

### 2.2.3 Outline Design Drawings

The outline design drawings are shown in Appendix-1. The major components of the Project are shown on Table 2.2-12.

**Table 2.2-12 Major Components of the Project**

Stage	No	Bridge No.	Bridge Name	Bridge Length (m)	Carriageway Width (m)	Superstructure Type	Foundation Type	Approach Road Length (m)
Stage-1	1	No.1	Roraya III	50.0	4.5	Plate Girder	Bored Pile	176.1
	2	No.3	Pinnango	22.0	6.0	RC Girder	Steel H-Pile	132.0
	3	No.4	Roraya II	64.0	6.0	Plate Girder	Bored Pile	273.8
	4	No.7	Lapoa	22.0	6.0	RC Girder	Steel H-Pile	124.6
	Subtotal				158.0	—	—	—
Stage-2	1	No.8	Wamorapa	22.0	6.0	RC Girder	Spread Footing	140.7
	2	No.9	Labuan Wolio III	22.0	6.0	RC Flat Slab	Spread Footing	108.3
	3	No.12	Maligano III	32.0	6.0	RC Girder	Steel Tubular Pile	146.1
	4	No.14	Wakaka II	24.0	6.0	RC Flat Slab	Steel Tubular Pile	157.9
	5	No.15	Labungka	22.0	6.0	RC Flat Slab	Steel Tubular Pile	106.6
	6	No.16	Tolie	22.0	6.0	RC Flat Slab	Steel Tubular Pile	148.0
	7	No.17	Wakorumba	36.0	6.0	RC Girder	Steel Tubular Pile	124.0
	Subtotal				180.0	—	—	—
Total				338.0	—	—	—	1,638.1



REPUBLIC OF INDONESIA  
MINISTRY OF PUBLIC WORKS  
DIRECTORATE GENERAL OF HIGHWAYS

THE PREPARATORY SURVEY ON THE PROJECT  
FOR  
THE IMPROVEMENT OF BRIDGES IN SOUTH-EAST SULAWESI PROVINCE  
IN  
THE REPUBLIC OF INDONESIA  
OUTLINE DESIGN DRAWINGS

NOVEMBER 2009

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JAPAN INTERNATIONAL COOPERATION AGENCY

 KATAHIRA & ENGINEERS  
INTERNATIONAL



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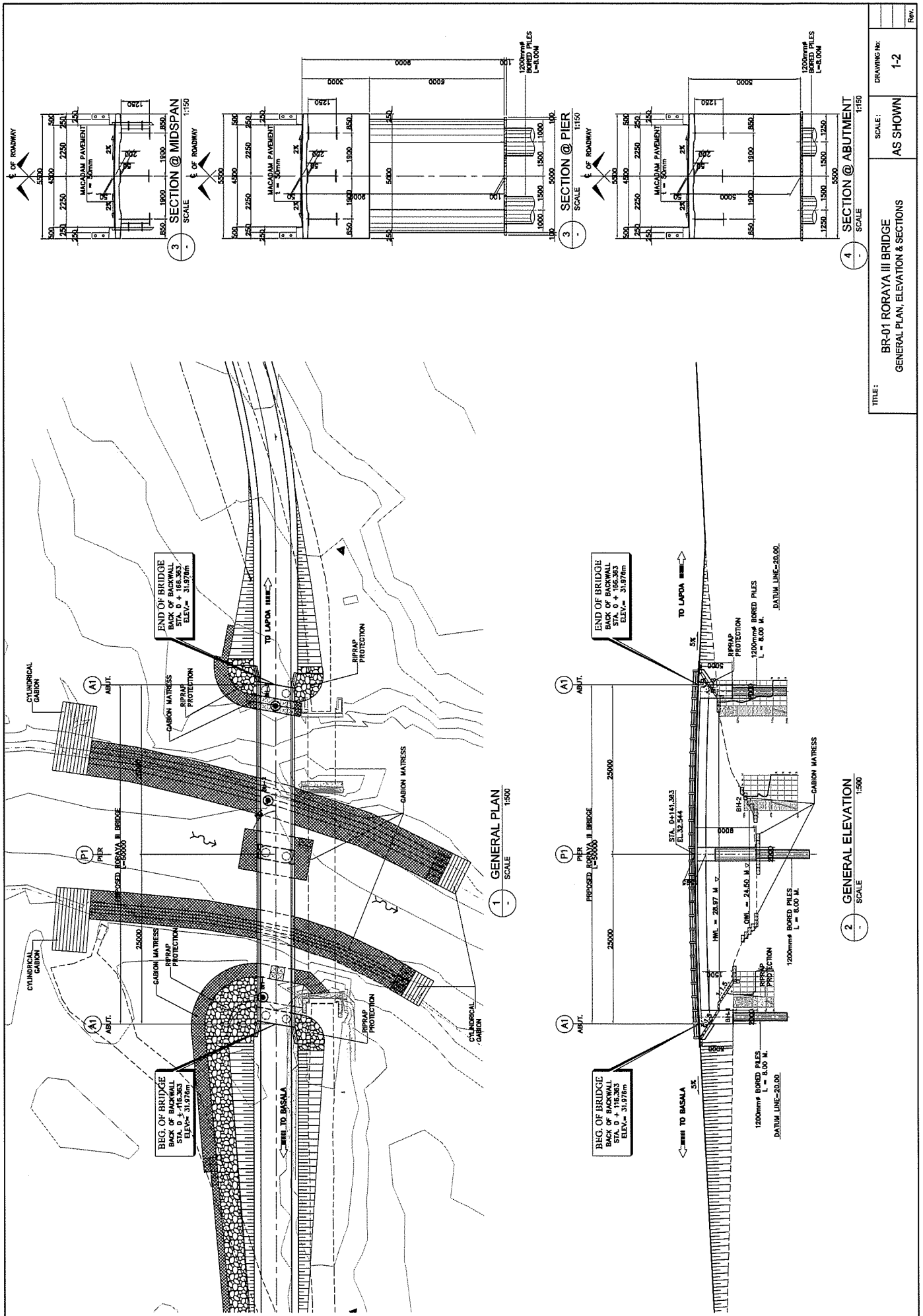


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# BR-01 RORAYA III BRIDGE

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BRG. OF BRIDGE  
BACK OF BACKWALL  
STA. 0 + 116.363  
ELEV. = 31.976m

END OF BRIDGE  
BACK OF BACKWALL  
STA. 0 + 166.363  
ELEV. = 31.976m

BRG. OF BRIDGE  
BACK OF BACKWALL  
STA. 0 + 116.363  
ELEV. = 31.976m

END OF BRIDGE  
BACK OF BACKWALL  
STA. 0 + 166.363  
ELEV. = 31.976m

1 - GENERAL PLAN  
SCALE 1:500

2 - GENERAL ELEVATION  
SCALE 1:500

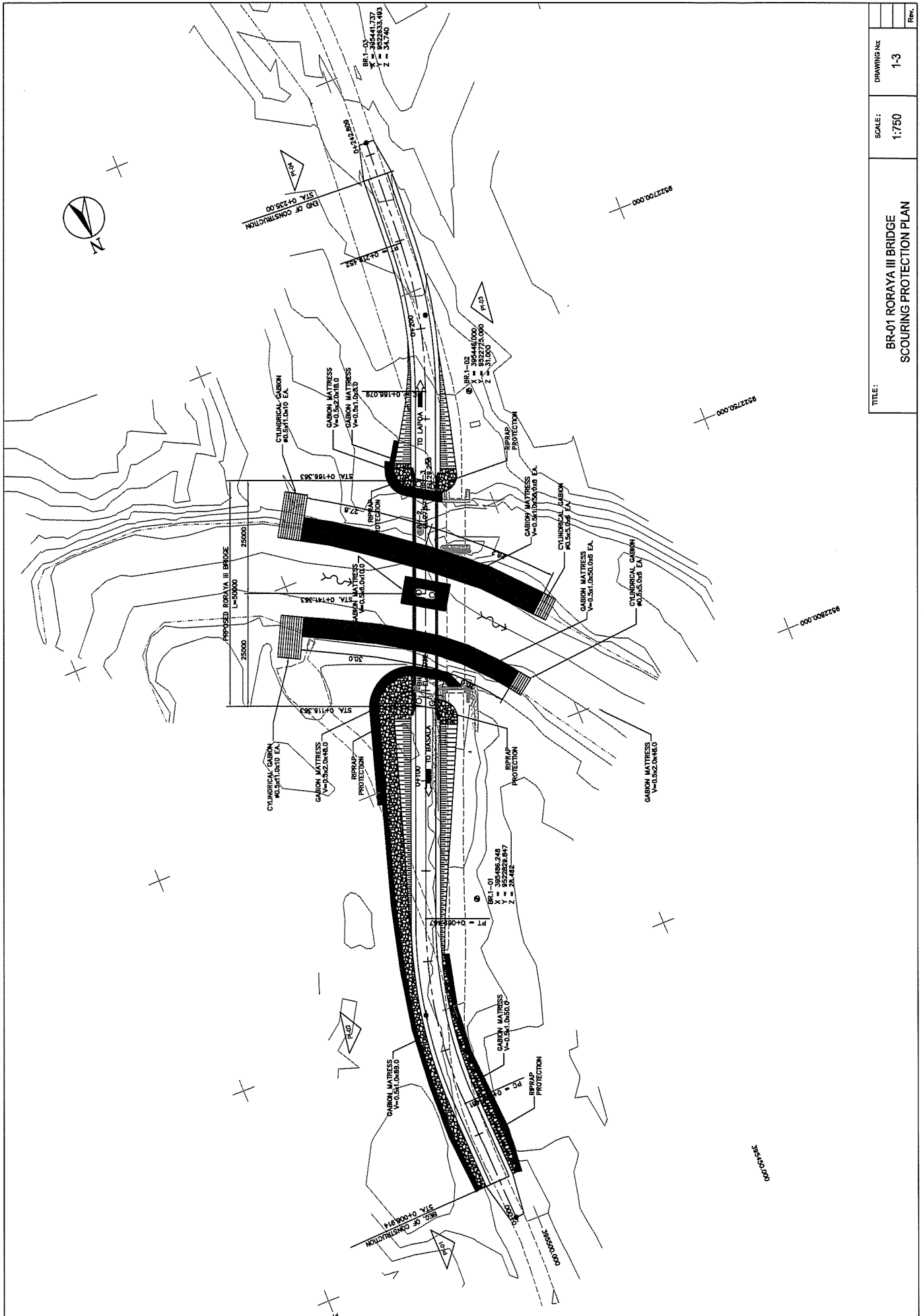
3 - SECTION @ MIDSPAN  
SCALE 1:150

3 - SECTION @ PIER  
SCALE 1:150

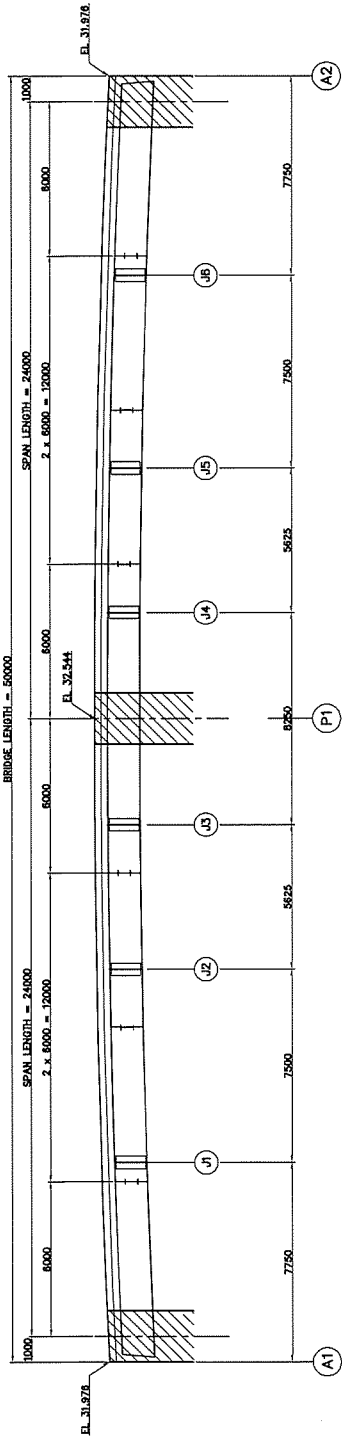
4 - SECTION @ ABUTMENT  
SCALE 1:150

TITLE:	BR-01 RORAYA III BRIDGE GENERAL PLAN, ELEVATION & SECTIONS	SCALE:	AS SHOWN	DRAWING NO.:	1-2	Rev.	
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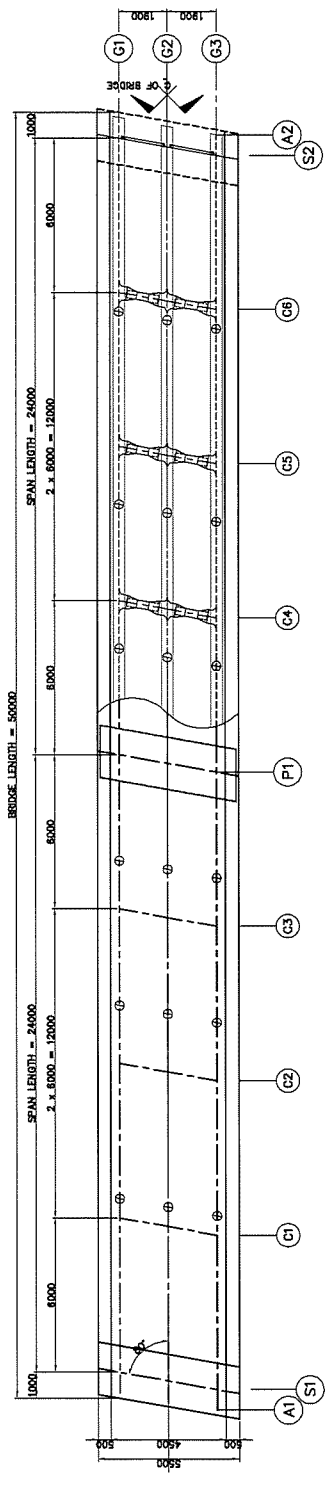




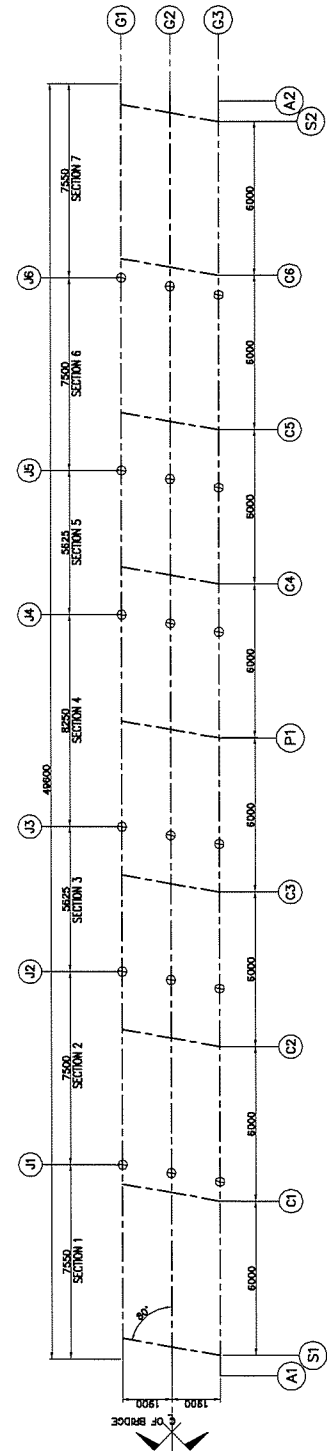
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SCALE:	1:750
DRAWING No:	1-3
Rev.	



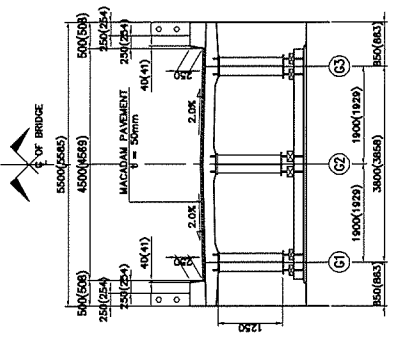
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SCALE 1:100



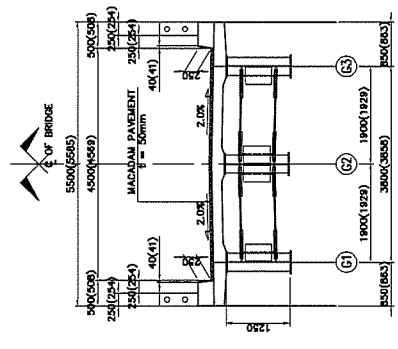
2 PLAN  
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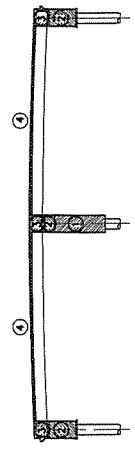
3 KEY PLAN  
SCALE 1:100



4 SECTION @ S1, P1 & S2  
SCALE 1:50



5 SECTION @ C1-C6  
SCALE 1:50

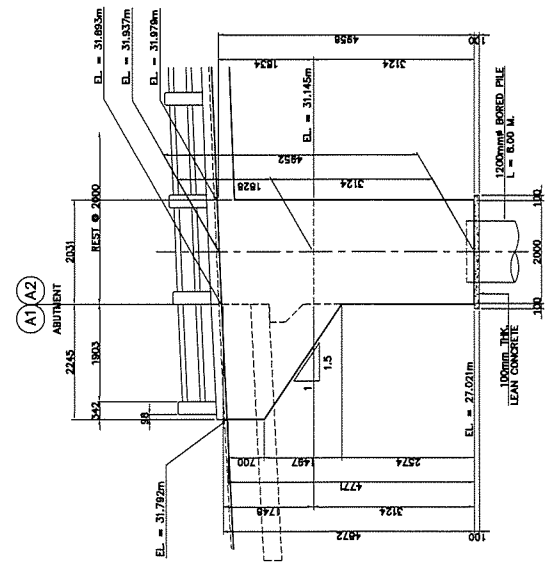


CONCRETE POURING SEQUENCE

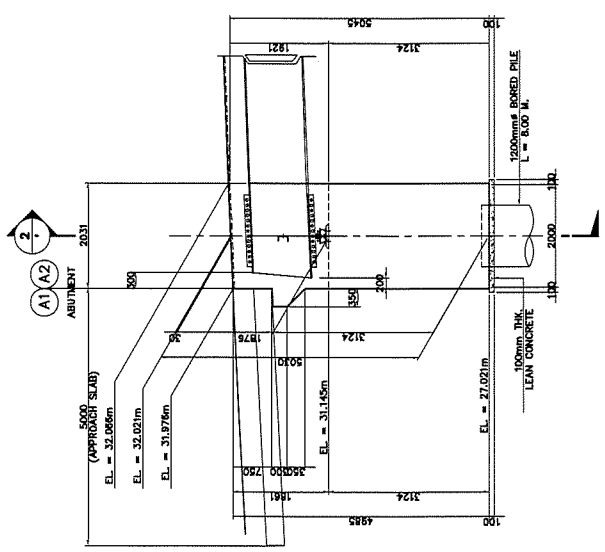
NOTE:  
 1. CONCRETE ④ SHALL NOT BE POURED BEFORE CONCRETE ③ HAS GAINED STRENGTH FOR 2 WEEKS AFTER CONCRETE ③ HAS BEEN POURED.  
 2. CONCRETE ③ SHALL BE POURED STARTING FROM THE CENTER OF THE SPAN.  
 SCALE:

TITLE:	BR-01 RAROYA III BRIDGE GEN. DIM. OF SUPERSTRUCTURE	DRAWING NO.	1-4
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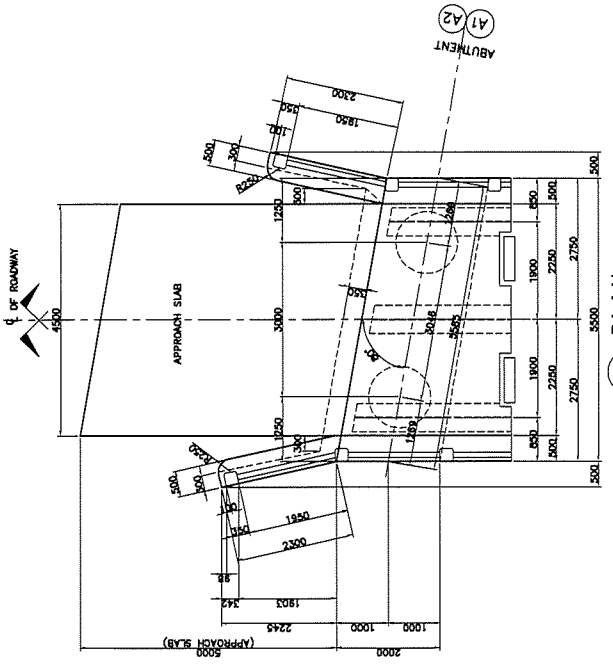
Rev.	
DRAWING No.	1-5
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TITLE:	BR-01 RORAYA III BRIDGE SUBSTRUCTURE STRUCTURAL DIMENSION (ABUT. A1 & A2)



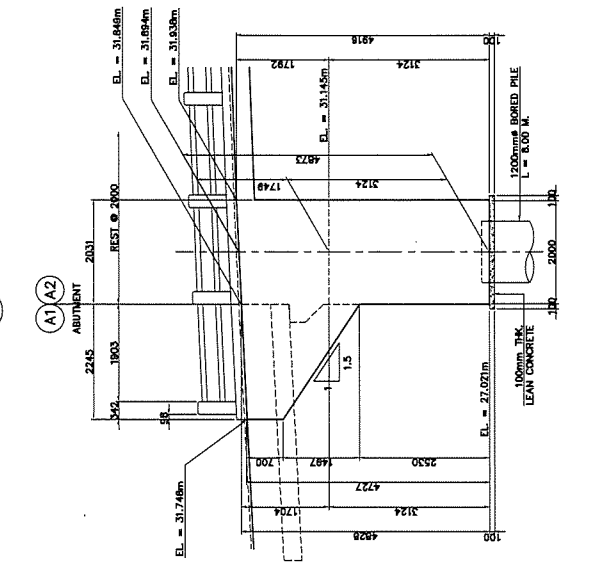
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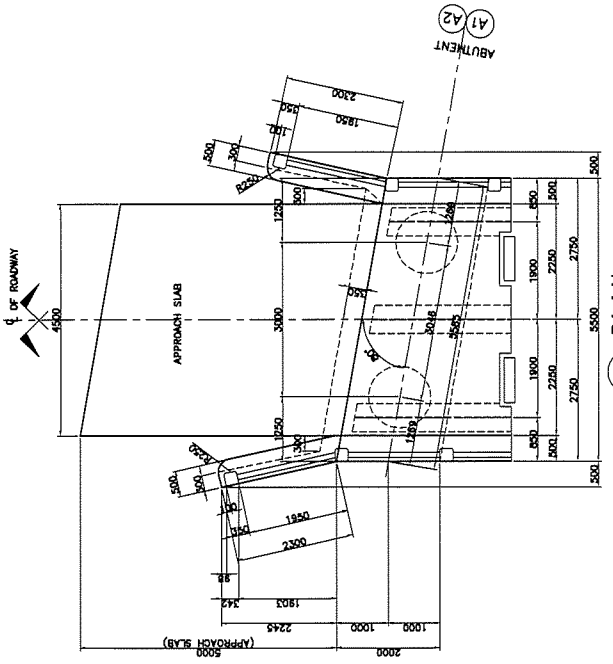
4 ELEVATION  
SCALE 1:100



