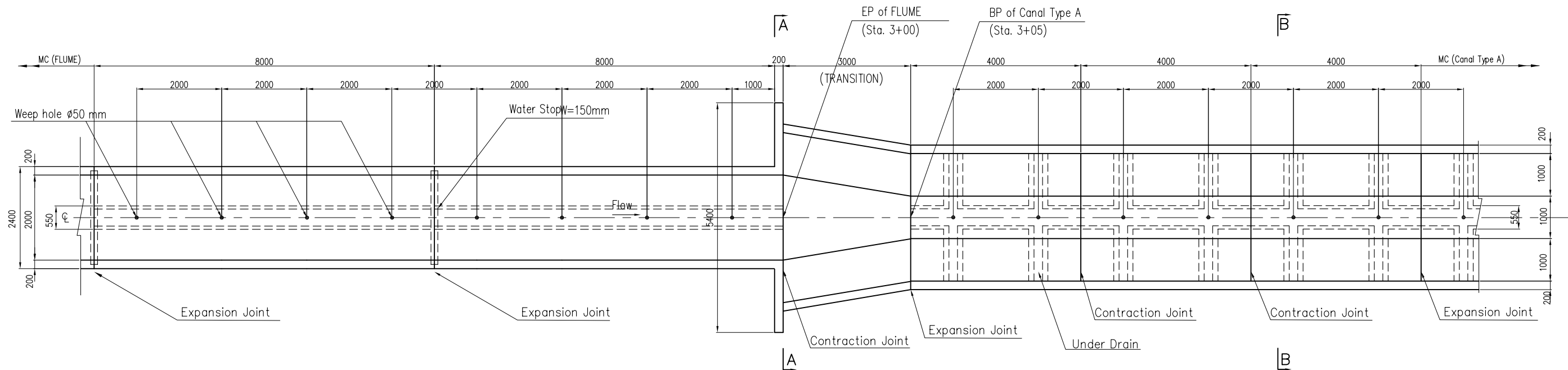


PROFILE of BC-2-A

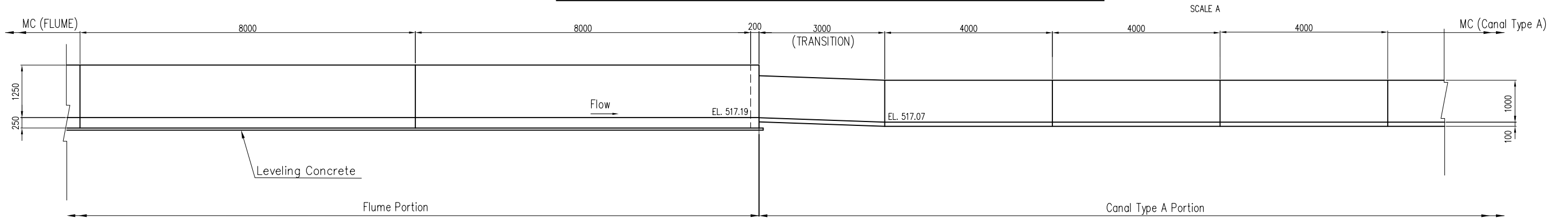
CANAL BANK ELEVATION	506.93	506.70	506.64	506.63	506.44	506.26	506.07	505.89	505.70	505.45	505.63	505.60	505.50	505.32	505.15	504.98
WATER SURFACE ELEVATION	506.66	506.42	506.39	506.37	506.19	506.00	505.82	505.63	505.45	505.37	505.35	505.25	505.08	504.90	504.73	504.72
CANAL BASE ELEVATION	506.43	506.20	506.14	506.13	505.94	505.76	505.57	505.39	505.20	505.13	505.10	505.00	504.82	504.65	504.48	504.47
GROUND SURFACE ELEVATION	506.68	506.14	506.43	506.43	506.22	506.01	505.81	505.60	505.39	505.10	505.10	505.22	505.03	504.83	504.75	504.45
ACCUMULATED DISTANCE	0.00	46.84	50.00	50.00	100.00	150.00	200.00	250.00	300.00	319.88	339.88	350.00	400.00	450.00	500.00	502.00
DISTANCE	0.00	46.84	3.16	50.00	50.00	50.00	50.00	50.00	50.00	18.00	30.02	50.00	50.00	50.00	50.00	50.00
STATION No.	0+00	0+47	0+50	1+00	1+50	2+00	2+50	3+00	3+20	3+50	4+00	4+50	5+00	5+02		

CANAL BANK ELEVATION	501.36	501.32	501.29	501.14	500.95	500.75	500.56	500.54	500.35	500.16	499.97	499.78	499.64	499.55	499.31	499.08
WATER SURFACE ELEVATION	501.08	501.04	501.01	500.86	500.67	500.47	500.28	500.26	500.07	499.88	499.69	499.50	499.36	499.26	499.02	498.78
CANAL BASE ELEVATION	500.86	500.82	500.79	500.64	500.45	500.25	500.06	500.04	499.85	499.66	499.47	499.28	499.14	499.05	498.81	498.58
GROUND SURFACE ELEVATION	500.86	501.49	501.49	500.80	500.60	500.40	500.50	500.04	500.03	499.83	499.62	499.42	499.12	499.23	498.97	498.71
ACCUMULATED DISTANCE	0.00	11.58	50.00	100.00	150.00	200.00	201.35	250.00	300.00	350.00	400.00	435.80	450.00	500.00	550.00	600.00
DISTANCE	0.00	11.58	38.42	50.00	50.00	50.00	0.00	48.65	50.00	30.02	50.00	35.80	14.20	50.00	50.00	50.00
STATION No.	0+00	0+12	0+50	1+00	1+50	2+00	2+01	2+50	3+00	3+50	4+00	4+36	4+50	5+00	5+50	6+00

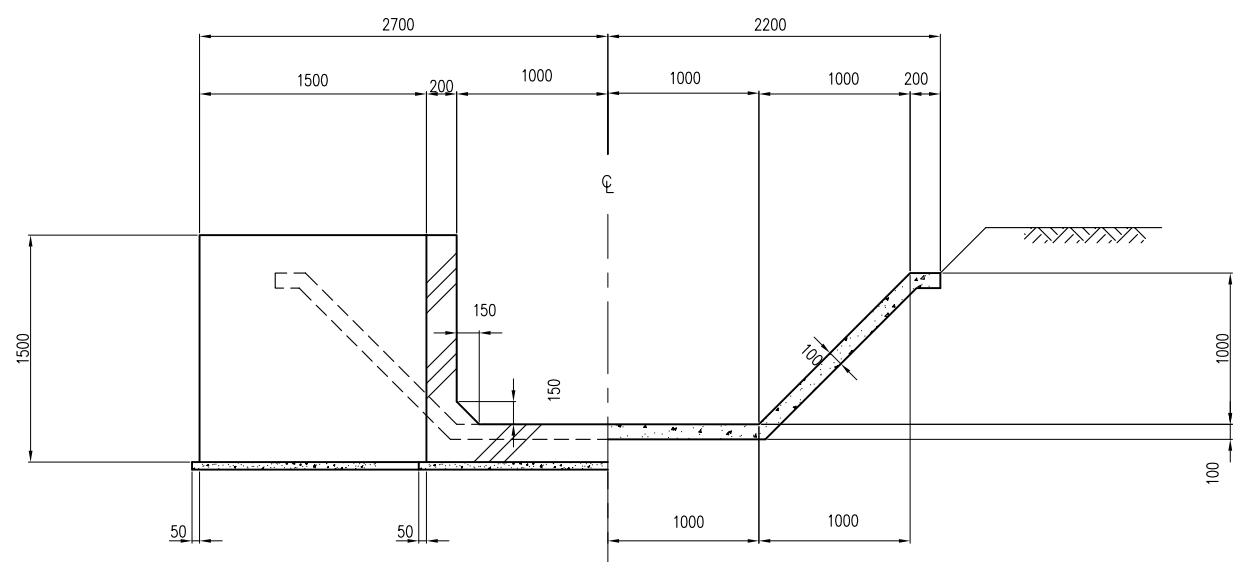
THE REPUBLIC OF MALAWI  
 THE PROJECT FOR REHABILITATION OF  
 BWANJE VALLEY IRRIGATION SYSTEM  
 TITLE OF DRAWING  
 PLAN AND PROFILE OF BC-1-A, 2-A  
 FOR 210HA AREA  
 DRAWING NO. ID-12  
 NIPPON KOEI CO., LTD.



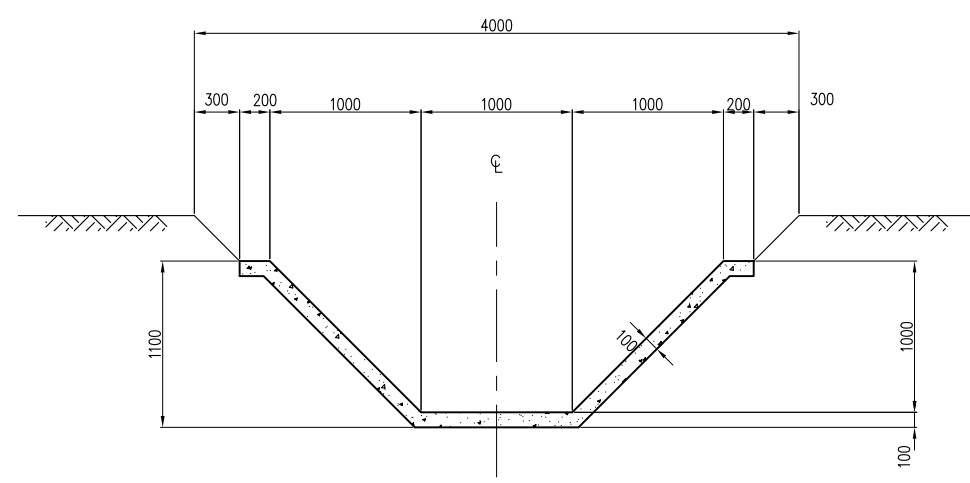
PLAN OF TRANSITION BETWEEN FLUME AND CANAL TYPE A



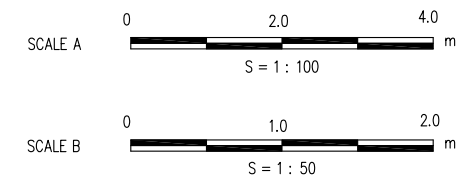
PROFILE



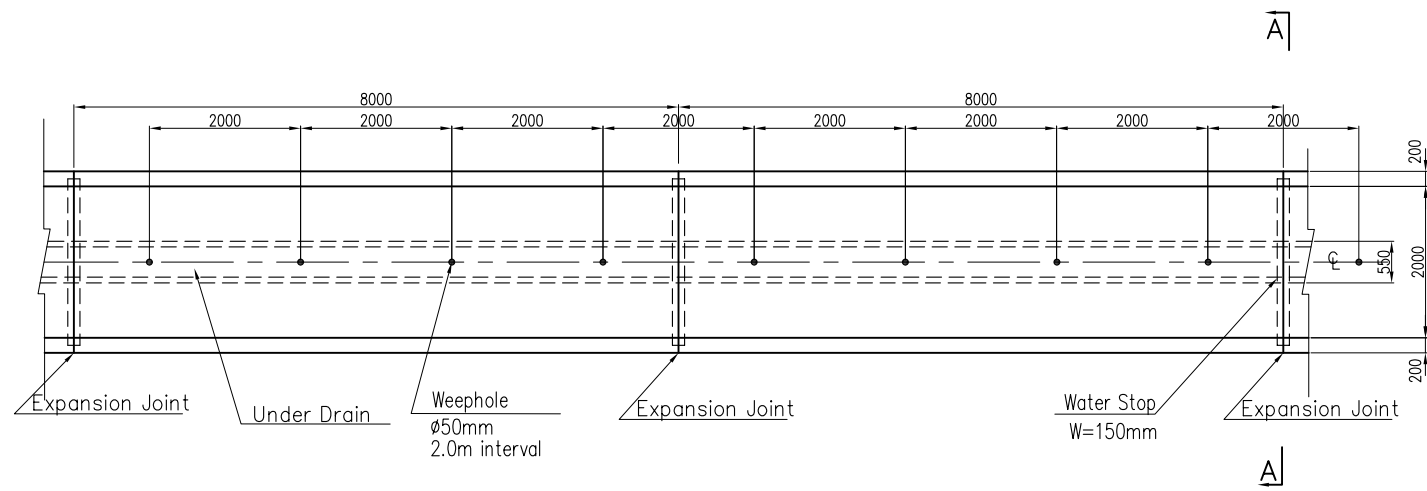
SECTION A-A  
SCALE B



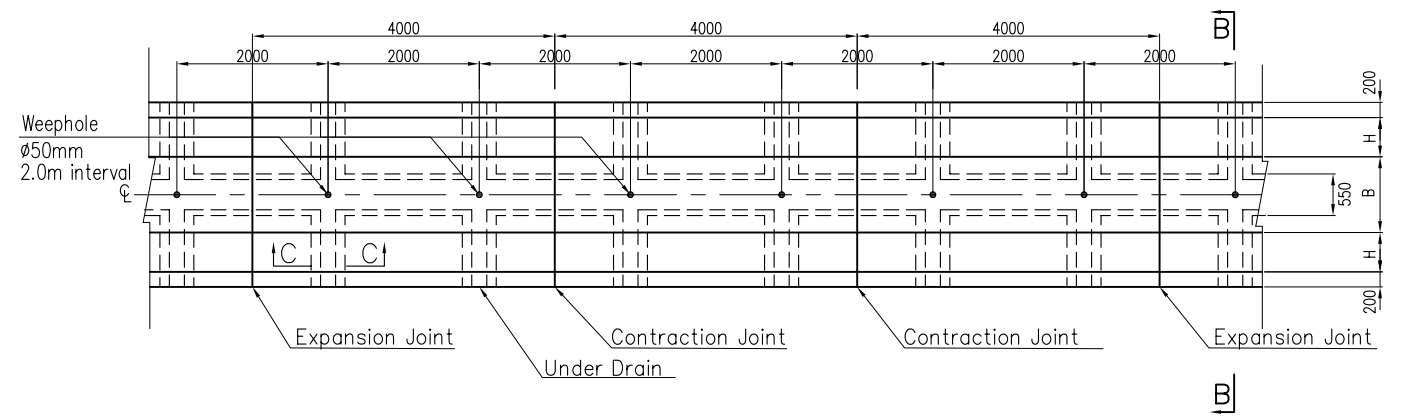
SECTION B-B  
SCALE B



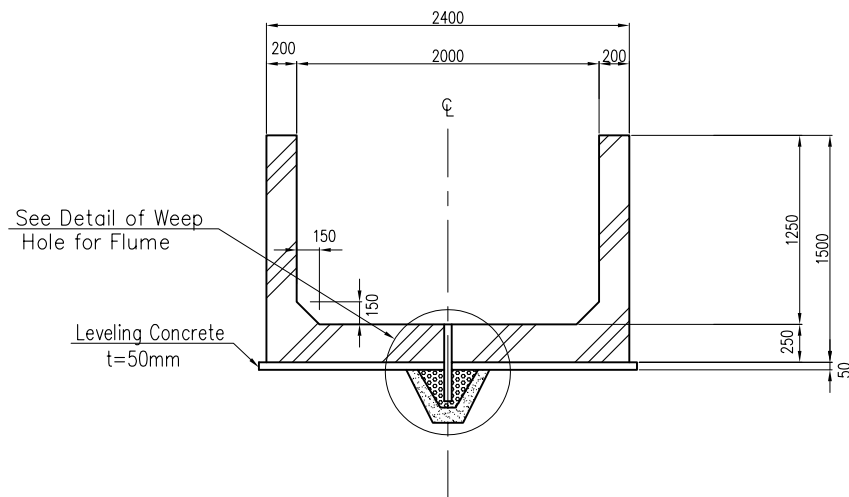
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING FLUME AND CANAL CONNECTION	
DRAWING NO.	ID-13
NIPPON KOEI CO., LTD.	



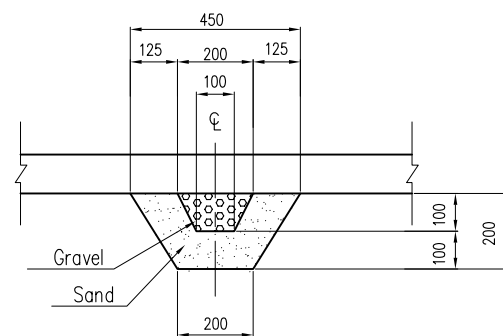
PLAN FOR FLUME  
SCALE A



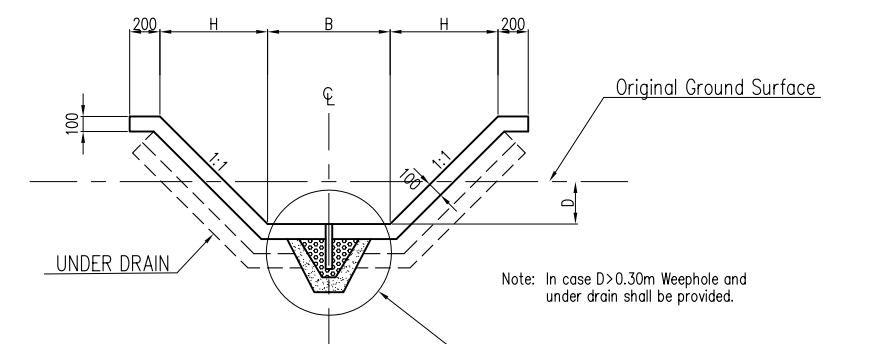
PLAN FOR LINING  
SCALE A



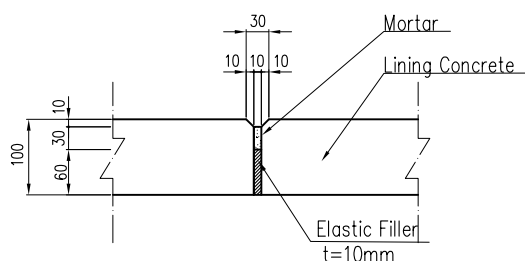
SECTION A-A  
SCALE B



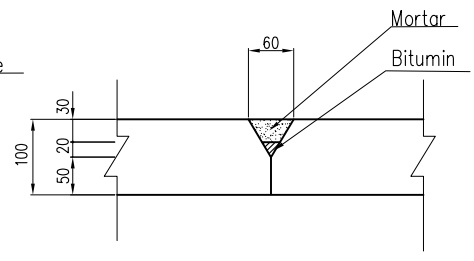
SECTION C-C  
SCALE C



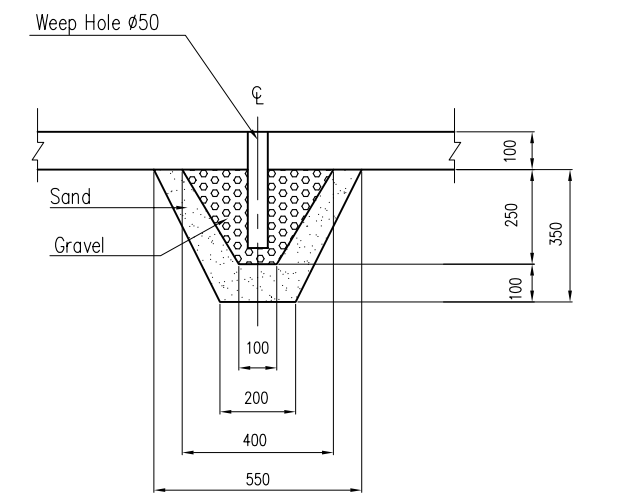
SECTION B-B  
SCALE B



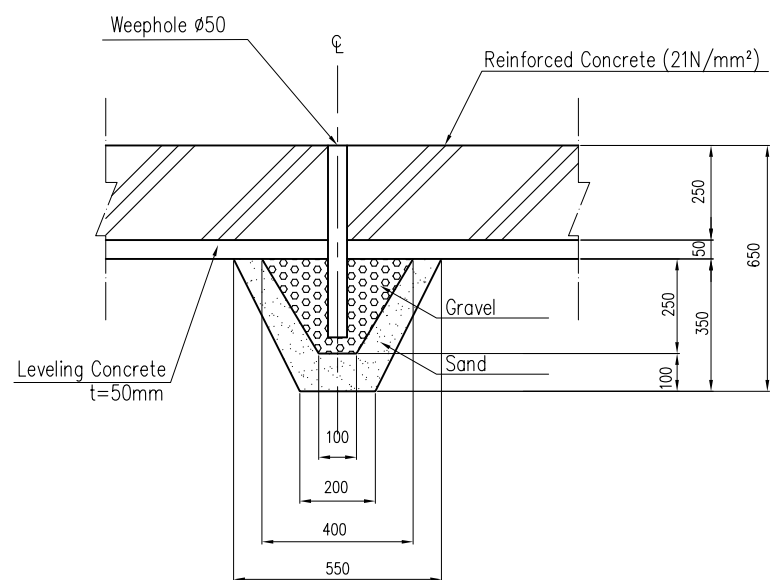
DETAIL OF EXPANSION JOINT FOR LINING  
SCALE D



