



Government of Nepal
Ministry of Physical Infrastructure and Transport
Department Of Roads
Development Cooperation Implementation Division
Strategic Road Connectivity & Trade Improvement Project
(SRCTIP)

**Detailed Design of Upgradation of Kamala- Dhalkebar- Pathlaiya
Road Section (130km) of Mahendra Highway and Bridges**

Final Design Report
Volume IV
Design Report & Drawing of Bridges

Bridge Name- Bhapsi
Volume-2
Detailed Drawing

April, 2023

Joint Venture Of:

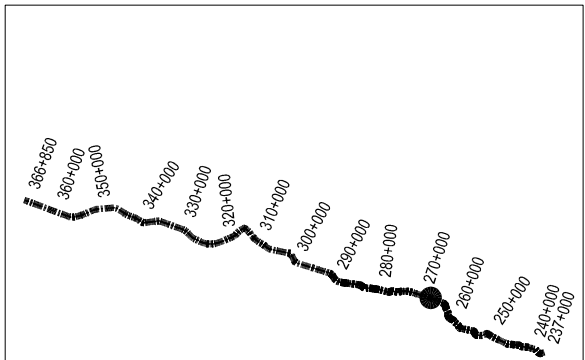
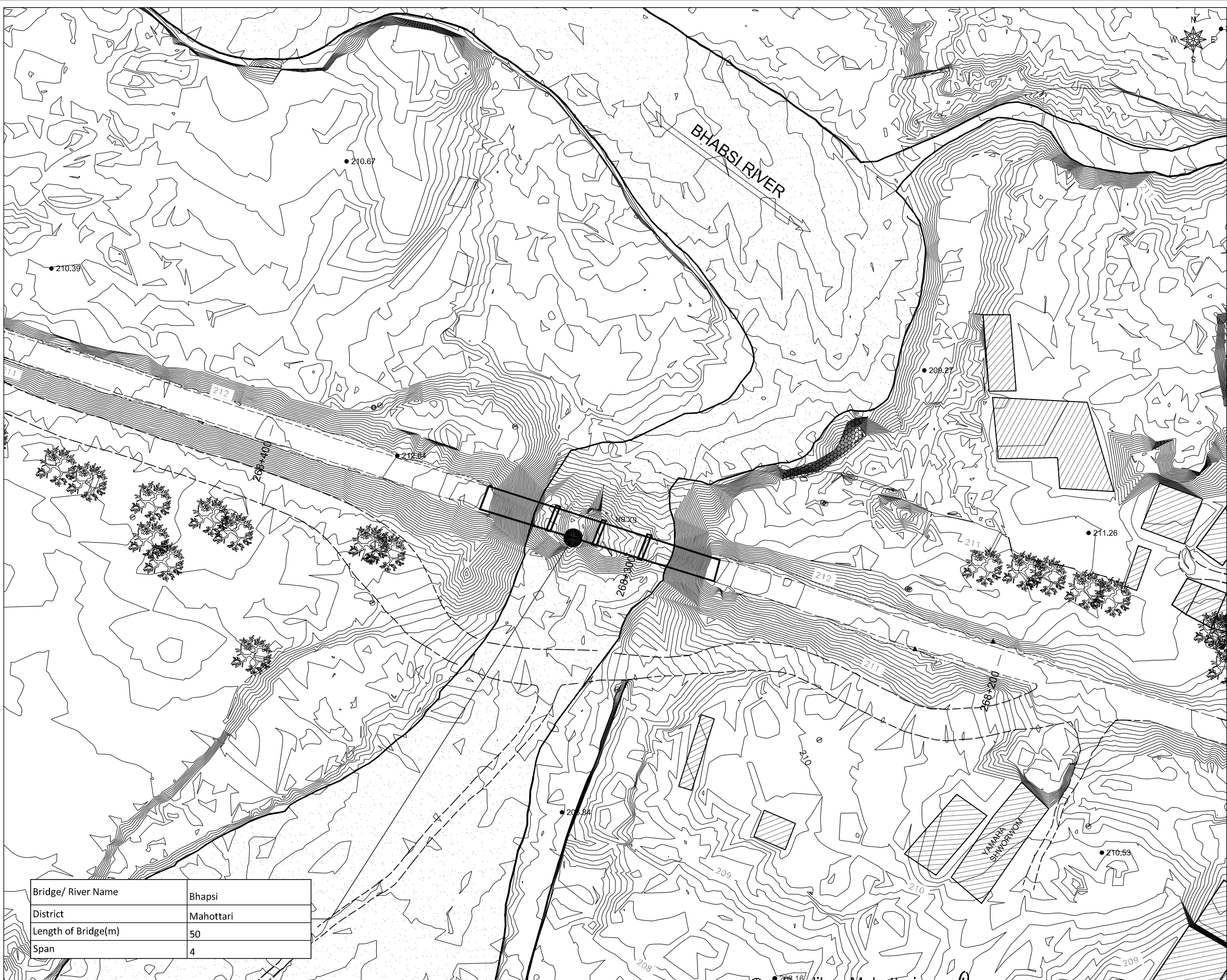
eptisa EPTISA Servicios De Ingenieria
Madrid, Spain

STUP STUP Consultants Private Limited
India

In Association With
Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited

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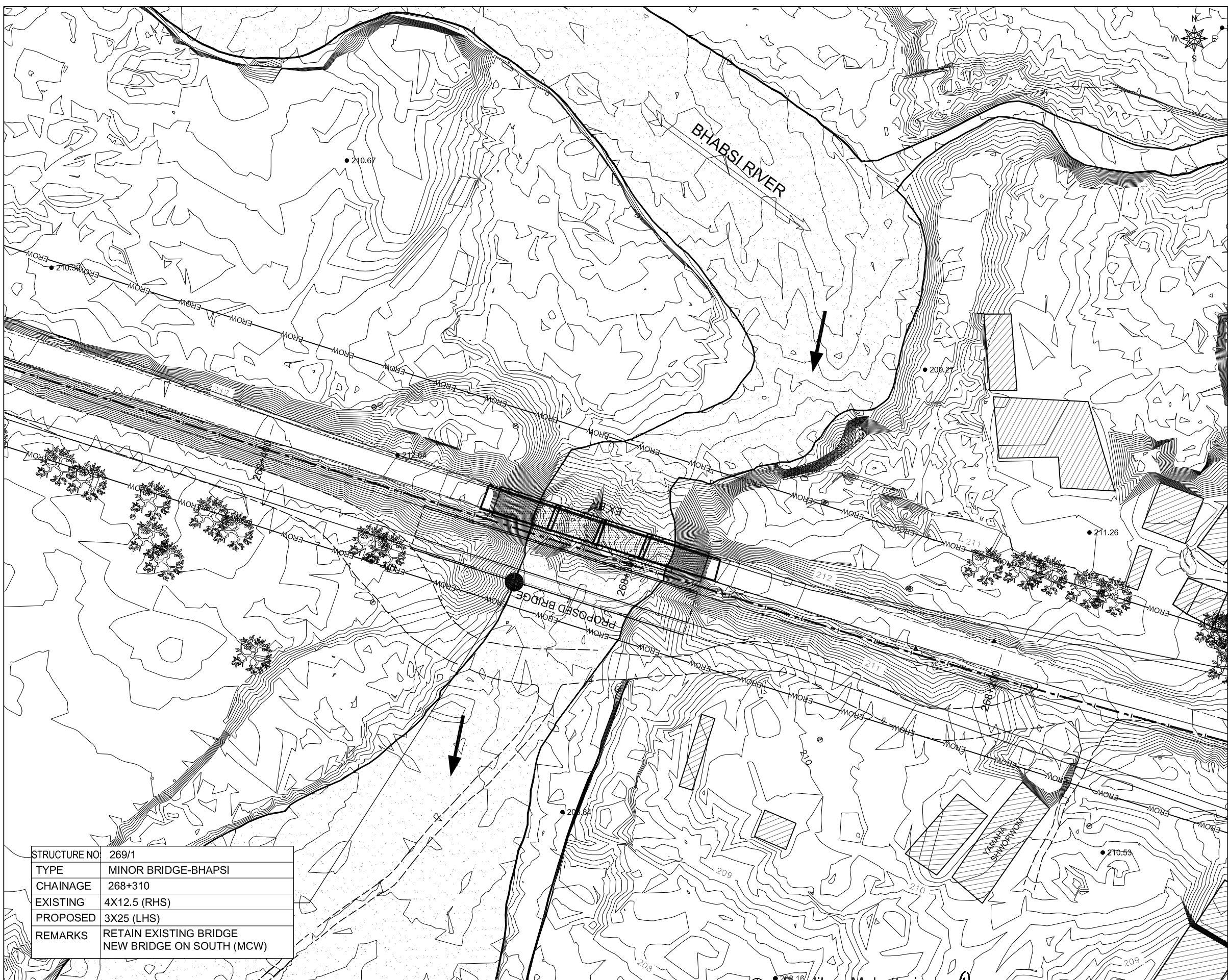
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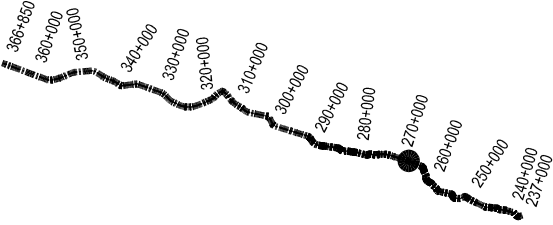
PROJECT KEY MAP

DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
MAIN FOOT TRAIL		ANIMAL FARM	
PLACE NAME		BAMBOO	
POLICE STATION		BIO GAS	
PETROL PUMP		BUS WAITING STATION	
Pond/ Water Body		BRIDGE	
POULTRY FARM		CONTOUR	
PROPERTY BOUNDARY		CANAL	
ROAD INFORMATION BOARD		CULVERT	
RIVER		CONTROL POINT (G)	
SPOT HEIGHT		CRUSHER	
SHED		DELINOTOR	
SAFTY TANK		ELECTRIC POLE	
SCHOOL		FACTORY	
STREET LIGHT		FEEDAR ROAD	
TAP		FISH FARM	
TEMPORARY HOUSE		FLOW DIRECTION	
TREE		GABION WALL	
TRANSMISSION LINE TOWER		HOSPITAL	
WELL		HAND PUMP	
TEMPLE		HOUSE	
CGI SHEET HOUSE		HOADING BOARD	
TOILET		CARRIAGE WAY	
WOODEN HOUSE		HUT	
WATER TANK		INDEX CONTOUR	
TRANSFORMER		KILOMETER POST	
SHOULDER		MONASTERY	

 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of EPTISA Servicios De Ingenieria Madrid, Spain STUP Consultants Private Limited Kolkatta, India		Designed By Mr. R.D. Nec.No. 6489 CIVIL/14 Signature	Drawing Name DETAILED SURVEY TOPOGRAPHIC MAP (EXISTING CONDITION) OF BRIDGE OVER RIVER BHAPSI Reference Drawings	Scale: AS SHOWN Chainage: 268+310	Date: 22.04.2023 Drawing No.- KDP/DPR/STR/BR/BHAPSI/DD - 2 Sheet No. 1 / 1
		Checked By Mr. S.M. Signature	Approved By Mr. H.B. Signature				
		In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited					



STRUCTURE NO	269/1
TYPE	MINOR BRIDGE-BHAPSI
CHAINAGE	268+310
EXISTING	4X12.5 (RHS)
PROPOSED	3X25 (LHS)
REMARKS	RETAIN EXISTING BRIDGE NEW BRIDGE ON SOUTH (MCW)



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WATER TANK		INDEX CONTOUR	
TRANSFORMER		KILOMETER POST	
SHOULDER		MONASTERY	

EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Drawing Name		Scale:		Date:	
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division		Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges		Joint Venture of EPTISA Servicios De Ingenieria Madrid, Spain STUP Consultants Private Limited Kolkatta, India		Detailed Survey TOPOGRAPHIC MAP(WITH PROPOSED BRIDGE) OF BRIDGE OVER RIVER BHAPSI		AS SHOWN		22.04.2023	
				In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited		Reference Drawings		Chainage: 268+310		Drawing No.- KDP/DPR/STR/BR/BHAPSI/DD - 3	
										Sheet No. 1 / 1	
Designed By Mr. R.D. Nec.No. 6489 CIVIL/14		Checked By Mr. S.M.		Approved By Mr. H.B.							

A. GENERAL

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METERS UNLESS NOTED OTHERWISE.
2. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED. DIMENSIONS ARE NOT TO BE SCALED.
3. THE LAYOUT OF THE BRIDGE/CULVERT SHALL BE SET AS PER RELEVANT HIGHWAY PLAN AND PROFILE DRAWING.
4. THE FORMATION LEVEL GIVEN IN THIS DRAWING SHALL BE VERIFIED FROM THE RELEVANT HIGHWAY DRAWING. IN CASE OF ANY DISCREPANCY THE HIGHWAY DRAWING SHALL BE CONSIDERED CORRECT.

B. DESIGN CRITERIA

1. THE DESIGN HAS BEEN PREPARED BASED ON THE FOLLOWING CODES:
a) NEPAL ROAD STANDARD 2070
b) IRC-5 2015
c) IRC-6 2017
d) IRC-78 2014
e) IRC-112 2020
f) IRC SP-13 2022
2. TOTAL WIDTH OF THE BRIDGE DECK: 11.85 M (8 M WIDE CARRIAGEWAY + 2.5 M WIDE FOOTPATH) HOWEVER THIS BRIDGE IS DESIGNED FOR THE FOLLOWING CARRIAGEWAY LIVE LOADS AS PER IRC:6-2017
a) ONE LANE OF IRC CLASS 70R (WHEELED) FOR TWO LANES + ONE LANE OF IRC CLASS A
b) THREE LANES OF IRC CLASS A
3. SEISMIC ZONE CONSIDERED IN THE DESIGN IS ZONE-V.
4. LAYING, COMPACTION, & EXTENT OF BACKFILL BEHIND ABUTMENT & RETURN/RETAINING WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO THE APPENDIX-6 OF IRC:78-2014 HAVING PROPERTIES $C=0$, $\phi=30^\circ$ & DENSITY=20KN/m³.
5. 100mm DIA WEEP HOLES AT 1000mm C/C BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN STAGGERED MANNER IN VERTICAL WALLS OF THE ABUTMENT AND RETURN WALL ABOVE GL. IN ONE OR TWO LAYERS AT A SLOPE OF 1 VERTICAL TO 20 HORIZONTAL TOWARDS THE DRAINING FACE.

C. HYDRAULIC DATA: -

1. DESIGN DISCHARGE, (Q100) - 161.21 CUMECs
2. HFL - 209.540 M
3. FREE BOARD (MINIMUM) - 1 M
4. MAXIMUM SCOUR LEVEL:
ABUTMENT - 203.630M
PIER - 200.640M

SCOUR LEVELS WERE CALCULATED AS PER IRC 78:2014 CL 703 WITH APPROPRIATELY INCREASED DESIGN DISCHARGE

D. STRUCTURAL AND OTHER DATA: -

1. SPAN ARRANGEMENT: 3 X 25 = 75 M
2. SUPERSTRUCTURE:
PRECAST RCC LONGITUDINAL GIRDERS & CAST-IN-SITU RCC CROSS GIRDERS AND DECK SLAB.
3. SUBSTRUCTURE
A) ABUTMENTS - RCC WALL TYPE
4. FOUNDATIONS
A) ABUTMENT - 1200 DIA BORED CAST-IN-SITU PILE
DESIGN WORKING LOAD ON PILE - 321.32 TON
B) PIER- 1200 DIA BORED CAST-IN-SITU PILE
DESIGN WORKING LOAD ON PILE - 269.67 TON
RCC BORED PILES SHOULD BE CONSTRUCTED AS PER IS: 2911(PART 1/SEC 2)-2010.
5. BEARINGS
ELASTOMERIC BEARINGS
6. WEARING COAT:
65 MM THICK ASPHALTIC CONCRETE WEARING COAT AS PER STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE WORKS (2073) ,
DEPARTMENT OF ROADS
7. EXPANSION JOINT -
SLAB SEAL TYPE EXPANSION JOINT OF PROVEN QUALITY SHALL BE PROVIDED IN ACCORDANCE WITH IRC:SP-69-2005 (GUIDELINES AND SPECIFICATIONS OF EXPANSION JOINT)
8. DRAINAGE SPOUTS - AS PER STANDARD SPECIFICATION FOR ROAD & BRIDGE WORKS 2073
9. RAILINGS/CRASH BARRIER:
RCC CRASH BARRIER AT EDGES OF CARRIAGEWAY AND FOOTPATH

10. FOOTPATH

2.5m WIDE FOOTPATH AT OUTER EDGE OF DECK

11. CONCRETE: -

- a. PILE..... M35 (CEMENT CONTENT AS PER SPECIFICATION)
b. PILE CAP.....M35
c. BEARING PEDESTALS.....M40
d. ABUTMENTM35
e. PIER.....M35
f. PIER CAP.....M35
g. RETURN WALL.....M35
h. LEVELING COURSE: I) BELOW APPROACH SLAB.....M15
II) BELOW PILE CAP.....M15
g. APPROACH SLABM30
h. CAST-IN-SITU CRASH BARRIERM40
i. KERBM35
j. DECK SLAB FOR RCC GIRDERS.....M35
k. PRECAST RCC GIRDERSM35
l. CAST-IN-SITU CROSS GIRDER FOR RCC GIRDERS.....M35

12. REINFORCEMENT STEEL: -

- a. H.Y.S.D. BARS - GRADE 500 CONFORMING TO IS 1786
b. REINFORCEMENT WHERE EVER NECESSARY SHALL BE LOCALLY BENT OR ADJUSTED TO ENSURE PROPER CONCRETING.

13. CONCRETE COVER

- a. DECK SLAB, GIRDER, PEDESTAL, CAP : 40 MM
b. SUBSTRUCTURE AND FOUNDATION : 75 MM

14. LAPS (Ls) ARE TO BE STAGGERED AND MINIMUM LAP LENGTH ARE TO BE AS FOLLOWS:

- a) FOR M 30 GRADE CONCRETE : 57.2Ø
b) FOR M 35 GRADE CONCRETE : 51.48Ø
c) FOR M 40 GRADE CONCRETE : 48.62Ø

(WHERE Ø IS THE DIAMETER OF THE BAR)

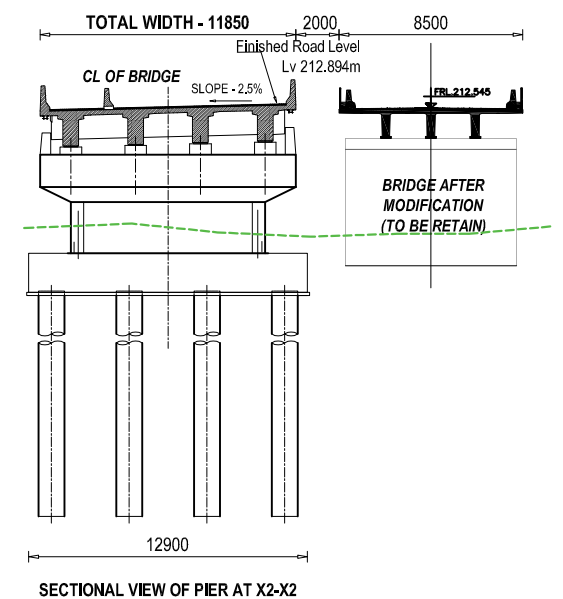
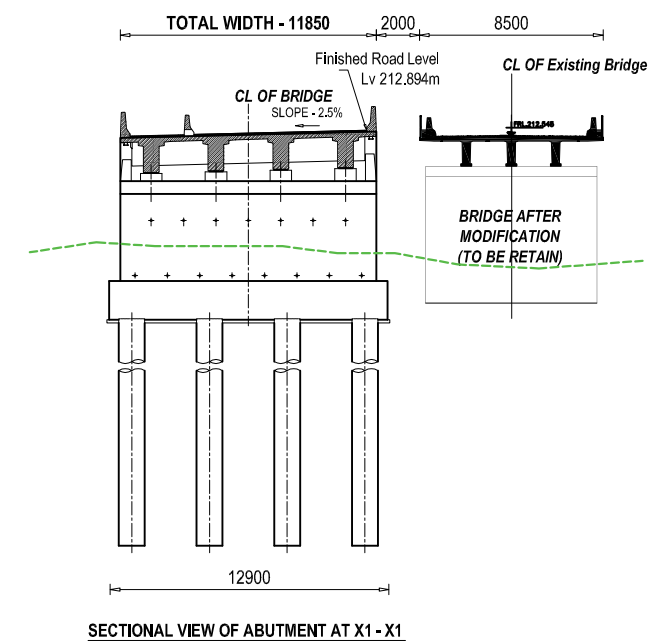
15. LAP LENGTH SHALL BE INCREASED BY A FACTOR BASED ON THE PERCENTAGE OF LAPPED BAR RELATIVE TO THE TOTAL CROSS SECTIONAL AREA. LAP LENGTH FOR DIFFERENT GRADE OF CONCRETE AS WELL AS DIFFERENT PERCENTAGE OF LAP LENGTH ARE AS FOLLOWS:

GRADE OF CONCRETE	M30	M35	M40	M45
LAPPED BAR <25%	57.2Ø	51.48Ø	48.62Ø	45.76Ø
25%≤LAPPED BAR <33%	65.78Ø	62.65Ø	55.91Ø	52.62Ø
33%≤LAPPED BAR <50%	80.08Ø	72.07Ø	68.07Ø	64.06Ø
50%≤LAPPED BAR	85.8Ø	77.22Ø	72.93Ø	68.64Ø

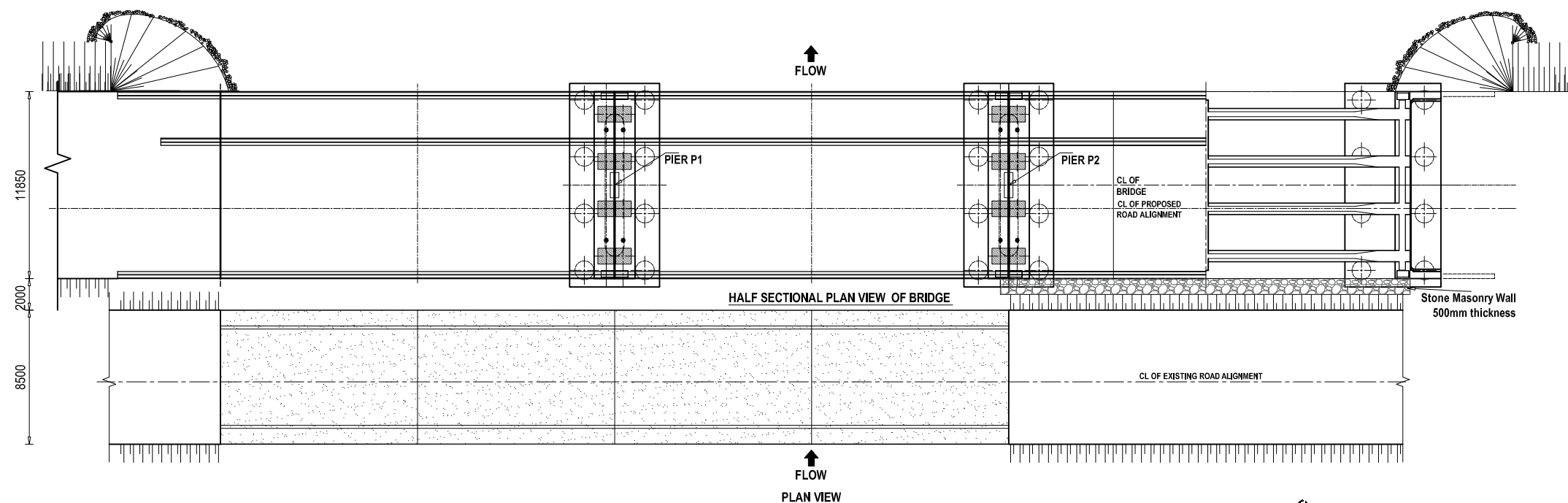
16. THE LAP LENGTH SHALL BE STAGGERED BY MINIMUM DISTANCE OF 1.3 TIMES THE LAP LENGTH.
17. HELICAL REINFORCEMENT SHALL BE LAPPED BY 1.5 TURNS.
18. INSTEAD OF LAPPING SPLICING OF REINFORCEMENT CAN BE DONE WITH WELDED JOINT AS PER CL. 15.2.5.2 OF IRC 112-2020. WELD LENGTH SHALL NOT BE LESS THAN 18Ø.
19. SHARP EDGES OF CONCRETE TO BE CHAMFERED MINIMUM 50 X 50

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		In Association With Udaya Consultancy, Geocom International, Sundar Krti Consultant and Rays Consultant Private Limited	Mr. H.B.	Signature	Reference Drawings	Chainage:	Drawing No.- KDP/DPR/STR/BR/BHAPSI /DD-4
						268+310	Sheet No. 1 / 1

