Government of Nepal
Ministry of Federal Affairs and General Administration
Department of Local Infrastructure (DoLI)
Motorable Local Roads Bridge Programme (MLRBP)

RCC T GIRDER BRIDGE

Intermediate-Lanes Traffic, Simply Supported Span, 3 Web, Cast-in-Situ

Standard Drawings for Typical (16, 18, 20, 22 & 25)m Span Superstructure of Normal Height

STANDARD SUPERSTRUCTURE DRAWINGS

Prepared by

Local Roads Bridge Support Unit (LRBSU)

Manbhawan, Lalitpur
Tel: 01-5549589, 5532019
email: lrbp@lrbpnepal.org

Joint Venture of Civil Informatics & Solutions P. Ltd (CIAS) & MEH Consultants (P.) Ltd. MLRBP-IV 2021 Chakupat, Patandhoka, Lalitpur

GENERAL NOTES:

GENERAL

1.1. ALL DIMENSIONS ARE IN MM. (EXCEPT OTHERWISE INDICATED).
1.2. DRAWINGS ARE VALID FOR A SPAN LENGTH BETWEEN (16-25)M.
1.3. APPLICABLE DESIGN LIVE LOAD IS ACCORDING TO IRC 6:2017.
1.4. THE BRIDGE IS DESIGNED ON CONDITION THAT IRC CLASS A AND IRC 7OR (TRACK AND WHEEL LOAD) LIVE LOAD PASS THE BRIDGE.
1.5. APPLICABLE DESIGN STANDARDS AND WORKS:
1.5.1. INDIAN ROAD CONGRESS (IRC)
1.5.2. LATEST STANDARD SPECIFICATION FOR ROAD AND BRIDGE WORKS, DEPARTMENT OF ROAD, DOR 2073 WITH AMENDMENT 2075

1. CONCRETE

1.1. THE GRADES OF CONCRETE ADOPTED IN THE STRUCTURES ARE AS FOLLOWS UNLESS OTHERWISE INDICATED IN THE DRAWINGS ACCORDING TO SECTION 2000:

CONCRETE GRADE	CHARACTERISTIC STRENGTH: FCK (MPA)	TYPICAL USE
M 25/20	25	DECK SLAB, APPROACH SLAB, FOOTPATH AND KERB, DELINEATOR AND RAILING POST

1.2. CONCRETE COVER AND CHAMFER:
MINIMUM CLEAR CONCRETE COVERS BETWEEN THE SURFACE OF CONCRETE AND RE-BAR AND ALL THE CONCRETE CORNERS SHALL BE CHAMFERED WITH TRIANGLE STRIP MINIMUM SIZE EXCEPT OTHERWISE INDICATED ON DRAWINGS SHALL BE AS FOLLOWS:

Structures	Clear Cover (mm)	Chamfer (mm)
RCC Slab	40	50 X 50
Superstructure	40	50 X 50
Parapet	25	30 X 30

2. REINFORCEMENT:

DEFORMED BARS SHALL COMPLY WITH FOLLOWING INDIAN STANDARD:
HEIGH YIELD DEFORMED BAR SHALL COMPLY WITH IS 1786-1979 OR EQUIVALENT WITH MINIMUM YIELD STRENGTH 500 MPA.
CUTTING, BENDING, SPLICING AND DEVELOPMENT LENGTH SHALL CONFORM TO IRC:112.
FOR FAVOURABLE CONDITION
LAP LENGTH SHALL BE 48 TIMES BAR DIAMETER FOR M25
FOR UNFAVOURABLE CONDITION, INCREASE LAP LENGTH BY 43%.