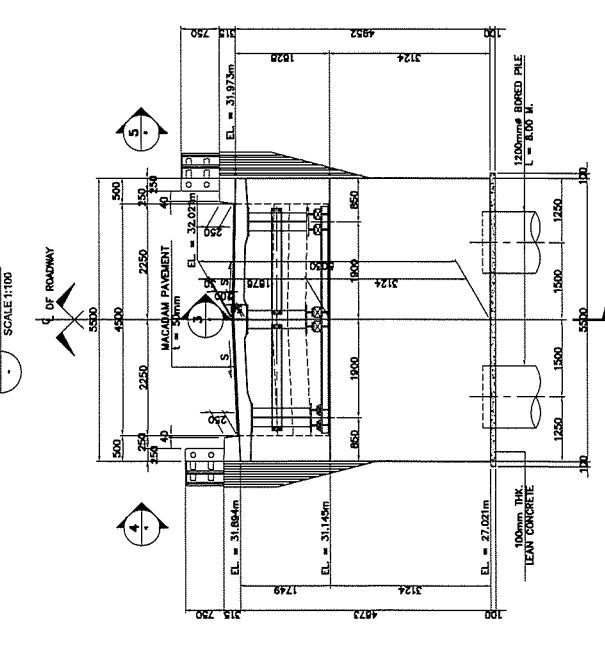
5 ELEVATION  
SCALE 1:100



2 ELEVATION  
SCALE 1:100



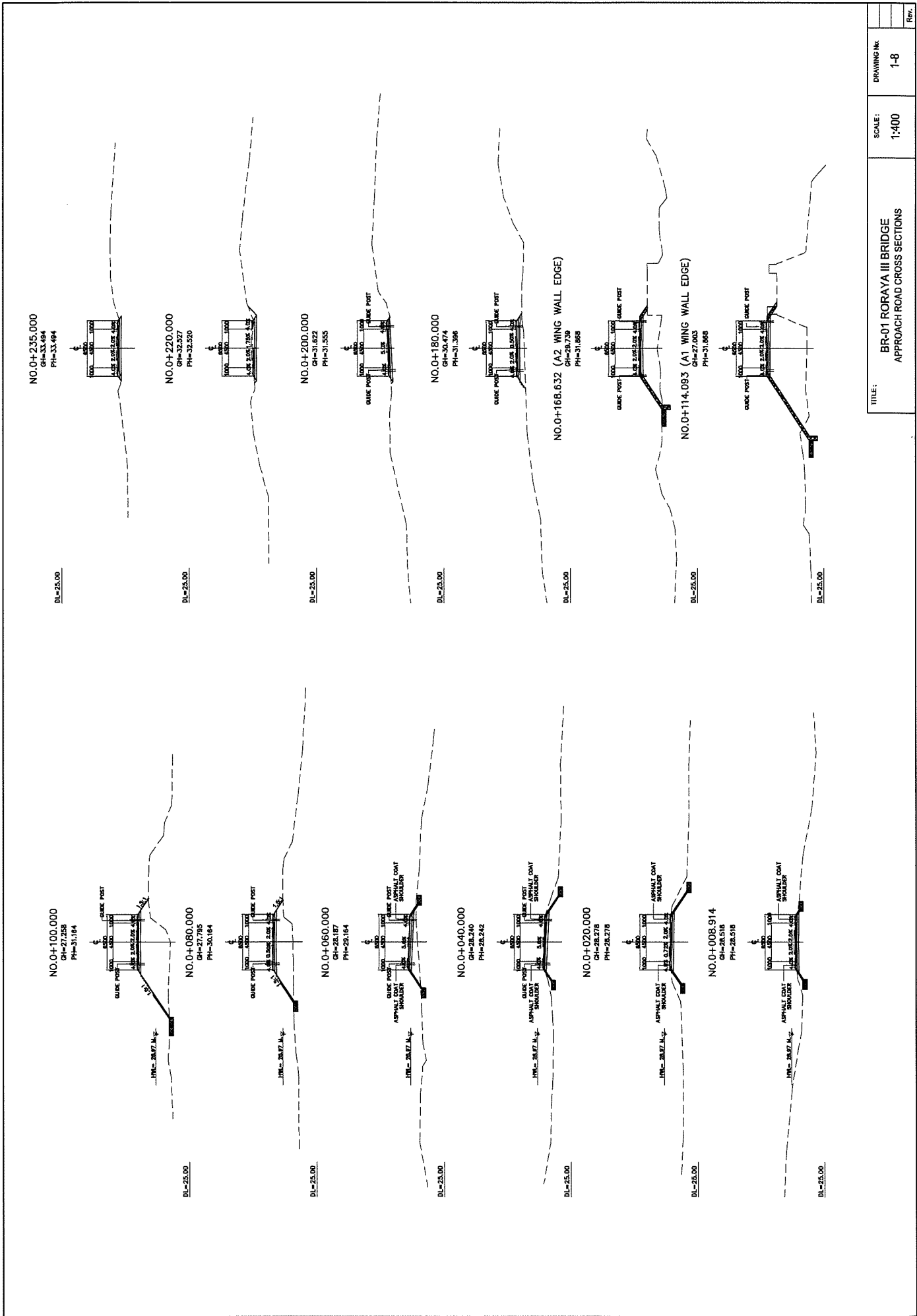
1 PLAN  
SCALE 1:100



1 ELEVATION  
SCALE 1:100







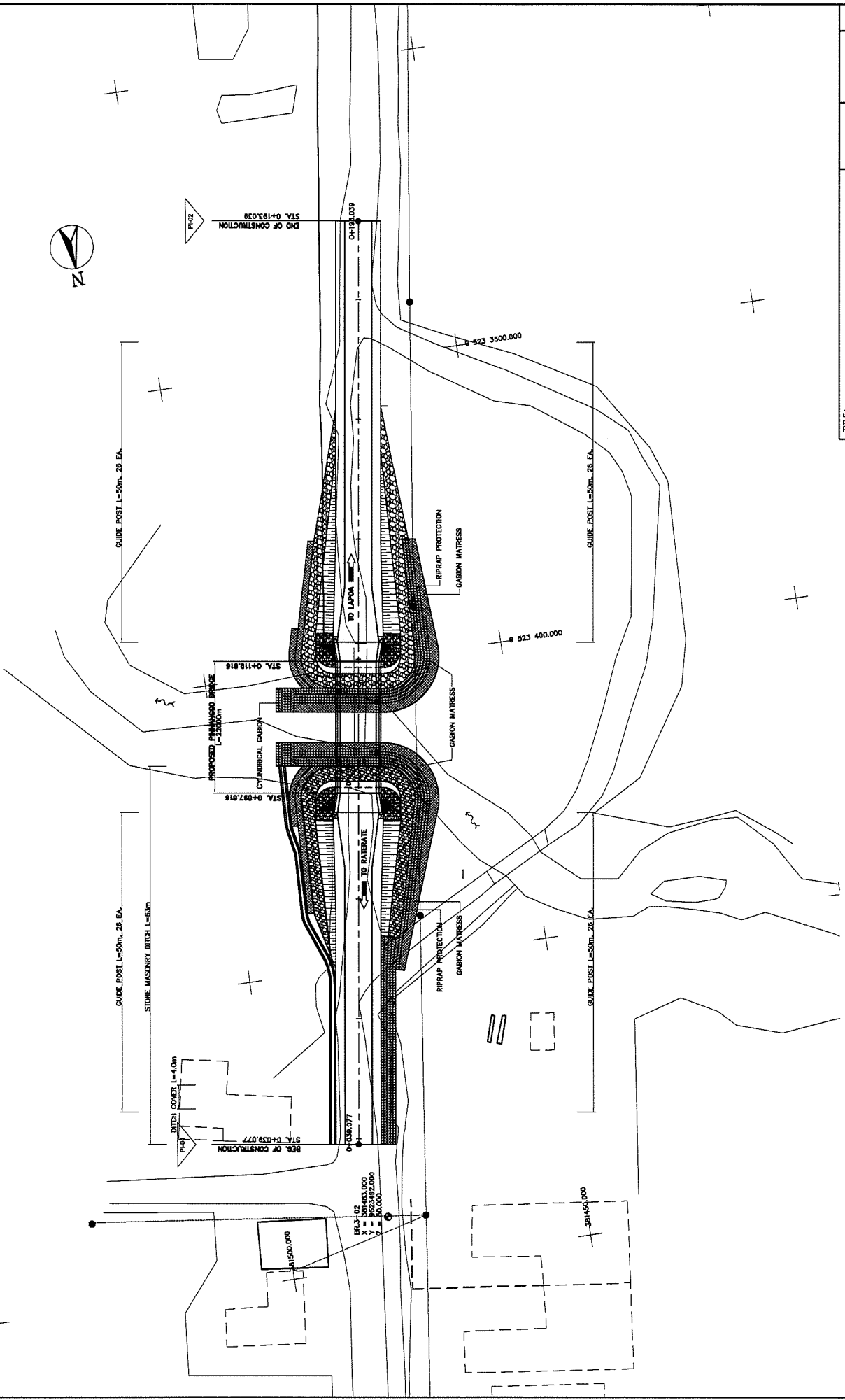
TITLE:	BR-01 RORAYA III BRIDGE APPROACH ROAD CROSS SECTIONS
SCALE:	1:400
DRAWING No.:	1-8
Rev.:	

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# BR-03 PINNANGO BRIDGE

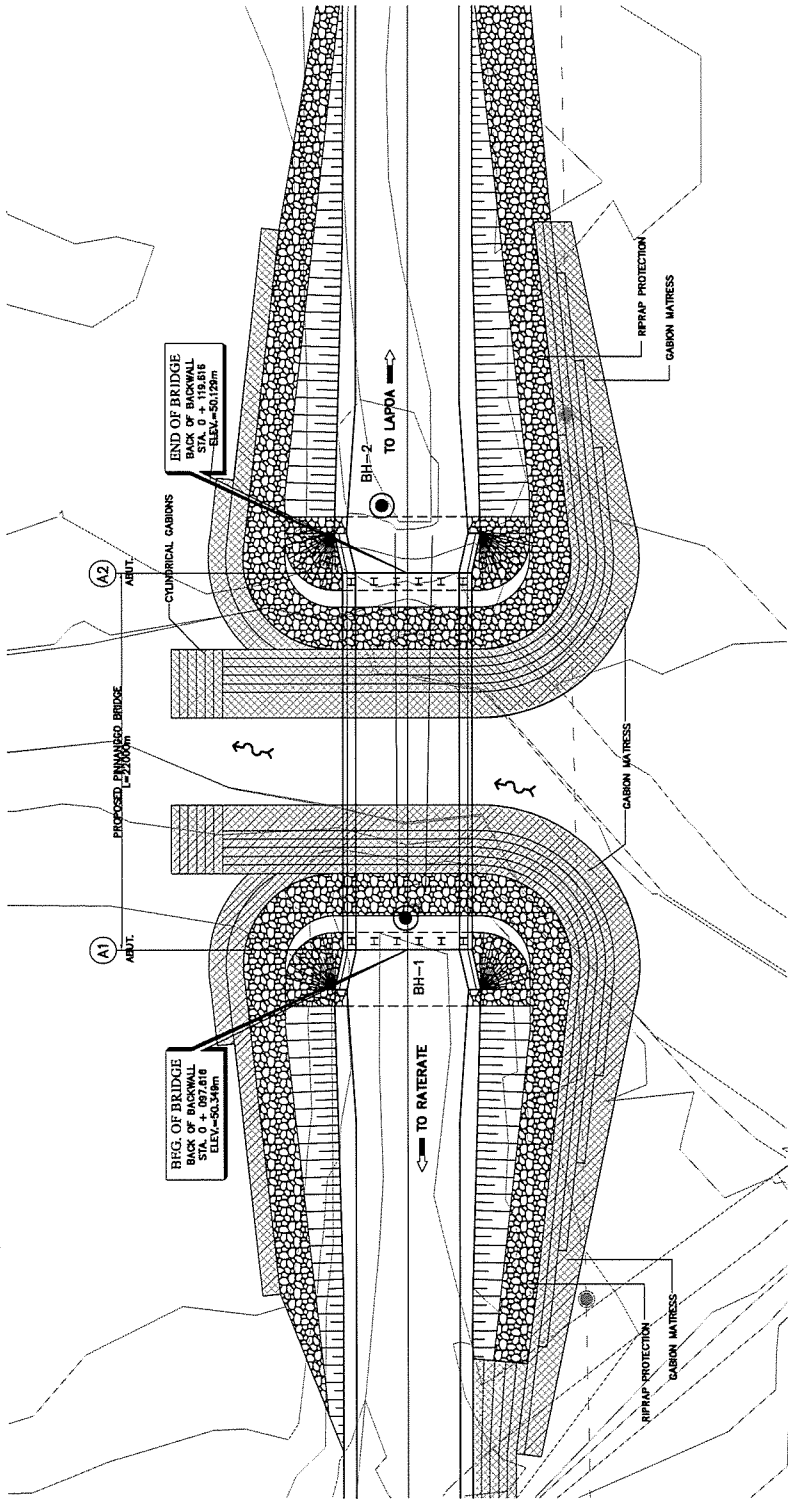
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ELEMENTS OF CURVE						
PI NO.	STATION	COORDINATES		Lg	E	W
		NORTHING	EASTING			
PI-01	0+1038.077	8232472.357	301468.082	NO HORIZONTAL CURVE		
PI-02	0+1823.039	8232327.089	301463.316	NO HORIZONTAL CURVE		



TITLE:	BR-03 PINNANGO BRIDGE SITE DEVELOPMENT PLAN
SCALE:	1:600
DRAWING NO.:	2-1
Rev.	



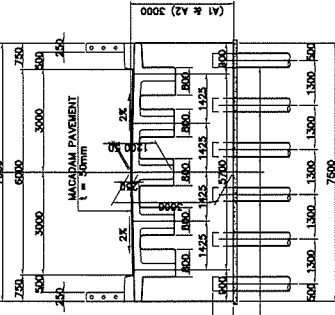
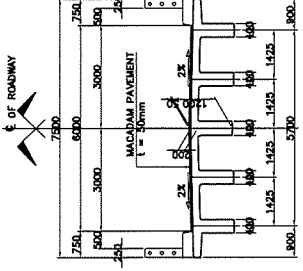


BEG. OF BRIDGE  
BACK OF BACKWALL  
STA. C = 07.816  
ELEV. = 50.346m

END OF BRIDGE  
BACK OF BACKWALL  
STA. C = 19.216  
ELEV. = 50.126m

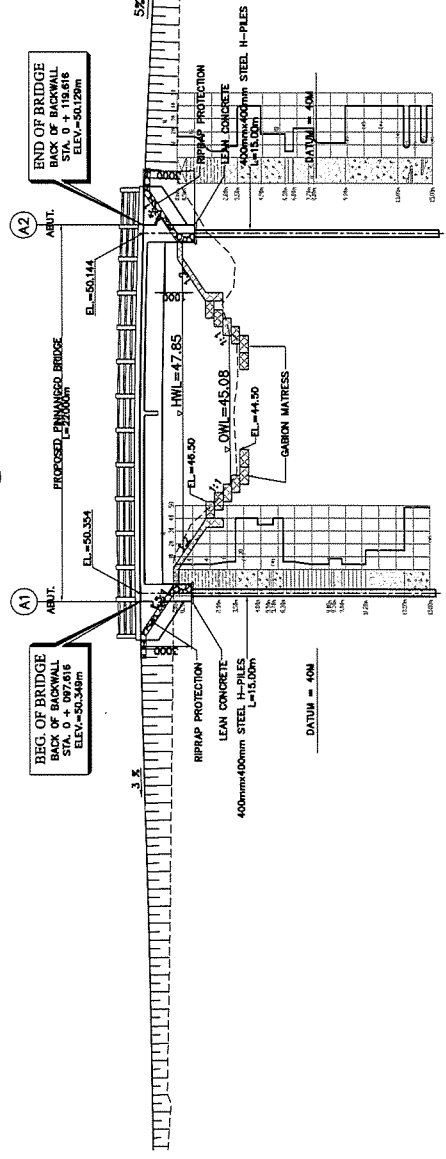
3 SECTION @ MIDSPAN  
SCALE 1:150

3 SECTION @ ABUTMENT  
SCALE 1:150



1 GENERAL PLAN  
SCALE 1:300

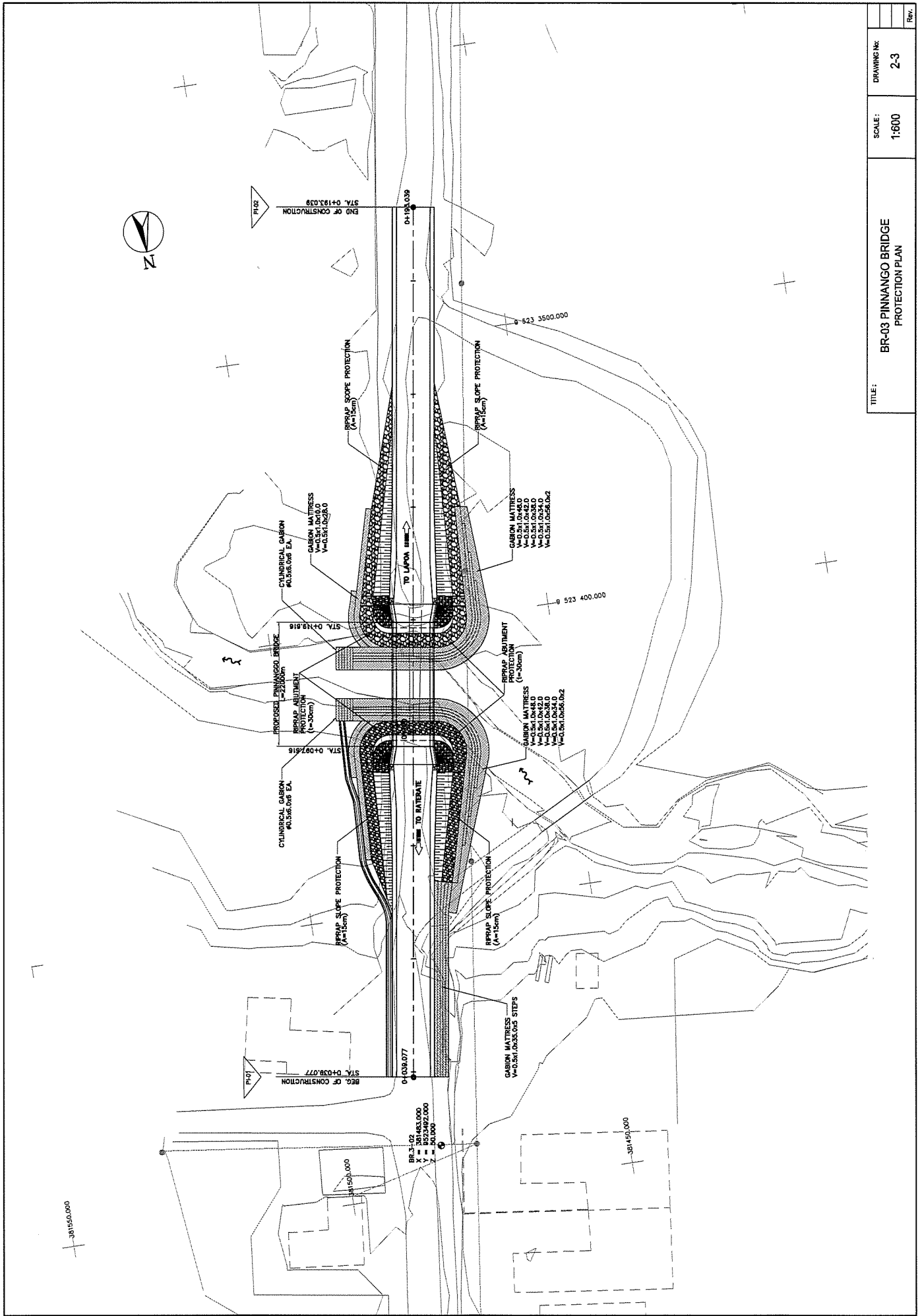
2 GENERAL ELEVATION  
SCALE 1:200



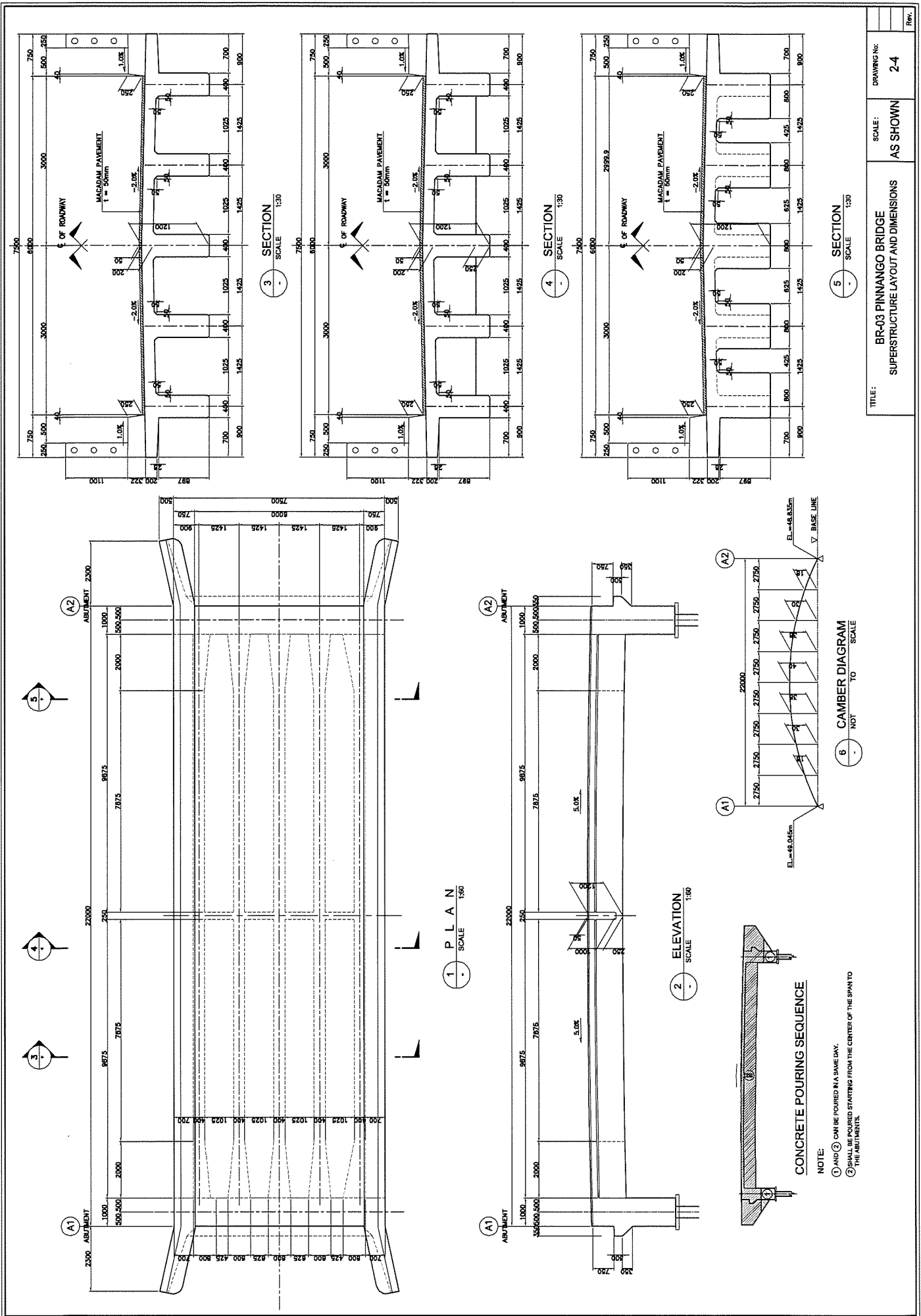
BEG. OF BRIDGE  
BACK OF BACKWALL  
STA. C = 07.816  
ELEV. = 50.346m

END OF BRIDGE  
BACK OF BACKWALL  
STA. C = 19.216  
ELEV. = 50.126m

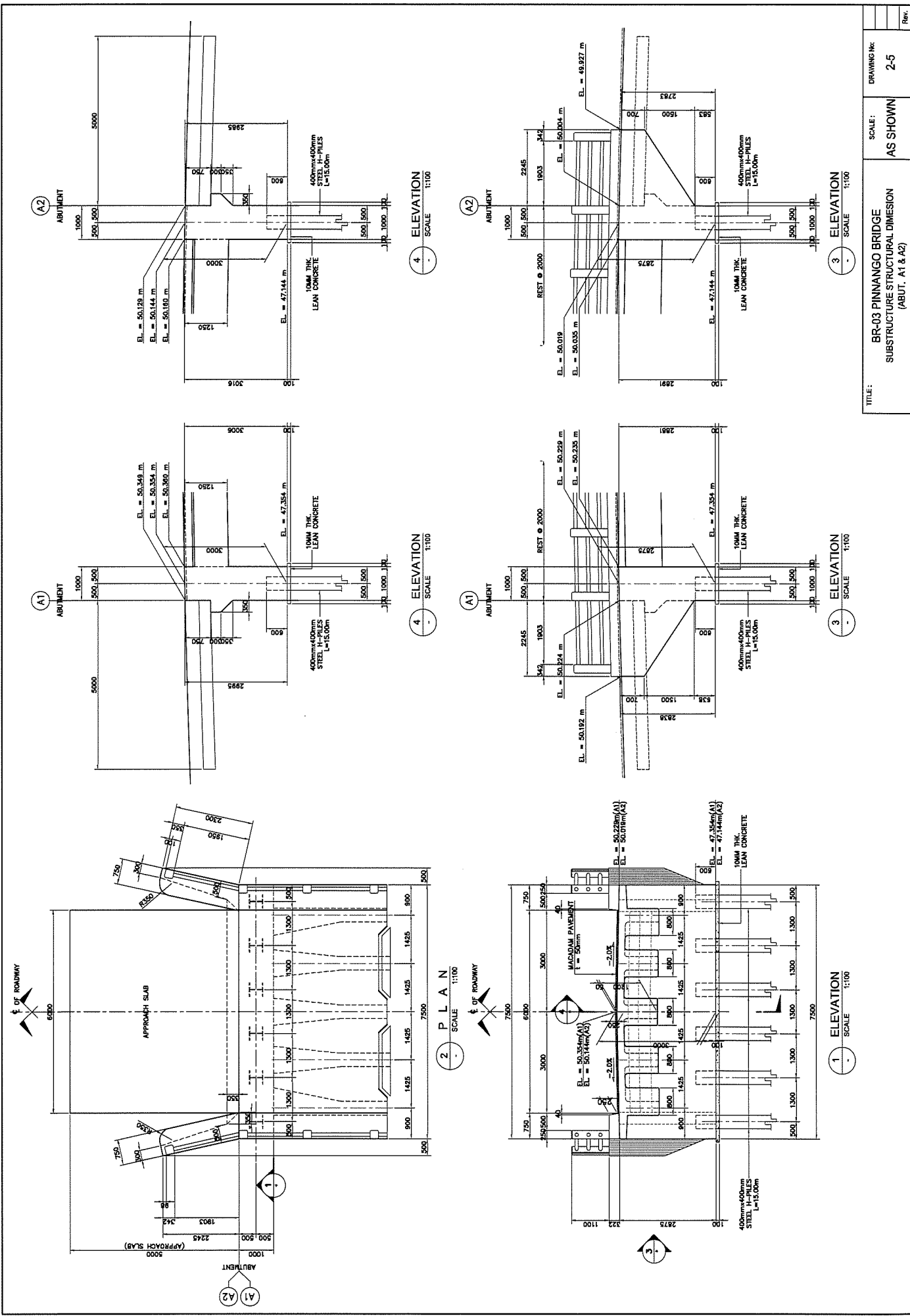
TITLE:	BR-03 PINNANGO BRIDGE GENERAL PLAN, ELEVATION & SECTIONS	SCALE:	AS SHOWN	DRAWING No:	2-2	Rev.	
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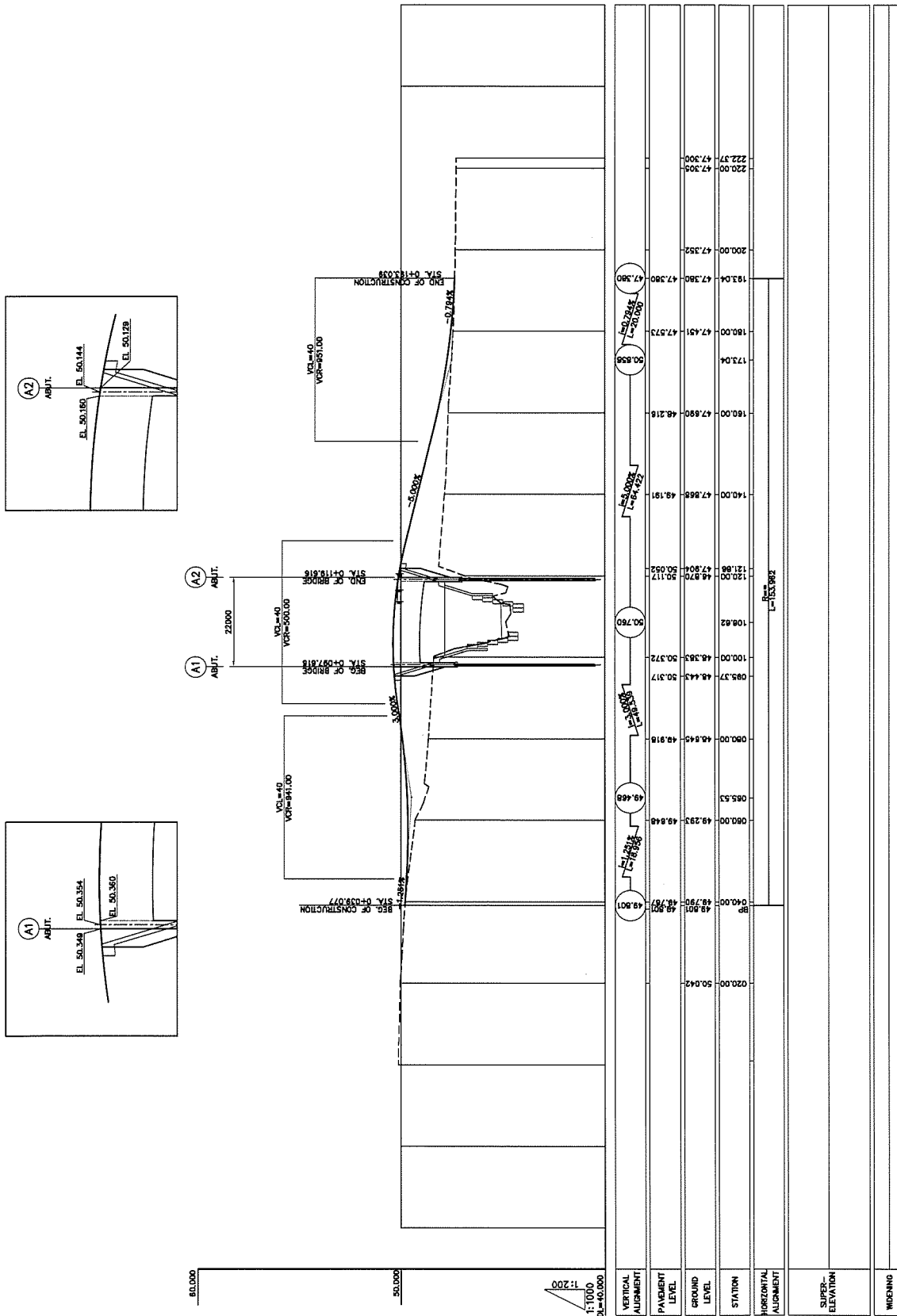
Rev.			
2-3	DRAWING No.	1:600	SCALE:
	BR-03 PINNANGO BRIDGE		TITLE:
	PROTECTION PLAN		



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SCALE:	AS SHOWN
DRAWING No:	24
Rev.	