➔
TO PATHALAIYA

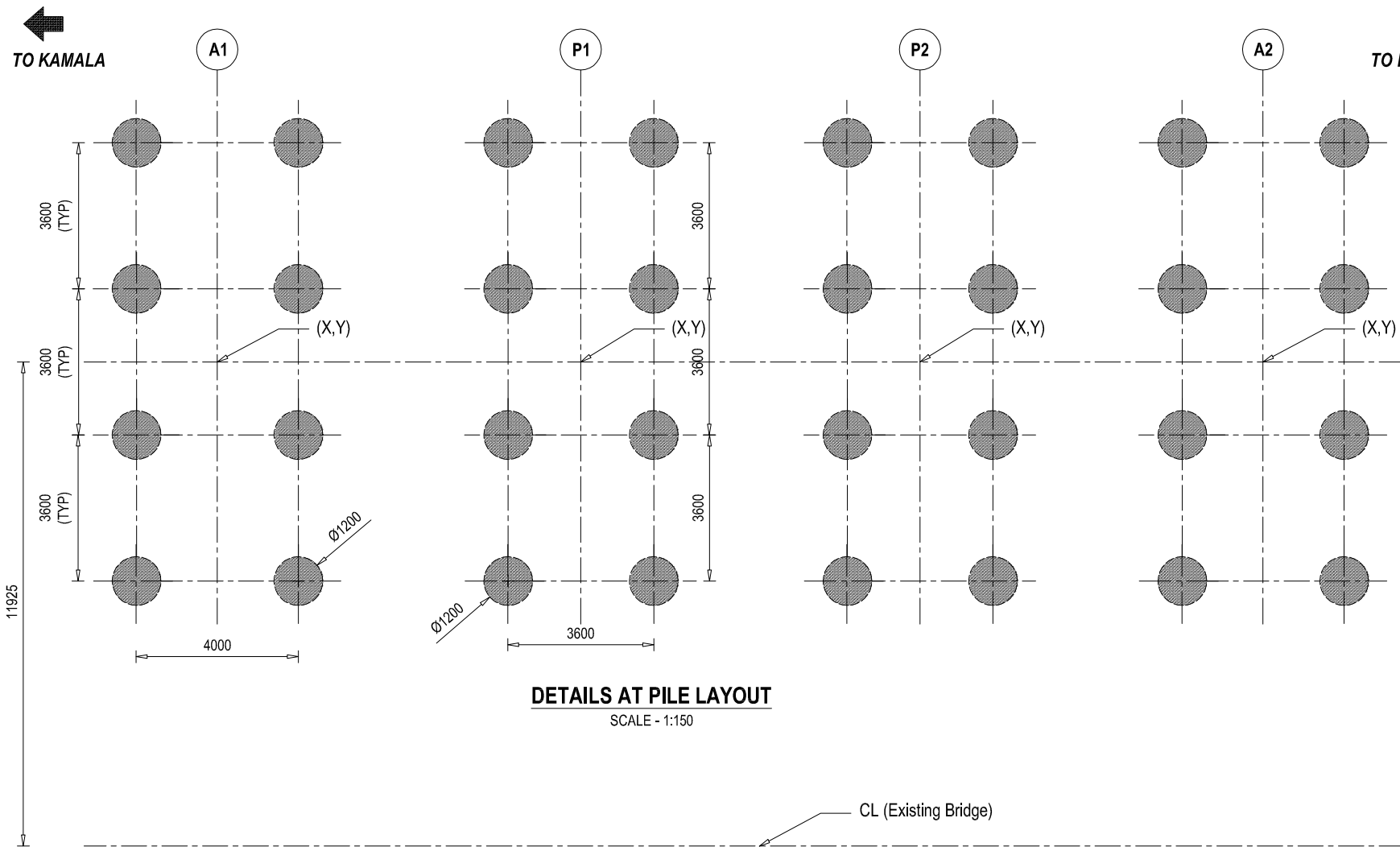


Finished Road Level(D/S)	LEFT ABUTMENT	212.894	PIER 1	212.830	PIER 2	212.785	LEFT ABUTMENT	212.740
Finished Road Level (Existing Bridge)		212.545		212.545		212.545		212.545
Existing Ground Level(D/S)		209.813		206.844		206.844		210.294
Existing Ground Lv		209.546		207.529		207.354		211.001
Chainage		268+272.5		268+297.5		268+322.5		268+347.5



SCALE 1 :350 (@ A3)

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		Checked By Mr. S.M. <i>[Signature]</i>	GENERAL ARRANGEMENT OF BRIDGE OVER RIVER BHAPSI				
		Approved By Mr. H.B. <i>[Signature]</i>	In Association With Udaya Consultancy, Geocom International, Sundar Krti Consultant and Rays Consultative Private Limited	Reference Drawings	Chainage:	268+310	Drawing No.- KDP/DPR/STR/BR/BHAPSI/DD- 5 Sheet No. 1 / 1



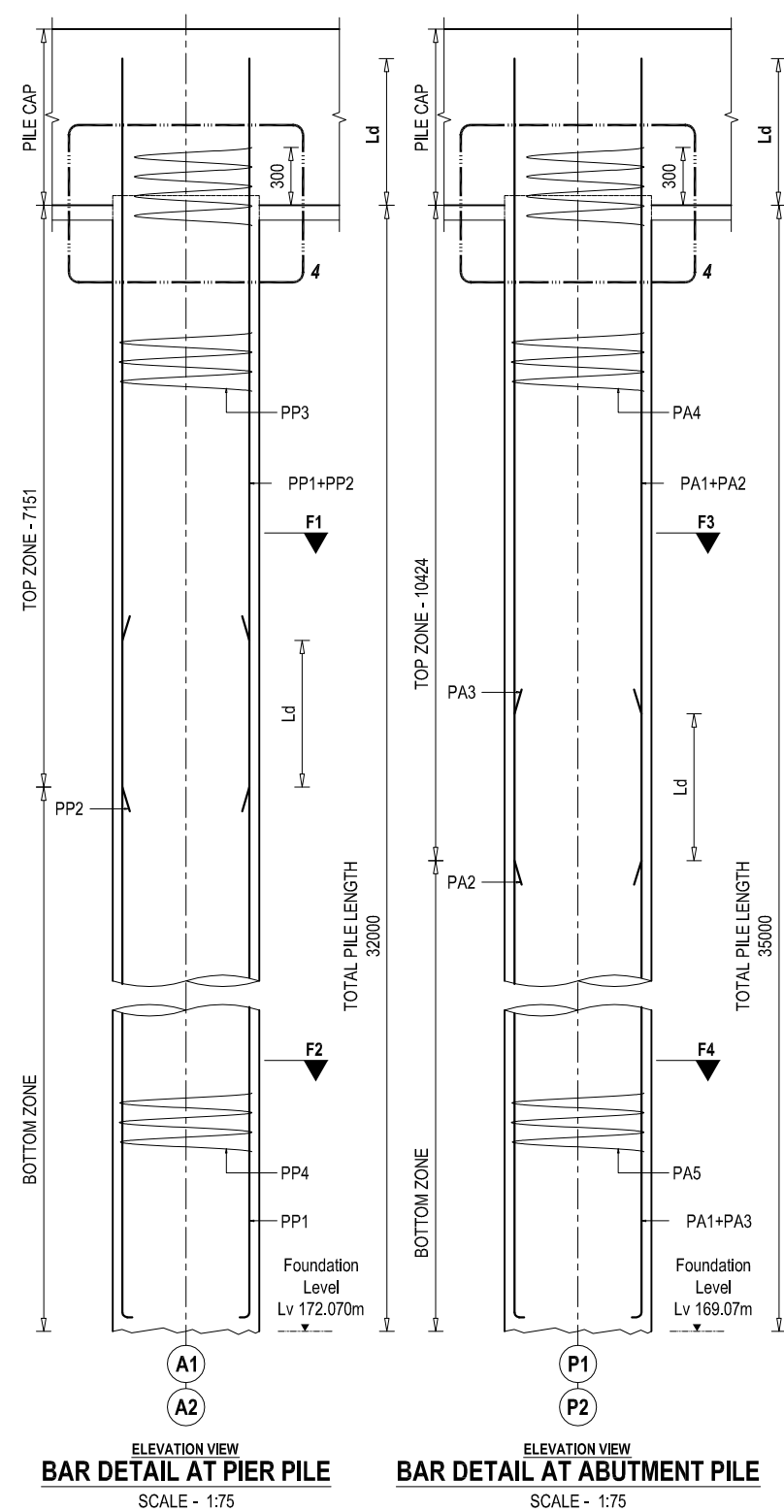
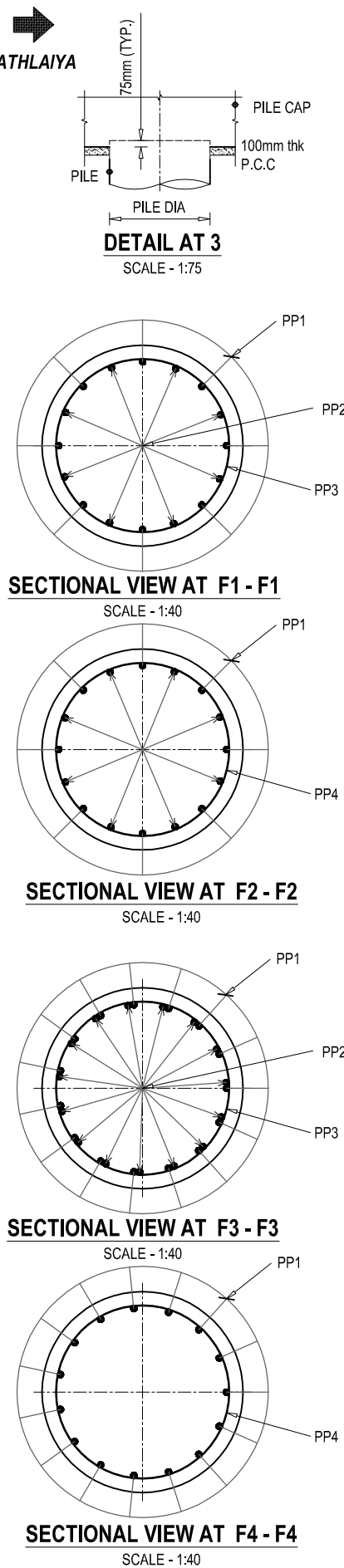
PILE CAPACITY PIER (INDIVIDUAL)		
SN.	DIA (mm)	CAPACITY (Ton)
1	1200	269.67

PILE CAPACITY ABUTMENT (INDIVIDUAL)		
SN.	DIA (mm)	CAPACITY (Ton)
1	1200	321.32

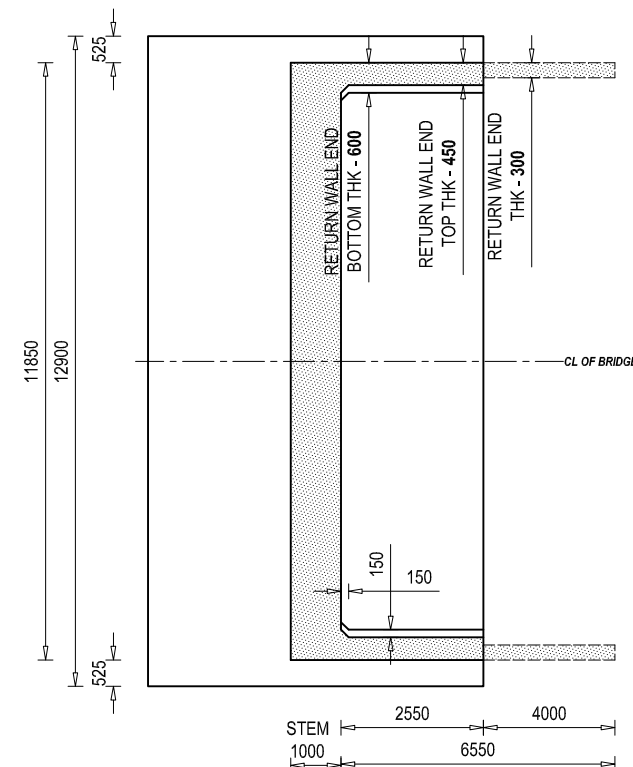
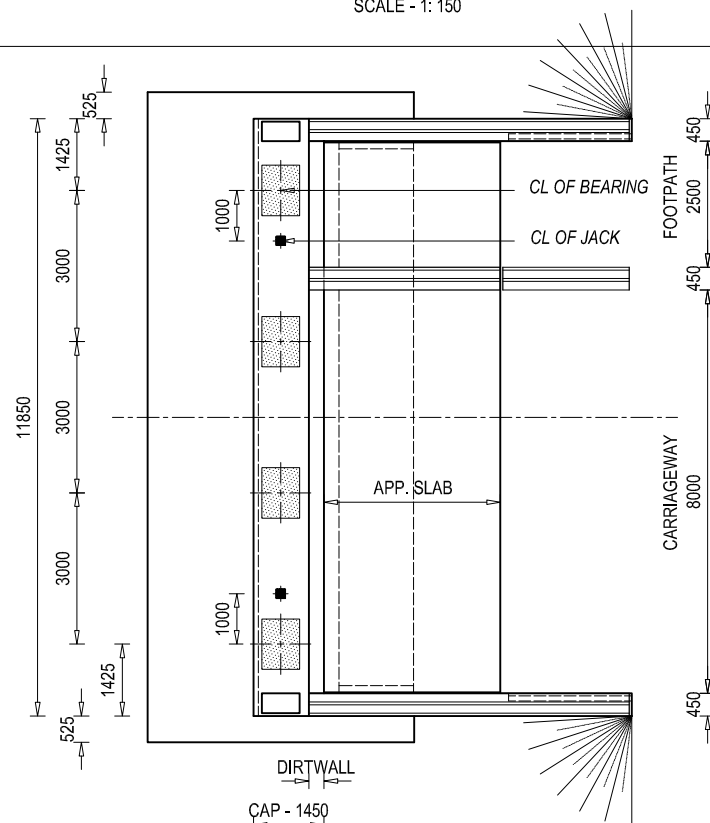
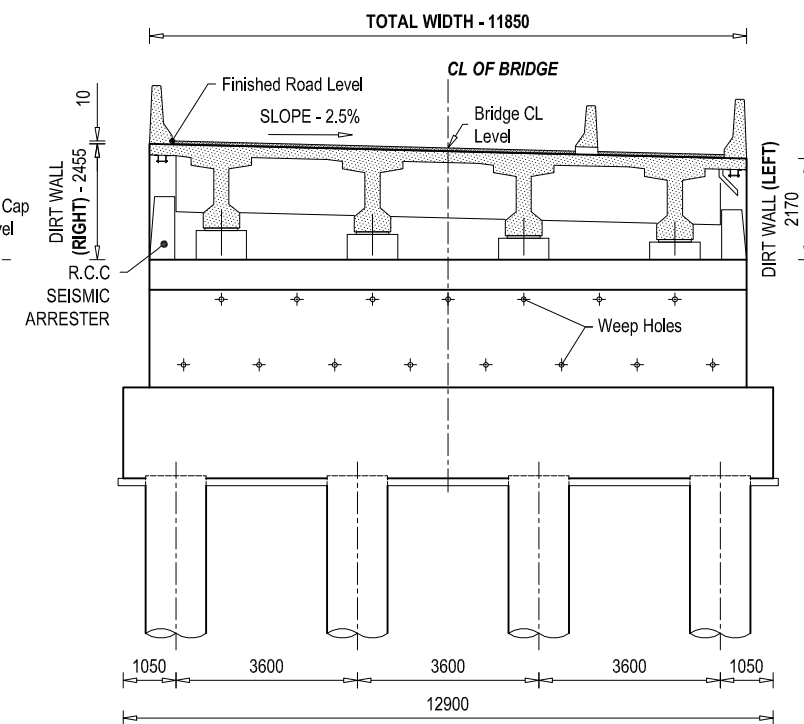
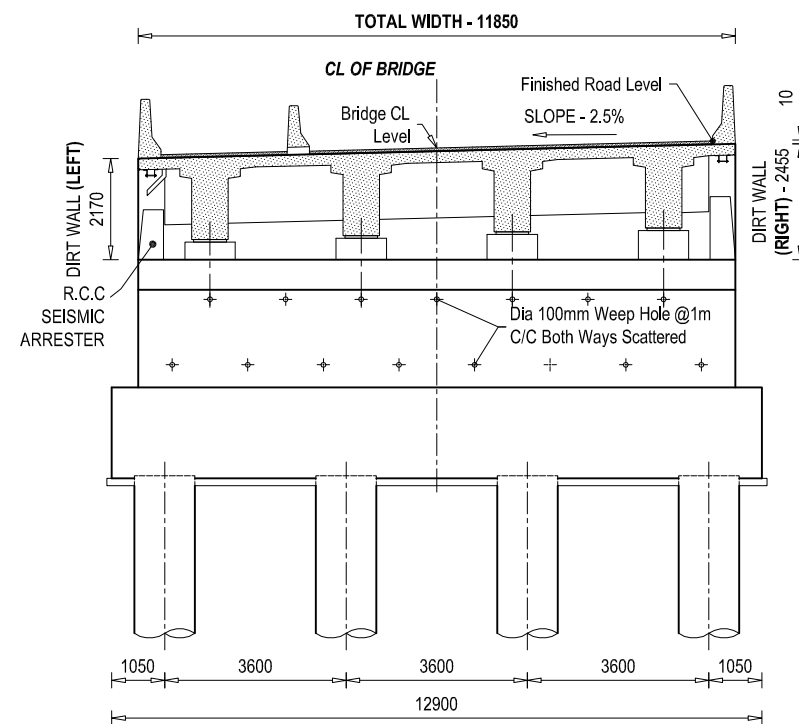
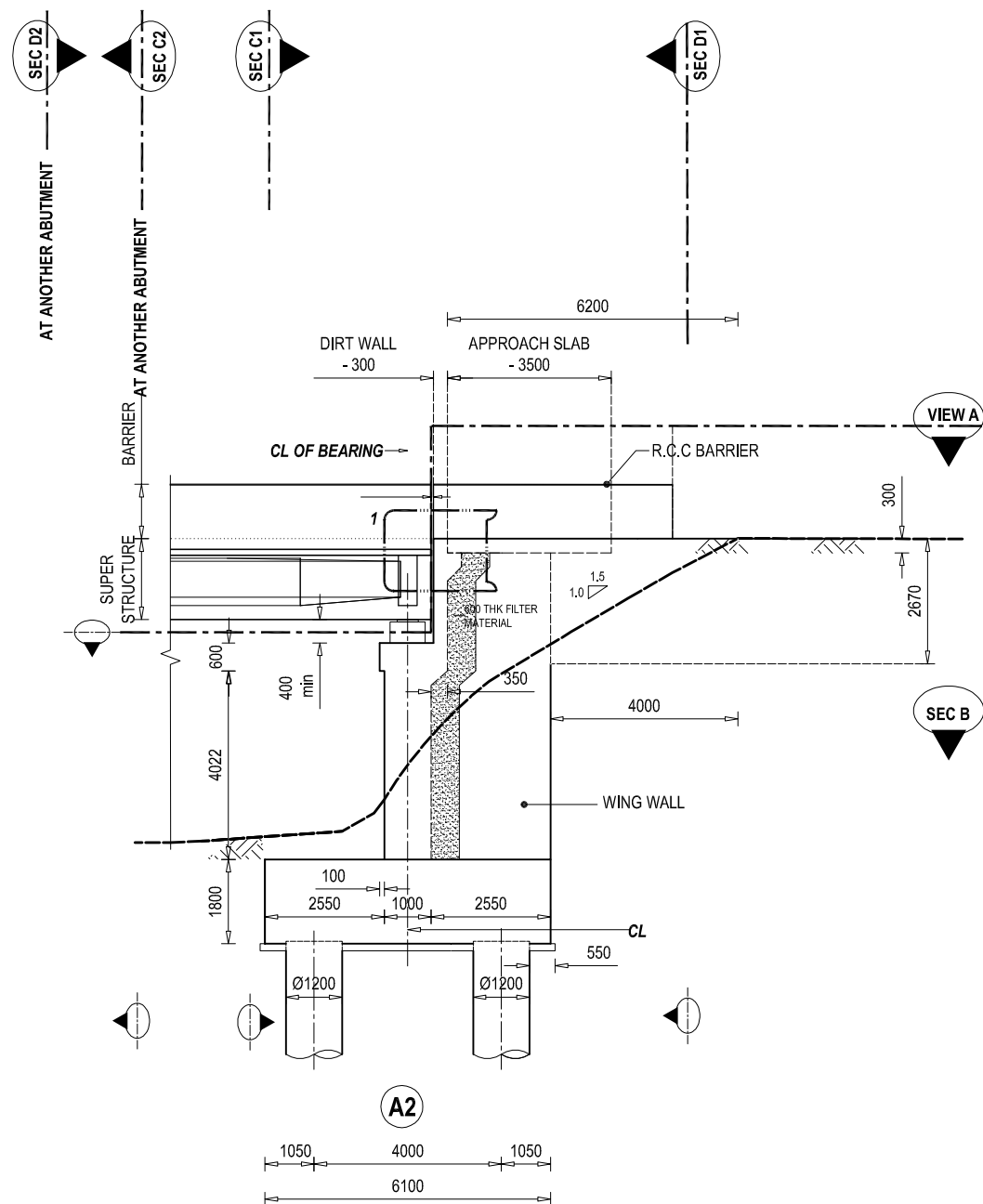
BAR BENDING SCHEDULE OF PIER PILE								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	PP1	300 33650	32		33.950	15	6.321	3218.96
2	PP2	13649	32		13.649	15	6.320988	1294.127
3	PP3	Dia. 1034 100	16	100	3.448	51	1.580	277.91
4	PP4	Dia. 1034 100	12	100	3.448	269	0.889	824.53
TOTAL (KG) :								5615.53
No. of Pile								8.00
TOTAL WEIGHT (KG) :								44924.23

BAR BENDING SCHEDULE OF ABUTMENT PILE								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	PA1	36650	32		36.950	8	6.321	1868.48
2	PA2	10376	32		10.376	8	6.321	524.693
3	PA3	27774	12		28.074	8	0.889	199.64
4	PA4	Dia. 1034 100	16	110	3.448	47	1.580	256.11
5	PA5	Dia. 1034 100	12	110	3.448	272	0.889	833.72
TOTAL (KG) :								3682.65
No. of Pile								8.00
TOTAL WEIGHT (KG) :								29461.20

NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/BHAPS/DD-4

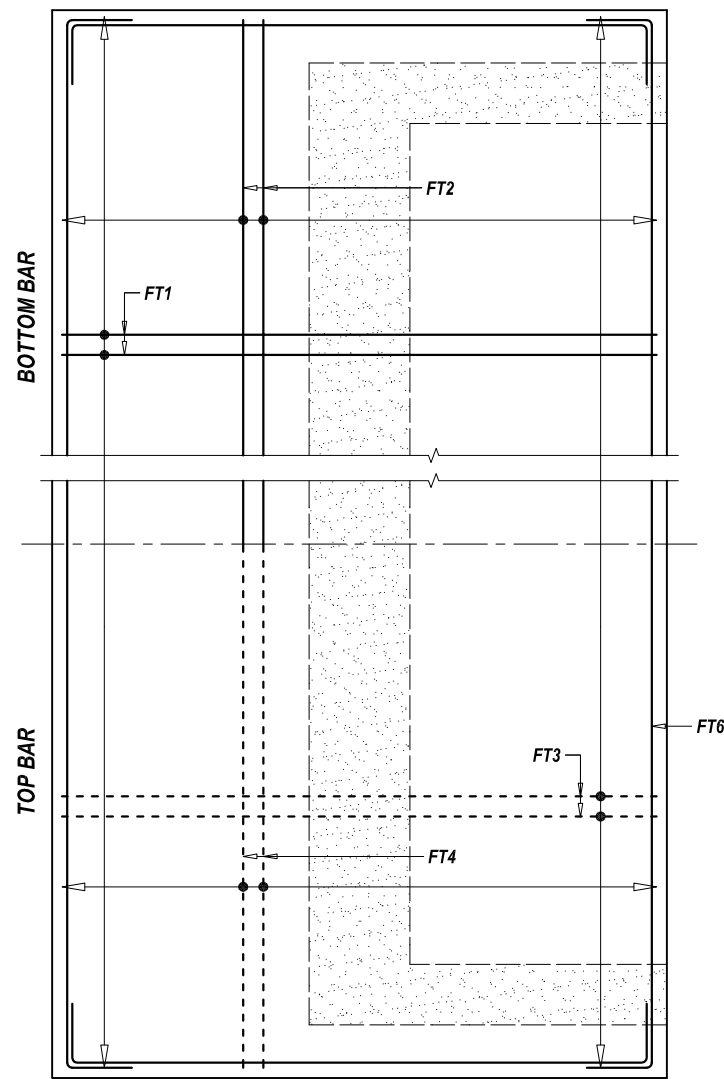


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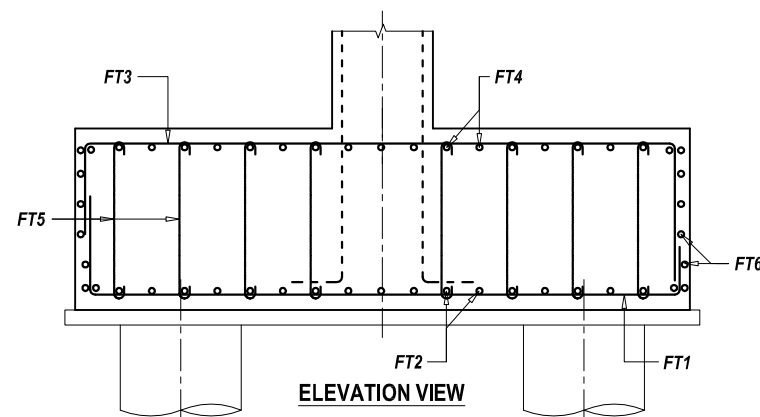


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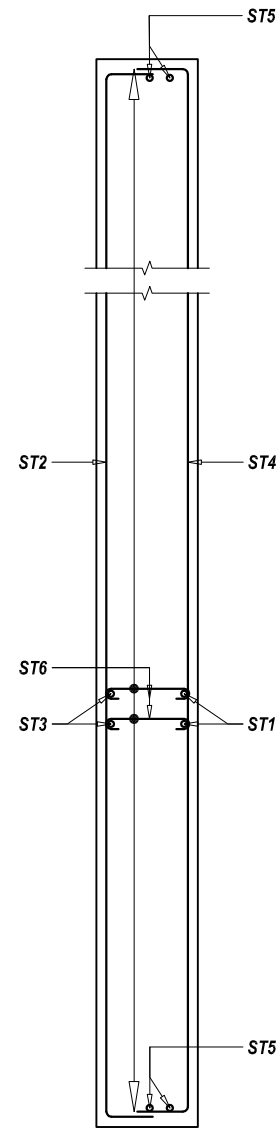
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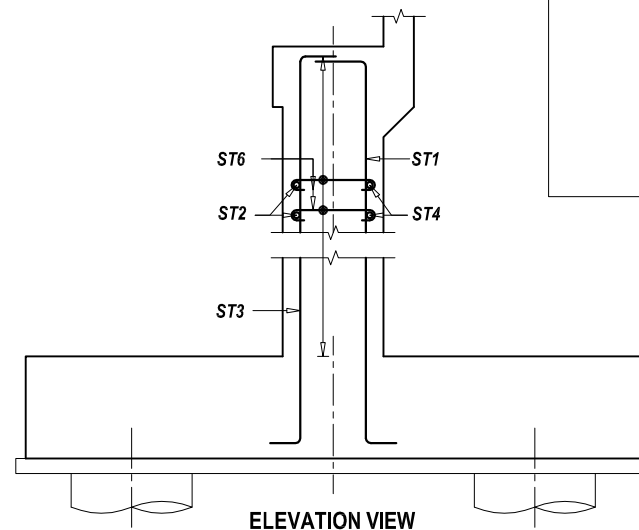
PLAN VIEW