3. CONTRACTOR OR CONSULTANT SHALL SUBMIT DRAWING WITH BAR BENDING SCHEDULE BASED ON THIS DRAWING.

REFERENCES TO CONSTRUCTION WORK REQUIREMENT INTER ALIA:

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE WORKS 2073 WITH AMENDMENT 2075:

SPECIFICATIONS FOR WORKING PROCESS, QUALITY OF WORK, QUALITY OF MATERIAL SHALL BE IN ACCORDANCE WITH "STANDARD SPECIFICATION FOR ROAD AND BRIDGE WORKS" SPECIALLY IN FOLLOWING SECTIONS;

SECTION 500-QUALITY CONROL

SECTION 600-MATERIALS AND TESTING OF MATERIALS

SECTION 900: EARTHWORKS

SECTION 1600-PILING FOR STRUCTURES

SECTION 1800: FALSEWORK, FORMWORK AND SURFACE FINISH FOR CONCRETE STRUCTURES

SECTION 1900 - BEARINGS AND EXPANSION JOINTS

SECTION 2000 -CONCRETE FOR STRUCTURES

SECTION 2400 - RIVER TRAINING AND PROTECTON WORKS

SECTION 3100: MISCELLANEOUS WORKS

LIST OF DRAWINGS

DWG.NO.	DESCRIPTION	DATE	REVISION NO.	REVISION DATE
SD-1	GENERAL NOTES/ LIST OF DRAWINGS			
SD-2	GENERAL ARRANGEMENT			
SD-3	MAIN GIRDER AND CROSS GIRDER DETAIL - 16 M			
SD-4	MAIN GIRDER AND CROSS GIRDER DETAIL - 18 M			
SD-5	MAIN GIRDER AND CROSS GIRDER DETAIL - 20 M			
SD-6	MAIN GIRDER AND CROSS GIRDER DETAIL - 22 M			
SD-7	MAIN GIRDER AND CROSS GIRDER DETAIL - 25 M			
SD-8	DECK SLAB AND APPROACH SLAB DETAIL			
SD-9	BAR BENDING SCHEDULE OF DECK SLAB			
SD-10	WING WALL			
SD-11	MISCELLANEOUS			

BEARING DESIGN DATA (FACTORED)						SUB-STRUCTURE DESIGN DATA (UN FACTORED)/ VERTICAL LOAD				
SPAN (m)	VERTICAL LOAD (KN)		LIVE LOAD (KN)		ROTATION	SPAN (m)	DEAD LOAD		LIVE LOAD	
	DEAD LOAD	LIVE LOAD	BRAKING/ TEMPERATURE	SEISMIC			SUPERSTRUCTURE LOAD	SURFACE LOAD	VEHICLE LOAD	PEDESTRIAN LOAD
16	462.36	554.12	115.69	83.41	0.003	16	836.80	90.00	774.40	73.96
18	516.51	578.53	119.53	93.11	0.003	18	933.30	101.25	810.56	81.60
20	602.52	598.05	123.37	109.18	0.003	20	1100.60	112.50	837.95	88.89
22	693.93	614.11	127.22	126.33	0.003	22	1279.90	123.75	859.27	95.82
25	802.56	633.64	132.98	146.36	0.003	25	1485.55	140.63	883.44	105.56

Civil Informatics & Solutions P. Ltd (CIASYS) MLRBP-IV 2021 Chakupat, Patandhoka, Lalitpur

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Ministry of Federal Affairs and General Administration
Department of Local Infrastructure (DoLI)
Motorable Local Roads Bridge Programme (MLRBP)

STANDARD DRAWINGS

Bridge Type: RCC T-Girder Bridge
Road Carriageway Width: 6.00m plus 2 Footpaths each 1.20 m wide | Overall Deck Width: 8.4 m
Effective Simply Supported Span (Center to Centre of Bearings): 16m to 25m

