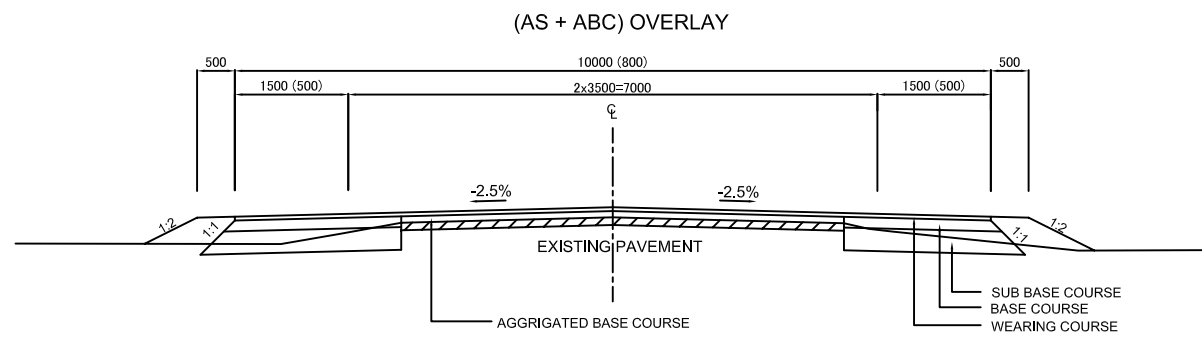
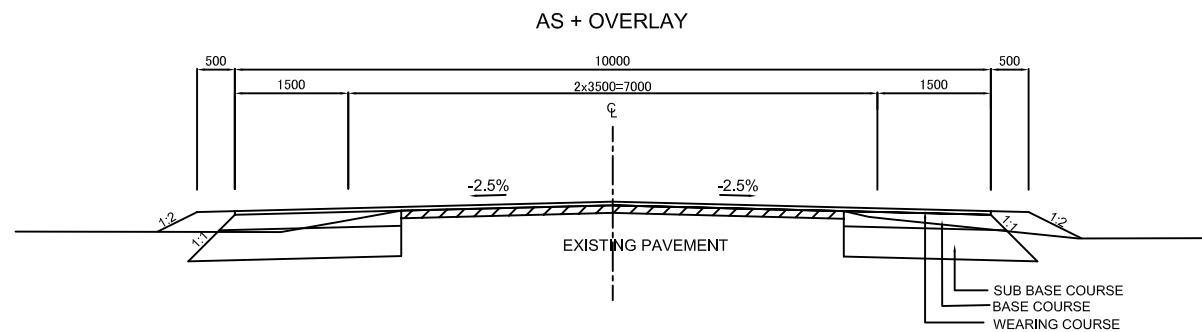


## **C.** TYPICAL CROSS SECTION



NOTE : ( ) = IN CASE OF ROW = 9.0m

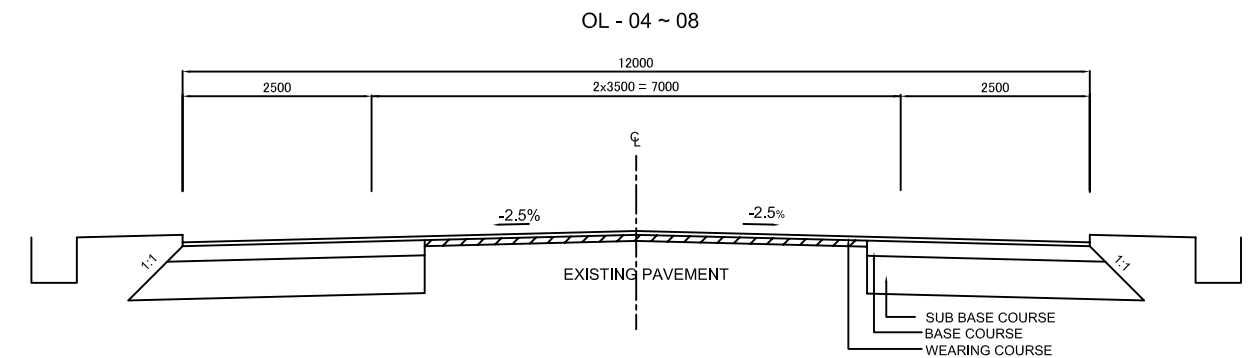
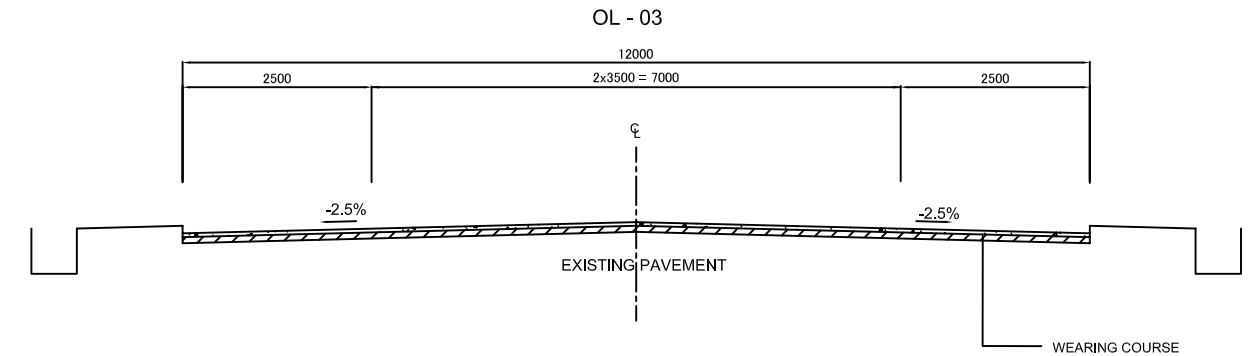
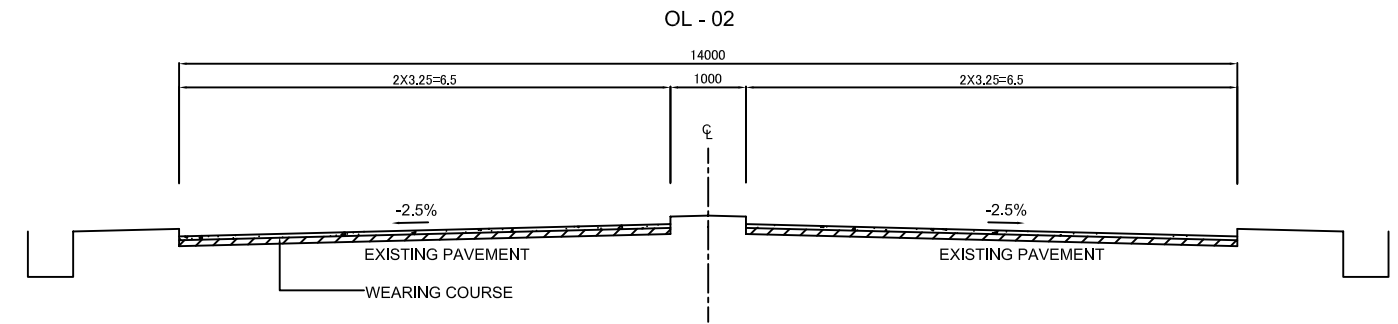
WEARING COURSE TYPE	WEARING COURSE (cm)	AGGRIGATED BASE COURSE (cm)	BASE COURSE (cm)	SUB BASE COURSE (cm)
OL - A	5	10	20	25
OL - B				30
OL - C (C')				40
OL - D				50
OL - E				55
OL - F (F')		15	20	40
OL - G				50
OL - H				55
OL - K(K')				40
OL - L(L')				50
OL - M	20	20	55	