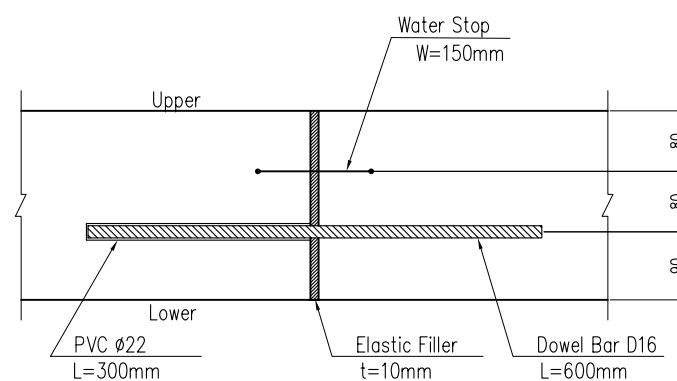
DETAIL OF CONTRACTION JOINT FOR LINING  
SCALE D



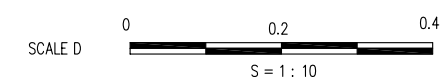
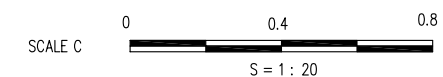
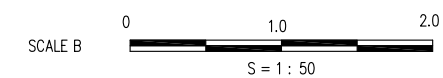
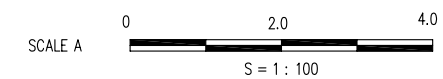
DETAIL OF WEEP HOLE FOR LINING  
SCALE C



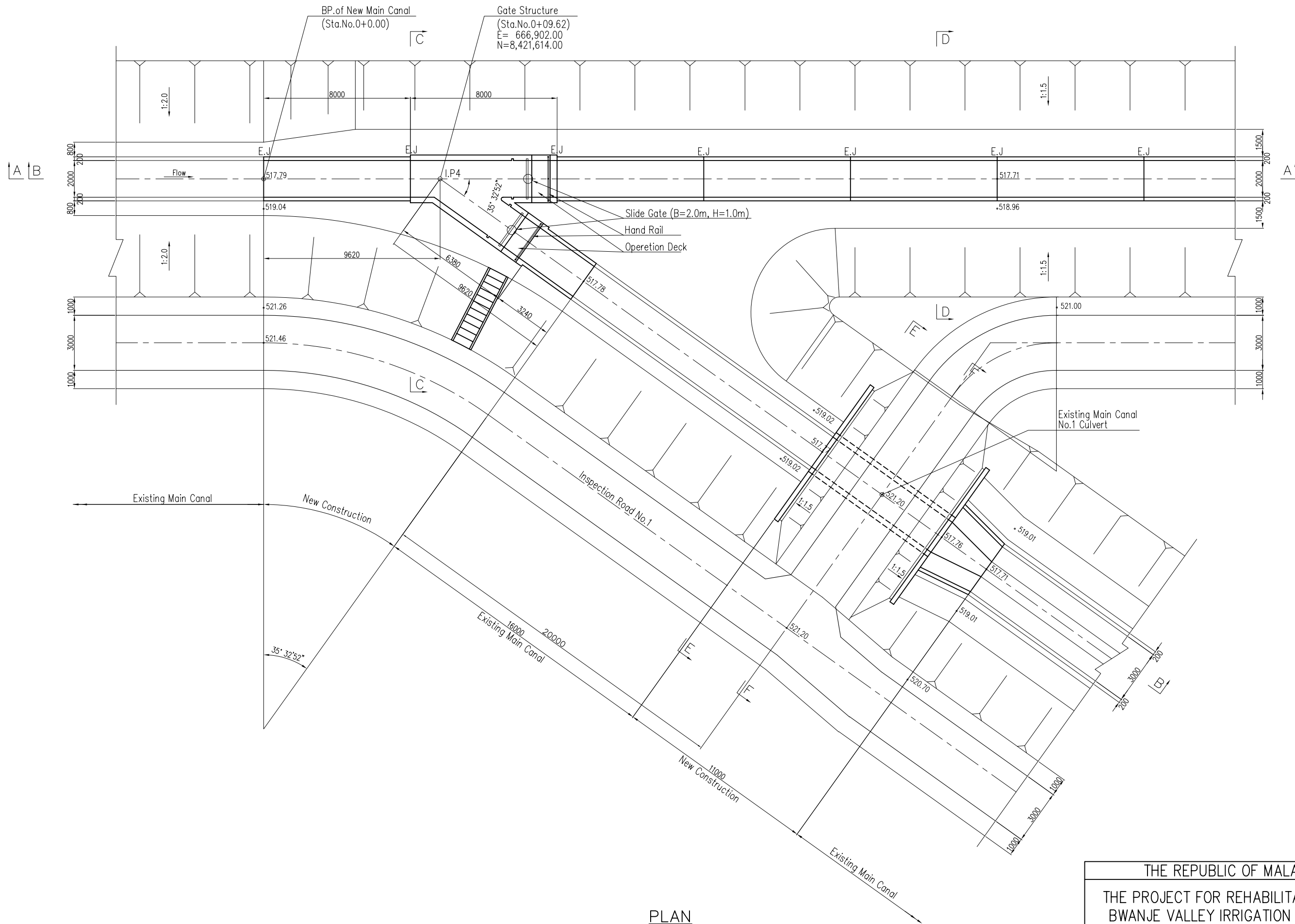
DETAIL OF WEEP HOLE FOR FLUME  
SCALE C



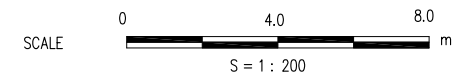
DETAIL OF EXPANSION JOINT FOR FLUME  
SCALE D



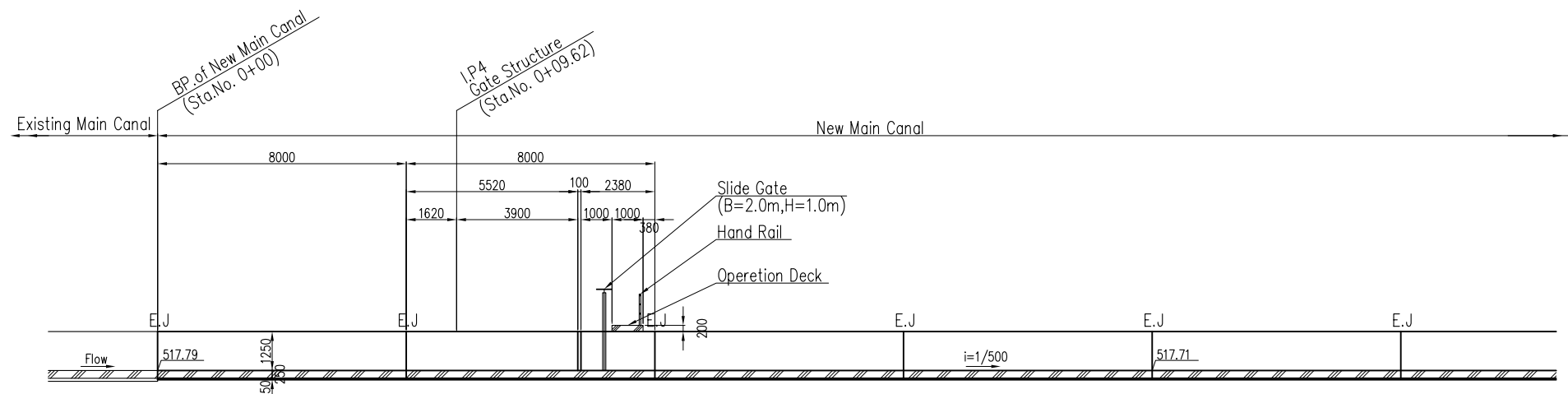
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING UNDER DRAIN AND JOINT FOR FLUME AND LINING CANAL	
DRAWING NO.	ID-14
NIPPON KOEI CO., LTD.	



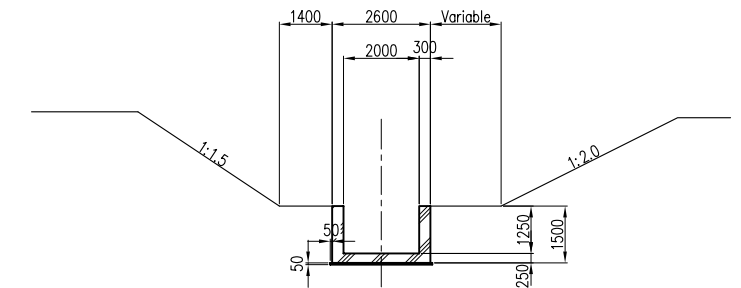
PLAN



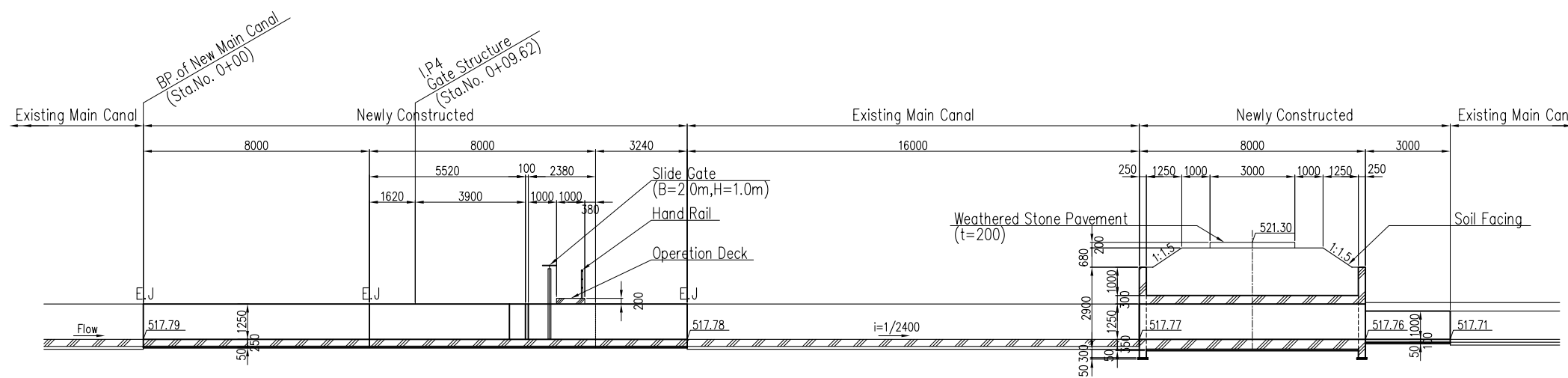
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
GATE STRUCTURE (1/2)	
DRAWING NO.	ID-15
NIPPON KOEI CO., LTD.	



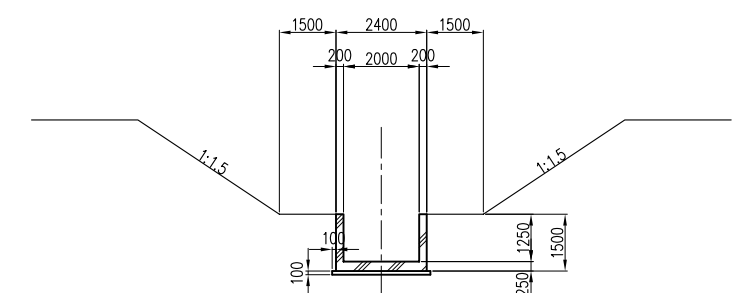
SECTION A-A



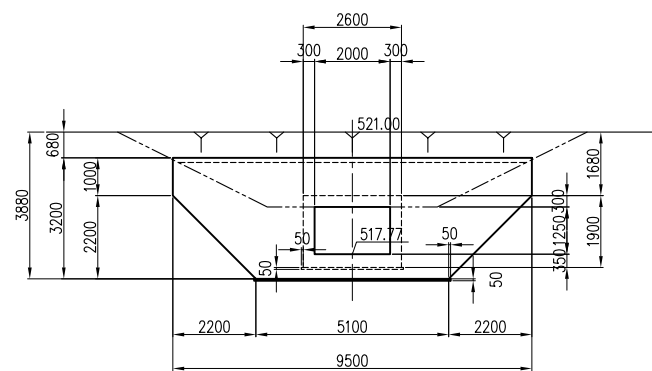
SECTION C-C



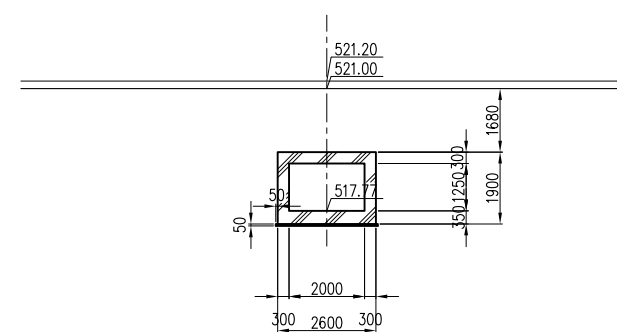
SECTION B-B



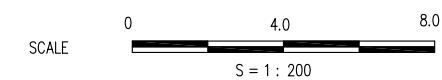
SECTION D-D



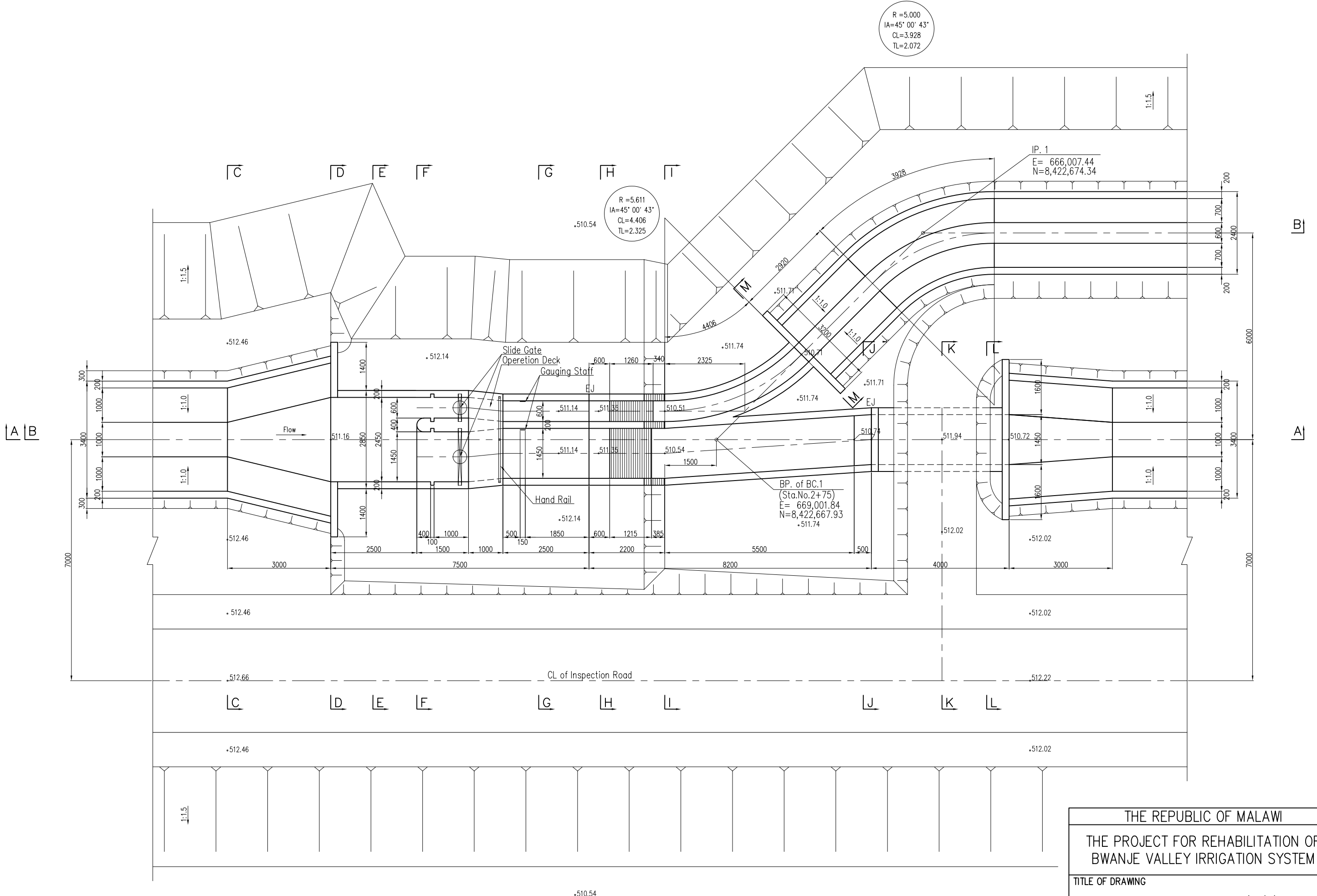
SECTION E-E



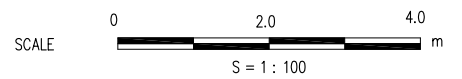
SECTION F-F



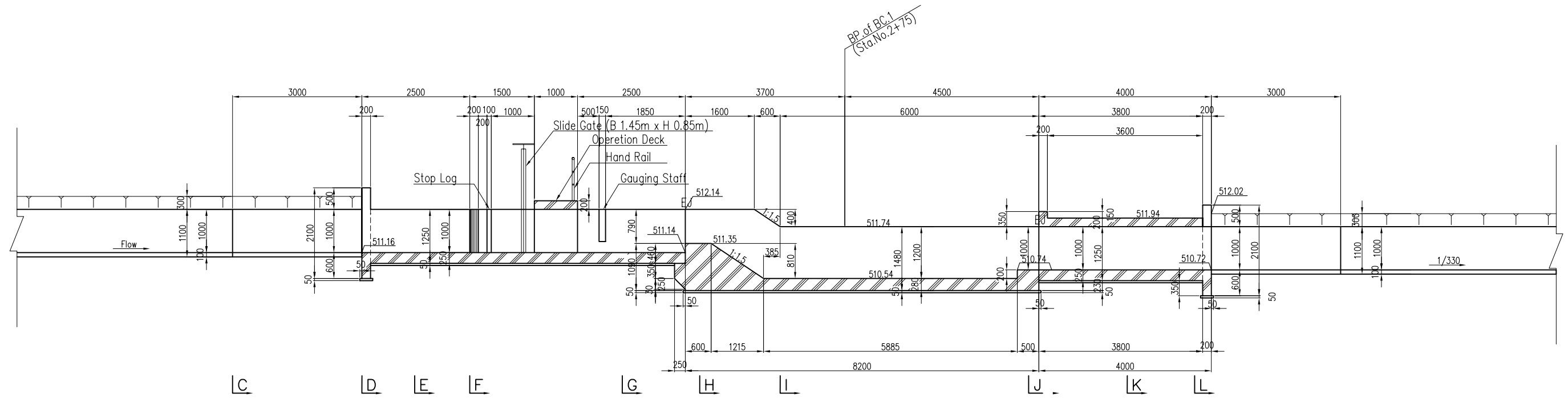
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING GATE STRUCTURE (2/2)	
DRAWING NO.	ID-16
NIPPON KOEI CO., LTD.	



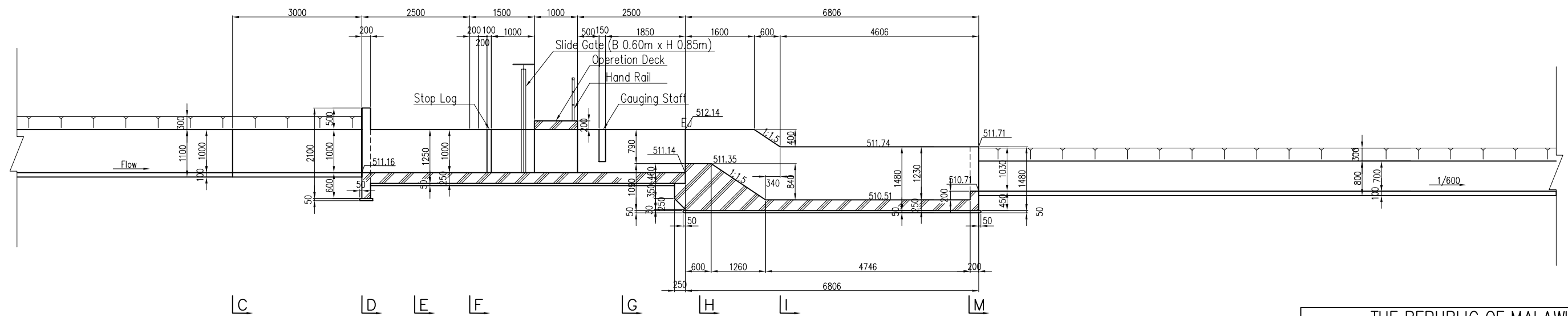
PLAN



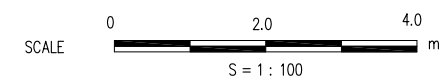
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
NO.1 BIFURCATION (1/4)	
DRAWING NO.	ID-17
NIPPON KOEI CO., LTD.	



