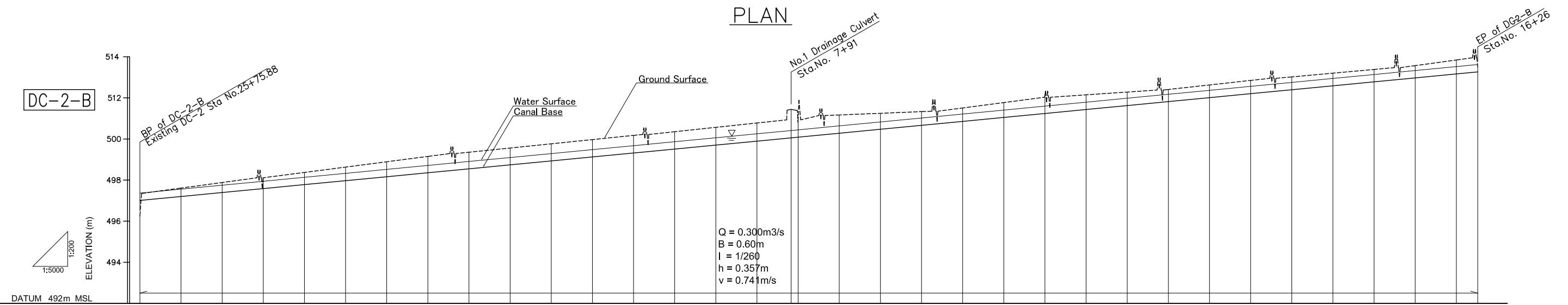


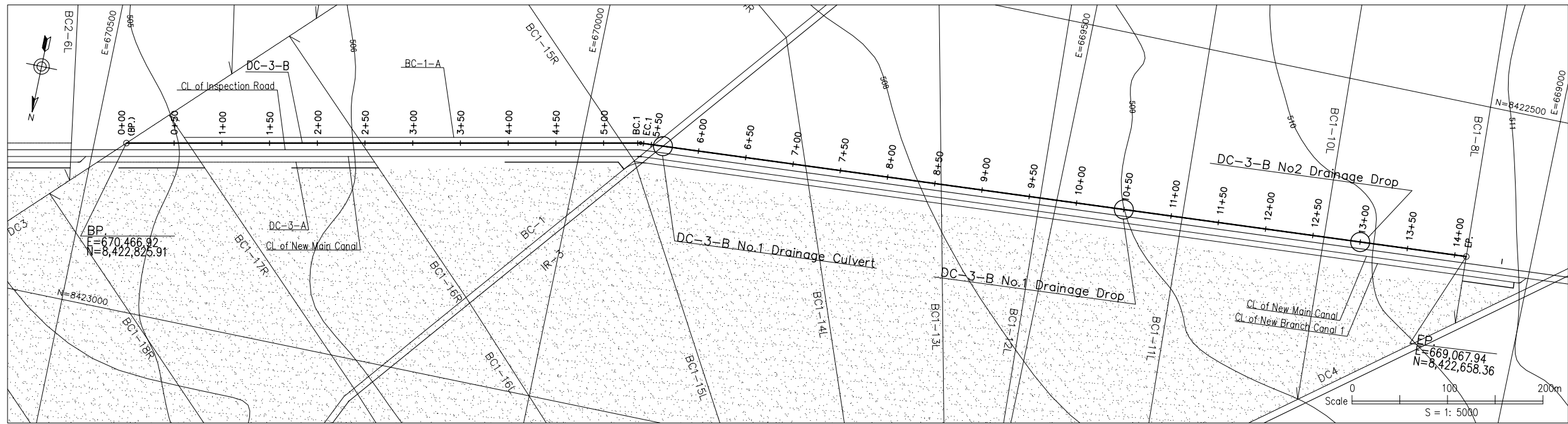
PLAN



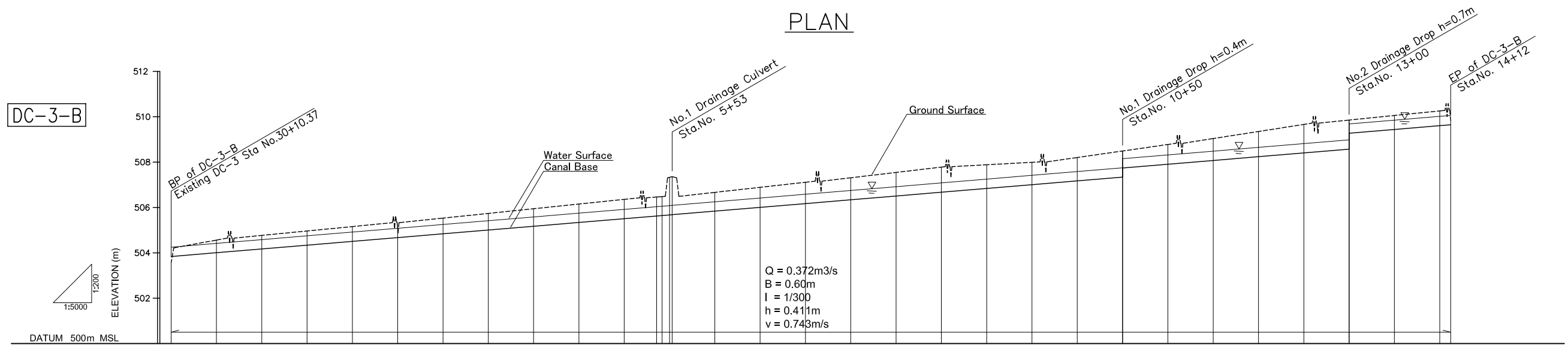
PROFILE

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	7+00	7+50	7+91	8+00	8+50	9+00	9+50	10+00	10+50	11+00	11+50	12+00	12+50	13+00	13+50	14+00	14+50	15+00	16+00	16+26	
WATER SURFACE ELEVATION	497.37	497.56	497.75	497.94	498.14	498.33	498.52	498.71	498.91	499.10	499.29	499.48	499.67	499.87	500.06	500.25	500.41	500.44	500.64	500.83	501.02	501.21	501.41	501.60	501.79	501.98	502.17	502.37	502.56	502.75	502.94	503.14	503.33	503.52	503.62
CANAL BASE ELEVATION	497.01	497.20	497.39	497.59	497.78	497.97	498.16	498.36	498.55	498.74	498.93	499.13	499.32	499.51	499.70	499.89	500.05	500.09	500.28	500.47	500.66	500.86	501.05	501.24	501.43	501.63	501.82	502.01	502.20	502.39	502.59	502.78	502.97	503.16	503.28
GROUND SURFACE ELEVATION	496.25	497.61	497.88	498.11	498.37	498.63	498.89	499.15	499.36	499.56	499.76	499.97	500.17	500.35	500.57	500.78	501.44	501.90	501.17	501.25	501.33	501.51	501.77	502.14	502.15	502.28	502.41	502.63	502.85	503.02	503.20	503.38	503.57	503.84	503.50
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	700.00	750.00	791.61	800.00	850.00	900.00	950.00	1,000.00	1,050.00	1,100.00	1,150.00	1,200.00	1,250.00	1,300.00	1,350.00	1,400.00	1,450.00	1,500.00	1,550.00	1,600.00	1,625.96
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	50.00	50.00	41.61	8.39	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	50.00	50.00	50.00	25.96

THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING 排水路 DC-2-B 平面・縦断面	
DRAWING NO.	ID-33
NIPPON KOEI CO., LTD.	



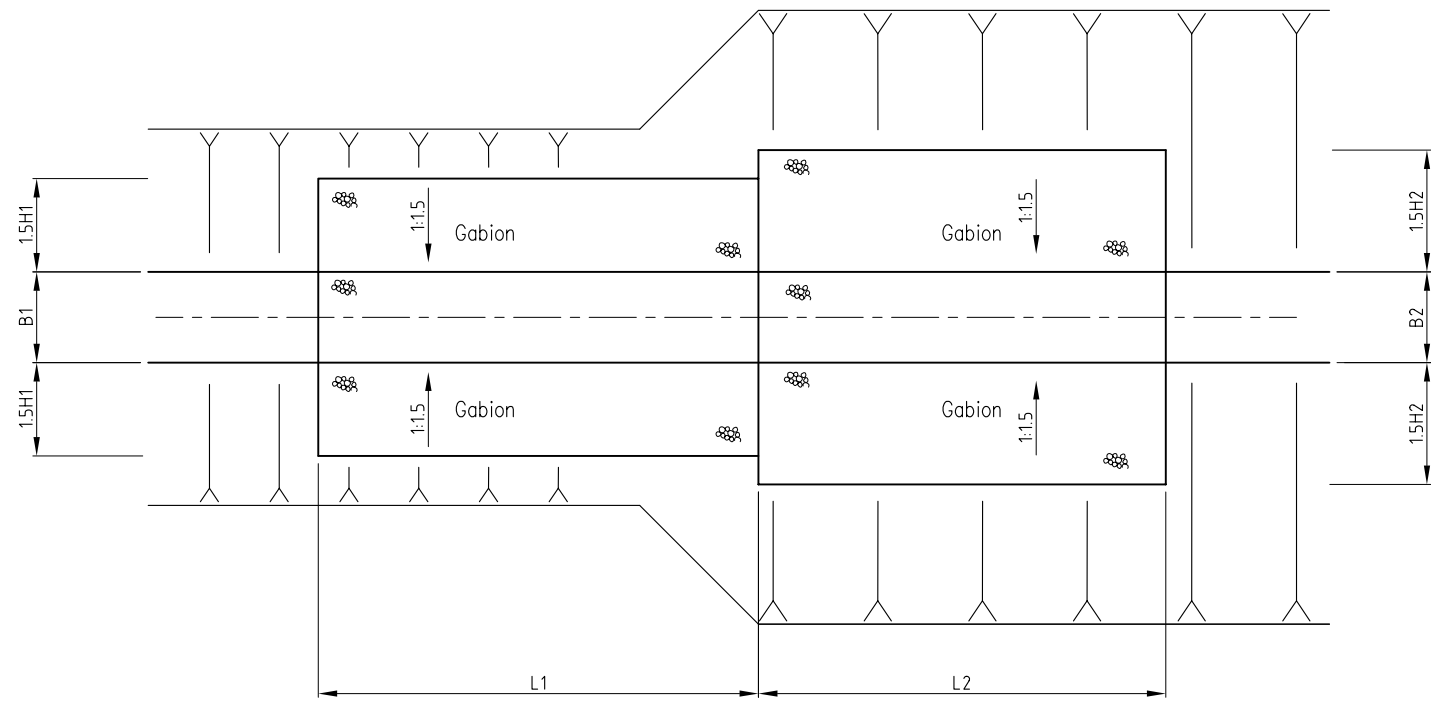
PLAN



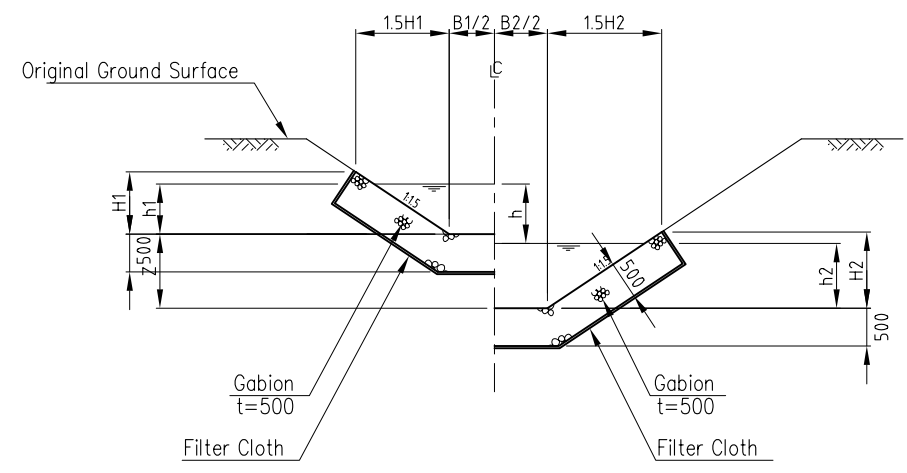
PROFILE

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	7+00	7+50	8+00	8+50	9+00	9+50	10+00	10+50	11+00	11+50	12+00	12+50	13+00	13+50	14+00	14+12	
WATER SURFACE ELEVATION	504.25	504.42	504.58	504.75	504.92	505.08	505.25	505.42	505.58	505.75	505.92	506.04	506.25	506.42	506.58	506.75	506.92	507.08	507.25	507.42	507.58	507.75	508.32	508.48	508.65	508.82	509.88	509.85	509.85	510.02	510.06
CANAL BASE ELEVATION	503.84	504.01	504.17	504.34	504.51	504.67	504.84	505.01	505.17	505.34	505.51	505.67	505.84	506.01	506.17	506.34	506.51	506.67	506.84	507.01	507.17	507.34	507.91	508.07	508.24	508.41	508.57	508.57	509.44	509.61	509.65
GROUND SURFACE ELEVATION	503.57	504.56	504.77	504.96	505.16	505.08	505.53	505.74	505.95	506.15	506.36	506.48	506.67	506.89	507.11	507.31	507.55	507.78	507.88	507.99	508.20	508.49	508.78	509.04	509.35	509.66	509.85	510.06	510.26	509.84	509.84
ACCUMULATED DISTANCE	0.00	50.00	100.00	150.00	200.00	250.00	300.00	350.00	400.00	450.00	500.00	547.80	600.00	650.00	700.00	750.00	800.00	850.00	900.00	950.00	1,000.00	1,050.00	1,100.00	1,150.00	1,200.00	1,250.00	1,300.00	1,350.00	1,400.00	1,412.08	
DISTANCE	0.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	38.80	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	50.00	50.00	50.00	50.00	12.08	

