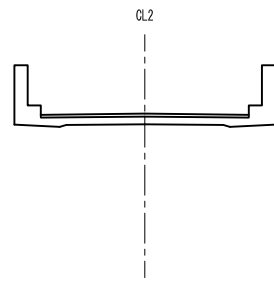


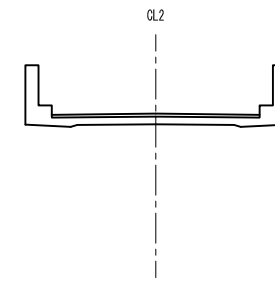
STA. 0+260

GH= 0.95
PH=10.761



STA. 0+320

GH= 0.31
PH=10.761

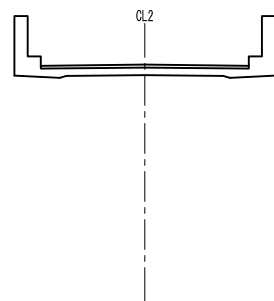


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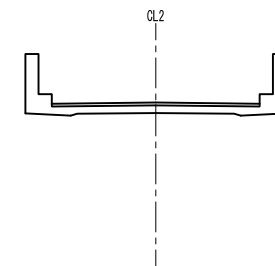
STA. 0+240

GH=-1.41
PH=10.761



STA. 0+300

GH= 0.53
PH=10.761

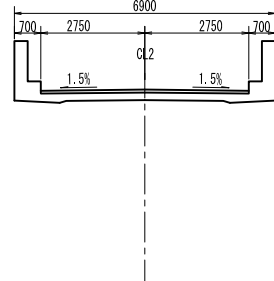


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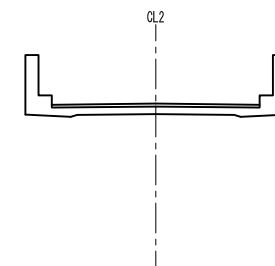
STA. 0+220

GH= 0.46
PH=10.761



STA. 0+280

GH= 0.60
PH=10.761



DL=0.00

DL=0.00

DEPARTMENT OF AGRARIAN REFORM
THE REPUBLIC OF THE PHILIPPINES

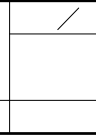
BASIC DESIGN STUDY
ON THE BRIDGE CONSTRUCTION PROJECT
FOR EXPANDED AGRARIAN REFORM
COMMUNITIES DEVELOPMENT

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

TITLE : UMIRAY BRIDGE
ROAD CROSS SECTION (3/6)

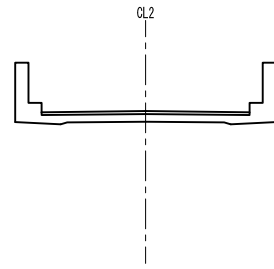
SCALE
S=1:100

Drawing No.
U21



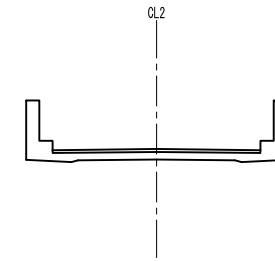
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GH= 0.53
PH=10.761



STA. 0+440

GH= 1.16
PH=10.761

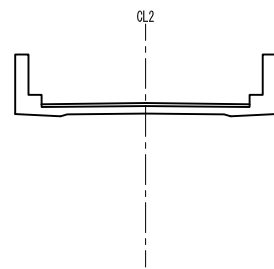


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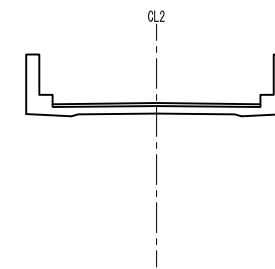
STA. 0+360

GH= 0.33
PH=10.761



STA. 0+420

GH= 0.75
PH=10.761

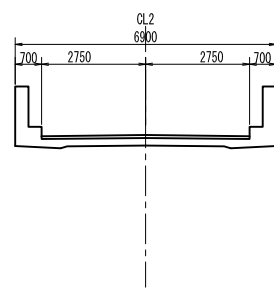


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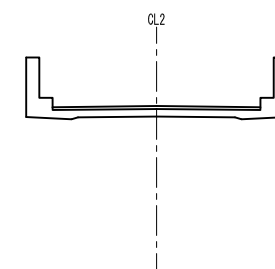
STA. 0+340

GH= 0.08
PH=10.761



STA. 0+400

GH= 0.68
PH=10.761



DL=0.00

DL=0.00

DEPARTMENT OF AGRARIAN REFORM
THE REPUBLIC OF THE PHILIPPINES

BASIC DESIGN STUDY
ON THE BRIDGE CONSTRUCTION PROJECT
FOR EXPANDED AGRARIAN REFORM
COMMUNITIES DEVELOPMENT

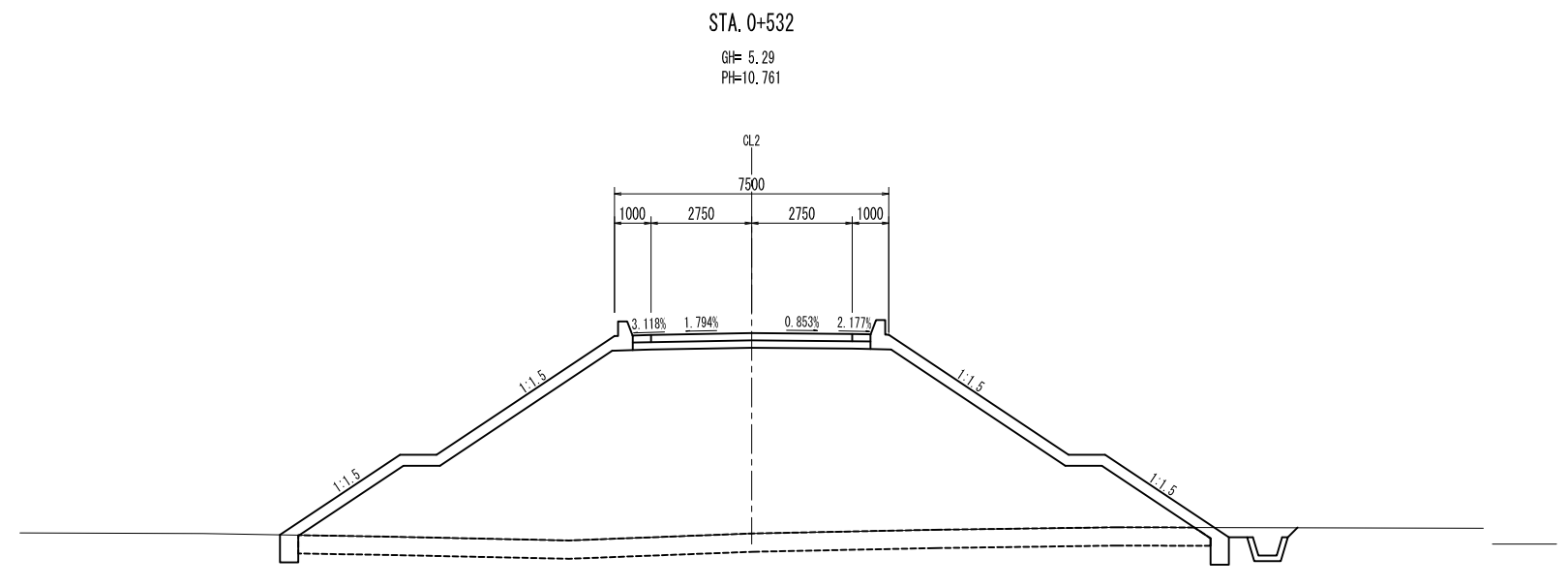
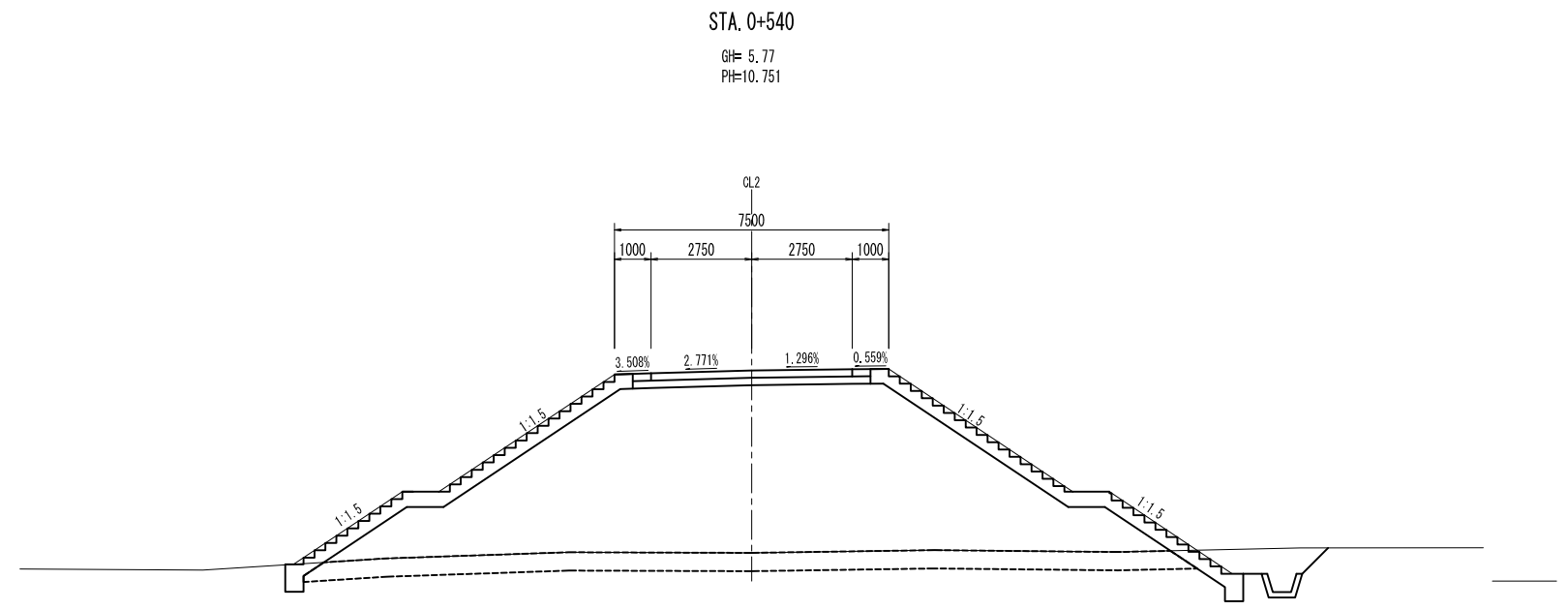
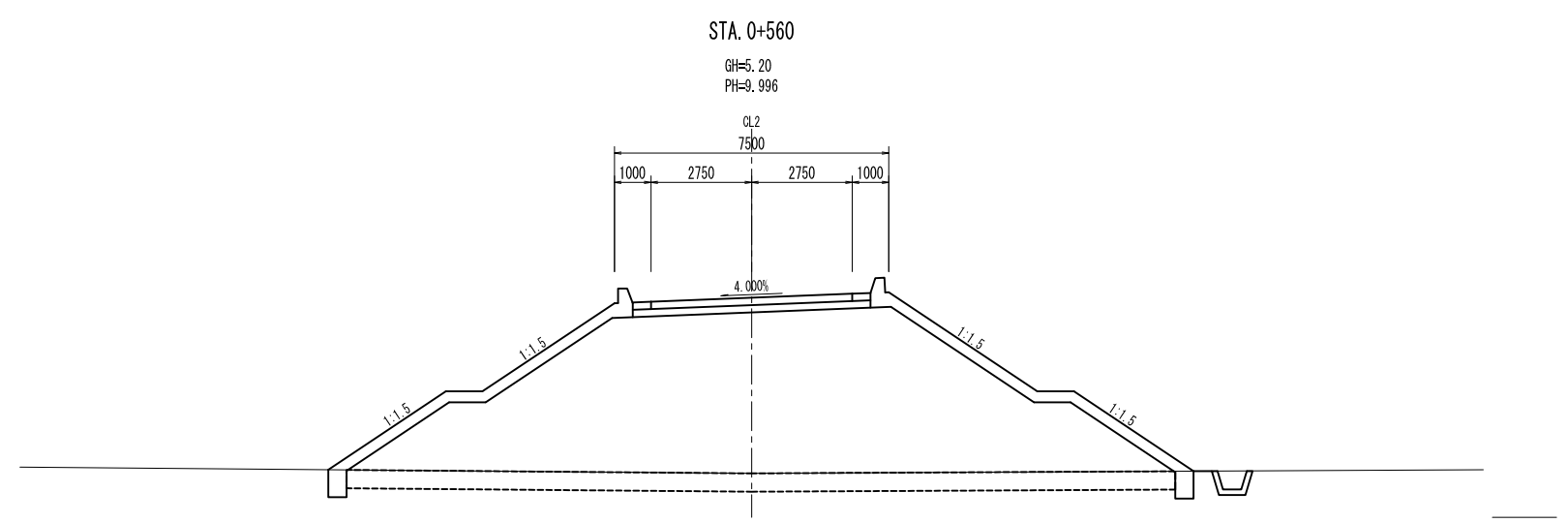
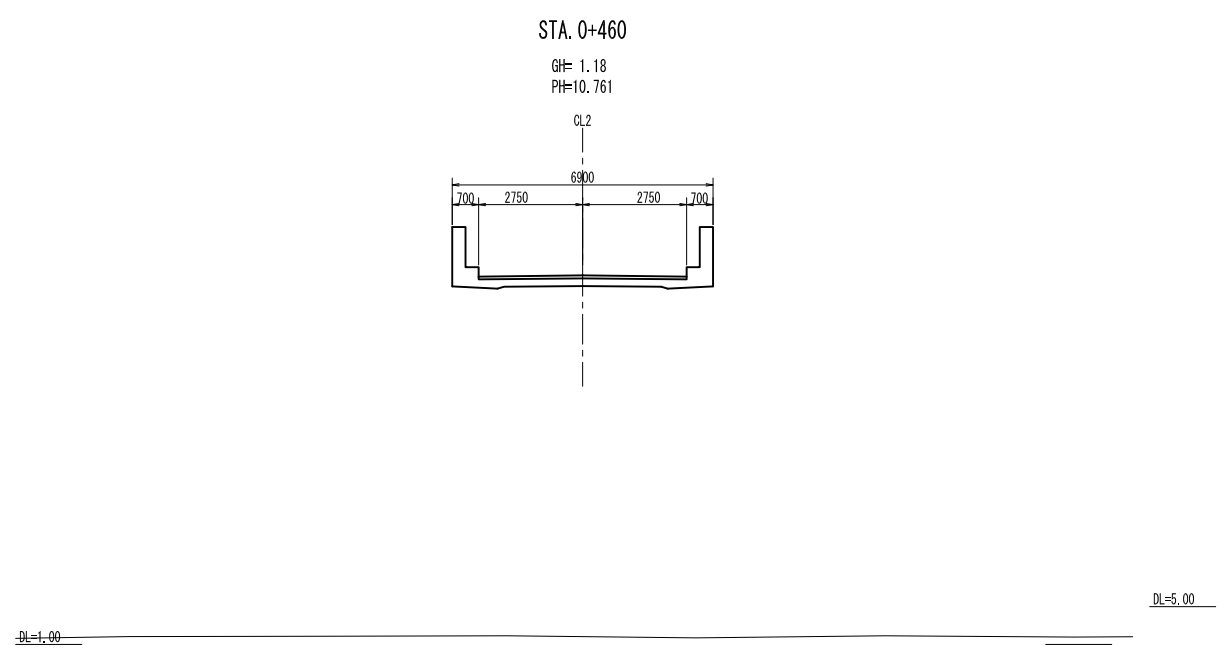
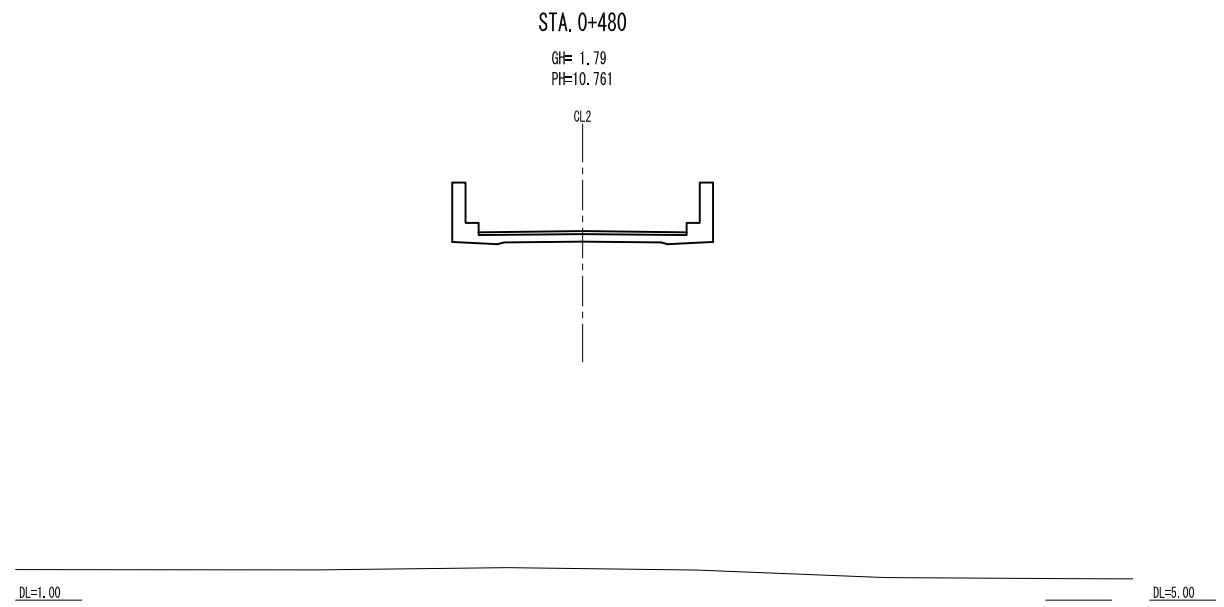
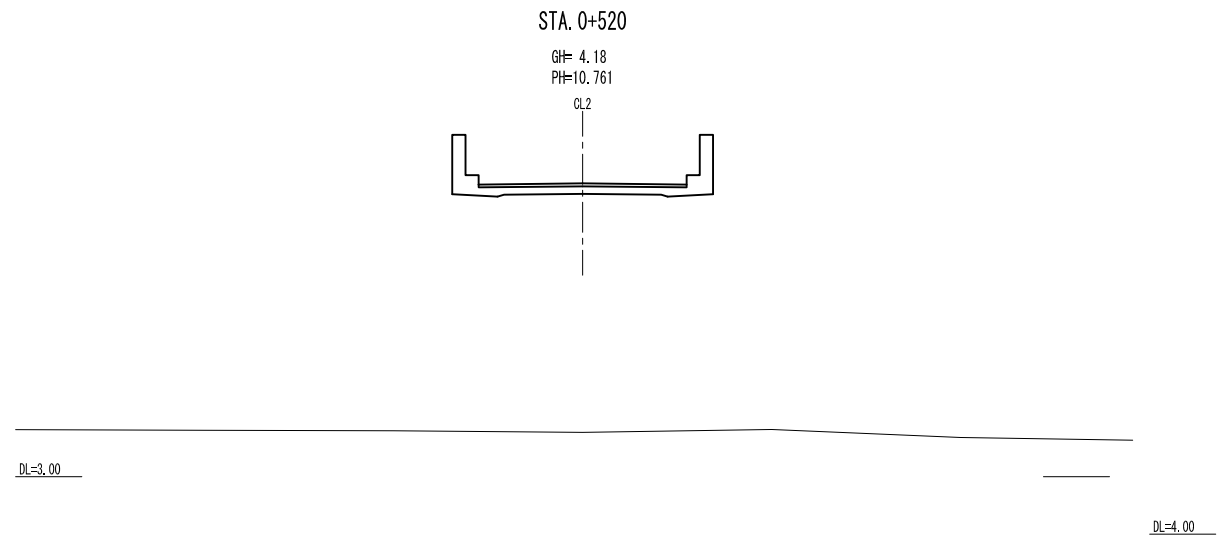
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