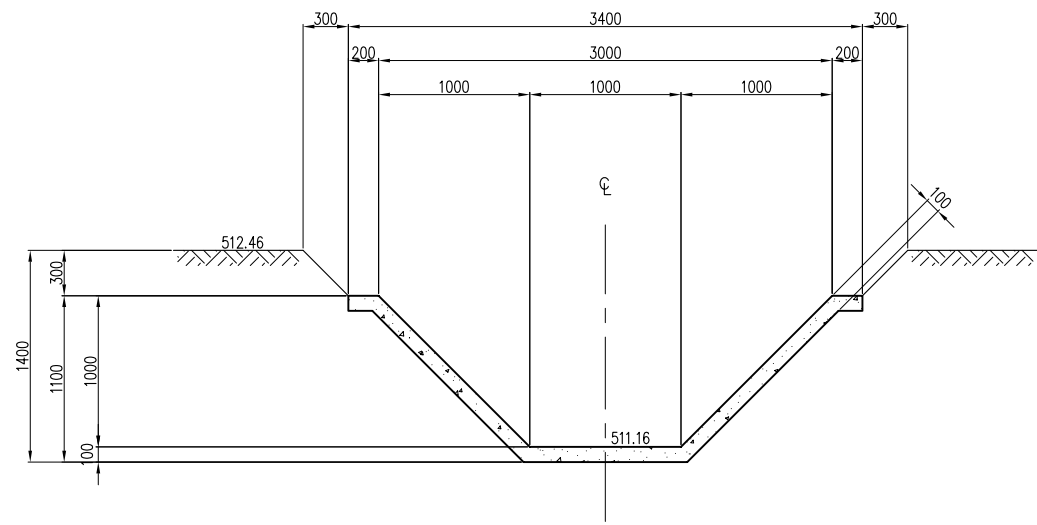
SECTION A-A



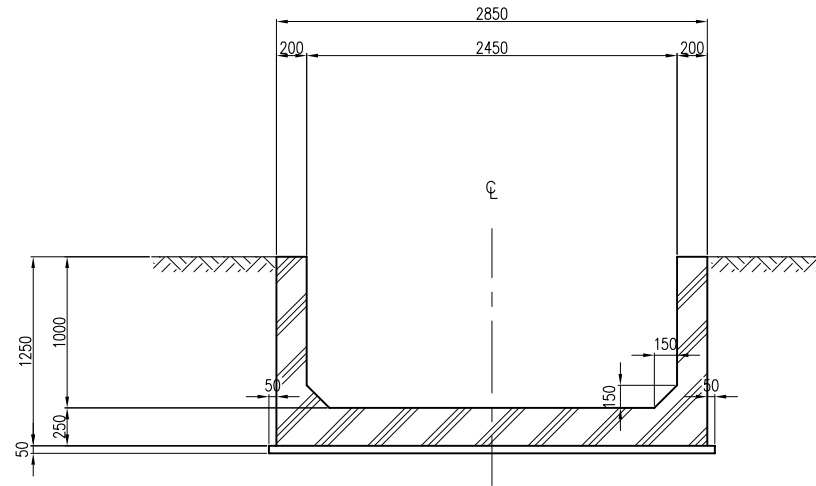
SECTION B-B



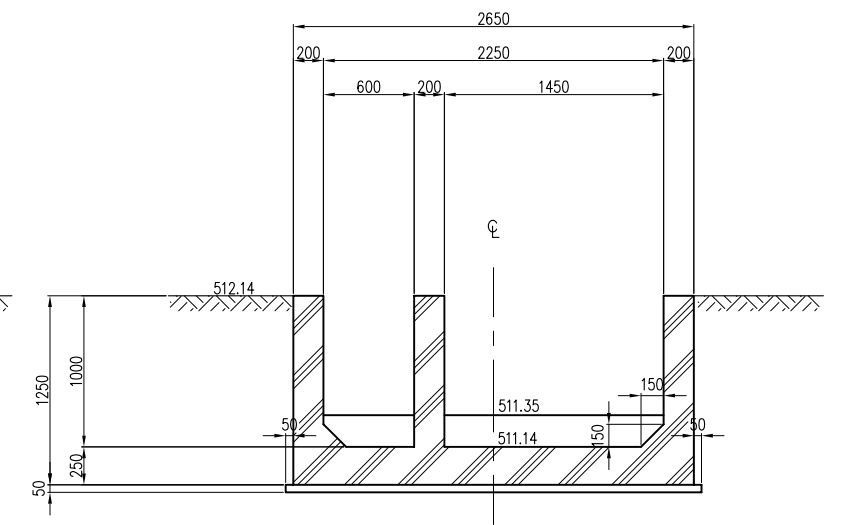
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
NO.1 BIFURCATION (2/4)	
DRAWING NO.	ID-18
NIPPON KOEI CO., LTD.	



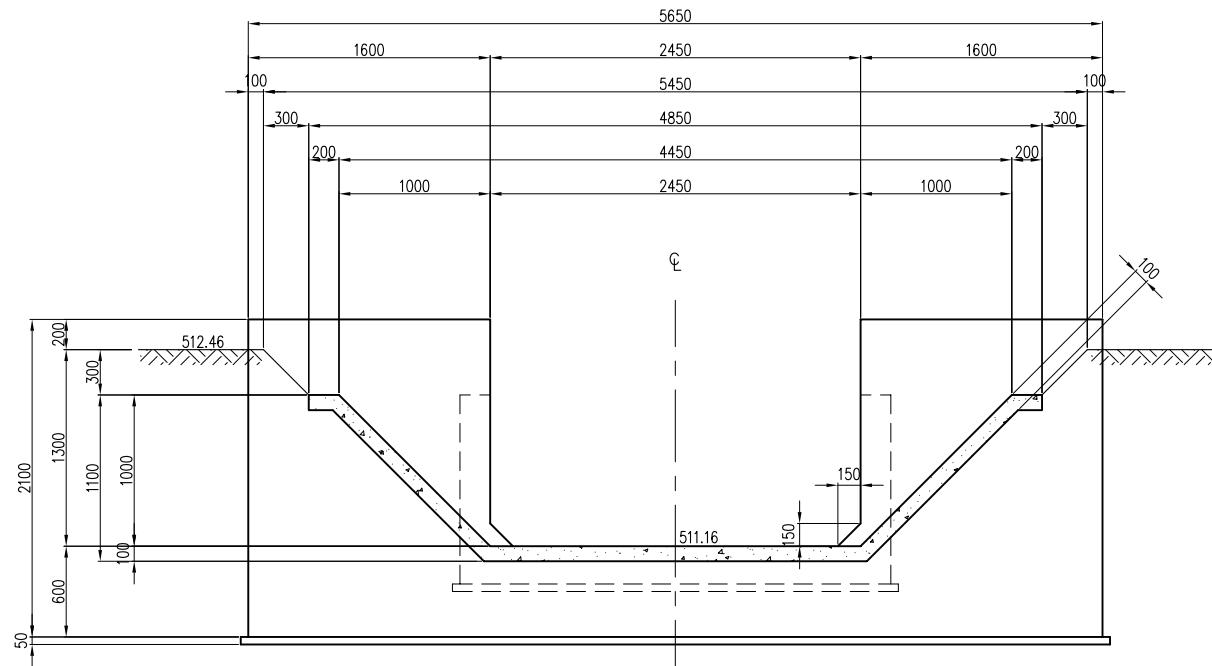
SECTION C-C



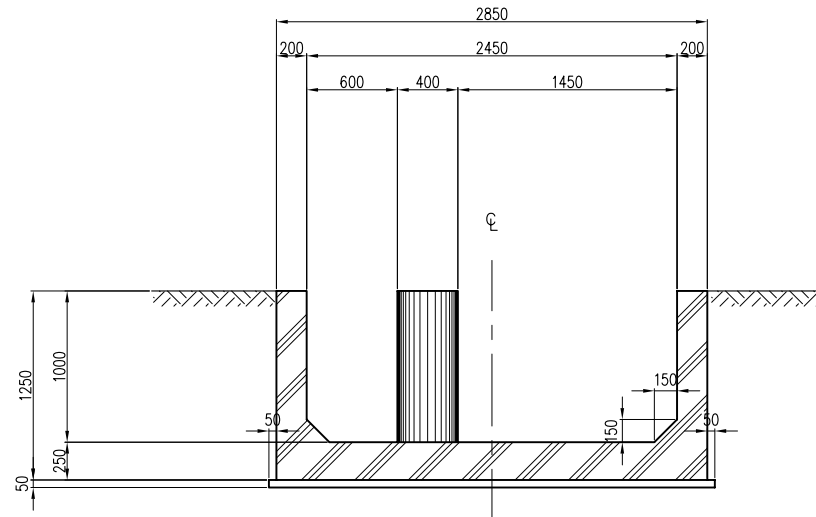
SECTION E-E



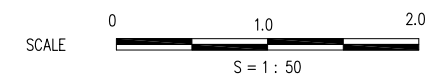
SECTION G-G



SECTION D-D

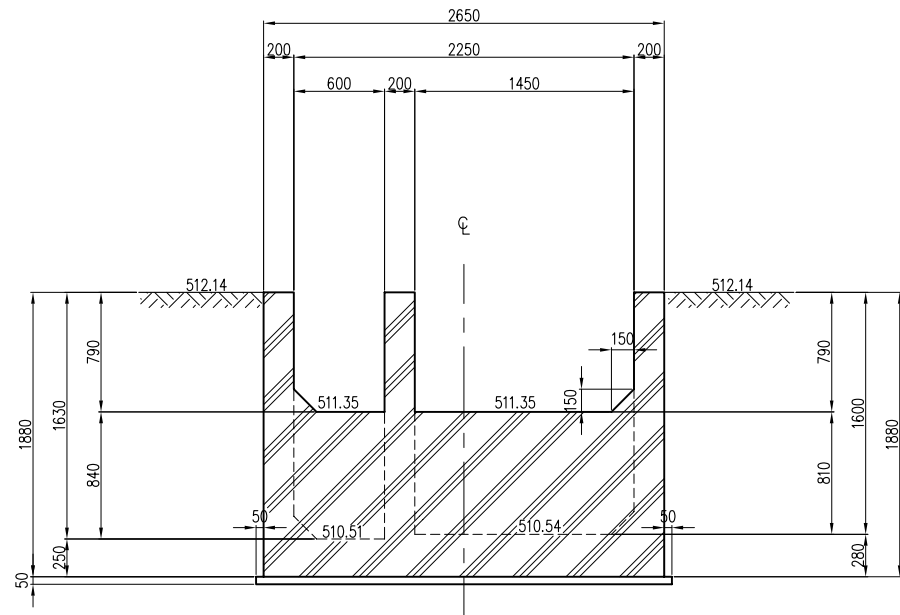


SECTION F-F

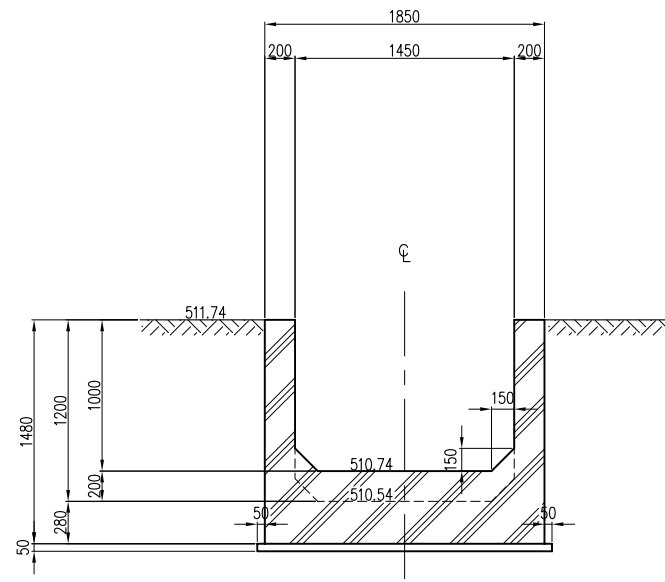


THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
NO.1 BIFURCATION (3/4)	
DRAWING NO.	ID-19
NIPPON KOEI CO., LTD.	