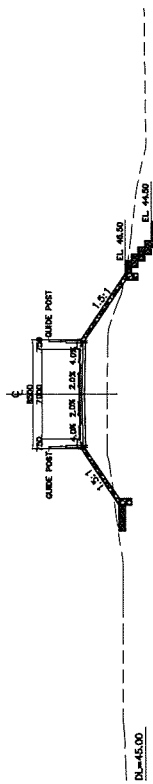


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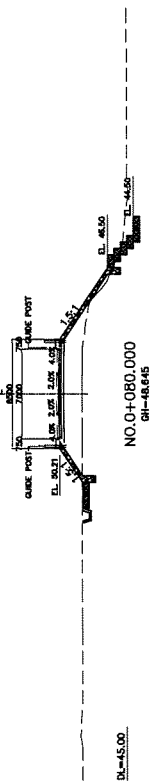
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GH=47.804  
PH=50.052



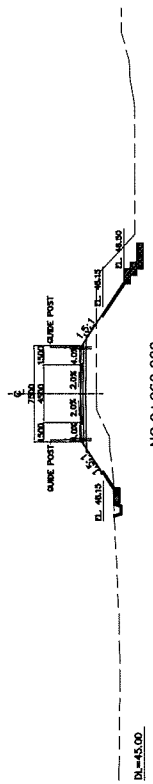
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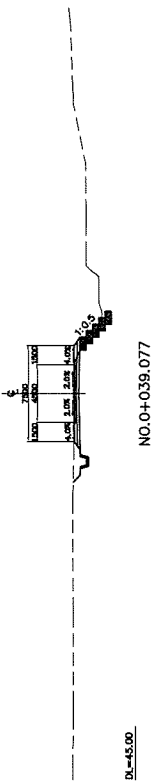
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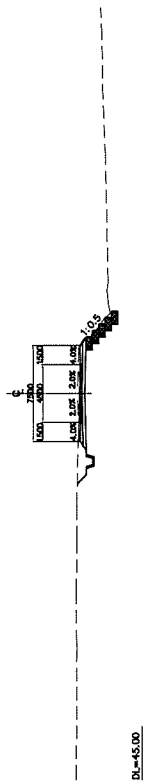
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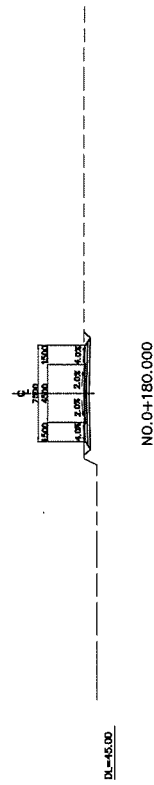
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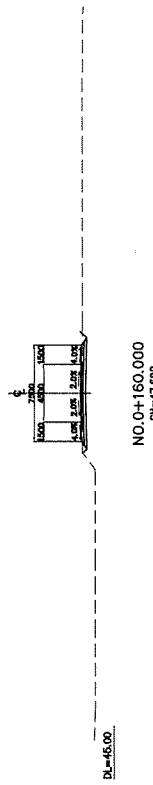
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GH=47.360  
PH=47.360



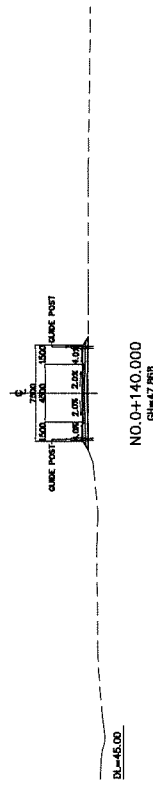
NO. 0+180.000

GH=47.451  
PH=47.573



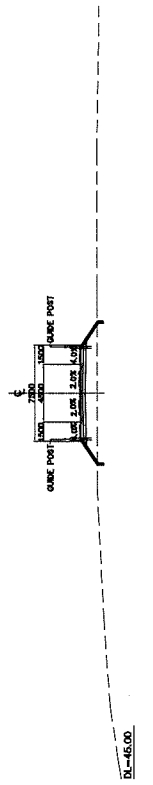
NO. 0+160.000

GH=47.680  
PH=48.216



NO. 0+140.000

GH=47.865  
PH=49.191



TITLE: BR-03 PINNANGO BRIDGE  
APPROACH ROAD CROSS SECTIONS

SCALE: 1:400

DRAWING No. 2-7

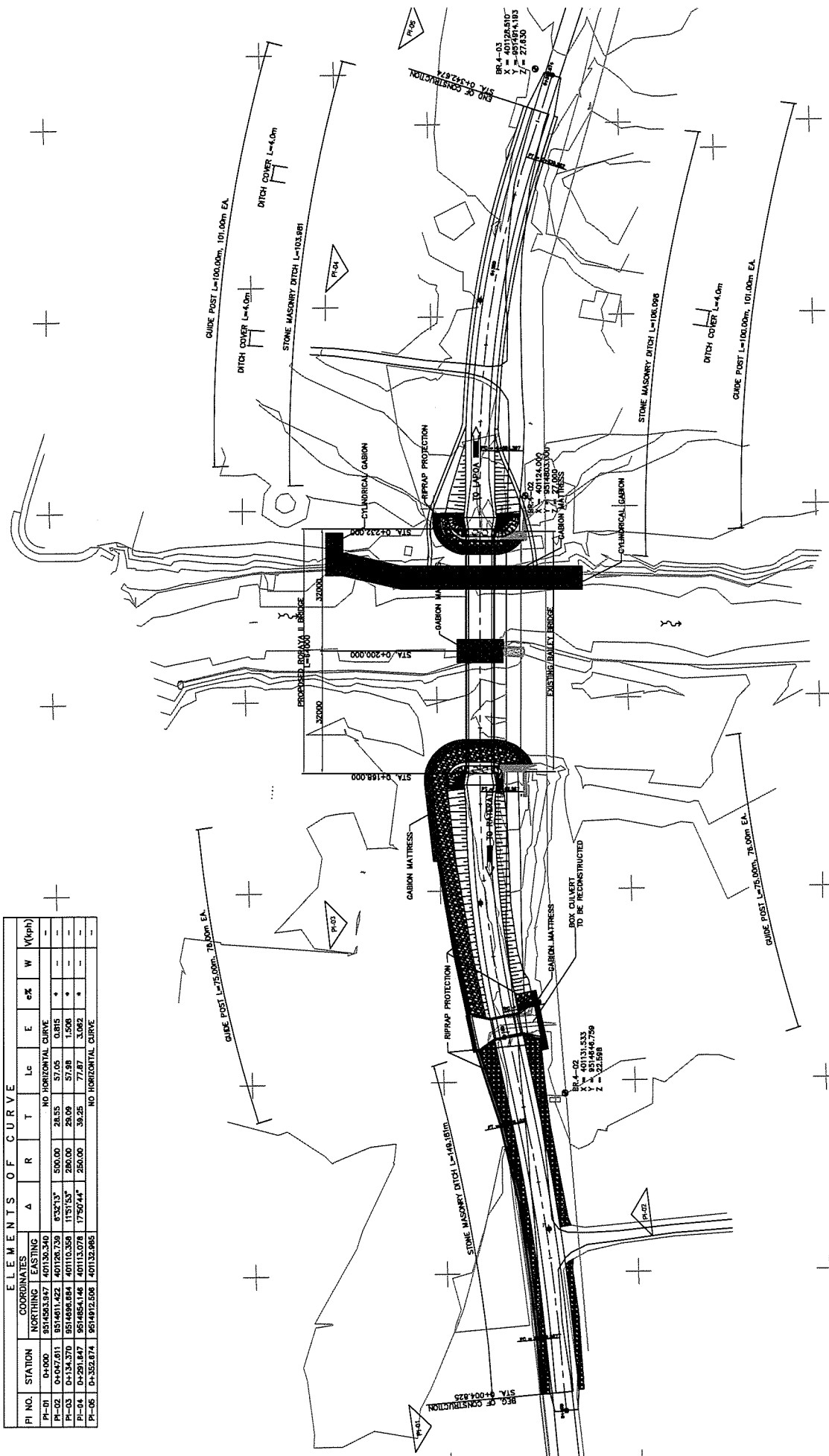
Rev.

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# BR-04 RORAYA II BRIDGE

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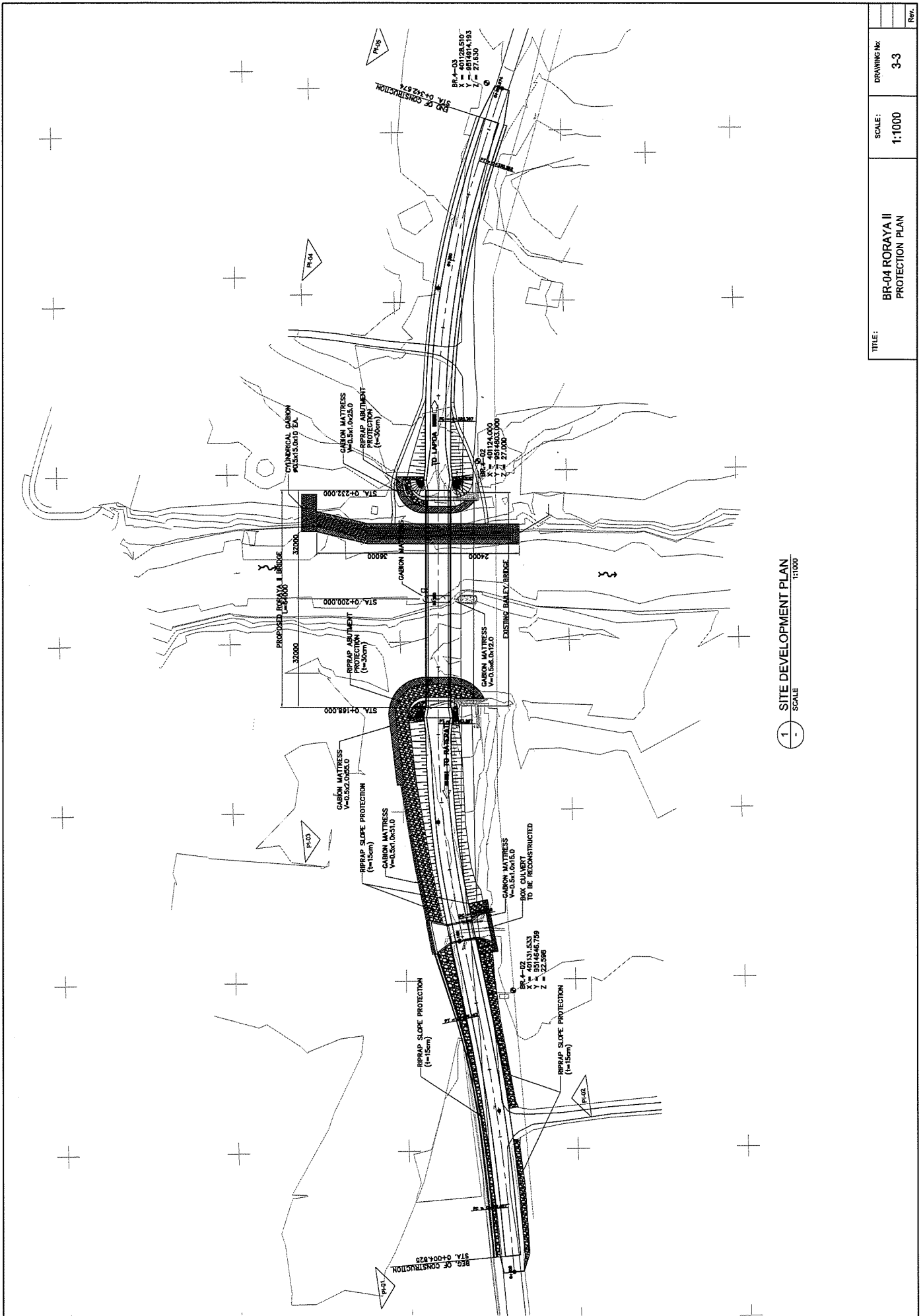
PI NO.	STATION	COORDINATES		A	R	T	Lc	E	e%	W
		NORTHING	EASTING							
PI-01	0+000	851483.947	401130.340	NO HORIZONTAL CURVE						
PI-02	0+047.611	851481.422	401126.739	6327.13°	500.00	28.55	57.05	0.815	*	--
PI-03	0+134.370	851489.684	401110.359	1157.53°	280.00	29.09	57.98	1.508	*	--
PI-04	0+291.847	851485.146	401113.078	17567.44°	250.00	39.25	77.87	3.082	*	--
PI-05	0+352.074	8514912.508	401132.985	NO HORIZONTAL CURVE						



1 SITE DEVELOPMENT PLAN  
SCALE 1:1000

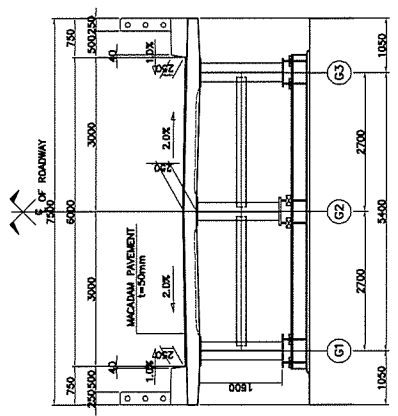




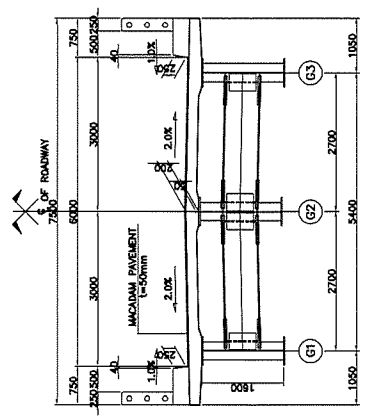


1 SITE DEVELOPMENT PLAN  
SCALE 1:1000

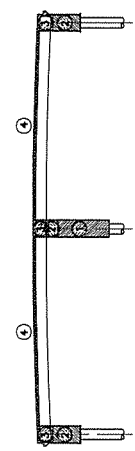
TITLE:	BR-04 RORAYA II PROTECTION PLAN
SCALE:	1:1000
DRAWING No:	3-3
Rev.	



4 SECTION @ S1, P1 & S2  
SCALE 1:50

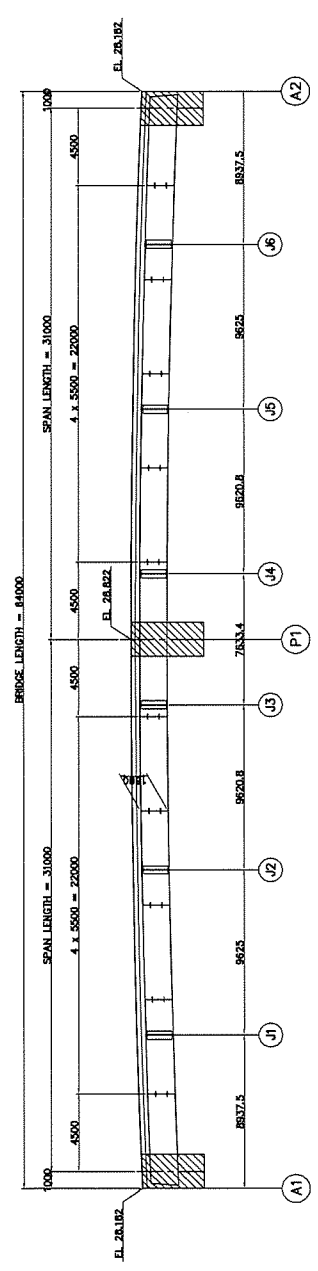


5 SECTION @ C1-C10  
SCALE 1:50

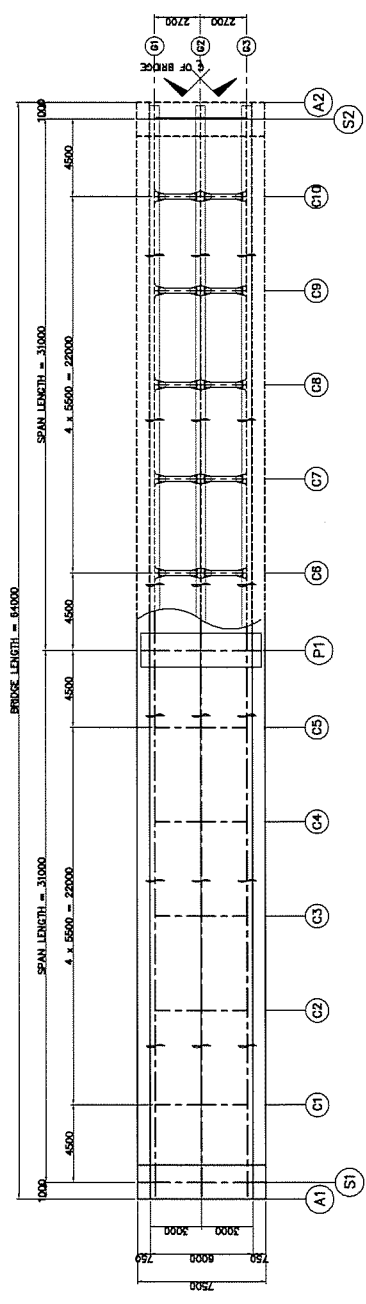


CONCRETE POURING SEQUENCE

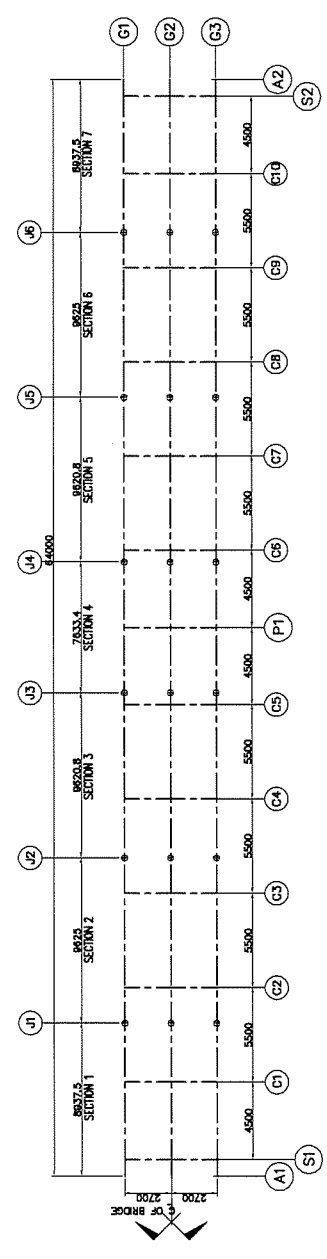
- NOTE:
1. CONCRETE ① SHALL NOT BE POURED BEFORE CONCRETE ② AT ANY PART OF THE DESIGN STRENGTH FOR 2 WEEKS AFTER CONCRETE ③ WAS POURED.
  2. CONCRETE ③ SHALL BE POURED STARTING FROM THE CENTER OF THE SPAN.



1 ELEVATION  
SCALE 1:100

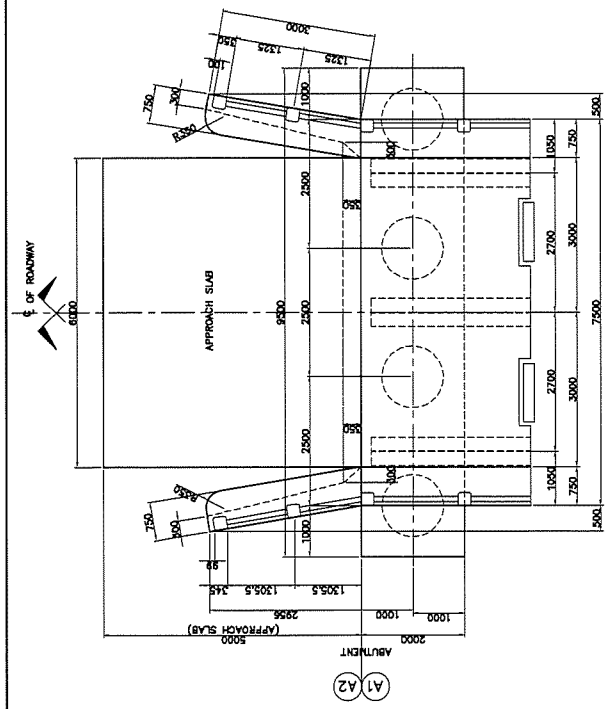


2 PLAN  
SCALE 1:100

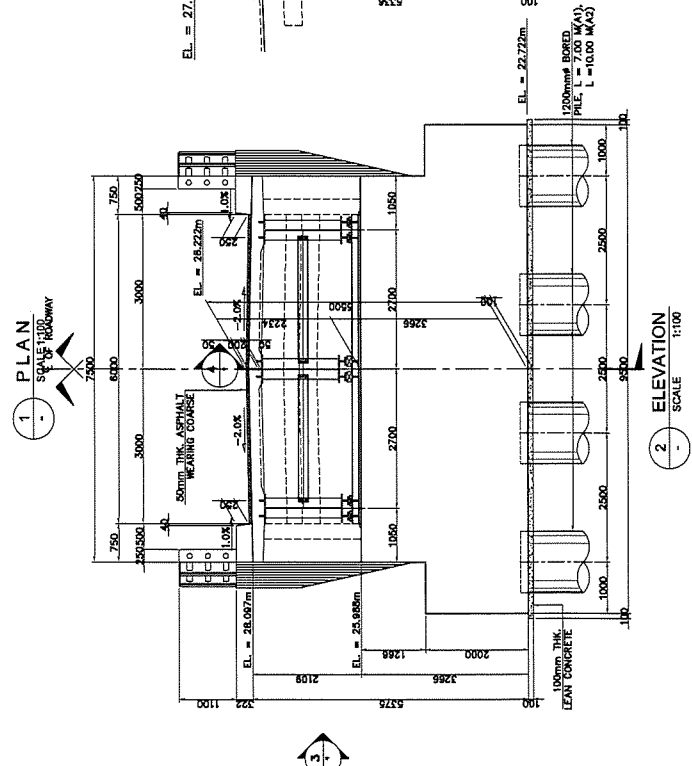


3 KEY PLAN  
SCALE 1:100

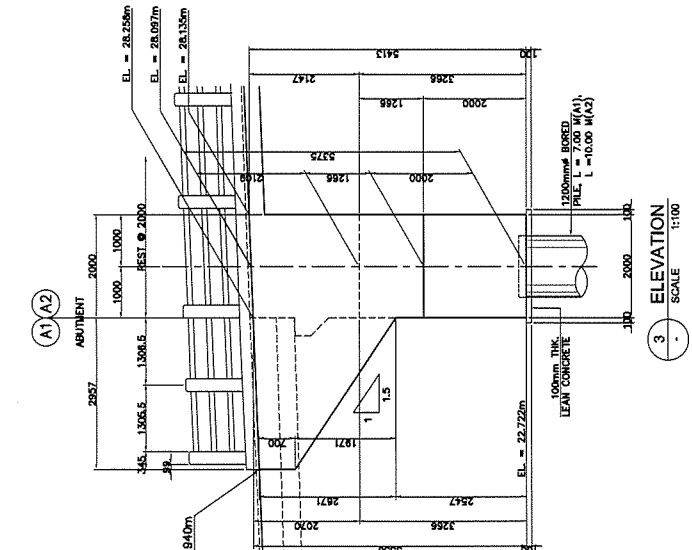
TITLE:	BR-04 RAROYA II BRIDGE GEN. DIM. OF SUPERSTRUCTURE	DRAWING NO.	3-4
SCALE:	AS SHOWN		