TITLE : UMIRAY BRIDGE
ROAD CROSS SECTION (4/6)

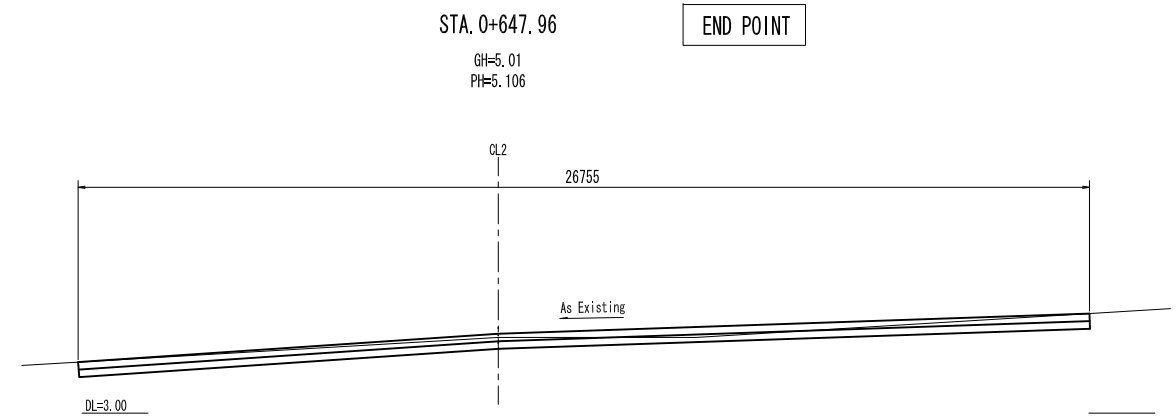
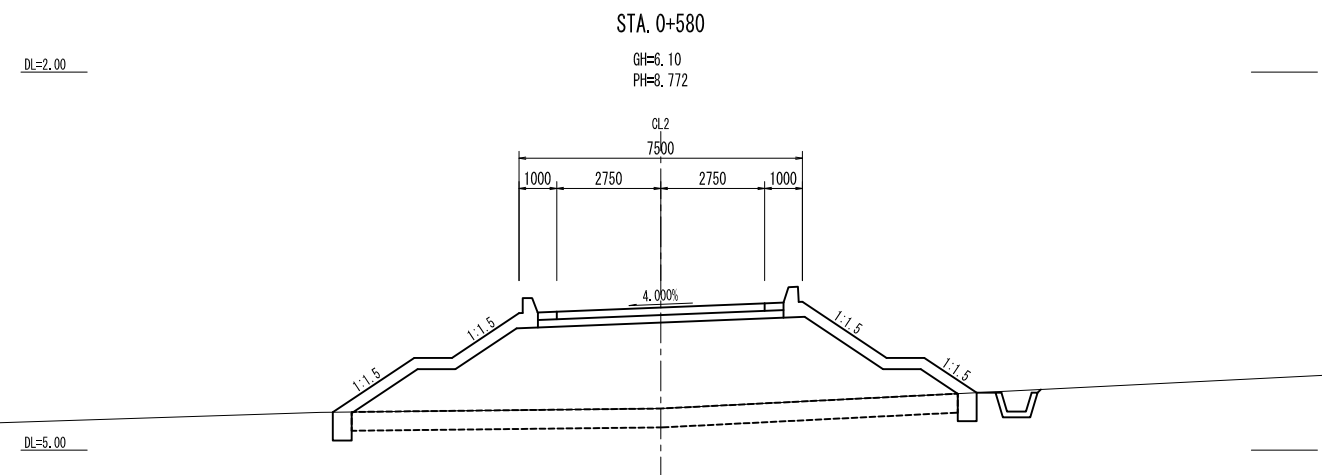
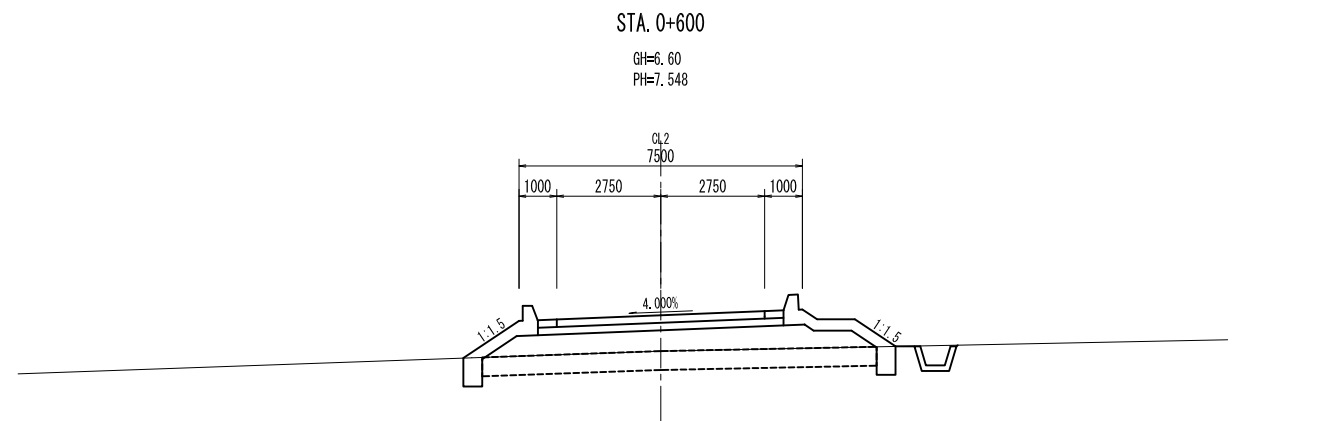
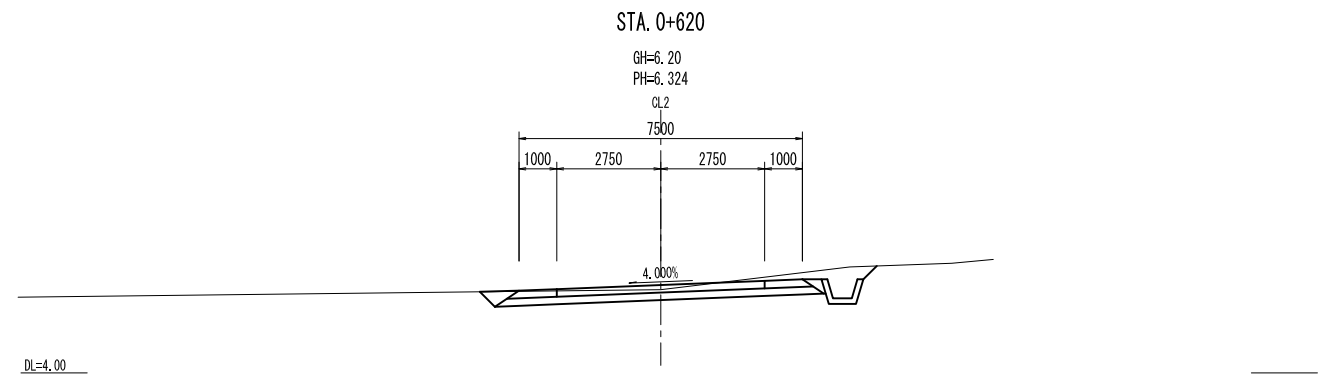
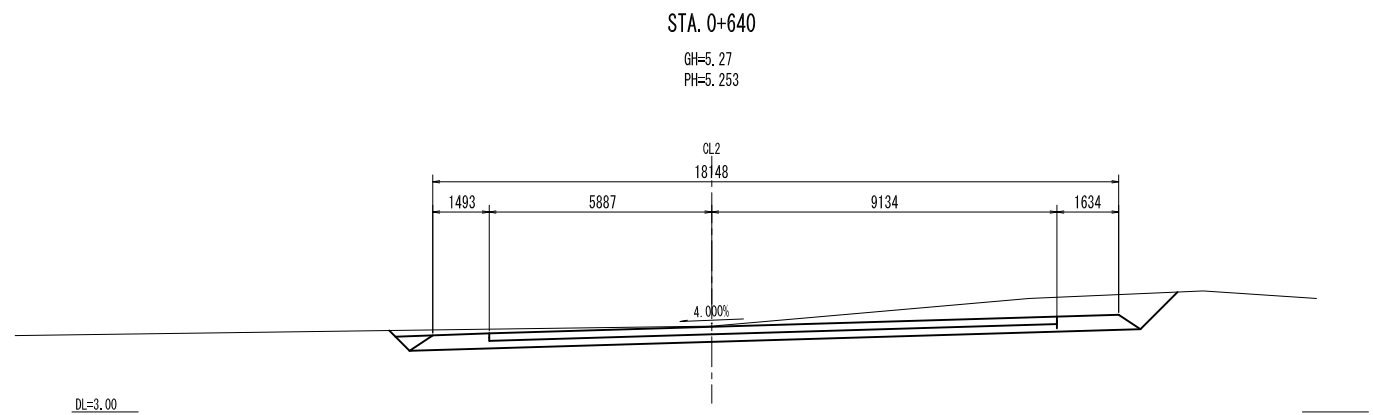
SCALE
S=1:100