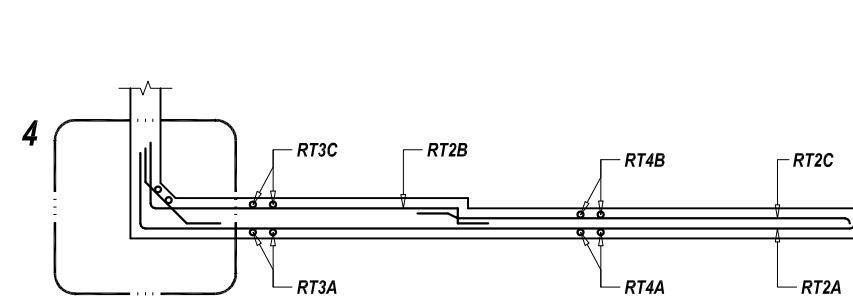
BAR DETAIL OF PILE CAP
SCALE - 1 : 75



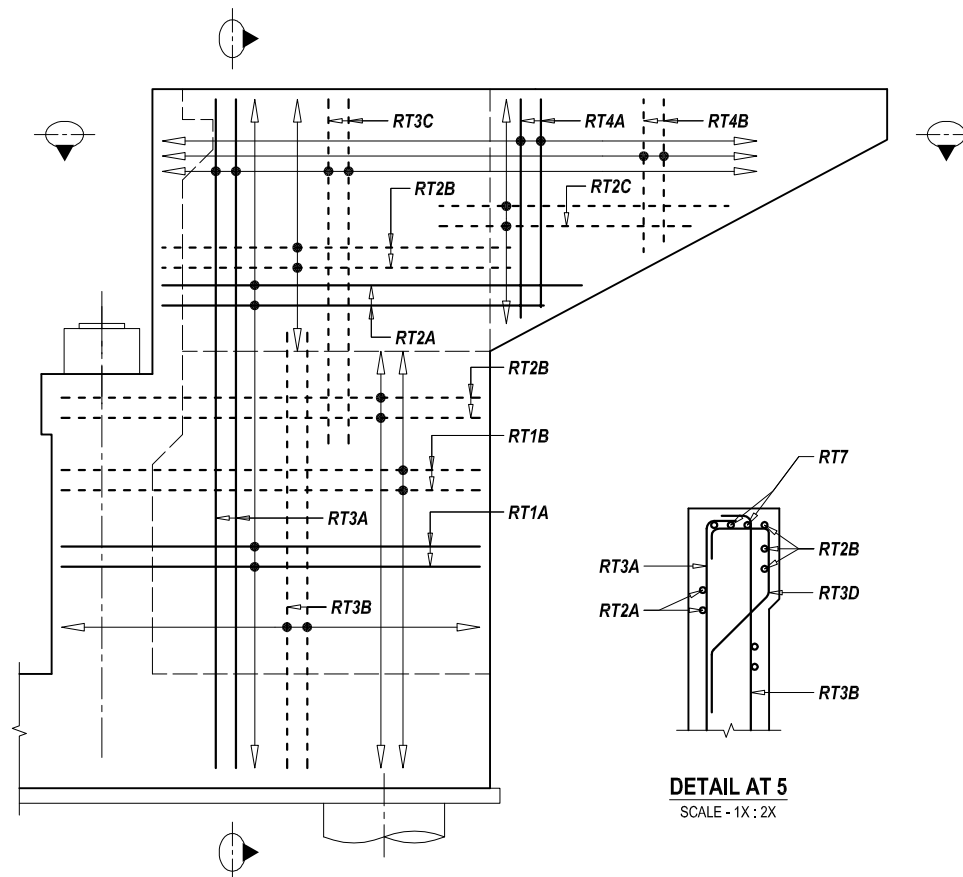
SECTIONAL PLAN VIEW



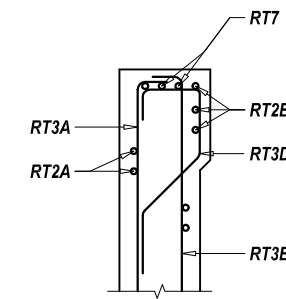
BAR DETAIL AT ABUTMENT STEM
SCALE - 1 : 75



SECTIONAL PLAN VIEW

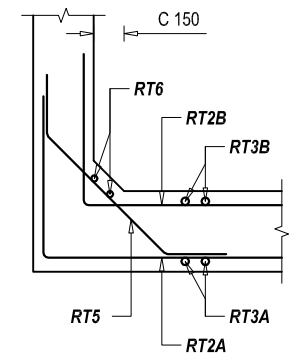


ELEVATION VIEW

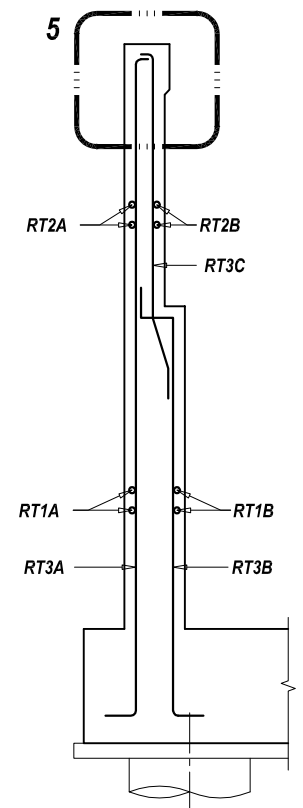


DETAIL AT 5
SCALE - 1X : 2X

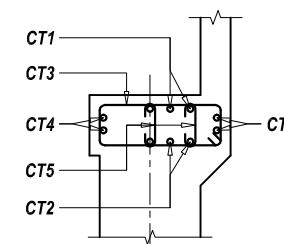
BAR DETAIL AT RETURN WALL
SCALE - 1 : 75



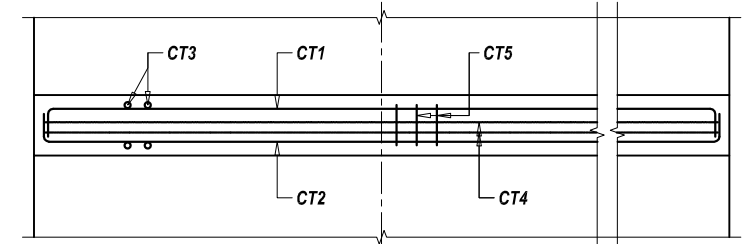
DETAILS AT 4



SECTIONAL SIDE VIEW



ELEVATION VIEW



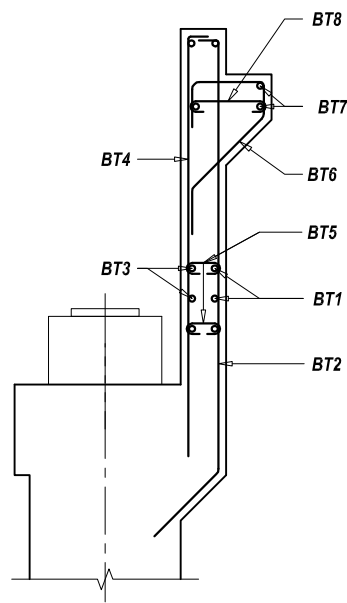
FRONT VIEW

BAR DETAIL AT ABUTMENT CAP
SCALE - 1 : 75

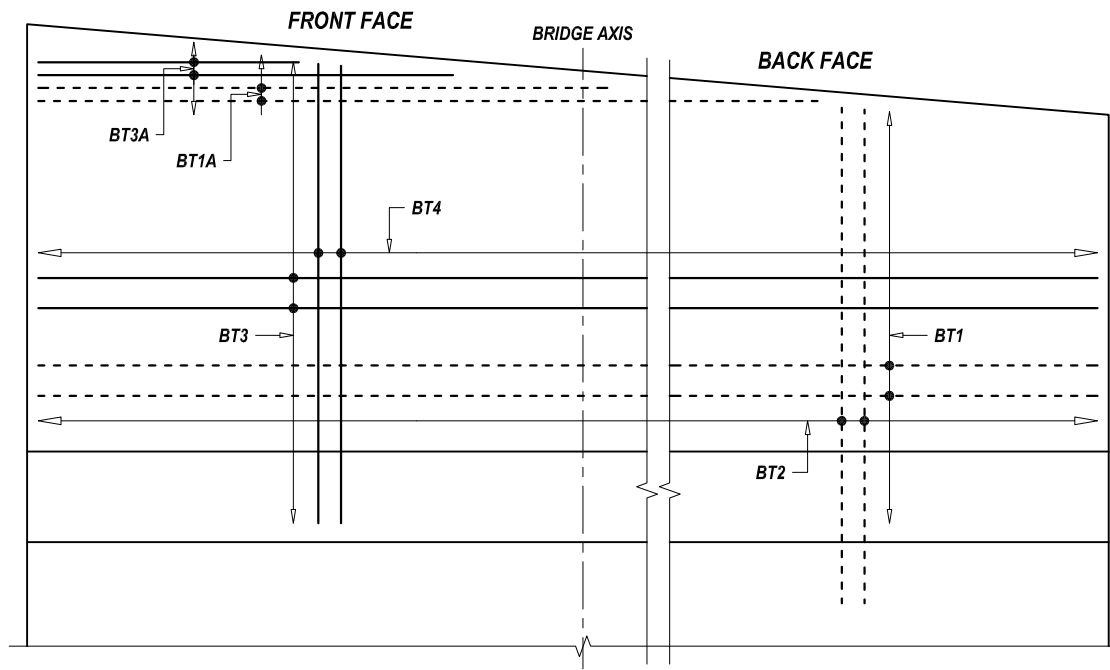
--- TOP BAR OR NEAR FACE REINFORCEMENT
--- BOTTOM BAR OR FAR FACE REINFORCEMENT

NOTE:
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/BHAPSI/DD-4

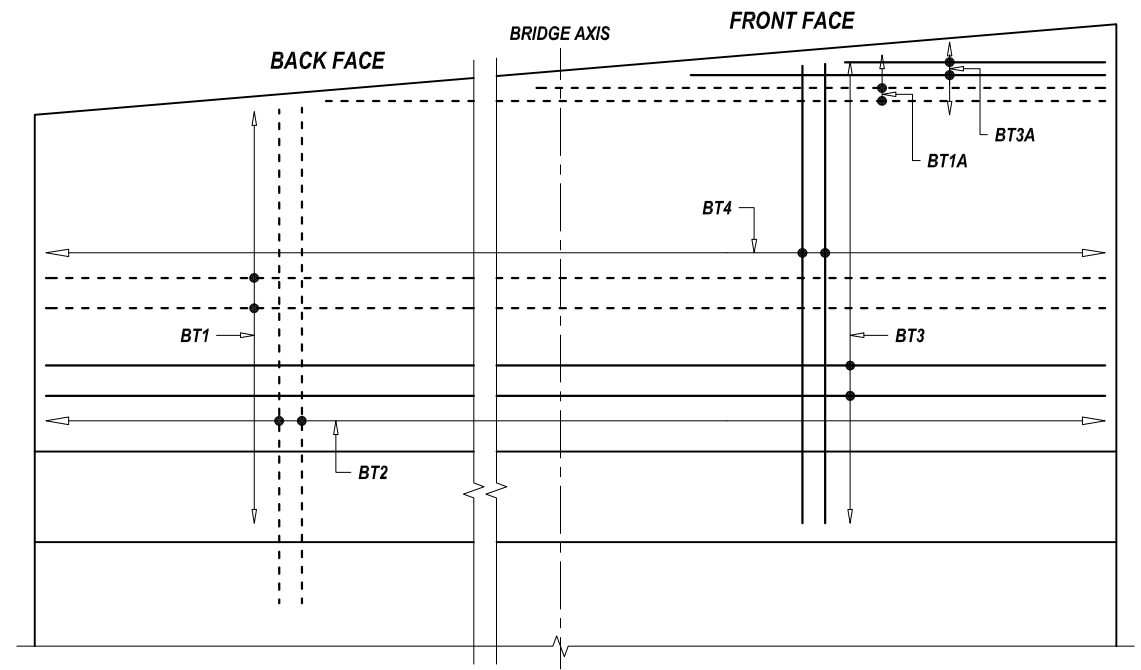
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.D.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited	Mr. S.M. 	Mr. H.B. 	ABUTMENT REINFORCEMENT DETAILS OF BRIDGE OVER RIVER BHAPSI Reference Drawings KDP/DPR/STR/BR/BHAPSI/DD-3	AS SHOWN Chainage: 268+310	24/05/2023 Drawing No.- KDP/DPR/STR/BR/BHAPSI/DD-8 Sheet No. 1 / 2



SECTIONAL SIDE VIEW



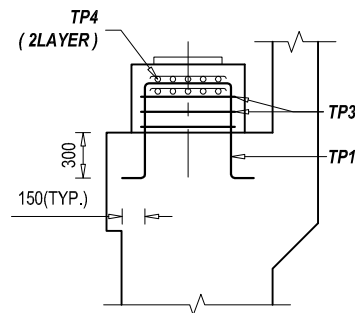
ELEVATION VIEW / VIEW AT D1



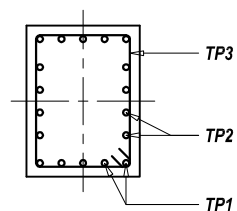
ELEVATION VIEW / VIEW AT D2

BAR DETAIL AT DIRT WALL

SCALE - 1 : 50

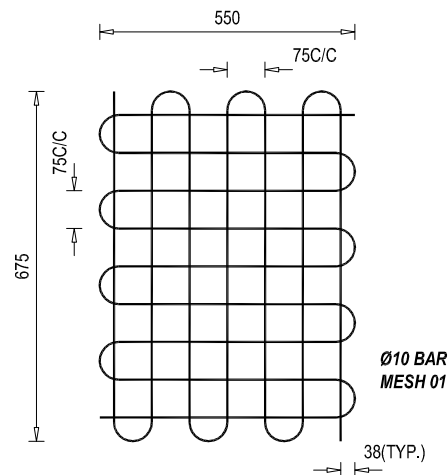


SECTIONAL SIDE VIEW



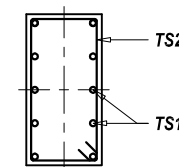
SECTIONAL PLAN VIEW
BAR DETAIL AT PEDESTAL

SCALE - 1 : 50

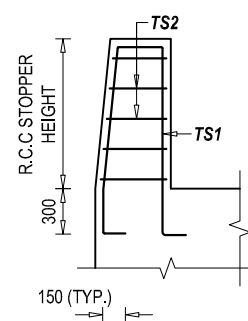


REINFORCEMENT DETAILS OF
BEARING MESH

SCALE - 1 : 50

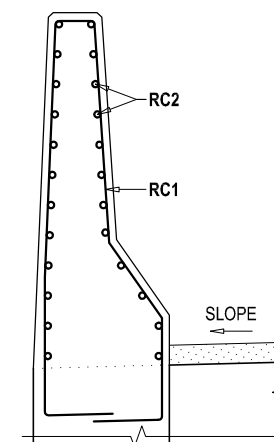


SECTIONAL PLAN VIEW



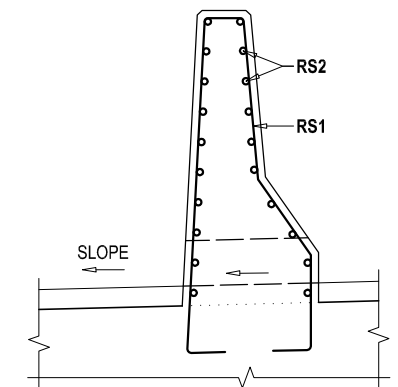
R.C.C STOPPER LEFT
ELEVATION VIEW

SCALE - 1 : 50



REINFORCEMENT DETAILS OF
R.C.C BARRIER (B)- SECTIONAL VIEW

SCALE - 1 : 25



REINFORCEMENT DETAILS OF
R.C.C SEPARATOR - SECTIONAL VIEW

SCALE - 1 : 25

— TOP BAR OR
NEAR FACE REINFORCEMENT
— BOTTOM BAR OR
FAR FACE REINFORCEMENT

NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/BHAPS/DD-4

EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.D.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlajaya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kritt Consultant and Rays Consultant Private Limited	Checked By Approved By	Mr. S.M. Mr. H.B.	ABUTMENT REINGORCEMENT DETAILS OF BRIDGE OVER RIVER BHAPSI Reference Drawings KDP/DPR/STR/BR/BHAPS/DD-9	AS SHOWN Chainage: 268+310	24/05/2023 Drawing No.- KDP/DPR/STR/BR/BHAPS/DD-8 Sheet No. 2 / 2

BAR BENDING SCHEDULE OF DIRT WALL								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	BT1	150 11700 150	16	200	12.000	17	1.580	322.37
2	BT1A	Avg. 5850 150	16	200	6.000	3	1.580	28.44
3	BT2	150 2803 Avg. 450	16	125	3.403	96	1.580	516.25
4	BT3	150 11700 150	16	200	6.000	13	1.580	123.26
5	BT3A	Avg. 5850 150	16	200	6.000	3	1.580	28.44
6	BT4	150 2878 Avg.	12	125	3.028	96	0.889	258.39
7	BT5	100 150 100	12	500	0.350	72	0.889	22.40
8	BT6	200 450 220 200 756	12	200	1.826	61	0.889	99.01
9	BT7	11700	16		11.700	5	1.580	92.44
10	BT8	100 450 100	12	200	0.650	720	0.889	416.00
TOTAL (KG) :								1907.01

BAR BENDING SCHEDULE OF ABUTMENT CAP								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	CT1	300 11700 300	16	150	12.300	11	1.580	213.81
2	CT2	300 11700 300	16	150	12.300	11	1.580	213.81
3	CT3	450 1300 100	16	150	3.700	80	1.580	467.75
4	CT4	300 11700 300	12	150	12.000	8	0.889	85.33
5	CT5	450 100 100	12	Long-150 Trans300	0.650	382	0.889	220.71
TOTAL (KG) :								1201.41

BAR BENDING SCHEDULE OF ABUTMENT STEM								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	ST1	300 6272 750	25		7.322	100	3.858	2824.85
2	ST2	500 11700 500	16	110	12.700	37	1.580	742.56
3	ST3	300 6272 750	25		7.322	100	3.858	2824.85
4	ST4	500 11700 500	16	110	12.700	37	1.580	742.56
5	ST5	300 6272 750	16		7.322	12	1.580	138.85
6	ST6	100 850 100	12	Ver. 110 Hor.240	1.050	1850	0.889	1726.67
TOTAL (KG) :								9000.32

BAR BENDING SCHEDULE OF PILE CAP								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	FT1	900 5950 900	25		7.750	100	3.858	2989.97
2	FT2	900 12750 900	20		14.550	50	2.469	1796.30
3	FT3	900 5950 900	16		7.750	100	1.580	1224.69
4	FT4	900 12750 900	16		14.550	50	1.580	1149.63
5	FT5	100 1650 100	16	Long. 240 Trans260	1.850	1216	1.580	3554.92
6	FT6	5900 12710 150	16	200	37.520	8	1.580	474.33
TOTAL (KG) :								11189.84

BAR BENDING SCHEDULE OF PEDESTAL								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TP1	150 700 Avg. 650	16	150	2.350	5	1.580	18.57
1	TP2	150 600 Avg. 650	16	150	2.150	6	1.580	20.39
2	TP3	700 600 100	16	150	2.800	3	1.580	13.27
1	TP4	675 550 @ 75	10		11.625	2	0.617	14.35
TOTAL (KG) :								66.58
TOTAL NOS OF PEDESTAL :								4.00
TOTAL WEIGHT (KG) :								266.32

BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - LEFT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TS1-L	1010 450 1270 300 150 150	16	150	3.330	6	1.580	31.57
2	TS2-L	450 700 100	12	150	2.500	7	0.889	15.56
TOTAL (KG) :								47.13

BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - RIGHT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TS1-R	1260 450 1525 300 150 150	16	150	3.835	6	1.580	36.36
2	TS2-R	450 700 100	12	150	3.500	9	0.889	28.00
TOTAL (KG) :								64.36

EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Designed By	Mr. R.D.		Drawing Name	Scale:	AS SHOWN	Date:	24/05/2023
	Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of		Checked By								
			 EPTISA Servicios De Ingeniera Madrid, Spain	 STUP Consultants Private Limited Kolkatta, India									
						In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited		Approved By	Mr. H.B.				

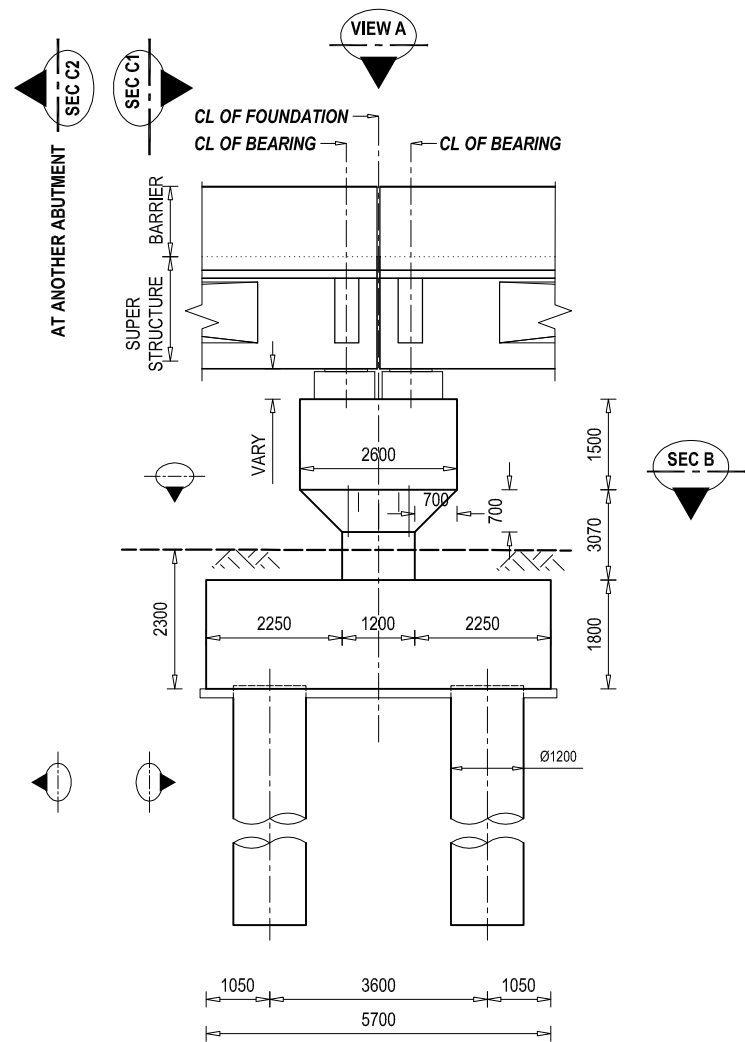
BAR BENDING SCHEDULE OF RETURN WALL - LEFT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RT 1A	450 3400 150	12	150	4.000	48	0.889	170.67
2	RT 1B	450 3400 150	12	150	4.000	48	0.889	170.67
3	RT 2A	450 6050 150	12	150	6.650	21	0.889	124.13
4	RT 2B	150 3400 150 600	12	150	4.300	21	0.889	80.27
5	RT 2C	600 3575 150	12	150	4.475	21	0.889	83.53
6	RT 3A	11705 150 450	12	150	12.305	18	0.889	196.88
7	RT 3B	800 150 8738 450	16	150	10.138	18	1.580	288.37
8	RT 3C	150 2892 150 800	16	150	3.992	18	1.580	113.55
9	RT 3D	200 300 300 200 210	16	150	1.210	43	1.580	82.22
10	RT 4A	1483.5 150 150	12	150	1.784	50	0.889	79.27
11	RT 4B	1483.5 150 150	16	150	1.784	50	1.580	140.92
12	RT 5	300 870 300	12	150	1.784	69	0.889	109.39
13	RT 6	10055	12		10.055	2	0.889	17.88
14	RT 7	225 5375	20		5.6	4	2.469	55.31
TOTAL (KG) :								1713.04

BAR BENDING SCHEDULE OF RETURN WALL - RIGHT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RT 1A	450 3400 150	12	150	4.000	46	0.889	163.56
2	RT 1B	450 3400 150	12	150	4.000	46	0.889	163.56
3	RT 2A	450 6050 150	12	150	6.650	21	0.889	124.13
4	RT 2B	150 3400 150 600	12	150	4.300	21	0.889	80.27
5	RT 2C	600 3575 150	12	150	4.475	21	0.889	83.53
6	RT 3A	11409 150 450	12	150	12.009	18	0.889	192.14
7	RT 3B	800 150 8442 450	16	150	9.842	18	1.580	279.95
8	RT 3C	150 2892 150 800	16	150	3.992	18	1.580	113.55
9	RT 3D	200 300 300 200 210	16	150	1.210	43	1.580	82.22
10	RT 4A	1483.5 150 150	12	150	1.784	50	0.889	79.27
11	RT 4B	1483.5 150 150	16	150	1.784	50	1.580	140.92
12	RT 5	300 870 300	12	150	1.784	69	0.889	109.39
13	RT 6	9759	12		9.759	2	0.889	17.35
14	RT 7	225 5375	20		5.6	4	2.469	55.31
TOTAL (KG) :								1685.14

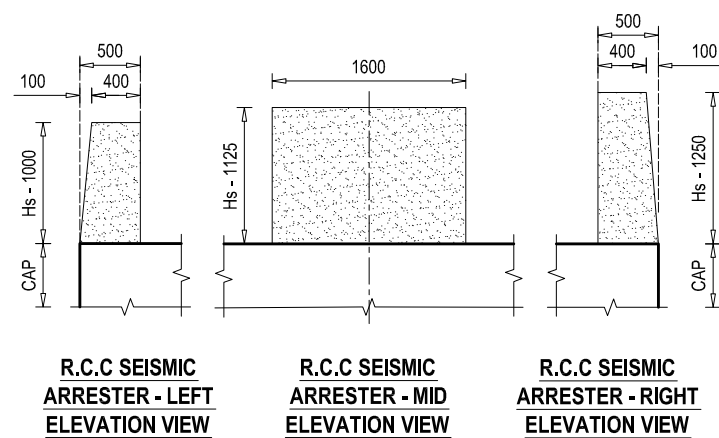
BAR BENDING SCHEDULE OF R.C.C BARRIER								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RC1	850 130 735 305 445 200 305 200	16	150	3.170	42	1.580	210.39
2	RC2	150 6100 150	10	150	6.400	20	0.617	79.01
TOTAL (KG) :								289.41

BAR BENDING SCHEDULE OF R.C.C SEPARATOR								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RS1	1110 130 535 305 150 315	16	150	2.695	25	1.580	106.47
2	RS2	150 3500 150	10	150	3.800	17	0.617	39.88
TOTAL (KG) :								146.35

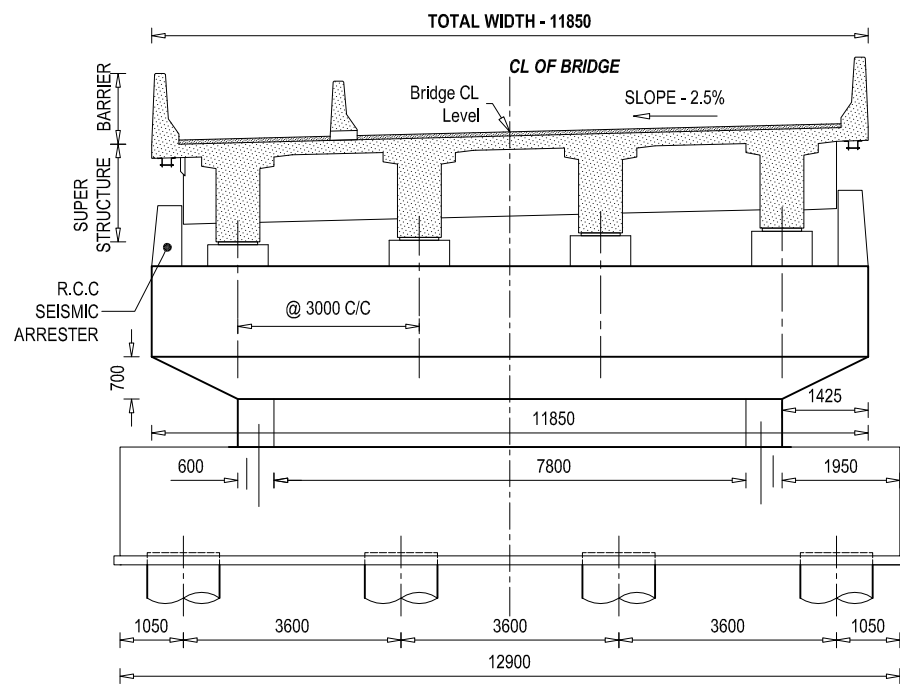
EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Designed By	Mr. R.D.		Drawing Name	Scale:	AS SHOWN	Date:	24/05/2023		
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of		EPTISA	EPTISA Servicios De Ingeniera Madrid, Spain										STUP Consultants Private Limited Kolkata, India
		In Association With				Udaya Consultancy, Geocom International, Sundar Krill Consultant and Rays Consultant Private Limited		Approved By	Mr. H.B.						