PAVEMENT STRUCTURE TYPE	WEARING COURSE (cm)	BASE COURSE (cm)	SUB BASE COURSE (cm)
OL - 01	5	20	40

NOTE

BASE COURSE SHOWN IN THESE DRAWINGS SHALL BE CONSTRUCTED AS INDICATED IN SECTION 405 DENSE GRADED AGGREGATE BASE OF THE TECHNICAL SPECIFICATIONS OF THE RDA.



PAVEMENT STRUCTURE TYPE	WEARING COURSE (cm)	BASE COURSE (cm)	SUB BASE COURSE (cm)
OL - 02	5	-	-
OL - 03			-
OL - 04	5	20	15
OL - 05			25
OL - 06			30
OL - 07			40
OL - 08			50

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No	REVISION	DATE

THE PRO-POOR EASTERN INFRASTRUCTURE DEVELOPMENT PROJECT

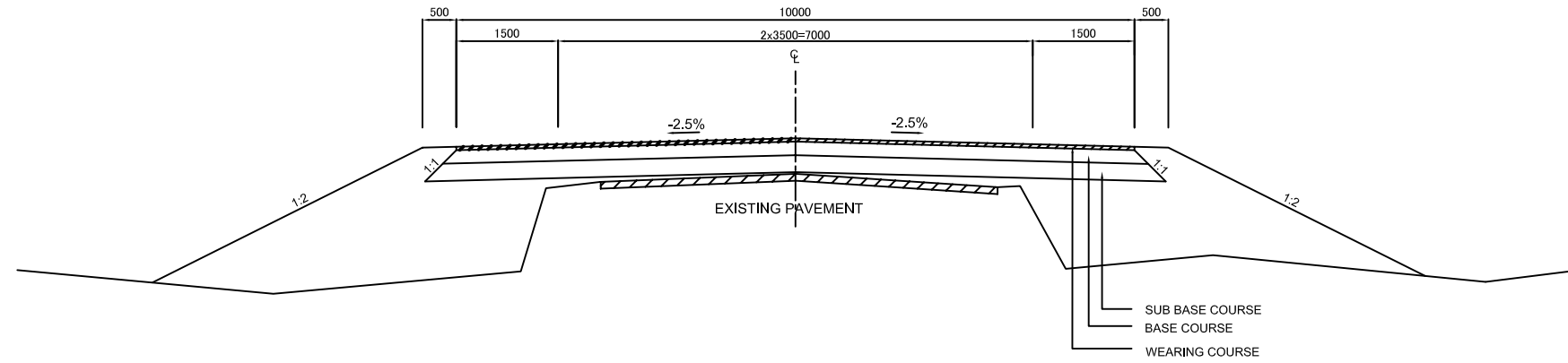
TYPICAL CROSS SECTION (1)

DESIGNED BY:

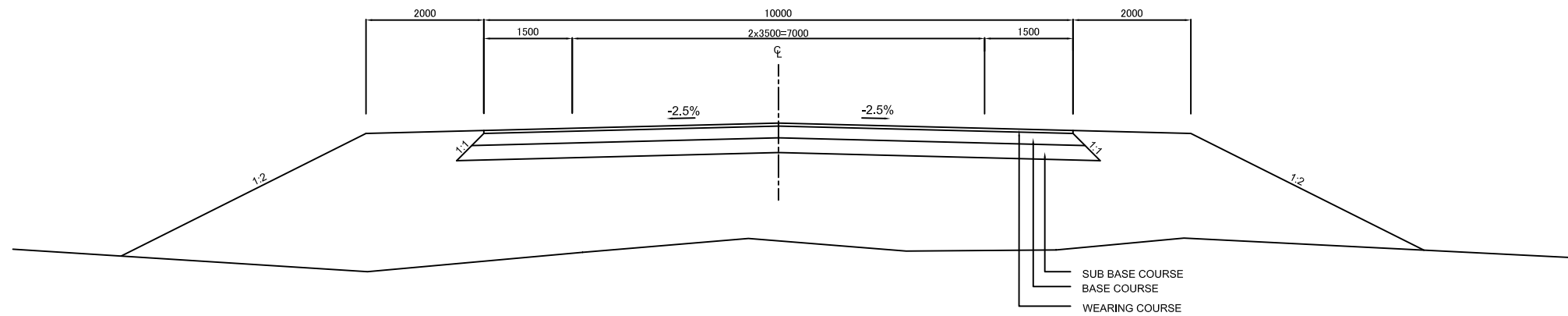
CHECKED BY:

APPROVED BY:

DWG. NO. C-01



WEARING COURSE TYPE	WEARING COURSE (cm)	BASE COURSE (cm)	SUB BASE COURSE (cm)
R - 01	5	20	25
R - 02			40
R - 03			50



WEARING COURSE TYPE	WEARING COURSE (cm)	BASE COURSE (cm)	SUB BASE COURSE (cm)
R - 05	5	20	40

**NOTE**

BASE COURSE SHOWN IN THESE DRAWINGS SHALL BE CONSTRUCTED AS INDICATED IN SECTION 405 DENSE GRADED AGGREGATE BASE OF THE TECHNICAL SPECIFICATIONS OF THE RDA.