Drawing No.
U22

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DEPARTMENT OF AGRARIAN REFORM THE REPUBLIC OF THE PHILIPPINES	BASIC DESIGN STUDY ON THE BRIDGE CONSTRUCTION PROJECT FOR EXPANDED AGRARIAN REFORM COMMUNITIES DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD.	TITLE : UMIRAY BRIDGE ROAD CROSS SECTION (5/6)	SCALE	Drawing No.
				S=1:100	U23



DEPARTMENT OF AGRARIAN REFORM
THE REPUBLIC OF THE PHILIPPINES

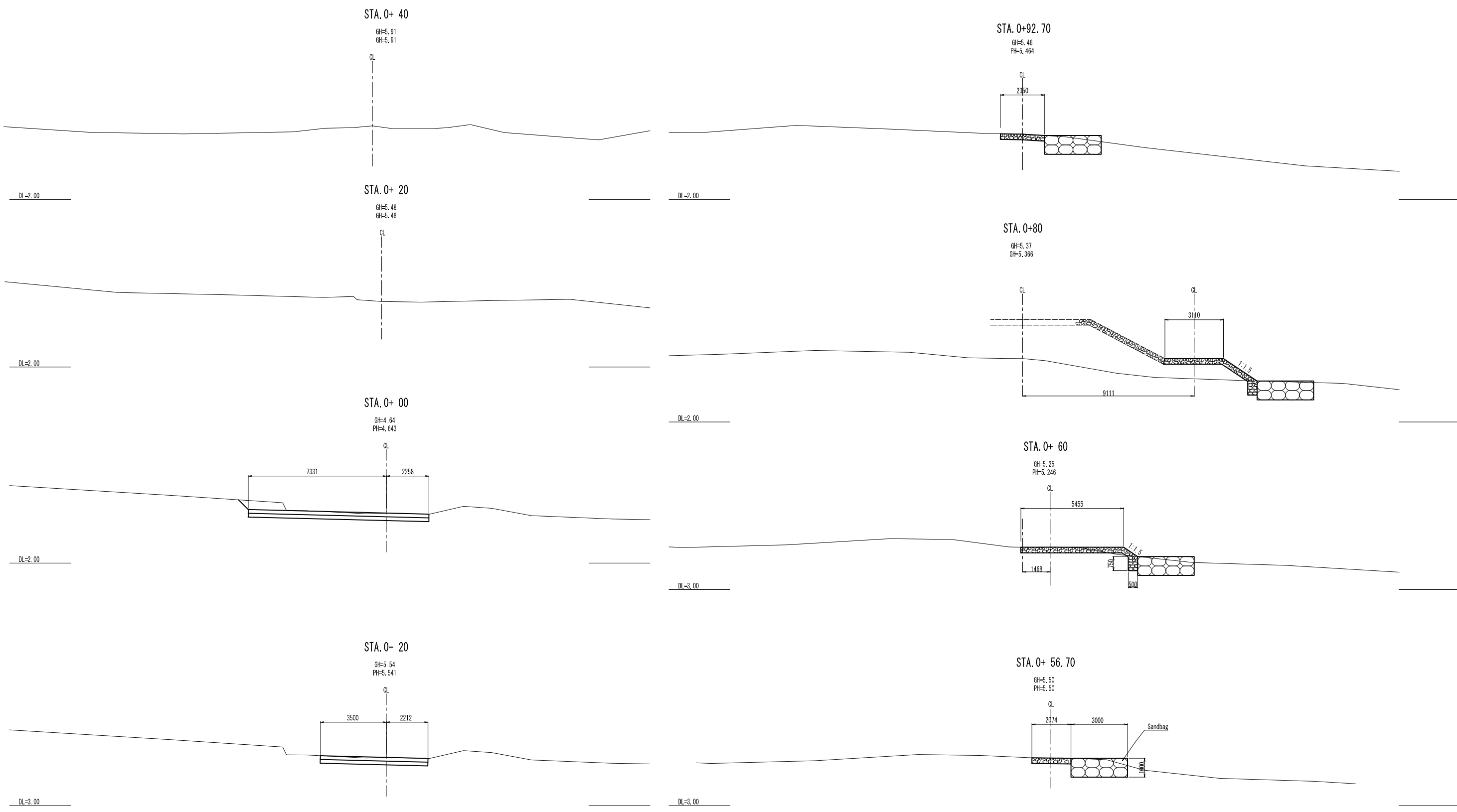
BASIC DESIGN STUDY
ON THE BRIDGE CONSTRUCTION PROJECT
FOR EXPANDED AGRARIAN REFORM
COMMUNITIES DEVELOPMENT

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

TITLE : UMIRAY BRIDGE
ROAD CROSS SECTION (6/6)

SCALE
S=1:100

Drawing No.
U24



DEPARTMENT OF AGRARIAN REFORM
THE REPUBLIC OF THE PHILIPPINES

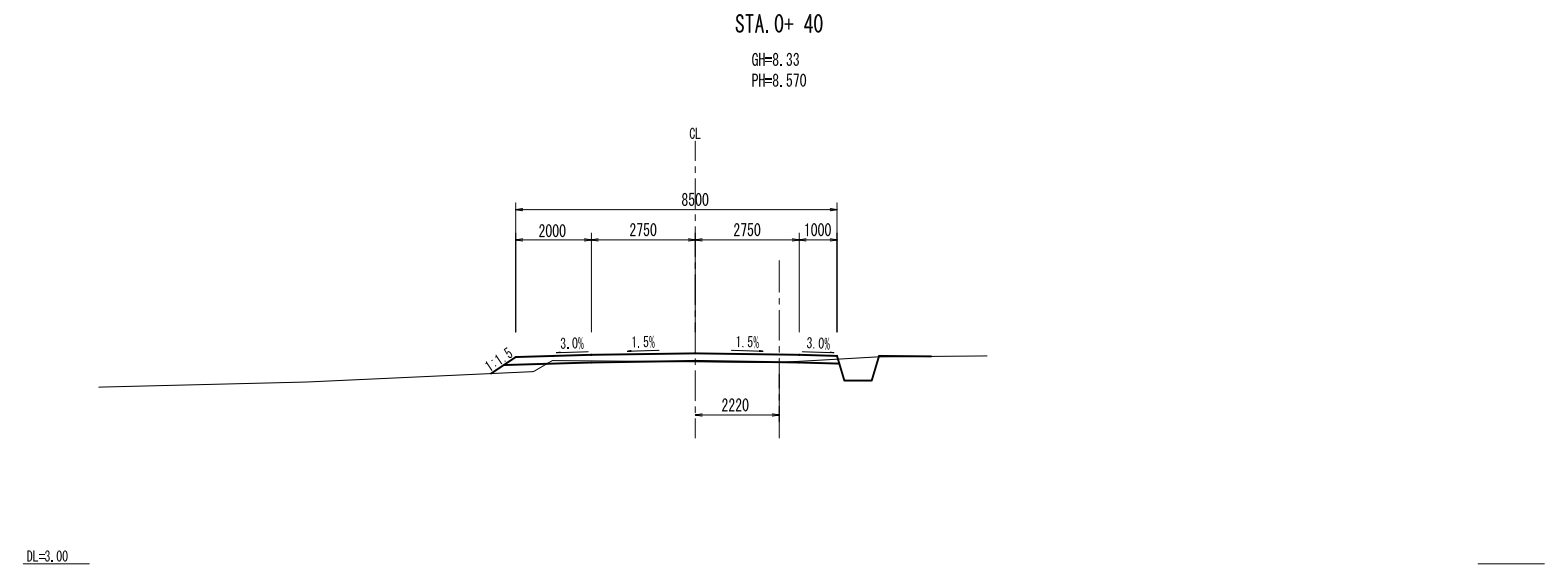
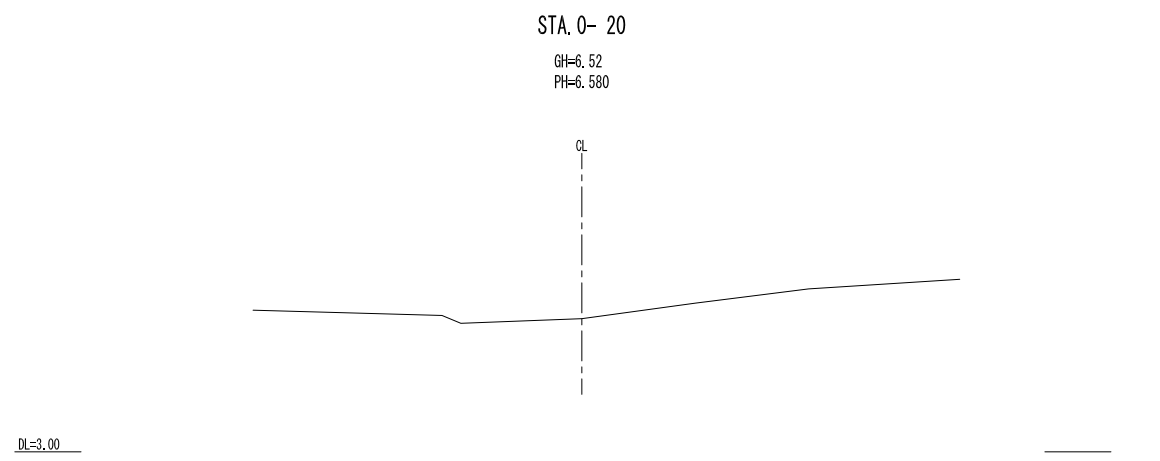
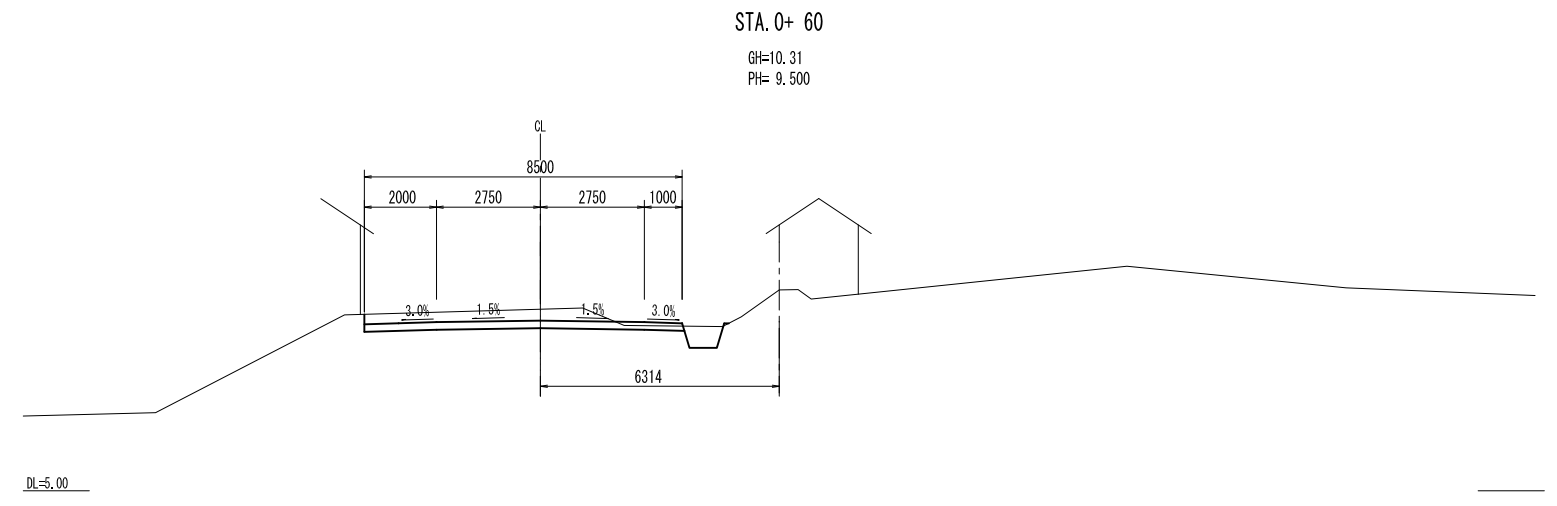
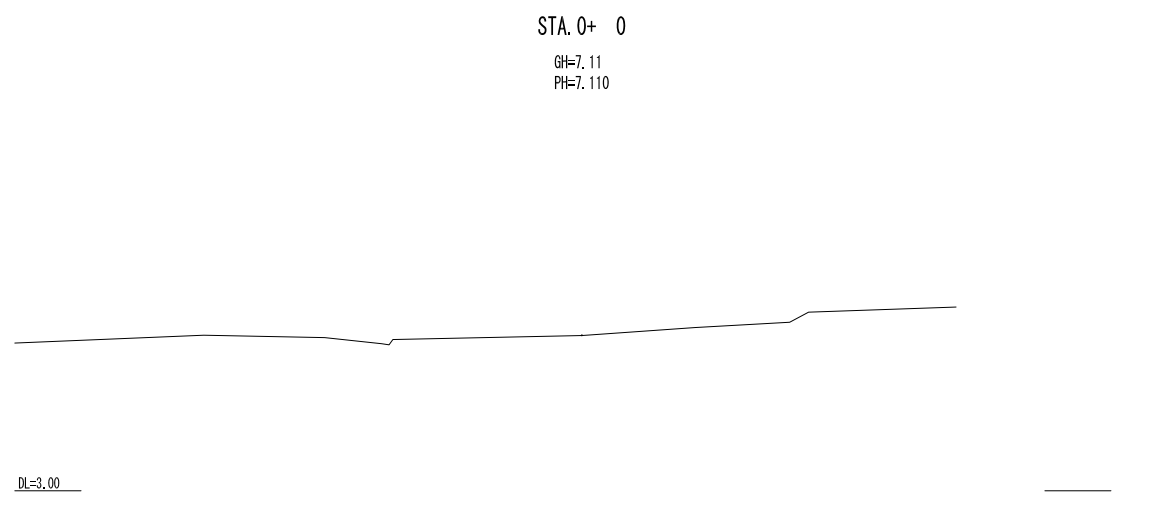
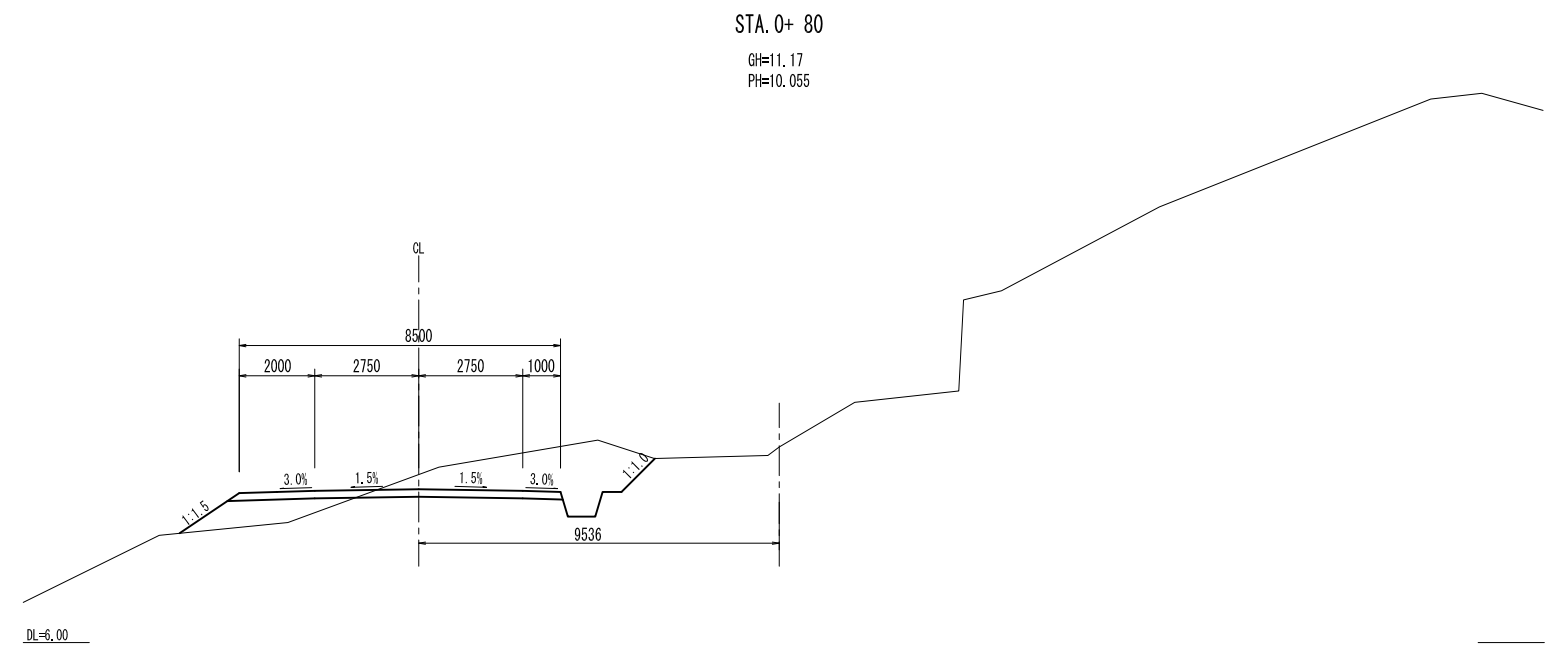
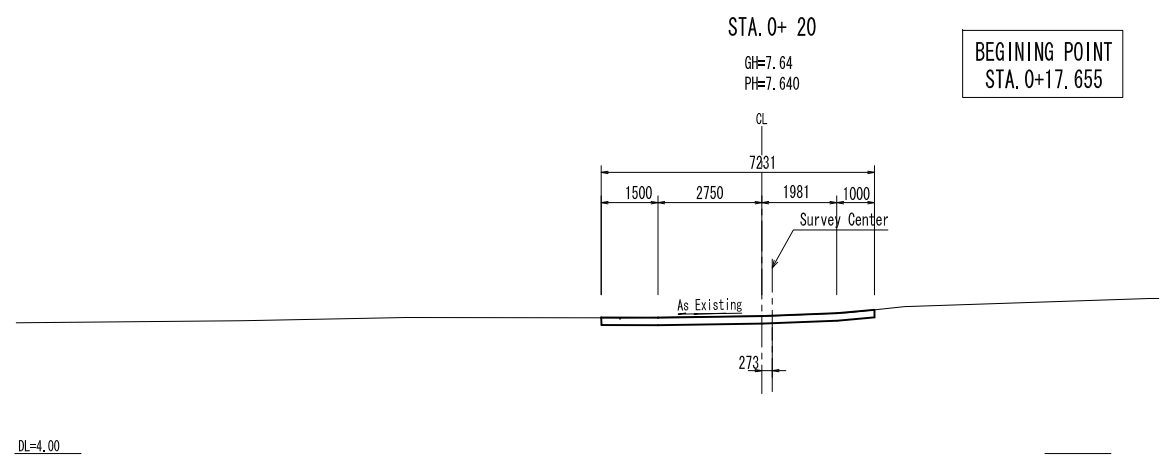
BASIC DESIGN STUDY
ON THE BRIDGE CONSTRUCTION PROJECT
FOR EXPANDED AGRARIAN REFORM
COMMUNITIES DEVELOPMENT