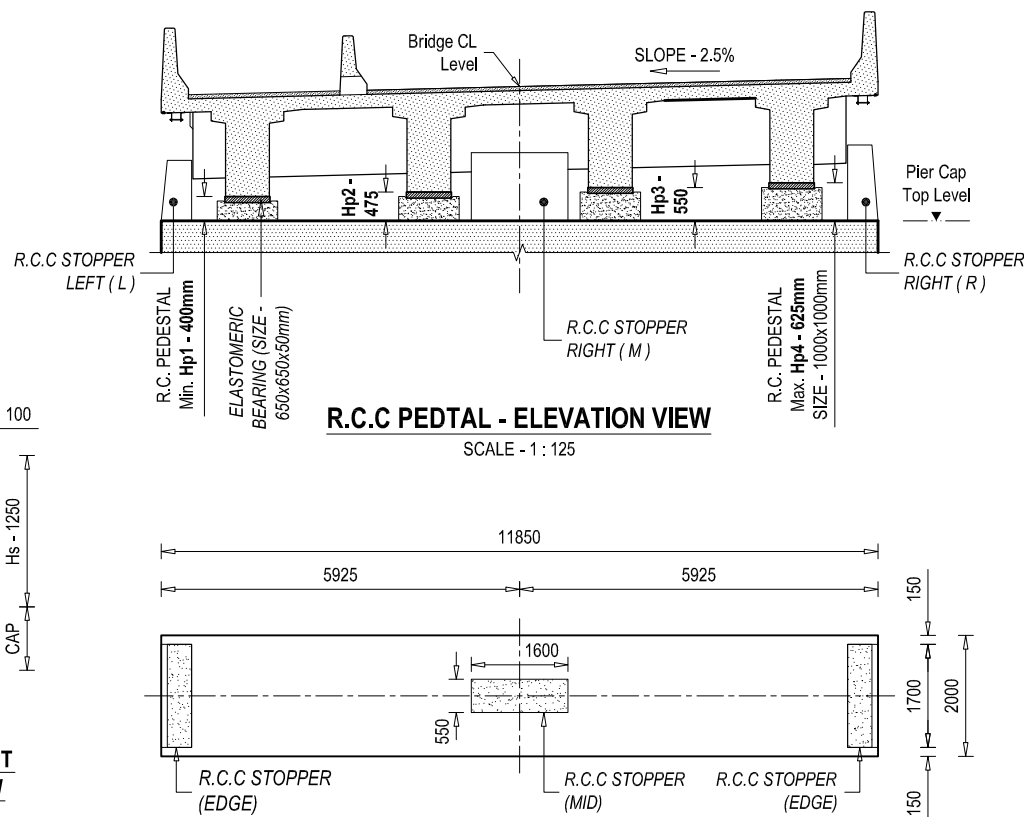
ELEVATION VIEW OF PIER
SCALE - 1: 125



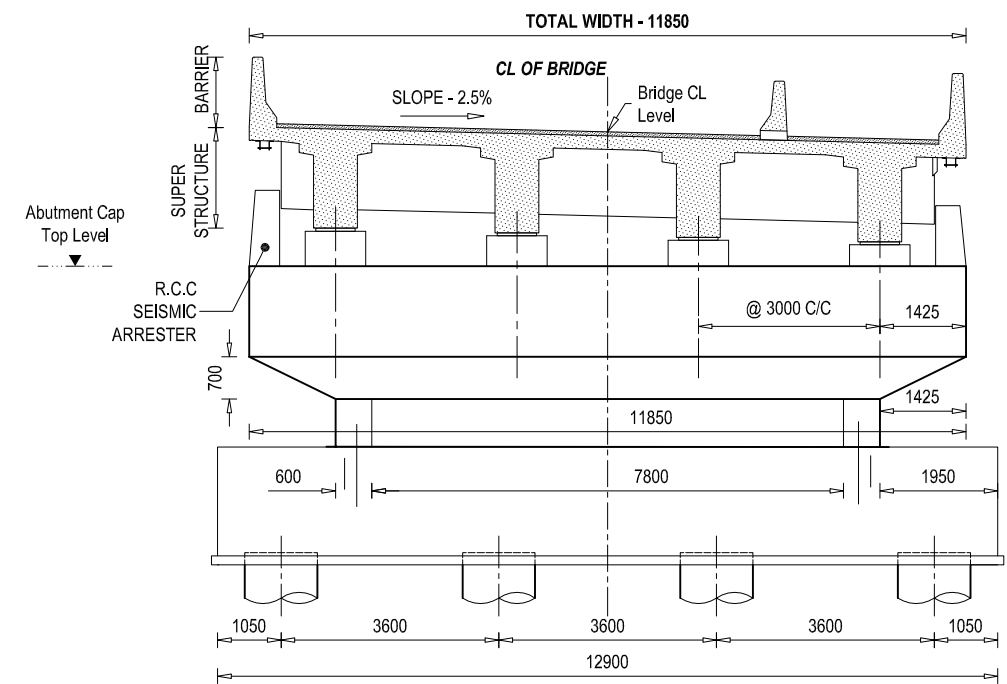
DETAIL AT PEDESTAL
SCALE - 1: 75



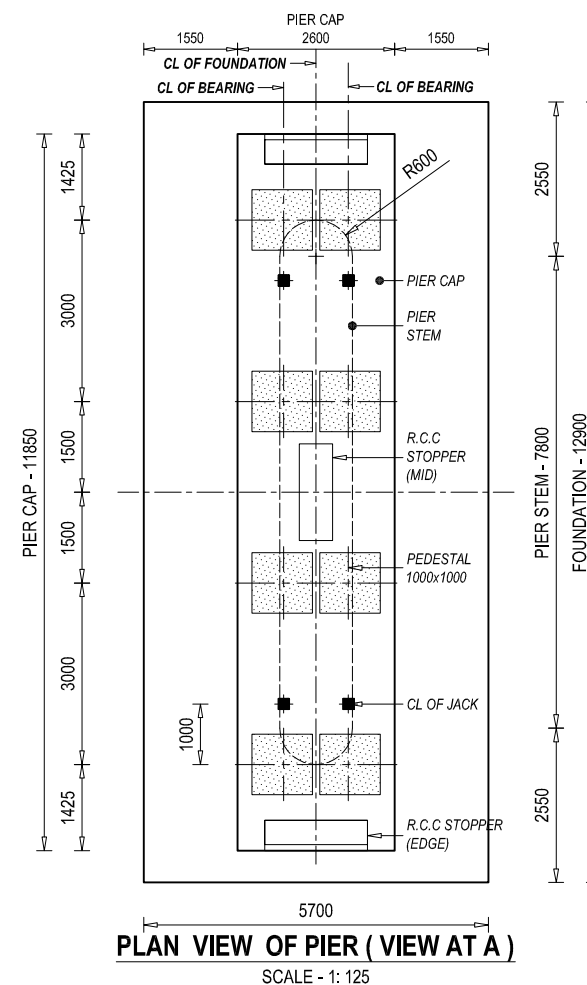
SECTIONAL VIEW AT C1 - C1
SCALE - 1: 125



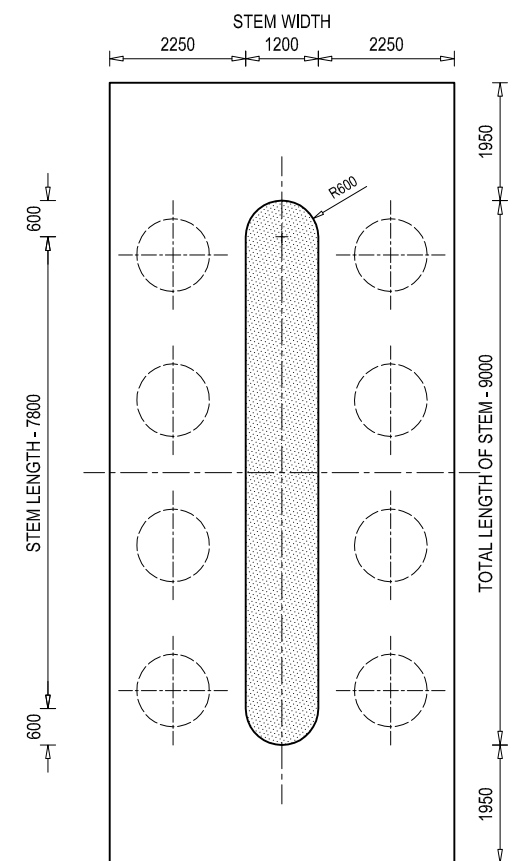
DETAIL AT R.C.C SEISMIC ARRESTER
SCALE - 1: 150



SECTIONAL VIEW AT C2 - C2
SCALE - 1: 125



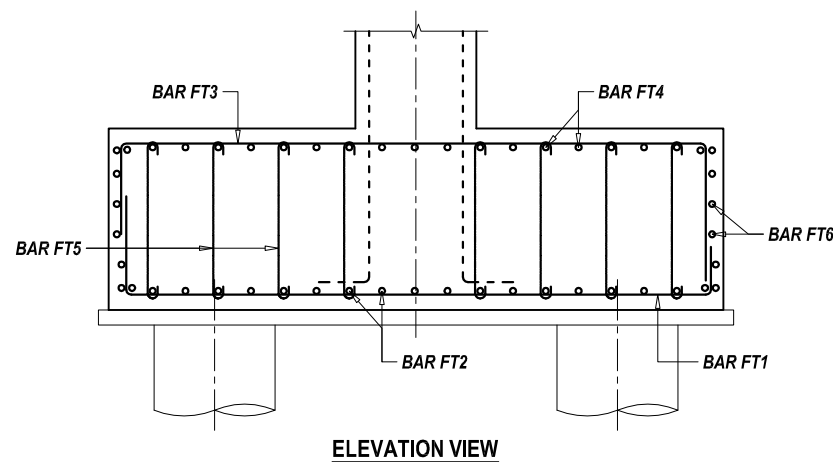
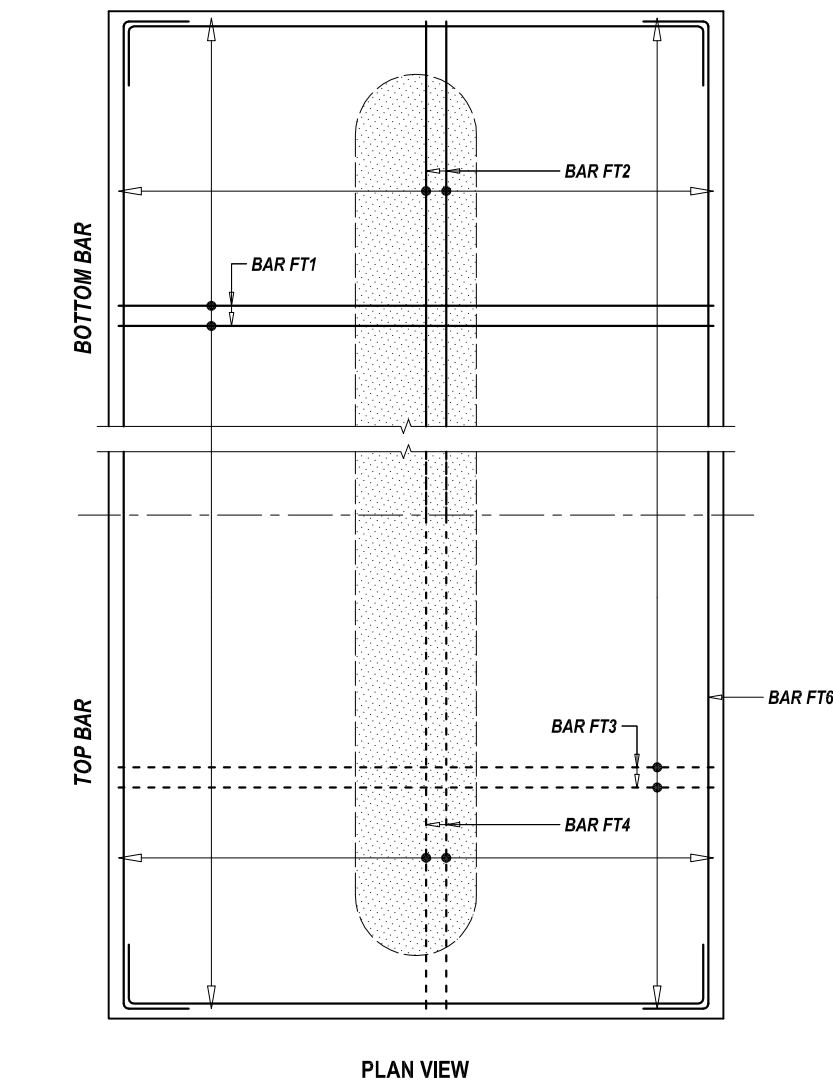
PLAN VIEW OF PIER (VIEW AT A)
SCALE - 1: 125



SECTIONAL VIEW AT B - B
SCALE - 1: 125

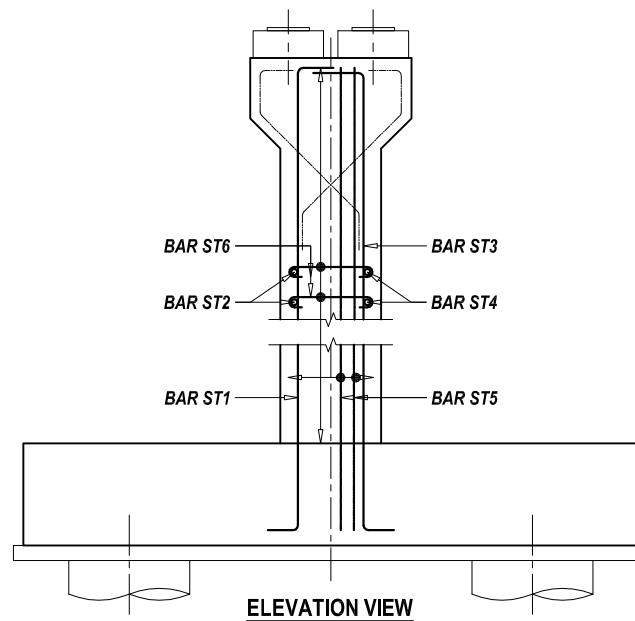
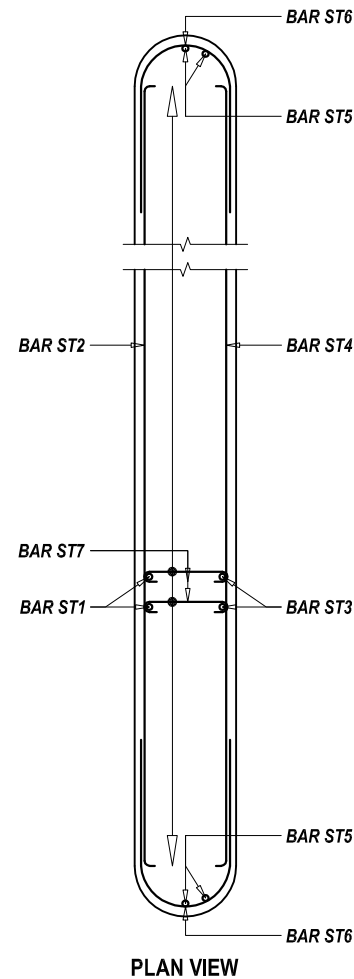
NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/BHAPS/ID-4

EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Drawing Name	Scale:	Date:
Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhakkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of ep4sa EPTISA Servicios De Ingeniera Madrid, Spain STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kritt Consultant and Rays Consultant Private Limited	Mr. R.D. Nec.No. 5489 CIVIL/V Signature	PIER DETAILS OF BRIDGE OVER RIVER BHAPSI	AS SHOWN	22.04.2023
			Checked By Mr. S.M. Signature	Reference Drawings KDP/DPR/STR/BR/BHAPS/ID-12	Chainage: 268+310	Drawing No.- KDP/DPR/STR/BR/BHAPS/ID-10
			Approved By Mr. H.B. Signature			Sheet No.1/1



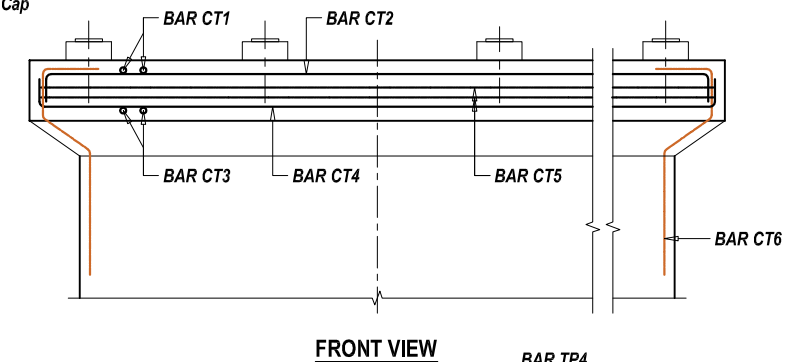
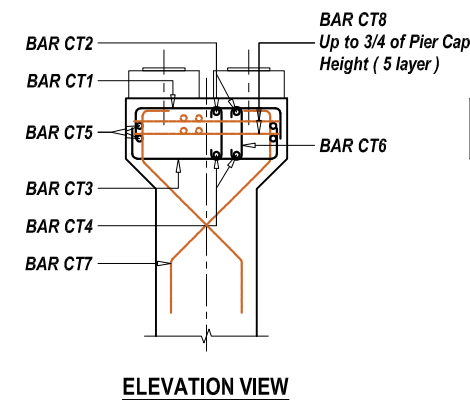
BAR DETAIL OF FOUNDATION

SCALE - 1 : 75



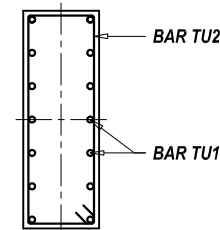
BAR DETAIL AT PIER STEM

SCALE - 1 : 75

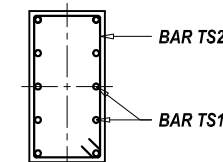


BAR DETAIL AT PIER CAP

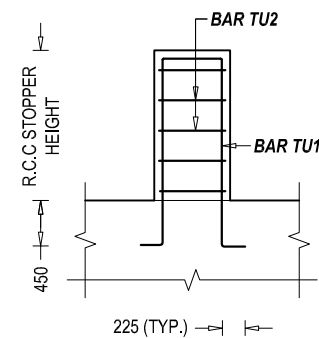
SCALE - 1 : 75



SECTIONAL PLAN VIEW



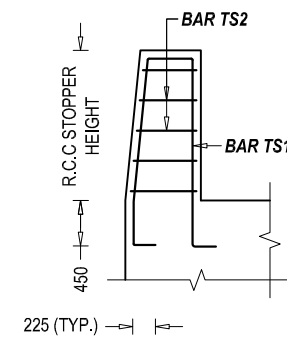
SECTIONAL PLAN VIEW



SECTIONAL ELEVATION VIEW

R.C.C STOPPER AT MID

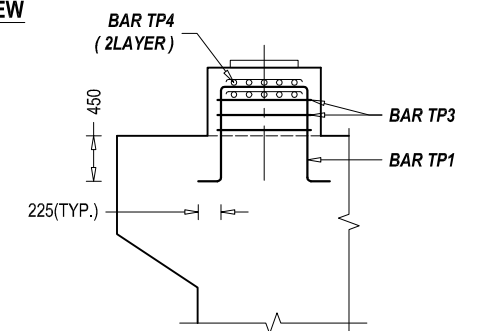
SCALE - 1 : 50



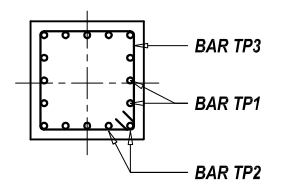
SECTIONAL ELEVATION VIEW

R.C.C STOPPER AT EDGE

SCALE - 1 : 50

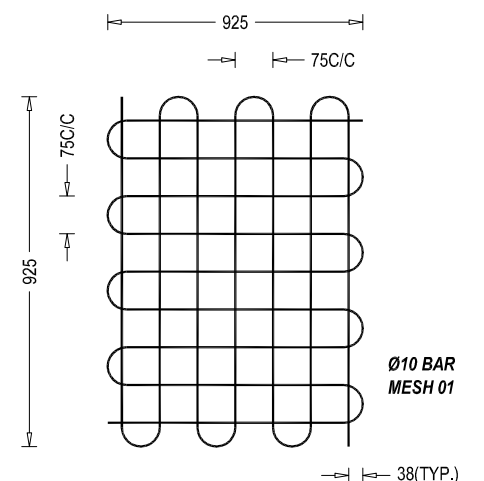


SECTIONAL SIDE VIEW



**SECTIONAL PLAN VIEW
BAR DETAIL AT PEDESTAL**

SCALE - 1 : 50

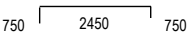
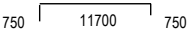
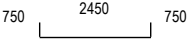
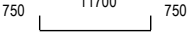
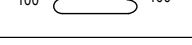
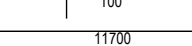
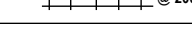


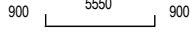
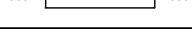
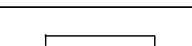
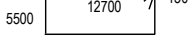
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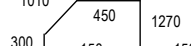
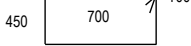
--- TOP BAR OR NEAR FACE REINFORCEMENT
--- BOTTOM BAR OR FAR FACE REINFORCEMENT

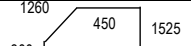
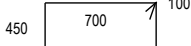
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READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/BHAPS/ID-4

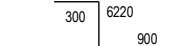
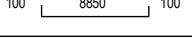
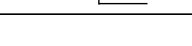
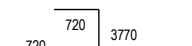
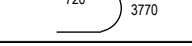
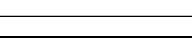
EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of ep4sa EPTISA Servicios De Ingenieria Madrid, Spain ow STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited	Designed By Mr. R.D. Nec.No. 6489 CIVE/V Signature Checked By Mr. S.M. Signature Approved By Mr. H.B. Signature	Drawing Name PIER BAR DETAIL OF BRIDGE OVER RIVER BHAPS Reference Drawings KDP/DPR/STR/BR/BHAPS/ID-12	Scale: AS SHOWN Chainage: 268+310	Date: 22.04.2023 Drawing No.- KDP/DPR/STR/BR/BHAPS/ID-11 Sheet No.1/1
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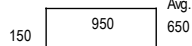
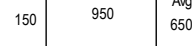
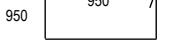
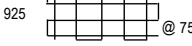
BAR BENDING SCHEDULE OF PIER CAP								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	CT1		20		3.950	50	2.469	487.65
2	CT2		20		13.200	18	2.469	586.67
3	CT3		20		3.950	50	2.469	487.65
4	CT4		20		13.200	18	2.469	586.67
5	CT5		16	150	28.500	11	1.580	495.41
6	CT6		16	X: 280 Y: 480	1.550	225	1.580	551.11
7	CT7		16	150	1.550	137	1.580	335.57
8	CT8		16		296.650	5 Layer	1.580	2343.90
TOTAL (KG) :								5874.63

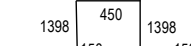
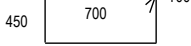
BAR BENDING SCHEDULE OF PILE CAP								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	FT1		25		7.350	98	3.858	2778.94
2	FT2		25		14.550	50	3.858	2806.71
3	FT3		25		7.350	98	3.858	2778.94
4	FT4		25		14.550	50	3.858	2806.71
5	FT5		12	Long: 225 Trans: 250	1.85	1258	0.889	2068.71
6	FT6		16	200	36.700	8	1.580	463.96
TOTAL (KG) :								13703.97

BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - LEFT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TS1-L		16	150	3.330	6	1.580	31.57
2	TS2-L		12	150	2.500	7	0.889	15.56
TOTAL (KG) :								47.13