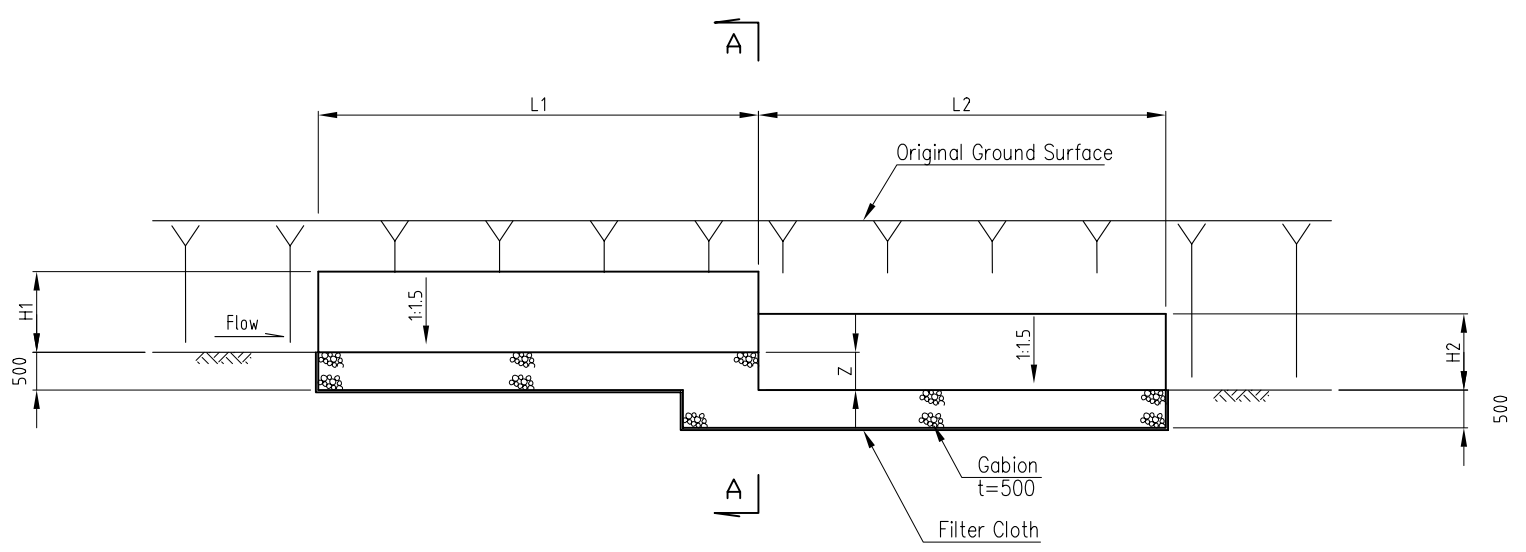
THE REPUBLIC OF MALAWI  
 THE PROJECT FOR REHABILITATION OF  
 BWANJE VALLEY IRRIGATION SYSTEM  
 TITLE OF DRAWING  
 排水路 DC-3-B  
 平面・縦断面  
 DRAWING NO. ID-34  
 NIPPON KOEI CO., LTD.



PLAN



SECTION A-A



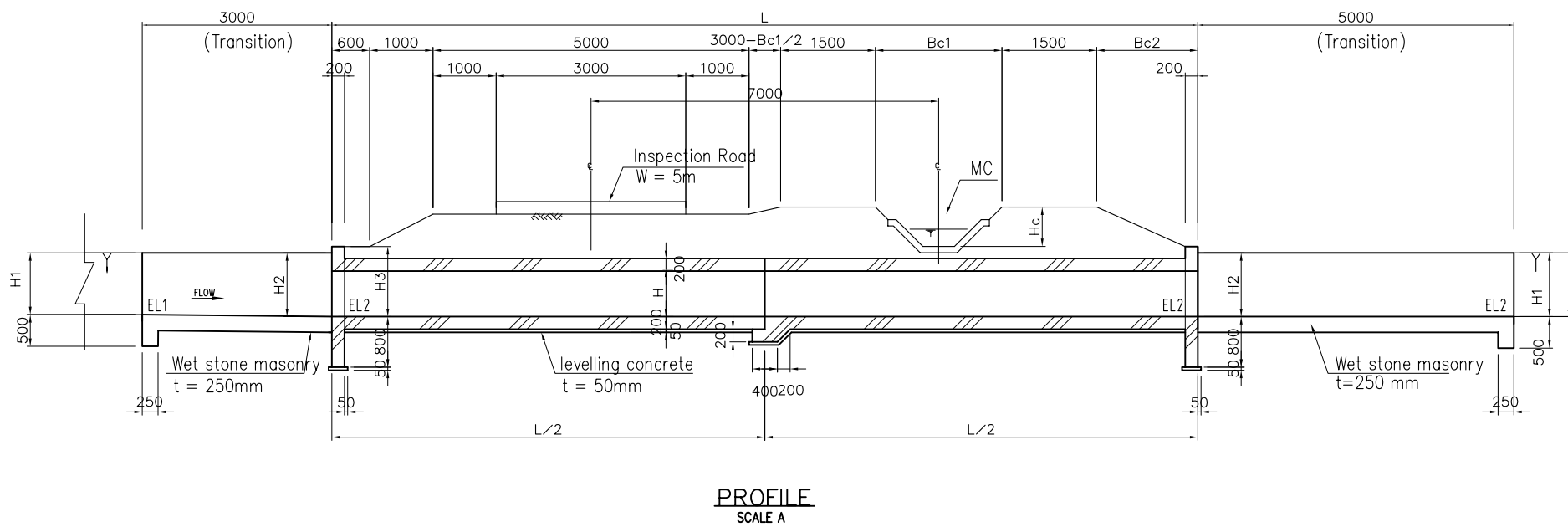
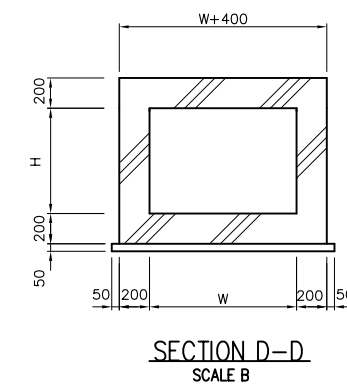
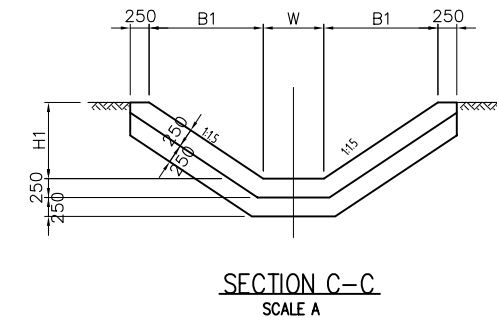
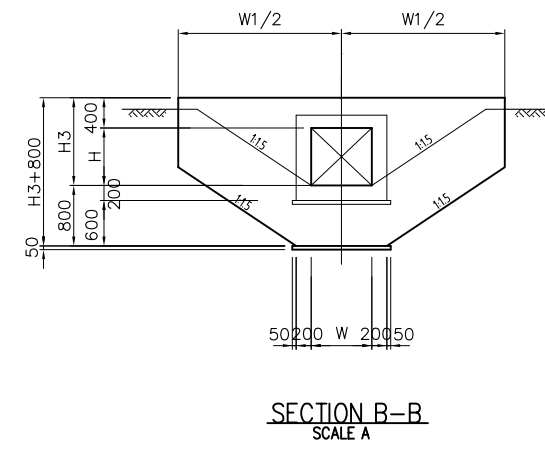
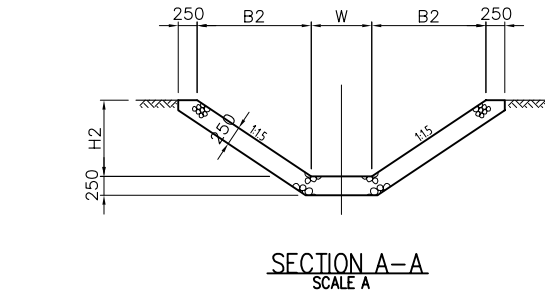
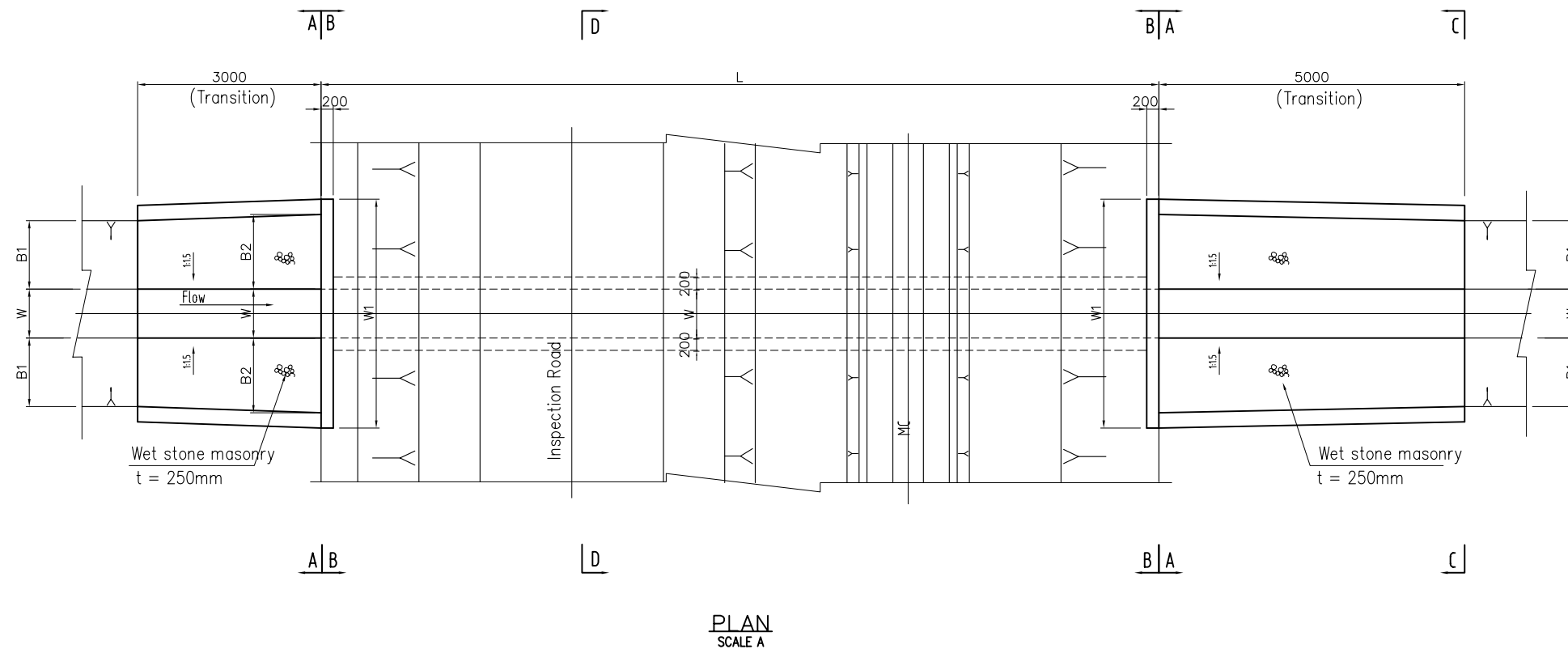
PROFILE(h=0.7m)

DIMENSION TABLE FOR DRAINAGE DROP

Drainage Canal	Drop No.	Sta. No.	EL1 (m)	EL2 (m)	h1 (mm)	h2 (mm)	H1 (mm)	H2 (mm)	B1 (mm)	B2 (mm)	h (mm)	Z (mm)	L1 (mm)	L2 (mm)
DC-3-B	No.1	10+50.00	507.74	507.34	411	411	700	700	600	600	400	400	2000	3000
	No.2	13+00.00	509.27	508.57	411	411	700	700	600	600	700	700	2000	3000

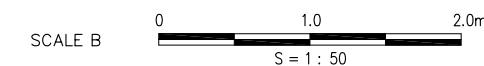


THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
排水路 落差工	
DRAWING NO.	ID-35
NIPPON KOEI CO., LTD.	