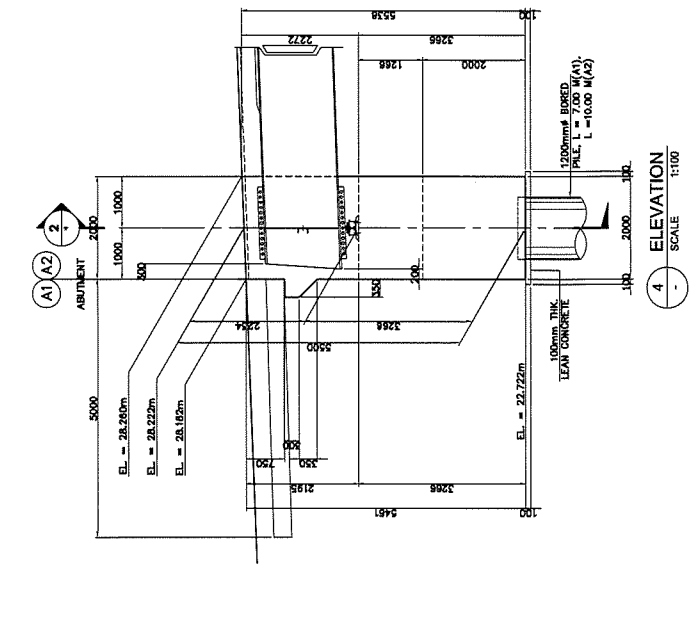
1 PLAN SCALE 1:100



2 ELEVATION SCALE 1:100

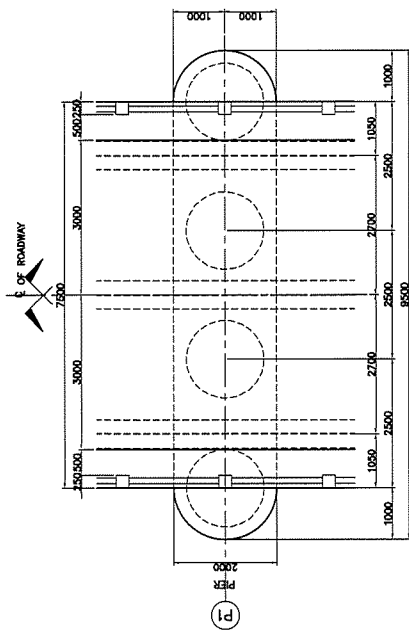


3 ELEVATION SCALE 1:100

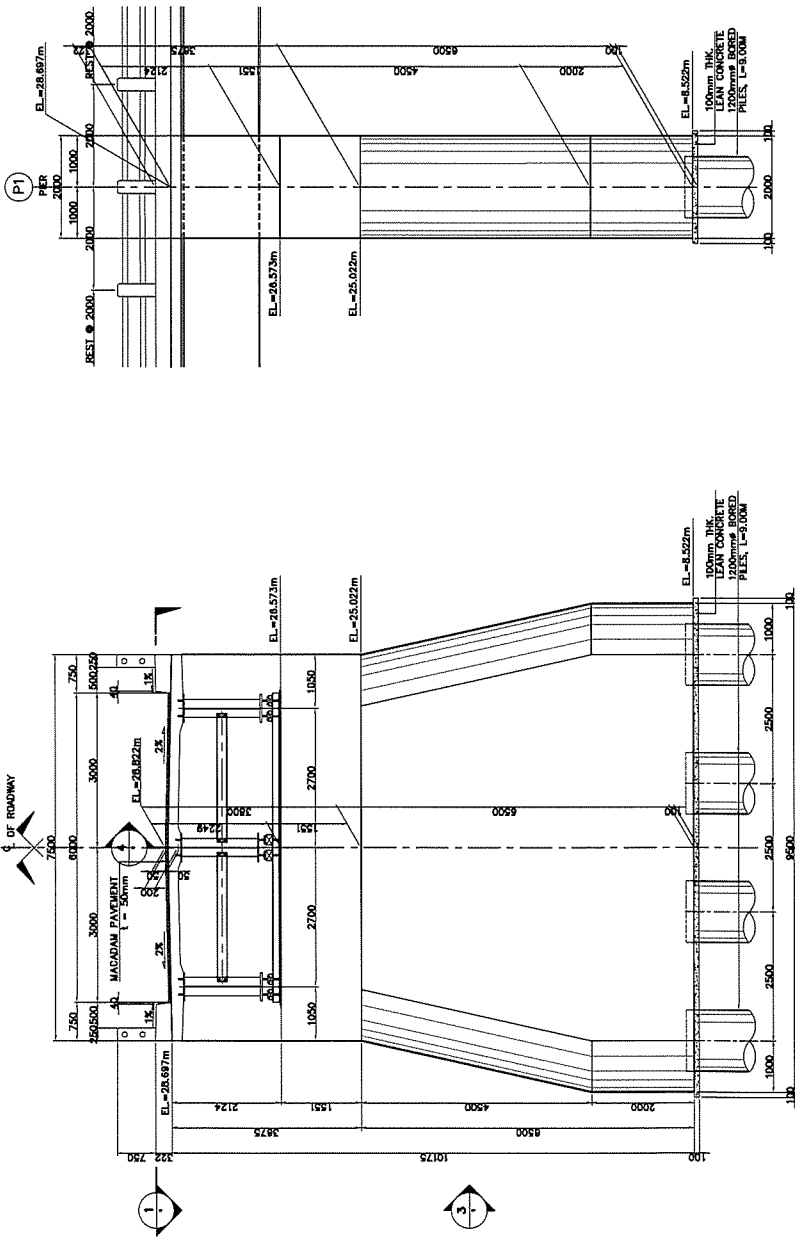


4 ELEVATION SCALE 1:100

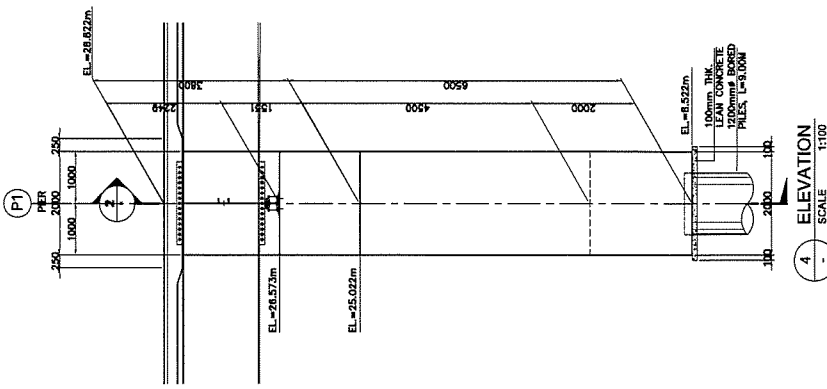
TITLE:	BR-04 FORAYA II BRIDGE SUBSTRUCTURE STRUCTURAL DIMENSION (ABUT. A1 & A2)	SCALE:	AS SHOWN	DRAWING No:	3-5
Rev.					



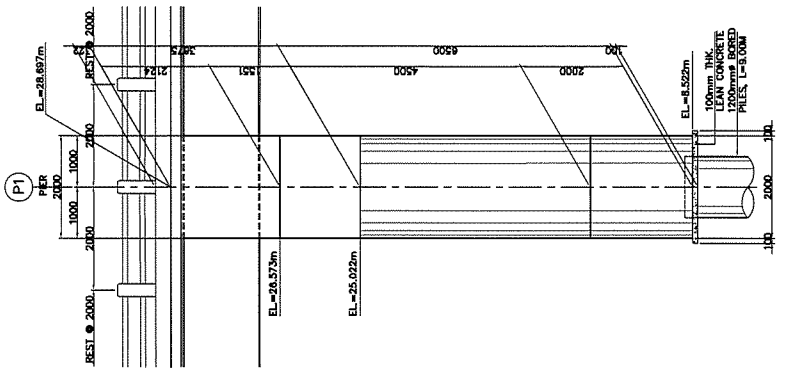
1 PLAN  
SCALE 1:100



2 ELEVATION  
SCALE 1:100



3 ELEVATION  
SCALE 1:100



4 ELEVATION  
SCALE 1:100

TITLE: BR-04 RORAYA II BRIDGE  
SUBSTRUCTURE STRUCTURAL DIMENSION  
(PIER P1)

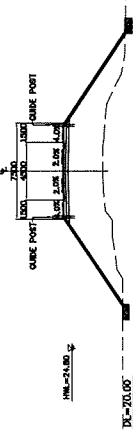
SCALE: AS SHOWN

DRAWING No: 3-6

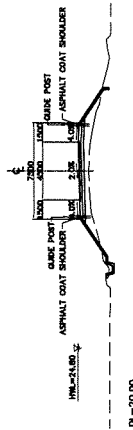
Rev.



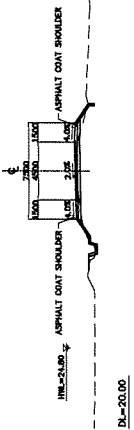
NO.0+100.000  
GH=22.398  
PH=25.462



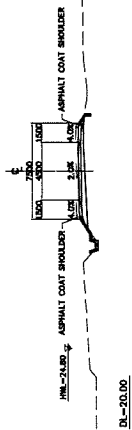
NO.0+080.000  
GH=23.924  
PH=24.657



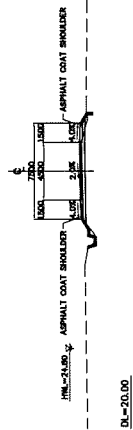
NO.0+060.000  
GH=23.994  
PH=24.151



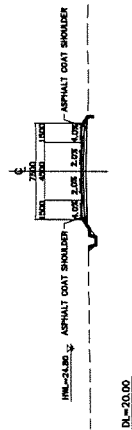
NO.0+040.000  
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PH=23.998



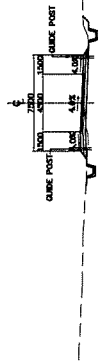
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GH=24.007  
PH=23.994



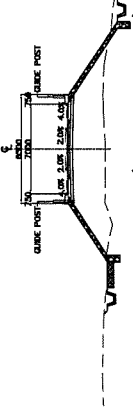
NO.0+004.825  
GH=24.007  
PH=23.994



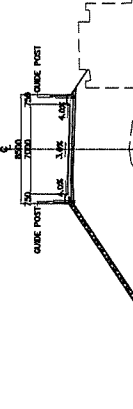
NO.0+260.000  
GH=27.108  
PH=27.326



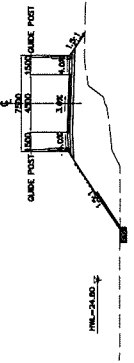
NO.0+235.000 (A2 WING WALL EDGE)  
GH=25.070  
PH=26.002



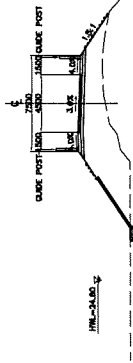
NO.0+165.000 (A1 WING WALL EDGE)  
GH=23.283  
PH=26.062



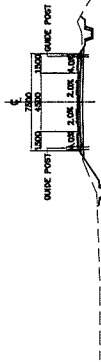
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GH=24.185  
PH=27.062



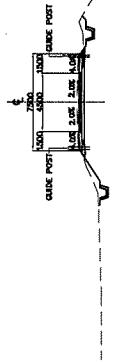
NO.0+120.000  
GH=24.218  
PH=26.262



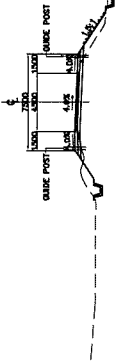
NO.0+342.674  
GH=27.600  
PH=27.652



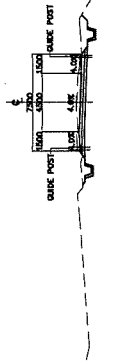
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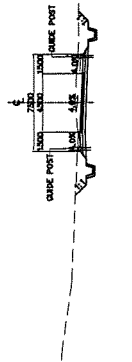
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PH=27.598



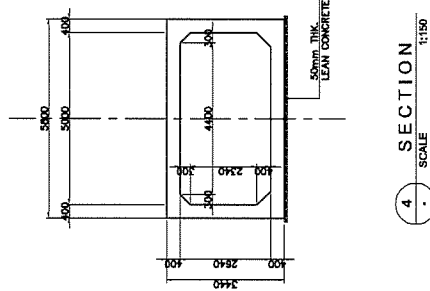
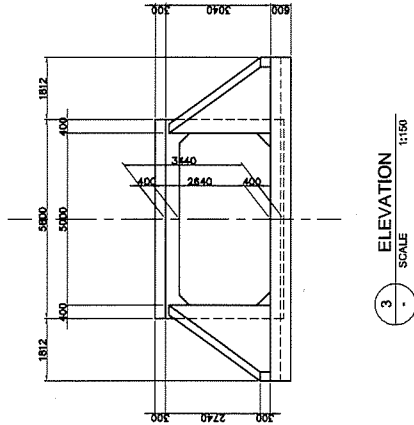
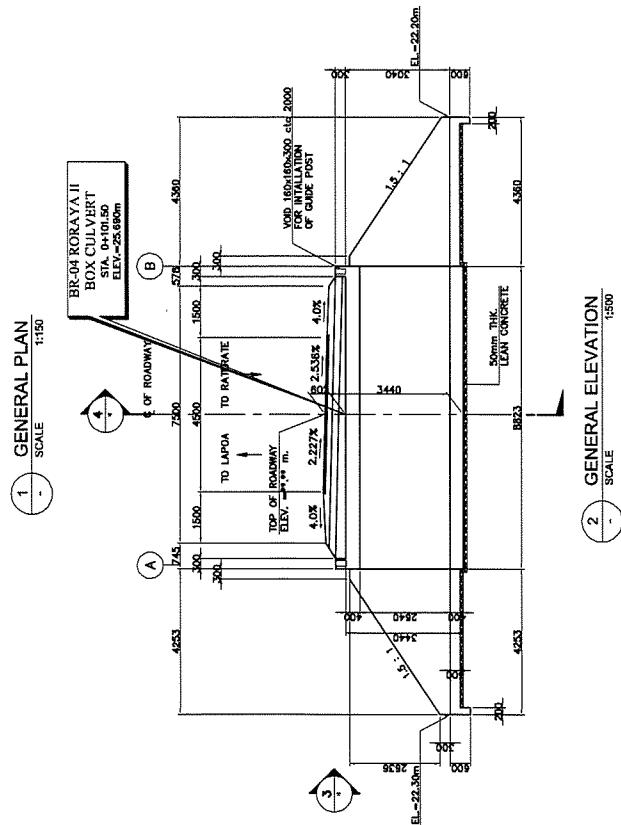
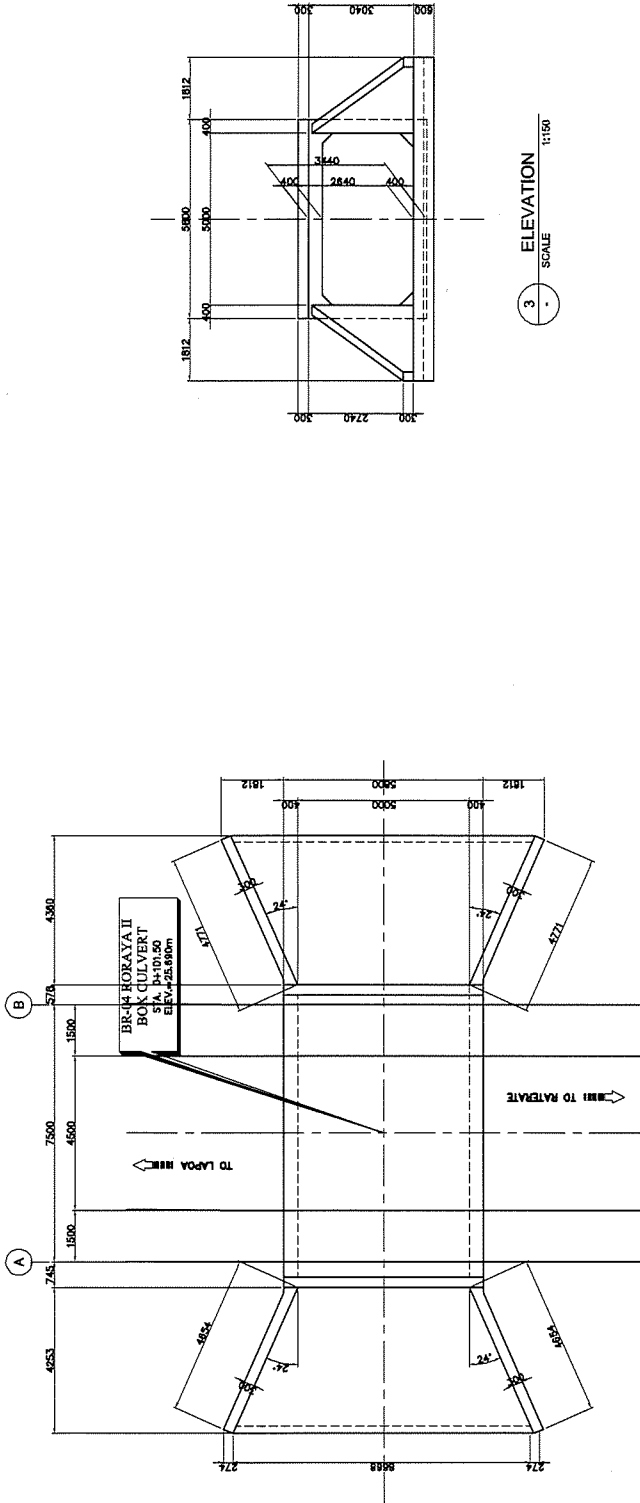
NO.0+300.000  
GH=27.653  
PH=27.580



NO.0+280.000  
GH=27.694  
PH=27.292



TITLE:	BR-04 RORAYA II BRIDGE APPROACH ROAD CROSS SECTIONS	SCALE:	1:400	DRAWING No:	3-8	Rev.	
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Rev.	
DRIVING No:	3-9
SCALE:	AS SHOWN
TITLE:	BR-04 RORAYA II BOX CULVERT STRUCTURAL DIMENSION

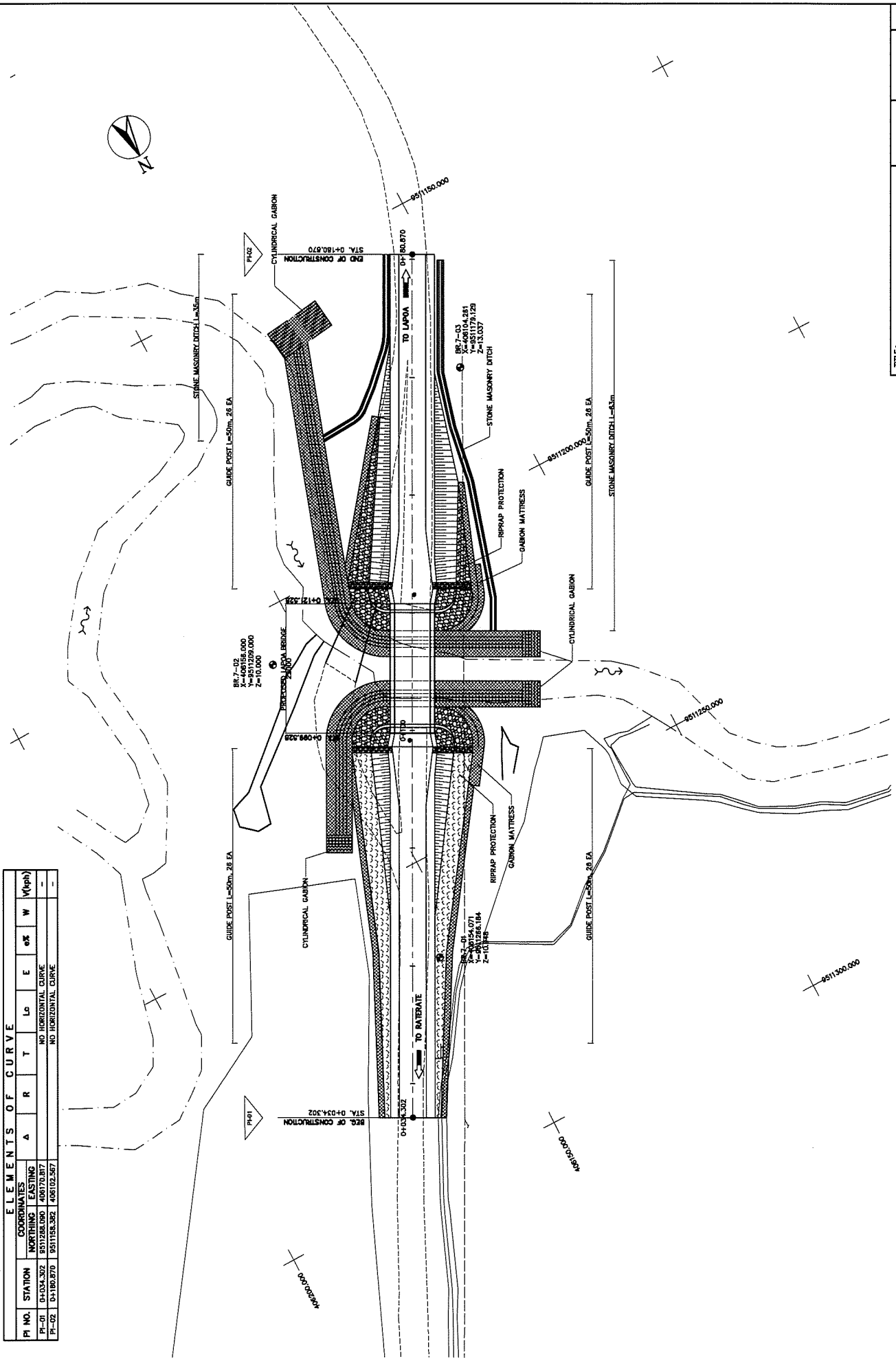


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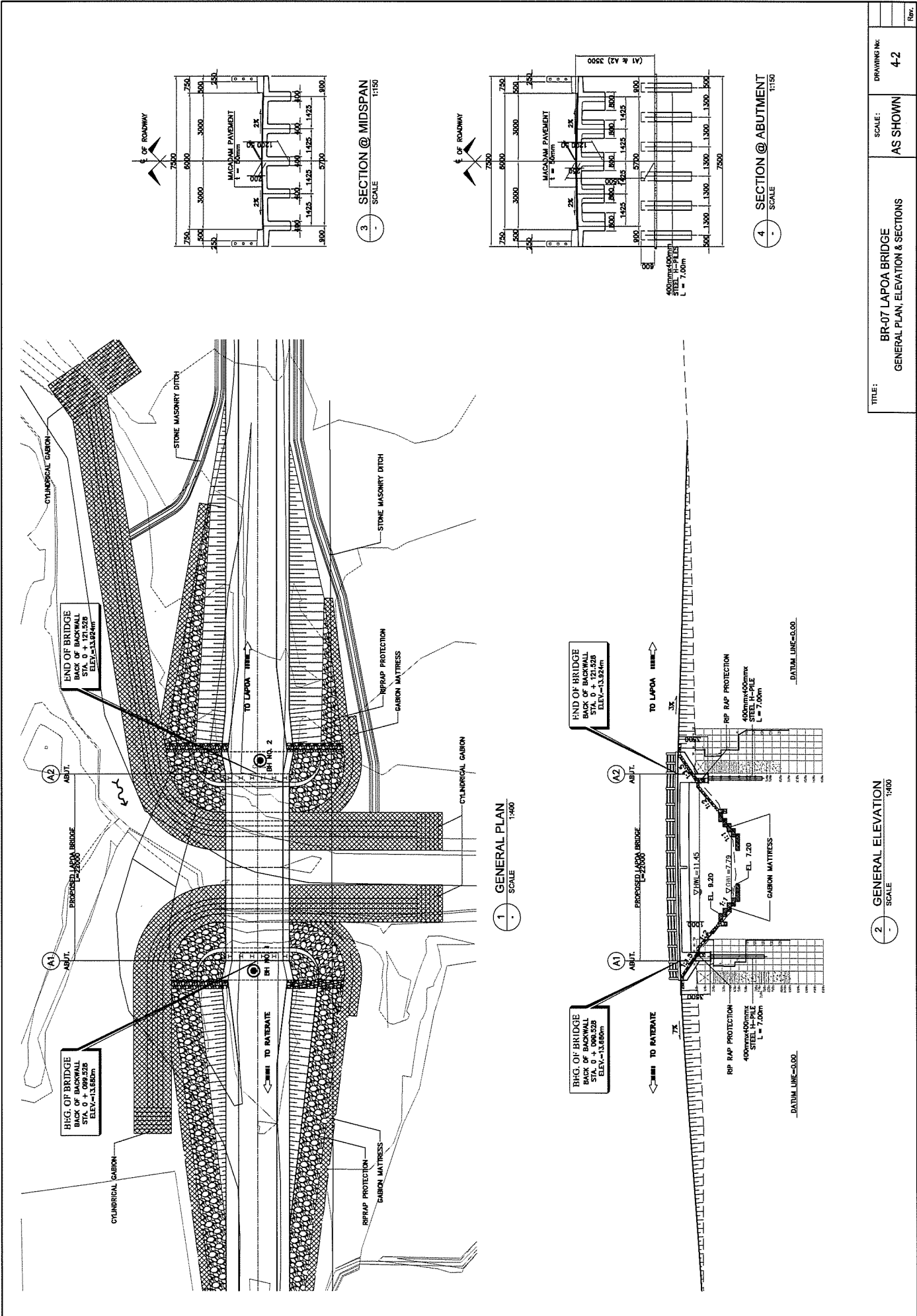
# BR-07 LAPOA BRIDGE

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ELEMENTS OF CURVE						
PI NO.	STATION	COORDINATES		Lg	e%	W
		NORTHING	EASTING			
PI-01	0+034.302	511286.000	408170.817	NO HORIZONTAL CURVE		
PI-02	0+180.870	511155.382	408102.587	NO HORIZONTAL CURVE		