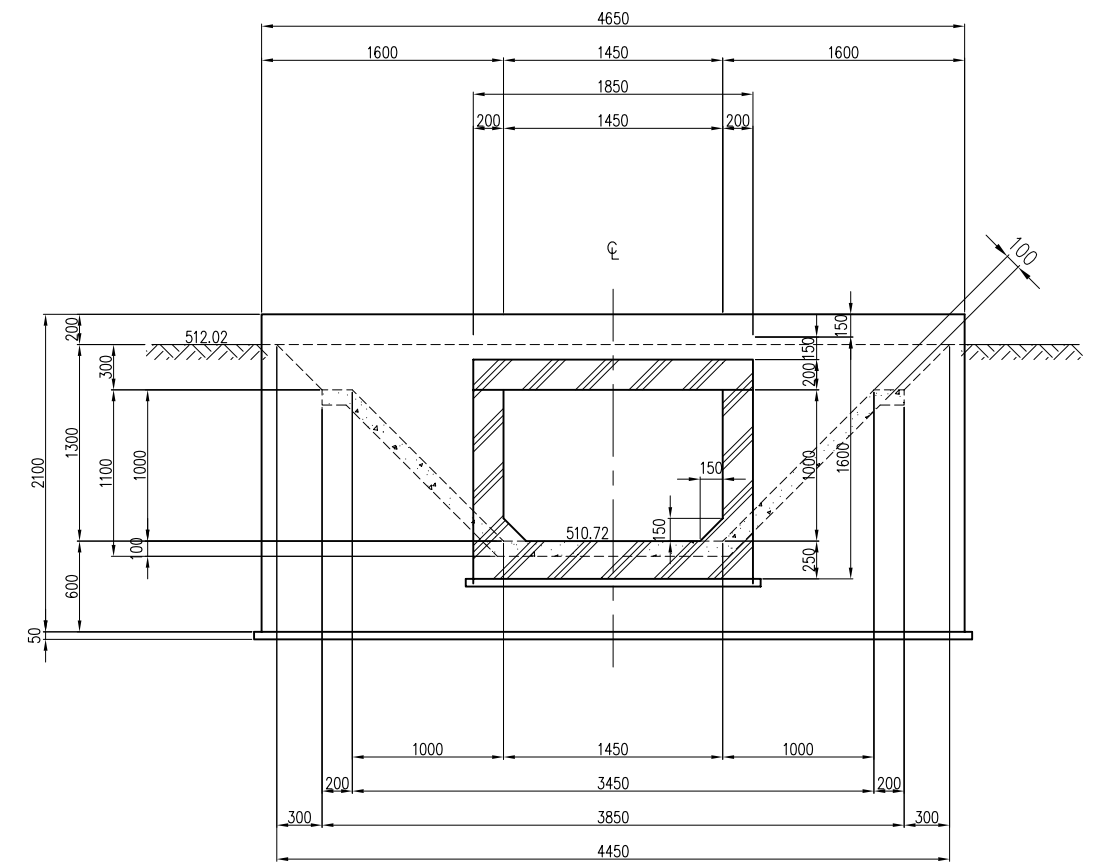




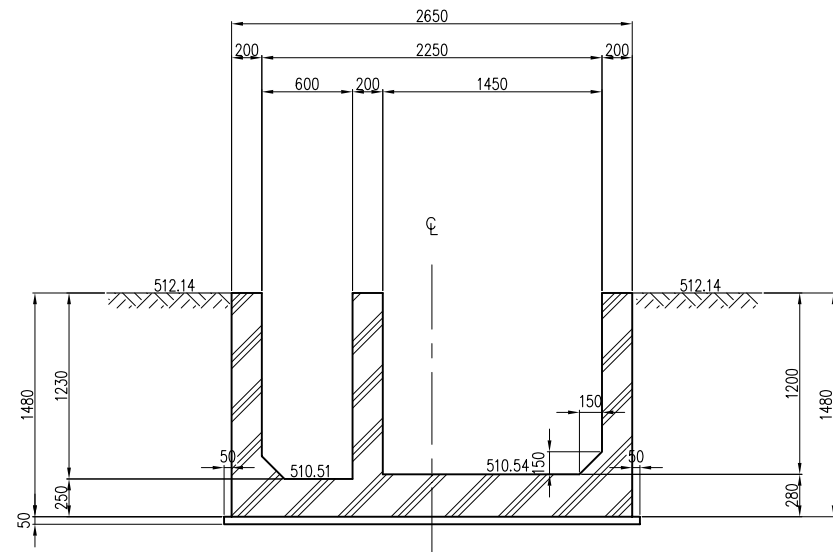
SECTION H-H



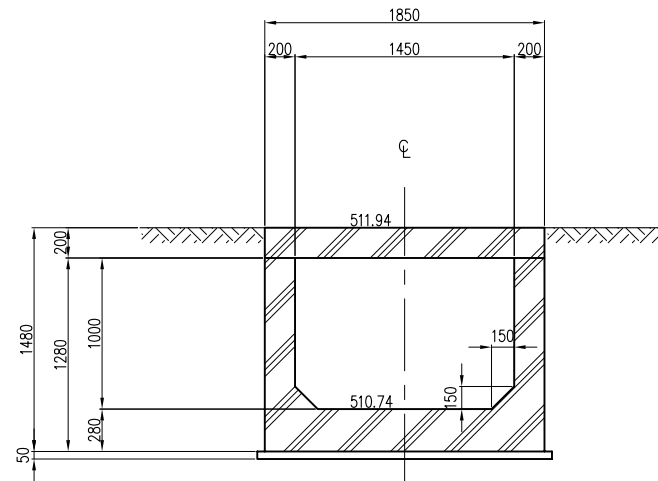
SECTION J-J



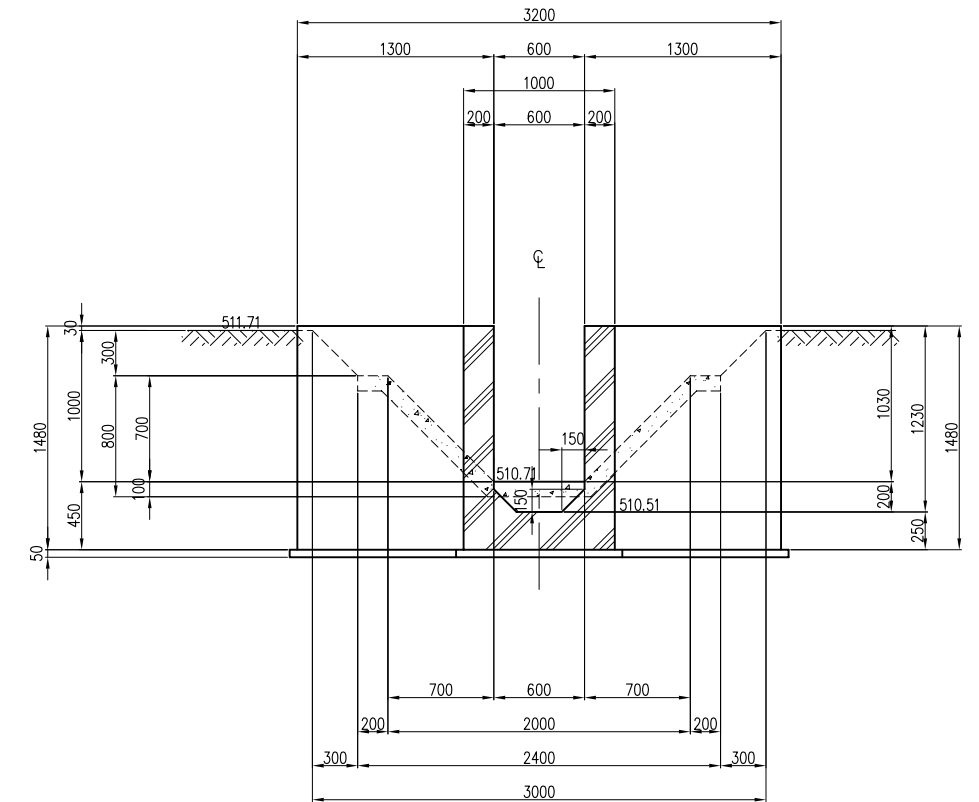
SECTION L-L



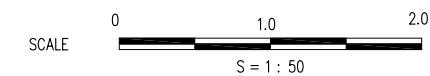
SECTION I-I



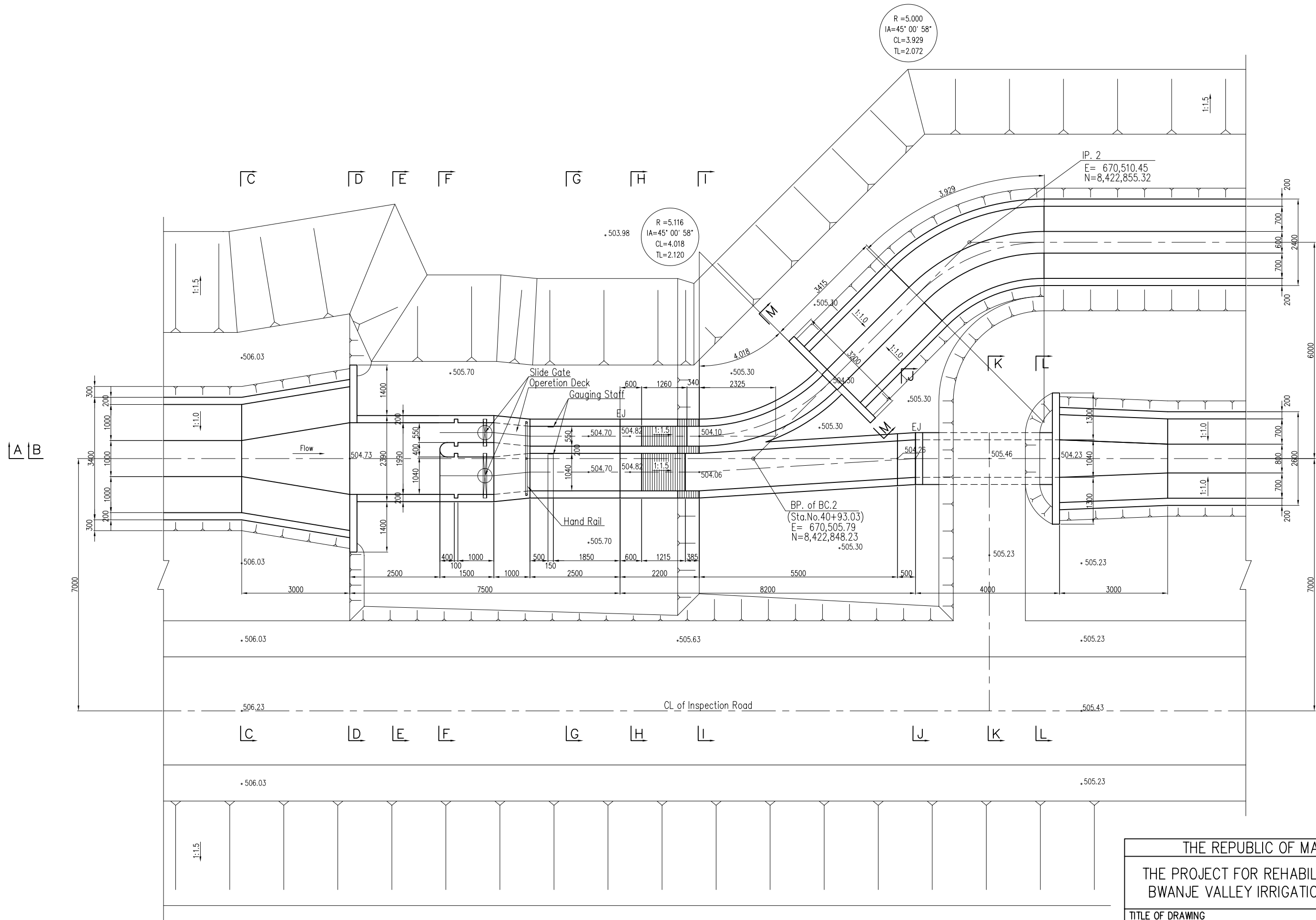
SECTION K-K



SECTION M-M



THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
NO.1 BIFURCATION (4/4)	
DRAWING NO.	ID-20
NIPPON KOEI CO., LTD.	



R = 5.000  
 IA = 45° 00' 58"  
 CL = 3.929  
 TL = 2.072

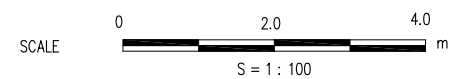
R = 5.116  
 IA = 45° 00' 58"  
 CL = 4.018  
 TL = 2.120

IP. 2  
 E = 670,510.45  
 N = 8,422,855.32

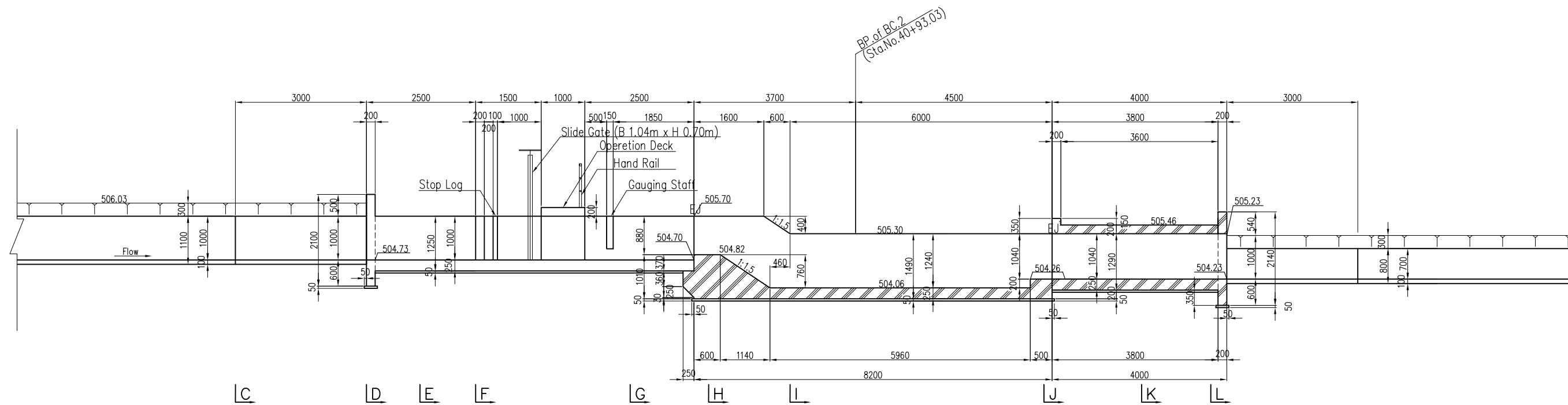
BP. of BC.2  
 (Sta.No. 40+93.03)  
 E = 670,505.79  
 N = 8,422,848.23

CL of Inspection Road

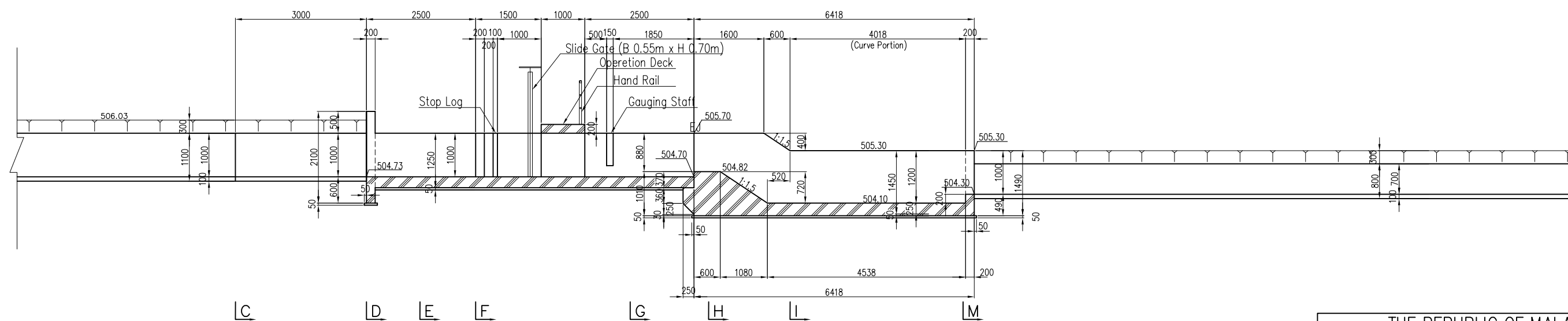
PLAN



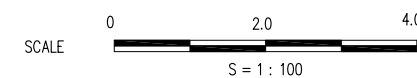
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
NO.2 BIFURCATION (1/4)	
DRAWING NO.	ID-21
NIPPON KOEI CO., LTD.	



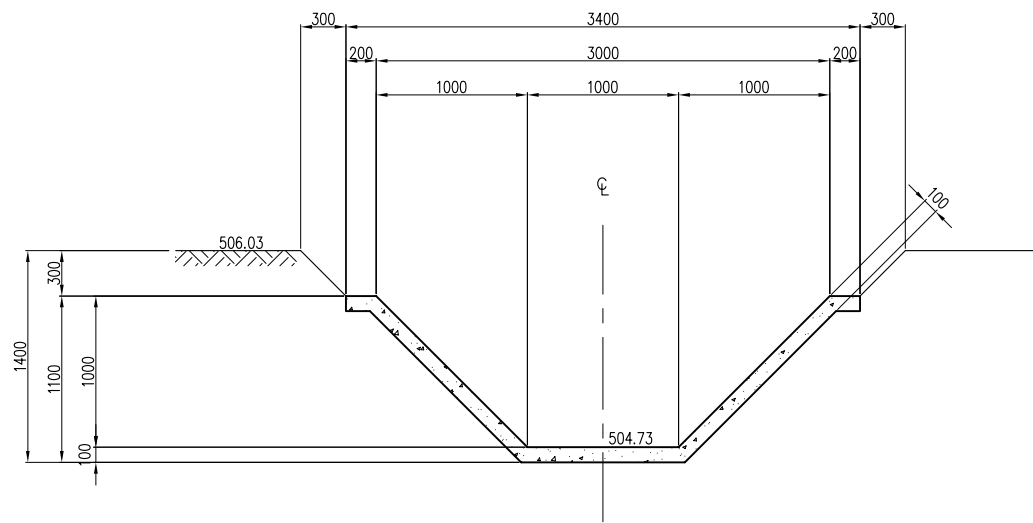
SECTION A-A



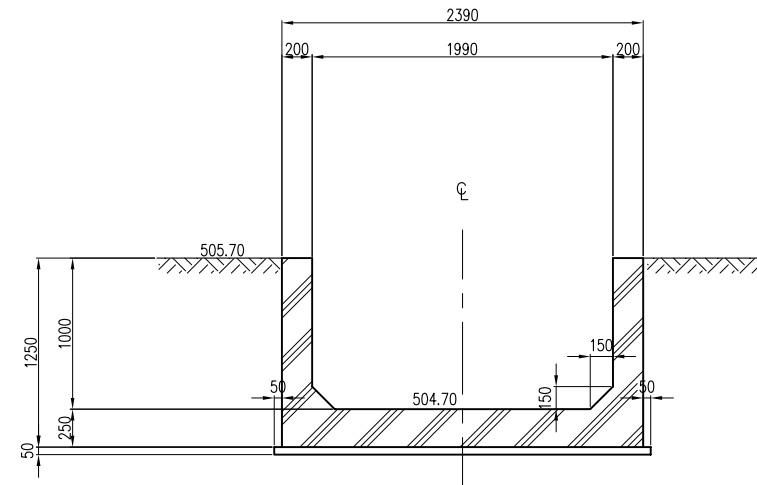
SECTION B-B



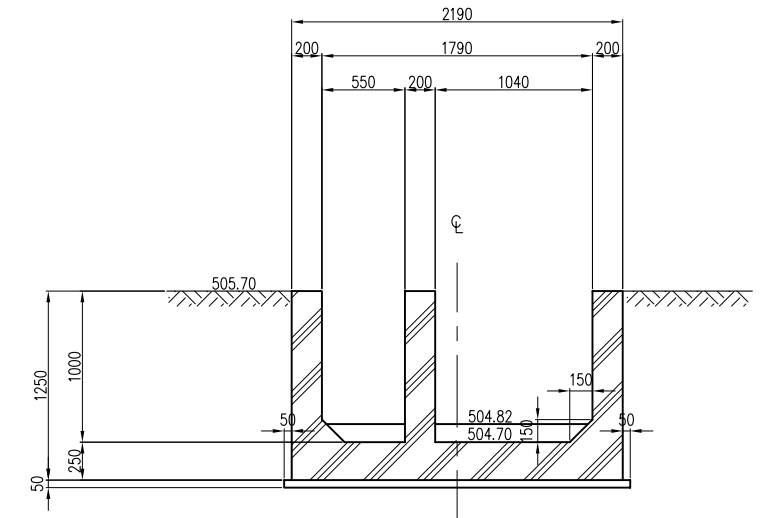
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING NO.2 BIFURCATION (2/4)	
DRAWING NO.	ID-22
NIPPON KOEI CO., LTD.	



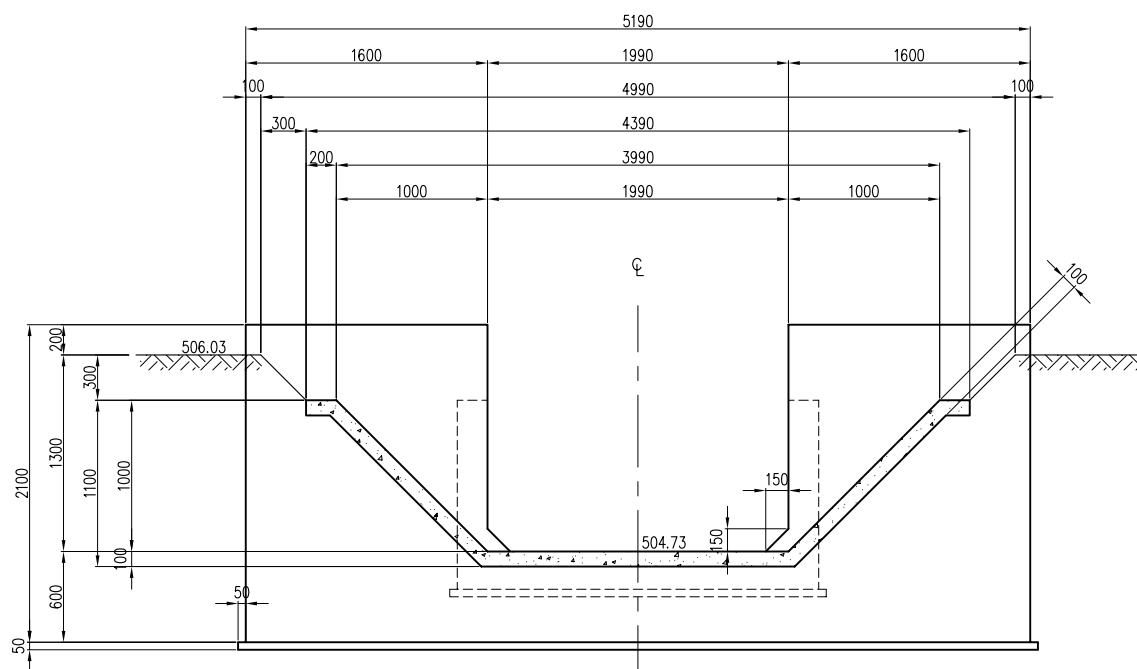
SECTION C-C



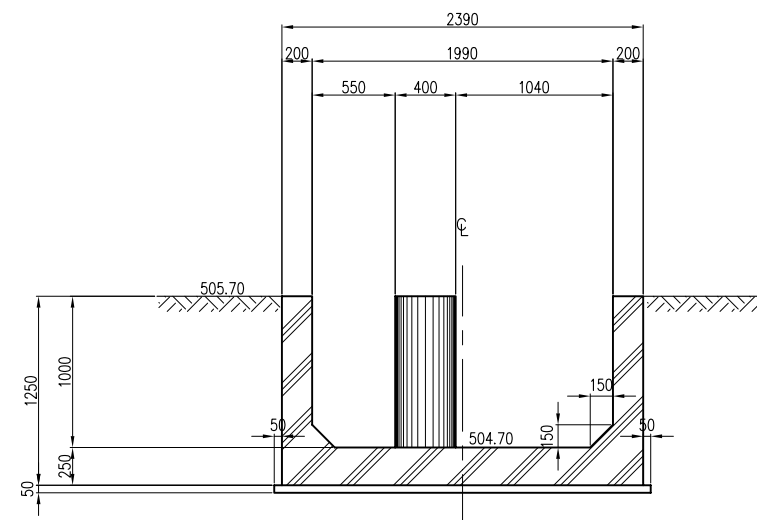
SECTION E-E



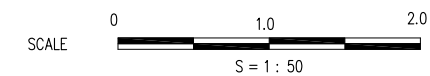
SECTION G-G



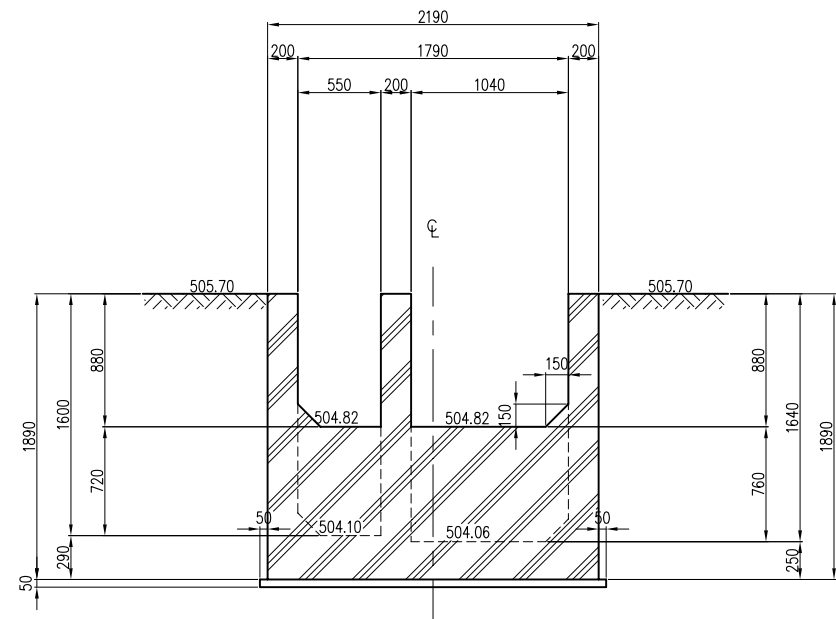
SECTION D-D



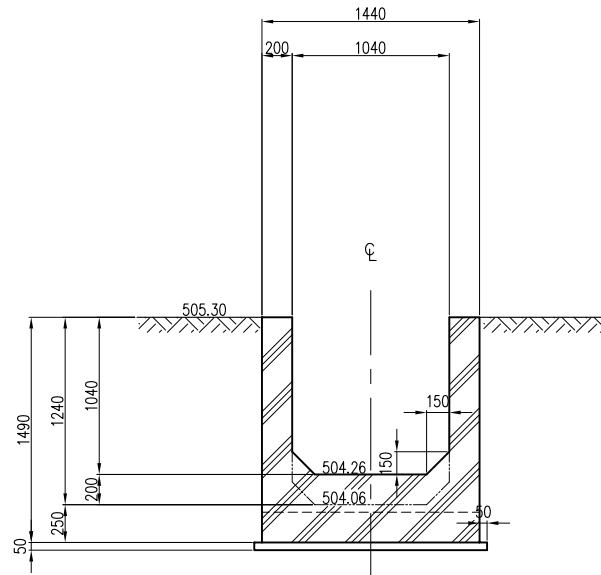
SECTION F-F



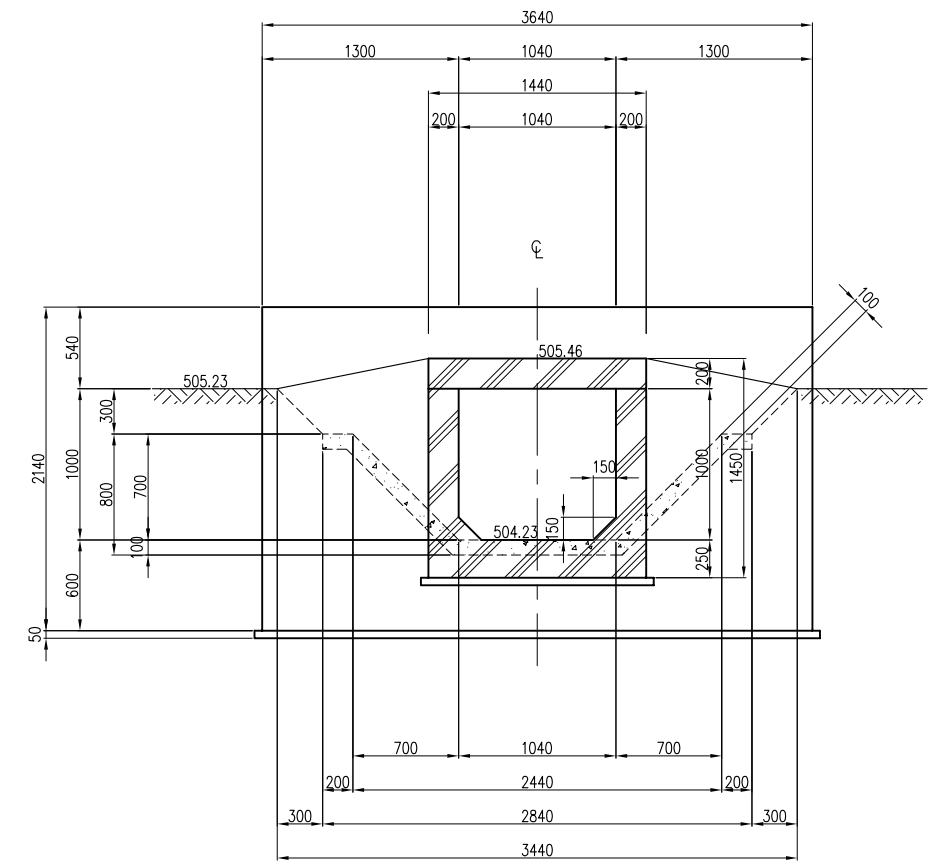
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
NO.2 BIFURCATION (3/4)	
DRAWING NO.	ID-23
NIPPON KOEI CO., LTD.	