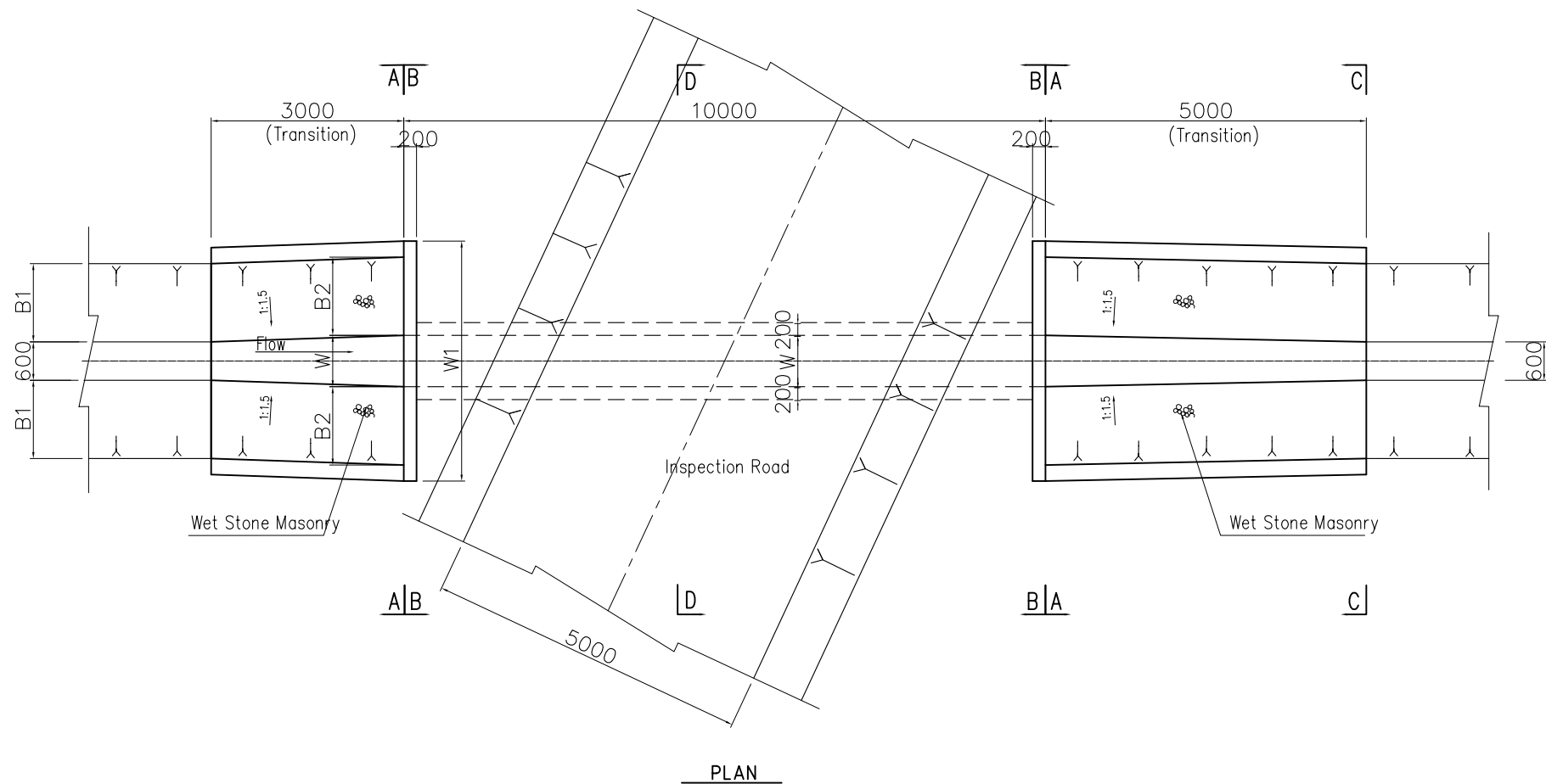


DIMENSION TABLE FOR DRAINAGE CULVERT

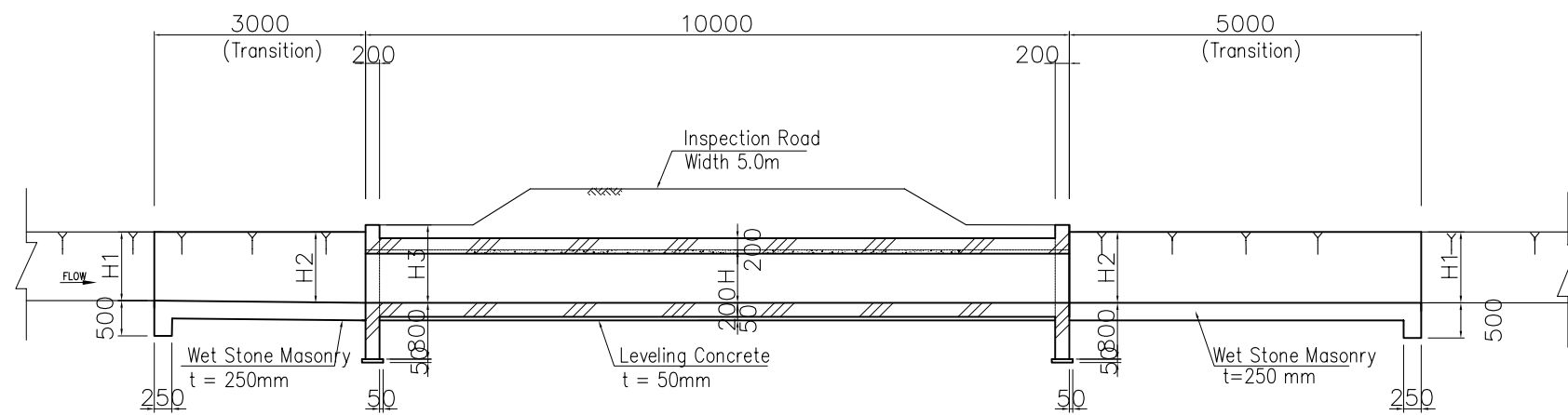
Drainage Culvert	Sta. No.	Drainage Canal	Drainage Culvert											Main Canal				
			W (mm)	H (mm)	L (mm)	B1 (mm)	B2 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	W1 (mm)	EL1 (m)	EL2 (m)	GL (m)	Bc1 (mm)	Bc2 (mm)	Hc (mm)	ELc (m)
No.1	25+56.98	DC-4	800	1000	17000	1755	1830	1170	1220	1400	5000	509.54	509.49	510.71	4000	2400	1300	511.17
No.2	40+71.78	DC-3	800	800	18000	990	1095	660	730	1200	3500	503.47	503.40	504.13	4000	3400	1300	504.76
No.3	57+35.00	DC-2	800	1000	17000	1635	1710	1090	1140	1400	4800	496.17	496.12	497.26	3200	2800	1300	497.84



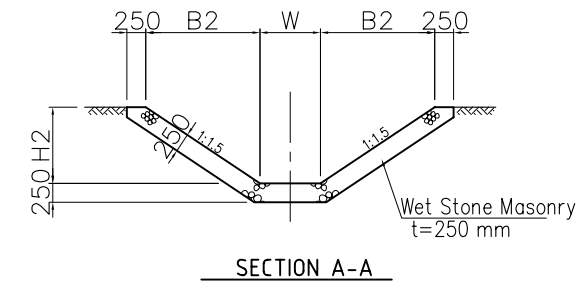
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
排水路横断工	
DRAWING NO.	ID-36
NIPPON KOEI CO., LTD.	