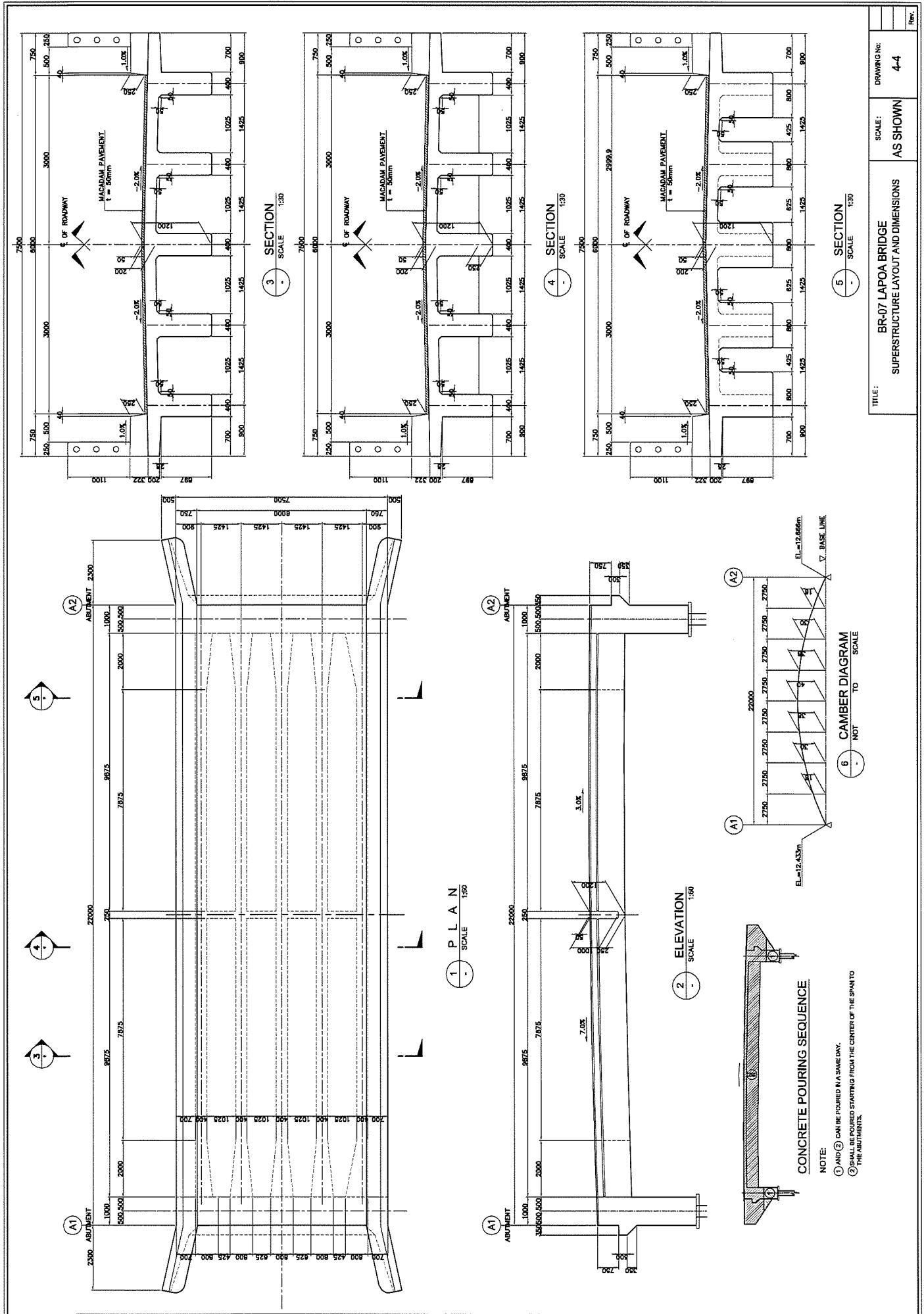


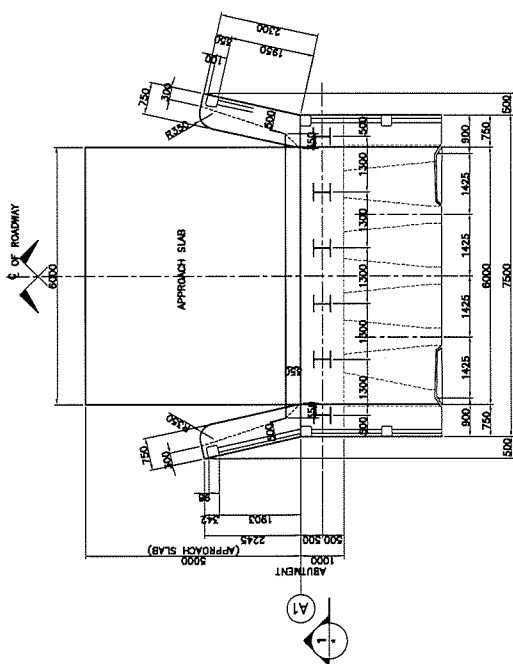
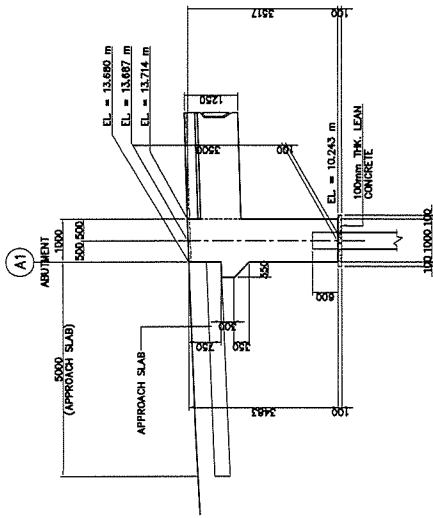
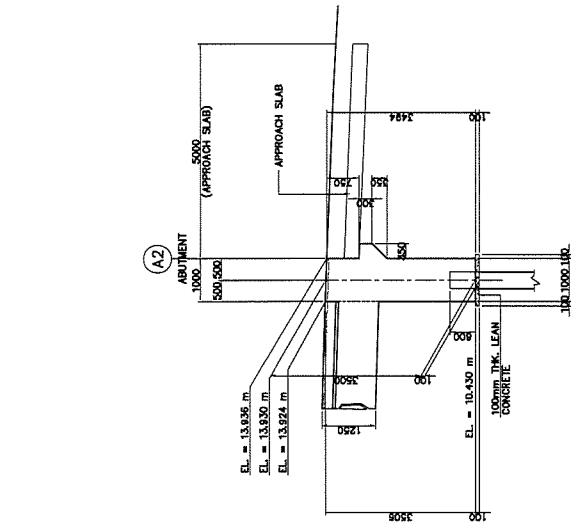
TITLE:	BR-07 LAPOA BRIDGE SITE DEVELOPMENT PLAN
SCALE:	1:800
DRAWING NO:	4-1
Rev.	



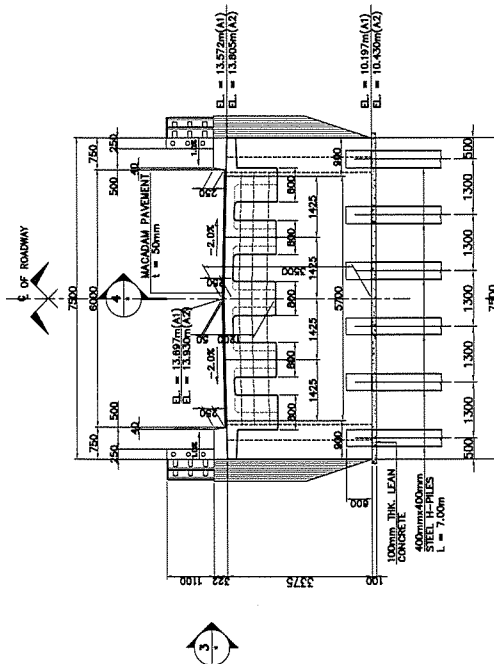
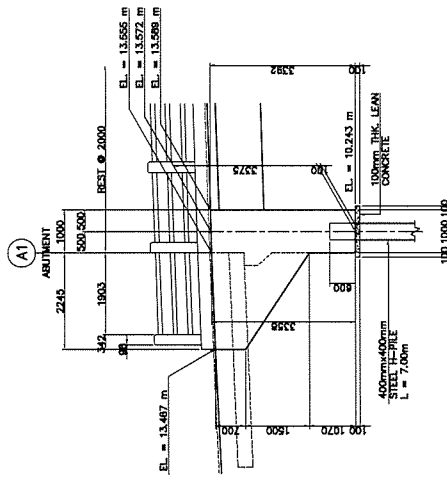
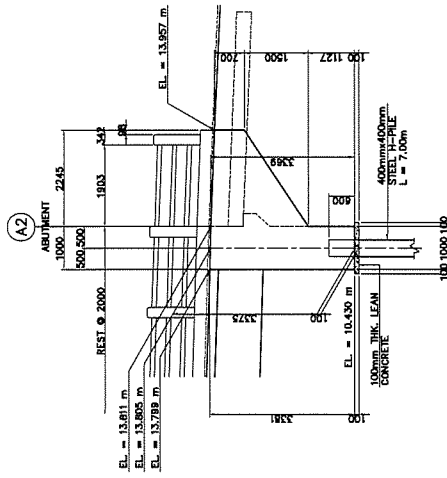
TITLE:	BR-07 LAPOA BRIDGE	SCALE:	AS SHOWN	DRAWING No:	4-2
					Rev.







2 - PLAN SCALE 1:50



1 - ELEVATION SCALE 1:50

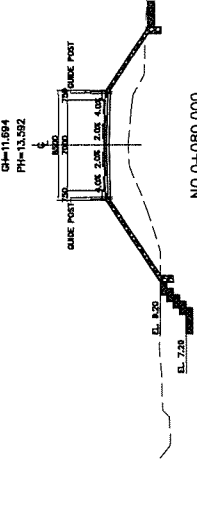
3 - ELEVATION SCALE 1:50

4 - ELEVATION SCALE 1:50

Rev.			
DRAWING NO:	4-5	SCALE:	AS SHOWN
TITLE:	BR-07 LAPOA BRIDGE SUBSTRUCTURE STRUCTURAL DIMENSION (ABUT. A1 & A2)		



NO.0+097.229 (A1 WING WALL EDGE)



DL=5.00

NO.0+180.870



DL=5.00

NO.0+180.000



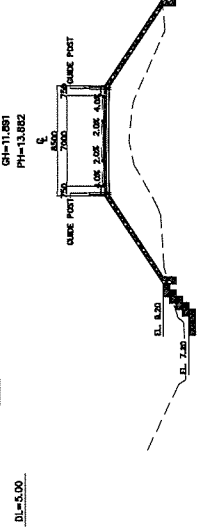
NO.0+160.000



NO.0+140.000



NO.0+124.129 (A2 WING WALL EDGE)



DL=5.00

NO.0+080.000



DL=5.00

NO.0+040.000



DL=5.00

NO.0+034.302



DL=5.00

TITLE:	BR-07 LAPOA BRIDGE APPROACH ROAD CROSS SECTIONS	SCALE:	1:400	DRAWING NO.:	4-7	Rev.	
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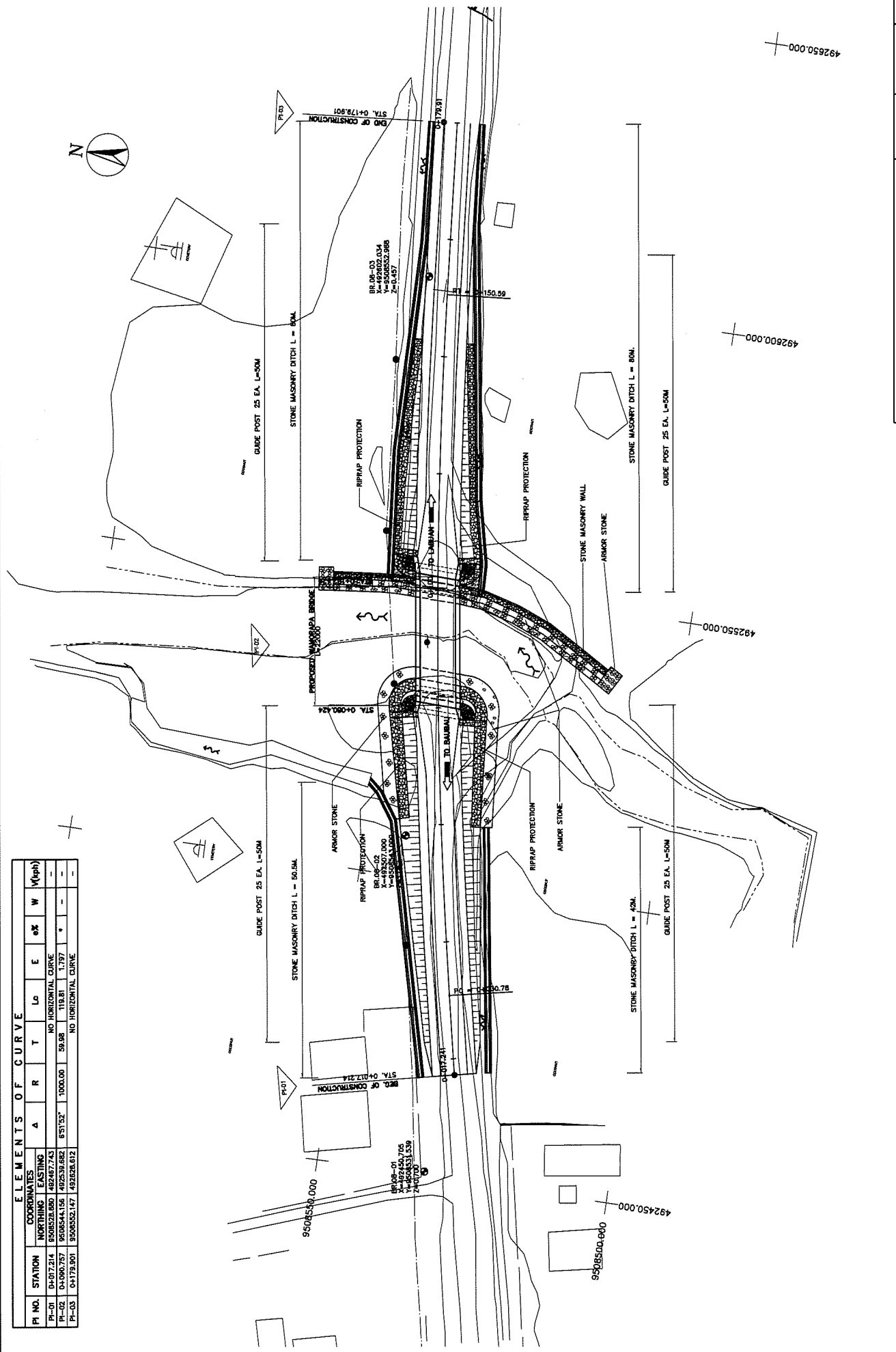


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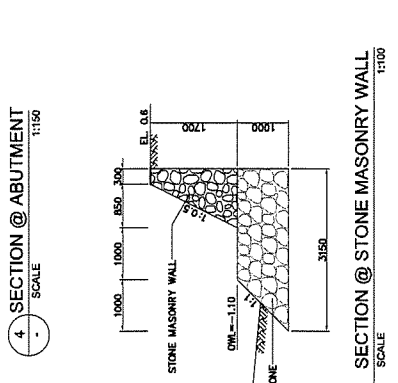
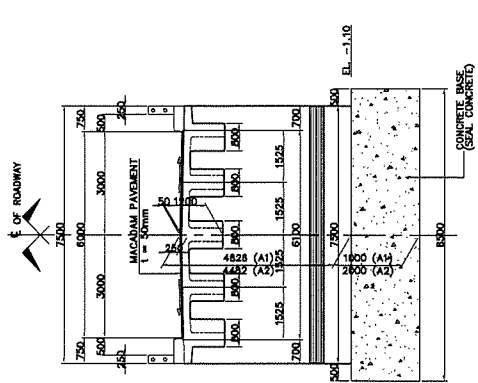
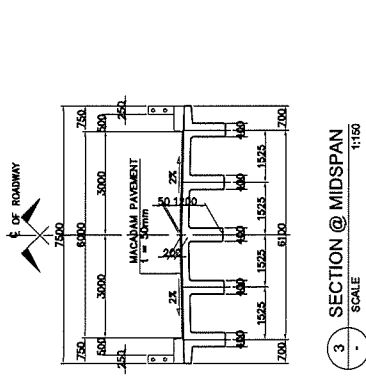
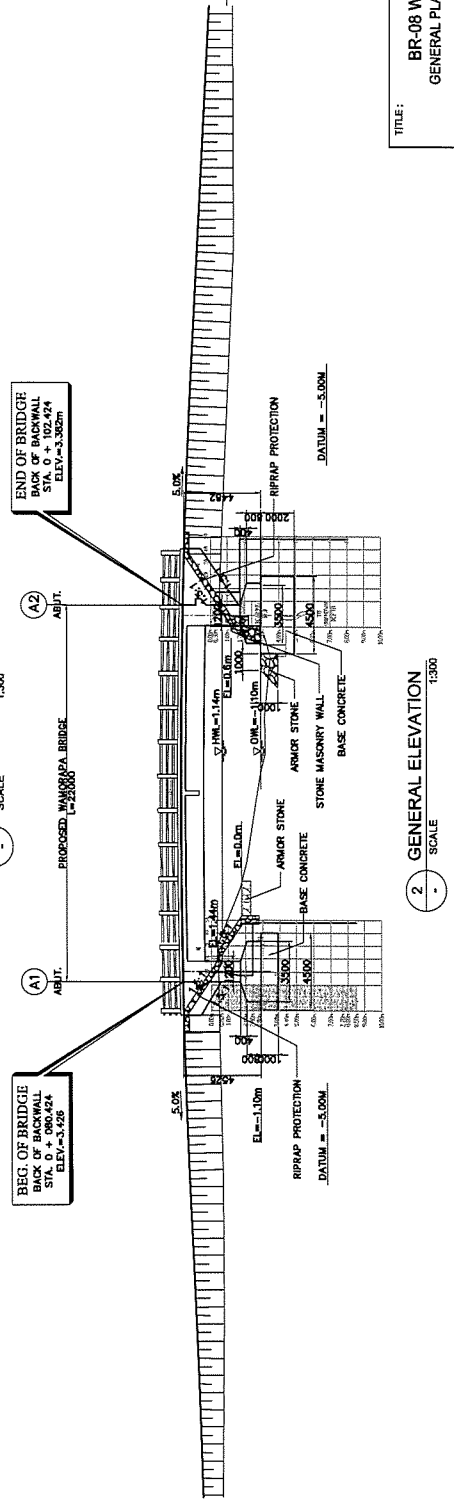
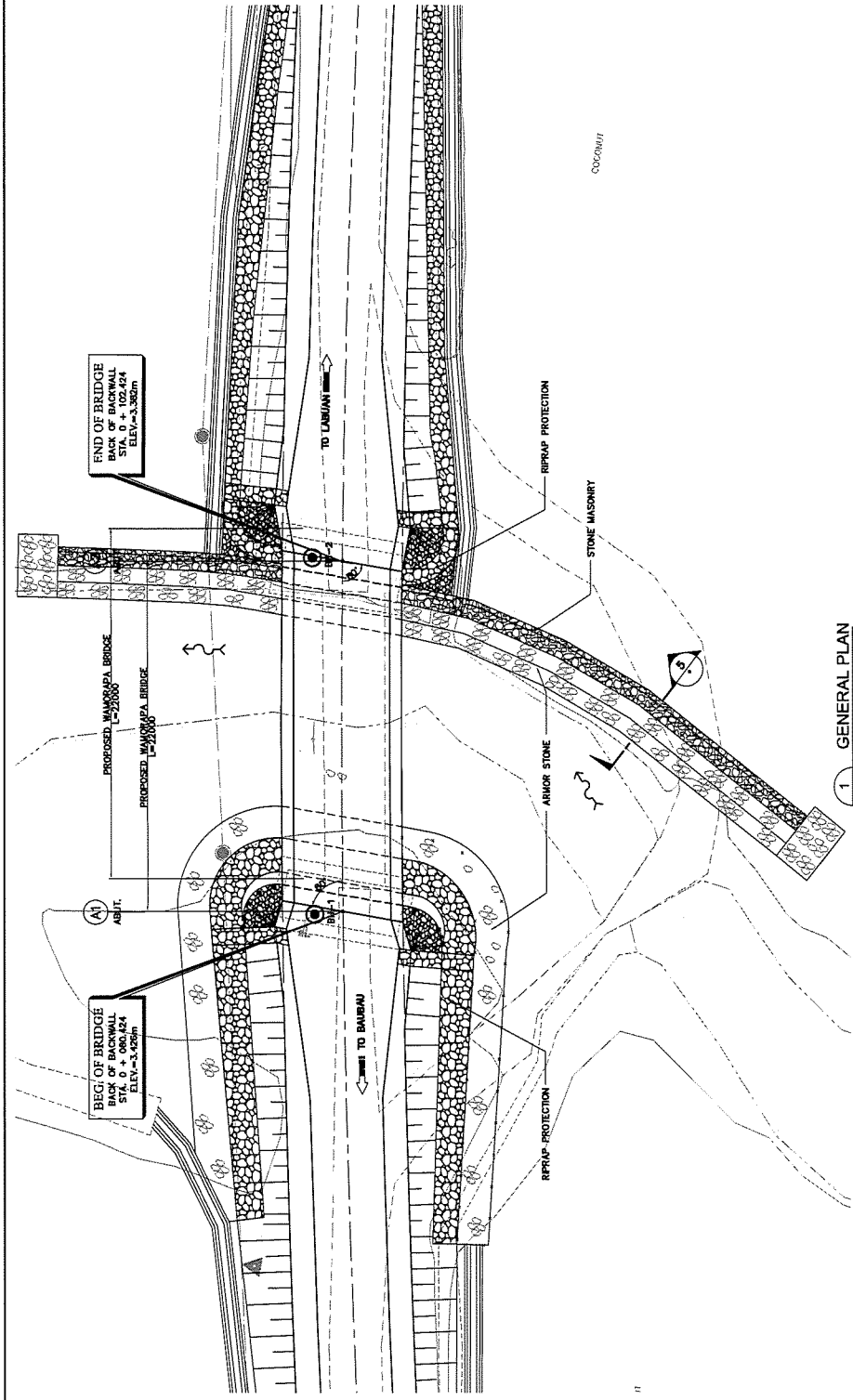
# BR-08 WAMORAPA BRIDGE

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ELEMENTS OF CURVE										
PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	W
		NORTHING	EASTING							
PI-01	D+072.214	9508524.800	4824877.743							
		NO HORIZONTAL CURVE								
PI-02	D+090.757	9508544.156	482539.682	8°57'52"	1000.00	59.88	118.81	1.797	*	-
		NO HORIZONTAL CURVE								
PI-03	D+179.901	9508552.147	482628.612							



TITLE:	BR-08 WAMORAPA BRIDGE SITE DEVELOPMENT PLAN
SCALE:	1 : 600
DRAWING NO:	5-1
Rev.	