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

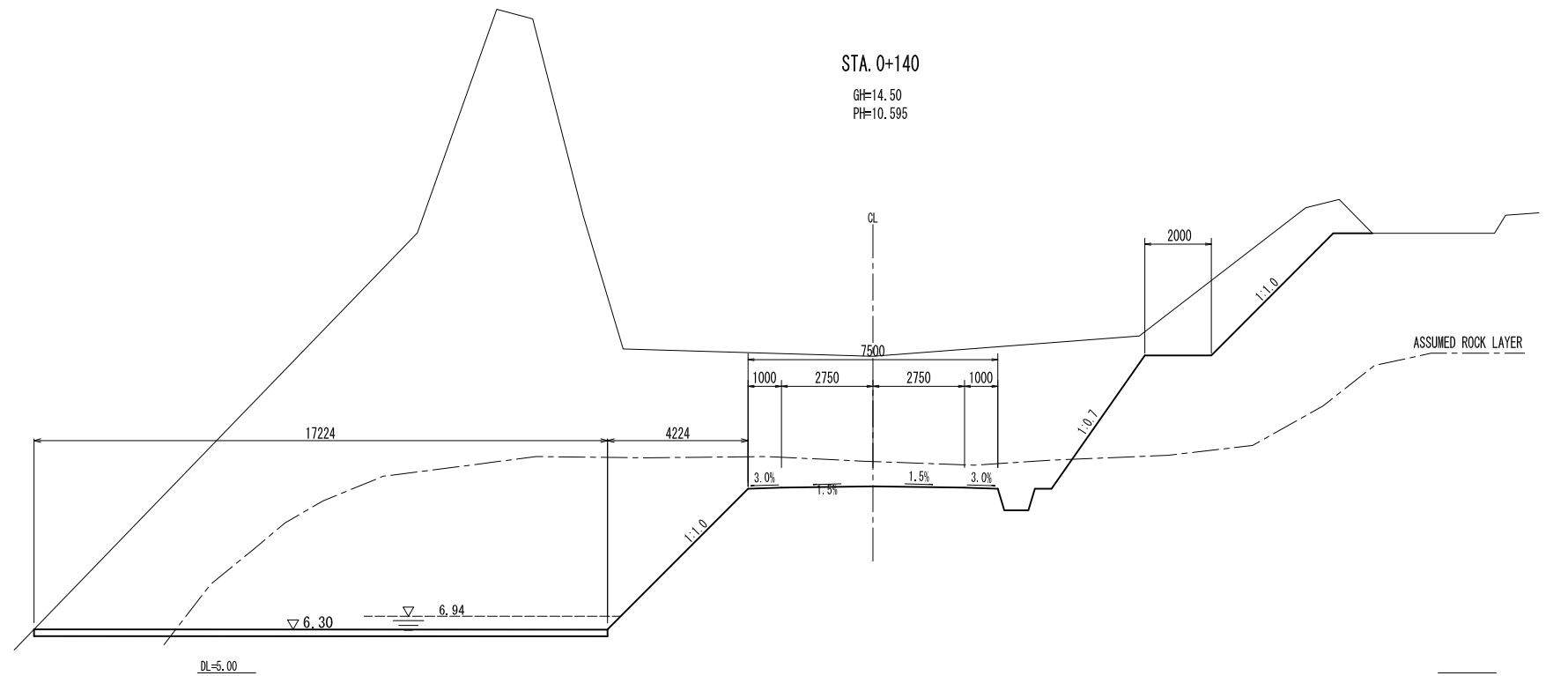
TITLE : UMRAY BRIDGE
CROSS SECTION OF DETOUR ROAD

SCALE
S=1:100

Drawing No.
U25

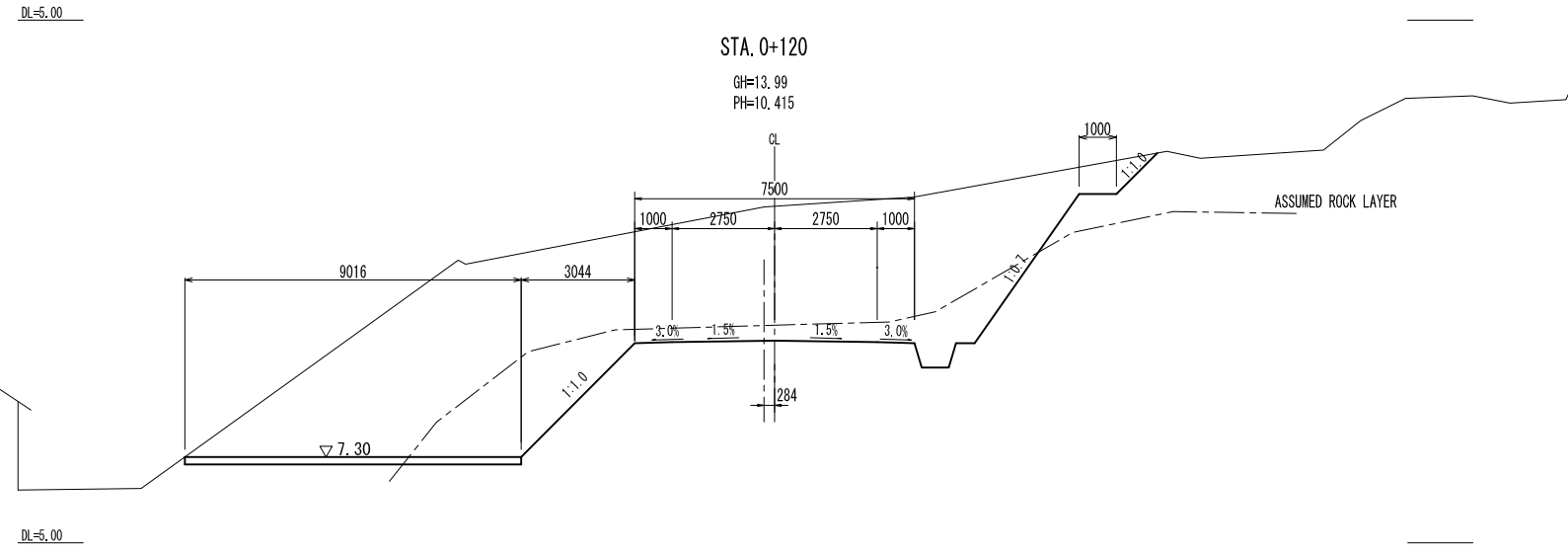


DEPARTMENT OF AGRARIAN REFORM THE REPUBLIC OF THE PHILIPPINES	BASIC DESIGN STUDY ON THE BRIDGE CONSTRUCTION PROJECT FOR EXPANDED AGRARIAN REFORM COMMUNITIES DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD.	TITLE : UMIRAY BRIDGE CROSS SECTION FOR TEMPORARY WORKS (1/3)	SCALE S=1:100	Drawing No. U26
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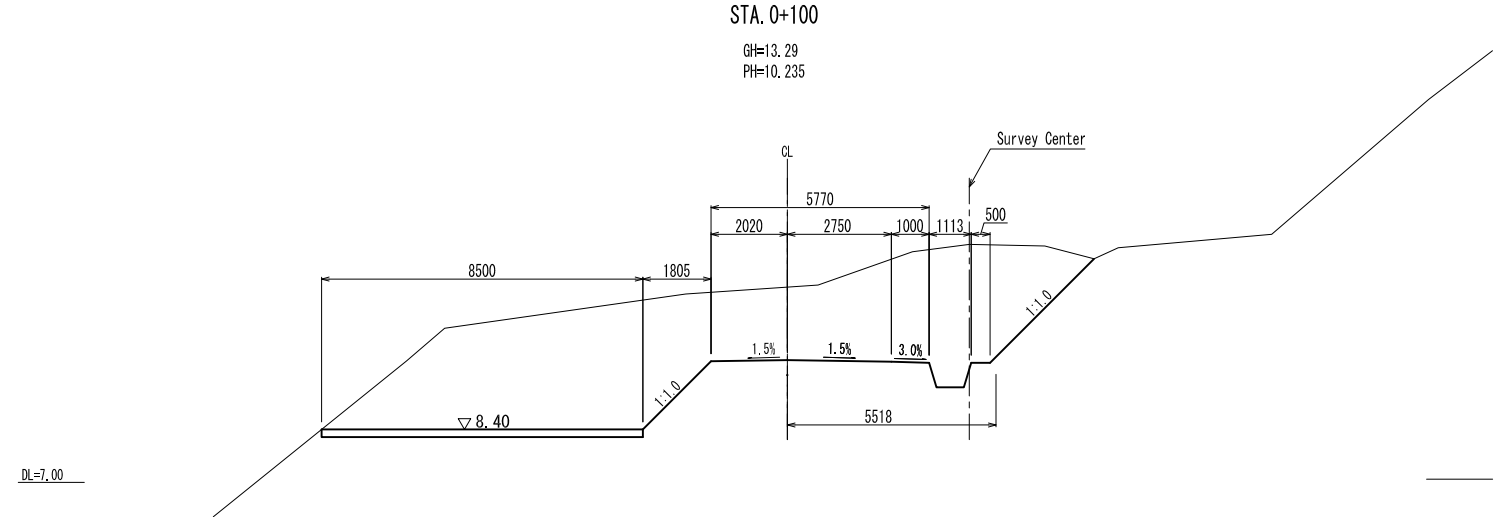
STA. 0+140