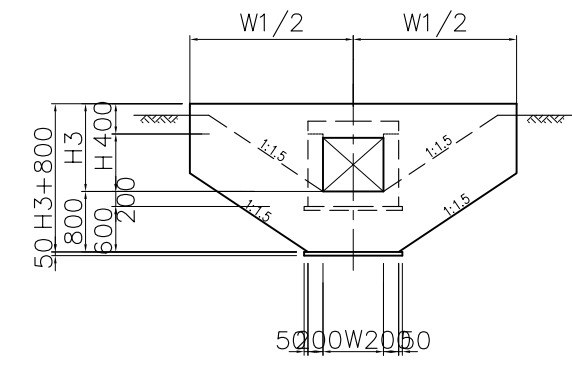
PLAN



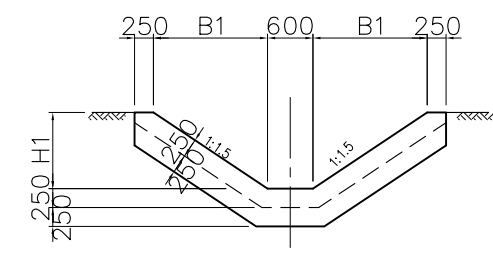
PROFILE



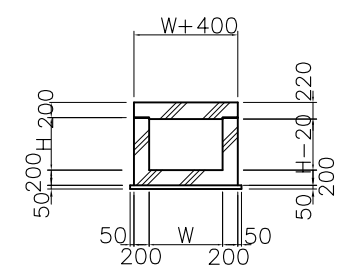
SECTION A-A



SECTION B-B



SECTION C-C



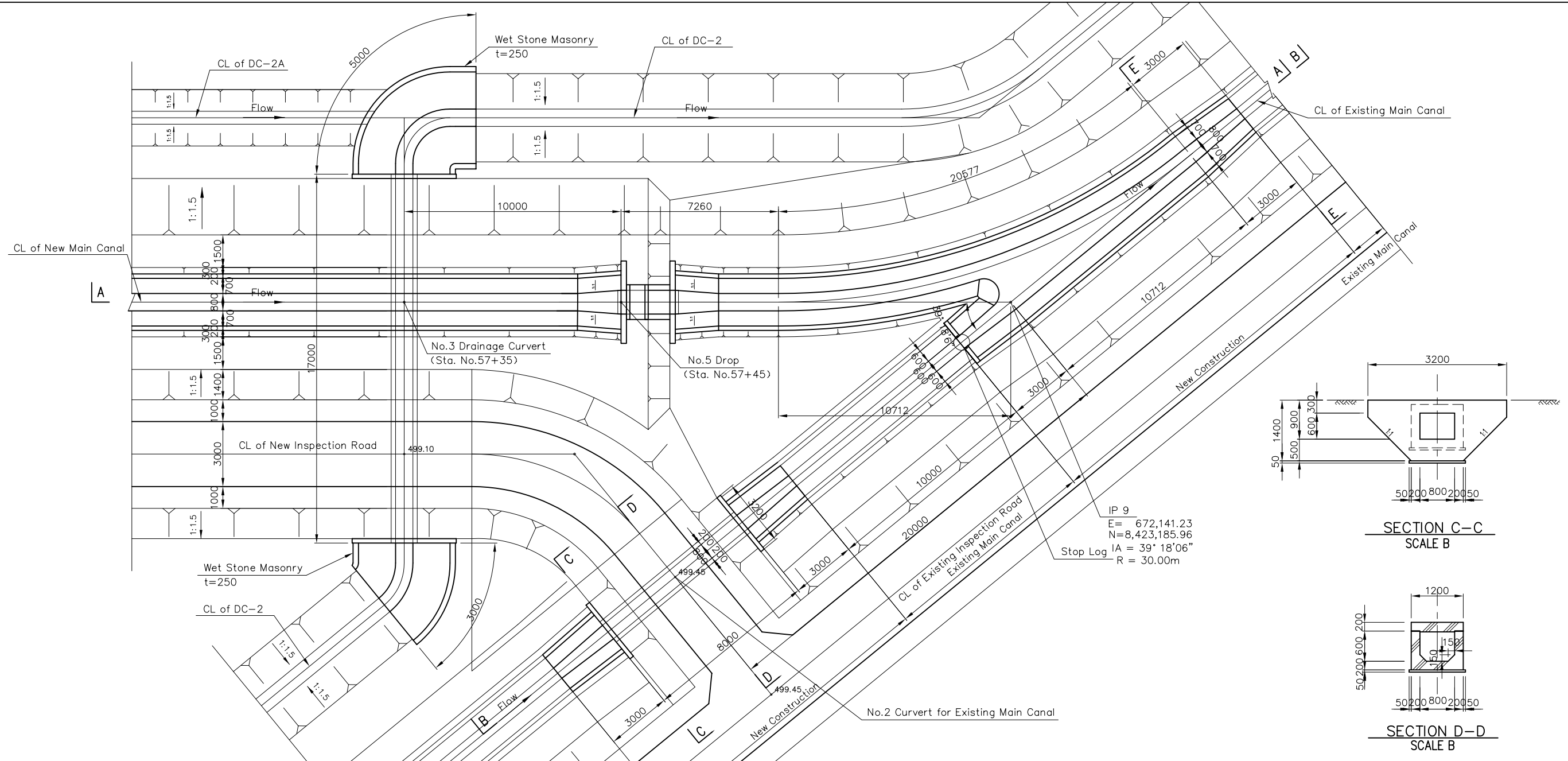
SECTION D-D

DIMENSION TABLE FOR DRAINAGE CULVERT FOR DC-2-B, 3-B

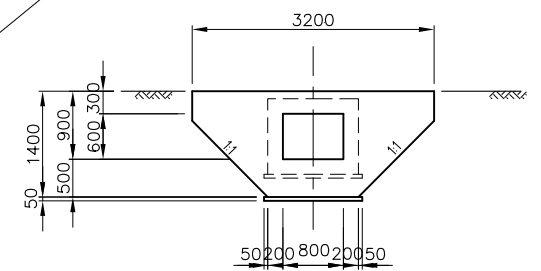
Drainage Canal	Sta. No.	W (mm)	H (mm)	h (mm)	B1 (mm)	B2 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	W1 (mm)	EL1 (m)	EL2 (m)	GL (m)
DC-2-B	7+91.61	800	1000	1000	2224	2272	1390	1420	1500	5900	500.05	500.02	501.44
DC-3-B	5+52.85	800	1000	1000	2688	2736	1680	1710	1800	6800	505.68	505.65	507.36



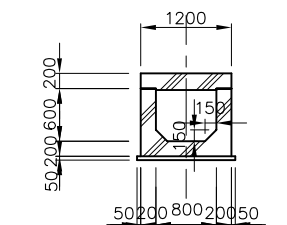
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING 排水路横断工 排水路 NO.2-B, 3-B	
DRAWING NO.	ID-37
NIPPON KOEI CO., LTD.	



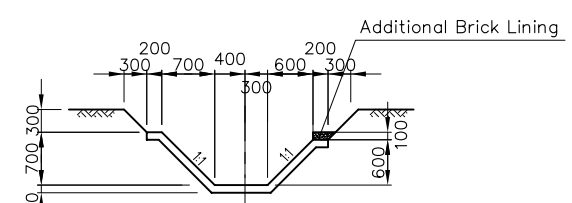
PLAN



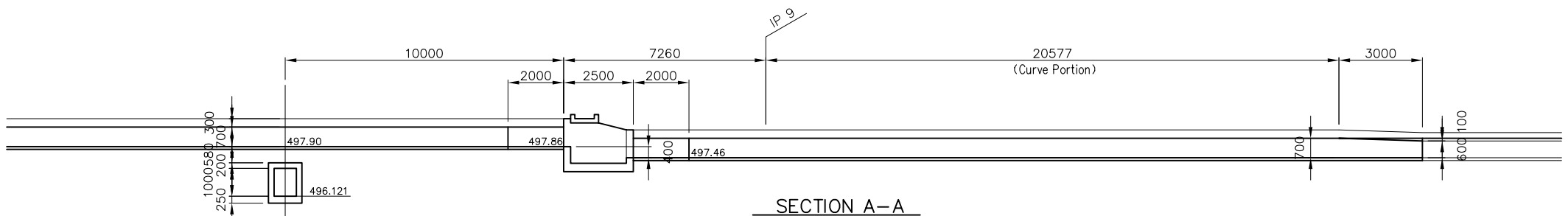
SECTION C-C  
SCALE B



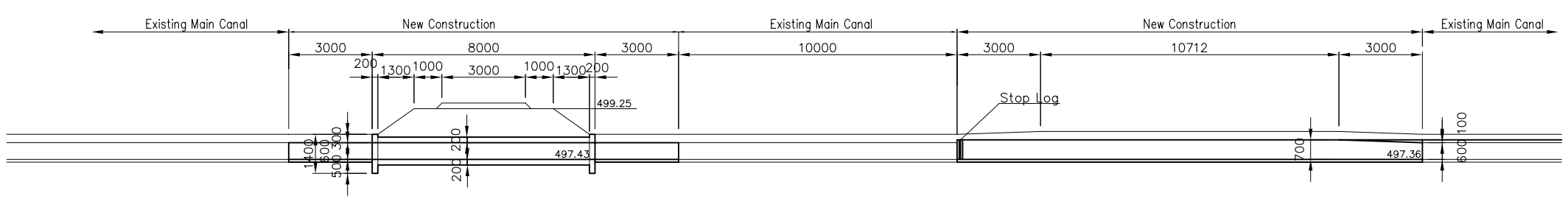
SECTION D-D  
SCALE B



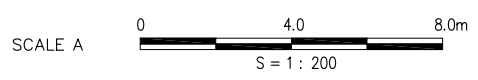
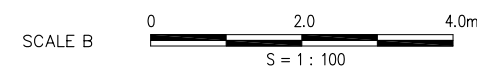
SECTION E-E  
SCALE B



SECTION A-A

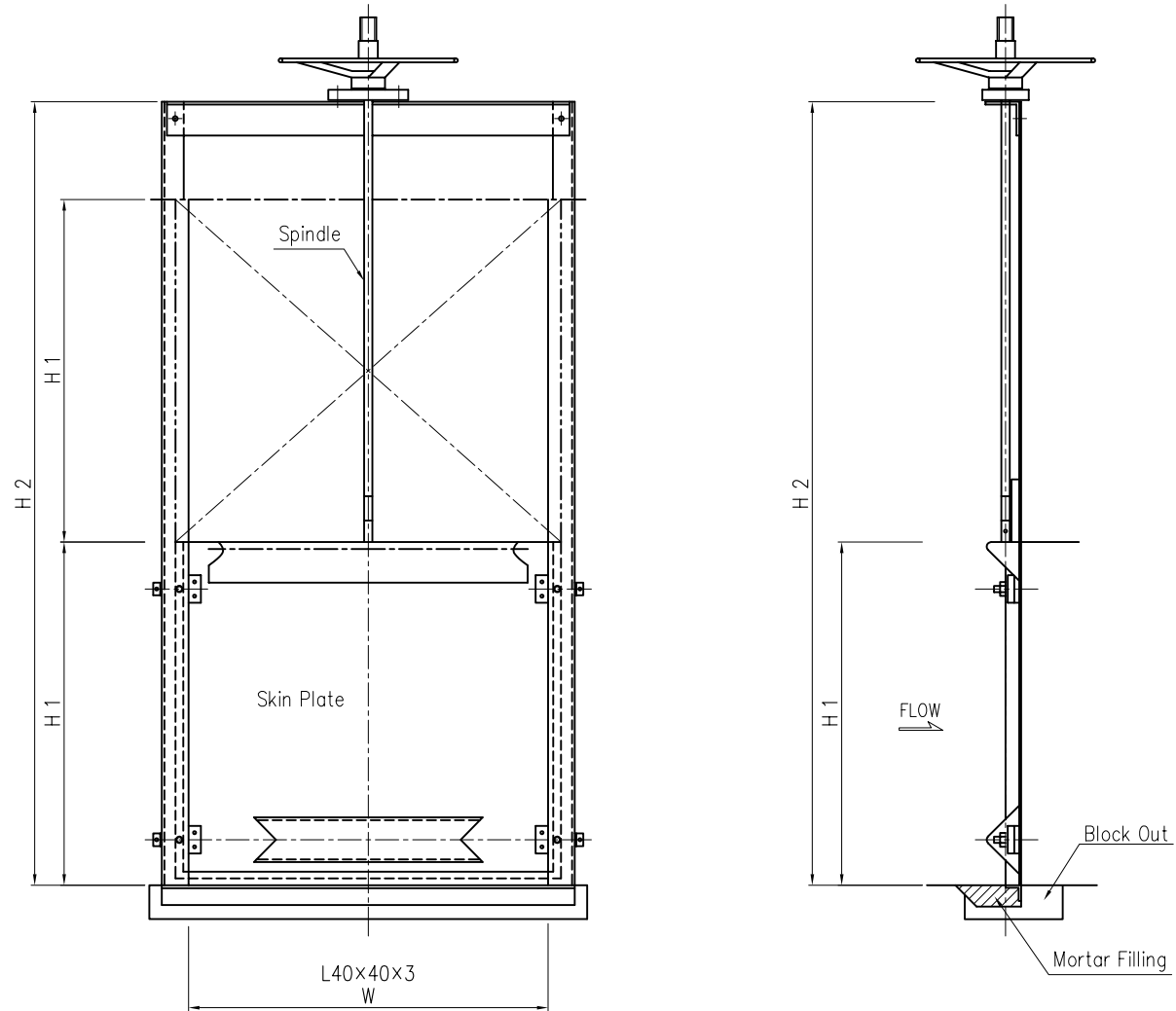


SECTION B-B



THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING 既存幹線水路合流箇所図	
DRAWING NO.	ID-38
NIPPON KOEI CO., LTD.	