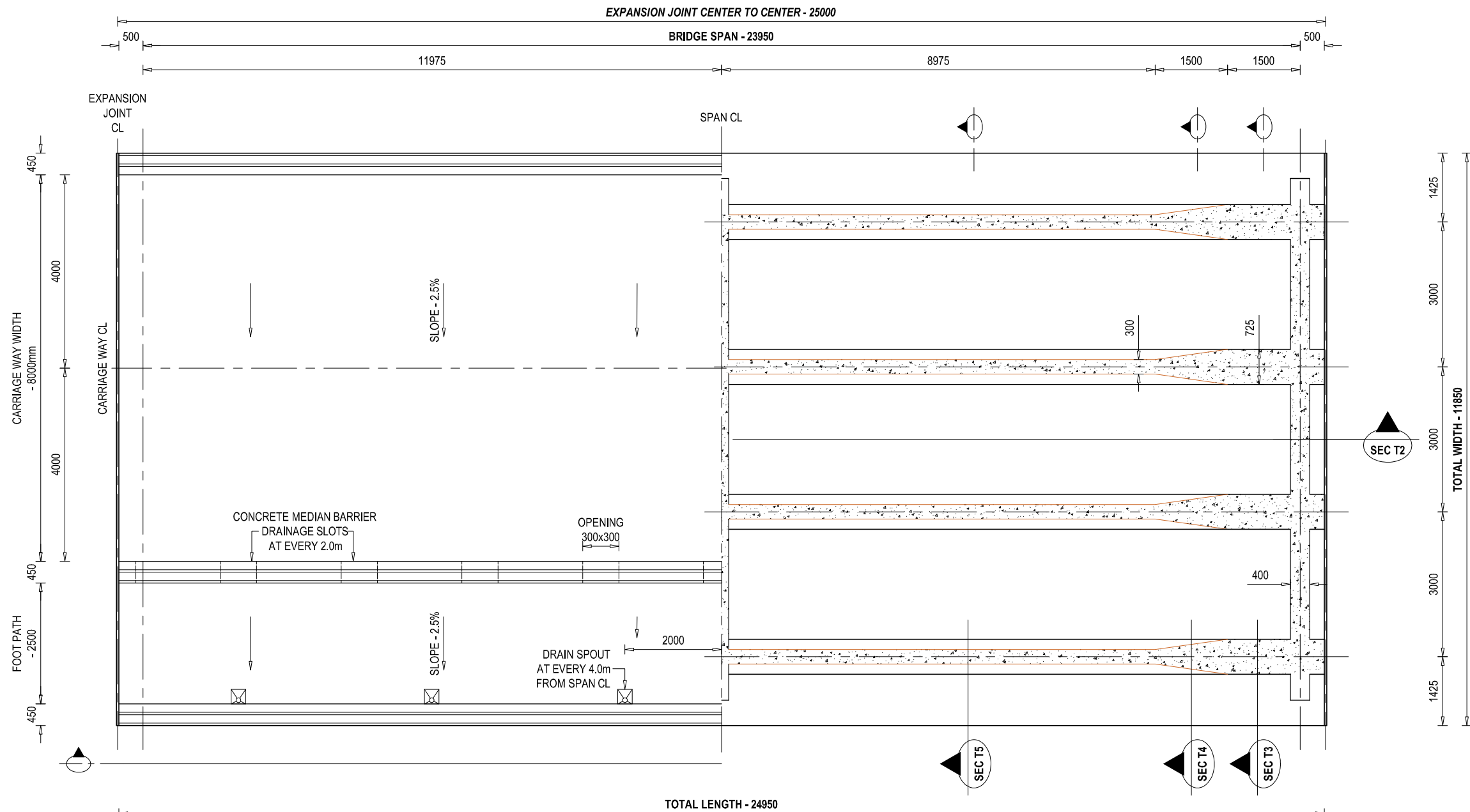
BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - RIGHT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TS1-R		16	150	3.835	6	1.580	36.36
2	TS2-R		12	150	2.500	9	0.889	20.00
TOTAL (KG) :								56.36

BAR BENDING SCHEDULE OF PIER STEM								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	ST1		25		7.420	50	3.858	1431.33
2	ST2		16	200	9.050	16	1.580	228.82
3	ST3		25		7.420	50	3.858	1431.33
4	ST4		16	200	9.050	16	1.580	228.82
5	ST5		25		7.420	12	3.858	343.52
5	ST6		16	200	5.210	16	1.580	131.73
6	ST7		12	Ver: 150 Hor: 400	1.250	483	0.889	536.67
TOTAL (KG) :								4332.21

BAR BENDING SCHEDULE OF PEDESTAL								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TP1		16	150	2.850	8	1.580	36.03
2	TP2		16	150	2.850	8	1.580	36.03
3	TP3		16	150	4.000	3	1.580	18.96
4	TP4		10		24.675	2	0.617	30.46
TOTAL (KG) :								121.49

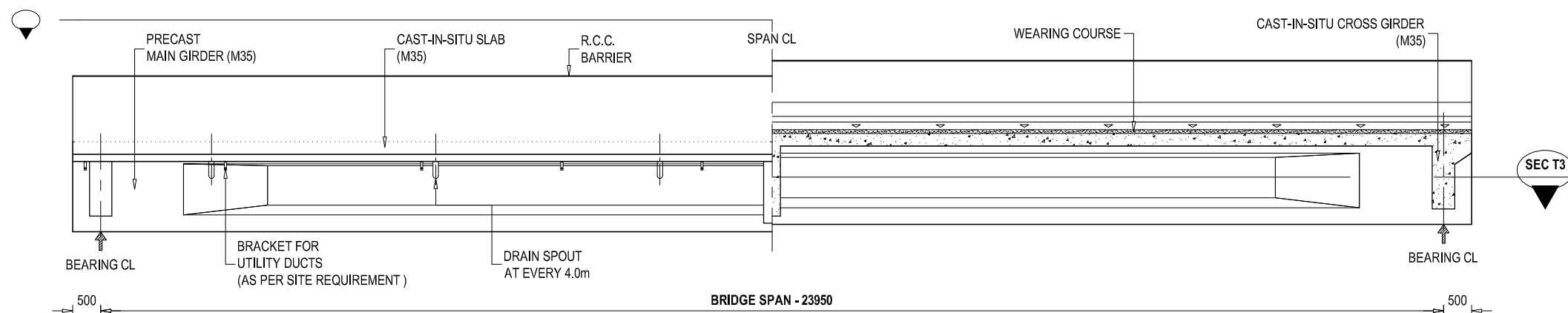
BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - MID								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TU1		16	150	3.546	6	1.580	33.62
2	TU2		12	150	2.500	8	0.889	17.78
TOTAL (KG) :								51.40

EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Designed By	Mr. R.D.		Drawing Name	Scale:	AS SHOWN	Date:	22.04.2023
	Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP)	Detailed Design of Upgradation of Kamala-Dhalkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of									
				 EPTISA Servicios De Ingeniera Madrid, Spain	 STUP Consultants Private Limited Kolkatta, India								
								In Association With		Approved By	Mr. H.B.		
				Udaya Consultancy, Geocom International, Sundar Krill Consultant and Rays Consultant Private Limited									



HALF SECTIONAL PLAN VIEW OF SUPERSTRUCTURE AT SEC T1

SCALE - 1 : 100 @ A3 PAPER

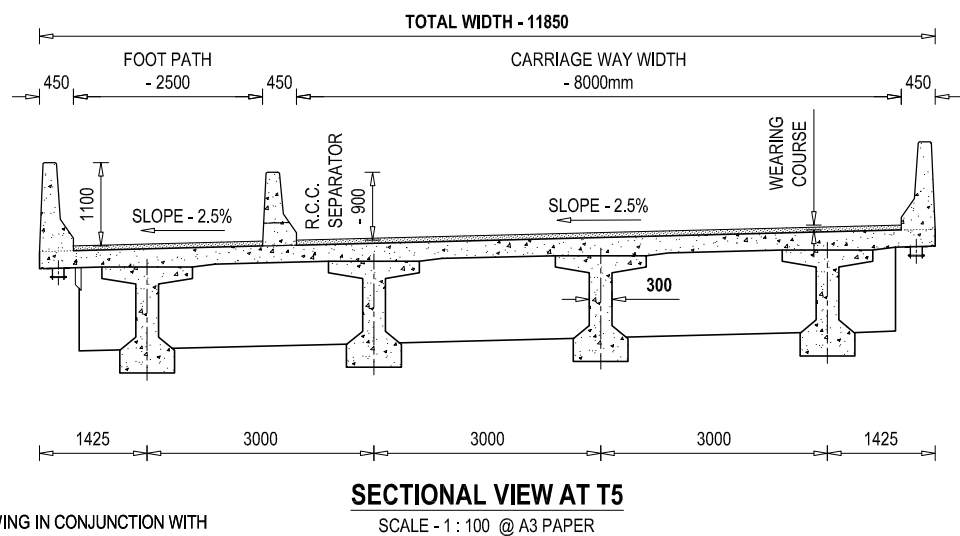
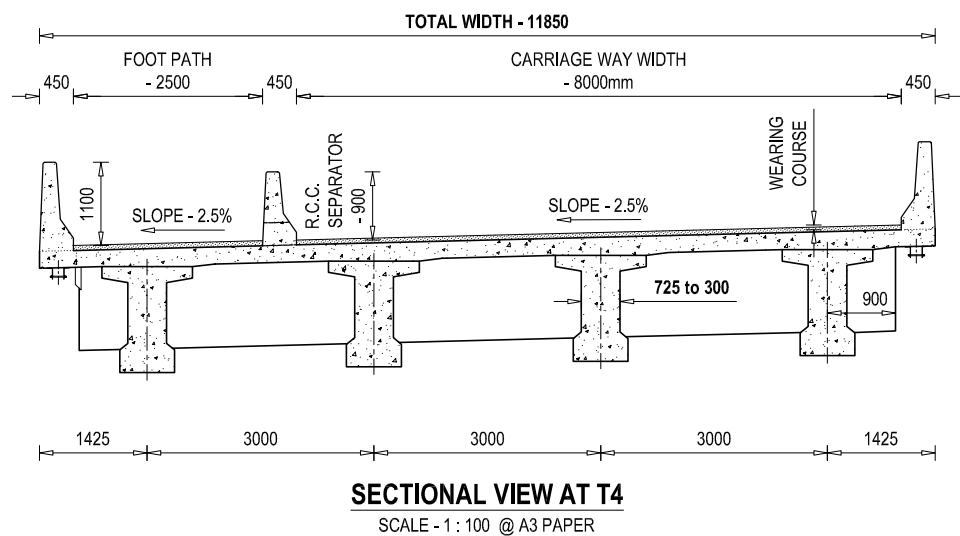
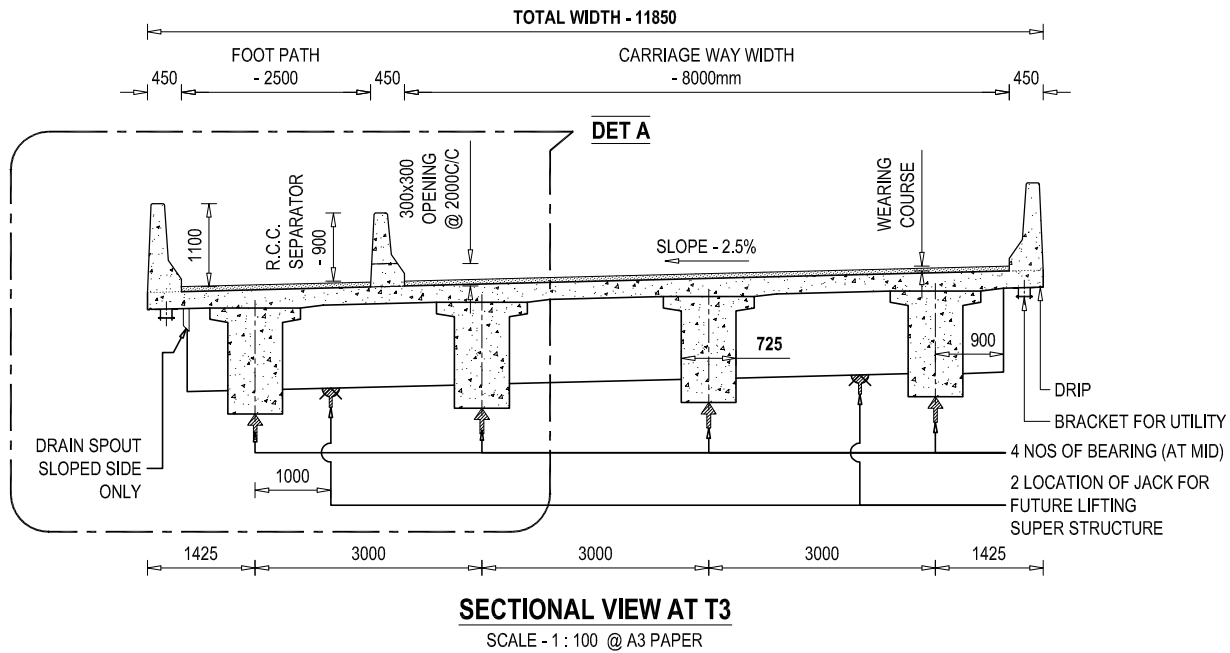


HALF ELEVATION SECTIONAL VIEW OF SUPERSTRUCTURE AT SEC T2

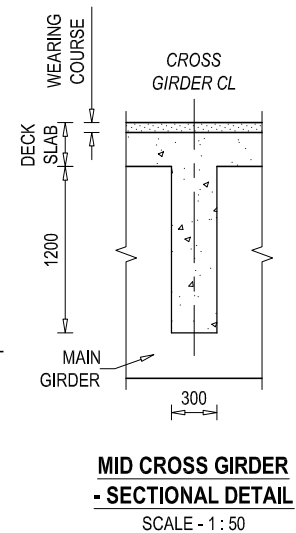
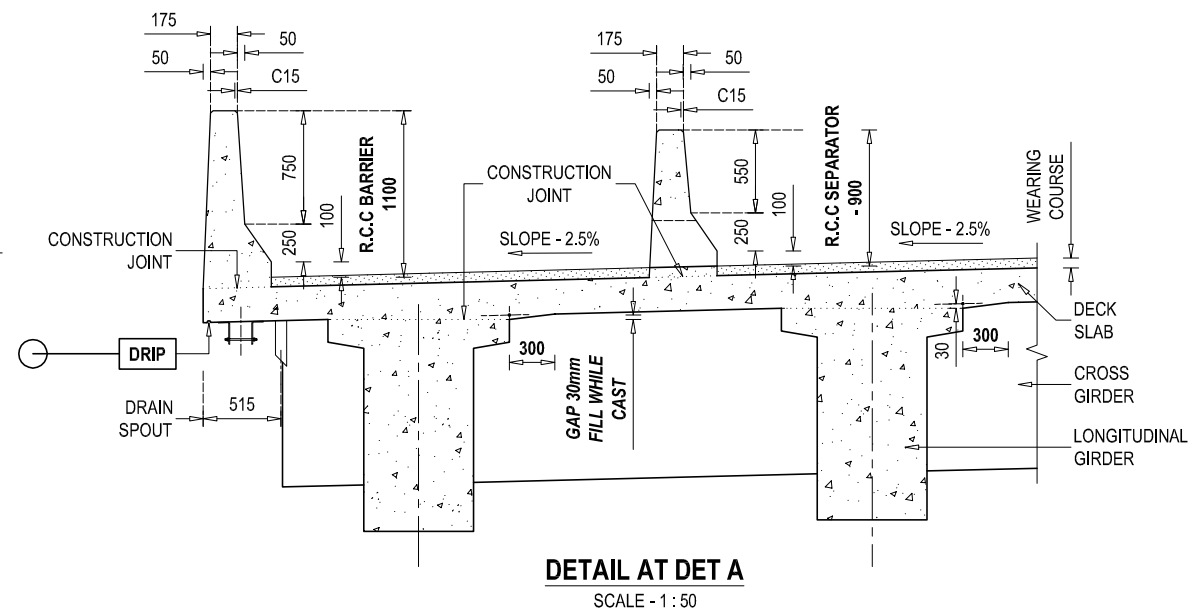
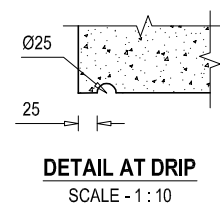
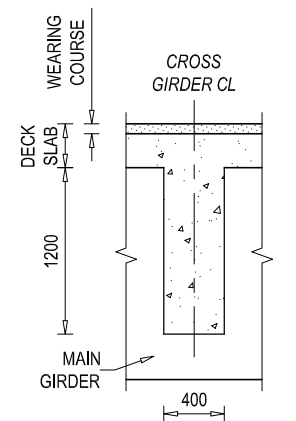
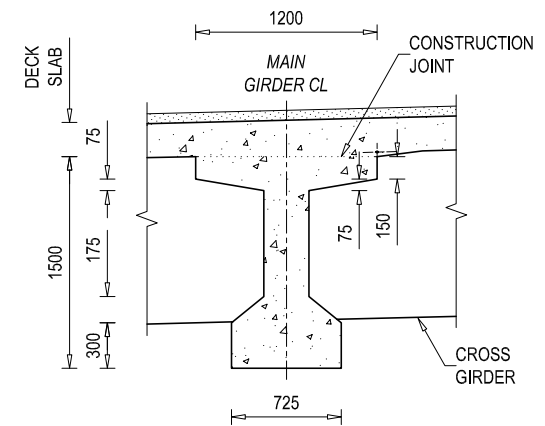
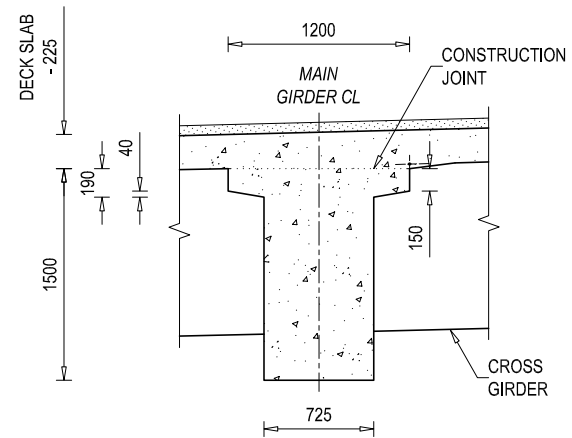
SCALE - 1 : 100 @ A3 PAPER

NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/BHAPS/ID-4

EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Mr. R.D. Nec.No. 6489 CIVIL/14	SUPER STRUCTURE DETAILS OF BRIDGE OVER RIVER BHAPSI	AS SHOWN	28.05.2023
			Checked By Mr. S.M.	Reference Drawings KDP/DPR/STR/BR/BHAPS/ID-17	Chainage: 268+310	Drawing No.- KDP/DPR/STR/BR/BHAPS/ID-13
			Approved By Mr. H.B.			Sheet No. 1 / 2



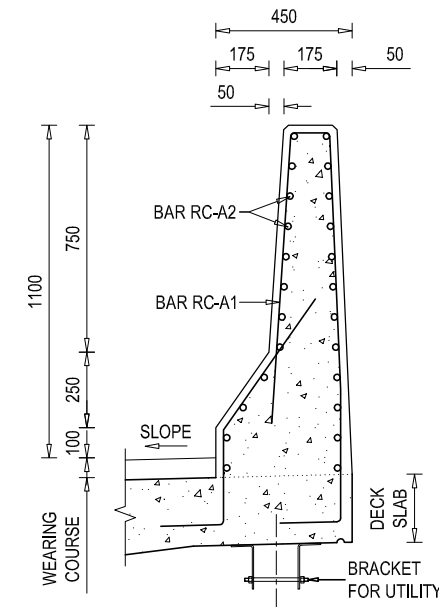
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DRG NO. KDP/DPR/STR/BR/BHAPS/ID-4



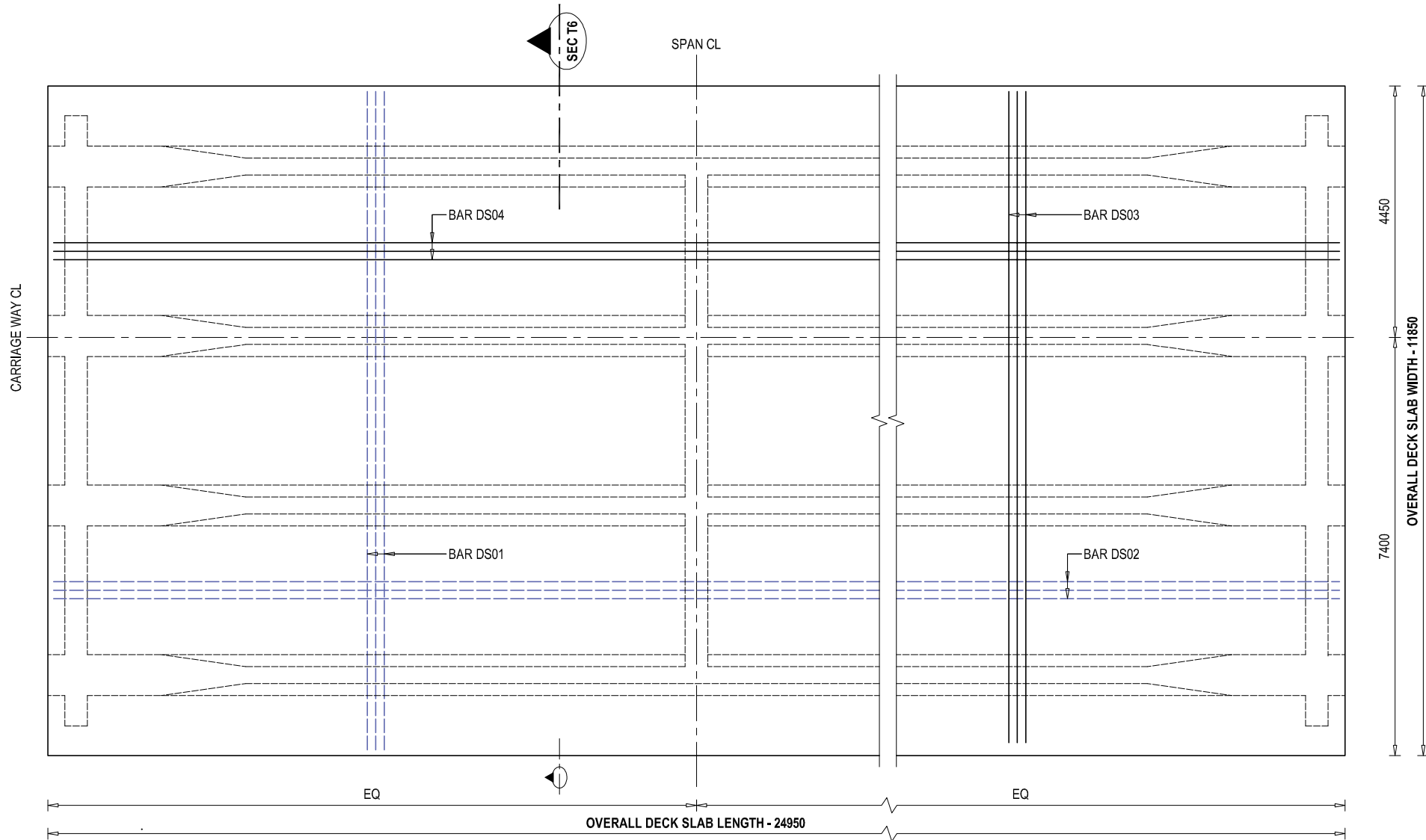
EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of eptisa EPTISA Servicios De Ingenieria Madrid, Spain STUP STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Designed By Mr. R.D. Nec.No. 6489 QUIL/14 Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name SUPER STRUCTURE DETAILS OF BRIDGE OVER RIVER BHAPSI Reference Drawings KDP/DPR/STR/BR/BHAPS/ID-17	Scale: AS SHOWN Chainage: 268+310	Date: 28.05.2023 Drawing No.- KDP/DPR/STR/BR/BHAPS/ID-13 Sheet No. 2 / 2
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LEGEND FOR REINFORCEMENT BAR

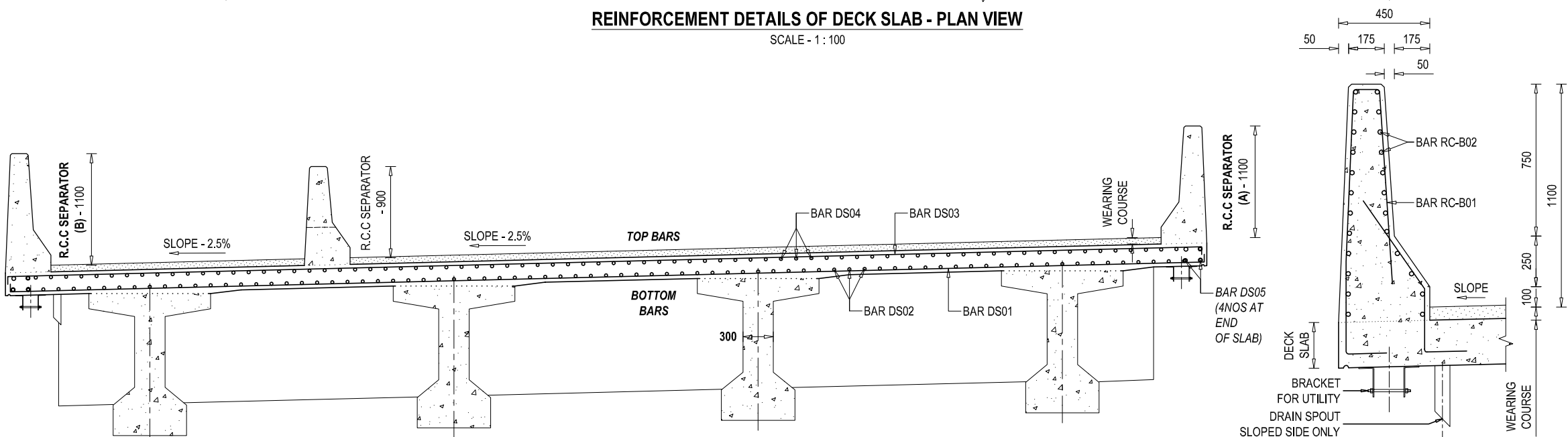
CODE	FULL FORM		
DS	- DECK SLAB	CG	- CROSS GIRDER
RB	- R.C.C BARRIER	AS	- APPROACH SLAB
RS	- R.C.C SEPARATOR	ST	- STOPPER
MG	- MAIN GIRDER	**	- ***
— TOP BAR OR NEAR FACE REINFORCEMENT			
- - - BOTTOM BAR OR FAR FACE REINFORCEMENT			