GH=14.50
PH=10.595



STA. 0+120

GH=13.99
PH=10.415



STA. 0+100

GH=13.29
PH=10.235

DEPARTMENT OF AGRARIAN REFORM
THE REPUBLIC OF THE PHILIPPINES

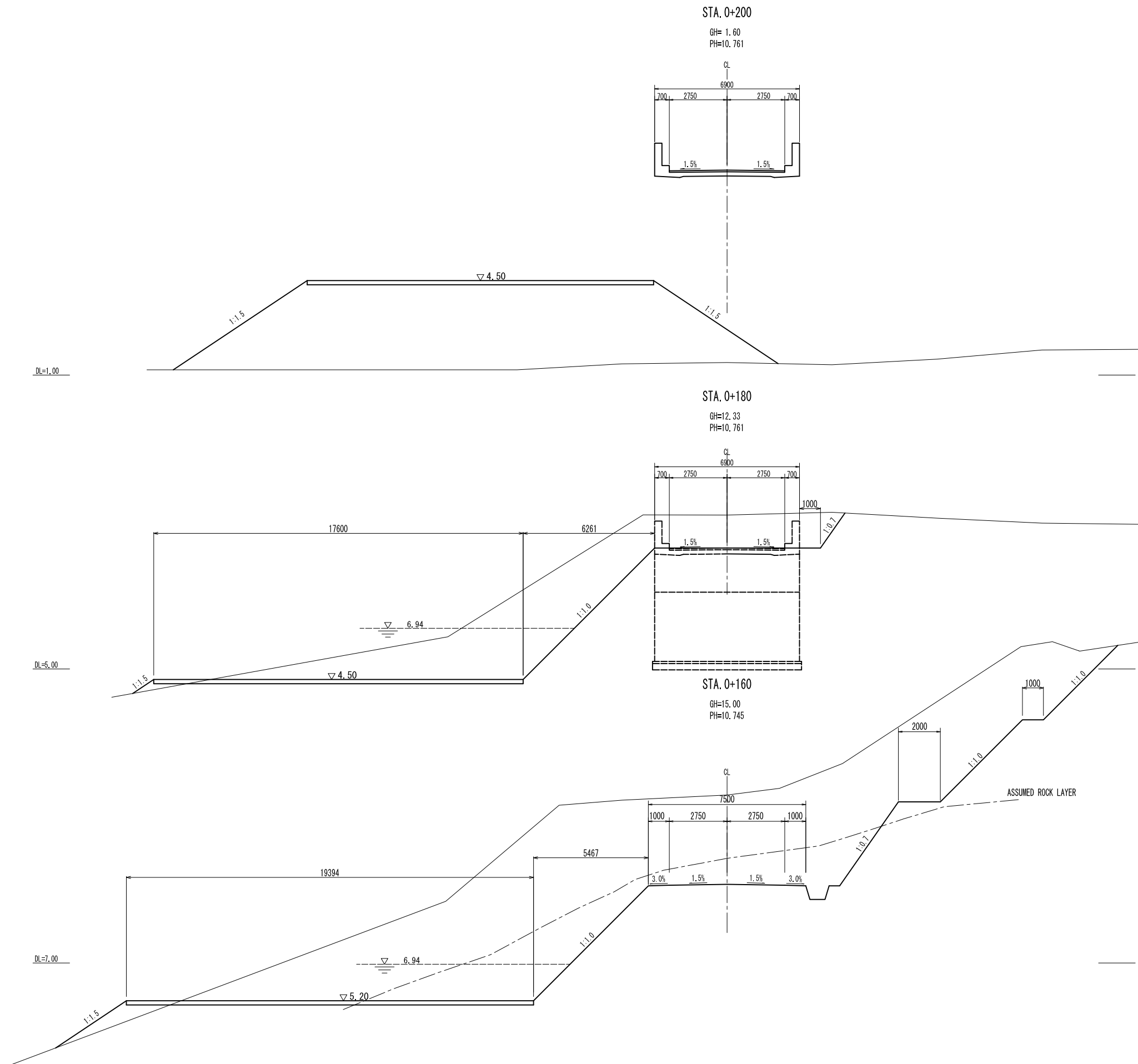
BASIC DESIGN STUDY
ON THE BRIDGE CONSTRUCTION PROJECT
FOR EXPANDED AGRARIAN REFORM
COMMUNITIES DEVELOPMENT

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

TITLE : UMIRAY BRIDGE
CROSS SECTION FOR
TEMPORARY WORKS (2/3)

SCALE
S=1:100

Drawing No.
U27



DEPARTMENT OF AGRARIAN REFORM
 THE REPUBLIC OF THE PHILIPPINES

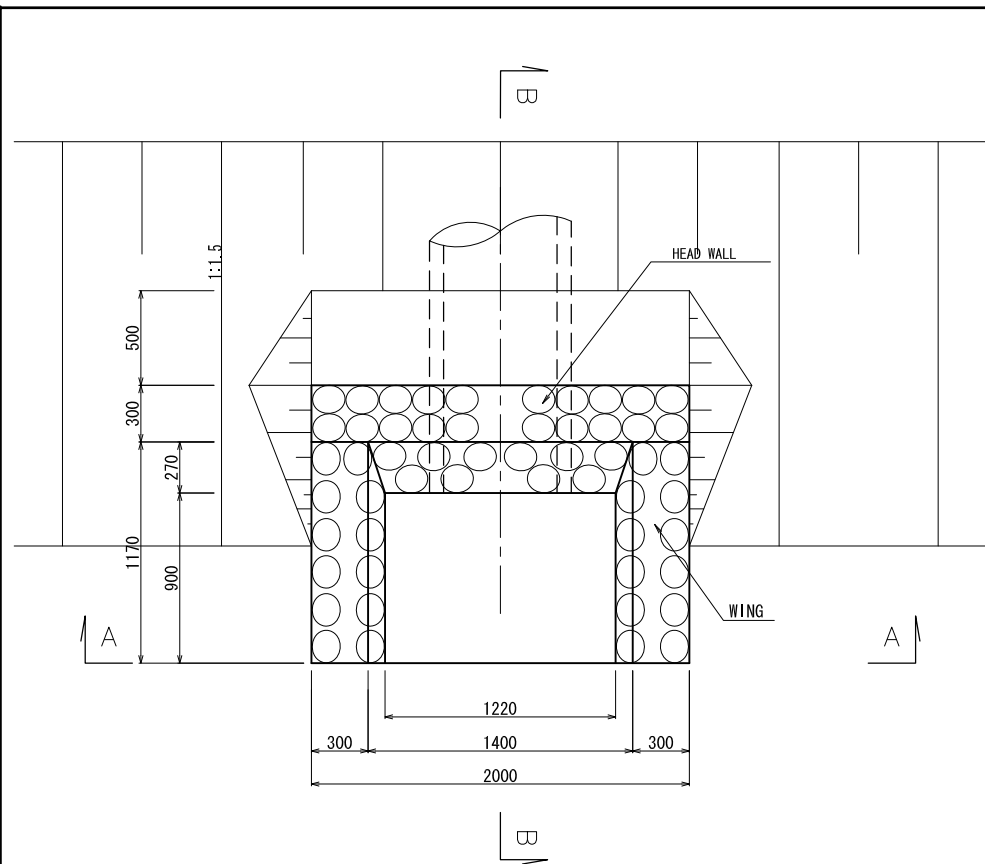
BASIC DESIGN STUDY
 ON THE BRIDGE CONSTRUCTION PROJECT
 FOR EXPANDED AGRARIAN REFORM
 COMMUNITIES DEVELOPMENT

JAPAN INTERNATIONAL COOPERATION AGENCY
 CTI ENGINEERING INTERNATIONAL CO., LTD.

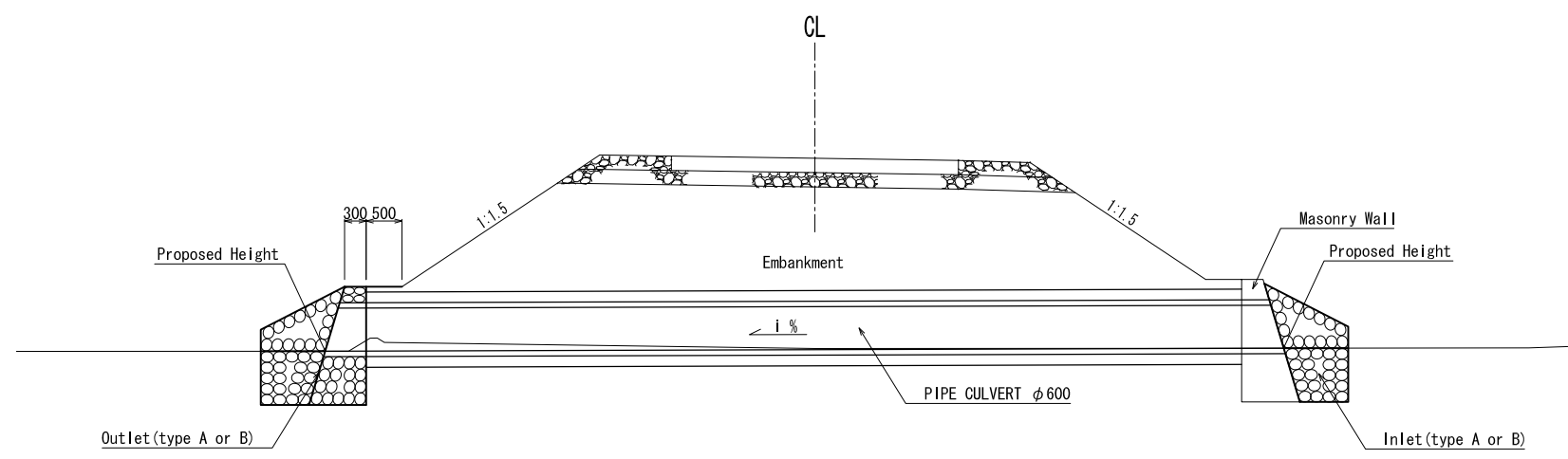
TITLE : UMIRAY BRIDGE
 CROSS SECTION FOR
 TEMPORARY WORKS (3/3)