CONTROL GATE FOR GATE STRUCTURE AND BIFURCATION

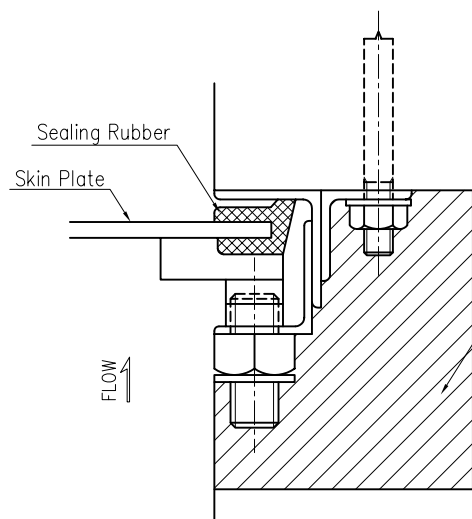


ELEVATION

SECTION

DIMENSION TABLE FOR CONTROL GATE

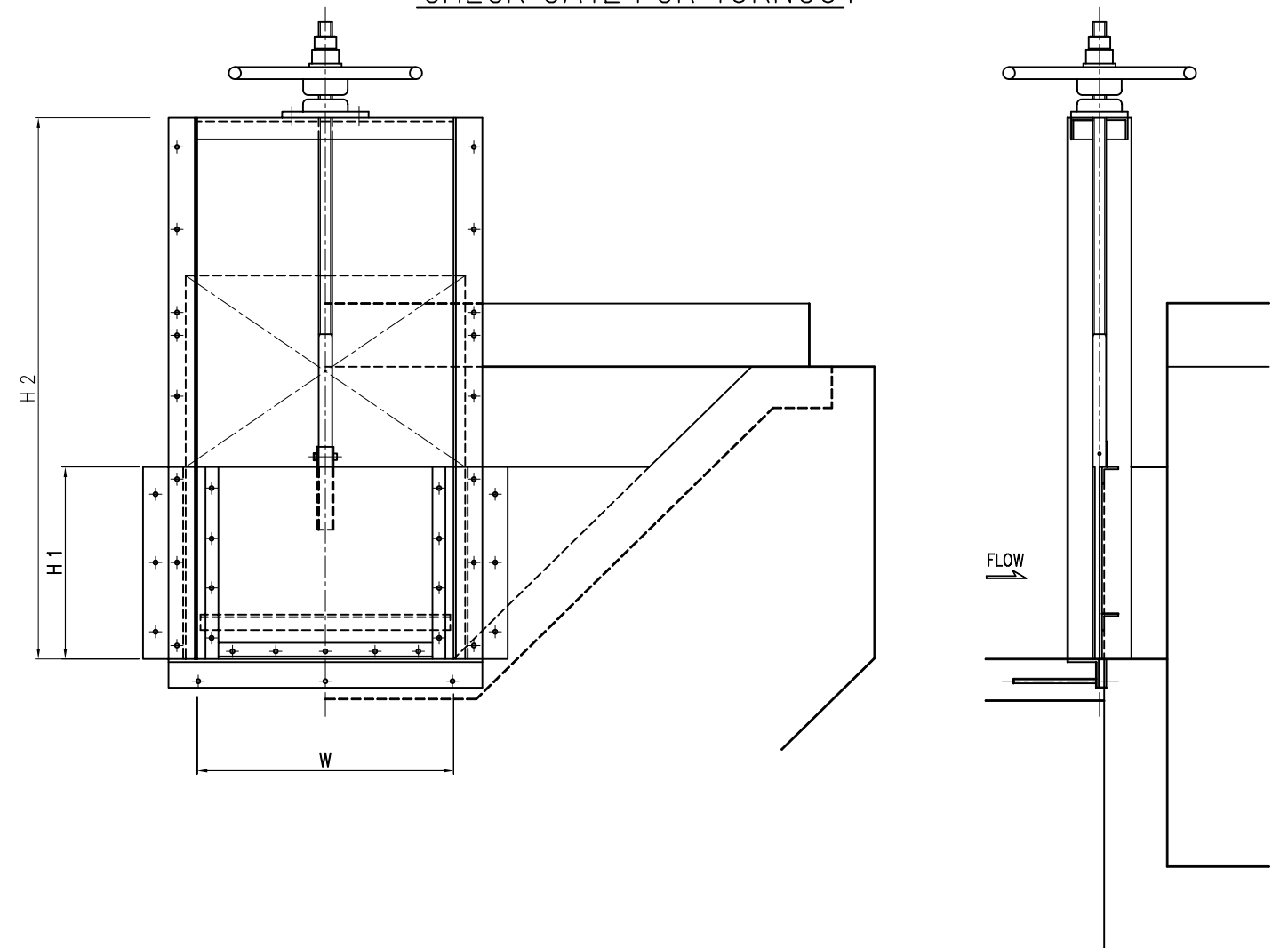
Name of Canal	Name of Structure	Sta. No.	Name of Diversion Canal	Dimension of Gate		
				W (m)	H1 (m)	H2 (m)
MC	Gate Structure	0+09.62	MC	2.00	1.00	2.30
			Existing Main Canal	2.00	1.00	2.30
	No.1 Bifurcation	25+75.00	MC	1.45	0.85	1.90
			BC-1	0.60	0.85	1.90
	No.2 Bifurcation	40+93.03	MC	1.04	0.70	1.70
			BC-2	0.55	0.70	1.70



SEALING DETAIL

Mortar Filling  
when repairing this part  
remove the mortar by cipping  
and after the repair fill  
the mortar again

CHECK GATE FOR TURNOUT

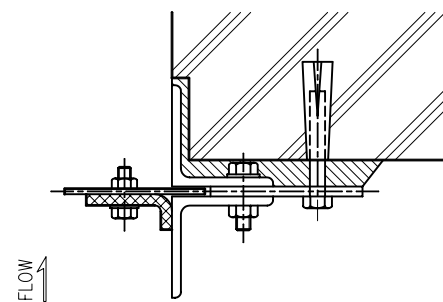


ELEVATION

SECTION

DIMENSION TABLE FOR CHECK GATE

Name of Canal	Name of Turnout	Sta. No.	Name of Tertiary Canal	Dimension of Gate		
				W (m)	H1 (m)	H2 (m)
BC-1	TO-7	0+14.30	BC-1-7L	0.60	0.48	1.30
	TP-10	2+18.44	BC-1-10L	0.60	0.48	1.30
	TO-11	3+68.51	BC-1-11L	0.60	0.48	1.30
	TO-12	5+18.75	BC-1-12L	0.60	0.48	1.30
	TO-13	6+19.96	BC-1-13L	0.60	0.48	1.30
	TO-14	7+60.48	BC-1-14L	0.60	0.48	1.30
BC-2	TO-15	9+57.09	BC-1-15L&R	0.60	0.48	1.30
	TO-6	0+18.33	BC-2-6L	0.60	0.42	1.20
	TO-9	2+64.57	BC-2-9L	0.60	0.42	1.20
	TO-10	4+01.47	BC-2-10L	0.60	0.42	1.20
	TO-11	5+38.30	BC-2-11L	0.60	0.42	1.20
	TO-12	6+75.29	BC-2-12L	0.60	0.42	1.20
	TO-13	8+13.08	BC-2-13L	0.60	0.42	1.20



SEALING DETAIL

NOT TO SCALE

THE REPUBLIC OF MALAWI

THE PROJECT FOR REHABILITATION OF  
BWANJE VALLEY IRRIGATION SYSTEM

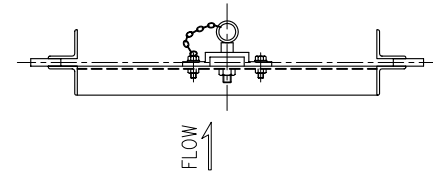
TITLE OF DRAWING

水路構造物用ゲート(1/2)

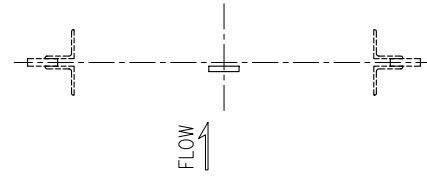
DRAWING NO.

ID-39

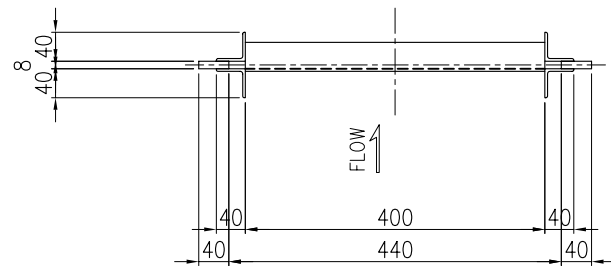
NIPPON KOEI CO., LTD.



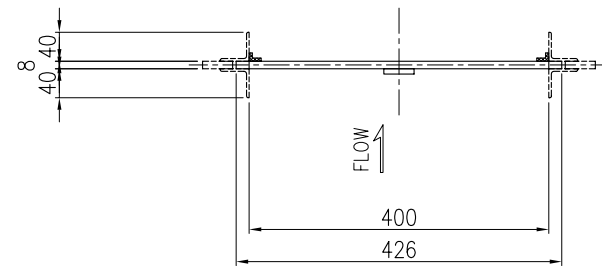
SECTION A-A



SECTION D-D



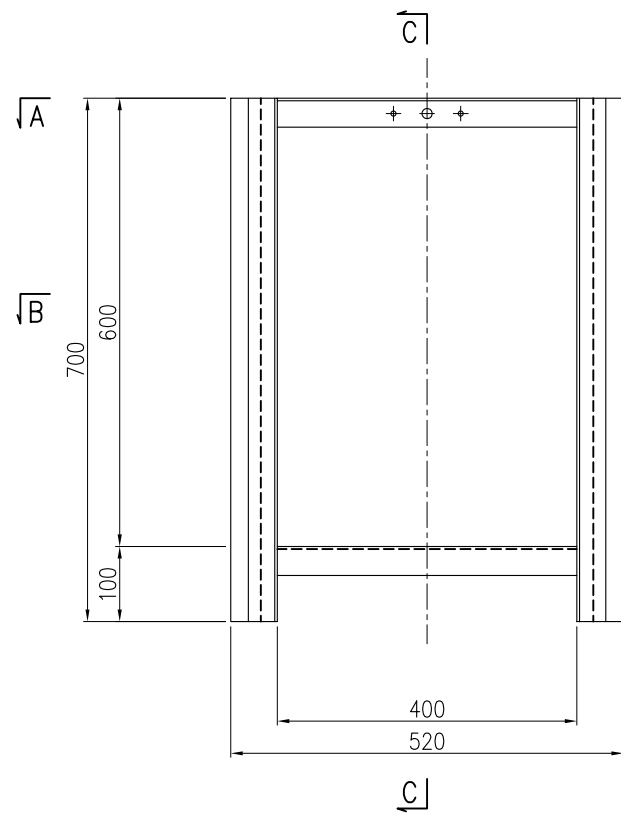
SECTION B-B



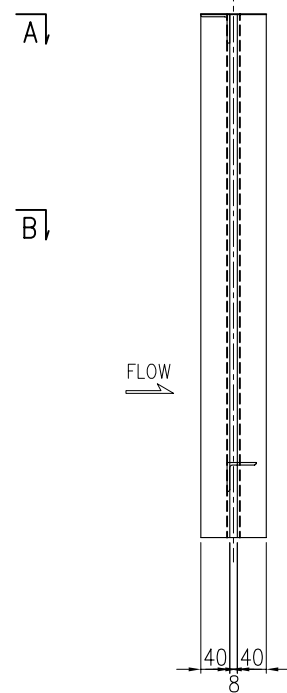
SECTION E-E

DIMENSION TABLE FOR HANDSTOP

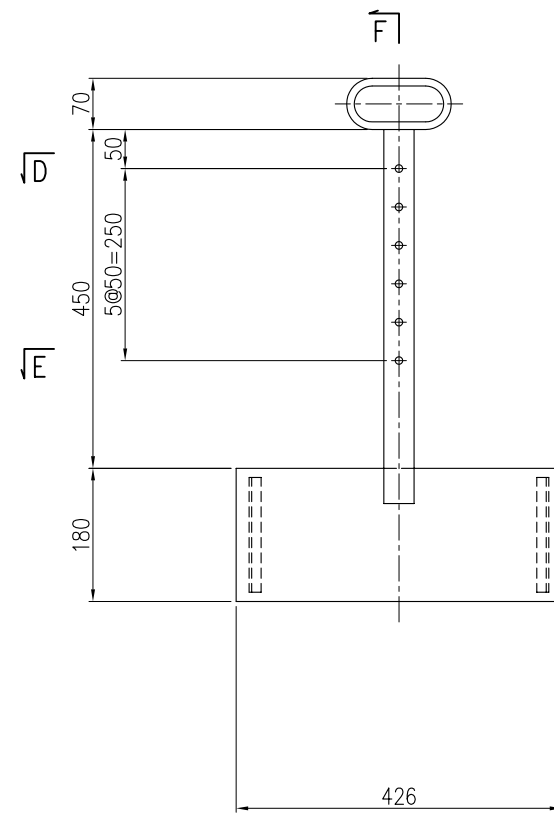
Name of Canal	Name of Turnout	Sta. No.	Name of Tertiary Canal	No. of Handstop
BC-1	TO-7	0+14.30	BC-1-7L	1
	TP-10	2+18.44	BC-1-10L	1
	TO-11	3+68.51	BC-1-11L	1
	TO-12	5+18.75	BC-1-12L	1
	TO-13	6+19.96	BC-1-13L	1
	TO-14	7+60.48	BC-1-14L	1
BC-2	TO-15	9+57.09	BC-1-15L BC-1-15R	1 1
	TO-6	0+18.33	BC-2-6L	1
	TO-9	2+64.57	BC-2-9L	1
	TO-10	4+01.47	BC-2-10L	1
	TO-11	5+38.30	BC-2-11L	1
	TO-12	6+75.29	BC-2-12L	1
	TO-13	8+13.08	BC-2-13L	1