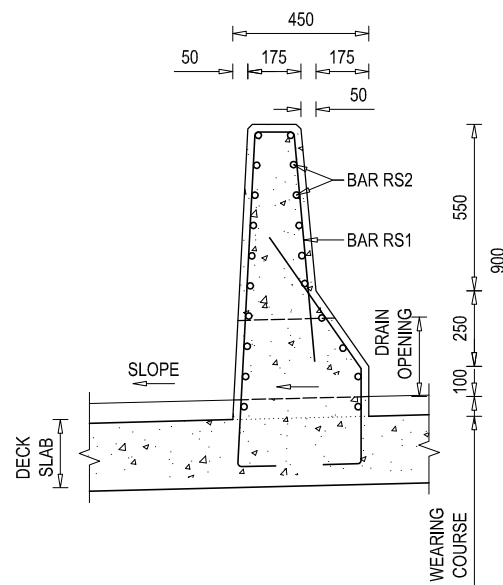
REINFORCEMENT DETAILS OF R.C.C BARRIER (A)- SECTIONAL VIEW
SCALE - 1 : 25



REINFORCEMENT DETAILS OF DECK SLAB - PLAN VIEW
SCALE - 1 : 100



REINFORCEMENT DETAILS OF R.C.C BARRIER (B)- SECTIONAL VIEW
SCALE - 1 : 25

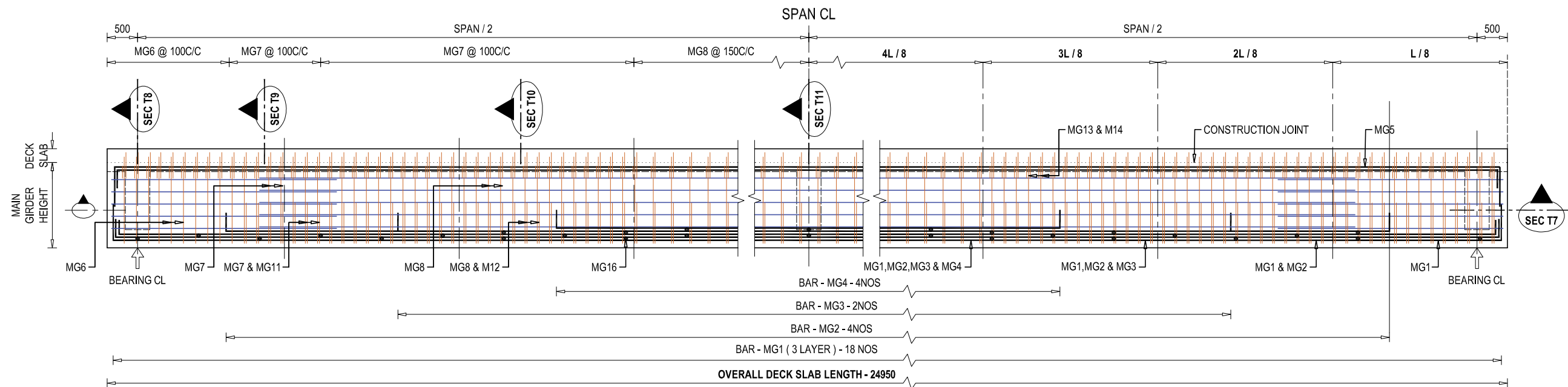


REINFORCEMENT DETAILS OF R.C.C SEPARATOR - SECTIONAL VIEW
SCALE - 1 : 25

NOTE
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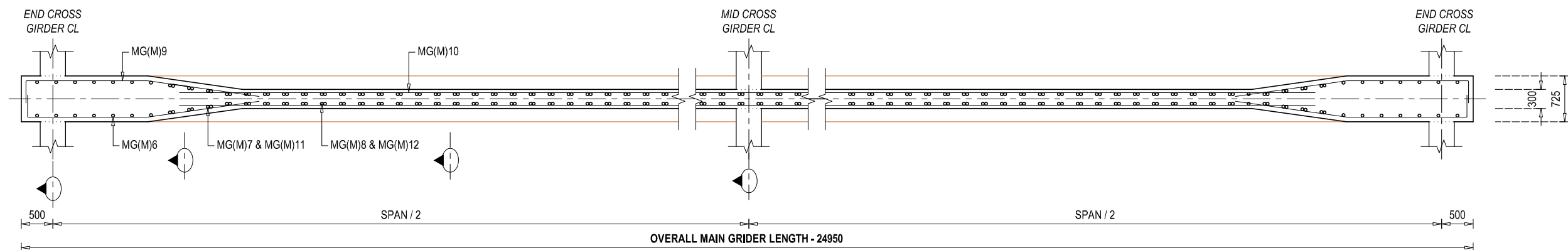
REINFORCEMENT DETAILS OF DECK SLAB - SECTIONAL VIEW AT T6
SCALE - 1 : 50

EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.D.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of EPTISA Servicios De Ingeniera Madrid, Spain STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Checked By	Mr. S.M.	DECK SLAB DETAILS OF BRIDGE OVER RIVER BHAPSI	AS SHOWN	28.05.2023
			Approved By	Mr. H.B.	Reference Drawings KDP/DPR/STR/BR/BHAPS/ID-17	Chainage: 268+310	Drawing No.- KDP/DPR/STR/BR/BHAPS/ID-14
							Sheet No. 1 / 1



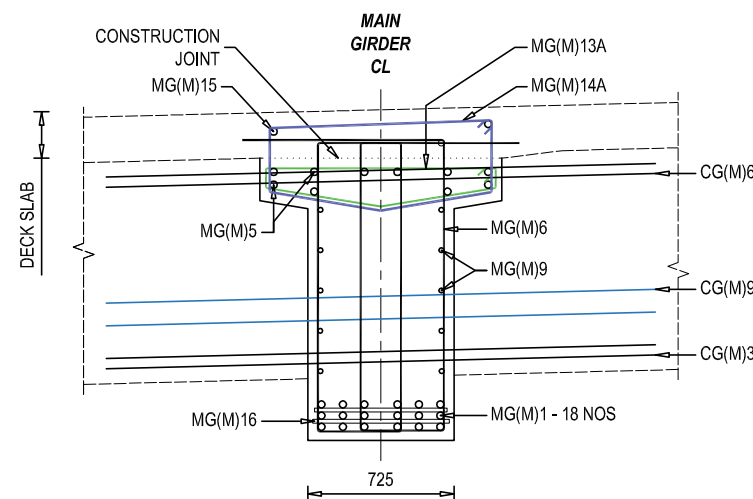
REINFORCEMENT DETAILS OF MAIN GIRDER - SECTIONAL ELEVATION VIEW

SCALE - 1 : 75



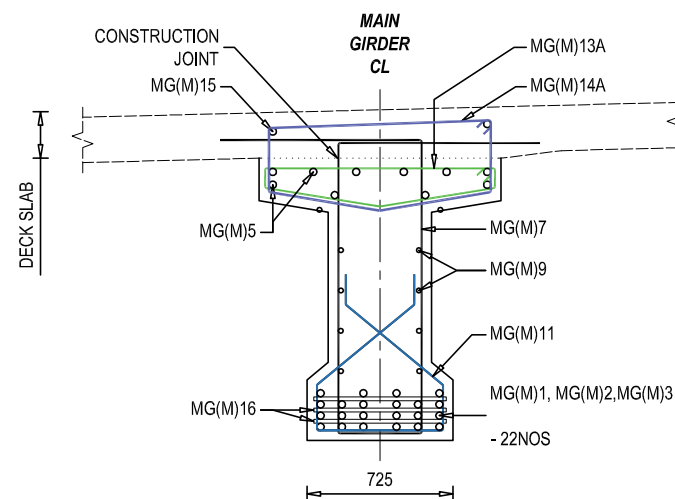
REINFORCEMENT DETAILS OF MAIN GIRDER (MID) - SECTIONAL PLAN VIEW AT T7(M)

SCALE - 1 : 75



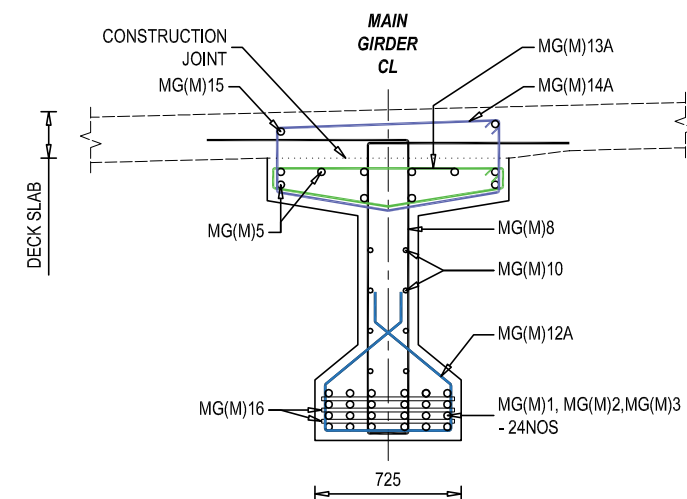
REINFORCEMENT DETAILS OF MAIN GIRDER SECTIONAL VIEW AT T8

SCALE - 1 : 50



REINFORCEMENT DETAILS OF MAIN GIRDER SECTIONAL VIEW AT T9

SCALE - 1 : 50

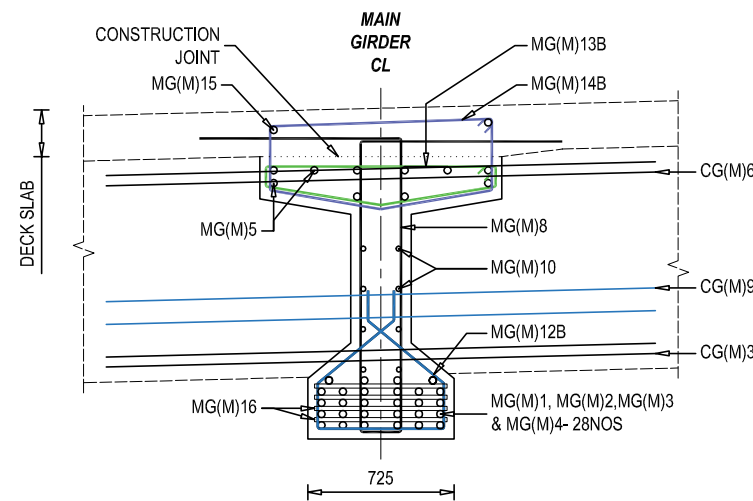


REINFORCEMENT DETAILS OF MAIN GIRDER SECTIONAL VIEW AT T10

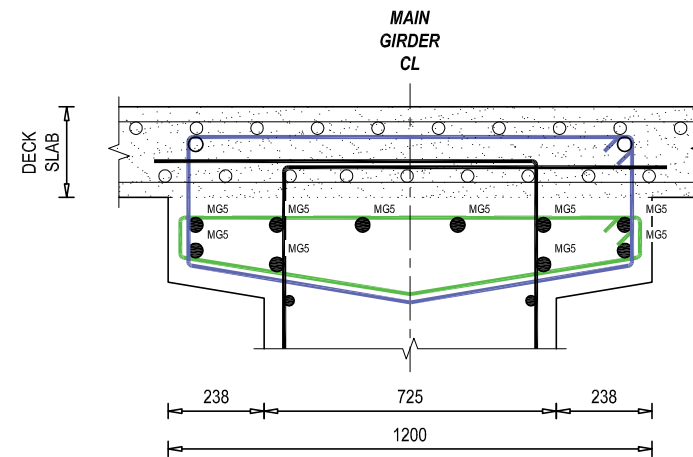
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NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/BHAPS/DD-4

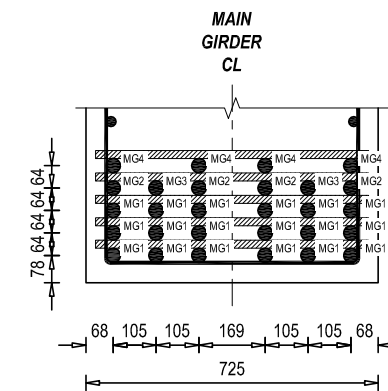
EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of EPTISA Servicios De Ingeniera Madrid, Spain STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Designed By Mr. R.D. Nec.No. 6489 CIVIL/14/ Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name MAIN GIRDER REINFORCEMENT DETAILS OF BRIDGE OVER RIVER BHAPSI Reference Drawings KDP/DPR/STR/BR/BHAPS/DD-17	Scale: AS SHOWN Chainage: 268+310	Date: 28.05.2023 Drawing No.- KDP/DPR/STR/BR/BHAPS/DD-15 Sheet No. 1 / 2
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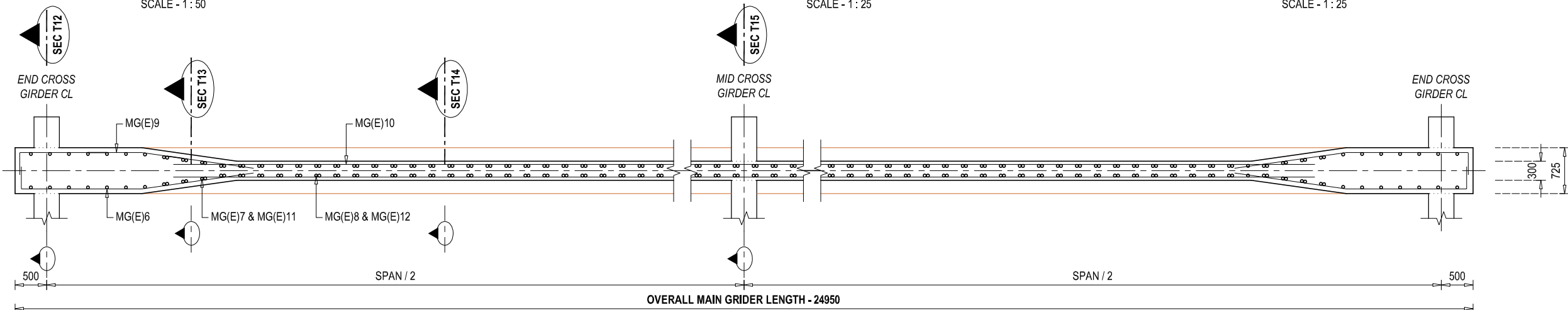
**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T11**
SCALE - 1 : 50



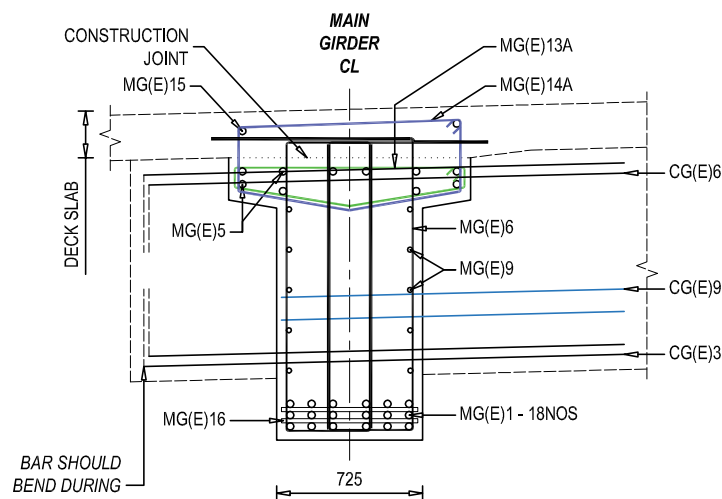
**TOP BAR WEB REINFORCEMENT DETAILS
OF MAIN GIRDER**
SCALE - 1 : 25



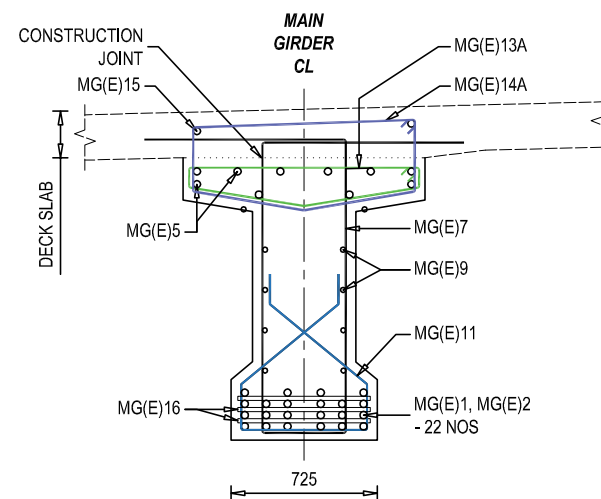
**BOTTOM BAR WEB REINFORCEMENT DETAILS
OF MAIN GIRDER**
SCALE - 1 : 25



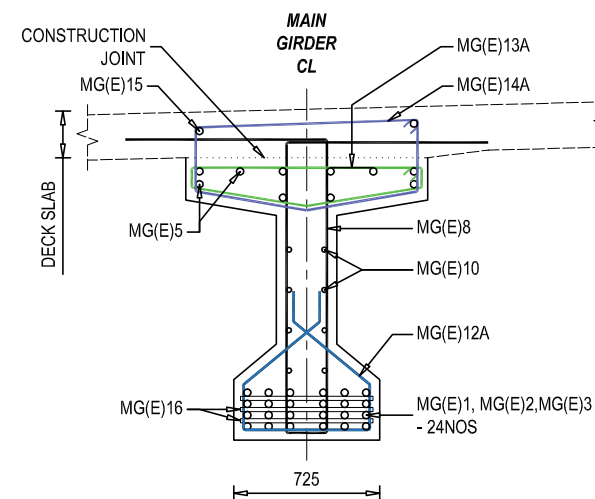
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SCALE - 1 : 75



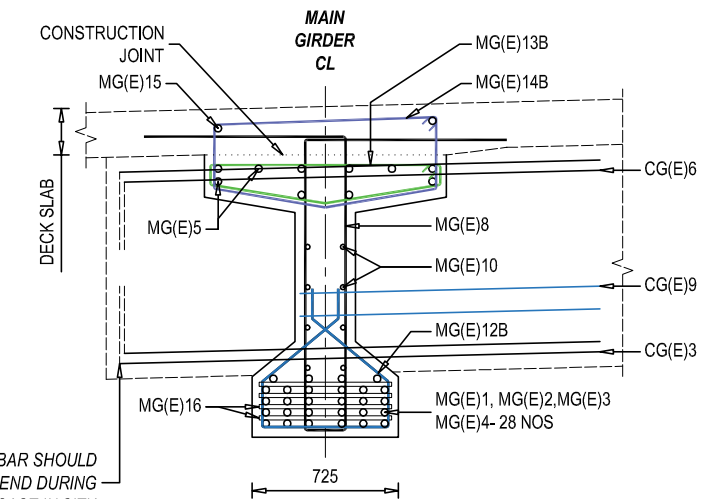
**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T12**
SCALE - 1 : 50



**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T13**
SCALE - 1 : 50



**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T14**
SCALE - 1 : 50



**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T15**
SCALE - 1 : 50

NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/BHAPS/ID-4



Government of Nepal
Ministry of Physical Infrastructure and Transport
Department of Roads
Development Cooperation Implementation
Division

PROJECT NAME
Strategic Road Connectivity & Trade Improvement Project
(SRCTIP)
Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya
Road Section (130 KM) of Mahendra Highway and Bridges

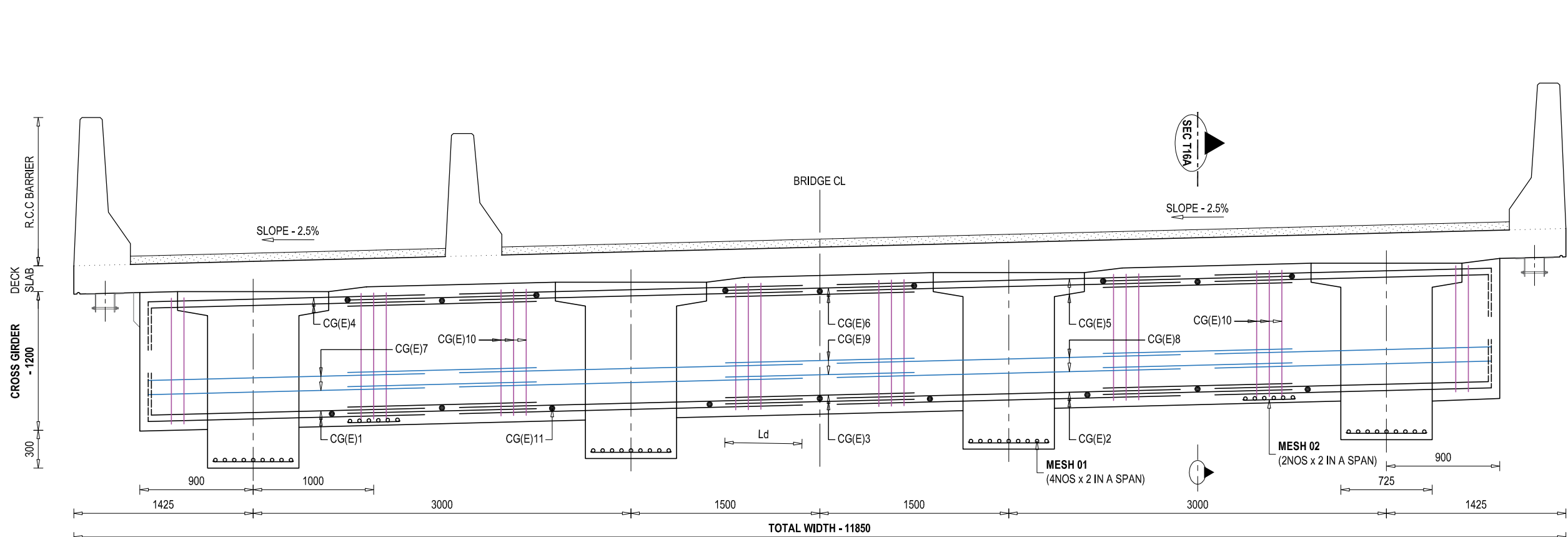
DESIGN CONSULTANTS
Joint Venture of
EPTISA Servicios De Ingeniera
Madrid, Spain
STUP Consultants Private Limited
Kolkata, India
In Association With
Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays
Consultant Private Limited

Designed By
Mr. R.D.
Nec.No. 6489 CIVIL/14
Checked By
Mr. S.M.
Approved By
Mr. H.B.

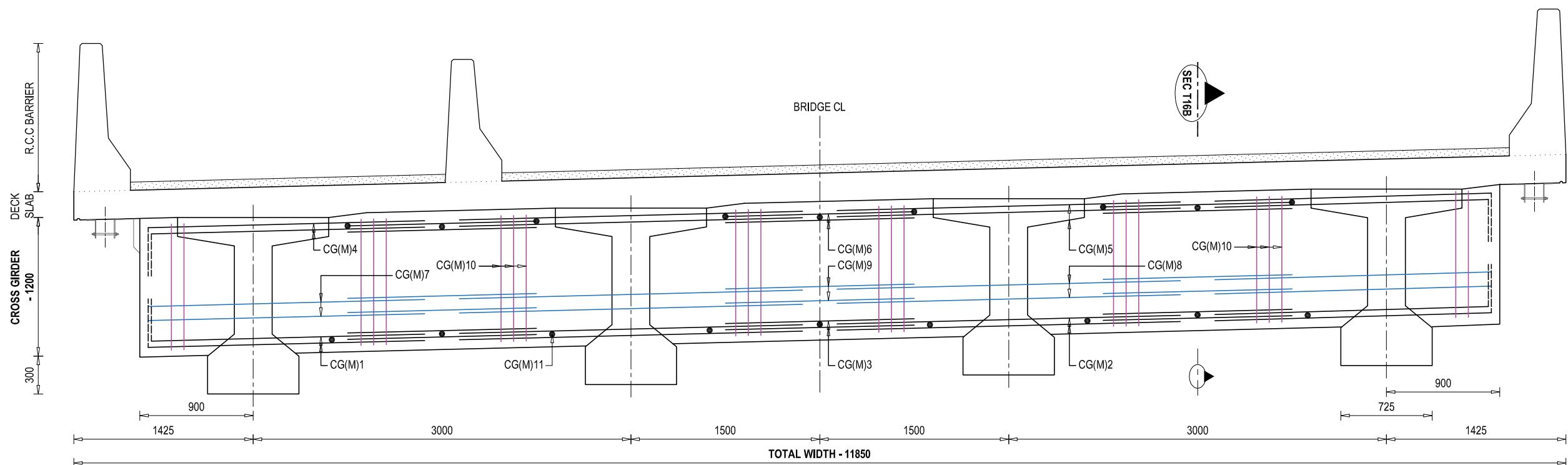
Drawing Name
MAIN GIRDER REINFORCEMENT DETAILS OF BRIDGE OVER
RIVER BHAPSI
Reference Drawings
KDP/DPR/STR/BR/BHAPS/ID-17

Scale:
AS SHOWN
Chainage:
268+310

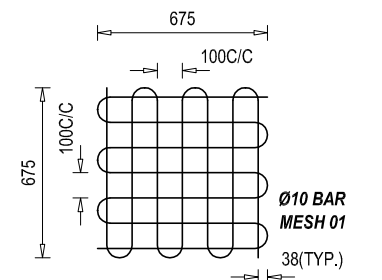
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28.05.2023
Drawing No.- KDP/DPR/STR/BR/BHAPS/ID-15
Sheet No. 2 / 2



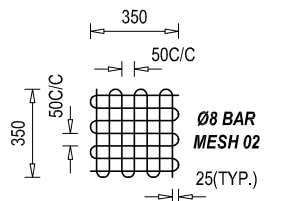
REINFORCEMENT DETAILS OF END CROSS GIRDER
SCALE - 1 : 50



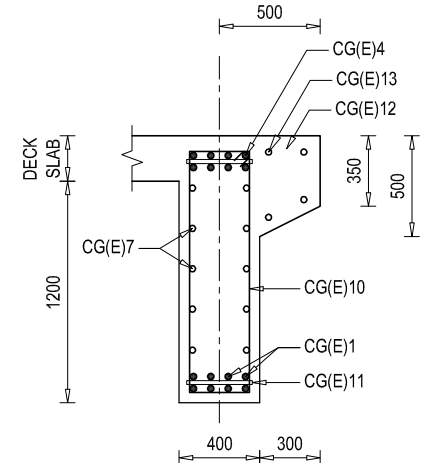
REINFORCEMENT DETAILS OF MID CROSS GIRDER
SCALE - 1 : 50



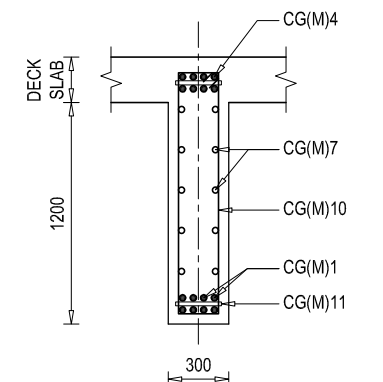
REINFORCEMENT DETAILS OF BEARING MESH
SCALE - 1 : 50



REINFORCEMENT DETAILS OF LIFTING MESH
SCALE - 1 : 50



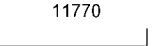
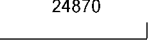
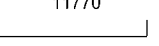
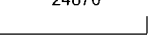
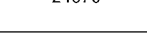
SECTIONAL REINFORCEMENT DETAILS OF END CROSS GIRDER - SEC T16A
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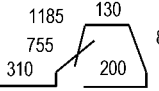
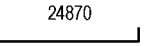


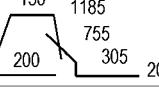
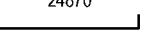
SECTIONAL REINFORCEMENT DETAILS OF MID CROSS GIRDER - SEC T16B
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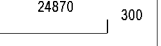
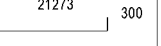
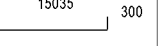
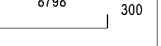
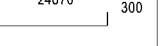
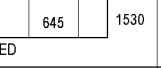
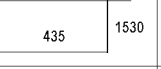
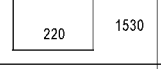
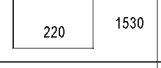
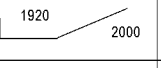
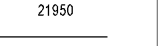
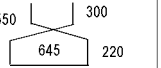
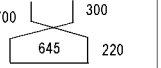
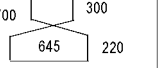
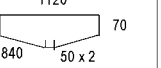
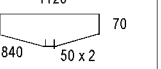
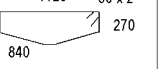
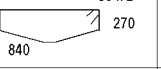
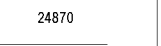
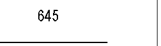
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READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/BHAPS/ID-4

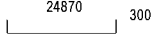
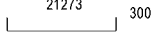
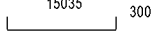
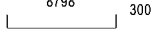
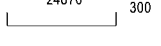
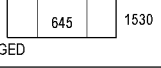
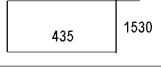
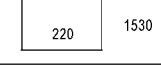
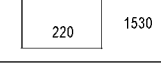
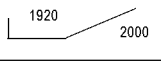
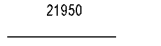
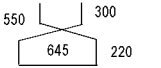
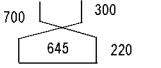
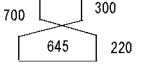
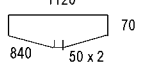
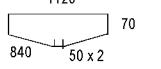
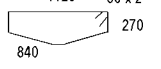
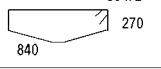
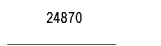
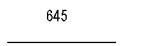
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.D.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingenieria Madrid, Spain  STUP Consultants Private Limited Kolkatta, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Designed By	Mr. R.D.	CROSS GIRDER REINFORCEMENT DETAILS OF BRIDGE OVER RIVER BHAPSI Reference Drawings KDP/DPR/STR/BR/BHAPS/ID-17	AS SHOWN Chainage: 268+310	28.05.2023 Drawing No:- KDP/DPR/STR/BR/BHAPS/ID-16 Sheet No. 1 / 1
			Checked By	Mr. S.M.			
			Approved By	Mr. H.B.			