SCALE
 S=1:100

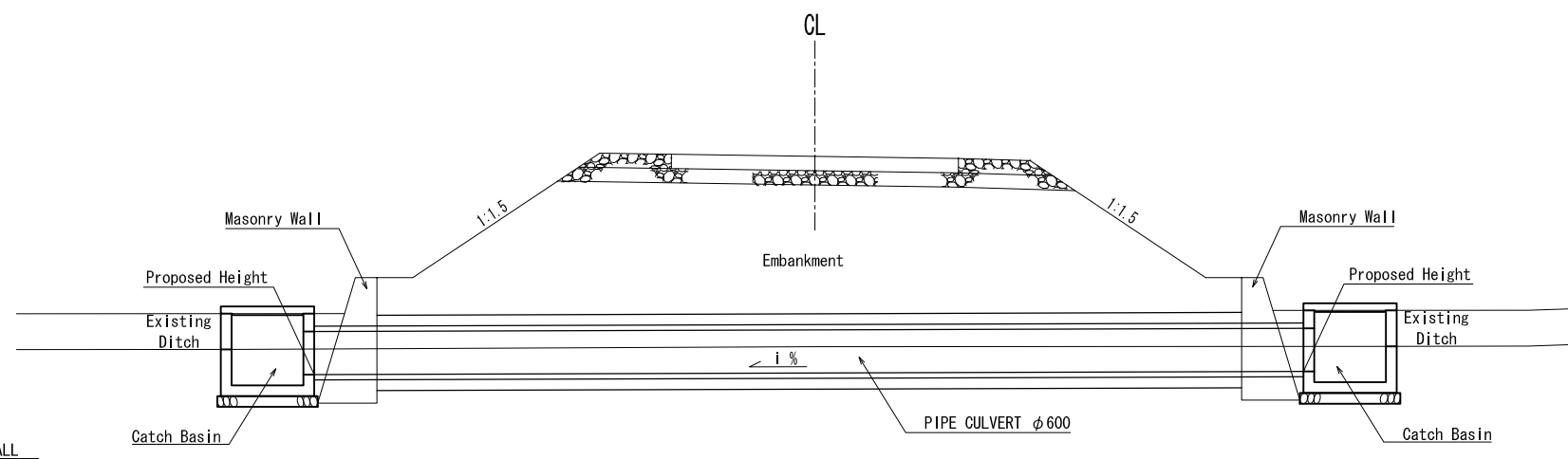
Drawing No.
 U28



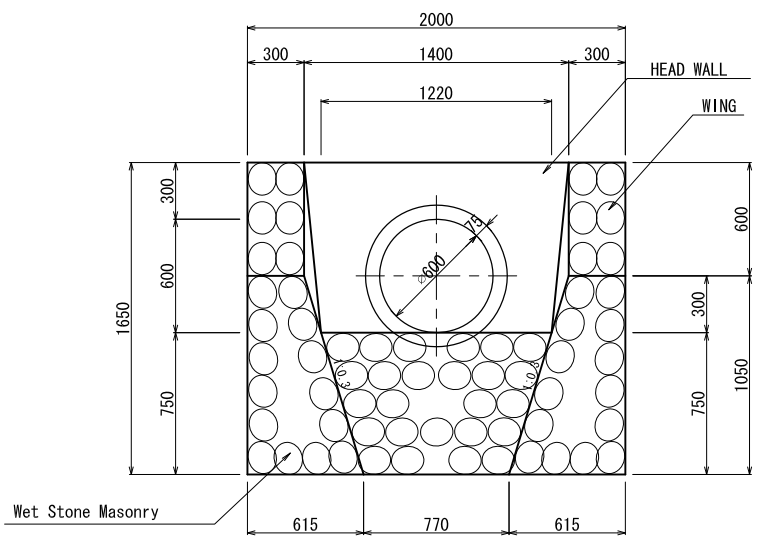
PLAN



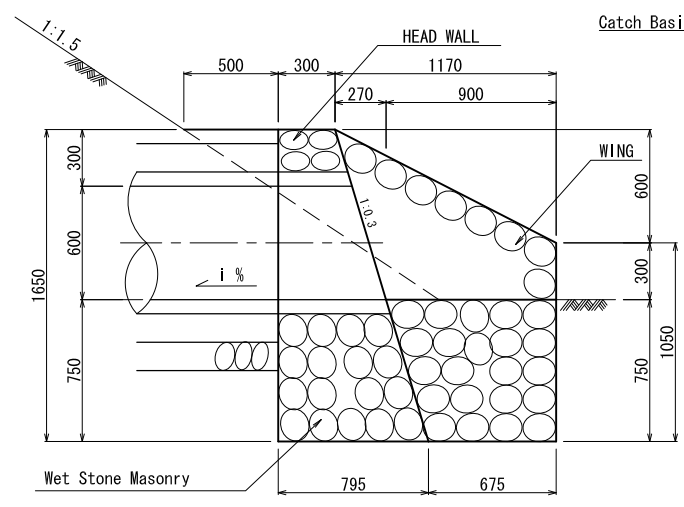
CROSS DRAINAGE (INLET/OUTLET) S=1:50



CROSS DRAINAGE (CATCH BASIN) S=1:50



SECTION A-A



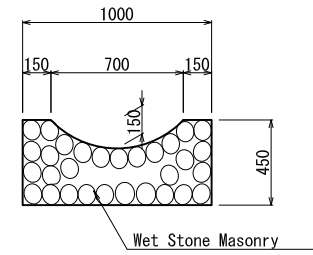
SECTION B-B

INLET/OUTLET (TYPE A) STRUCTURE S=1:20
 INLET/OUTLET (TYPE B) (WING ONLY)

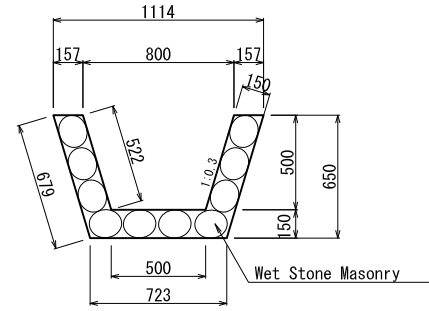
TABLE OF CONTENTS

STATION	INLET		OUTLET		PIPE CULVERT LENGTH (m)
	TYPE	PH	TYPE	PH	
0+40.0	catch basin	7.15	catch basin	6.51	13.00
0+525.0	catch basin	4.10	A	4.00	13.00
0+609.0	catch basin	5.37	catch basin	5.04	13.00
0+643.0	catch basin	4.04	catch basin	4.00	12.50

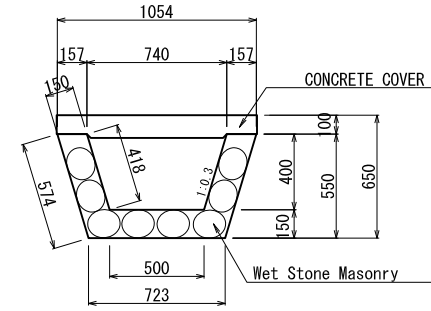
NOTE: PH= PROPOSED HEIGHT



SLOPE DRAIN
S=1:20

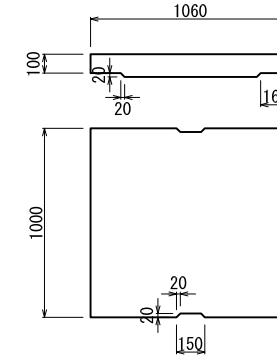


TYPE A

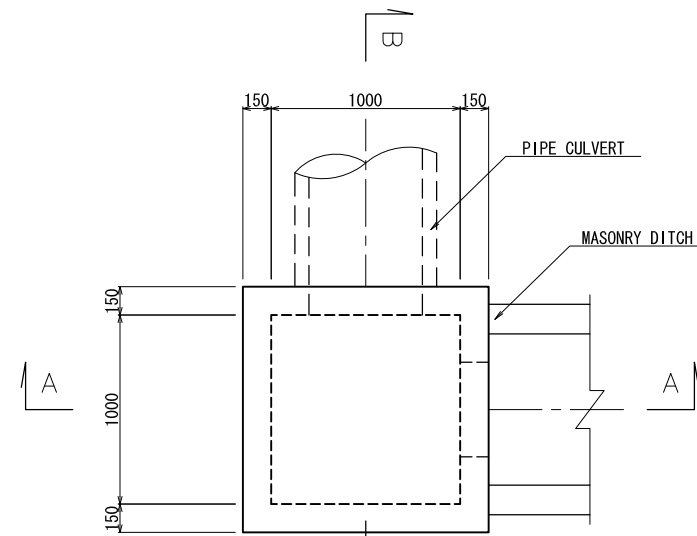


TYPE B

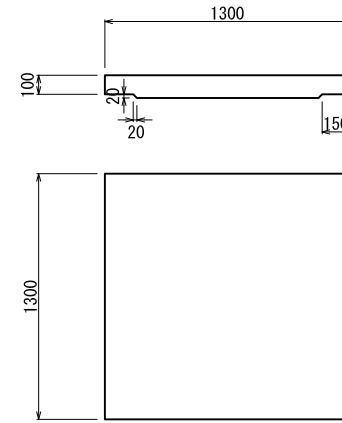
MASONRY DITCH S=1:20



CONCRETE COVER



PLAN



CONCRETE COVER

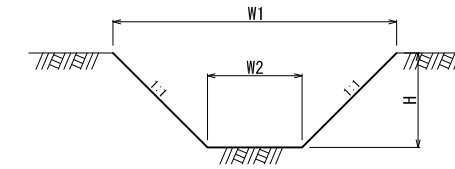
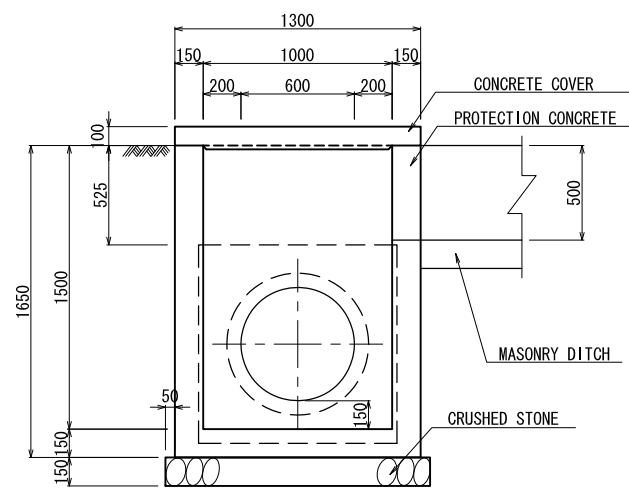


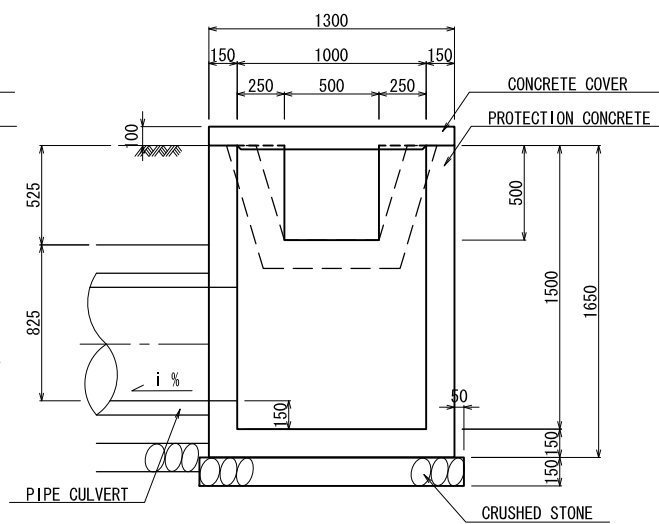
TABLE OF CONTENTS

TYPE	W1	W2	H
TYPE A	900	300	300
TYPE B	1500	500	500
TYPE C	3000	1000	1000

EARTH DITCH S=1:20



SECTION A-A



SECTION B-B

CATCH BASIN (TYPE B) S=1:20

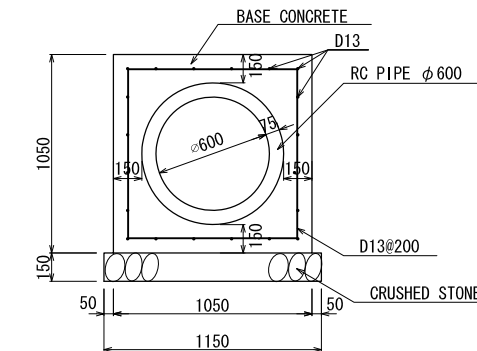
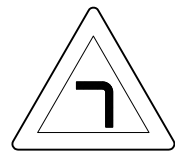


TABLE OF CONTENTS

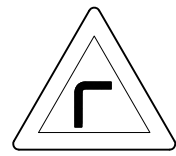
ITEM	STANDARD	QUANTITY
CONCRETE	$\sigma_{Ck} = 18N/mm^2$	6.61 m ³
FRAME WORK		20.0 m ²
CRUSHED STONE	RC-40	11.5 m ²
HUME PIPE	D600	10.0 m
BAR	D13	429.84 kg

UNIT: 10m

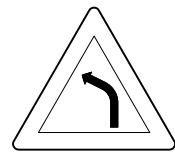
PIPE CULVERT 1:20



SHARP TURN
W 1-1 (L)



SHARP TURN
W 1-1 (R)



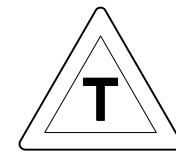
CURVE AHEAD
W 1-3 (L)



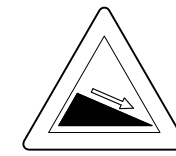
CURVE AHEAD
W 1-3 (R)



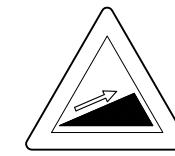
WINDING ROAD
W 1-5



T JUNCTION
W 2-4



STEEP DESCENT
W 5-4



STEEP CLIMB
W 5-5

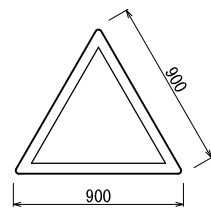


SPEED LIMIT
R 4-1

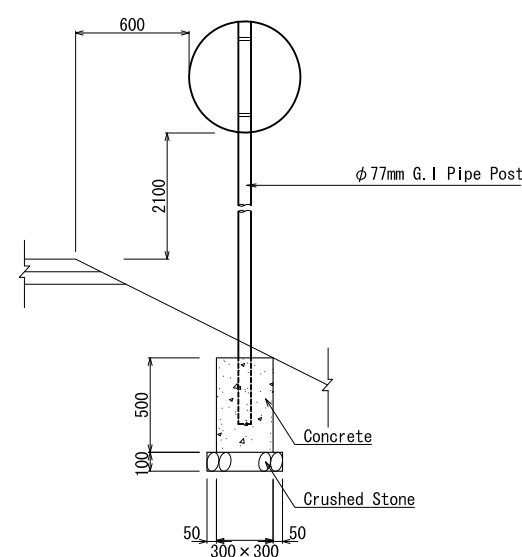
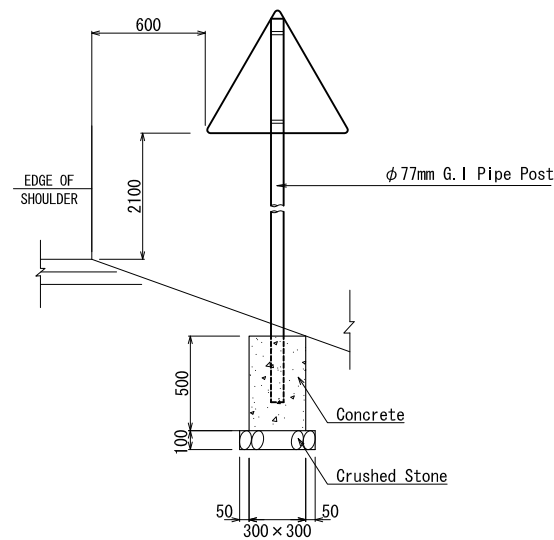
WARNING SIGN