DRAWING TITLE

GENERAL NOTES

Prepared by:
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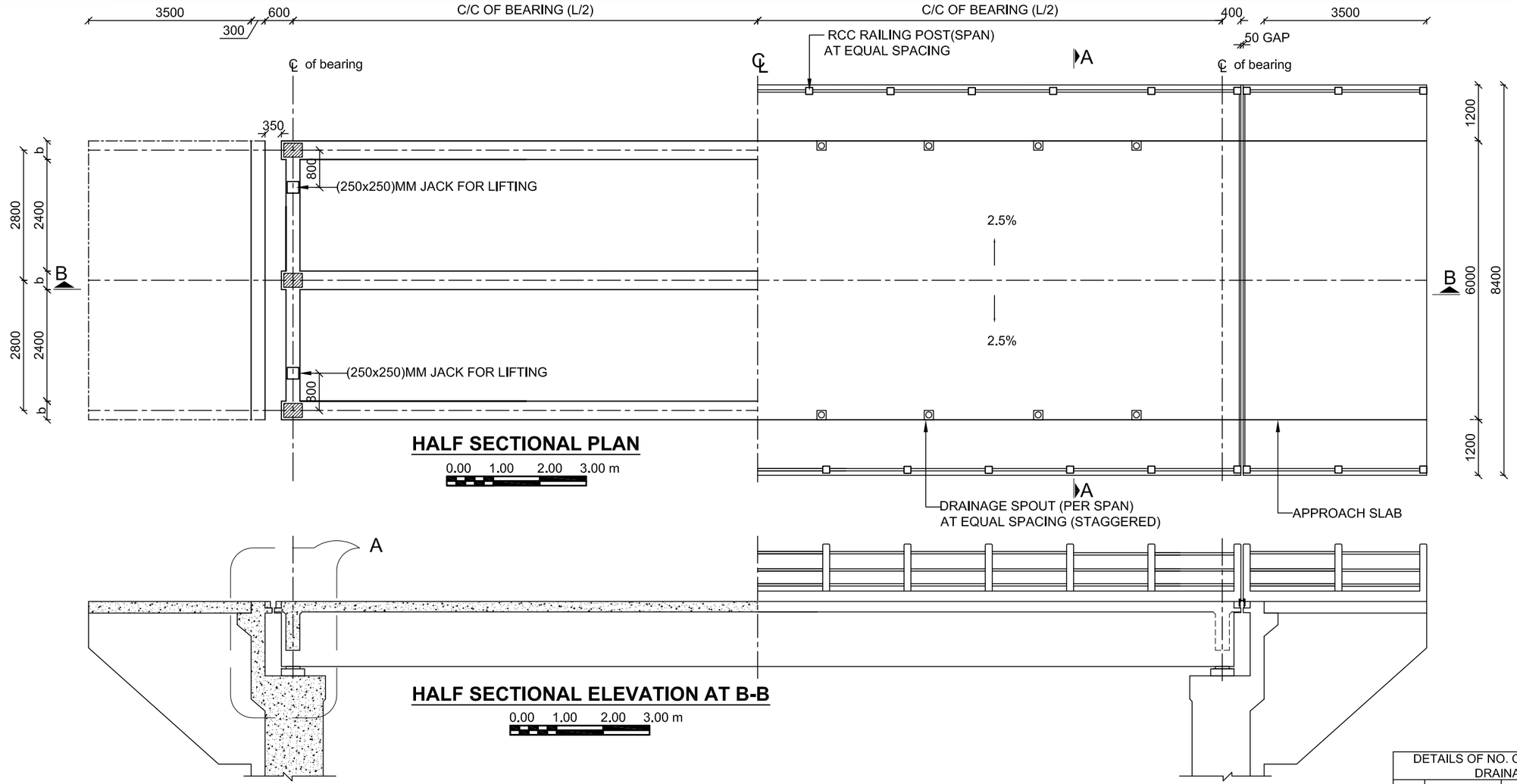
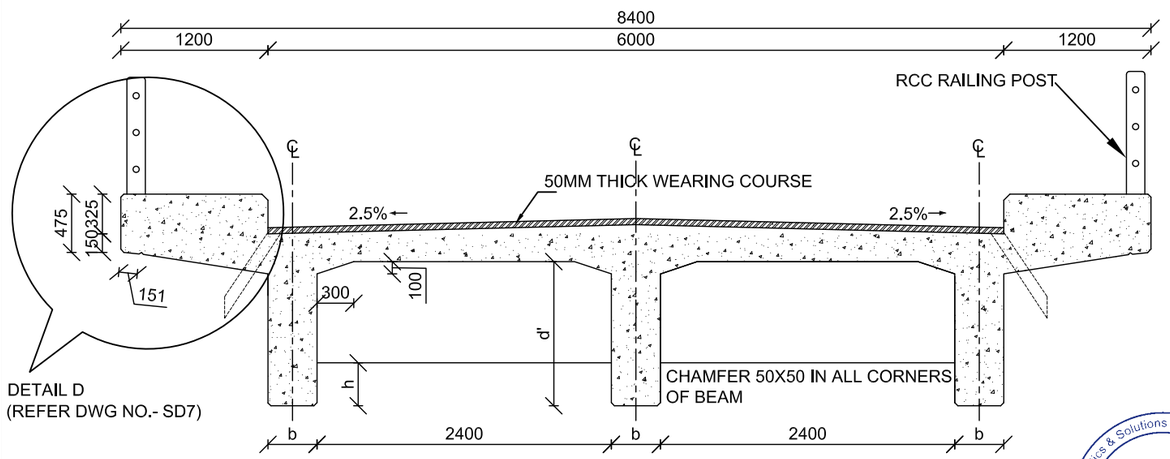
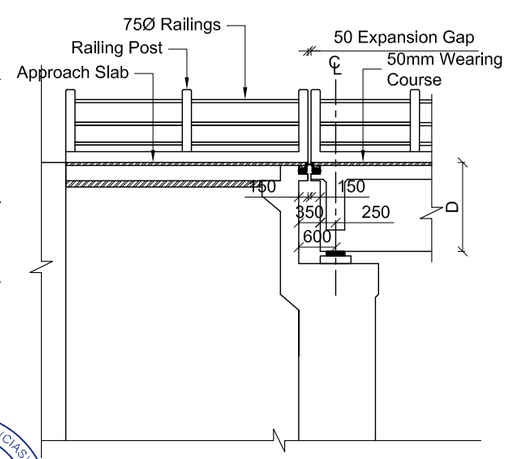
		Sign:	Date:	
Designed by:				Date: Aug, 2021
Drawn by:				Dwg No.: SD-1
Checked by:				Rev:
Approved by:				