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No	REVISION	DATE

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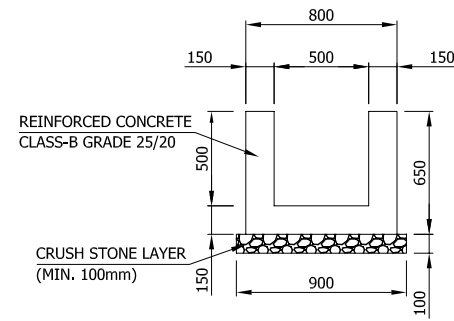
TYPICAL CROSS SECTION (2)

DESIGNED BY:	
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APPROVED BY:	
DWG. NO.	C-02

## **D.** RETAINING WALL AND DRAINAGE STRUCTURE

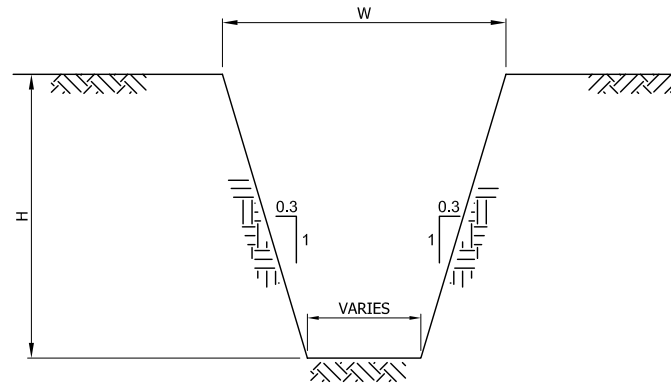
SIDE DRAIN & IRRIGATION CHANNEL

**SIDE DRAIN**  
U = 0.5m



GENERAL SECTION  
SCALE :- 1:40

**IRRIGATION CHANNEL**



GENERAL SECTION  
SCALE :- 1:40

W (m)	H (m)
0.75	0.75
0.90	0.90
1.00	1.00
1.25	1.25
1.50	1.50
2.50	2.50
2.75	2.75

**DETAILS OF SIDE DRAINS**

STATION		LEFT/ RIGHT	LENGTH (Km)
START (Km)	END (Km)		
366.720	368.220	L	1.500
366.720	368.220	R	1.500
369.110	369.340	L	0.230
369.110	369.250	R	0.140
373.645	373.670	R	0.025
379.650	379.910	L	0.260
379.770	379.850	R	0.080
379.990	381.070	R	1.080
380.890	382.590	L	1.700
381.535	381.810	R	0.275
382.795	382.840	R	0.045
383.000	383.220	L	0.220
383.230	384.500	L	1.270
383.000	383.600	R	0.600
383.760	383.840	R	0.080
384.360	384.460	R	0.100
384.600	384.616	R	0.016
384.620	384.640	R	0.020
384.690	384.720	R	0.030
384.680	384.740	L	0.060
384.940	385.020	L	0.080
385.310	385.540	L	0.230
385.330	385.500	R	0.170
385.680	385.920	L	0.240
385.940	385.970	R	0.030
386.140	386.230	R	0.090
386.320	386.460	R	0.140
386.810	386.970	L	0.160
386.900	386.930	R	0.030
387.080	387.300	L	0.220
387.120	387.140	R	0.020
387.450	387.500	R	0.050
388.010	395.310	L	7.300
388.010	395.320	R	7.310
395.925	397.360	L	1.435
395.925	397.360	R	1.435
397.930	398.080	L	0.150
397.930	398.080	R	0.150
401.110	404.490	L	3.380
401.120	404.495	R	3.375
404.840	406.740	L	1.900
404.840	406.740	R	1.900
422.260	425.475	L	3.215
422.260	423.400	R	1.140
425.080	425.480	R	0.400
1.200	1.480	L	0.280
1.570	3.000	L	1.430
1.550	3.500	R	1.950
14.640	15.075	L	0.435
14.640	15.005	R	0.365
15.740	16.880	L	1.140
15.740	16.760	R	1.020
33.250	33.880	R	0.630
<b>TOTAL</b>			<b>51.006</b>

**DETAILS OF IRRIGATION CHANNEL**

STATION		LEFT/ RIGHT	LENGTH (m)	WIDTH (m)
START (Km)	END (Km)			
372.435	372.950	L	515.00	2.75
372.980	373.280	R	300.00	1.50
373.270	373.355	L	85.00	0.90
373.485	373.670	L	185.00	0.90
373.890	373.900	L	10.00	1.00
374.840	375.140	L	300.00	0.75
375.330	375.440	L	110.00	0.75
375.280	375.500	R	220.00	1.25
375.640	376.100	L	460.00	1.00
376.120	376.330	R	210.00	1.00
376.280	376.665	L	385.00	0.75
378.040	378.130	R	90.00	2.50
378.130	378.530	L	400.00	2.50
<b>TOTAL</b>			<b>3295.00</b>	

NOTE

- (1) ALL THE DIMENSIONS ARE GIVEN IN MILLIMETERS UNLESS OTHERWISE STATED.
- (2) CLEAR COVER TO REINFORCEMENT SHALL BE 50mm.

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No	REVISION	DATE

**THE PRO-POOR EASTERN INFRASTRUCTURE DEVELOPMENT PROJECT**

SIDE DRAIN & IRRIGATION CHANNEL

DESIGNED BY:

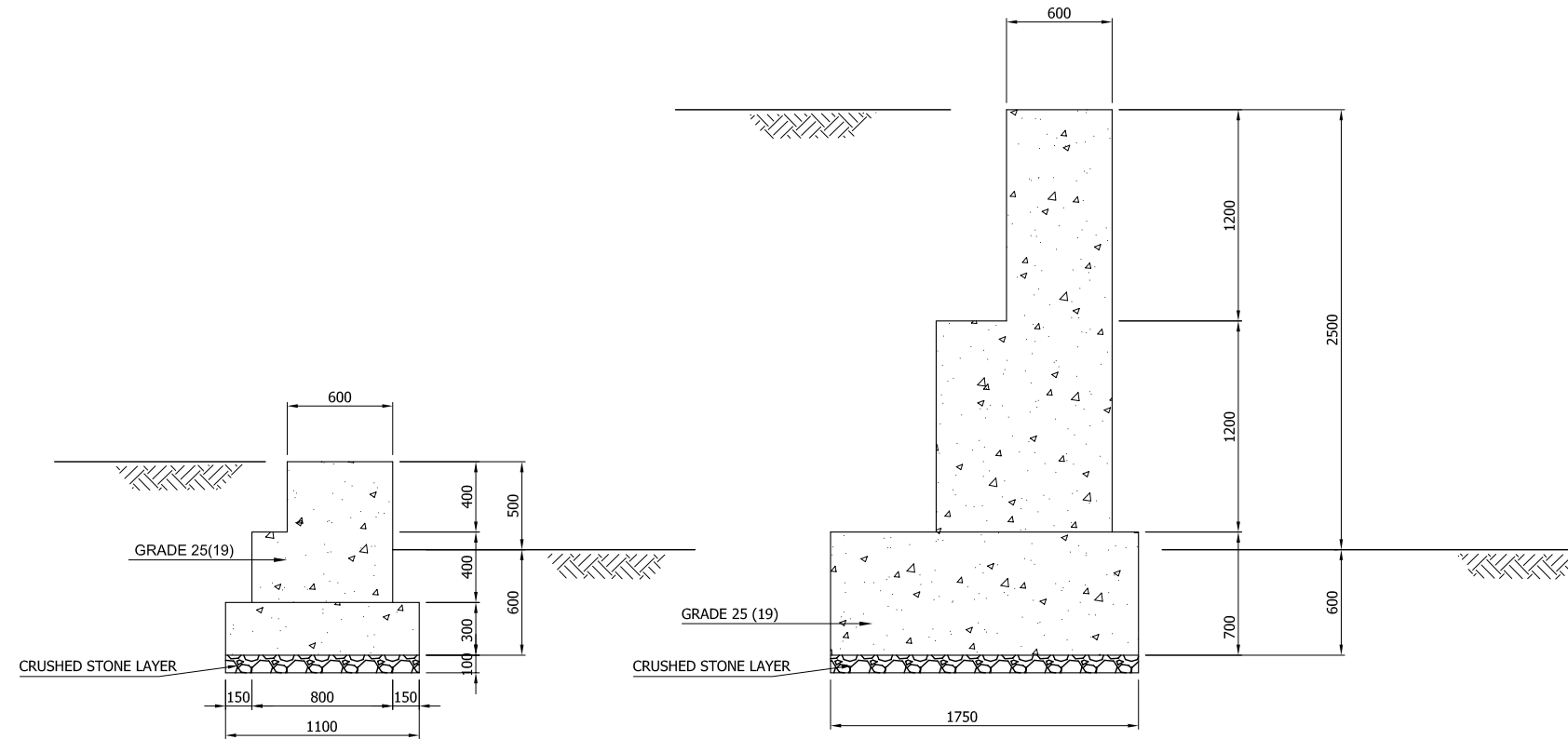
CHECKED BY:

APPROVED BY:

DWG. NO.

D-01

RETAINING WALL  
STATION 426+660~426+710



GENERAL SECTION - A  
HEIGHT ABOVE THE GROUND = 0.5m  
SCALE :- 1:40

GENERAL SECTION - B  
HEIGHT ABOVE THE GROUND = 2.5m  
SCALE :- 1:40

NOTE

- (1) ALL THE DIMENSIONS ARE GIVEN IN MILLIMETERS UNLESS OTHERWISE STATED.
- (2) CLEAR COVER TO REINFORCEMENT SHALL BE 50mm.

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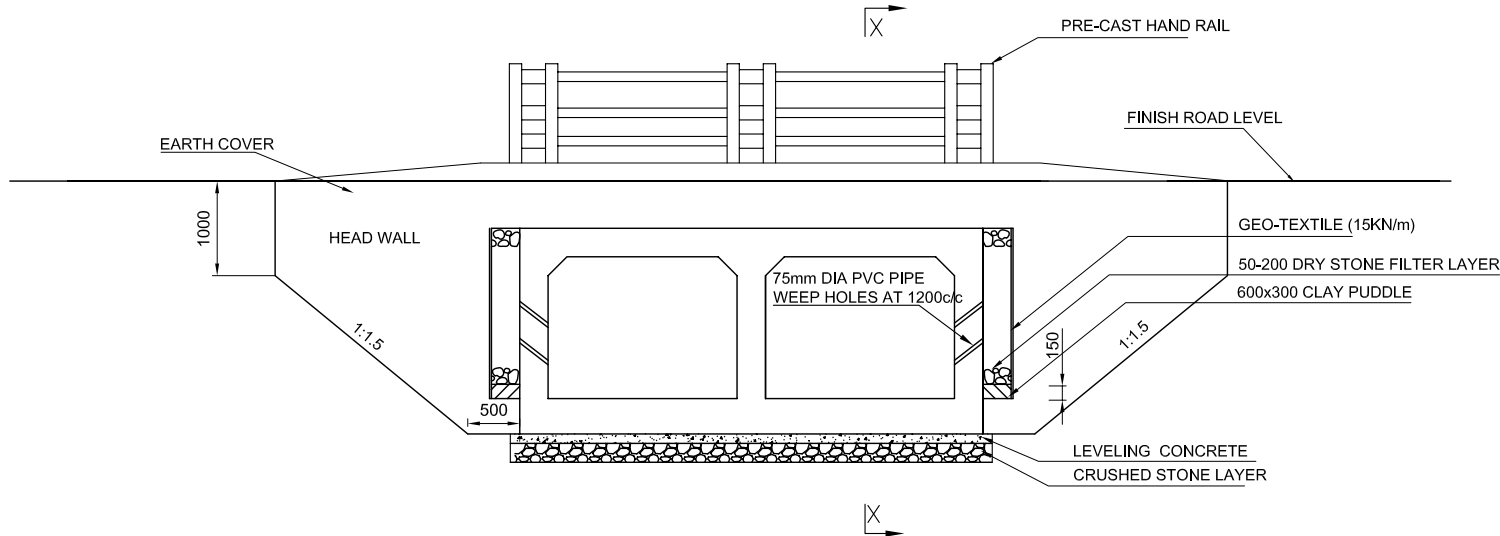
No	REVISION	DATE