PROHIBITORY SIGN

WARNING SIGN

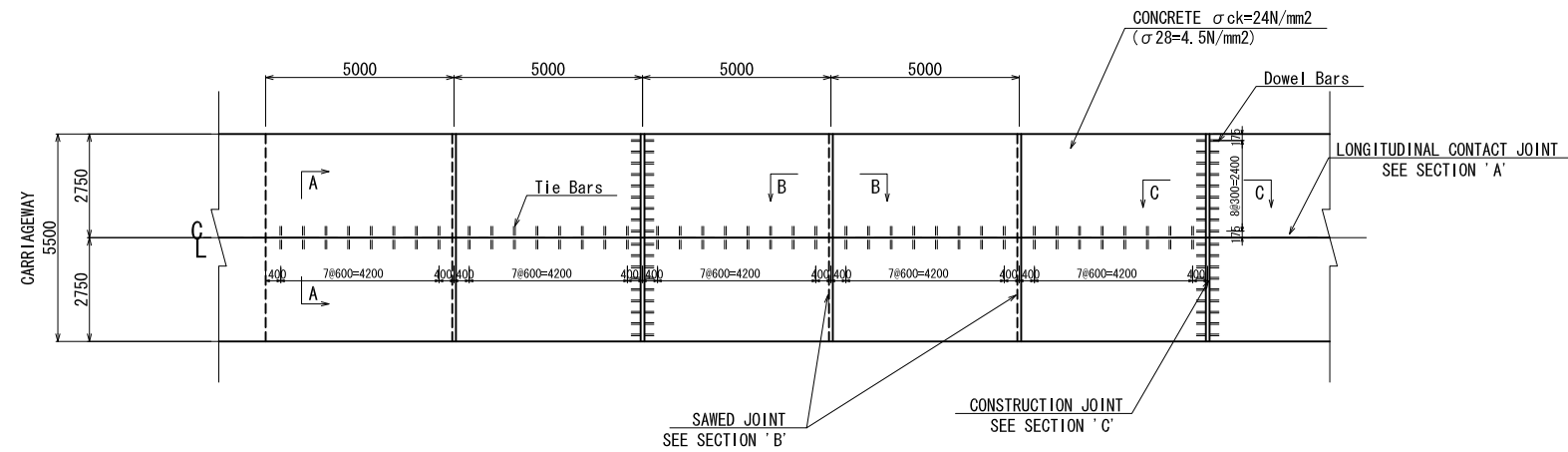


PROHIBITORY SIGN

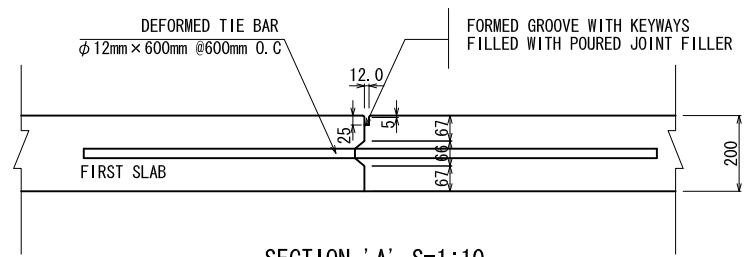


LIST OF TRAFFIC SIGNS (UMIRAY)

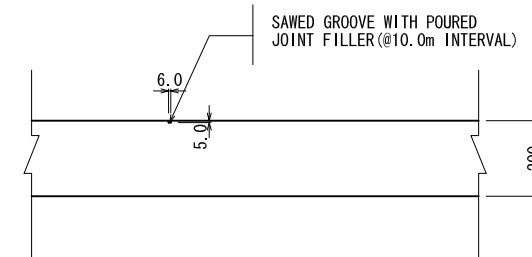
STATION	SHARP TURN		SHARP TURN		CURVE AHEAD		CURVE AHEAD		WINDING ROAD		T JUNCTION		STEEP DESCENT		STEEP CLIMB		STEEP LIMIT		VEHICLE LOAD LIMIT	
	W 1-1(L)		W 1-1(R)		W 1-3(L)		W 1-3(R)		W 1-5		W 2-4		W 5-4		W 5-5		R 4-1		R 6-4	
	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R
0+20.0										1						1		1		
0+146.0		1																		
0+537.5													1							
0+523.0						1														
0+80.0													1							
0+141.0									1											
0+146.0			1																	
0+640.0							1				1				1		1			
SUBTOTAL	0	1	1	0	0	1	1	0	1	1	0	1	1	1	1	1	1	1	0	0
SUM OF L & R	1		1		1		1		2		1		2		2		2		0	
TOTAL	13																			



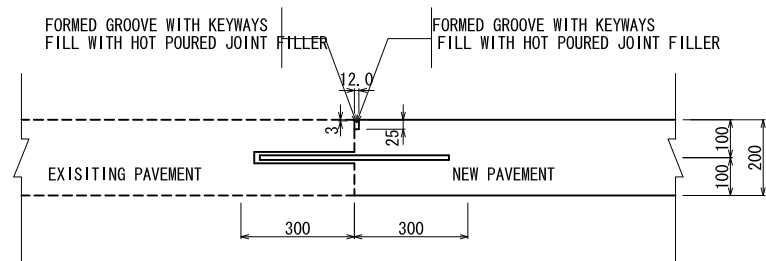
PLAN S=1:100



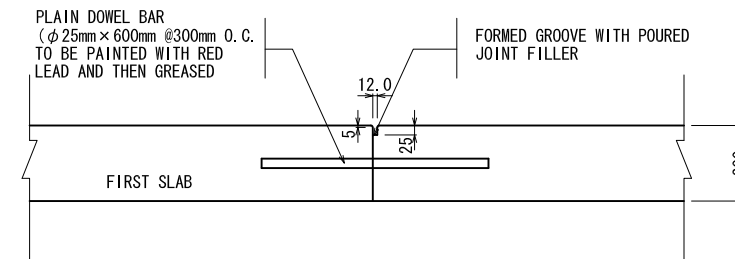
SECTION 'A' S=1:10
(CONTACT JOINT)



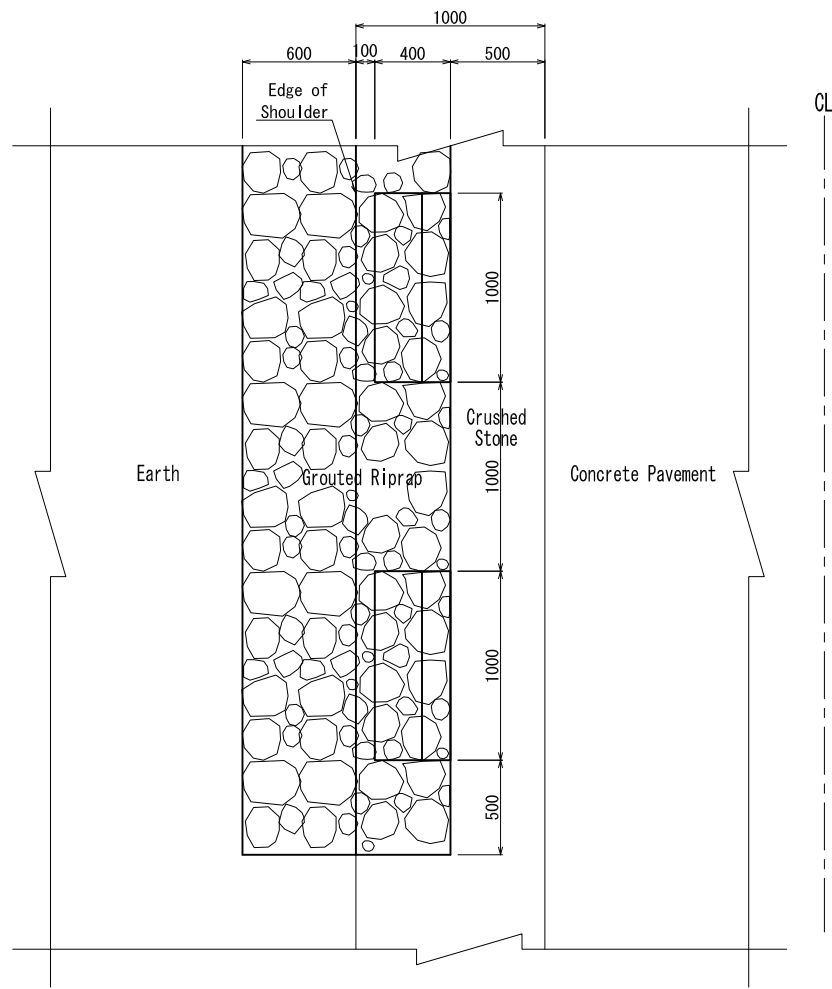
SECTION 'B' S=1:10
(CONTRACTION JOINT)



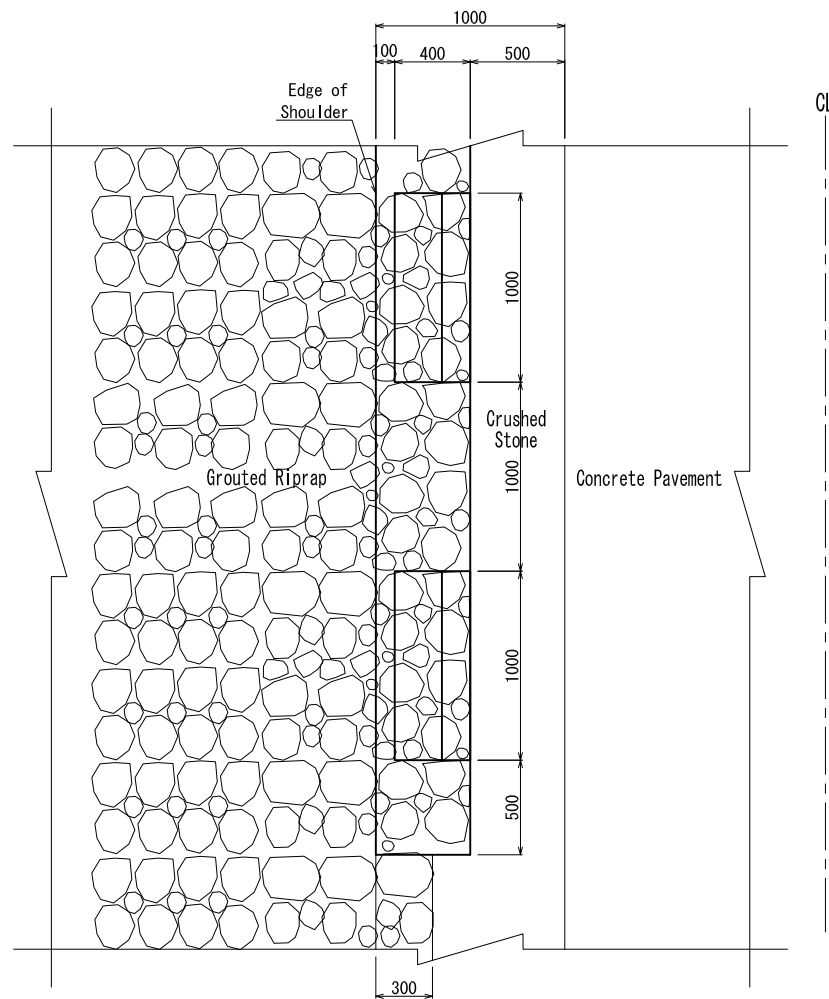
DETAIL OF EXISTING PCCP CONNECTION S=1:10



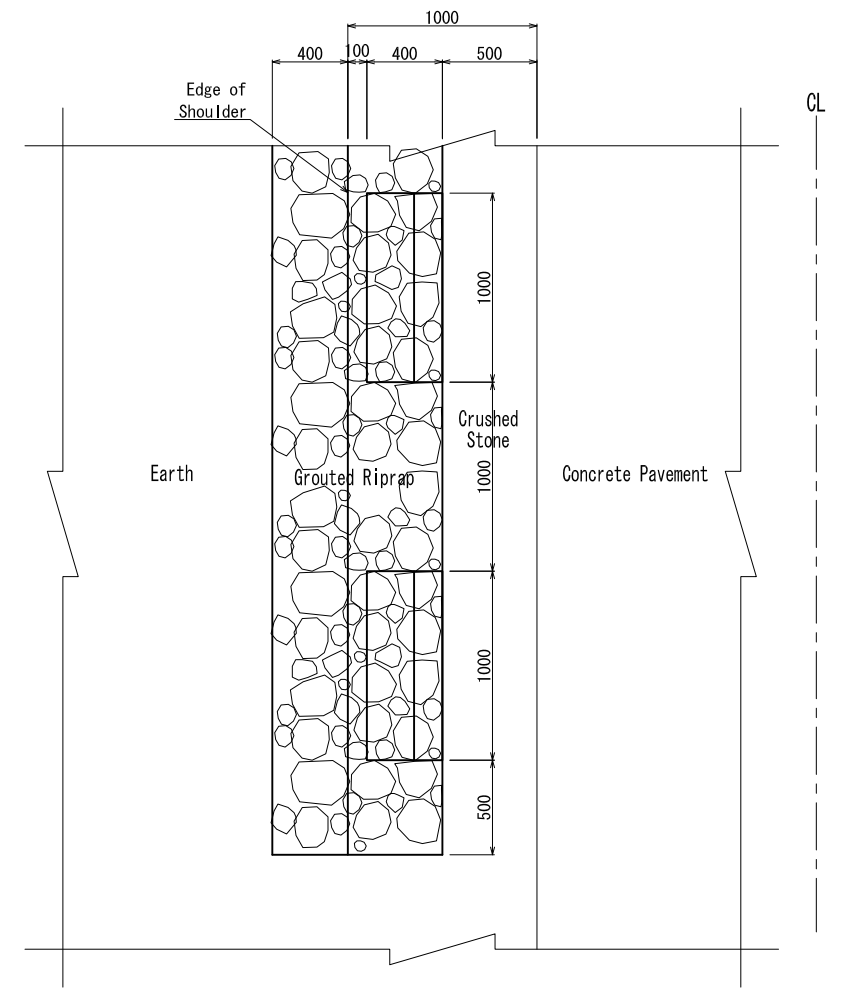
SECTION 'C' S=1:10
(CONSTRUCTION JOINT)