BAR BENDING SCHEDULE OF DECK SLAB (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	DS01	150  150	16	150	12.070	167	1.580	3185.29
2	DS02	150  150	10	150	25.170	76	0.617	1180.81
3	DS03	150  150	16	150	12.070	167	1.580	3185.29
5	DS04	150  150	10	150	25.170	76	0.617	1180.81
6	DS05		16		24.870	8	1.580	314.41
TOTAL (KG) :							9046.61	

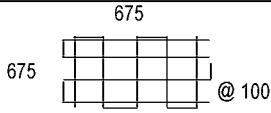
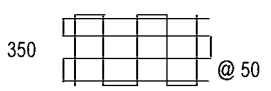
BAR BENDING SCHEDULE OF R.C.C BARRIER (A) (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RC-A1		16	150	4.065	167	1.580	1072.76
2	RC-A2	150  150	10	150	25.170	16	0.617	248.59
TOTAL (KG) :							1321.35	

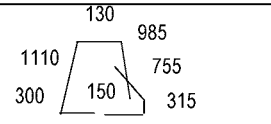
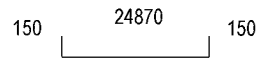
BAR BENDING SCHEDULE OF R.C.C BARRIER (B) (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RC-B1		16	150	4.070	167	1.580	1074.08
2	RC-B2	150  150	10	150	25.170	16	0.617	248.59
TOTAL (KG) :							1322.67	

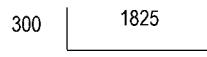
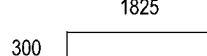
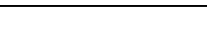
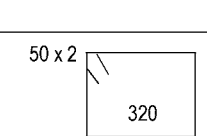
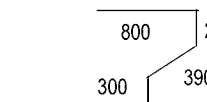
BAR BENDING SCHEDULE OF MID MAIN GIRDER (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	MG(M)1	300  300	32		25.470	18	6.321	2897.92
2	MG(M)2	300  300	32		21.873	4	6.321	553.04
3	MG(M)3	300  300	32		15.635	2	6.321	197.66
4	MG(M)4	300  300	32		9.398	4	6.321	237.62
5	MG(M)5	300  300	12		25.470	10	0.889	226.40
6	MG(M)6		12	100	9.660	42	0.889	360.64
7	MG(M)7		12	100	5.325	32	0.889	151.47
8	MG(M)8A		12	100	4.680	91	0.889	378.56
9	MG(M)8B		12	150	4.680	43	0.889	178.88
10	MG(M)9		12	200	4.290	32	0.889	122.03
11	MG(M)10		12	200	21.950	16	0.889	312.18
12	MG(M)11		12	100	2.785	32	0.889	79.22
13	MG(M)12A		12	150	3.085	91	0.889	249.54
14	MG(M)12B		12	150	3.085	43	0.889	117.92
15	MG(M)13A		12	100	3.040	189	0.889	510.72
16	MG(M)13B		12	150	3.040	43	0.889	116.20
17	MG(M)14A		12	100	3.440	189	0.889	577.92
18	MG14B		12	150	3.440	43	0.889	131.48
19	MG(M)15		12		24.870	2	0.889	44.21
19	MG(M)16		32	1500	0.645	68	6.321	277.24
TOTAL (KG) :							7720.83	

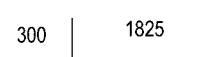
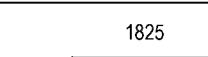
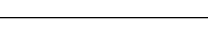
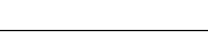
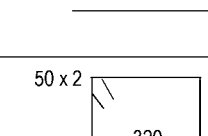
BAR BENDING SCHEDULE OF END MAIN GIRDER (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	MG(E)1	300  300	32		25.470	18	6.321	2897.92
2	MG(E)2	300  300	32		21.873	4	6.321	553.04
3	MG(E)3	300  300	32		15.635	2	6.321	197.66
4	MG(E)4	300  300	32		9.398	4	6.321	237.62
5	MG(E)5	300  300	12		25.470	10	0.889	226.40
6	MG(E)6		12	100	9.660	42	0.889	360.64
7	MG(E)7		12	100	5.325	32	0.889	151.47
8	MG(E)8A		12	100	4.680	91	0.889	378.56
9	MG(E)8B		12	150	4.680	43	0.889	178.88
10	MG(E)9		12	200	4.290	32	0.889	122.03
11	MG(E)10		12	200	21.950	16	0.889	312.18
12	MG(E)11		12	100	2.785	32	0.889	79.22
13	MG(E)12A		12	150	3.085	91	0.889	249.54
14	MG(E)12B		12	150	3.085	43	0.889	117.92
15	MG(E)13A		12	100	3.040	189	0.889	510.72
16	MG(E)13B		12	150	3.040	43	0.889	116.20
17	MG(E)14A		12	100	3.440	189	0.889	577.92
18	MG14B		12	150	3.440	43	0.889	131.48
19	MG(E)15		12		24.870	2	0.889	44.21
19	MG(E)16		32	1500	0.645	68	6.321	277.24
TOTAL (KG) :							7720.83	

EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Drawing Name		Scale:		Date:	
		Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges		Joint Venture of		Designed By	Mr. R.D.	AS SHOWN		28.05.2023	
				EPTISA Servicios De Ingeniera Madrid, Spain		Checked By	Mr. S.M.			Drawing No:- KDP/DPR/STR/BR/BHAPSI/DD-17	
				In Association With		Approved By	Mr. H.B.			Sheet No. 1 / 2	
				Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited				Chainage:			
								268+310			

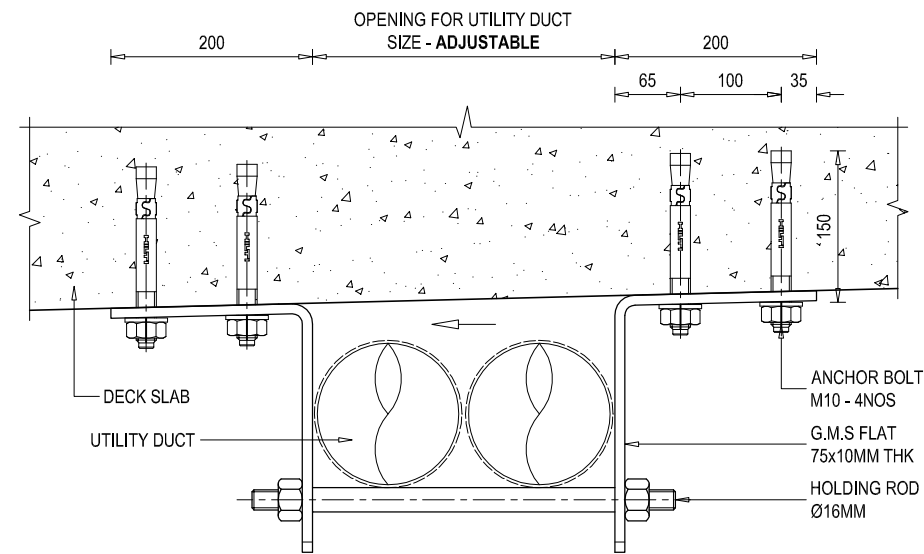
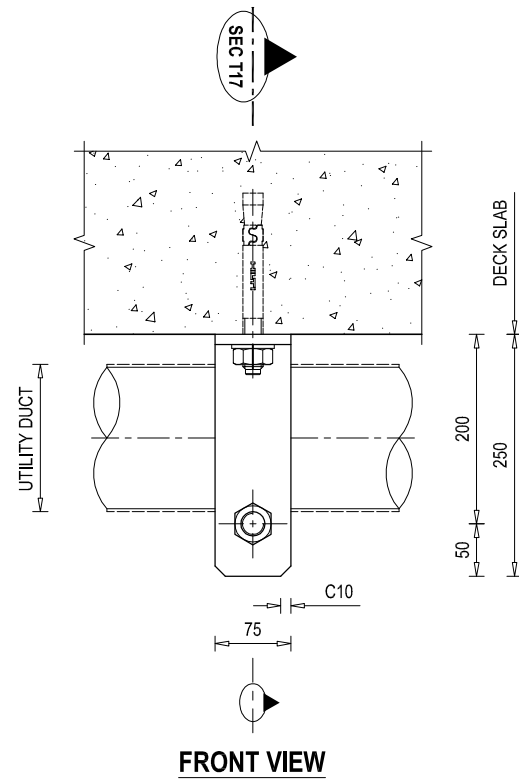
BAR BENDING SCHEDULE OF MESH (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	MESH 01	675 	10		9.450	8	0.617	46.67
2	MESH 02	350 	10		4.900	4	0.617	12.10
TOTAL (KG) :								58.77

BAR BENDING SCHEDULE OF R.C.C SEPARATOR (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RS1		16	150	3.745	167	1.580	988.31
2	RS2		10	150	25.170	13	0.617	201.98
TOTAL (KG) :								1190.29

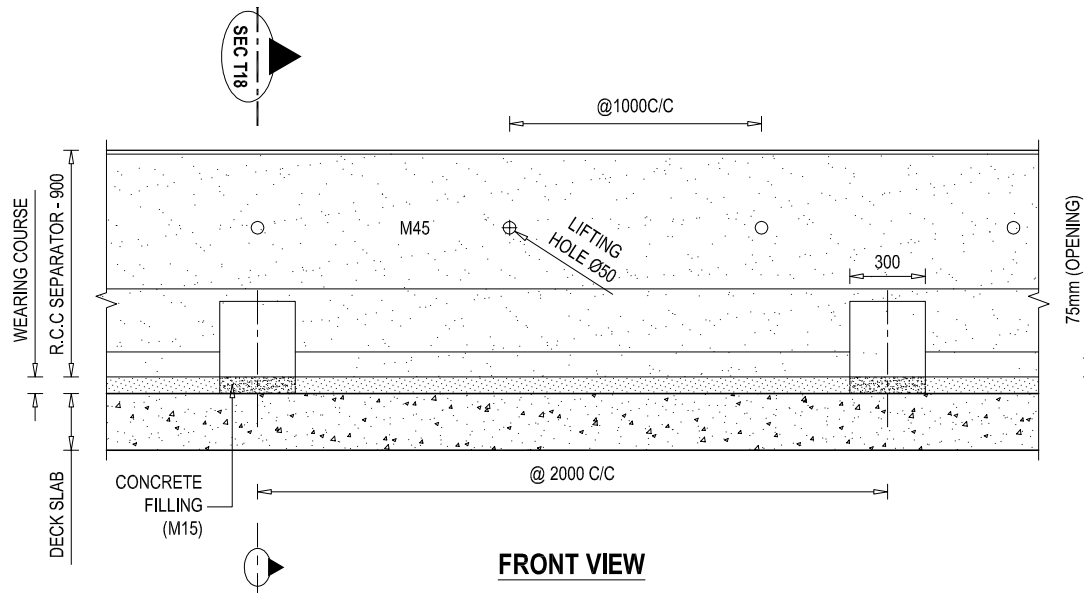
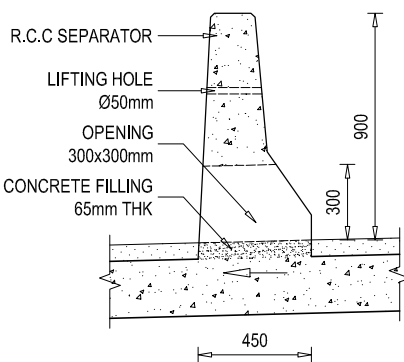
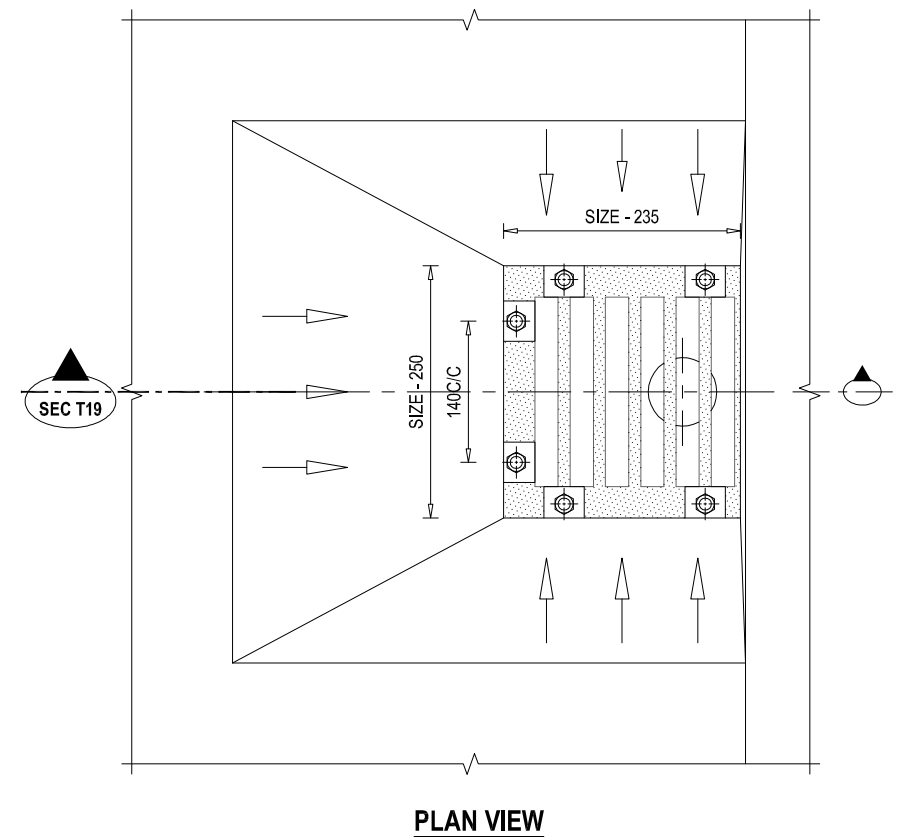
BAR BENDING SCHEDULE OF END CROSS GIRDER (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	CG(E)1		20		2.125	8	2.469	41.98
2	CG(E)2		20		2.625	8	2.469	51.85
3	CG(E)3		20		1.675	8	2.469	33.09
4	CG(E)4		20		2.125	8	2.469	41.98
5	CG(E)5		20		2.625	8	2.469	51.85
6	CG(E)6		20		1.675	8	2.469	33.09
7	CG(E)7		12	150	1.825	8	0.889	12.98
8	CG(E)8		12	150	2.625	8	0.889	18.67
9	CG(E)9		12	150	1.675	8	0.889	11.91
10	CG(E)10		12	200	1.740	39	0.889	60.32
11	CG(E)11		20	1000	0.320	18	2.469	14.22
12	CG(E)12		16	150	1.750	79	1.580	218.47
13	CG(E)13		12		11.770	6	0.889	62.77
TOTAL (KG) :								653.17
TOTAL NOS OF CROSS GIRDER :								2.00
TOTAL WEIGHT (KG) :								1306.33

BAR BENDING SCHEDULE OF MID CROSS GIRDER (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	CG(M)1		20		1.920	8	2.469	37.93
2	CG(M)2		20		2.945	8	2.469	58.17
3	CG(M)3		20		1.995	8	2.469	39.41
4	CG(M)4		20		1.920	8	2.469	37.93
5	CG(M)5		20		2.625	8	2.469	51.85
6	CG(M)6		20		1.675	8	2.469	33.09
7	CG(M)7		12	150	1.620	8	0.889	11.52
8	CG(M)8		12	150	2.625	8	0.889	18.67
9	CG(M)9		12	150	1.675	8	0.889	11.91
10	CG(M)10		12	200	1.740	39	0.889	60.32
11	CG(M)11		20	1000	0.320	18	2.469	14.22
TOTAL (KG) :								375.01

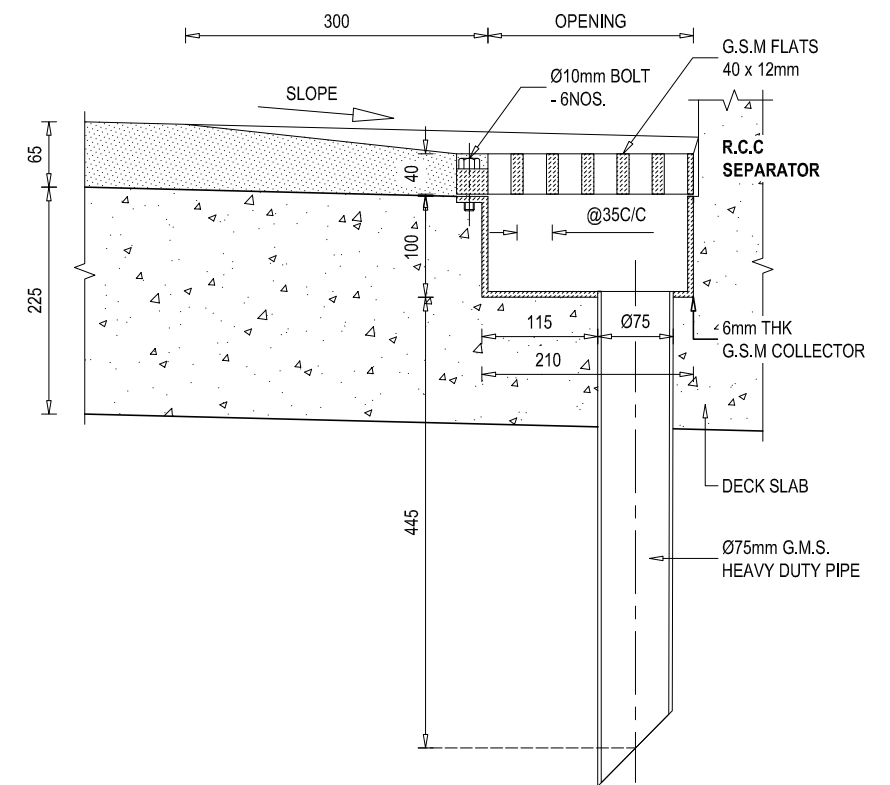
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS			Designed By	Mr. R.D.	 Signature	Drawing Name SUPER STRUCTURE BAR BENDING SCHEDULE OF BRIDGE OVER RIVER BHAPSI	Scale: AS SHOWN	Date: 28.05.2023		
		Joint Venture of				EPTISA Servicios De Ingeniera Madrid, Spain						STUP Consultants Private Limited Kolkata, India
		In Association With										
			Checked By	Mr. S.M.	 Signature							
			Approved By	Mr. H.B.		 Signature						
			Reference Drawings -				Chainage: 268+310	Drawing No.- KDP/DPR/STR/BR/BHAPSI/DD-17	Sheet No. 2 / 2			



**DETAILS OF GALVANIZED MILD STEEL (G.M.S)
UTILITY DUCT CLAMP**
SCALE - 1 : 10

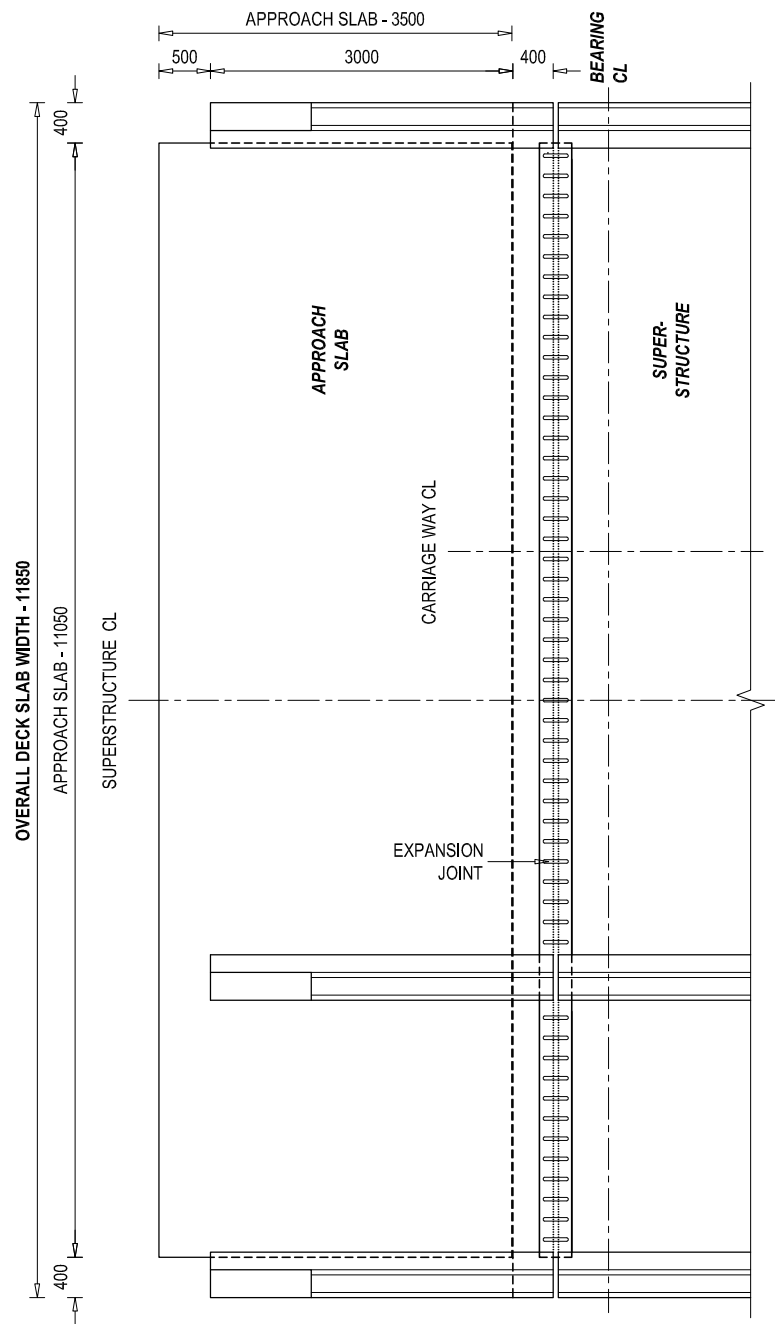


**DETAIL ELEVATION VIEW AT R.C.C SEPARATOR
& IT'S DRAIN OPENING**
SCALE - 1 : 40

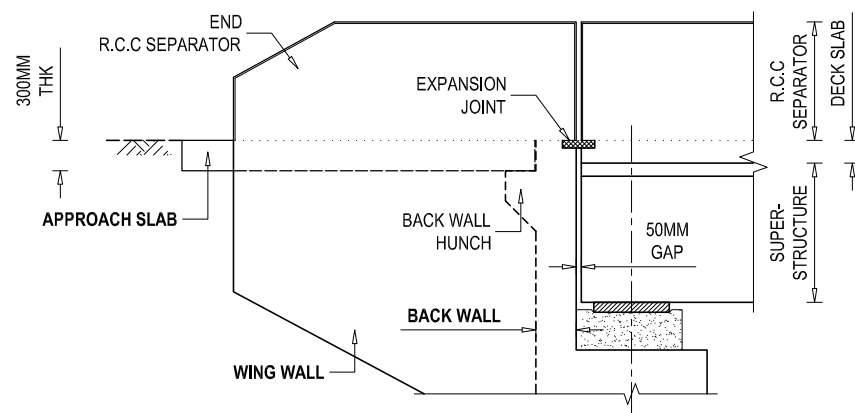


**DETAILS OF GALVANIZED MILD STEEL (G.M.S)
DRAINAGE SPOUT**
SCALE - 1 : 10

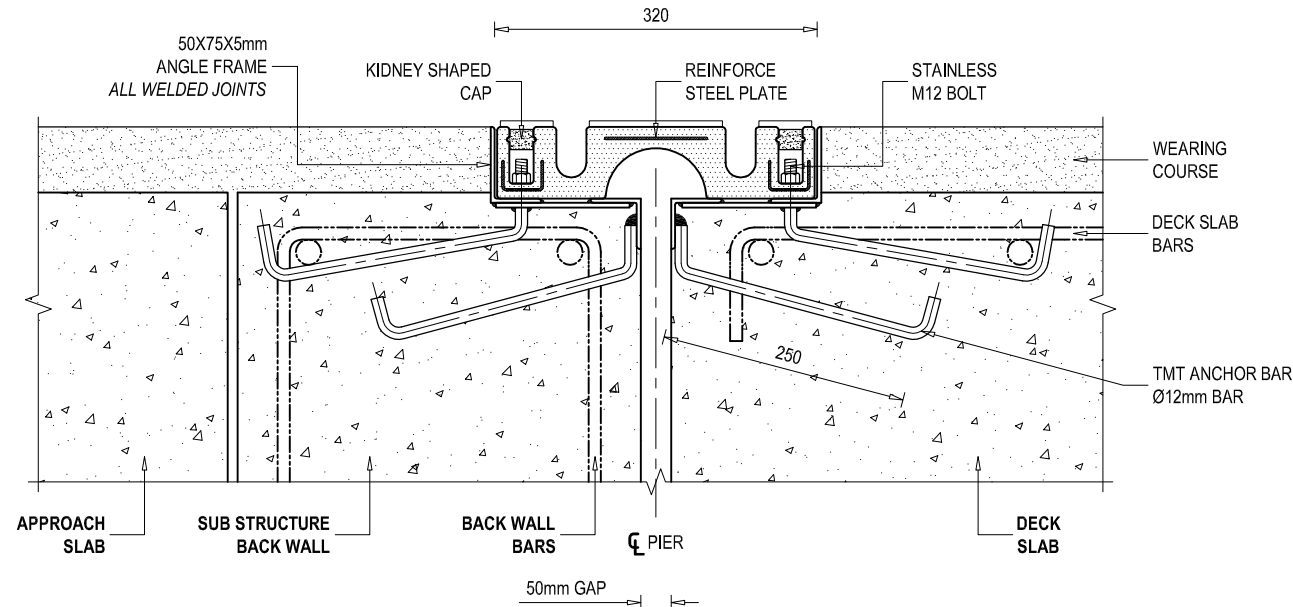
EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of EPTISA Servicios De Ingeniera Madrid, Spain STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Designed By Mr. R.D. Nec.No. 6489 CPM/V Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name MISCELLANEOUS DETAILS OF BRIDGE OVER RIVER BHAPSI Reference Drawings	Scale: AS SHOWN Chainage: 268+310	Date: 22.04.2023 Drawing No:- KDP/DPR/STR/BR/BHAPS/DD-18 Sheet No.1 /2
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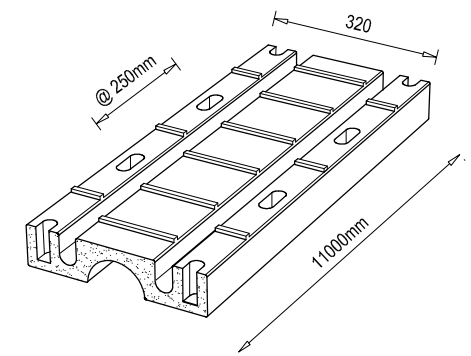
PLAN VIEW AT EXPANSION JOINT, END R.C.C SEPARATOR & APPROACH SLAB