**THE PRO-POOR EASTERN INFRASTRUCTURE DEVELOPMENT PROJECT**

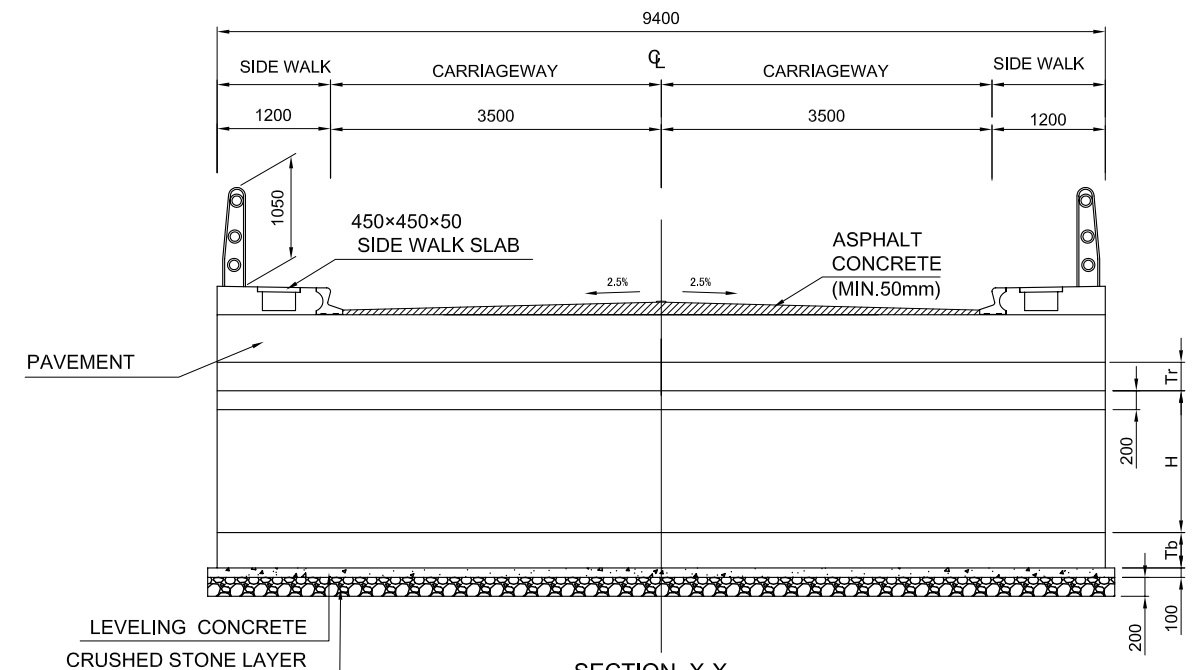
RETAINING WALL  
STATION 426+660~426+710

DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	D-02

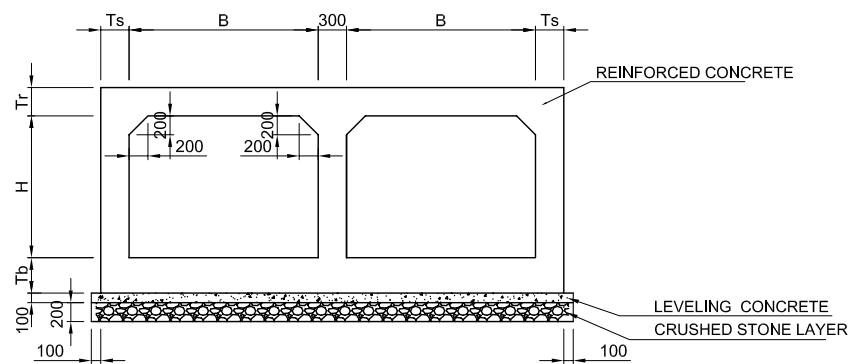
TYPICAL ELEVATIONS & SECTIONS  
IMPROVEMENT TYPE - A  
CONSTRUCTION OF NEW BRIDGE (BOX CULVERT TYPE)



TYPICAL ELEVATION  
(IMPROVEMENT TYPE - A)  
SCALE : 1:80



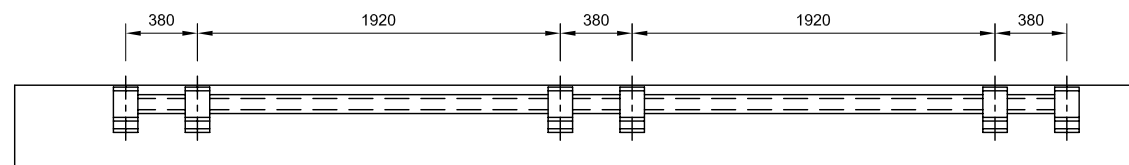
SECTION X-X  
(IMPROVEMENT TYPE-A)  
SCALE : 1:80



GENERAL CROSS SECTION  
IMPROVEMENT TYPE - A)  
SCALE : 1:80

DIMENSIONS

BRIDGE TYPE	NO. OF CELLS	EARTH COVER	DIMENSIONS				
			B	H	Tr	Ts	Tb
T4	2	0 - 500	2500	1500	350	300	300
T5	2	0 - 500	2500	2000	350	350	300
T6	2	0 - 500	3000	2000	400	350	400
T7	3	0 - 500	2500	2000	350	350	350
T8	4	0 - 500	3000	1250	400	300	400
T9	3	0 - 500	3000	2000	400	350	400
T10	6	0 - 500	3000	3000	400	400	450



PLAN - HAND RAIL  
(IMPROVEMENT TYPE-A)  
SCALE : 1:40

NOTE:

- (1) ALL THE DIMENSIONS ARE GIVEN IN MILLIMETRES UNLESS OTHERWISE STATED.
- (2) REFER DRW.NO.D-08 FOR DETAILS OF UP RIGHT , KERB & FOOT WALK SLAB
- (3) ALL DIMENSIONS ARE PROVISIONAL FINAL FIGURES SHALL BE CONFIRMED BY THE DETAIL DESIGN.