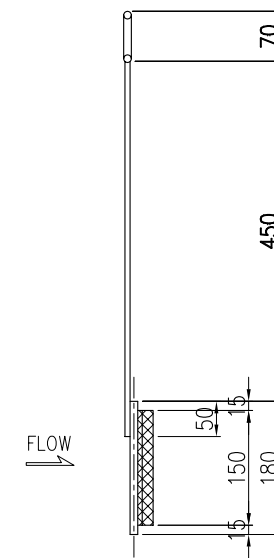
FRAME



SECTION C-C

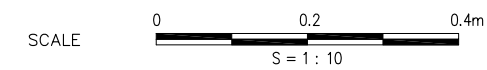


BLADE



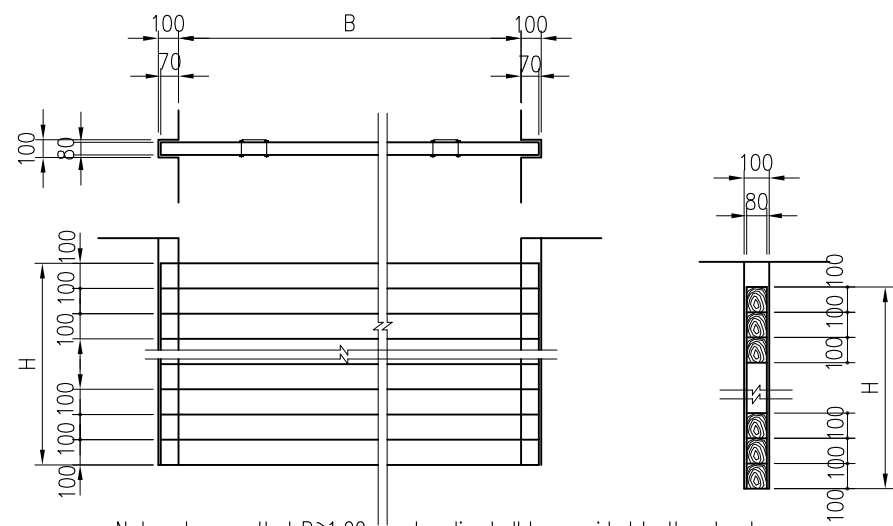
SECTION F-F

STEEL GATE FOR TURNOUT



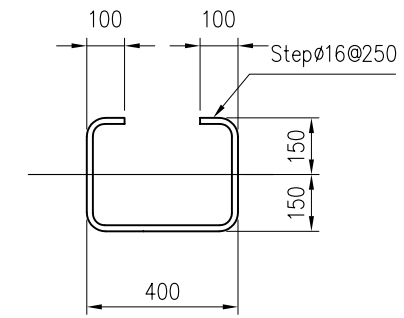
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING 水路構造物用ゲート(2/2)	
DRAWING NO.	ID-40
NIPPON KOEI CO., LTD.	



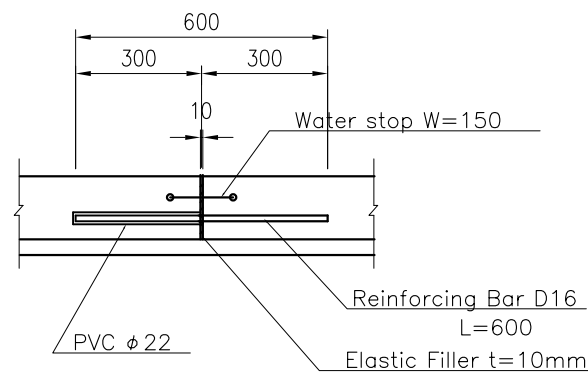


Note : In case that  $B \geq 1.00\text{m}$ , a handle shall be provided to the stop log

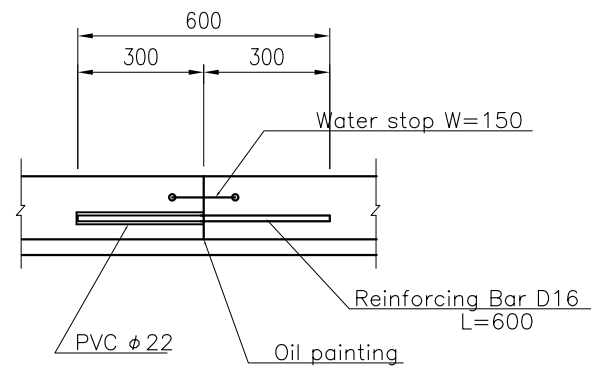
STOP LOG  
NOT TO SCALE



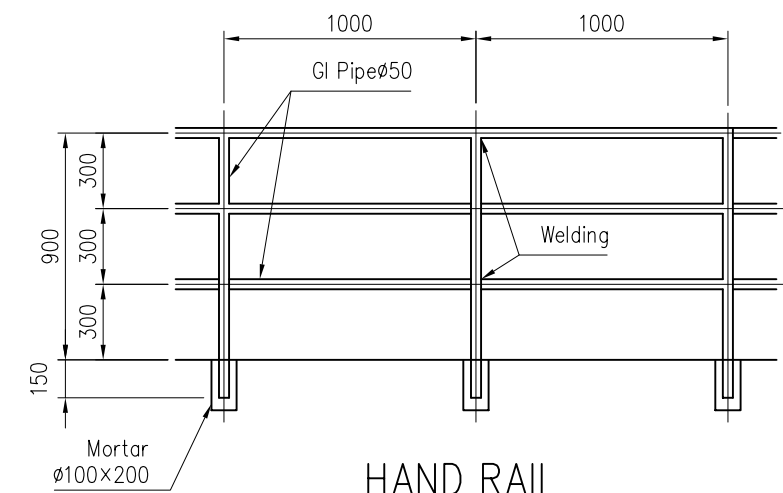
DETAIL OF STEP  
SCALE A



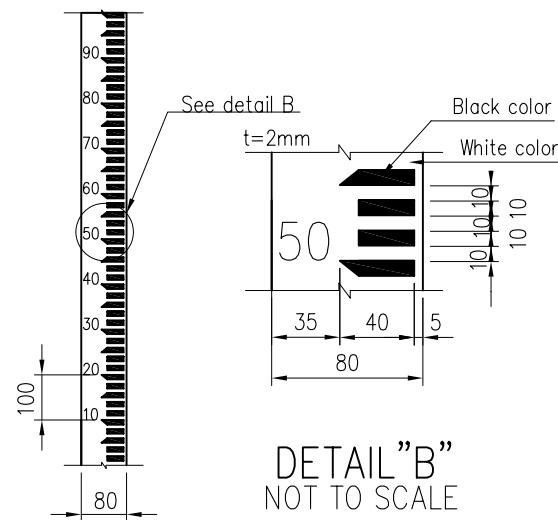
EXPANTION JOINT  
SCALE B



CONTRACTION JOINT  
SCALE B

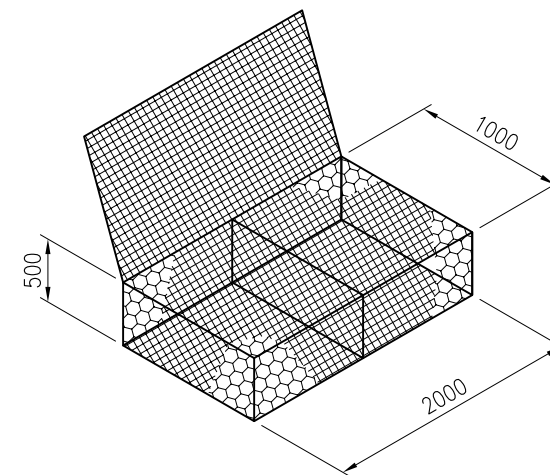


HAND RAIL  
SCALE B

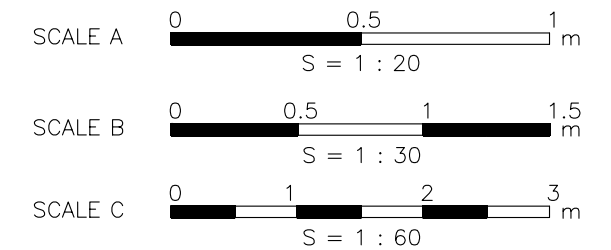


STAFF GAUGE  
NOT TO SCALE

DETAIL "B"  
NOT TO SCALE



GABION  
NOT TO SCALE



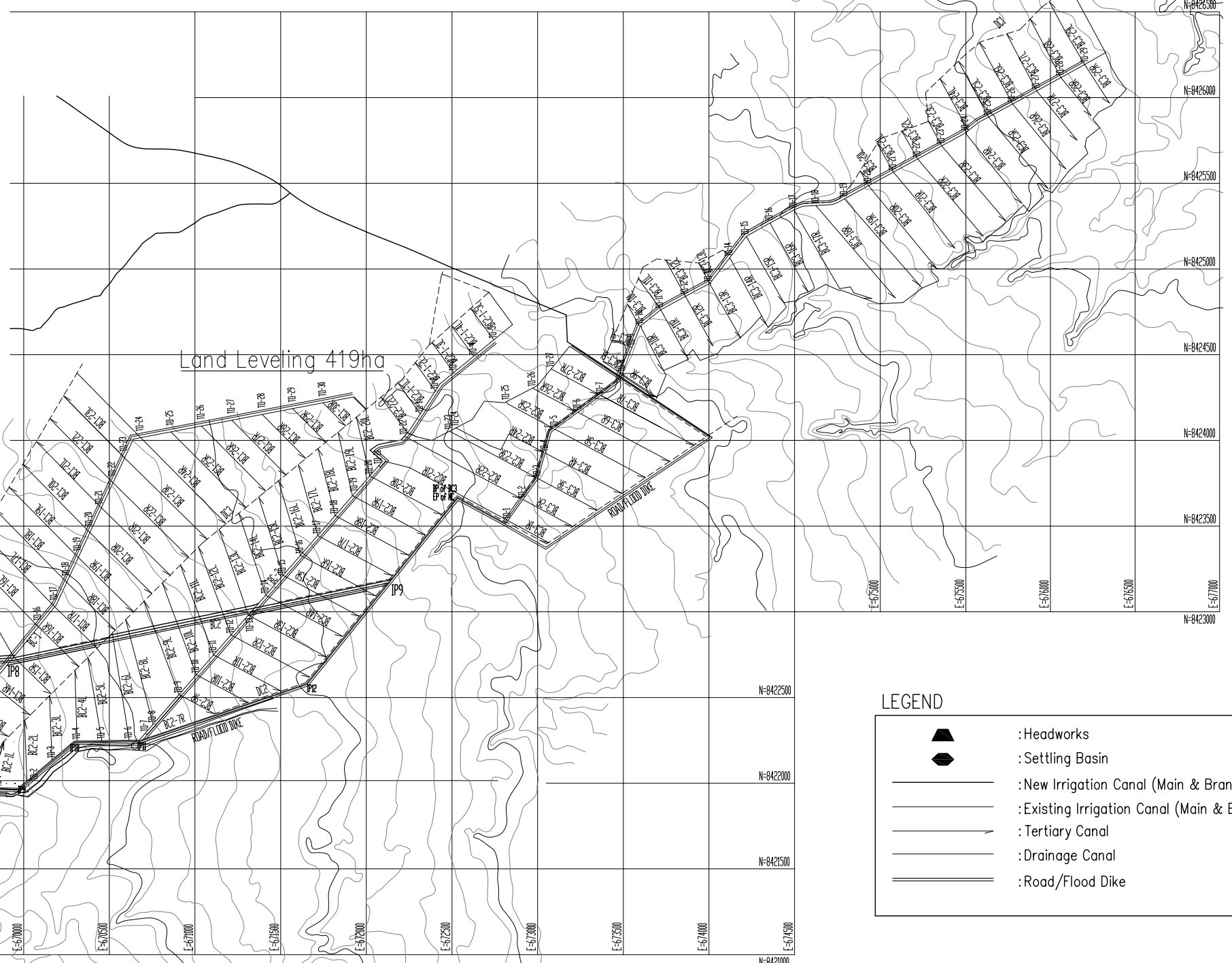
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
雑工	
DRAWING NO.	ID-41
NIPPON KOEI CO., LTD.	