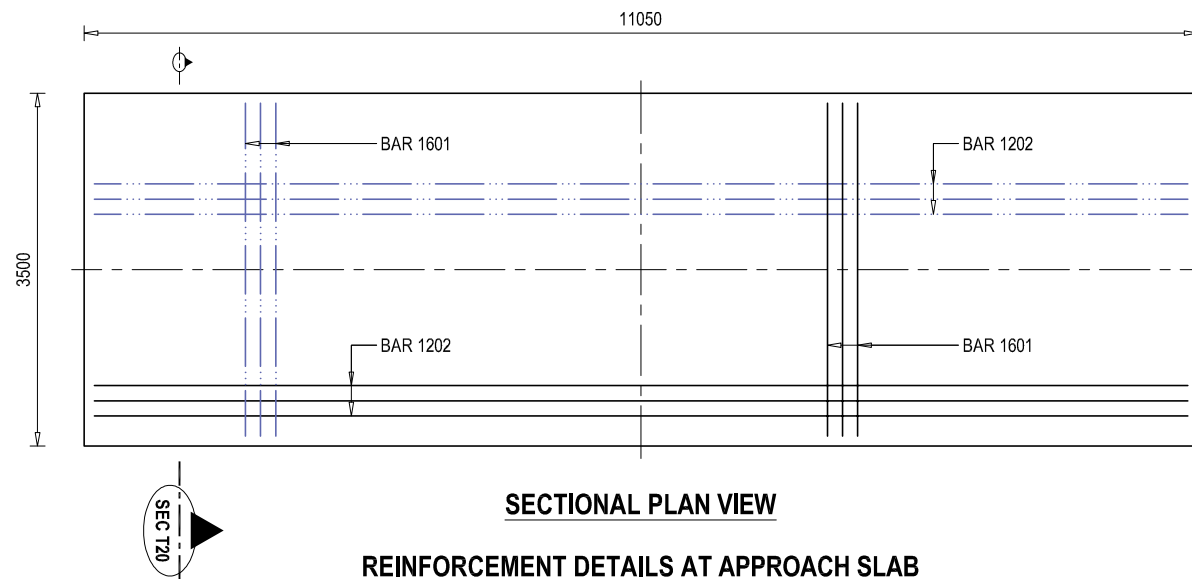
ELEVATION VIEW



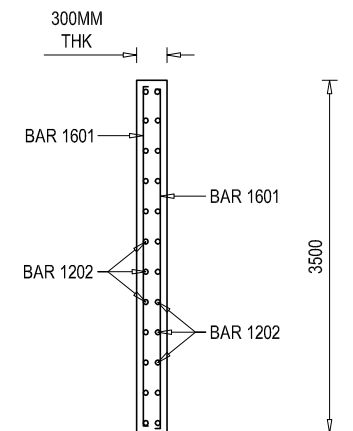
SEAL TYPE EXPANSION JOINTS ARRANGEMENT IN A CARRIAGEWAY
SCALE - 1 : 10 @ A3 PAPER



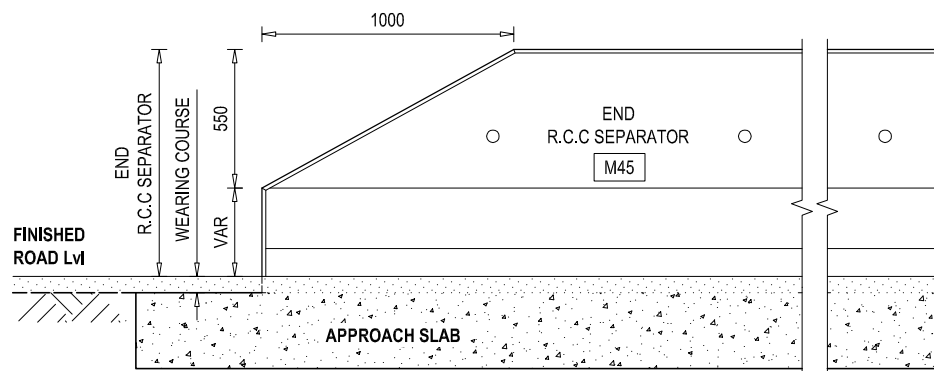
EXPANSION JOINT ISOMETRIC VIEW - SEAL TYPE
SCALE - NON



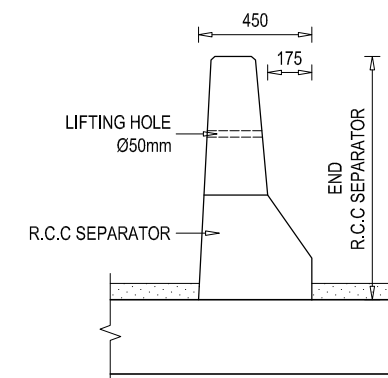
SECTIONAL PLAN VIEW
REINFORCEMENT DETAILS AT APPROACH SLAB
SCALE - 1 : 100 @ A3 PAPER



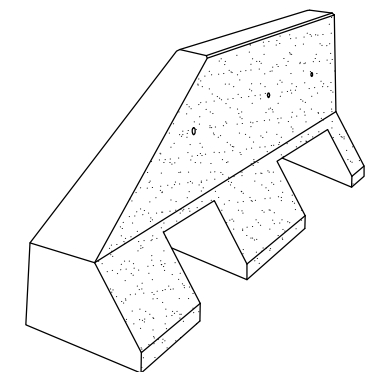
SECTIONAL ELEVATION VIEW AT SEC T20



ELEVATION VIEW OF END R.C.C SEPARATOR
SCALE - 1 : 40 @ A3 PAPER

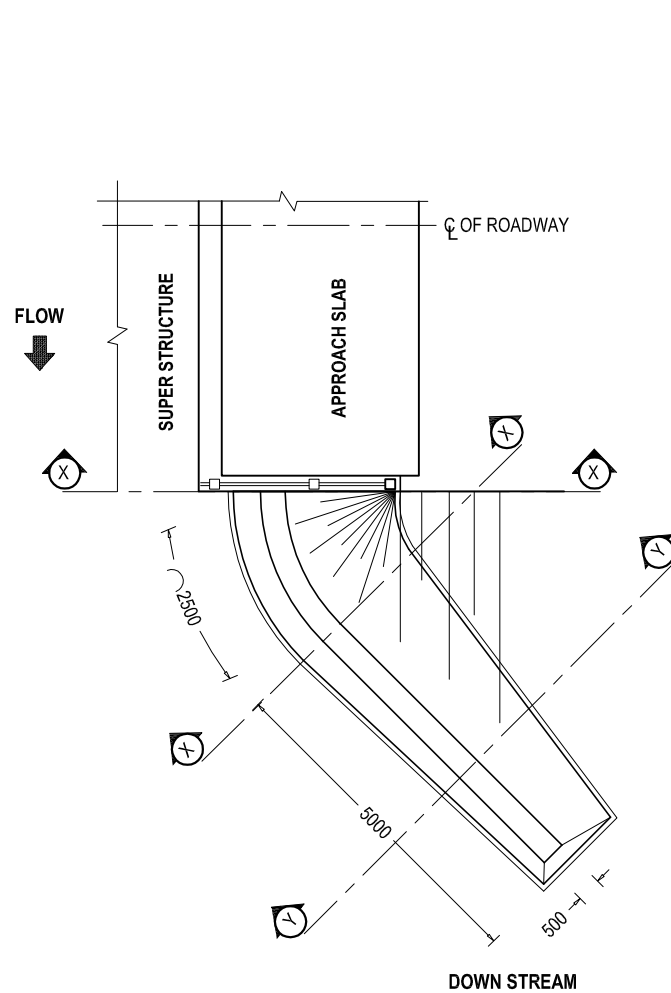


SIDE VIEW
SCALE - 1 : 40 @ A3 PAPER

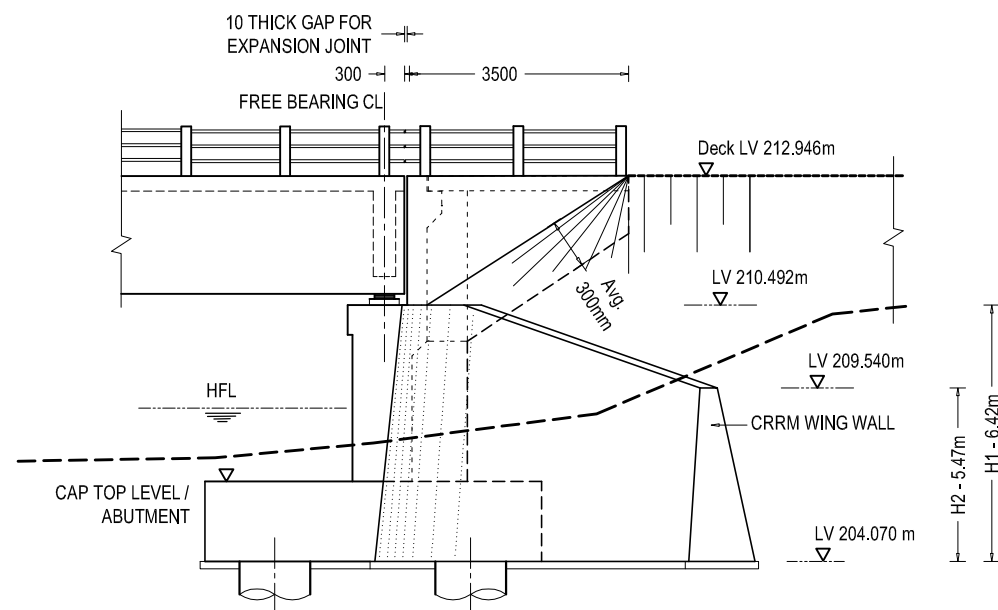
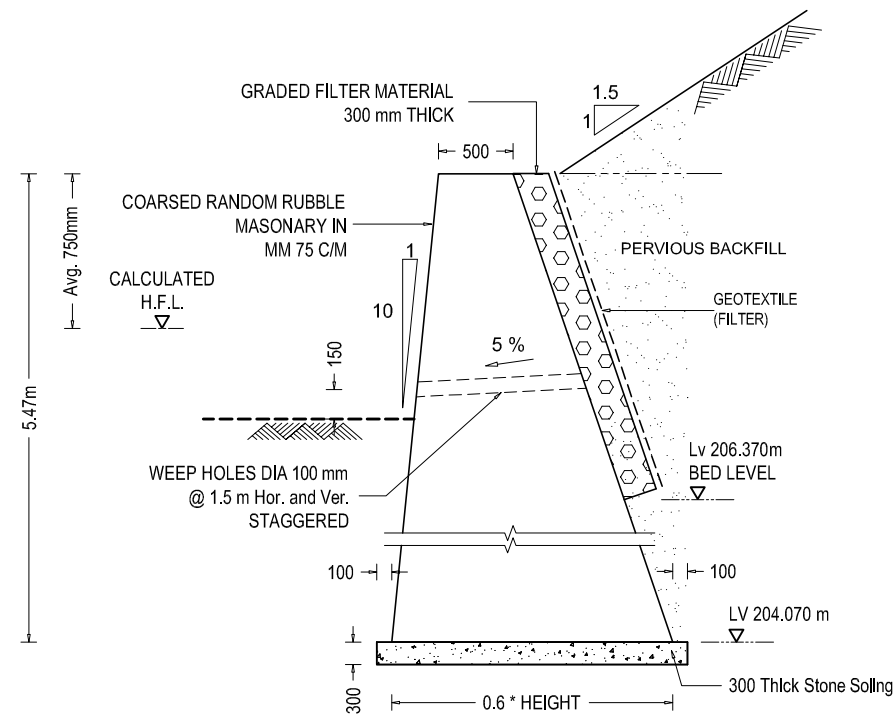


END R.C.C SEPARATOR ISOMETRIC VIEW
SCALE - NON

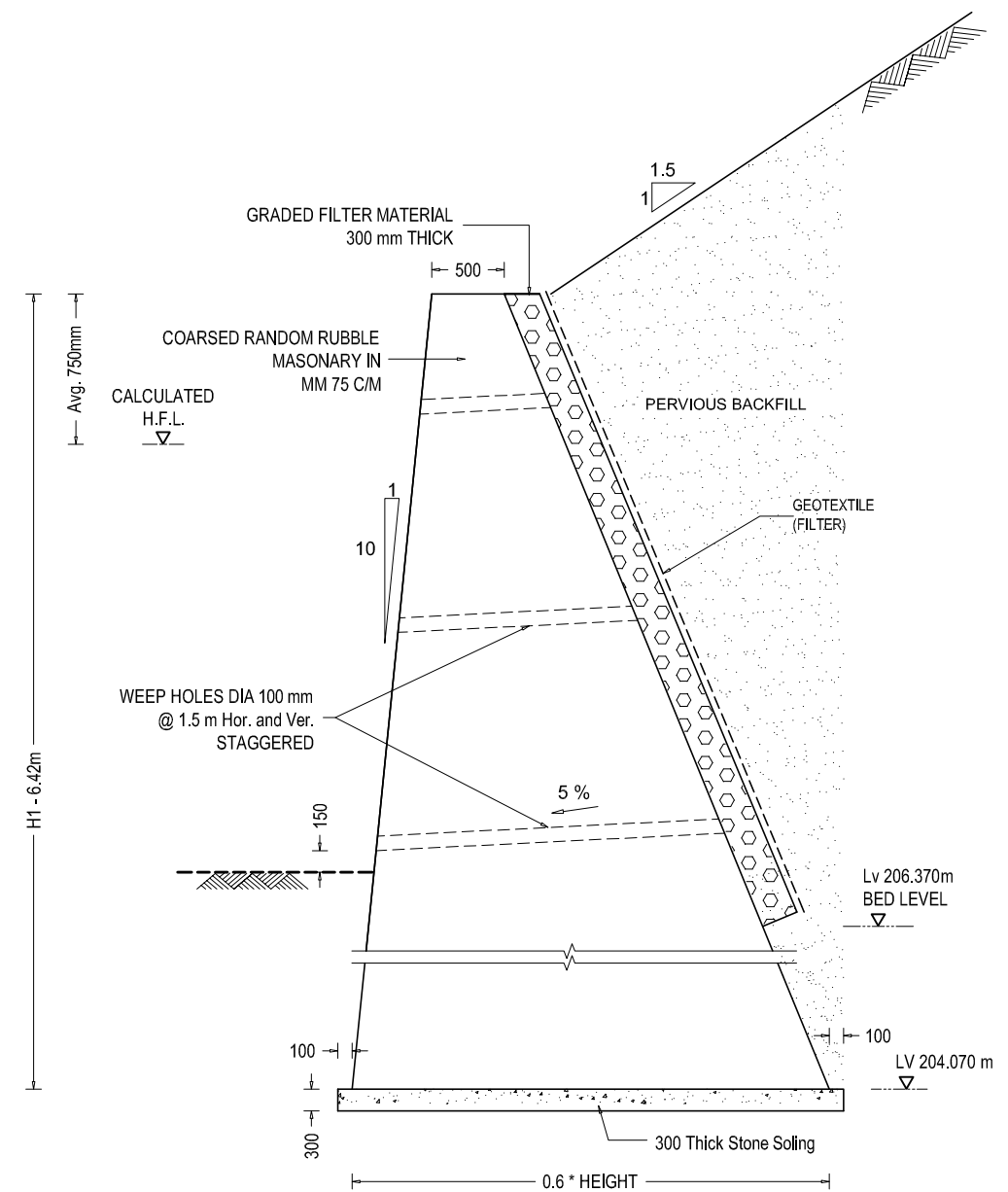
EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of EPTISA Servicios De Ingenieria Madrid, Spain STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Designed By Mr. R.D. Nec.No. 6489 CML/V Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name MISCELLANEOUS DETAILS OF BRIDGE OVER RIVER BHAPSI Reference Drawings	Scale: AS SHOWN Chainage: 268+310	Date: 22.04.2023 Drawing No:- KDP/DPR/STR/BR/BHAPSI/DD-18 Sheet No.2/2
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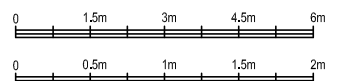
NOTE : AT DOWN STREAM ONLY



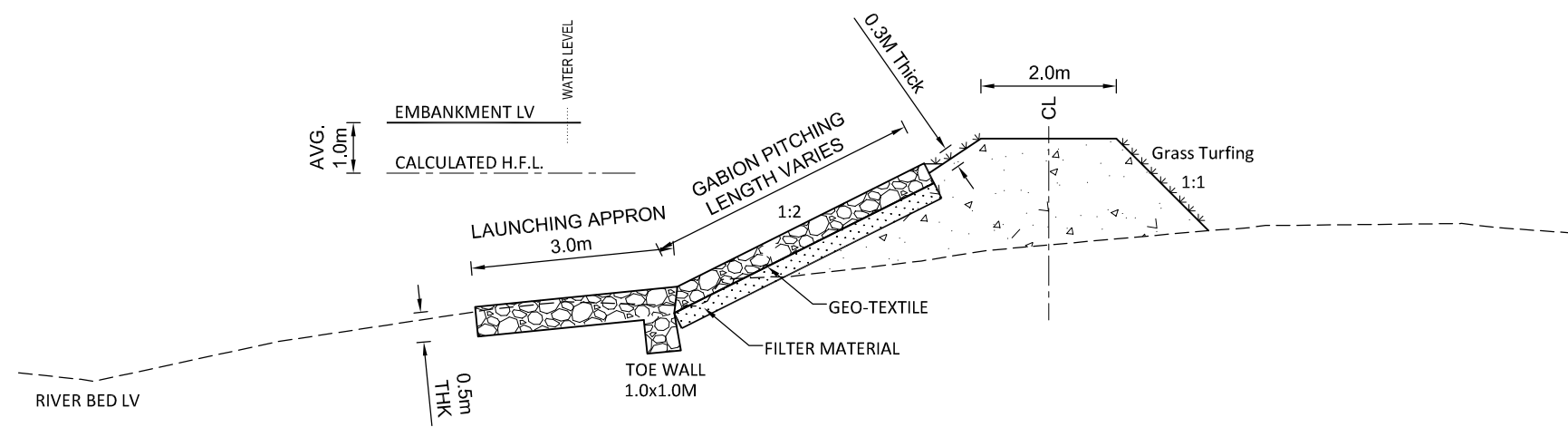
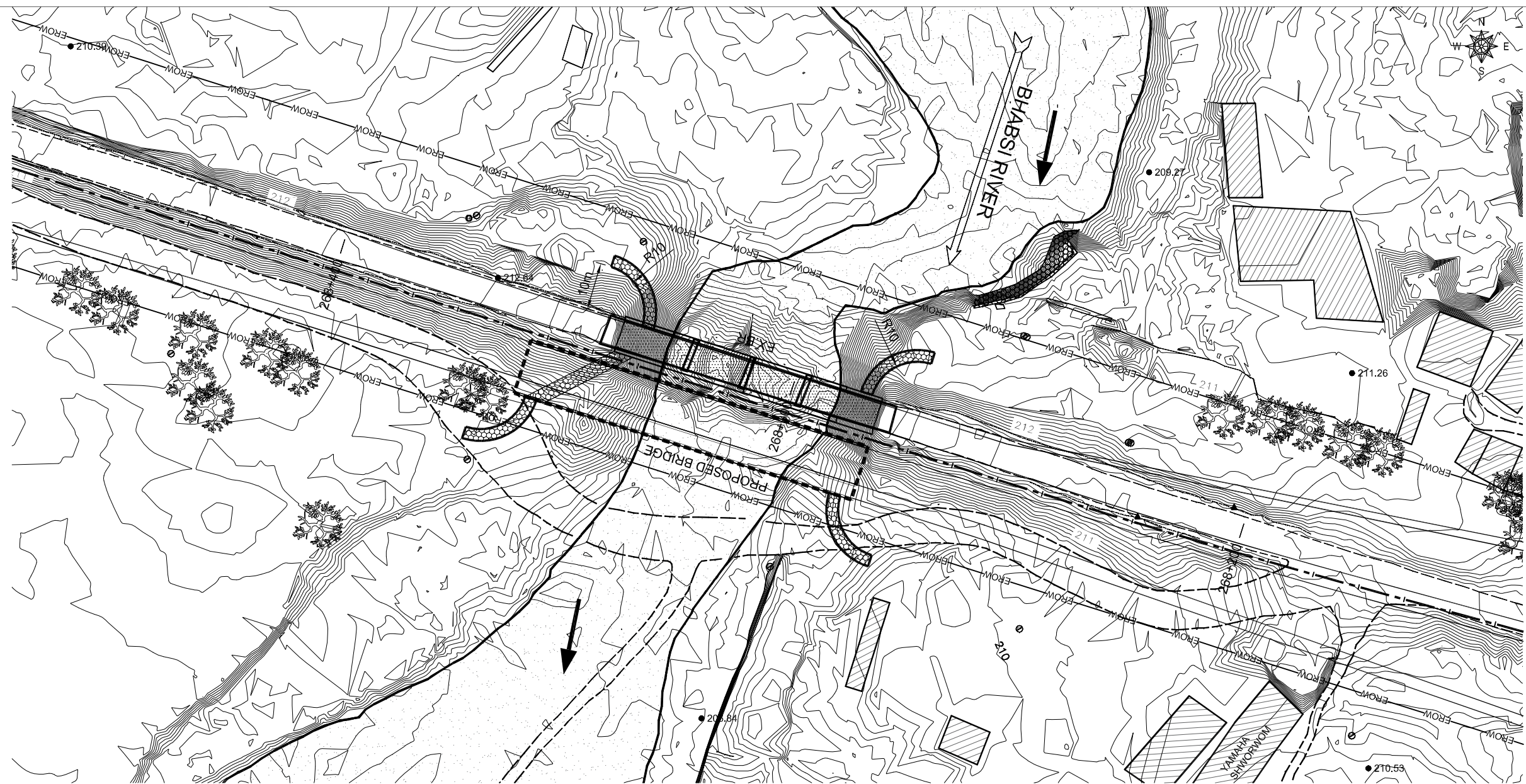
WING WALL ELEVATION



STONE MASONRY WING WALL SECTION X - X



EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.D.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkatta, India In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited	Checked By	Mr. S.M.	WING WALL DETAILS OF BRIDGE OVER RIVER BHAPSI Reference Drawings	AS SHOWN Chainage: 268+310	22.04.2023
			Approved By	Mr. H.B.			Drawing No.- KDP/DPR/STR/BR/BHAPS/DD-19
							Sheet No. 1 / 1



EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.D.	 Signature	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingenieria Madrid, Spain  STUP Consultants Private Limited Kolkatta, India	Mr. S.M.	 Signature		RIVER TRAINING WORKS OF BRIDGE OVER RIVER BHAPSI	AS SHOWN	22.04.2023
		In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Mr. H.B.	 Signature		Reference Drawings	Chainage:	Drawing No.- KDP/DPR/STR/BR/BHAPSI /DD - 20
			Approved By				268+310	Sheet No. 1/1

Bearing Design Data for 25m Span and 11.85m width

Load Condition	Items	Under	On each Neoprene Bearing	Unit
Under No Live Load	V	NO EQ.	60.54	Ton
		EQ.	69.62	Ton
	H _L	NO EQ.	-	Ton
		EQ.	13.62	Ton
	H _T	NO EQ.	-	Ton
		EQ.	13.62	Ton
	θ	NO EQ.	0.00250	radian
		EQ.	0.00288	radian
	Δ		14.57	mm
Under Maximum Live Load	V	NO EQ.	103.45	Ton
		EQ.	113.82	Ton
	H _L	NO EQ.	-	Ton
		EQ.	0.00	Ton
	H _T	NO EQ.	-	Ton
		EQ.	0.00	Ton
	θ	NO EQ.	0.00388275	radian
		EQ.	0.00447	radian
	Δ		24.23	mm

EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS			Designed By		Mr. R.D.		Drawing Name		Scale:		Date:		
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP)	Joint Venture of		EPTISA		STUP Consultants Private Limited		Mr. S.M.		Signature		BEARING DESIGN DATA OF BRIDGE OVER RIVER BHAPSI		AS SHOWN		22.04.2023	
		EPTISA Servicios De Ingenieria Madrid, Spain		STUP Consultants Private Limited Kolkata, India		Checked By		Signature		Drawing No.-							
		Detailed Design of Upgradation of Kamala-Dhakkebar-Pathalya Road Section (130 KM) of Mahendra Highway and Bridges		In Association With		Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited		Approved By		Mr. H.B.		Signature		Reference Drawings		Chainage:	
												268+310					