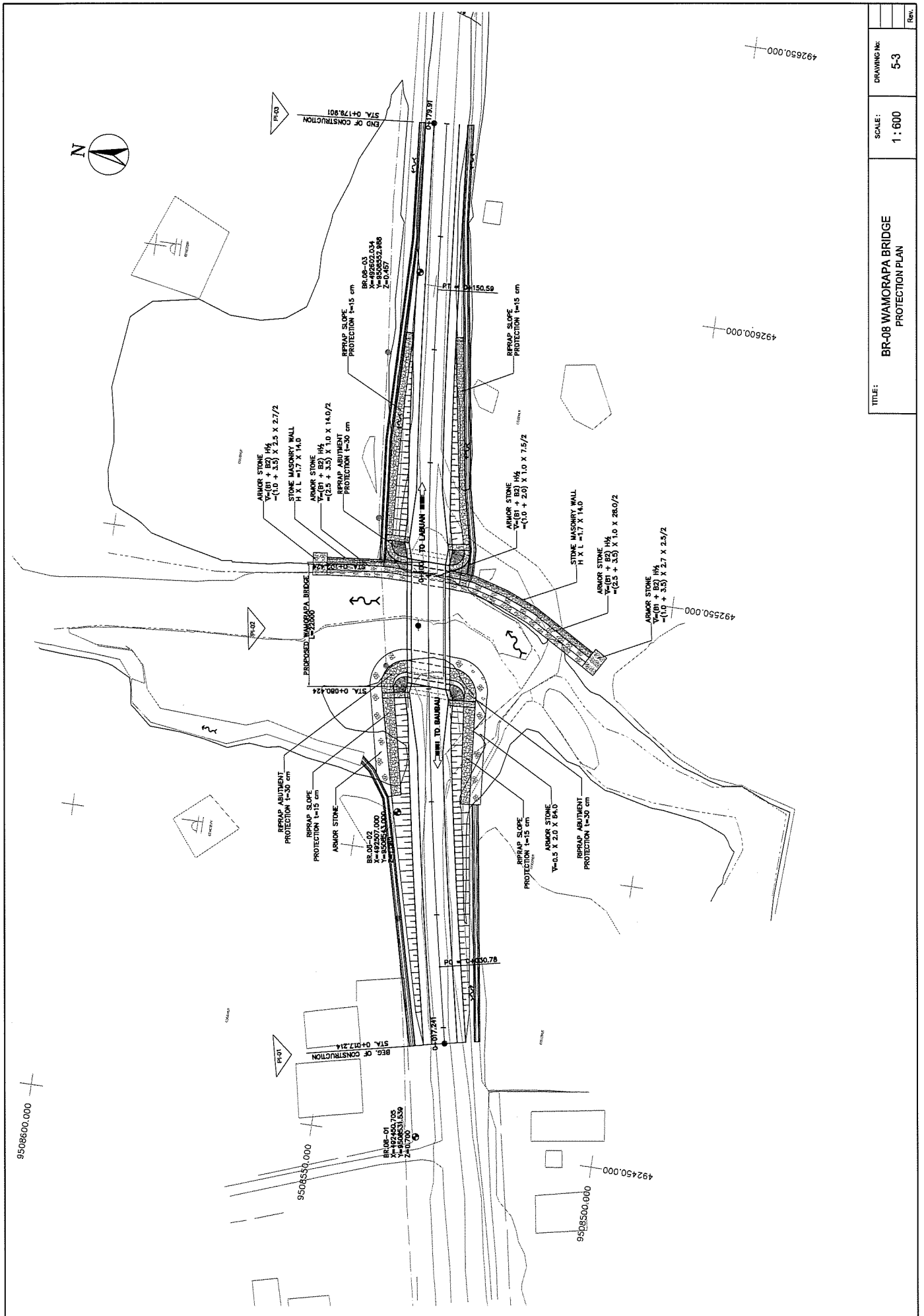


TITLE: BR-08 WAMORAPA BRIDGE  
GENERAL PLAN, ELEVATION & SECTIONS

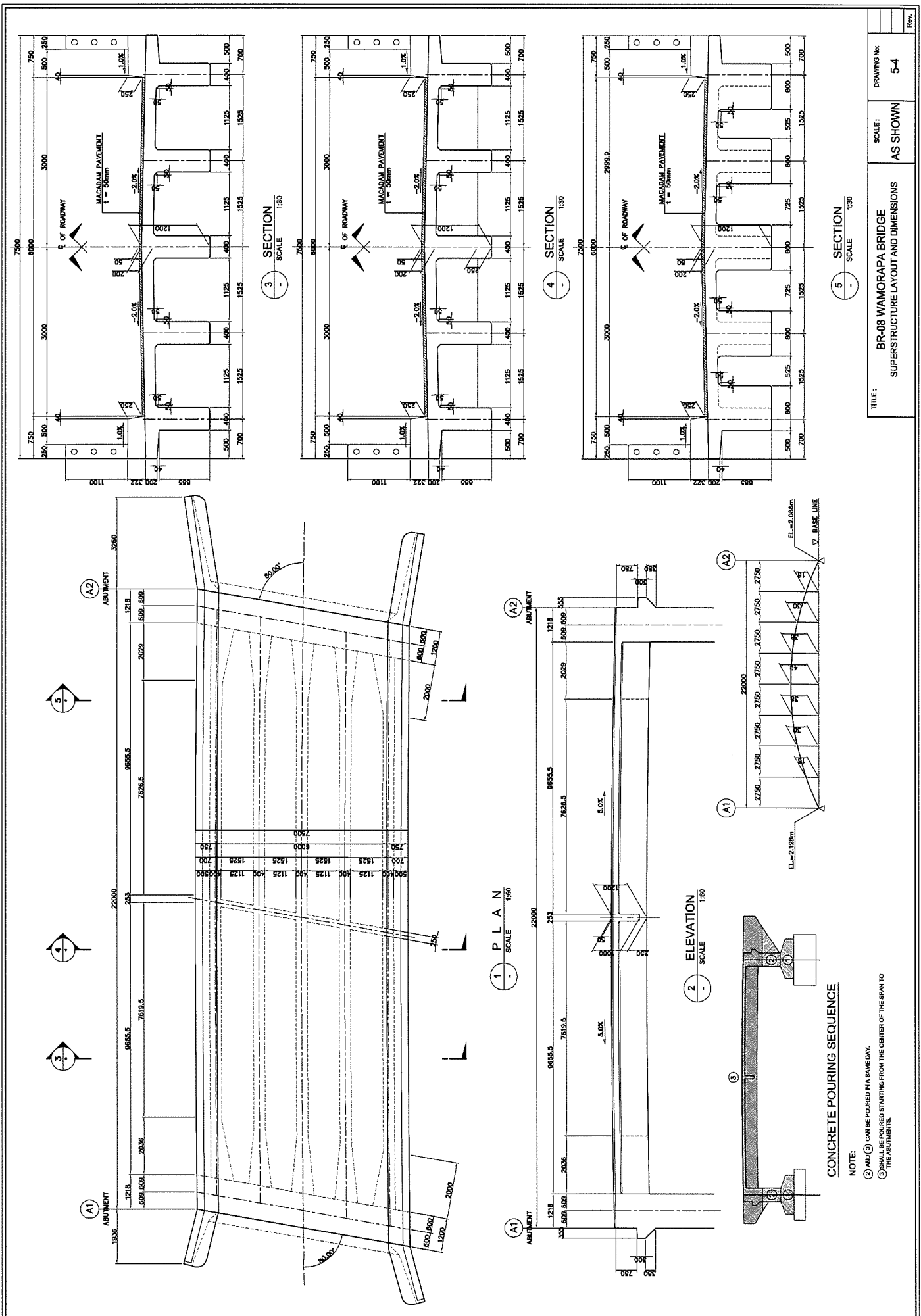
SCALE: AS SHOWN

DRAWING No: 5-2

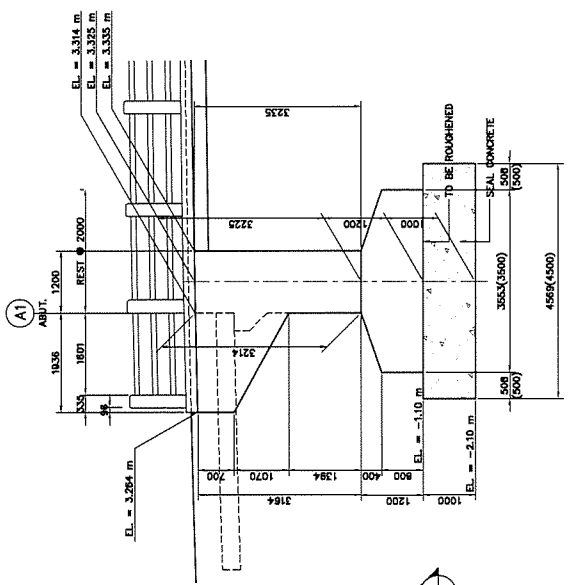
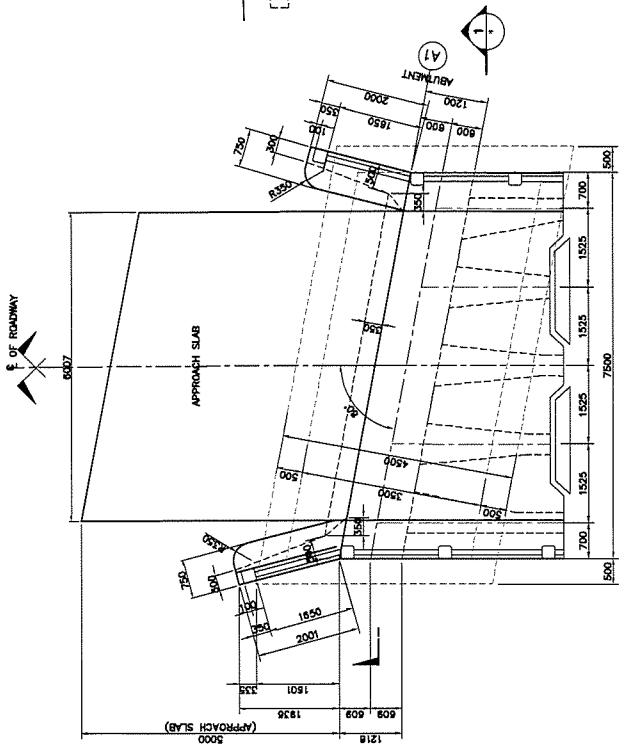
Rev.	
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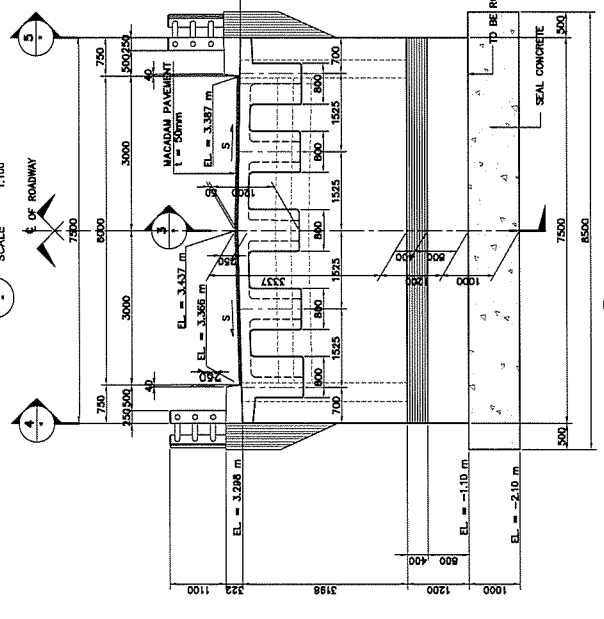
Rev.	
DRAWING NO.	5-3
SCALE:	1 : 600
TITLE:	BR-08 WAMORAPA BRIDGE PROTECTION PLAN



Rev.	
TITLE:	BR-08 WAMORAPA BRIDGE SUPERSTRUCTURE LAYOUT AND DIMENSIONS
SCALE:	AS SHOWN
DRAWING NO.:	5-4

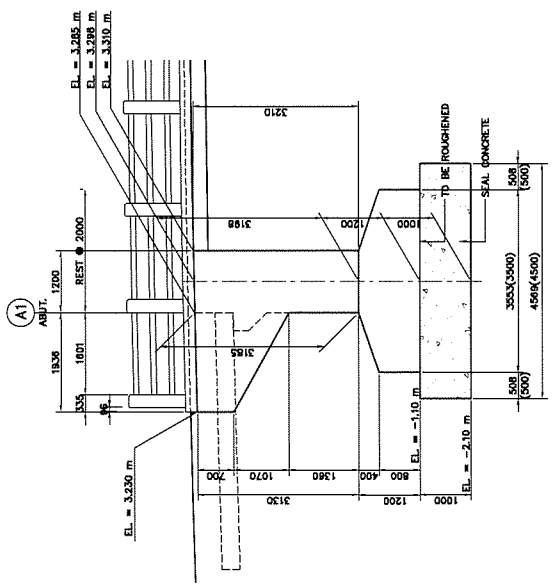


5 ELEVATION  
SCALE 1:100

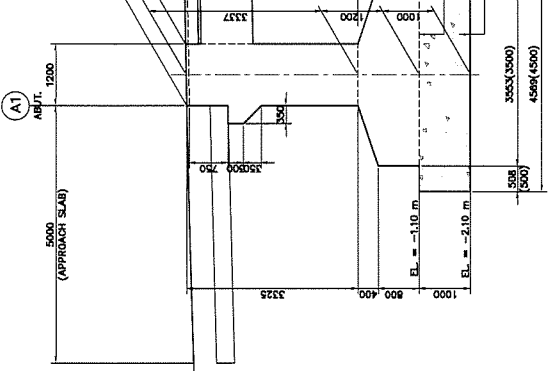


1 ELEVATION  
SCALE 1:100

2 PLAN  
SCALE 1:100

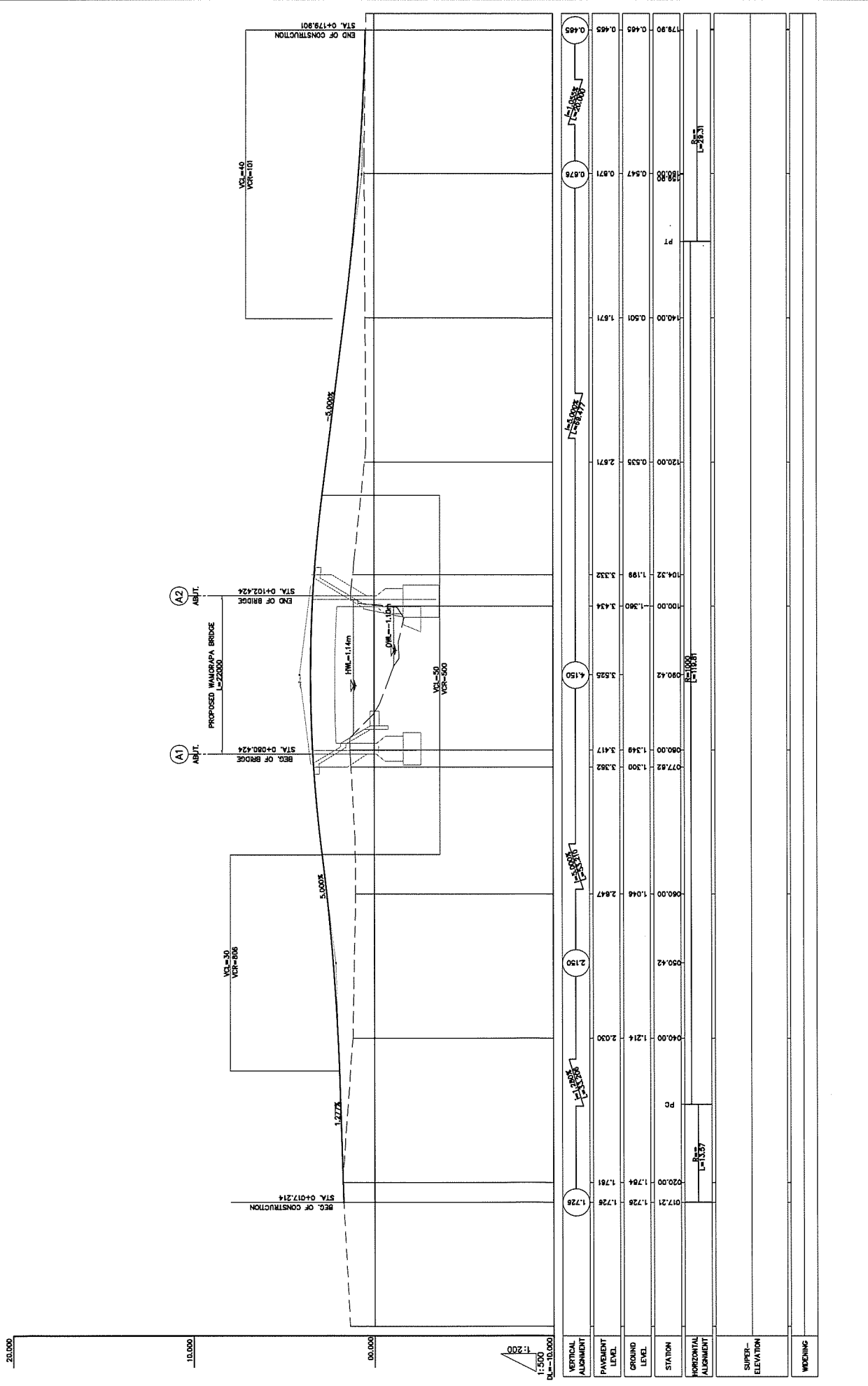


4 ELEVATION  
SCALE 1:100

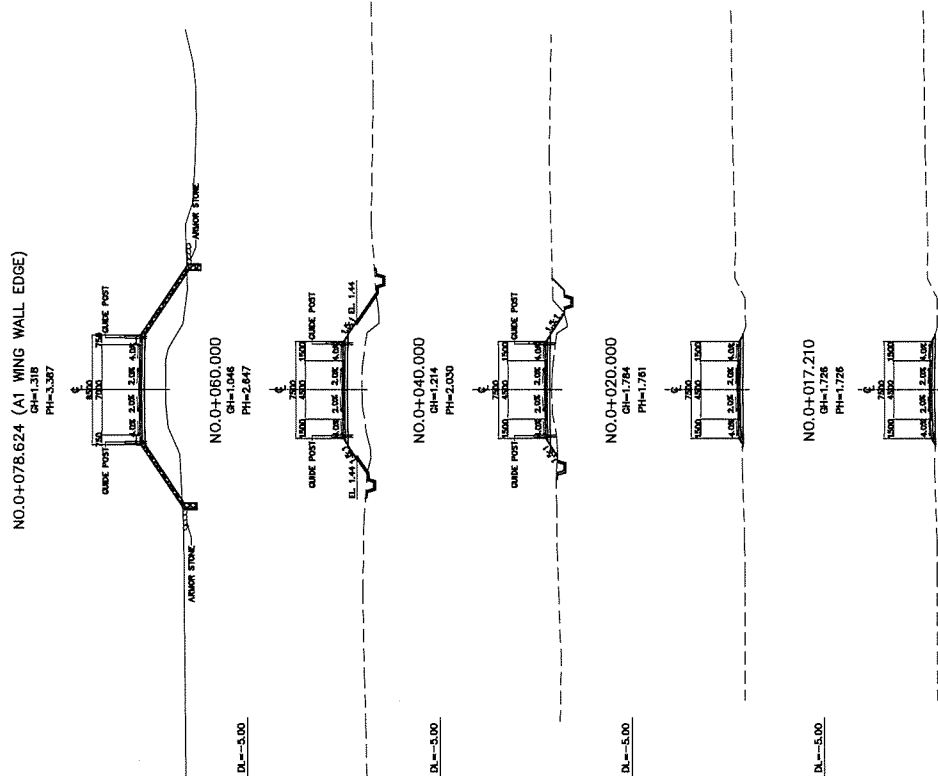
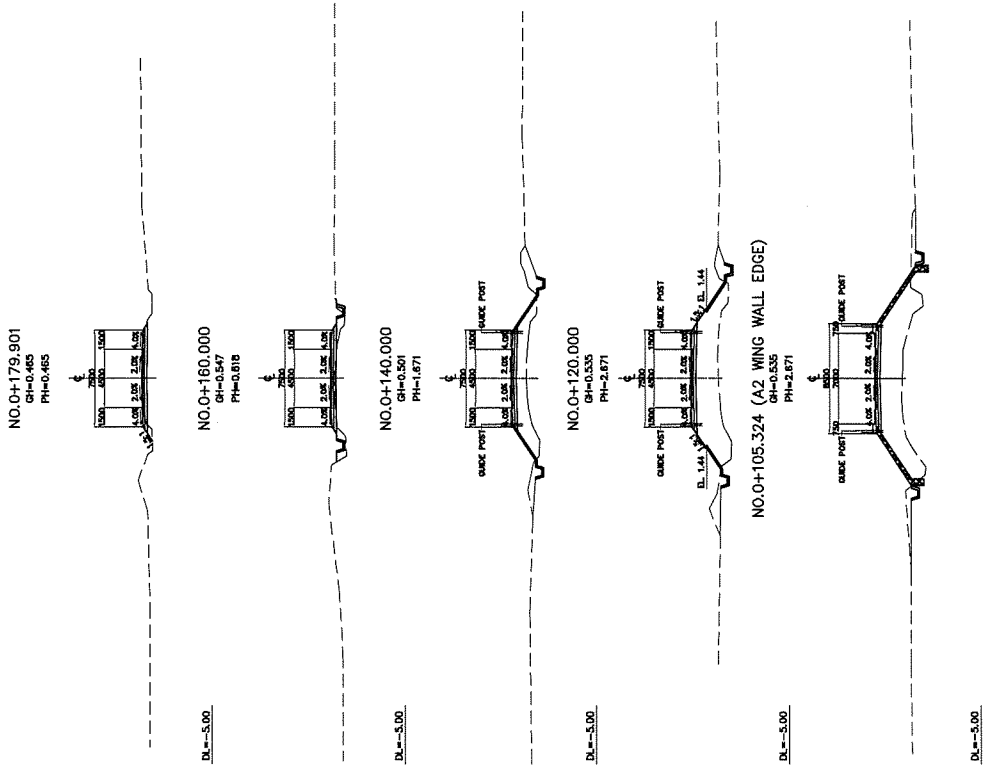


3 ELEVATION  
SCALE 1:100

TITLE:	BR-08 WAMORAPA BRIDGE SUBSTRUCTURE STRUCTURAL DIMENSION (ABUTMENT A1)	SCALE:	AS SHOWN	DRAWING No:	5-5	Rev.	
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VERTICAL ALIGNMENT	PAVEMENT LEVEL	GROUND LEVEL	STATION	HORIZONTAL ALIGNMENT	SUPER-ELEVATION	WIDENING
1.726	1.726	1.761	0+00	PC		
2.030	1.214	2.030	0+00			
2.647	1.046	2.647	0+00			
3.362	1.300	3.362	0+00			
3.417	1.349	3.417	0+00			
4.150	1.525	4.150	0+00			
3.434	1.390	3.434	100.00			
3.332	1.198	3.332	104.32			
2.671	0.535	2.671	120.00			
1.671	0.501	1.671	140.00			
0.871	0.547	0.871	150.00			
0.465	0.465	0.465	179.90	PT		



TITLE:	BR-08 WAMORAPA BRIDGE APPROACH ROAD CROSS SECTIONS	SCALE:	1:400	DRAWING No:	5-8	Rev.	
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# BR-09 LABUAN WOLIO III BRIDGE

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ELEMENTS OF CURVE										
PI NO.	STATION	COORDINATES		A	R	T	Lc	E	e%	W (m)
		NORTHING	EASTING							
PI-01	0+026.428	8506183.207	491803.433				NO HORIZONTAL CURVE			
PI-02	0+068.510	8506183.078	491939.389	22377.8°	200.00	40.00	78.86	3.861	•	
PI-03	0+158.713	8506192.691	492029.088				NO HORIZONTAL CURVE			

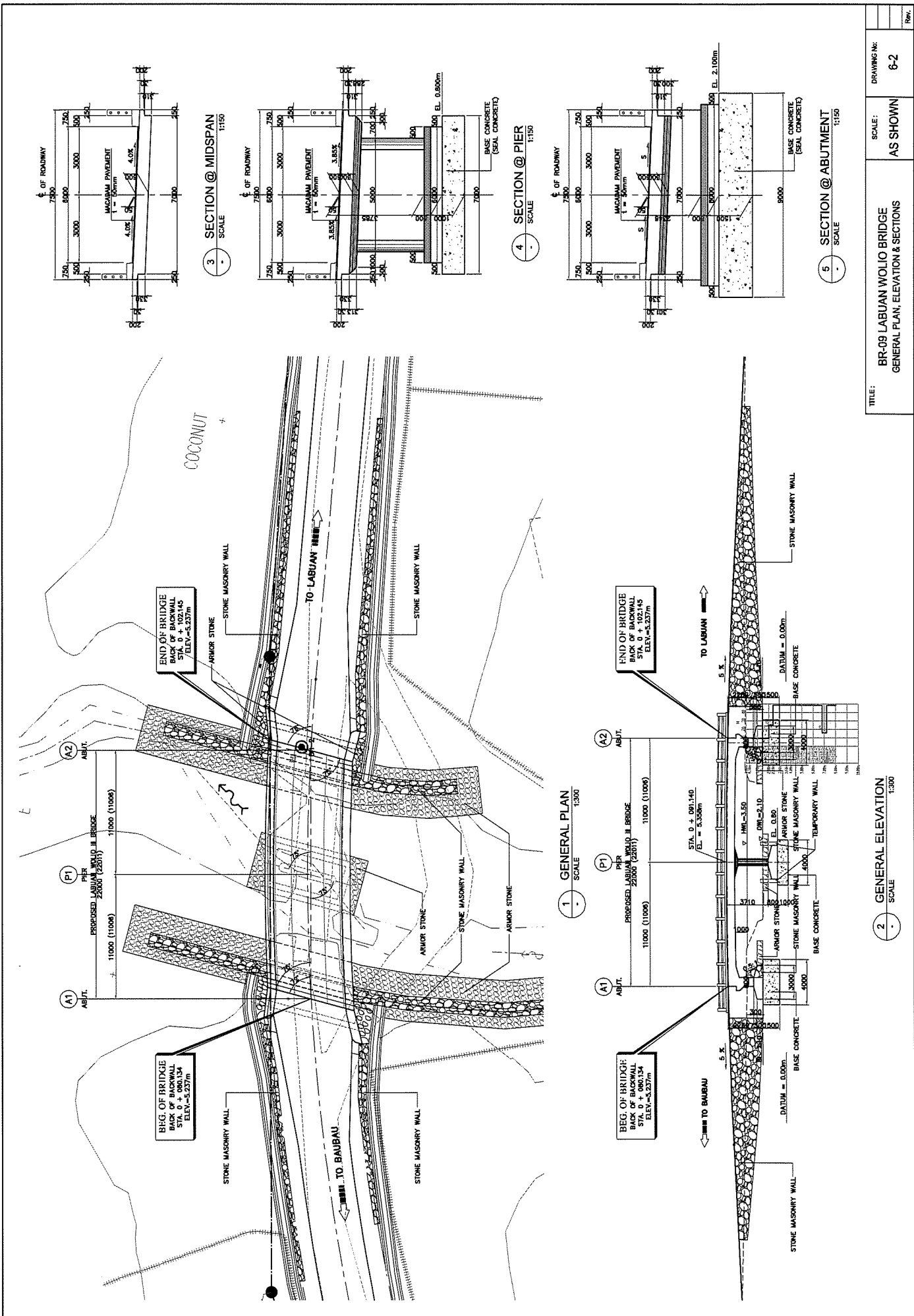


TITLE: BR-09 LABUAN WOLIO BRIDGE  
SITE DEVELOPMENT PLAN

SCALE: 1 : 600

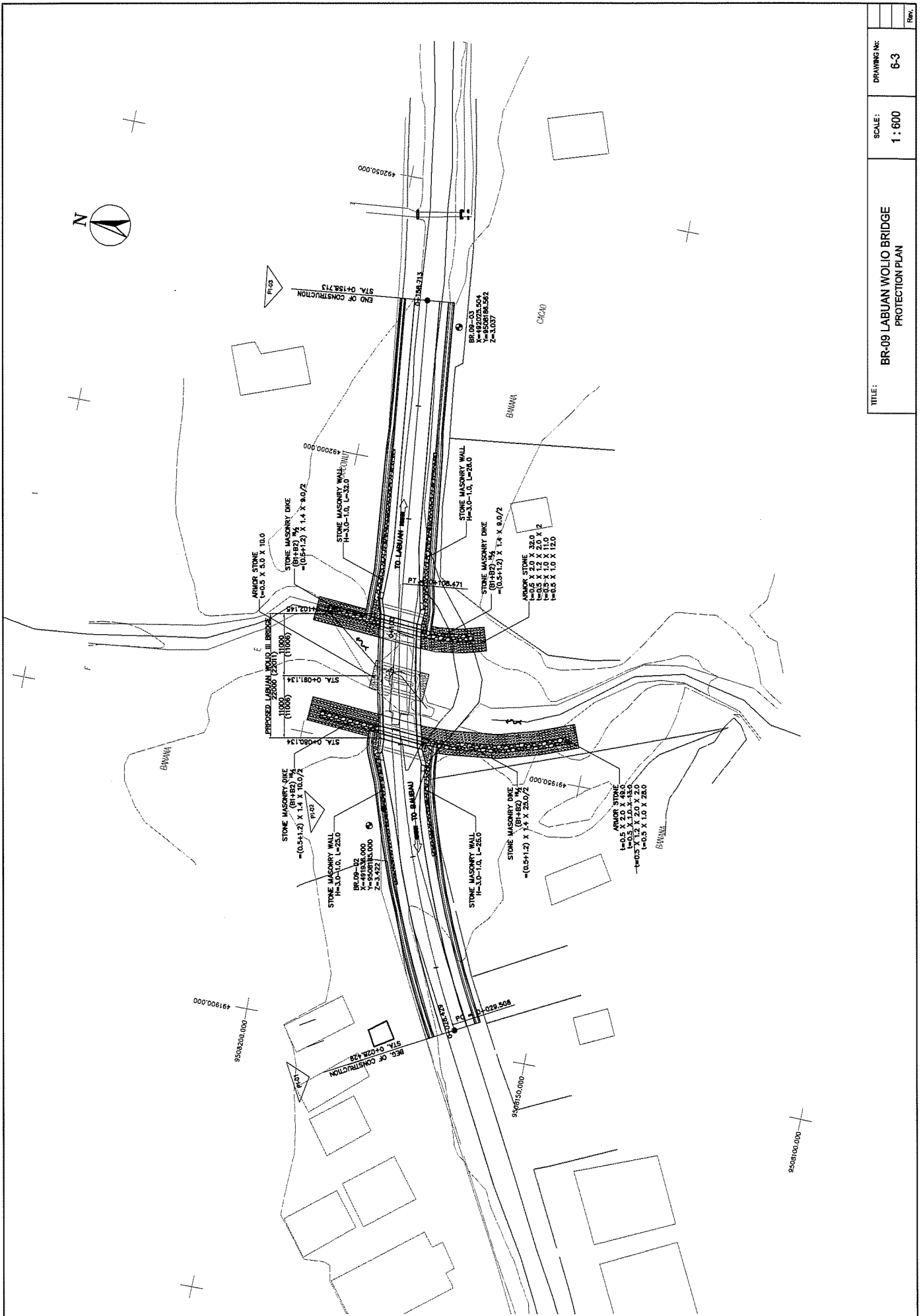
DRAWING No: 6-1

Rev.