BC1			
Block No.	Target Area (ha)		
	Lesser Degree	Middle Degree	Greater Degree
1L	0.0	0.0	0.0
2L	0.0	0.0	0.0
3L	0.0	0.0	0.0
4L	0.0	0.0	0.0
5L	0.0	0.0	0.0
6L	0.0	0.0	0.0
7L	0.0	0.0	0.1
8L	0.0	0.0	1.1
10L	0.0	0.0	2.4
11L	0.0	1.1	2.7
12L	0.0	0.0	2.1
13L	0.0	2.9	0.8
14L	0.0	3.4	2.2
15L	0.0	7.0	0.0
16L	0.0	3.5	4.1
17L	0.0	5.4	2.3
18L	0.0	5.5	2.0
19L	0.0	4.7	2.6
20L	0.0	2.3	4.7
21L	0.0	4.3	2.5
22L	0.0	1.9	4.6
23L	0.0	6.4	0.0
9R	0.0	0.0	0.0
11R	0.0	0.0	0.0
12R	0.0	0.0	0.0
13R	0.0	0.0	0.0
14R	0.0	0.0	0.0
15R	1.3	0.0	0.0
16R	2.8	0.0	0.0
17R	0.3	3.2	1.0
18R	5.5	0.0	0.0
19R	0.0	3.0	3.2
20R	5.4	0.0	1.6
21R	0.0	6.9	0.8
22R	0.4	3.1	0.8
23R	0.4	5.8	0.0
24R	0.0	7.7	1.0
25R	3.5	1.6	2.4
26R	0.0	1.9	0.0
27R	0.0	0.0	0.0
28R	0.0	0.0	0.0
29R	0.0	0.0	0.0
30R	0.0	0.0	0.0
Total	19.6	81.6	45.0

BC2			
Block No.	Target Area (ha)		
	Lesser Degree	Middle Degree	Greater Degree
1L	0.0	0.0	0.0
2L	0.0	0.0	0.0
3L	0.0	0.0	0.0
4L	0.0	0.0	0.0
5L	0.0	0.0	0.0
6L	0.0	0.3	0.0
8L	0.0	1.4	0.0
9L	0.0	0.0	0.0
10L	0.0	0.0	0.0
11L	0.0	3.4	1.1
12L	0.0	5.3	0.0
13L	0.0	5.8	0.0
14L	0.0	5.5	0.0
15L	0.0	0.2	5.1
16L	0.0	0.9	4.2
17L	0.0	3.6	1.1
18L	0.0	1.8	2.5
19L	0.0	0.7	3.0
20L	0.0	3.0	1.3
22L	3.2	0.0	0.0
7R	0.0	0.0	0.0
9R	0.0	0.0	0.0
10R	0.0	0.0	0.0
11R	0.0	0.0	0.0
12R	0.0	0.0	0.0
13R	0.1	0.1	0.0
14R	0.0	0.4	0.0
15R	0.0	1.1	1.0
16R	0.0	0.0	0.0
17R	0.4	3.4	2.4
18R	0.0	2.9	3.2
19R	0.0	5.7	0.4
20R	0.0	4.6	1.2
21R	0.0	0.0	0.0
22R	0.0	0.0	0.0
23R	0.0	0.0	0.0
24R	0.0	0.0	0.0
25R	0.0	0.0	0.0
26R	0.0	0.0	0.0
27R	0.0	0.0	0.0
1-1L	1.9	0.0	0.7
1-2L	1.7	0.0	0.8
1-3L	1.1	0.0	0.0
1-4L	0.0	0.0	0.0
1-5L	0.0	0.0	0.0
Total	8.4	50.1	28.0

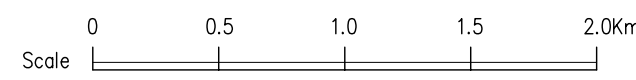
BC3			
Block No.	Target Area (ha)		
	Lesser Degree	Middle Degree	Greater Degree
8L	0.0	0.0	0.0
9L	0.0	0.0	0.0
10L	0.0	0.0	0.0
11L	4.6	0.0	0.0
12L	0.8	1.5	0.6
13L	0.0	0.4	1.1
20L	0.0	0.0	2.3
21L	3.3	0.0	0.0
22L	0.7	2.1	0.0
23L	1.4	0.9	0.7
24L	5.1	0.0	0.3
25L	2.3	3.9	0.0
26L	6.5	0.0	0.0
27L	6.1	0.0	0.0
28L	6.3	0.0	0.0
29L	6.8	0.0	0.0
1R	0.0	0.0	0.0
2R	0.0	0.0	0.0
3R	0.6	5.3	0.0
4R	0.0	0.0	0.0
5R	0.0	0.0	0.0
6R	0.4	2.4	5.2
7R	1.0	0.6	3.7
8R	0.0	0.0	0.0
10R	0.0	0.0	0.0
11R	0.0	3.2	2.5
12R	0.0	6.1	0.0
13R	0.0	6.6	0.0
14R	0.0	7.3	0.0
15R	0.0	7.4	0.0
16R	0.0	0.0	0.0
17R	0.0	0.0	0.0
18R	0.0	0.0	0.0
19R	0.0	0.0	0.0
20R	3.3	0.0	5.0
21R	10.0	0.0	0.0
22R	9.7	0.0	0.0
23R	8.6	0.0	0.0
24R	9.6	0.0	0.0
25R	8.8	0.0	0.0
26R	7.9	0.0	0.0
27R	6.0	0.0	0.0
28R	4.3	0.0	0.0
29R	4.0	0.0	0.0
Total	118.1	47.7	21.4

Branch Canal Area	Target Area (ha)		
	Lesser Degree	Middle Degree	Greater Degree
BC1	19.6	81.6	45.0
BC2	8.4	50.1	28.0
BC3	118.1	47.7	21.4
Total	146.1	179.4	94.4

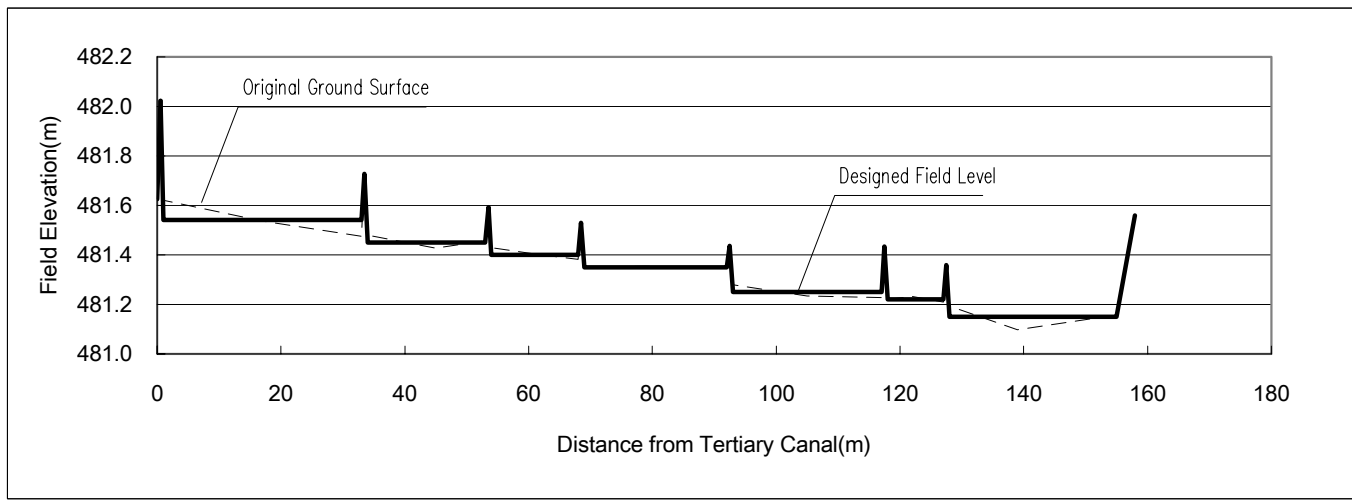


**LEGEND**

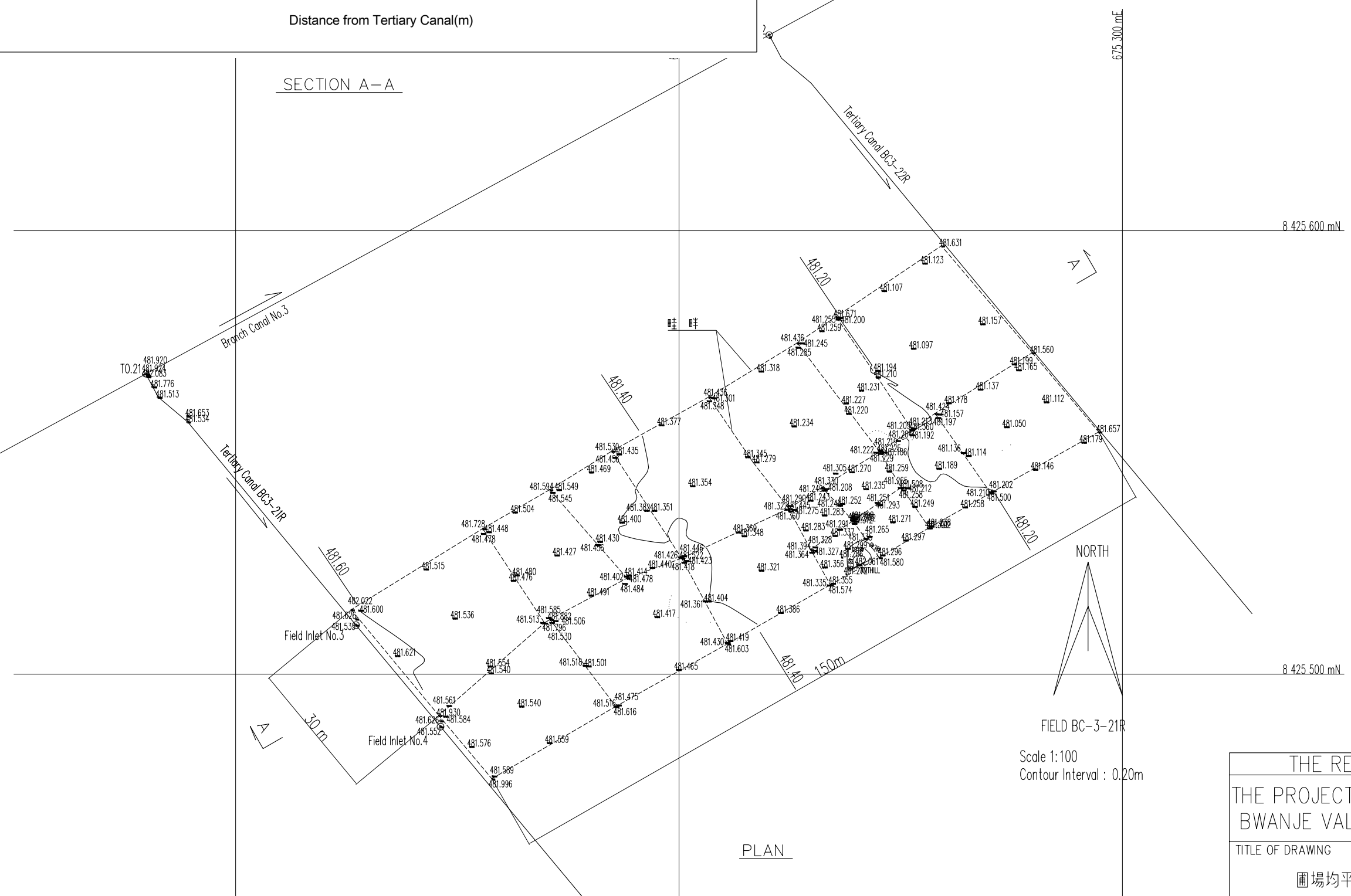
- : Headworks
- : Settling Basin
- : New Irrigation Canal (Main & Branch)
- : Existing Irrigation Canal (Main & Branch)
- : Tertiary Canal
- : Drainage Canal
- : Road/Flood Dike



THE REPUBLIC OF MALAWI  
 THE PROJECT FOR REHABILITATION OF  
 BWANJE VALLEY IRRIGATION SYSTEM  
 TITLE OF DRAWING  
 圃場均平平面図  
 DRAWING NO. OF-01  
 NIPPON KOEI CO., LTD.