TYPE-A: CONSTRUCTION OF NEW BRIDGE (BOX CULVERT TYPE)

No.	Road	ID No.	Chainage (km)	EXISTING STRUCTURE				IMPROVEMENT STRUCTURE				
				Category	Inner size (Cell x) Length x Height (m)	Structure width (m)	Covering +Deck (m)	Category	New Inner Size No.Spans x Length x Clearance (m)	Bridge width (m)	Headwall (nos)	Dimension Type
1	AA004	371/1	370.360	Bridge	2x6.00x(1.90)	7.60	0.50	Bridge	5x2.50x2.00	9.4	2	T5
2	AA004	371/2	370.500	Bridge	2x4.60x(1.95)	7.40	0.50	Bridge	3x2.50x2.00	9.4	2	T7
3	AA004	375/5	374.860	Causeway	-	-	-	Bridge	(2x4)x3.00x1.25	9.4	2	2xT8
4	AA004	377/7	377.000	Bridge	2x8.80x(2.95)	7.70	0.50	Bridge	6x3.00x3.00	9.4	2	T10
5	AA004	378/2	377.995	Bridge	7.90x(2.10)	6.80	0.50	Bridge	3x3.00x2.00	9.4	2	T9
6	AA004	382/2	381.560	Bridge	6.00x(1.90)	5.85	0.50	Bridge	2x3.00x2.00	9.4	2	T6
7	AA004	405/1	404.080	Bridge	5.00x(1.20)	6.90	0.35	Bridge	2x2.50x1.50	9.4	2	T4
8	AA015	[9/3]	8.490	n/a	-	-	-	Bridge	2x3.00x2.00	9.4	2	T6
9	AA015	12/3	11.760	Bridge	4.50x(2.00)	4.50	0.50	Bridge	2x2.50x2.00	9.4	2	T5
10	AA015	17/2	16.840	Pipe	2xdia. 0.60	8.80	0.40	Bridge	2x3.00x2.00	9.4	2	T6
11	AA015	[21/1b]	19.510	n/a	-	-	-	Bridge	2x3.00x2.00	9.4	2	T6
12	AA015	21/2	20.625	Pipe	dia. 0.60	8.70	0.50	Bridge	2x3.00x2.00	9.4	2	T6
13	AA015	25/2	24.660	Bridge	7.50x(1.45)	6.80	0.50	Bridge	3x2.50x2.00	9.4	2	T7
-	AA004	371/3	370.875	Bridge	6.10x(0.80)	9.60	-	-	Construction for Sidewalks	-	-	-

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THE PRO-POOR EASTERN INFRASTRUCTURE DEVELOPMENT PROJECT

TYPICAL ELEVATIONS & SECTIONS  
(IMPROVEMENT TYPE - A)

No REVISION DATE

DESIGNED BY:

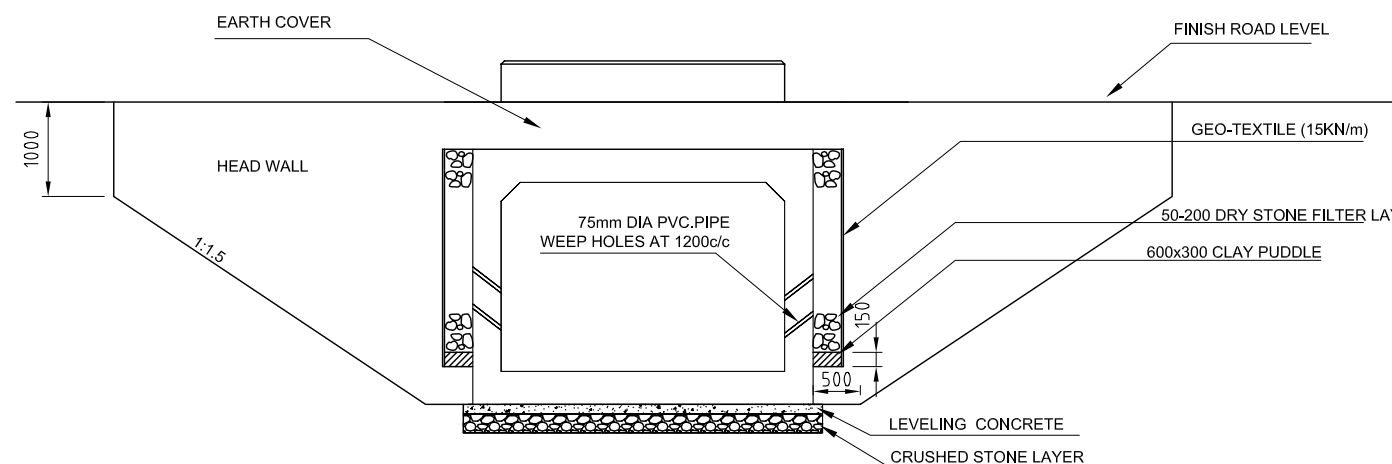
CHECKED BY:

APPROVED BY:

DWG. NO. D-03

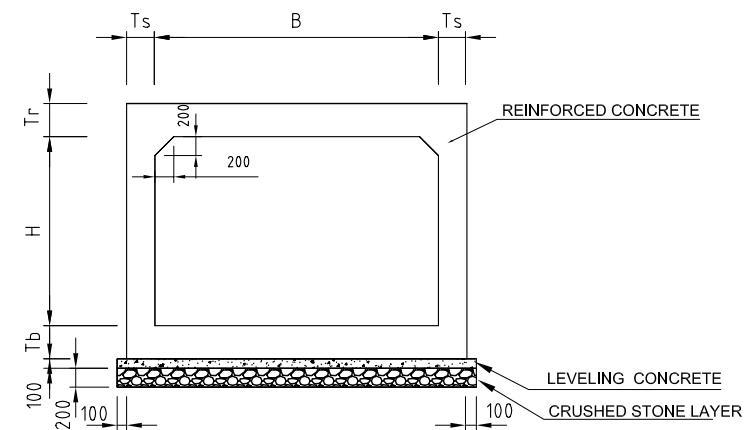
GENERAL SECTIONS OF DRAINAGE

IMPROVEMENT TYPE - B  
CONSTRUCTION OF BOX CULVERT



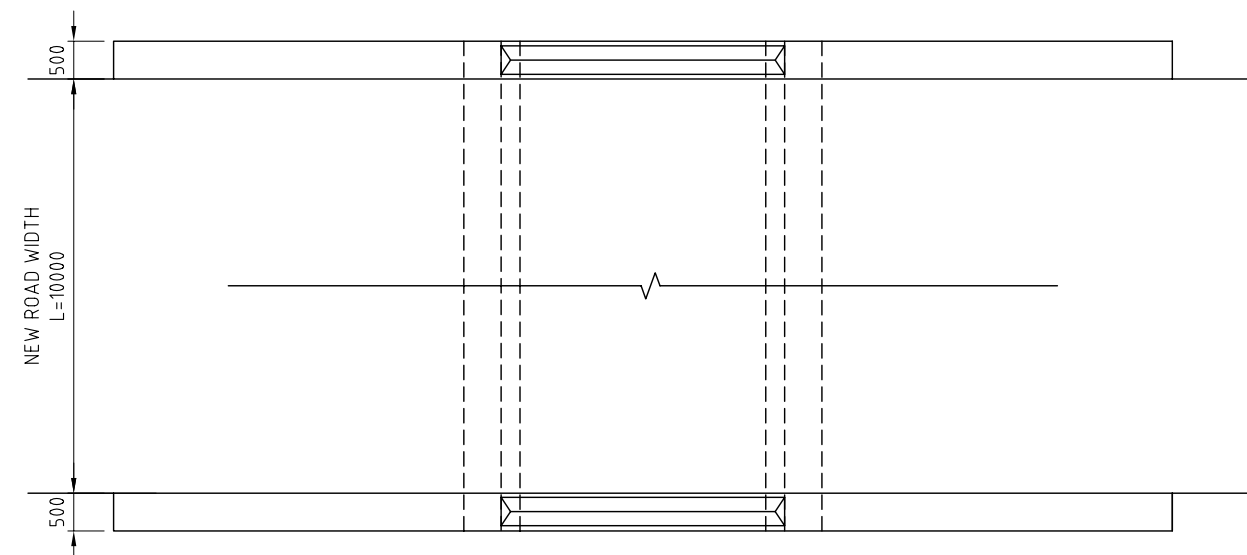
TYPICAL ELEVATION  
(IMPROVEMENT TYPE-B)

SCALE : 1:80



GENERAL CROSS SECTION  
(IMPROVEMENT TYPE - B)

SCALE : 1:80



PLAN  
(IMPROVEMENT TYPE-B)

SCALE : 1:80

NOTE

- (1) ALL THE DIMENSIONS ARE GIVEN IN MILLIMETERS UNLESS OTHERWISE STATED.
- (2) CLEAR COVER TO REINFORCEMENT SHALL BE 50mm.
- (3) CHARACTERISTIC CUBE STRENGTH OF CONCRETE = 30 N/mm<sup>2</sup>
- (4) ALL DIMENSIONS ARE PROVISIONAL FINAL FIGURES SHALL BE CONFIRMED BY THE DETAILED DESIGN.

DIMENSIONS

CULVERT TYPE	EARTH COVER	DIMENSIONS				
		B	H	Tr	Ts	Tb
T1	0 - 500	2000	1500	300	300	300
T2	0 - 500	2500	1500	300	300	300
T3	0 - 500	3000	2000	350	300	350

TYPE-B: CONSTRUCTION OF BOX CULVERT

No.	Road	ID No.	Chainage	EXISTING STRUCTURE			IMPROVEMENT STRUCTURE						
				Category	Inner size Diameter (m)	Structure width (m)	Covering +Deck (m)	Category	Inner size (Cell x) Length x Height (m)	Road width (m)	New Box width (m)	Headwall (nos.)	Dimension Type
1	AA004	[377/8]	377.200	n/a		-	-	Box	2.00x1.50	10.0	10.0	2	T1
2	AA015	4/4	3.370	Pipe	dia. 0.60	8.60	0.30	Box	2.00x1.50	10.0	10.0	2	T1
3	AA015	[4/9]	4.005	n/a		-	-	Box	3.00x2.00	10.0	10.0	2	T3
4	AA015	[6/1b]	5.390	n/a		-	-	Box	3.00x2.00	10.0	10.0	2	T3
5	AA015	[6/4]	5.830	n/a		-	-	Box	3.00x2.00	10.0	10.0	2	T3
6	AA015	[8/1b]	7.260	n/a		-	-	Box	3.00x2.00	10.0	10.0	2	T3
7	AA015	[8/3]	7.700	n/a		-	-	Box	3.00x2.00	10.0	10.0	2	T3
8	AA015	[9/1b]	8.200	n/a		-	-	Box	3.00x2.00	10.0	10.0	2	T3
9	AA015	17/1	16.320	Pipe	dia. 0.60	12.00	0.30	Box	3.00x2.00	10.0	10.0	2	T3
10	AA015	19/2	19.060	Pipe	dia. 0.60	9.20	0.40	Box	2.50x1.50	10.0	10.0	2	T2
11	AA015	[23/2]	22.700	n/a		-	-	Box	3.00x2.00	10.0	10.0	2	T3
12	AA015	[29/2]	28.220	n/a		-	-	Box	2.50x1.50	10.0	10.0	2	T2

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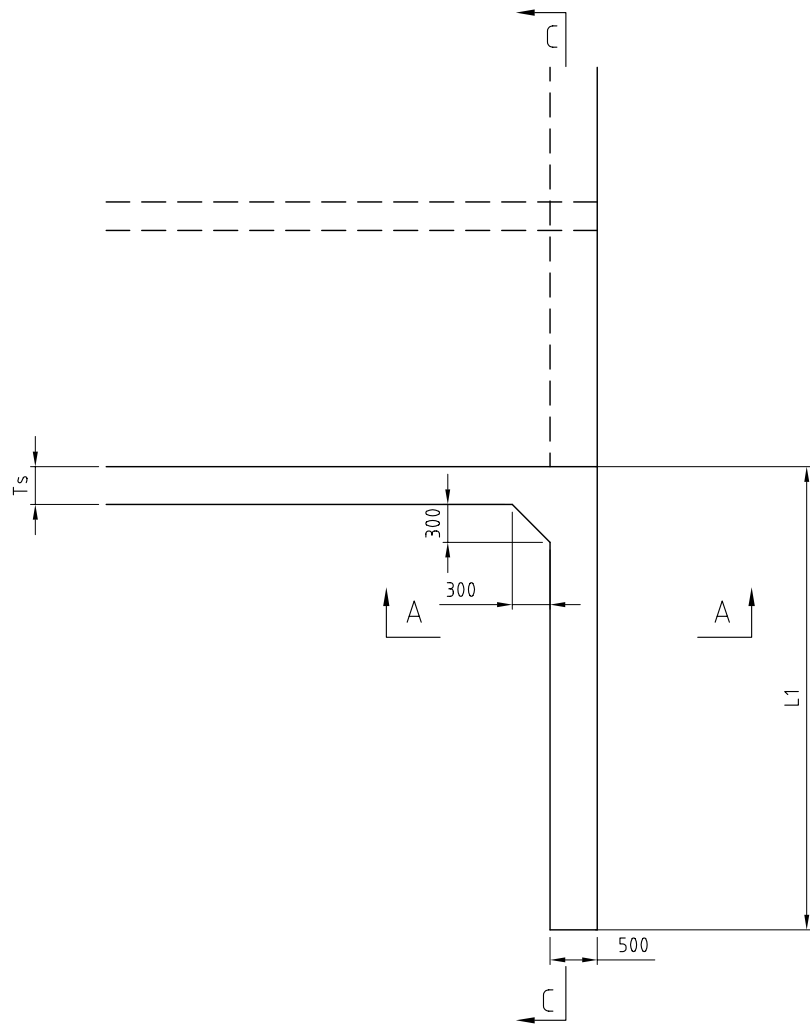
No	REVISION	DATE