TITLE:	BR-09 LABUAN WOLIO BRIDGE GENERAL PLAN, ELEVATION & SECTIONS	SCALE:	AS SHOWN	DRAWING NO.:	6-2
Rev.:					

SCALE:	1:300
TITLE:	GENERAL ELEVATION



TITLE:	BR-09 LABUAN WOLIO BRIDGE PROTECTION PLAN
SCALE:	1 : 600
DRAWING No:	6-3
Rev.	





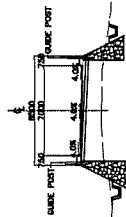






NO.0+077.334 (A1 WING WALL EDGE)

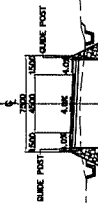
GH=3.553  
PH=5.137



DL=0.00

NO.0+060.000

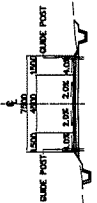
GH=3.987  
PH=4.470



DL=0.00

NO.0+040.000

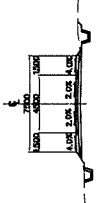
GH=4.237  
PH=4.276



DL=0.00

NO.0+028.429

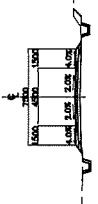
GH=4.427  
PH=4.427



DL=0.00

NO.0+158.714

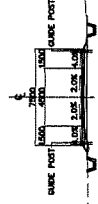
GH=3.221  
PH=3.221



DL=0.00

NO.0+140.000

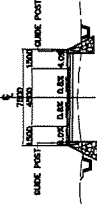
GH=3.535  
PH=3.714



DL=0.00

NO.0+120.000

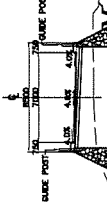
GH=3.708  
PH=4.540



DL=0.00

NO.0+104.930 (A2 WING WALL EDGE)

GH=3.636  
PH=5.121



DL=0.00

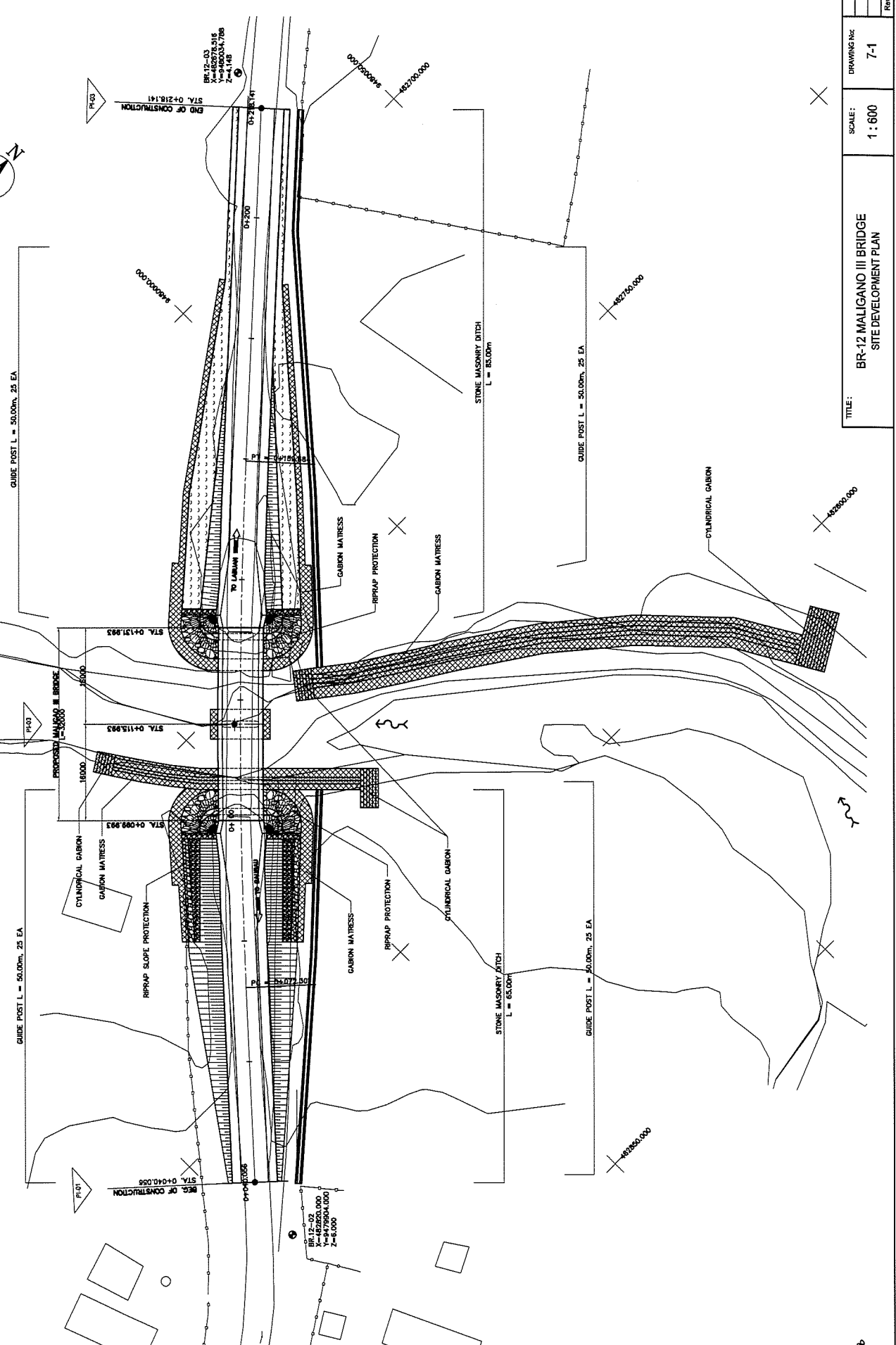
TITLE:	BR-09 LABUAN WOLIO BRIDGE APPROACH ROAD CROSS SECTIONS	SCALE:	1:400	DRAWING NO:	6-8	Rev.
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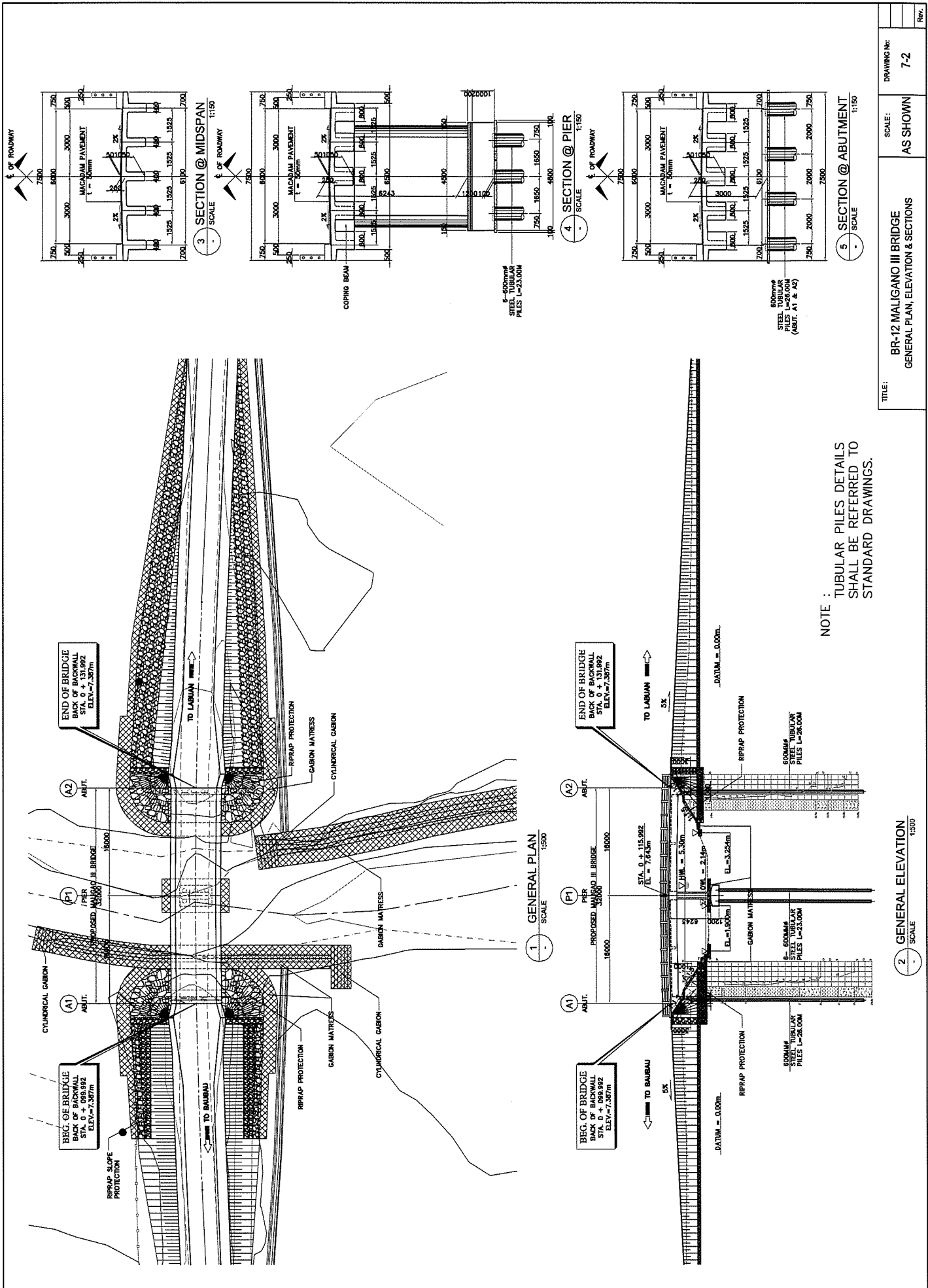
# BR-12 MALIGNANO III BRIDGE

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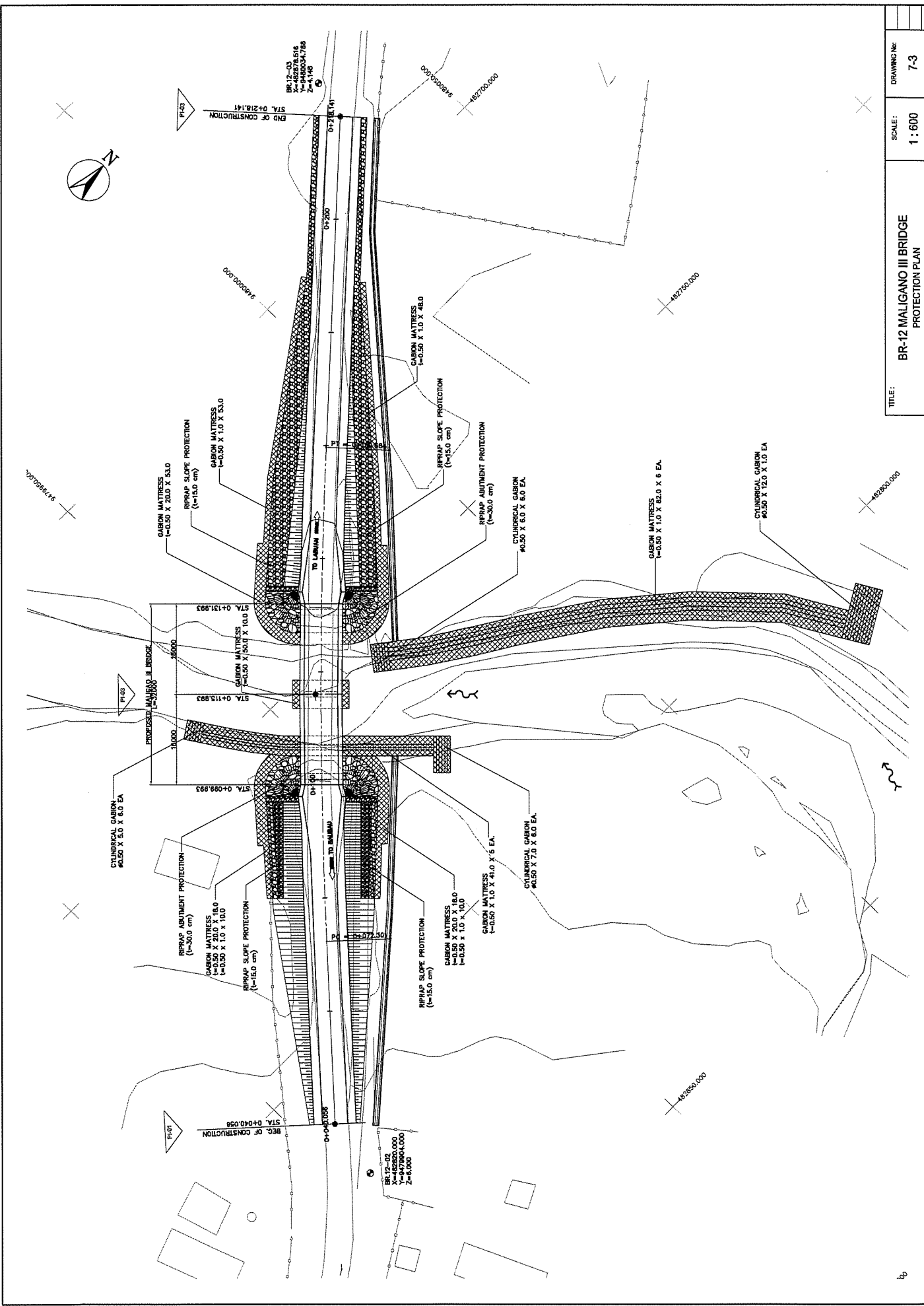
ELEMENTS OF CURVE										
PI NO.	STATION	COORDINATES		A	R	T	Lc	E	e%	W
		NORTHING	EASTING							
PI-01	0+040.005	8473903.814	422009.483				NO HORIZONTAL CURVE			
PI-02	0+116.021	8473957.532	422753.842	6°51'32"	1000.00	43.72	87.38	0.365	*	
PI-03	0+218.141	8480033.350	422685.359				NO HORIZONTAL CURVE			



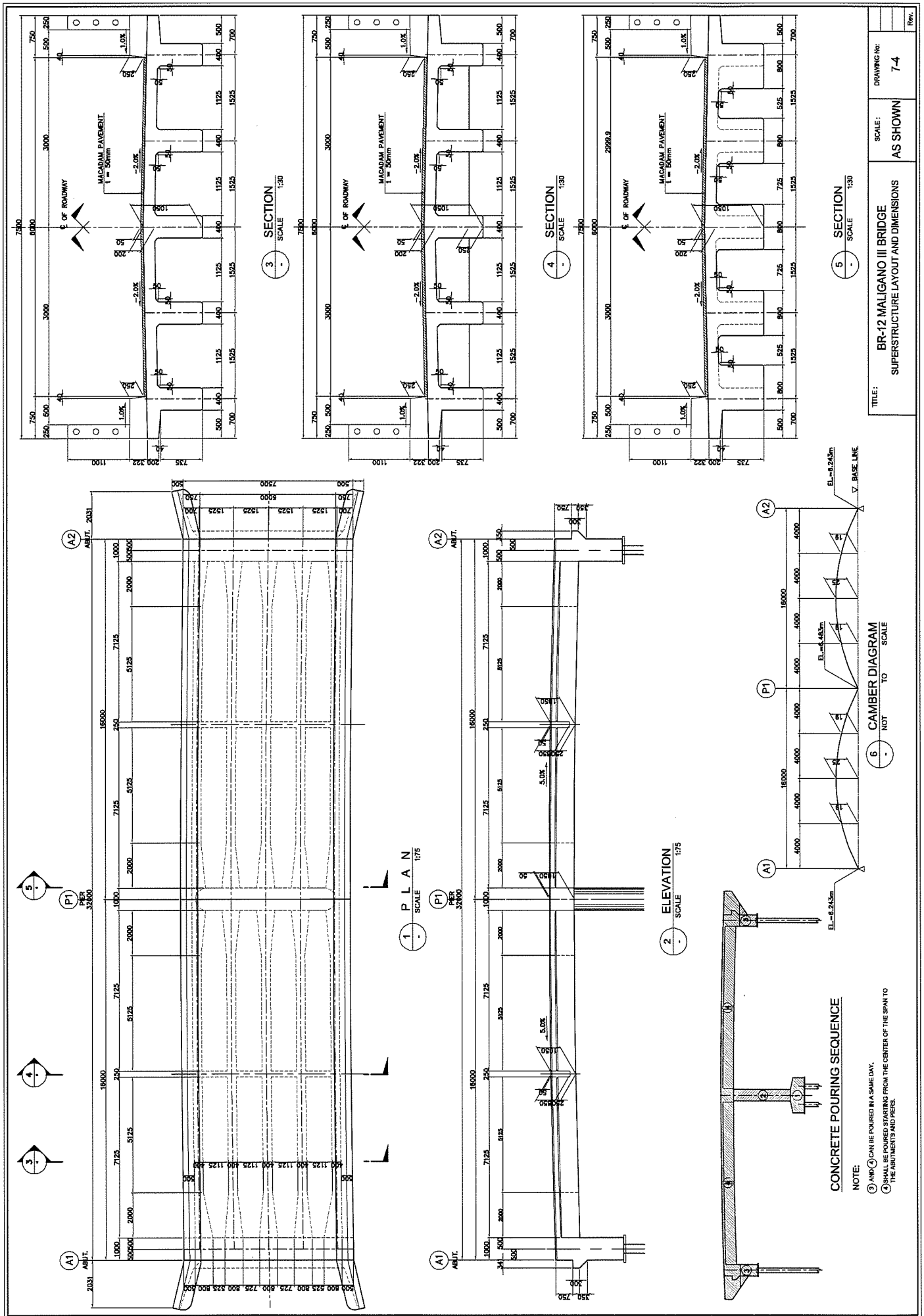
Rev.	
DRAWING NO.	7-1
SCALE:	1 : 600
TITLE:	BR-12 MALIGANO III BRIDGE SITE DEVELOPMENT PLAN



Rev.	
DRAWING No.	7-2
SCALE:	AS SHOWN
TITLE:	BR-12 MALIGANO III BRIDGE GENERAL PLAN, ELEVATION & SECTIONS



Rev.	
DRAWING No.	7-3
SCALE:	1 : 600
TITLE:	BR-12 MALIGANO III BRIDGE PROTECTION PLAN



Rev.	
DRIVING No:	7-4
SCALE:	AS SHOWN
TITLE:	BR-12 MALIGANO III BRIDGE SUPERSTRUCTURE LAYOUT AND DIMENSIONS

**CONCRETE POURING SEQUENCE**

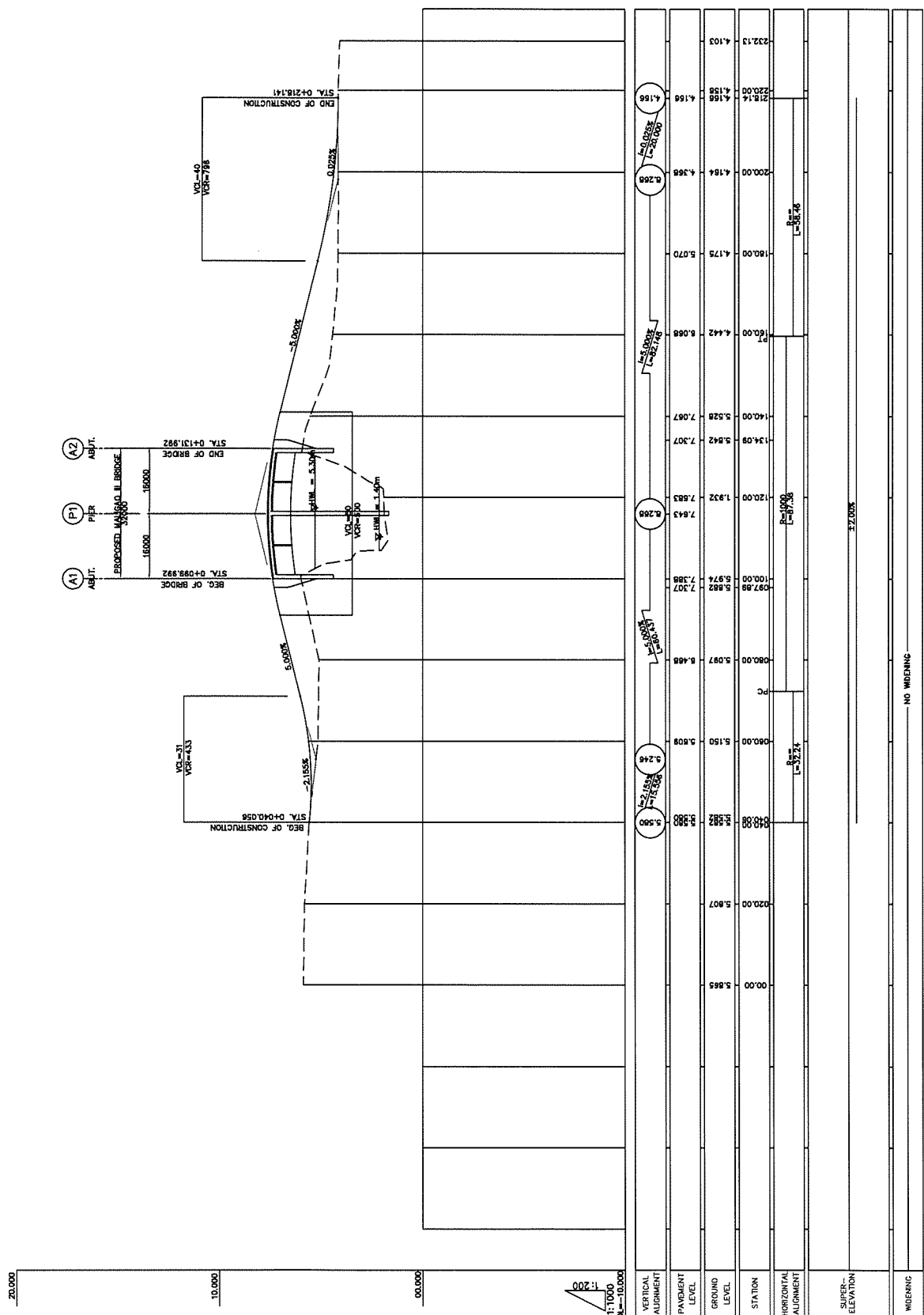
NOTE:

- ③ AND ④ CAN BE POURED IN A SAME DAY.
- ① SHALL BE POURED STARTING FROM THE CENTER OF THE SPAN TO THE ABUTMENT AND PIERS.