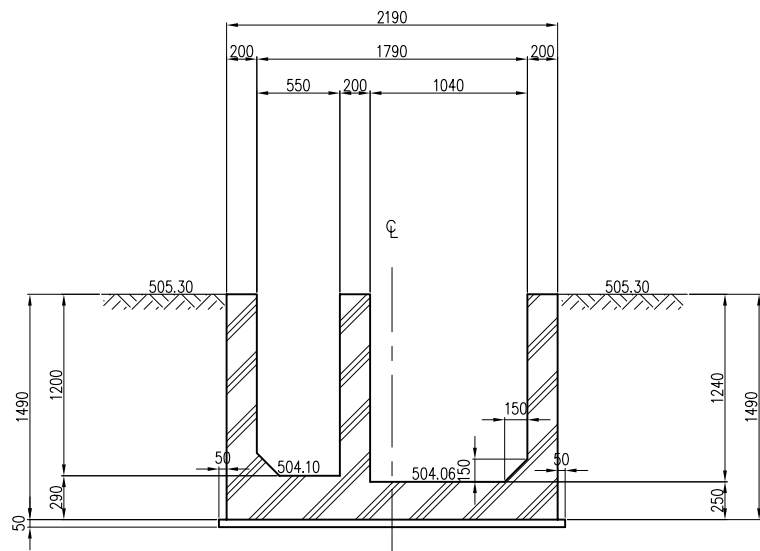
SECTION H-H



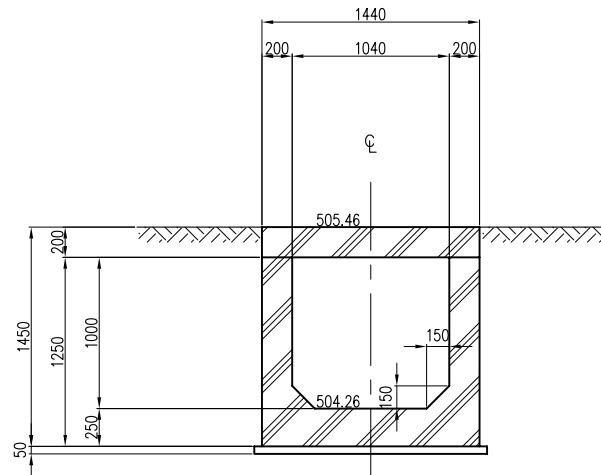
SECTION J-J



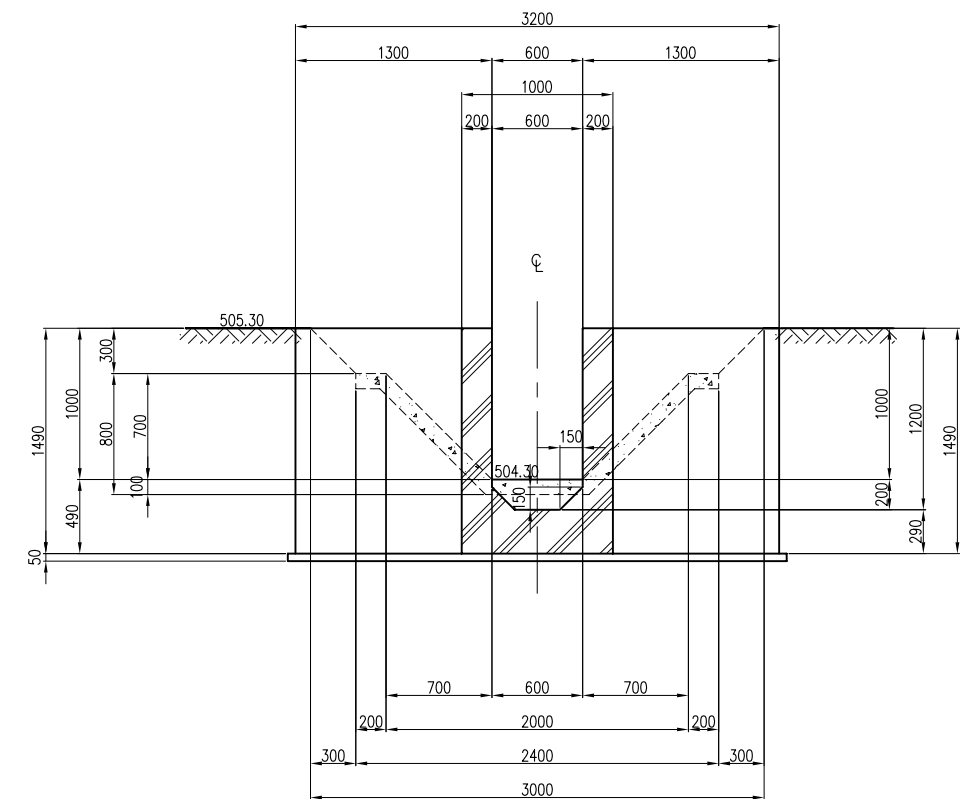
SECTION L-L



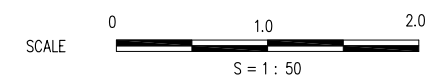
SECTION I-I



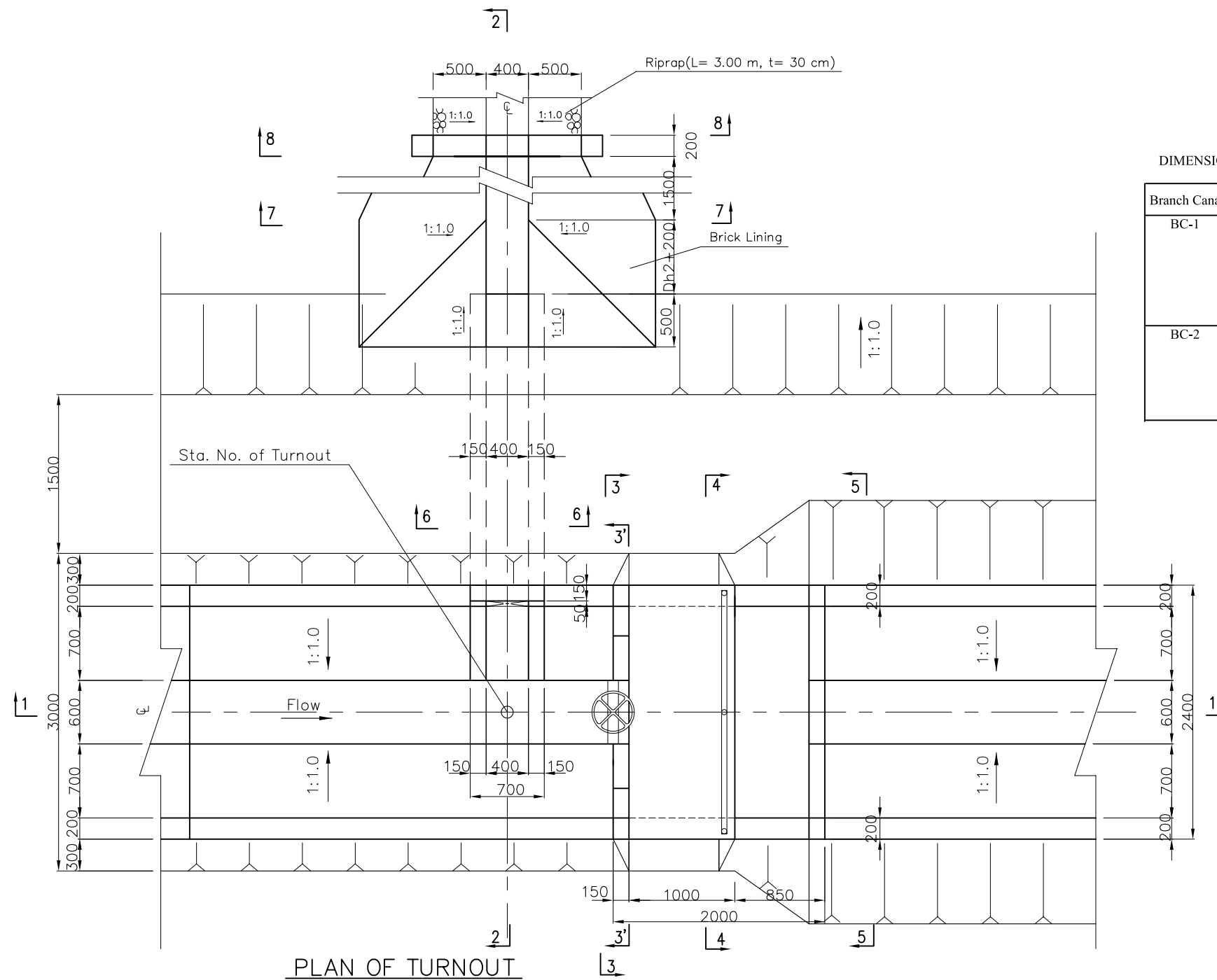
SECTION K-K



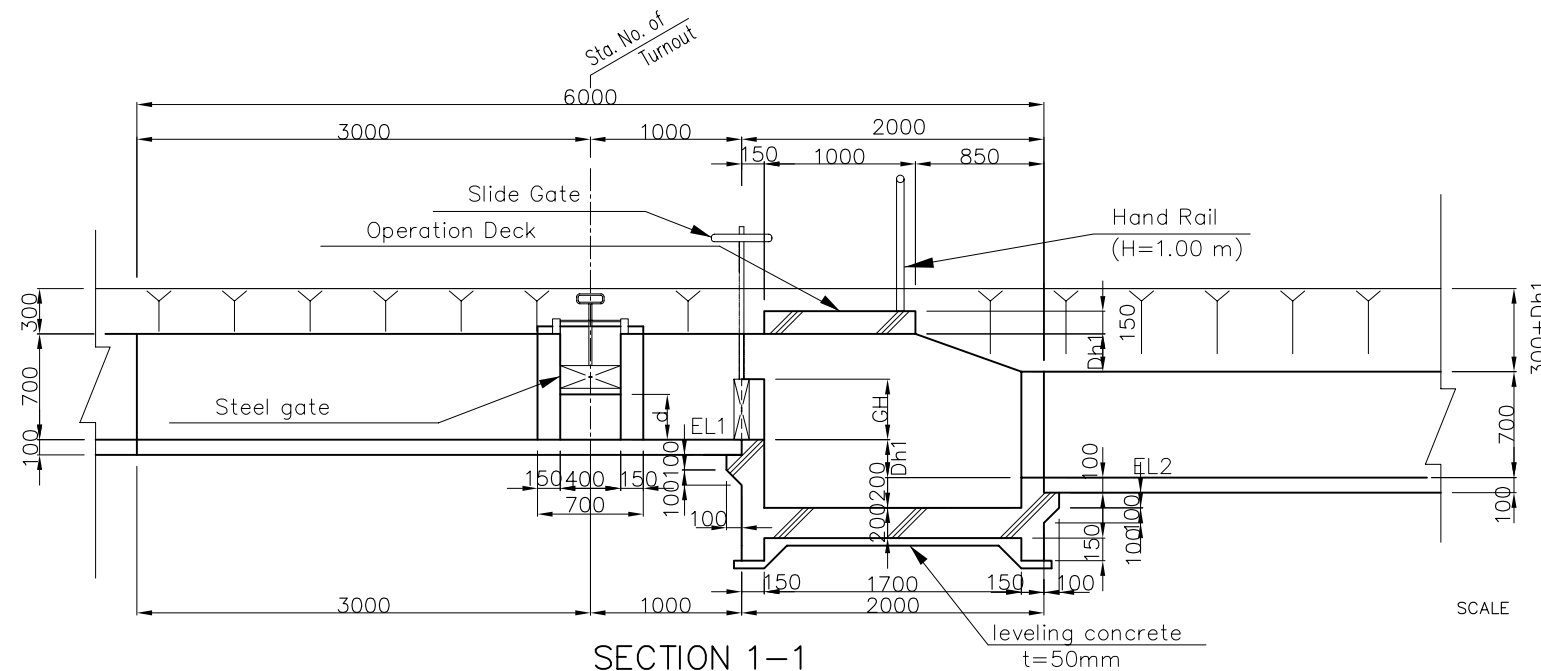
SECTION M-M



THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
NO.2 BIFURCATION (4/4)	
DRAWING NO.	ID-24
NIPPON KOEI CO., LTD.	



PLAN OF TURNOUT

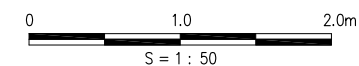


SECTION 1-1

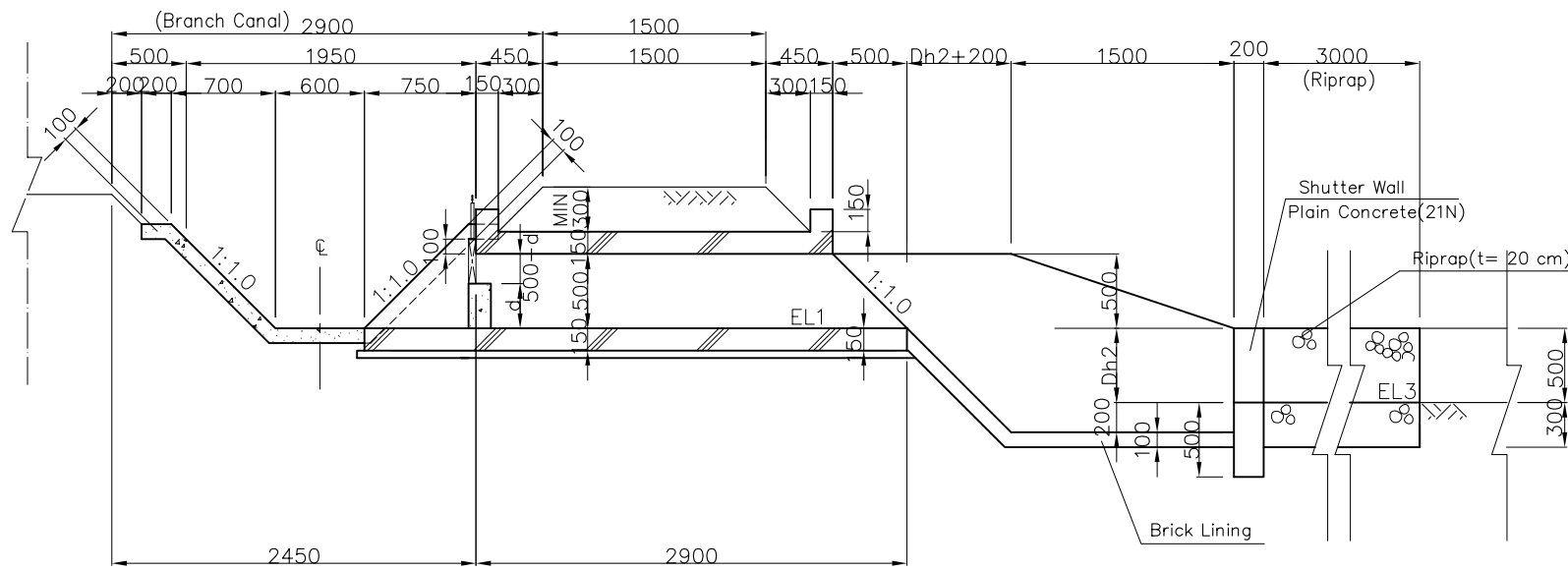
DIMENSION TABLE FOR TURNOUT

Branch Canal	TO.No.	Sta. No.	EL1 (m)	EL2 (m)	EL3 (m)	Dh1 (mm)	Dh2 (mm)	GH (mm)	d (mm)
BC-1	TO-7(L)	0+14.30	510.69	510.19	510.19	500	500	430	300
	TO-10(L)	2+18.44	509.85	509.45	509.36	400	490	430	300
	TO-11(L)	3+68.51	509.10	508.60	508.68	500	420	430	300
	TO-12(L)	5+18.75	508.35	508.15	507.85	200	500	430	300
	TO-13(L)	6+19.96	507.98	507.78	507.53	200	450	430	300
	TO-14(L)	7+60.48	507.54	507.04	507.09	500	450	430	300
BC-2	TO-15(L,R)	9+57.09	506.70	506.21	506.14	490	560	430	300
	TO-6(L)	0+18.33	504.27	503.67	503.86	600	410	430	250
	TO-9(L)	2+64.57	503.26	503.16	502.81	100	450	430	250
	TO-10(L)	4+01.47	502.93	502.53	502.47	400	460	430	250
	TO-11(L)	5+38.30	502.30	502.10	501.80	200	500	430	250
	TO-12(L)	6+75.29	501.88	501.68	501.41	200	470	430	250
	TO-13(L)	8+13.08	501.45	500.90	500.97	550	480	430	250

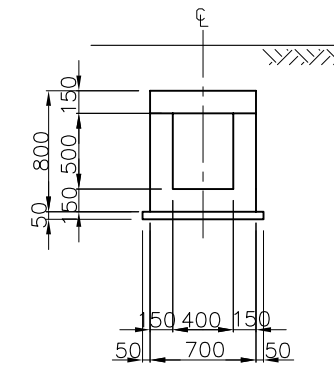
SCALE



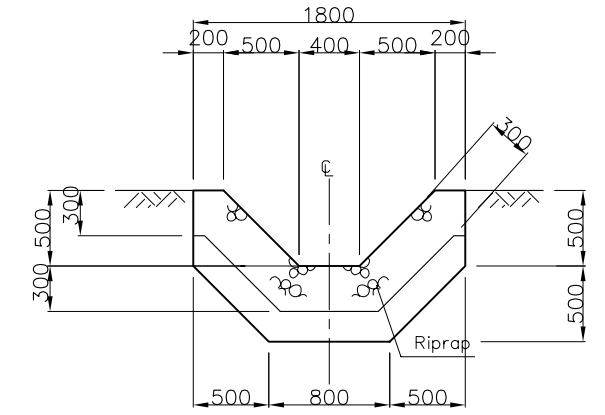
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING TURNOUT (1/2)	
DRAWING NO.	ID-25
NIPPON KOEI CO., LTD.	