**THE PRO-POOR EASTERN INFRASTRUCTURE DEVELOPMENT PROJECT**  
  
**GENERAL SECTION OF DRAINAGE**  
 (IMPROVEMENT TYPE - B)

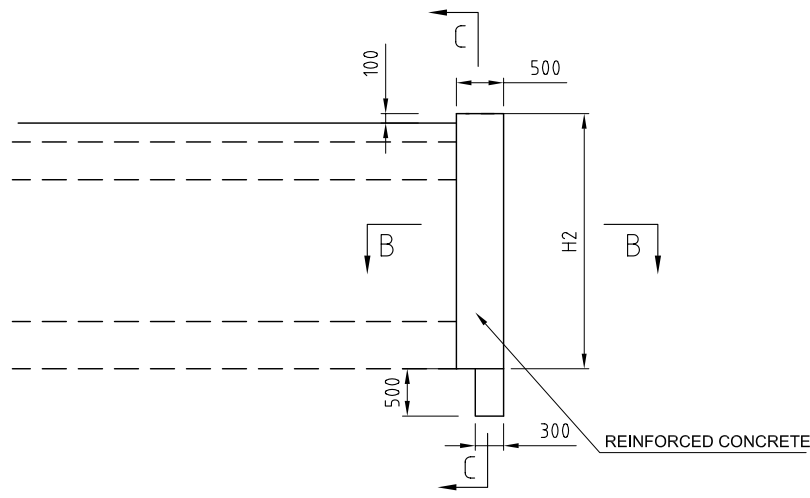
DESIGNED BY:	
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APPROVED BY:	
DWG. NO.	D-04



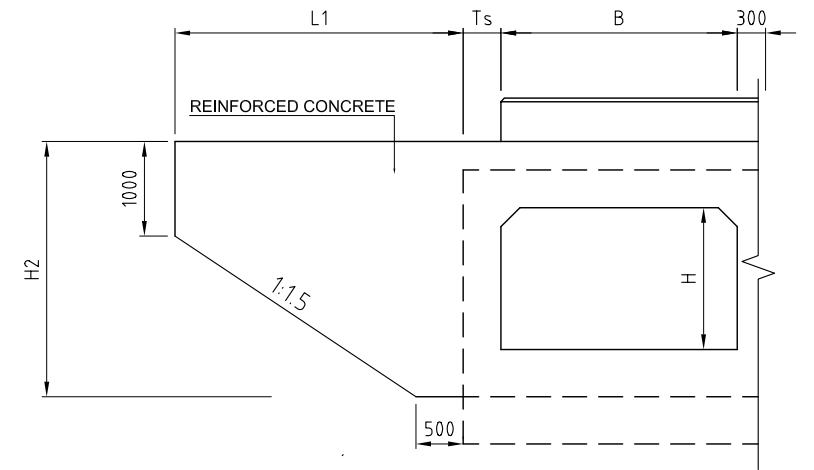
CONCRETE WINGWALL  
IMPROVEMENT TYPES A & B



SECTION B - B  
SCALE: 1:80



SECTION A - A  
SCALE: 1:80



SECTION C - C  
SCALE: 1:80

DIMENSIONS

TYPE OF BRIDGE / CULVERT	CULVERT/BRIDGE DIMENSIONS						EARTH COVER	L1*	H2*
	NO. OF CELLS	B	H	TOP SLAB THICKNESS	SIDE WALL THICKNESS	BOTTOM SLAB THICKNESS			
				Tr	Ts	Tb			
T1	1	2000	1500	300	300	300	0 - 500	2150~2900	2200~2700
T2	1	2500	1500	300	300	300	0 - 500	2900~3650	2200~2700
T3	1	3000	2000	350	300	350	0 - 500	3725~4475	2750~3250
T4	2	2500	1500	350	300	300	0 - 500	2250~2750	2250~2750
T5	2	2500	2000	350	350	300	0 - 500	2750~3250	2750~3250
T6	2	3000	2000	400	350	400	0 - 500	2900~3400	2900~3400
T7	3	2500	2000	350	350	350	0 - 500	2800~3300	2800~3300
T8	4	3000	1250	400	300	400	0 - 500	2150~2650	2150~2650
T9	3	3000	2000	400	350	400	0 - 500	2900~3400	2900~3400
T10	6	3000	3000	400	400	450	0 - 500	3950~4450	3950~4450

NOTE

- (1) \* - LENGTH HAS TO BE DECIDED AT SITE, DEPENDING ON THE EARTH COVER
- (2) ALL DIMENSIONS ARE PROVISIONAL FINAL FIGURES SHALL BE CONFIRMED BY THE DETAILED DESIGN.
- (3) ALL THE DIMENSIONS ARE GIVEN IN MILLIMETERS UNLESS OTHERWISE STATED.
- (4) CLEAR COVER TO REINFORCEMENT SHALL BE 50mm.

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**JEEC** JAPAN ENGINEERING CONSULTANTS CO., LTD.

No	REVISION	DATE

THE PRO-POOR EASTERN INFRASTRUCTURE DEVELOPMENT PROJECT

CONCRETE WING WALL  
(IMPROVEMENT TYPES A & B)

DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	D-05