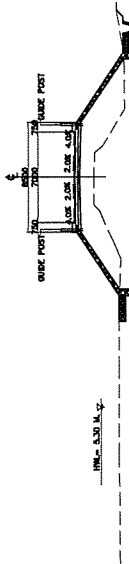


Rev.	
7-7	DRAWINGS No.
7-7	SCALE:
	H = 1:1000
	V = 1:200
	TITLE:
	BR-12 MALIGANO III BRIDGE
	APPROACH ROAD PROFILE

NO WIDENING

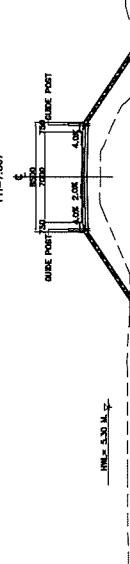
NO.0+134.093 (A2 WING WALL EDGE)

GH=5.842  
PH=7.307



NO.0+097.893 (A1 WING WALL EDGE)

GH=5.882  
PH=7.307



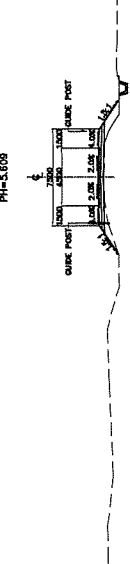
NO.0+080.000

GH=5.087  
PH=6.408



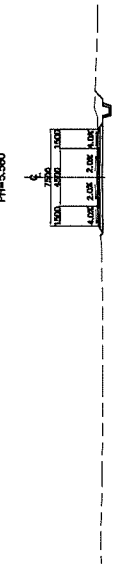
NO.0+060.000

GH=5.190  
PH=5.018



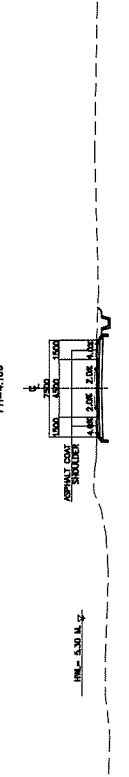
NO.0+040.056

GH=5.582  
PH=5.590



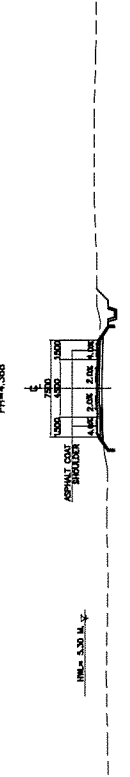
NO.0+218.141

GH=4.168  
PH=4.168



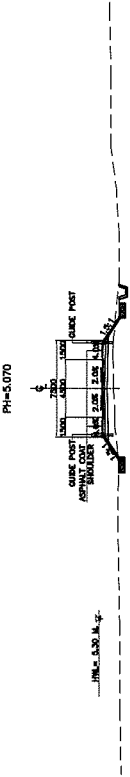
NO.0+200.000

GH=4.164  
PH=4.268



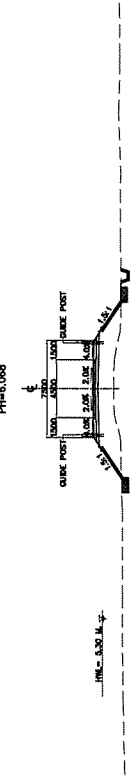
NO.0+180.000

GH=4.175  
PH=5.070



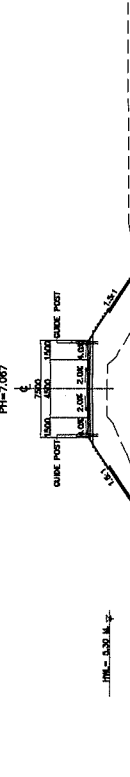
NO.0+160.000

GH=4.042  
PH=5.008



NO.0+140.000

GH=5.528  
PH=7.097



TITLE: BR-12 MALIGANO III BRIDGE  
APPROACH ROAD CROSS SECTIONS

SCALE: 1:400

DRAWING NO: 7-8

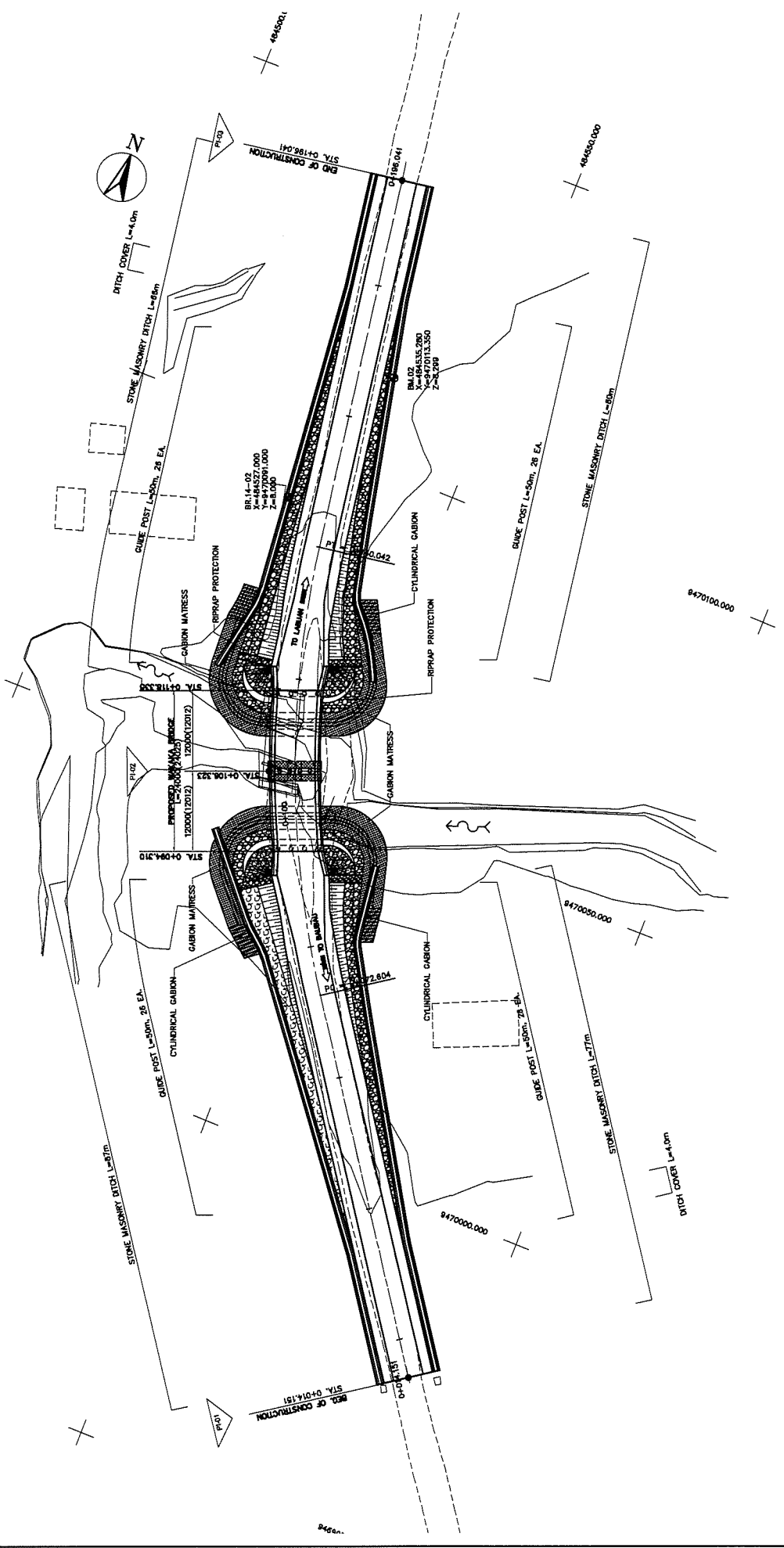
Rev.

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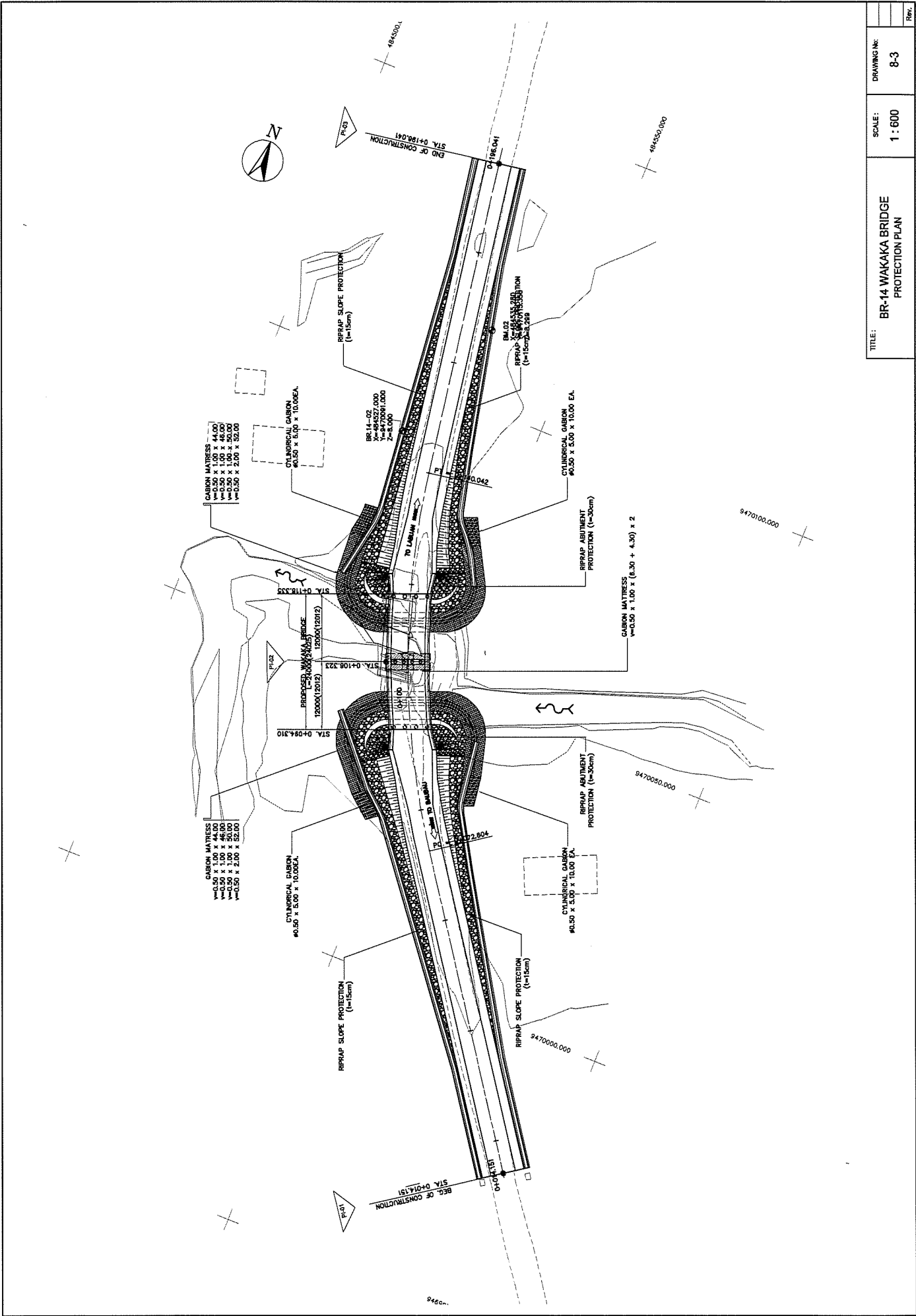
# BR-14 WAKAKA II BRIDGE

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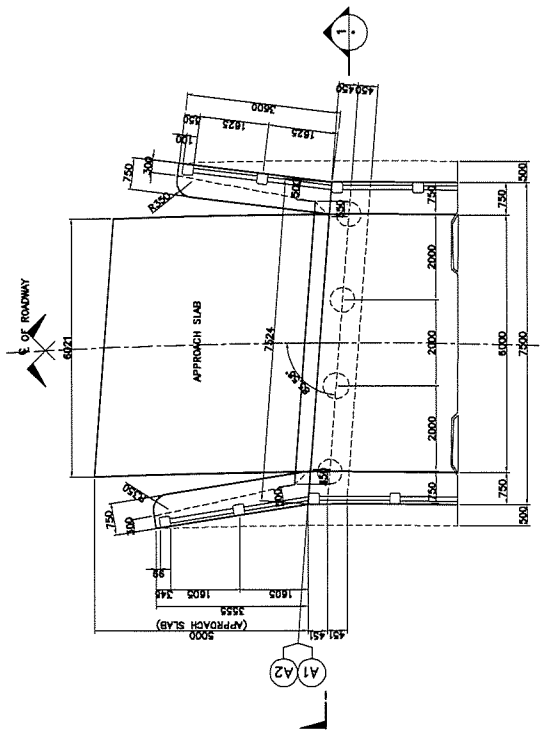
ELEMENTS OF CURVE		COORDINATES		A	R	T	Lc	E	e%	W	V(mph)
PI NO.	STATION	NORTHING	EASTING								
PI-01	0+1074.151	8466975.620	4845822.283								
		NO HORIZONTAL CURVE									
PI-02	0+1065.903	8470051.003	4845539.522	25°45'34"	150.00	34.30	67.44	3.971	*		
		NO HORIZONTAL CURVE									
PI-03	0+1065.041	8470141.111	4845255.536								



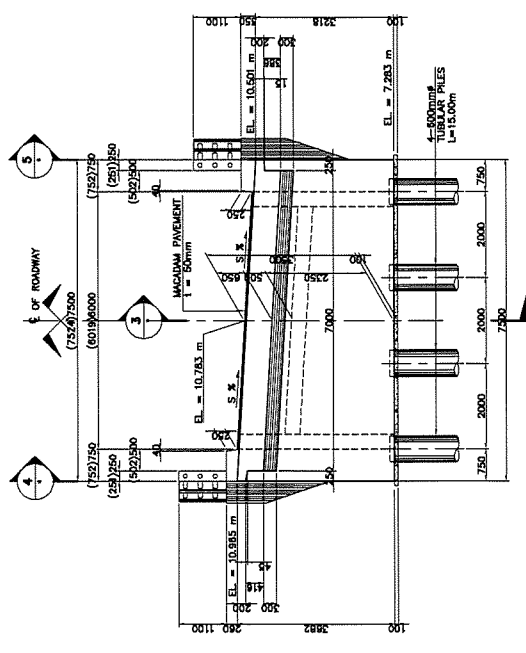




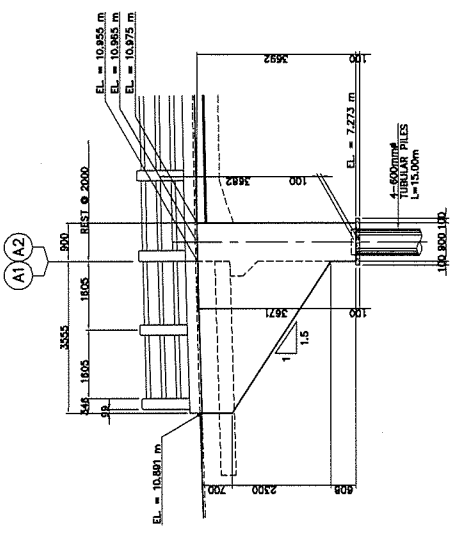
TITLE:	BR-14 WAKAKA BRIDGE PROTECTION PLAN
SCALE:	1:600
DRAWING No:	8-3
Rev.	



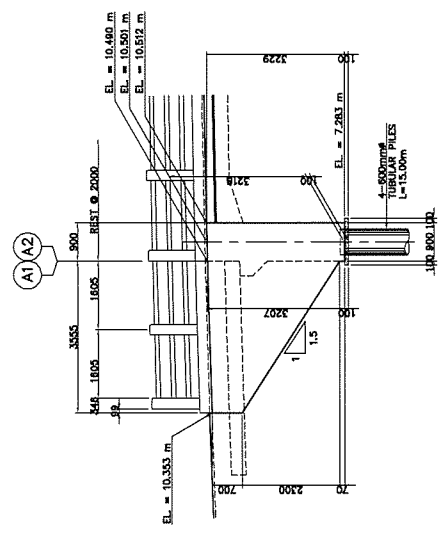
2 PLAN  
SCALE 1:180



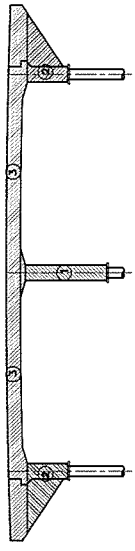
1 ELEVATION  
SCALE 1:180



5 ELEVATION  
SCALE 1:180

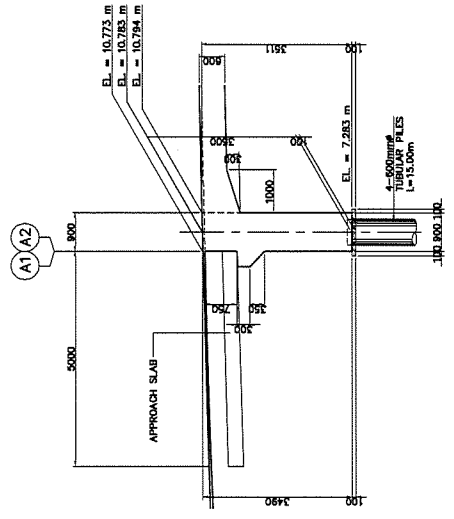


4 ELEVATION  
SCALE 1:180



CONCRETE POURING SEQUENCE

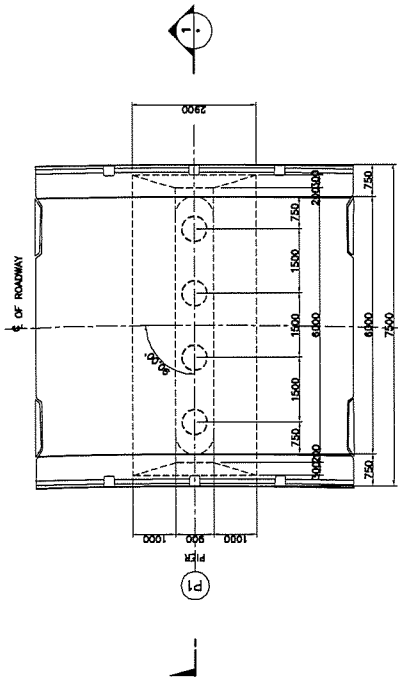
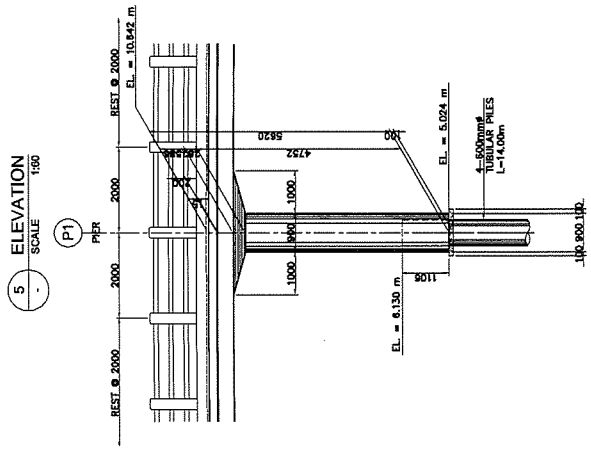
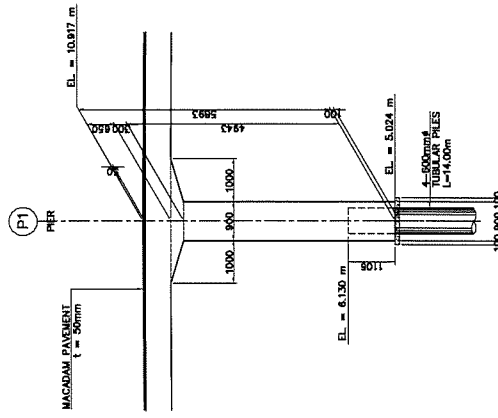
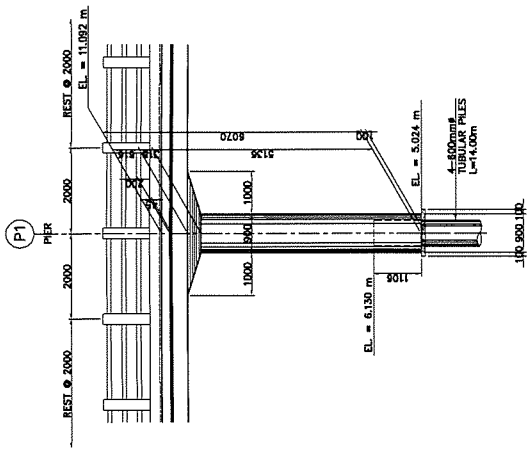
NOTE:  
 ① AND ② CAN BE POURED IN A SAME DAY.  
 ③ SHALL BE POURED STARTING FROM THE CENTER OF THE SPAN TO THE ABUTMENT AND PERK.



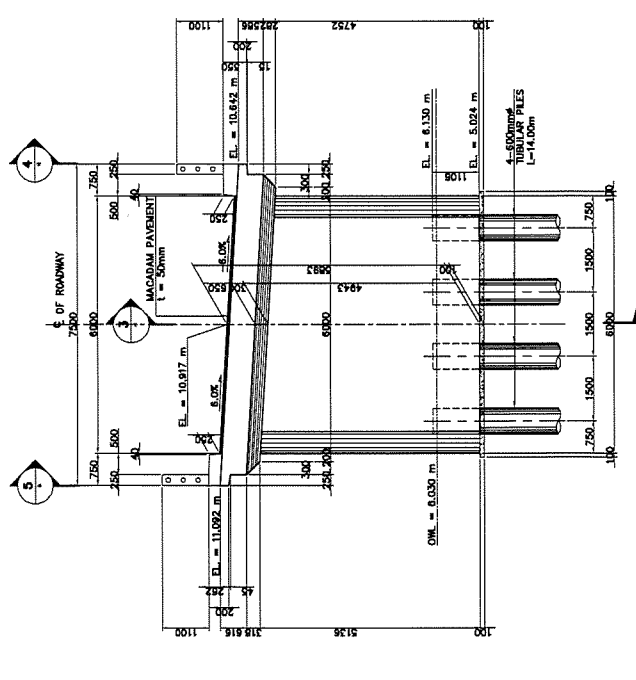
3 SECTION  
SCALE 1:180

NOTE: PILE DETAILS SHALL BE REFERRED TO "STANDARD DRAWINGS".

Rev.	
DRAWING NO.	8-4
SCALE:	AS SHOWN
TITLE:	BR-14 WAKAKA II BRIDGE SUBSTRUCTURE STRUCTURAL DIMENSION (ABUTMENT A1 & A2)



2 PLAN SCALE 1:80



1 ELEVATION SCALE 1:80

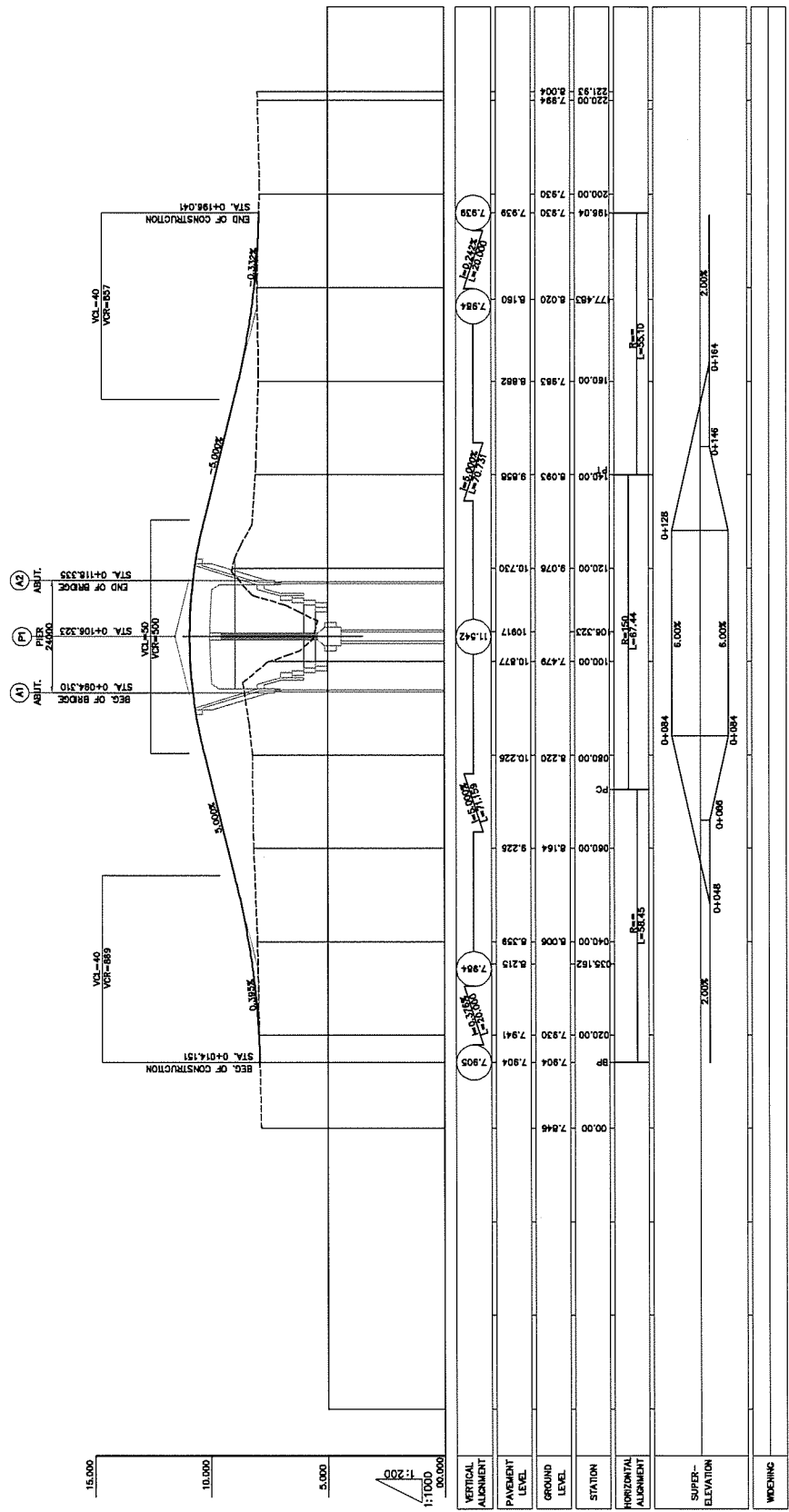
NOTE: ALL DETAILS SHALL BE REFERRED TO STANDARD DRAWINGS.

4 ELEVATION SCALE 1:80

3 SECTION SCALE 1:80

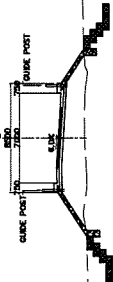
Rev.	
DRIVING NO:	8-5
SCALE:	AS SHOWN
TITLE:	BR-14 WAKAKA II BRIDGE SUBSTRUCTURE STRUCTURAL DIMENSION (PIER P1)





NO.0+090.694 (A1 WING WALL EDGE)

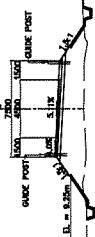
GH=8.447  
PH=10.673



DL=5.00

NO.0+080.000

GH=8.220  
PH=10.226



DL=8.20m

NO.0+060.000

GH=8.164  
PH=8.226



DL=8.16m

NO.0+040.000

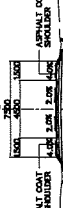
GH=8.306  
PH=8.306



DL=8.30m

NO.0+020.000

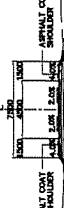
GH=7.930  
PH=7.941



DL=5.00

NO.0+014.151

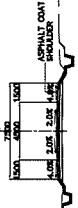
GH=7.904  
PH=7.904



DL=5.00

NO.0+196.040

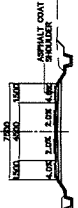
GH=7.930  
PH=7.936



DL=5.00

NO.0+180.000

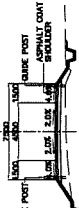
GH=8.020  
PH=8.160



DL=5.00

NO.0+160.000

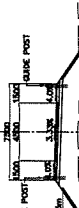
GH=7.963  
PH=8.062



DL=5.00

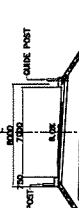
NO.0+140.000

GH=8.043  
PH=8.036



NO.0+121.950 (A2 WING WALL EDGE)

GH=8.036  
PH=10.673



DL=5.00

TITLE: BR-14 WAKAKA BRIDGE  
APPROACH ROAD CROSS SECTIONS

SCALE: 1:400

DRAWING NO: 8-7

REV.