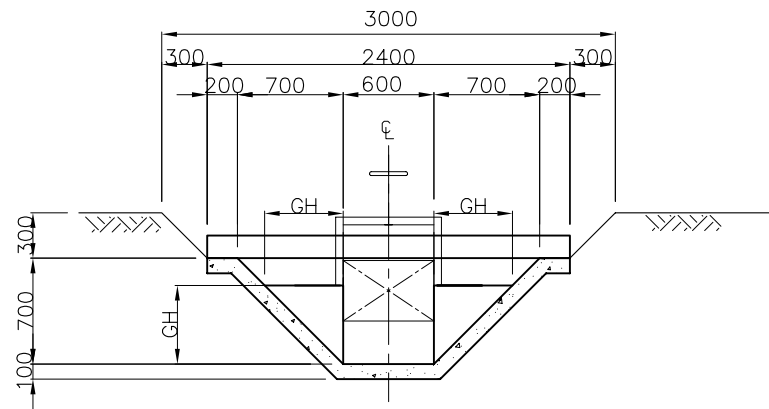
SECTION 2-2



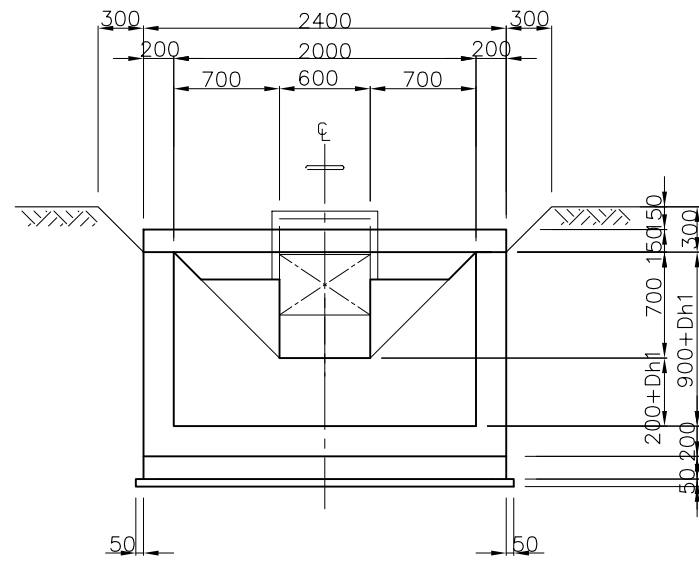
SECTION 6-6



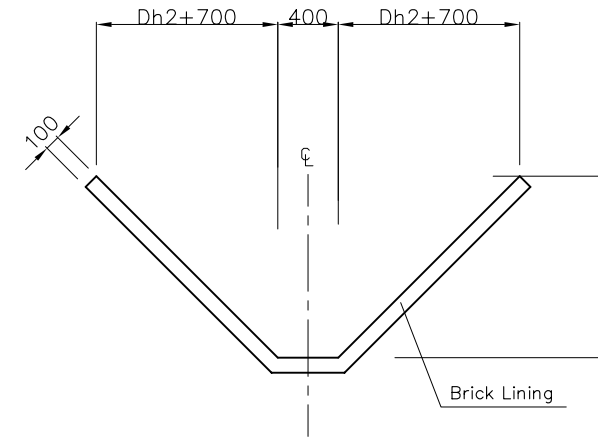
SECTION 8-8



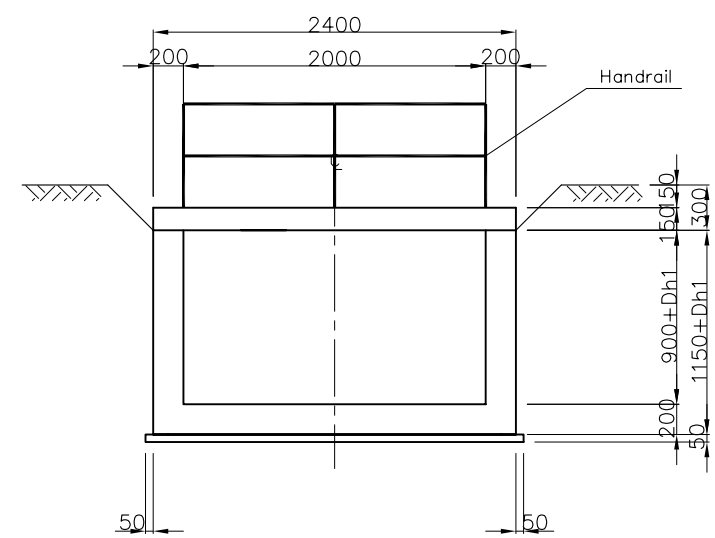
SECTION 3-3



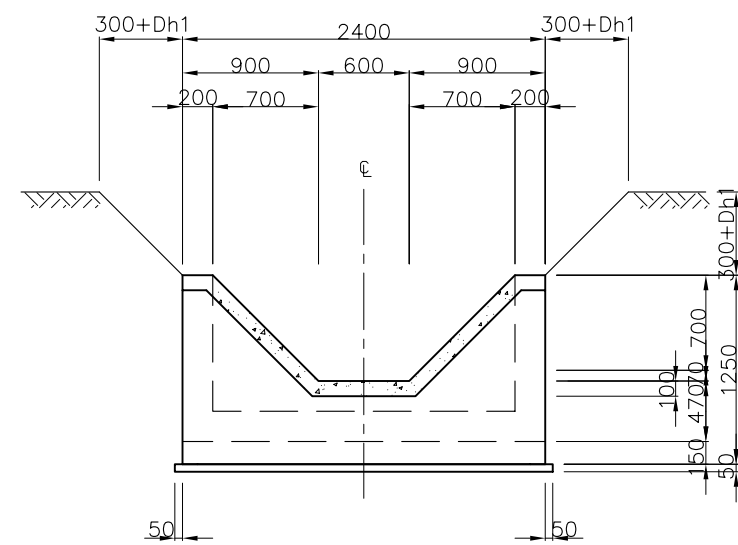
SECTION 3'-3'



SECTION 7-7



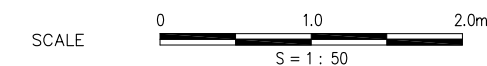
SECTION 4-4



SECTION 5-5

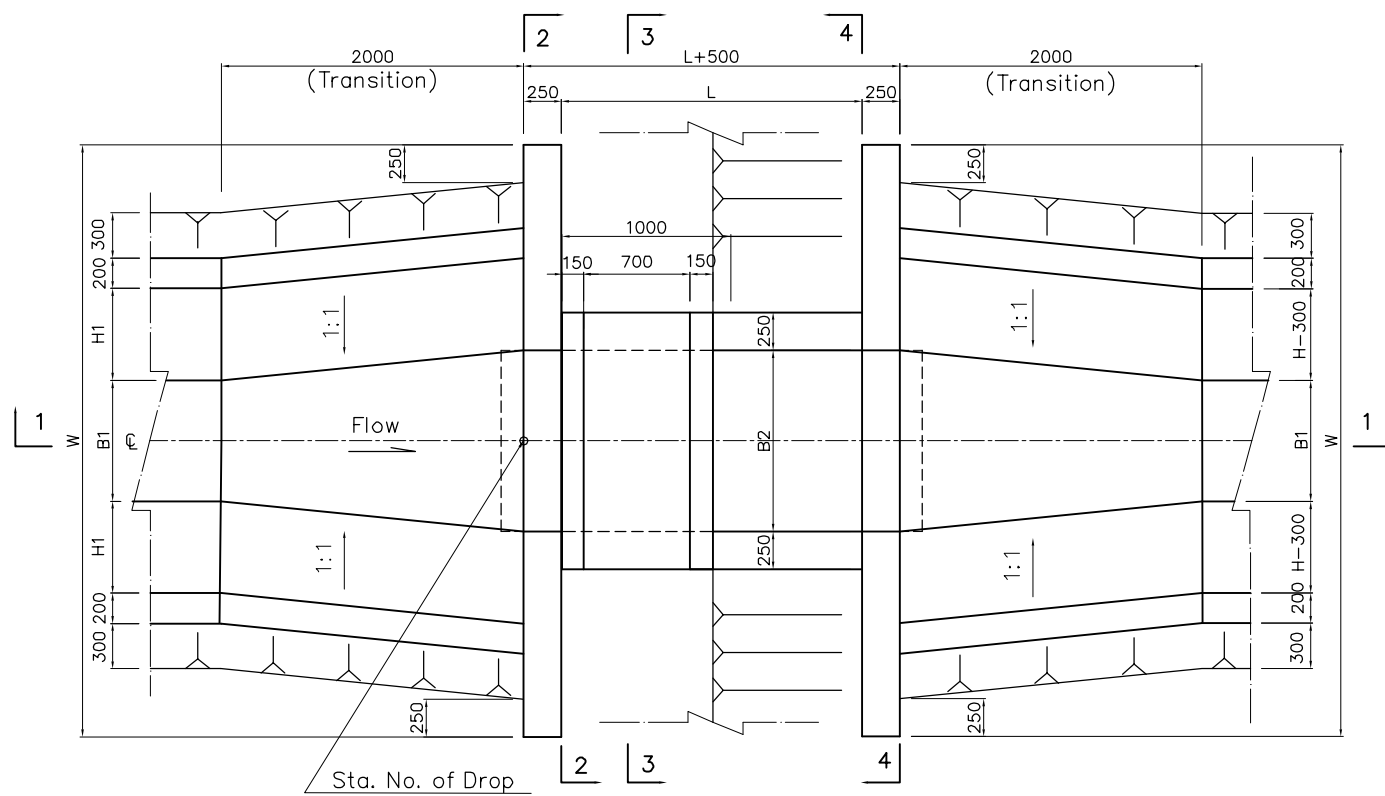
DIMENSION TABLE FOR TURNOUT

Branch Canal	TO.No.	Sta. No.	EL1 (m)	EL2 (m)	EL3 (m)	Dh1 (mm)	Dh2 (mm)	GH (mm)	d (mm)
BC-1	TO-7(L)	0+14.30	510.69	510.19	510.19	500	500	430	300
	TO-10(L)	2+18.44	509.85	509.45	509.36	400	490	430	300
	TO-11(L)	3+68.51	509.10	508.60	508.68	500	420	430	300
	TO-12(L)	5+18.75	508.35	508.15	507.85	200	500	430	300
	TO-13(L)	6+19.96	507.98	507.78	507.53	200	450	430	300
	TO-14(L)	7+60.48	507.54	507.04	507.09	500	450	430	300
BC-2	TO-15(L,R)	9+57.09	506.70	506.21	506.14	490	560	430	300
	TO-6(L)	0+18.33	504.27	503.67	503.86	600	410	430	250
	TO-9(L)	2+64.57	503.26	503.16	502.81	100	450	430	250
	TO-10(L)	4+01.47	502.93	502.53	502.47	400	460	430	250
	TO-11(L)	5+38.30	502.30	502.10	501.80	200	500	430	250
	TO-12(L)	6+75.29	501.88	501.68	501.41	200	470	430	250
	TO-13(L)	8+13.08	501.45	500.90	500.97	550	480	430	250

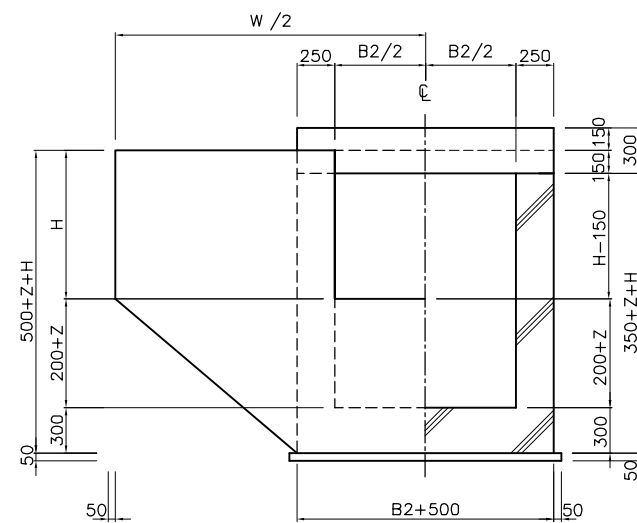


THE REPUBLIC OF MALAWI  
 THE PROJECT FOR REHABILITATION OF  
 BWANJE VALLEY IRRIGATION SYSTEM  
 TITLE OF DRAWING  
 TURNOUT (2/2)  
 DRAWING NO. ID-26  
 NIPPON KOEI CO., LTD.

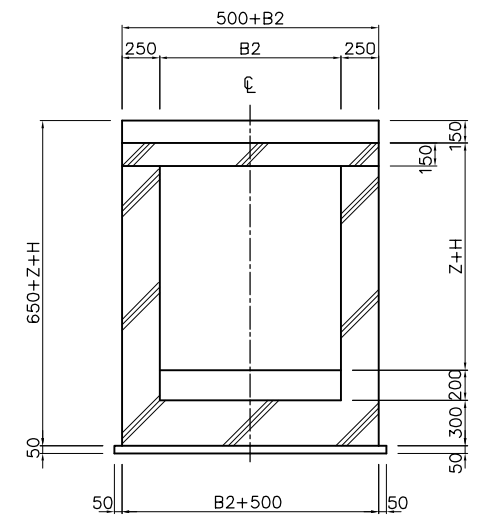
# DROP



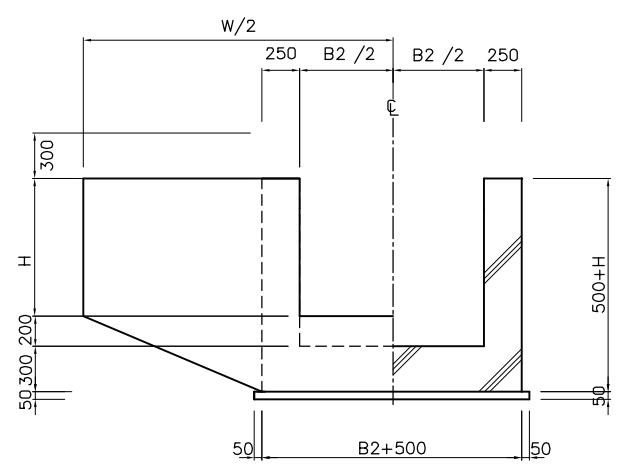
PLAN OF DROP



SECTION 2-2

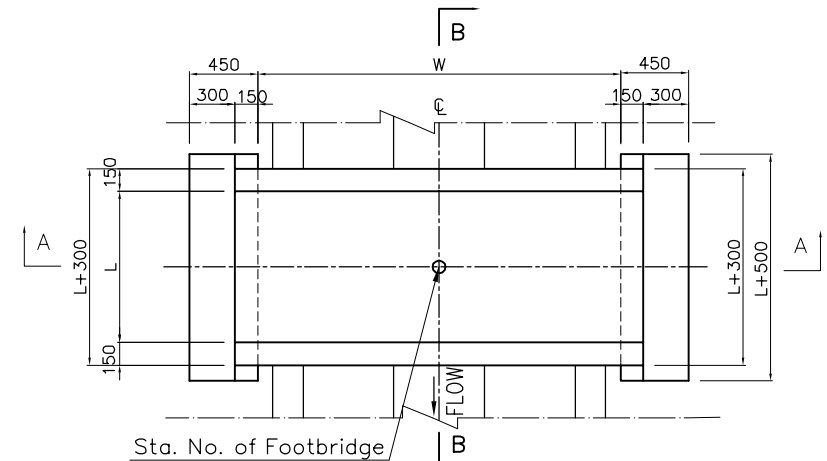


SECTION 3-3

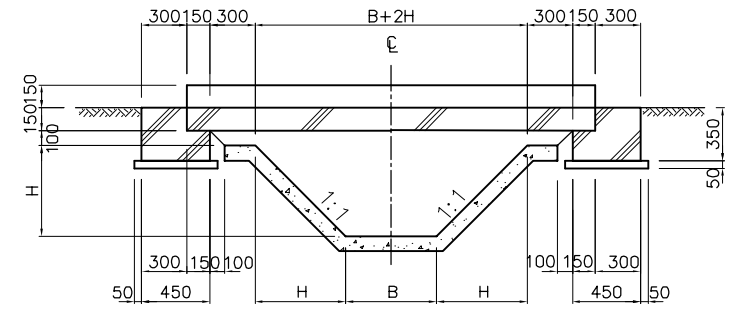


SECTION 4-4

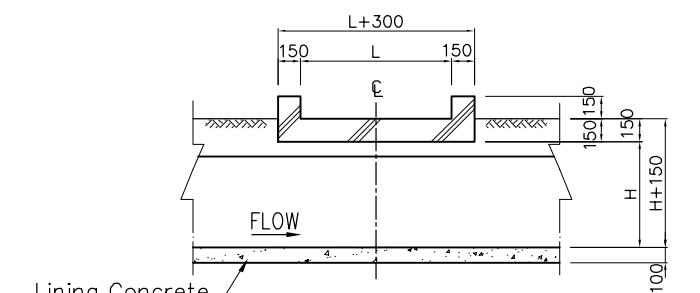
# FOOTBRIDGE



PLAN OF FOOTBRIDGE



SECTION A-A



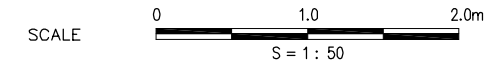
SECTION B-B

DIMENSION TABLE FOR FOOTBRIDGE

Canal Name	Footbridge No.	Sta. No.	B (mm)	H (mm)	W (mm)	L (mm)
MC	No.1	4+00	1000	1000	3600	1000
	No.2	12+00	1000	1000	3600	1000
	No.3	16+00	1000	1000	3600	3000
	No.4	20+00	1000	1000	3600	1000
	No.5	28+00	1000	1000	3600	1000
	No.6	29+50	1000	1000	3600	3000
	No.7	31+00	1000	1000	3600	1000
	No.8	32+00	1000	1000	3600	1000
	No.9	33+50	1000	1000	3600	1000
	No.10	38+00	1000	1000	3600	3000
	No.11	40+00	1000	1000	3600	1000
	No.12	43+50	800	700	2800	1000
	No.13	45+00	800	700	2800	3000
	No.14	46+50	800	700	2800	1000
	No.15	47+50	800	700	2800	1000
	No.16	51+00	800	700	2800	1000
	No.17	53+50	800	700	2800	3000
	No.18	55+50	800	700	2800	1000
BC-1	No.1	4+00	600	700	2600	3000
BC-2	No.2	4+50	600	700	2600	3000

DIMENSION TABLE FOR DROP

Canal	Drop No.	Sta. No.	EL1 (m)	EL2 (m)	H (mm)	H1 (mm)	B1 (mm)	B2 (mm)	Z (mm)	L (mm)	W (mm)
MC	No.1	22+00.00	513.23	512.53	1300	1000	1000	1400	700	3000	4900
	No.2	23+50.00	512.23	511.63	1300	1000	1000	1400	600	3000	4900
	No.3	26+00.00	510.66	509.96	1300	1000	1000	1400	700	3000	4900
	No.4	30+00.00	508.75	508.05	1300	1000	1000	1400	700	3000	4900
	No.5	57+45.00	497.86	497.46	1000	700	800	1100	400	2000	4000



THE REPUBLIC OF MALAWI

THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM

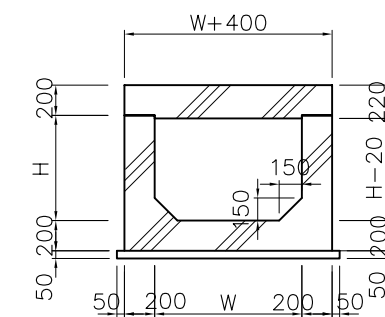
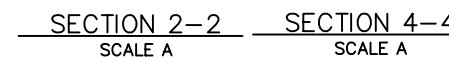
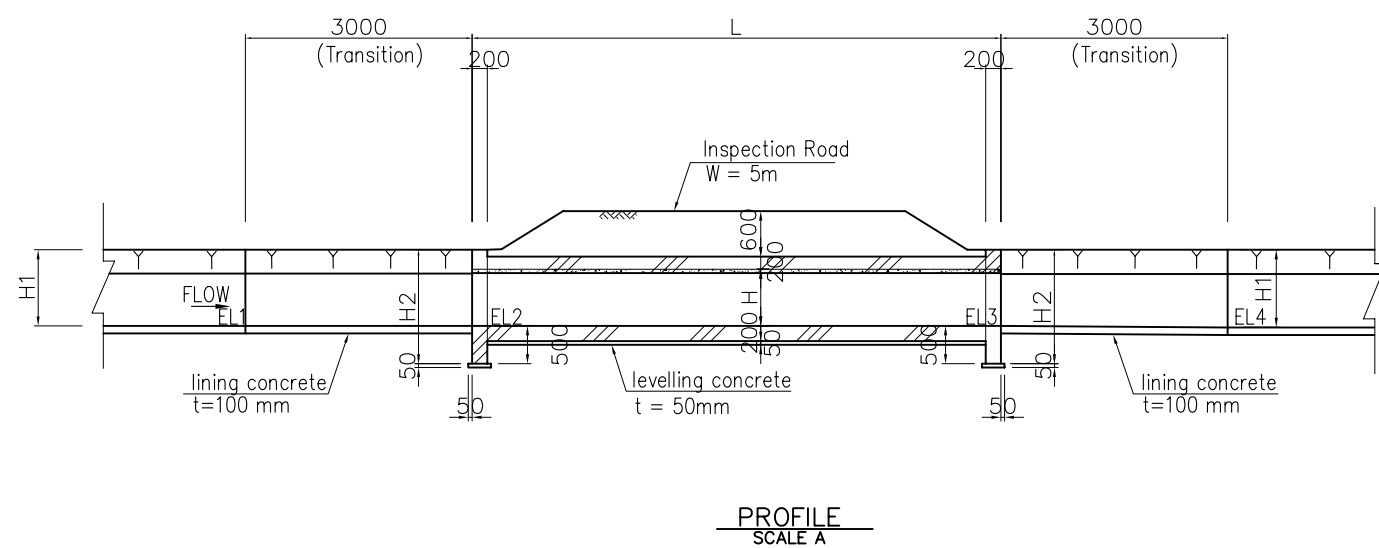
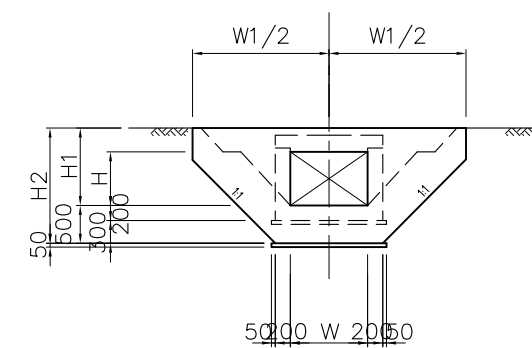
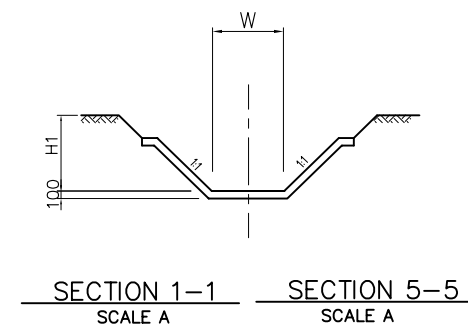
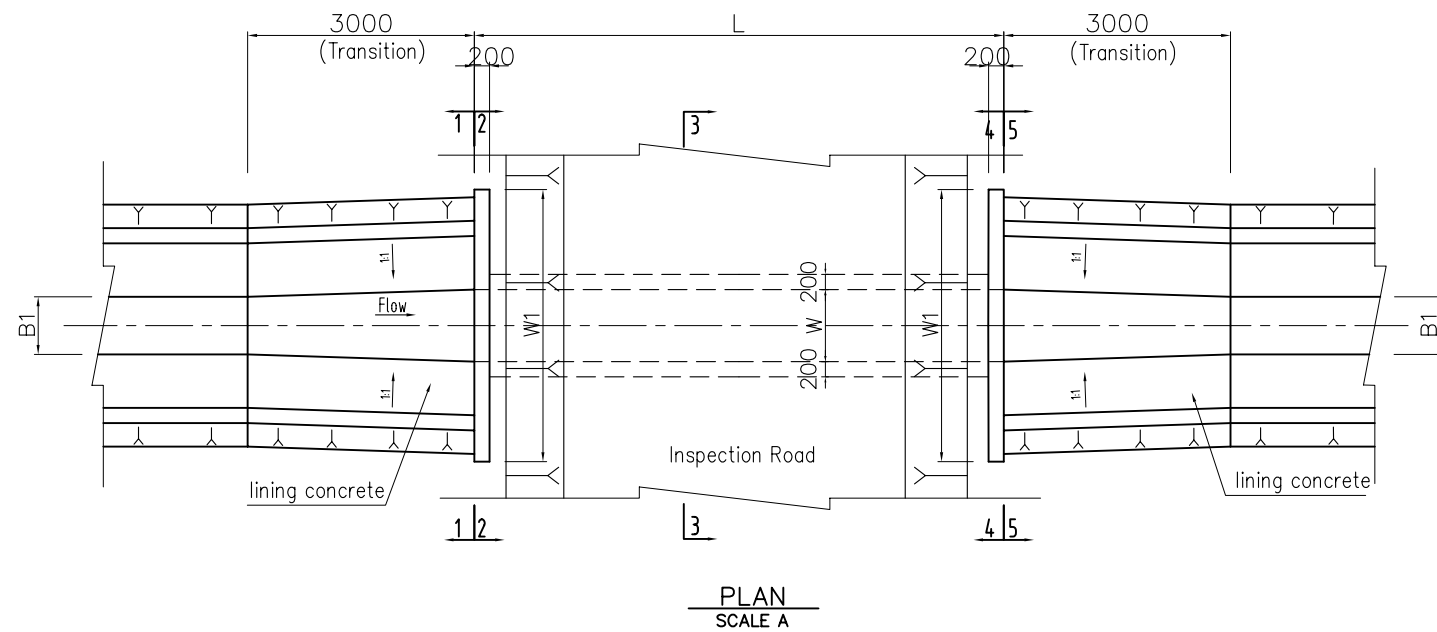
TITLE OF DRAWING

DROP AND FOOTBRIDGE

DRAWING NO. ID-27

NIPPON KOEI CO., LTD.