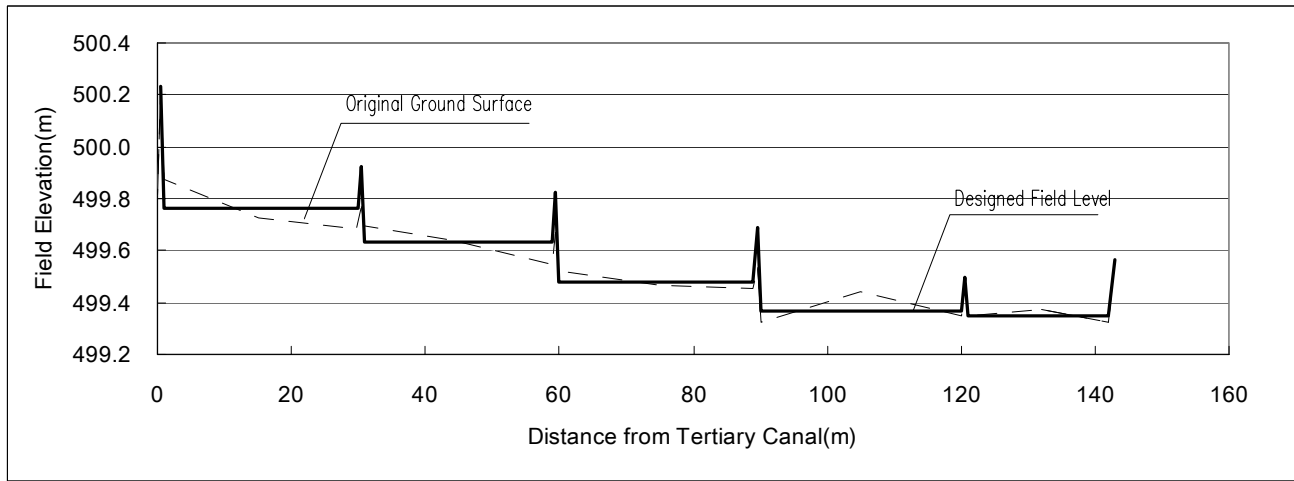
SECTION A-A



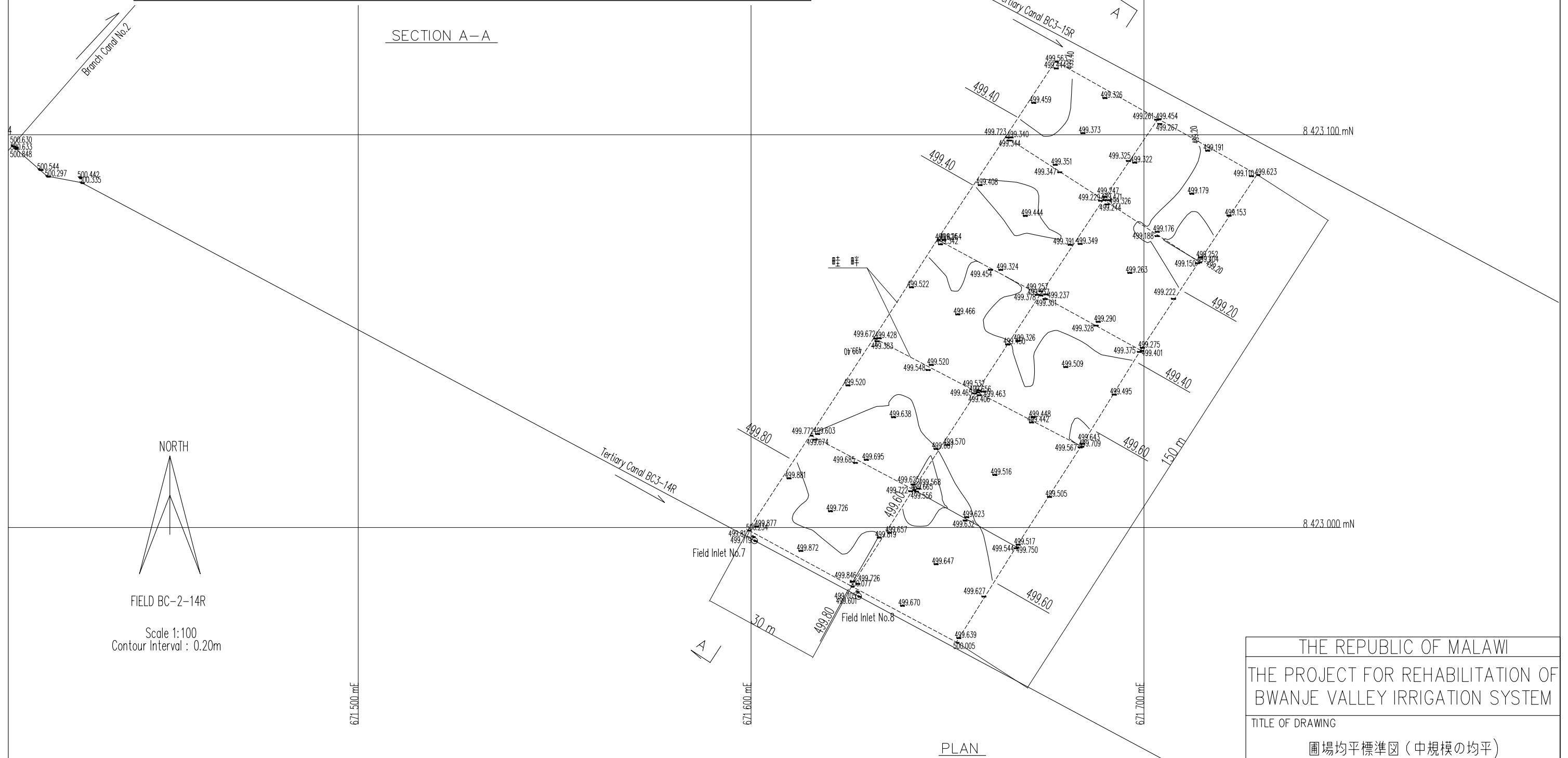
PLAN

Scale 1:100  
Contour Interval : 0.20m

THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
圃場均平標準図 (小規模の均平)	
DRAWING NO.	OF-02
NIPPON KOEI CO., LTD.	



SECTION A-A



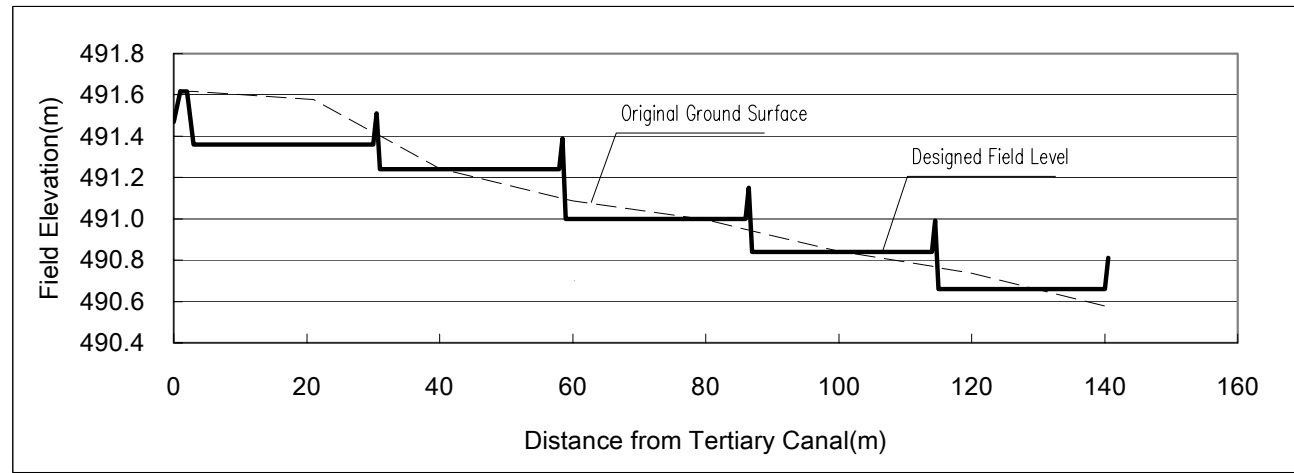
PLAN

NORTH

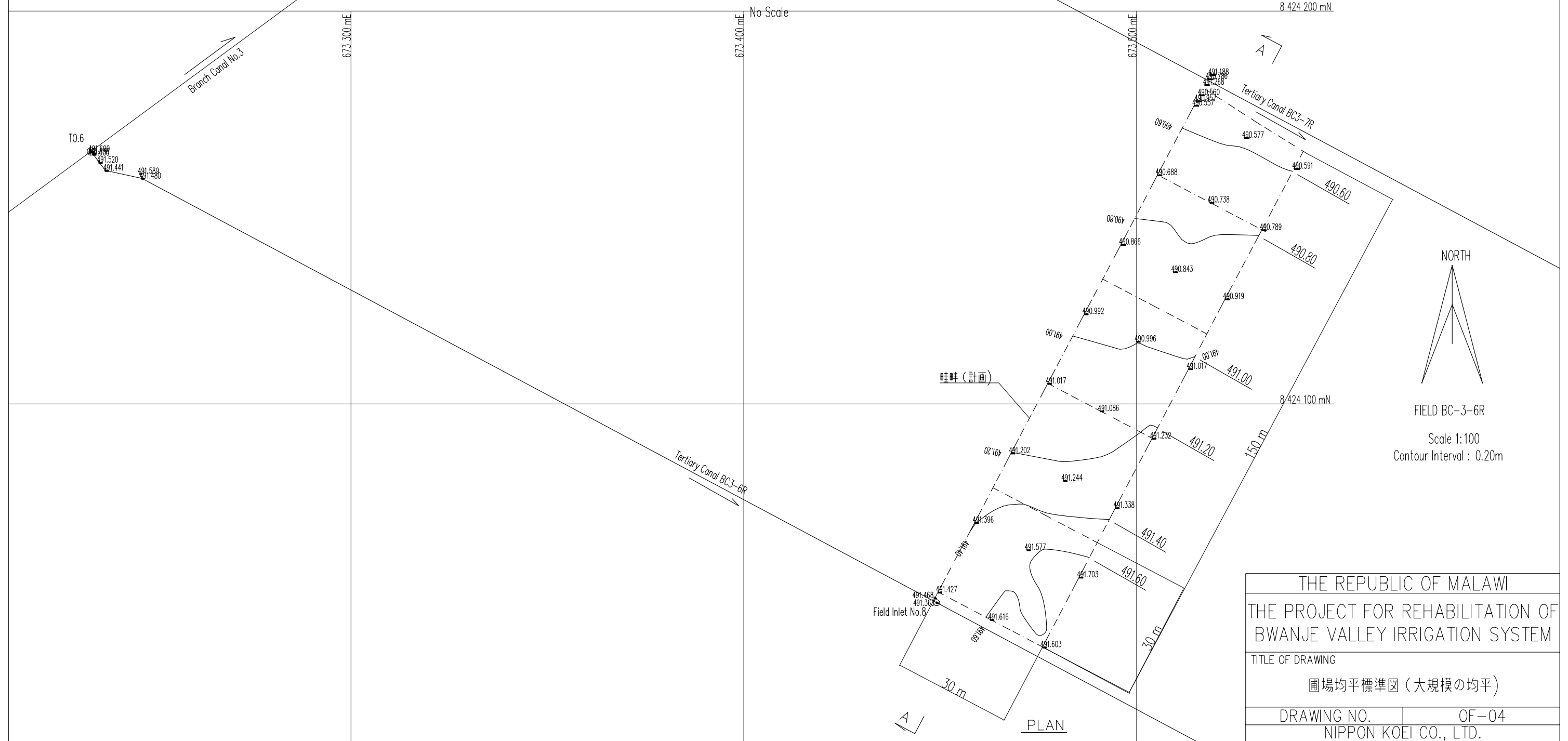
FIELD BC-2-14R

Scale 1:100  
Contour Interval : 0.20m

THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
圃場均平標準図 (中規模の均平)	
DRAWING NO.	OF-03
NIPPON KOEI CO., LTD.	



SECTION A-A



THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
圃場均平標準図 (大規模の均平)	
DRAWING NO.	OF-04
NIPPON KOEI CO., LTD.	