Print Date: 2021-08-14







DETAILS OF NO. OF RAILING POST AND DRAINAGE SPOUT

S.N	DESCRIPTION	RAILING POST	DRAINAGE SPOUT
1	16M SPAN	2 x 14 = 28 Nos.	2 x 4 = 8 Nos.
2	18M SPAN	2 x 15 = 30 Nos.	2 x 4 = 8 Nos.
3	20M SPAN	2 x 16 = 32 Nos.	2 x 4 = 8 Nos.
4	22M SPAN	2 x 17 = 34 Nos.	2 x 5 = 10 Nos.
5	25M SPAN	2 x 18 = 36 Nos.	2 x 6 = 12 Nos.

DIMENSION DETAILING RECOMMENDED AT DRAWINGS:

S.N	PARAMETERS	16M SPAN	18M SPAN	20M SPAN	22M SPAN	25M SPAN
1	L	16000	18000	20000	22000	25000
2	b	400	400	400	400	400
3	d	225	225	225	225	225
4	d'	975	975	1175	1375	1475
5	D	1200	1200	1400	1600	1700
6	h	300	300	350	400	425

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STANDARD DRAWINGS | Bridge Type: RCC T-Girder Bridge
Road Carriageway Width: 6.00m plus 2 Footpaths each 1.20 m wide | Overall Deck Width: 8.4 m
Effective Simply Supported Span (Center to Centre of Bearings): 16m to 25m

DRAWING TITLE
GENERAL ARRANGEMENT

Prepared by:
Local Roads Bridge Support Unit (LRBSU)
Manbhawan, Lalitpur
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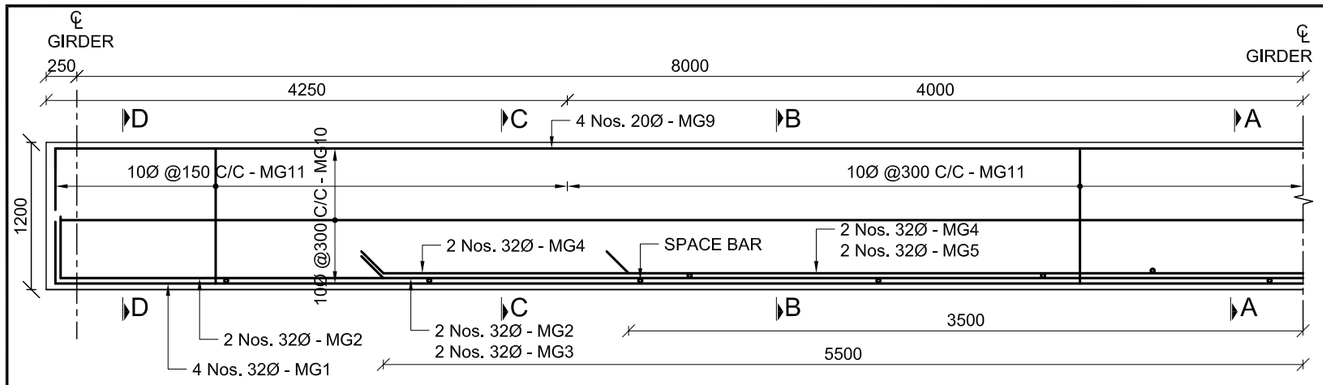
		Sign:	Date:
Designed by:			
Drawn by:			
Checked by:			
Approved by:			