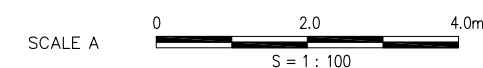
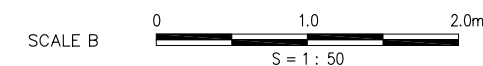




SECTION 3-3  
SCALE B

DIMENSION TABLE FOR CULVERT

Canal Name	Culvert No.	Sta. No.	W (mm)	H (mm)	L (mm)	B1 (mm)	H1 (mm)	H2 (mm)	W1 (mm)	EL1 (m)	EL2 (m)	EL3 (m)	EL4 (m)
MC	No.1	8+45.00	1600	1000	8000	1000	1300	1800	4800	515.99	515.98	515.97	515.92
	No.2	25+44.18	1600	1000	10000	1000	1300	1800	4800	511.26	511.25	511.23	511.18
	No.3	35+03.13	1400	1000	10000	1000	1300	1800	4600	506.55	506.52	506.49	506.46
	No.4	49+60.86	1200	800	10000	800	1100	1600	4000	500.95	500.94	500.90	500.85
BC-1	No.1	9+45.42	1000	700	10000	600	1000	1500	3600	506.75	506.74	506.73	506.70
BC-2-A	No.1	0+11.58	800	500	10000	600	800	1300	3000	500.85	500.84	500.80	500.76



THE REPUBLIC OF MALAWI

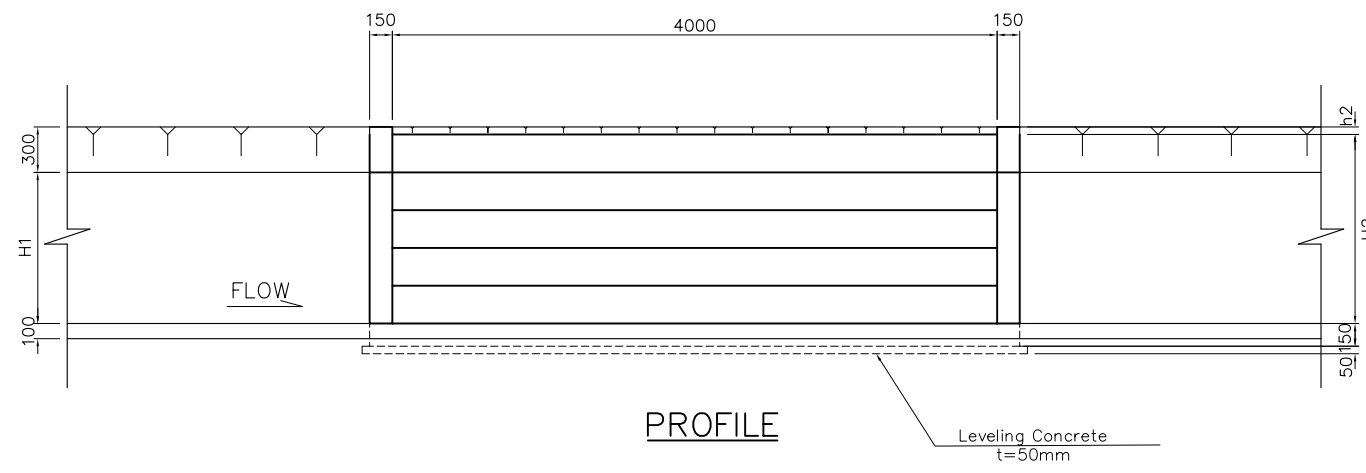
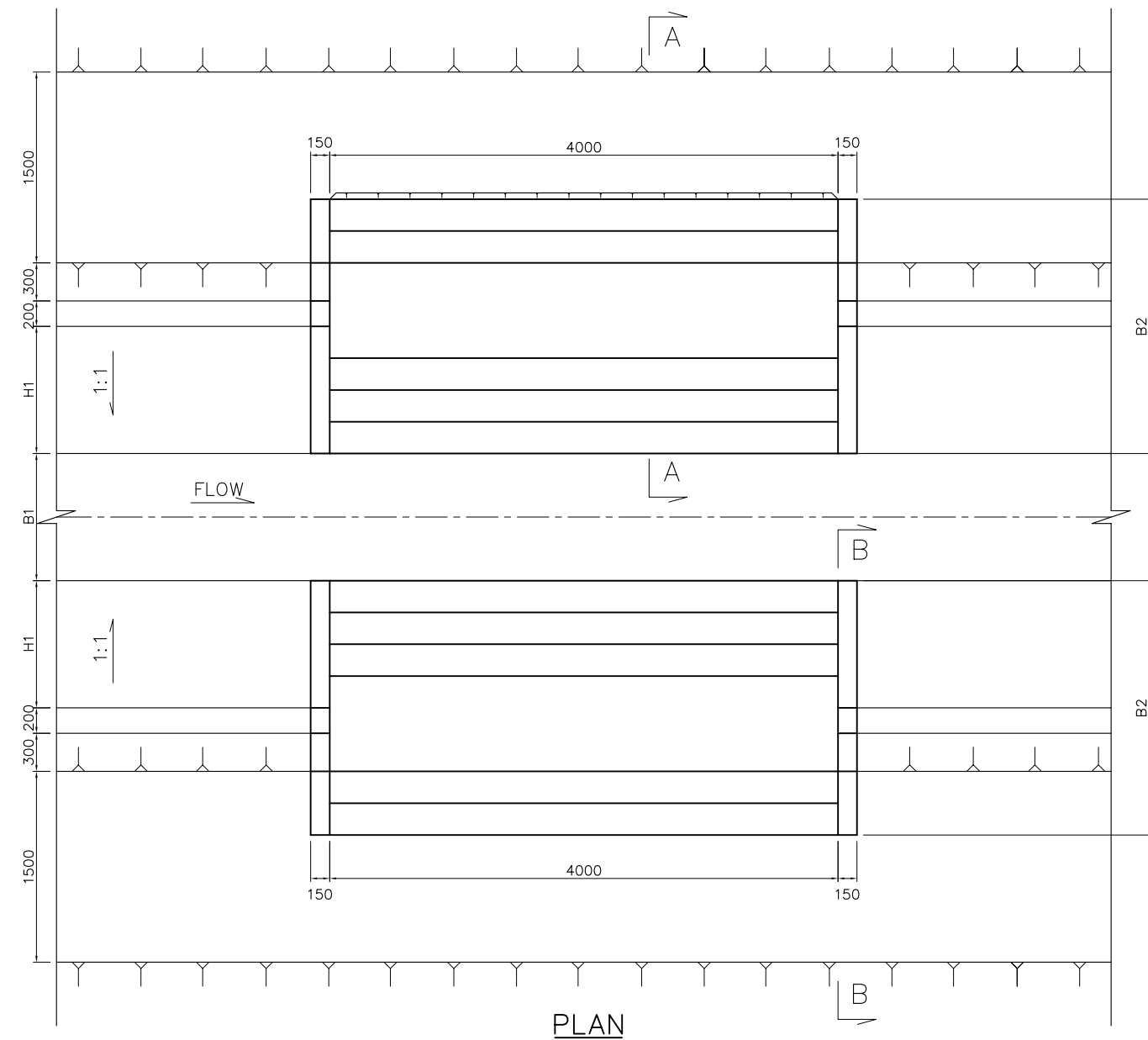
THE PROJECT FOR REHABILITATION OF  
BWANJE VALLEY IRRIGATION SYSTEM

TITLE OF DRAWING

CULVERT

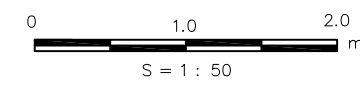
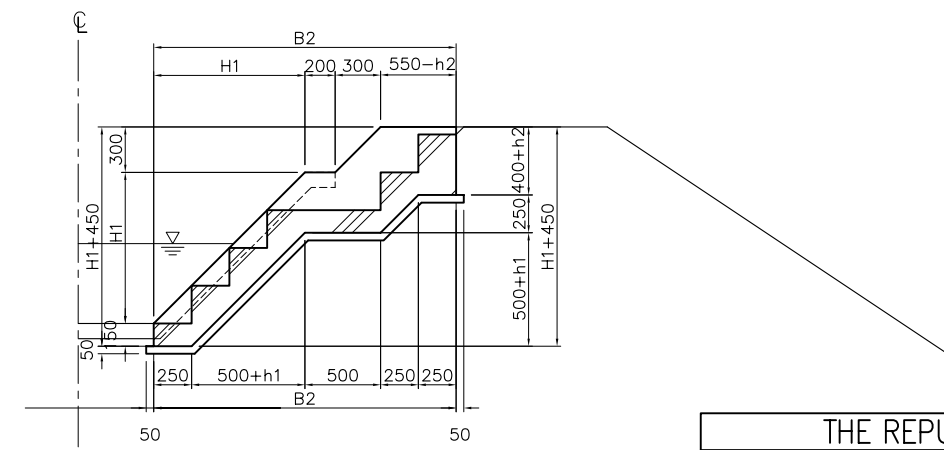
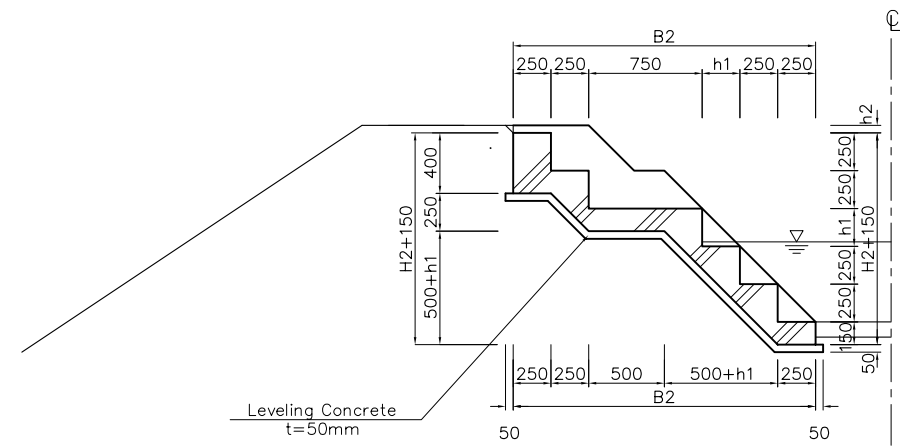
DRAWING NO. ID-28

NIPPON KOEI CO., LTD.

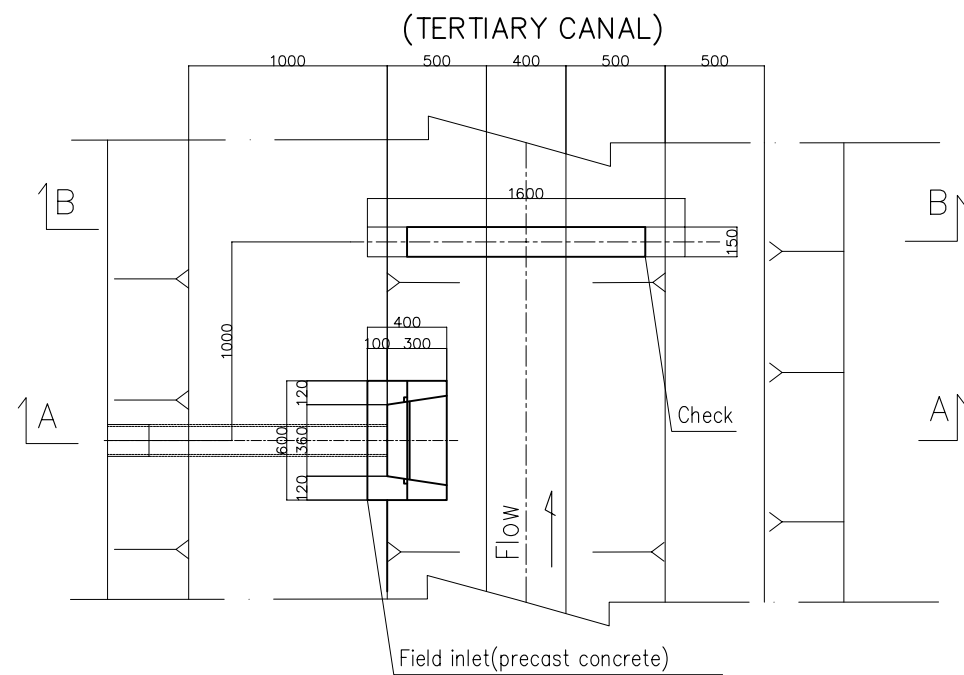


DIMENSION TABLE FOR WASHING BASIN

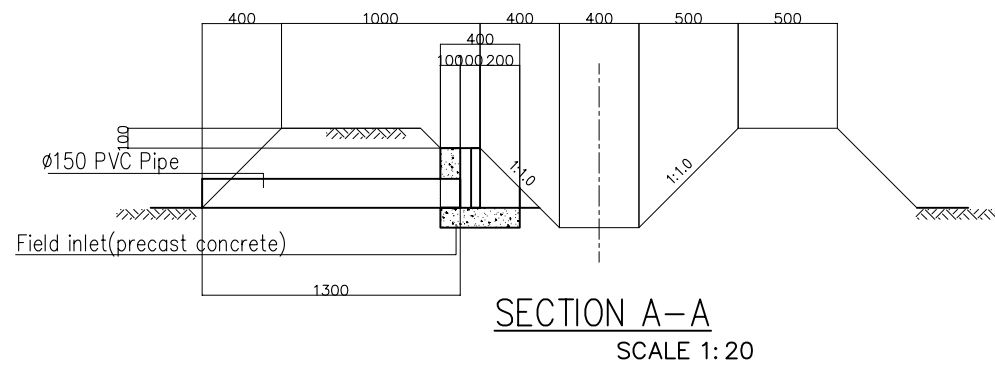
Main Canal	Sta. No.	B1 (mm)	B2 (mm)	H1 (mm)	H2 (mm)	h1 (mm)	h2 (mm)
No.1	8+50.00	1000	2000	1000	1250	250	50
No.2	25+44.00	1000	2000	1000	1250	250	50
No.3	34+50.00	1000	2000	1000	1250	250	50
No.4	50+00.00	800	1750	700	1000	0	0



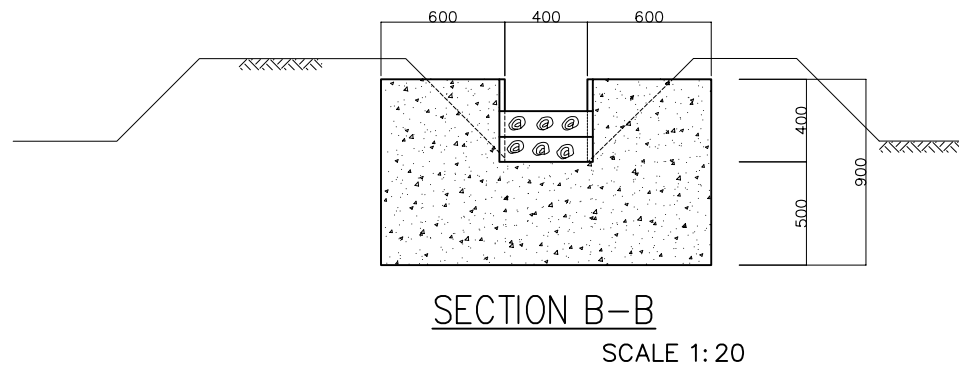
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
WASHING BASIN	
DRAWING NO.	ID-29
NIPPON KOEI CO., LTD.	