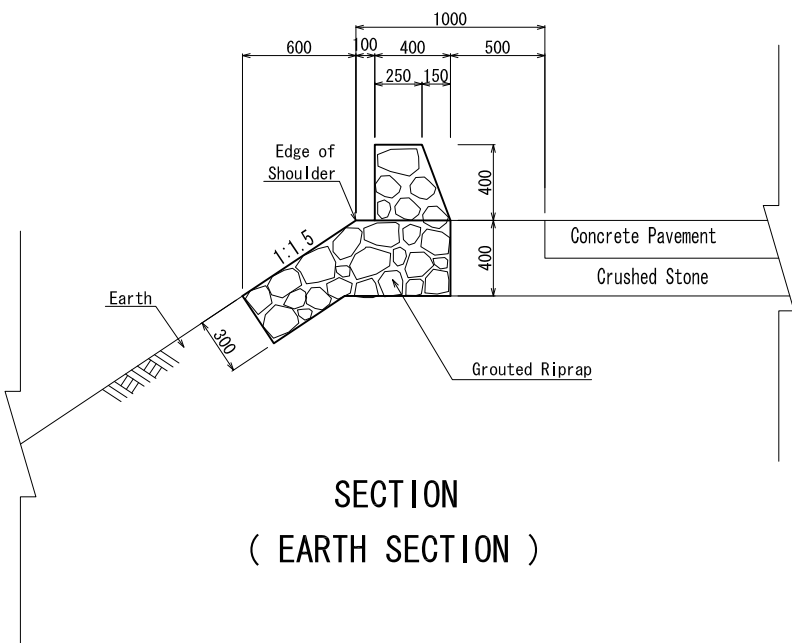
PLAN
(EARTH SECTION)



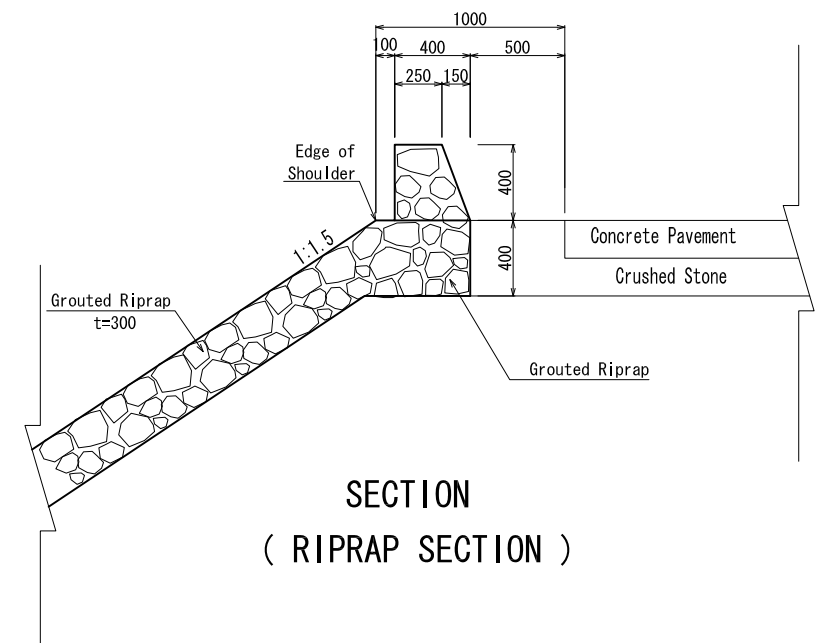
PLAN
(RIPRAP SECTION)



PLAN

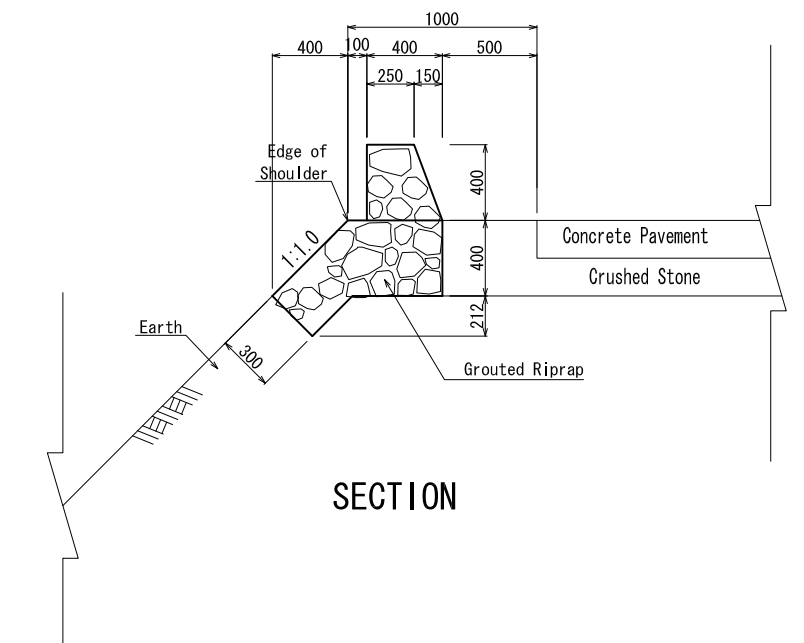


SECTION
(EARTH SECTION)



SECTION
(RIPRAP SECTION)

RIPRAP GUARDBLOCK (TYPE A) S=1:20



SECTION

RIPRAP GUARDBLOCK (TYPE B) S=1:20

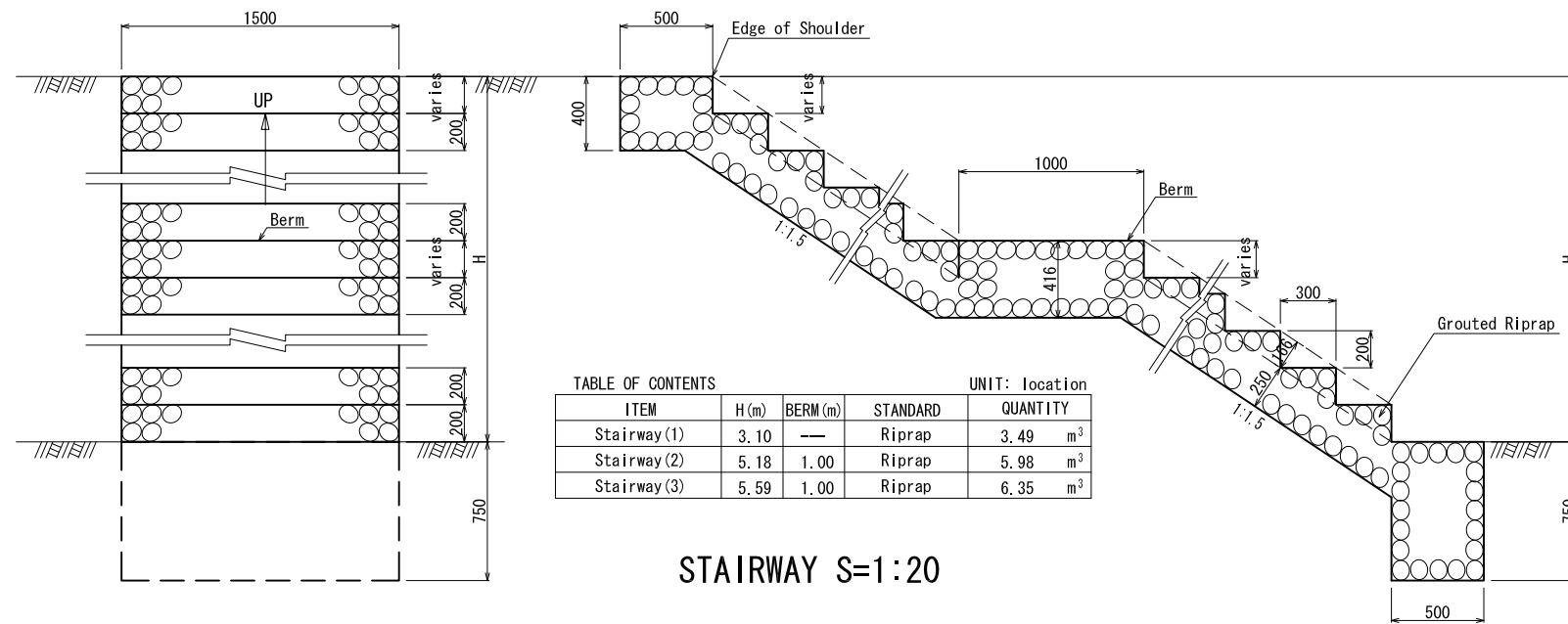
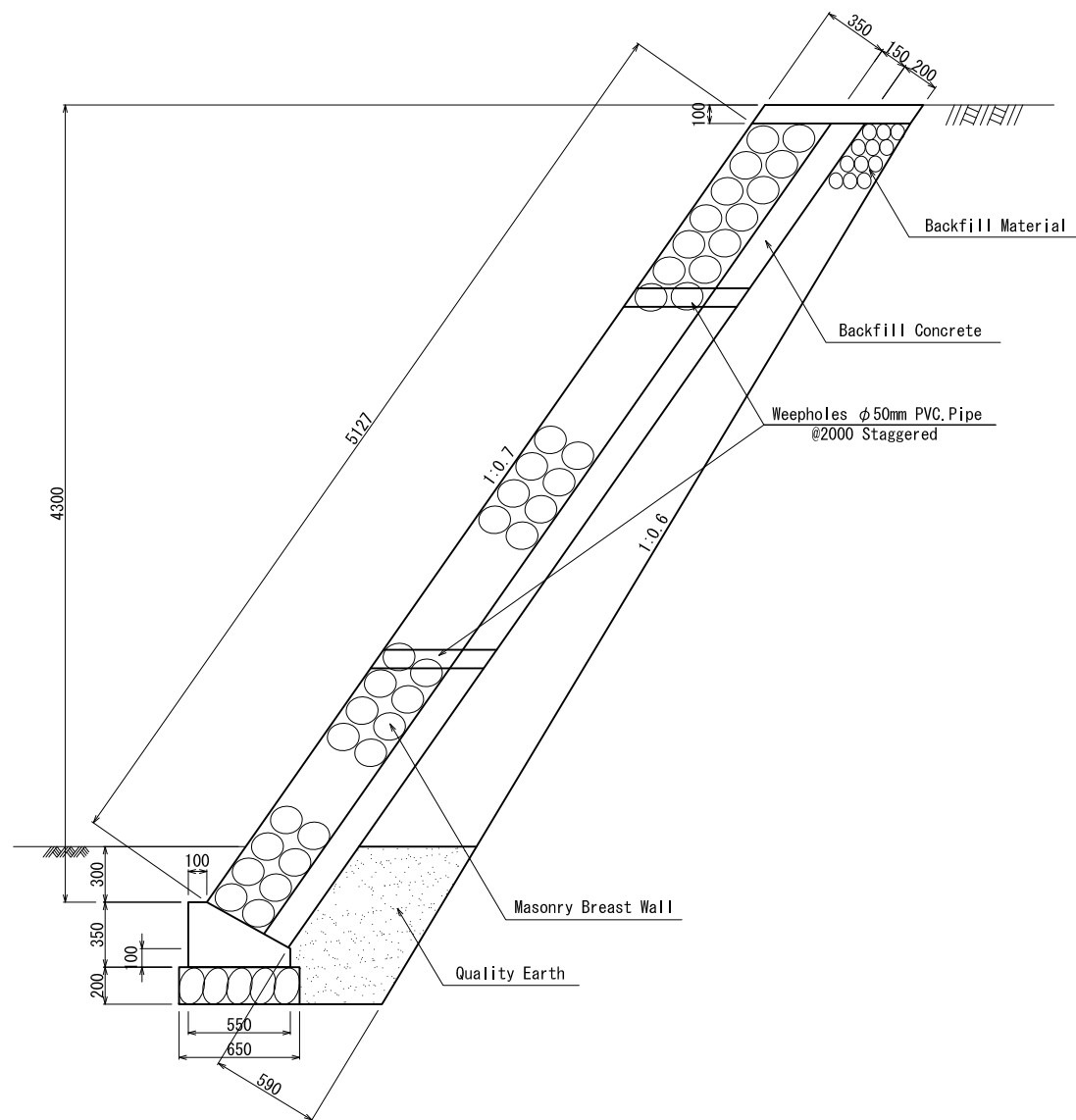


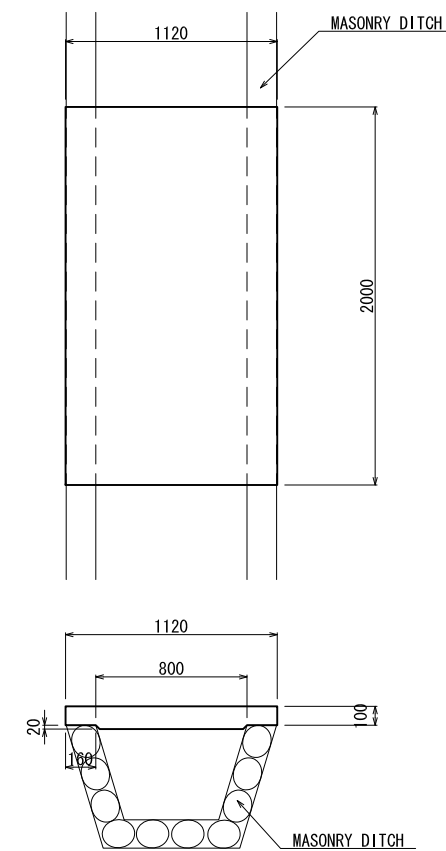
TABLE OF CONTENTS UNIT: location

ITEM	H (m)	BERM (m)	STANDARD	QUANTITY
Stairway (1)	3.10	—	Riprap	3.49 m ³
Stairway (2)	5.18	1.00	Riprap	5.98 m ³
Stairway (3)	5.59	1.00	Riprap	6.35 m ³

STAIRWAY S=1:20



MASONRY WALL (TYPE B) S=1:20



CONCRETE SLAB S=1:20