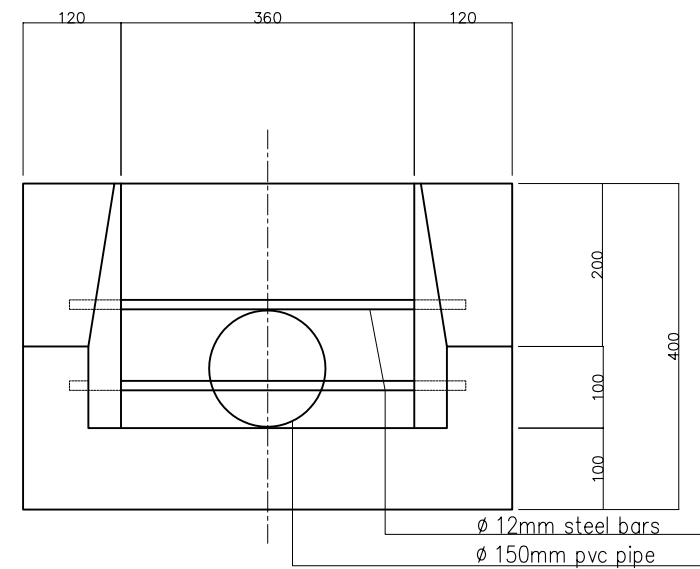
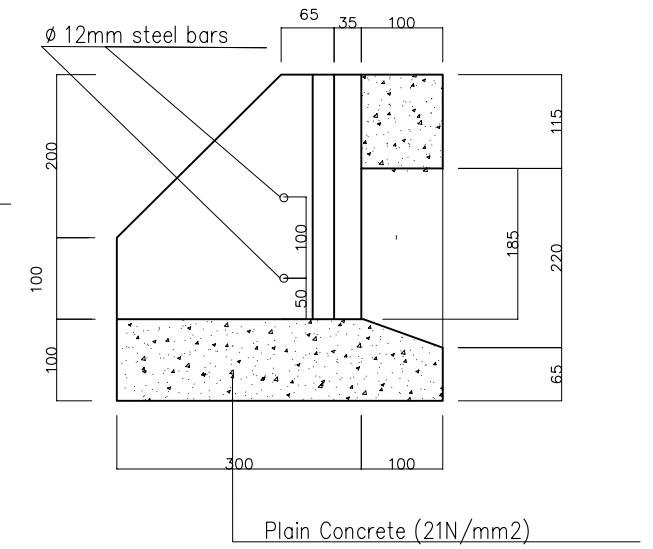
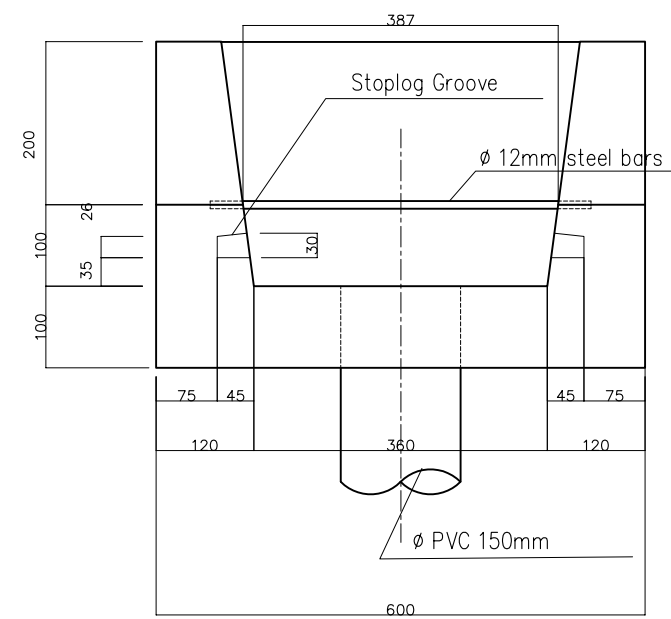
PLAN ON FARM STRUCTURE  
SCALE 1:20



SECTION A-A  
SCALE 1:20



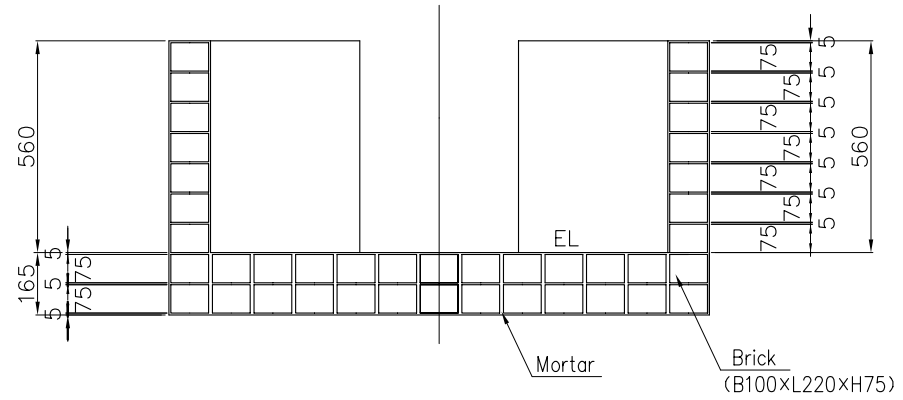
SECTION B-B  
SCALE 1:20



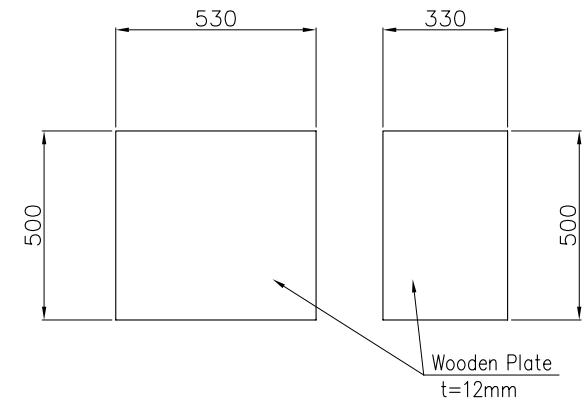
PLAN, ELEVATION AND SECTION OF FIELD INLET  
Scale 1:5

Name of Branch Canal	Name of Tertiary Canal	No. of Farm Structure
BC-1	BC-1-7L	1
	BC-1-15R	3
	BC-1-16R	2
	BC-1-17R	2
BC-2	BC-2-6L	1
	BC-2-14R	3
	BC-2-15R	3
	BC-2-16R	3

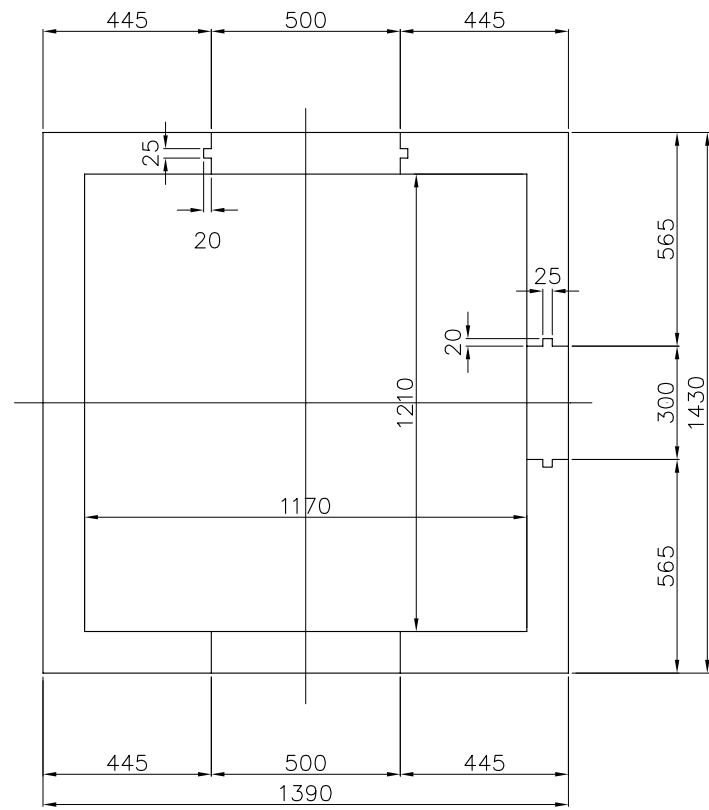
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
FARM STRUCTURE	
DRAWING NO.	ID-30
NIPPON KOEI CO., LTD.	



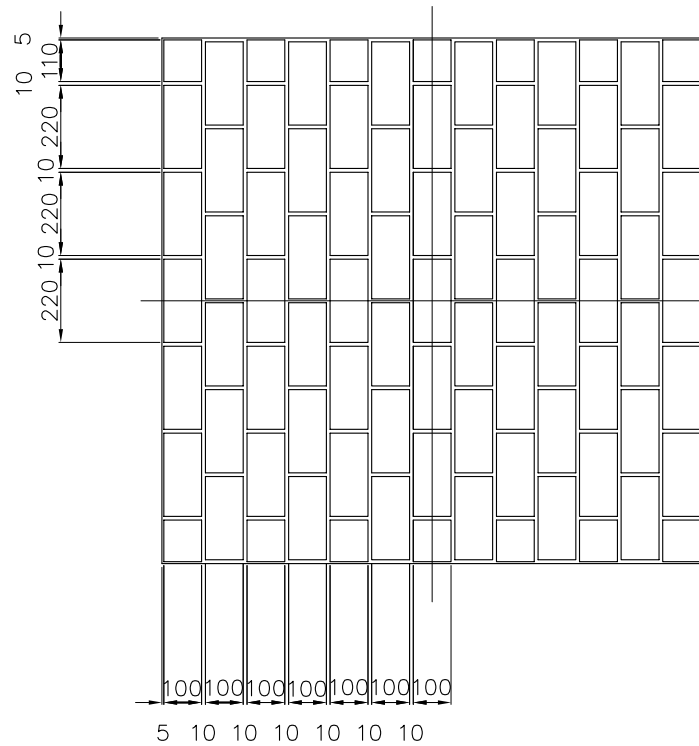
BRICK ALIGNMENT(WALL SECTION)



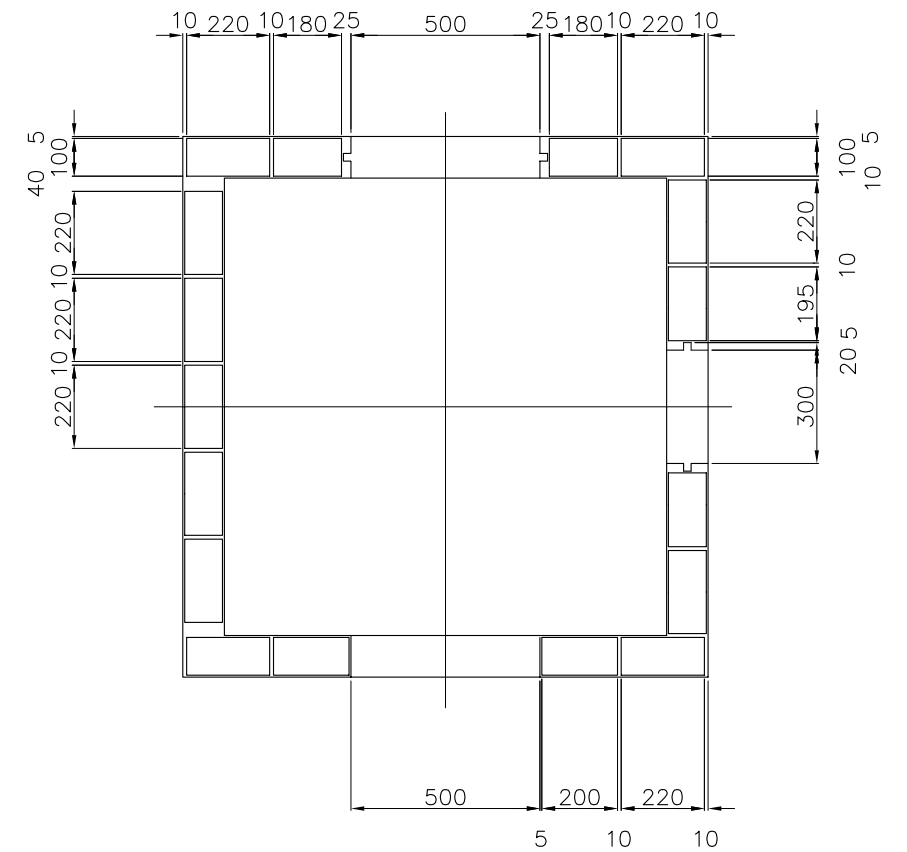
STOP LOG



PLAN



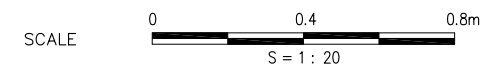
BRICK ALIGNMENT(BOTTOM)



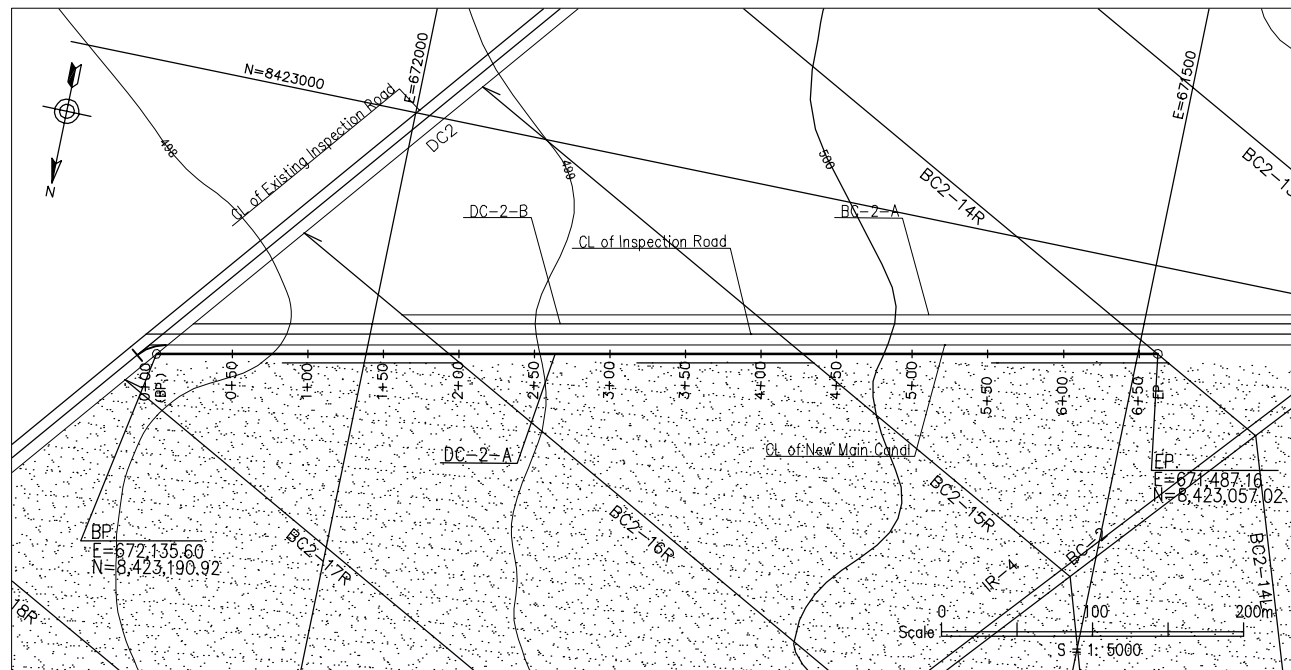
BRICK ALIGNMENT(WALL PLAN)

DIMENSION TABLE FOR DIVISION BOX

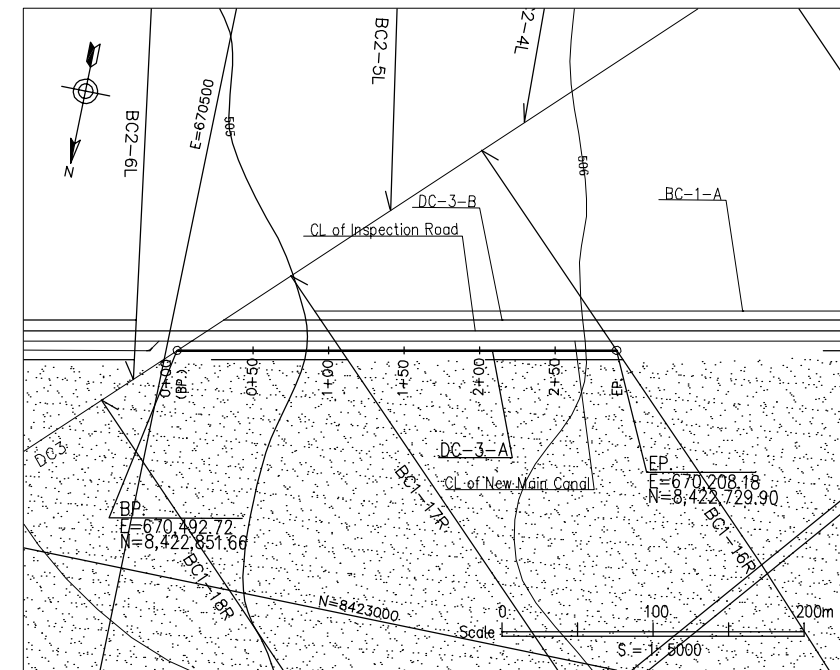
BC	No.	Sta. No.	EL1(m)
BC-1-A	DB-15	0+46.84	506.20
	DB-16	3+19.98	505.13
BC-2-A	DB-14	2+01.35	500.06
	DB-15	4+35.80	499.14



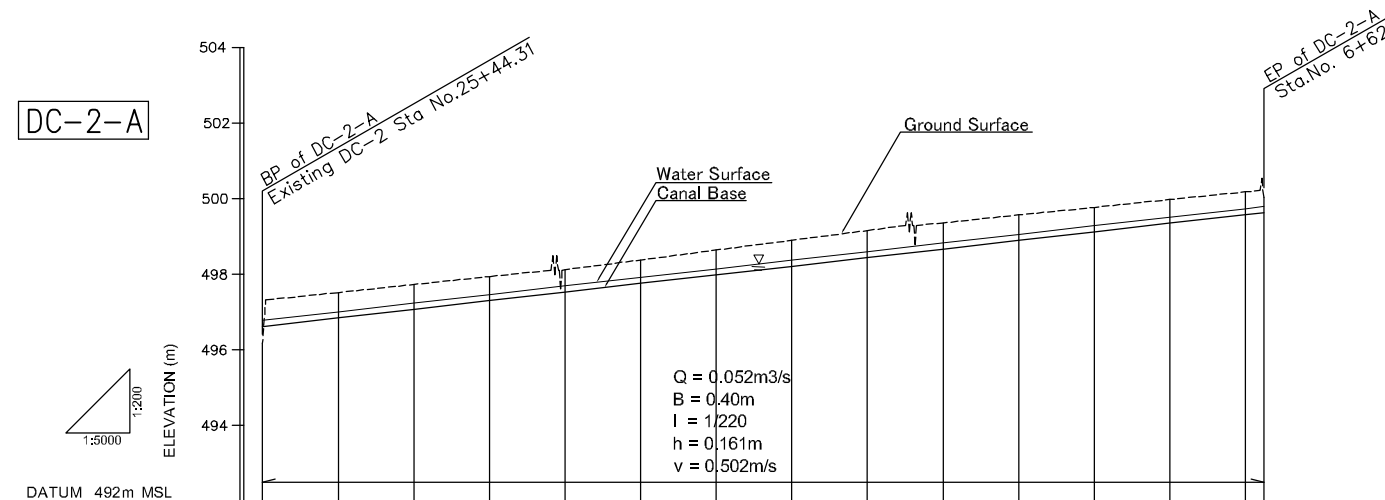
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING DIVISION BOX FOR 210HA AREA	
DRAWING NO.	ID-31
NIPPON KOEI CO., LTD.	



PLAN of DC-2-A

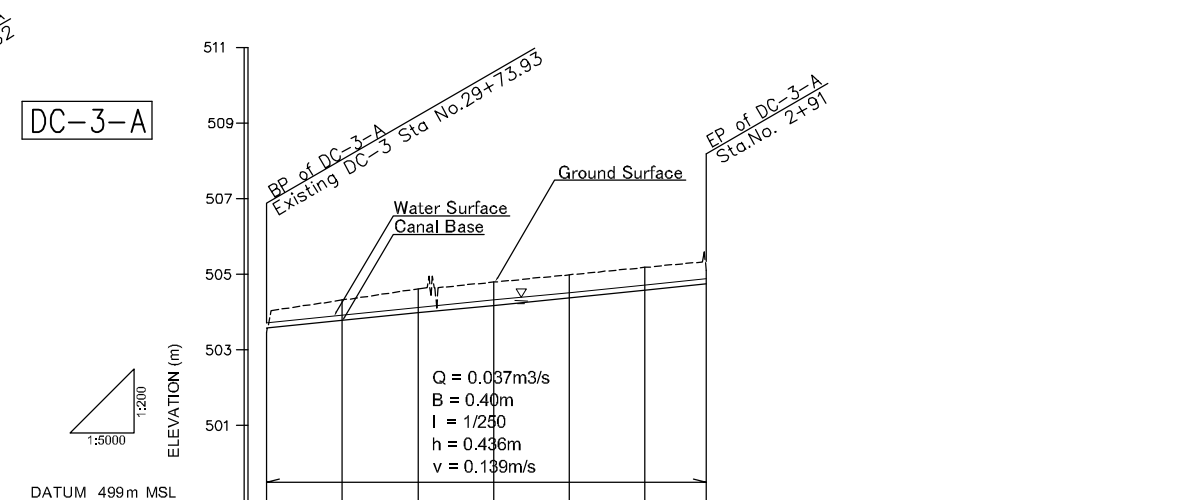


PLAN of DC-3-A



WATER SURFACE ELEVATION	496.78	497.01	497.24	497.46	497.69	497.92	498.15	498.37	498.60	498.83	499.06	499.28	499.51	499.74	499.79
CANAL BASE ELEVATION	496.62	496.85	497.08	497.30	497.53	497.76	497.99	498.21	498.44	498.67	498.89	499.12	499.35	499.58	499.63
GROUND SURFACE ELEVATION	496.17	497.52	497.73	497.94	498.12	498.38	498.64	498.91	499.16	499.36	499.57	499.77	499.96	500.18	500.04
ACCUMULATED DISTANCE	0.00	50.00	100.00	150.00	200.00	250.00	300.00	350.00	400.00	450.00	500.00	550.00	600.00	650.00	662.12
DISTANCE	0.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	12.12
STATION No.	0+00	0+50	1+00	1+50	2+00	2+50	3+00	3+50	4+00	4+50	5+00	5+50	6+00	6+50	6+62

PROFILE of DC-2-A



WATER SURFACE ELEVATION	503.72	503.92	504.12	504.32	504.52	504.72	504.88
CANAL BASE ELEVATION	503.56	503.78	503.98	504.18	504.38	504.58	504.74
GROUND SURFACE ELEVATION	503.47	504.32	504.61	504.79	504.99	505.18	505.10
ACCUMULATED DISTANCE	0.00	50.00	100.00	150.00	200.00	250.00	290.54
DISTANCE	0.00	50.00	50.00	50.00	50.00	50.00	40.54
STATION No.	0+00	0+50	1+00	1+50	2+00	2+50	2+91

PROFILE of DC-3-A

THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING PLAN AND PROFILE OF DRAINAGE CANAL DC-2-A,3-A	
DRAWING NO.	ID-32
NIPPON KOEI CO., LTD.	