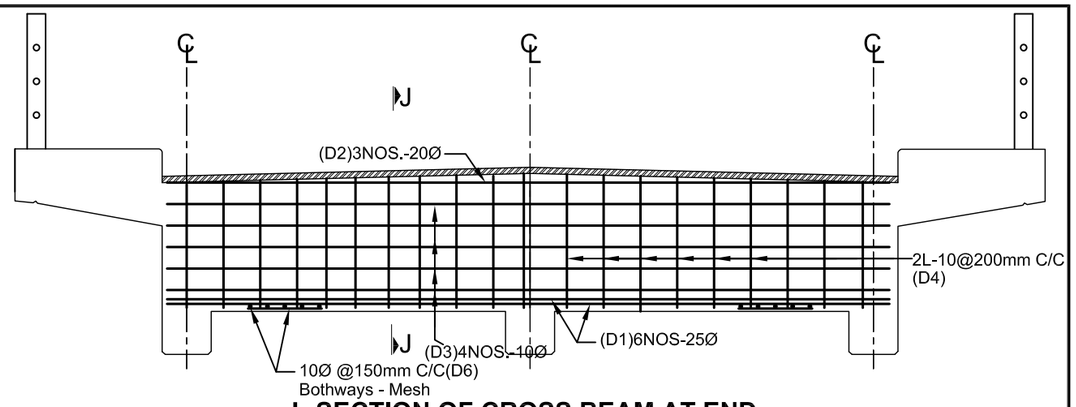
Date: Aug, 2021
Dwg No. SD-2
Rev:

Print Date: 2021-08-14



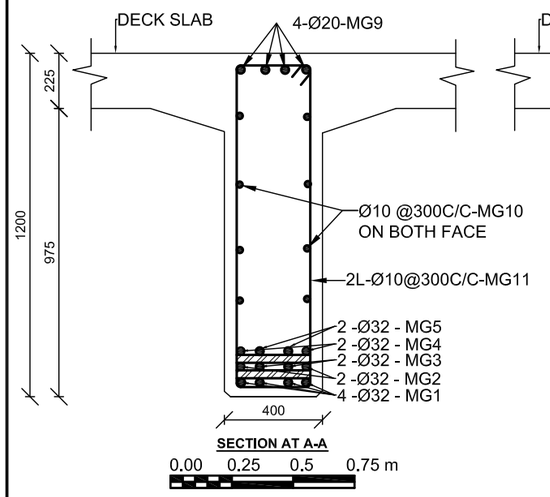
MAIN GIRDER REINFORCEMENT DETAILS

0.00 0.50 1.00 1.50 m



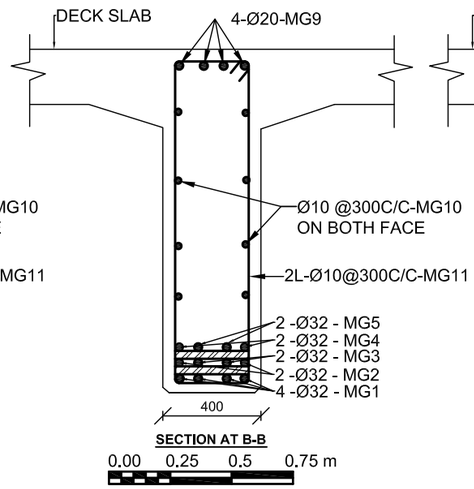
L-SECTION OF CROSS BEAM AT END

0.00 0.50 1.00 1.50 m



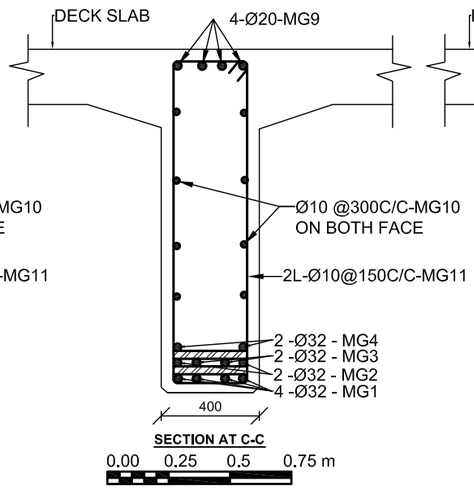
SECTION AT A-A

0.00 0.25 0.5 0.75 m



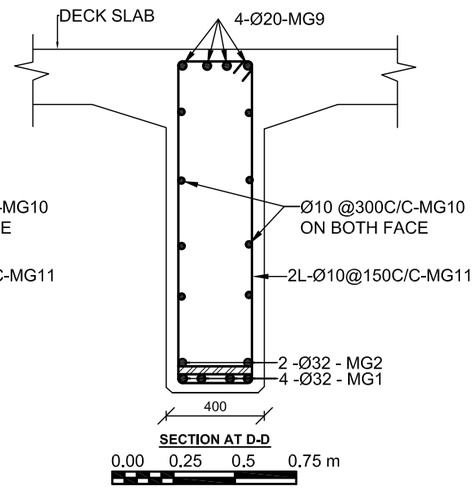
SECTION AT B-B

0.00 0.25 0.5 0.75 m



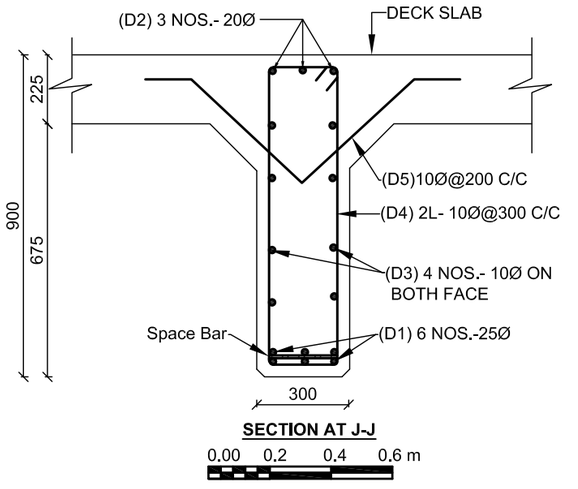
SECTION AT C-C

0.00 0.25 0.5 0.75 m



SECTION AT D-D

0.00 0.25 0.5 0.75 m



SECTION AT J-J

0.00 0.2 0.4 0.6 m

BAR SCHEDULE FOR MAIN GIRDER OF 16.0 m

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	MG1	500 | 16420 | 500	32		17.42	4	69.68	6.321	440.48
2	MG2	500 | 16420 | 500	32		17.42	2	34.84	6.321	220.24
3	MG3	500 | 11000 | 500	32		12.00	2	24.00	6.321	151.71
4	MG4	500 | 11000 | 500	32		12.00	2	24.00	6.321	151.71
5	MG5	500 | 7000 | 500	32		8.00	2	16.00	6.321	101.14
6	MG9	500 | 16420 | 500	20		17.42	4	69.68	2.469	172.06
7	MG10	150 | 16420 | 150	10	300	16.72	4	66.88	0.617	41.29
8	MG11	100 / 1120 / 320	10	150/ 300	3.08	75	231.00	0.617	142.60
							TOTAL WEIGHT =		1421.23
							TOTAL WEIGHT (FOR 3 MAIN GIRDER) =		4263.70

BAR SCHEDULE FOR CROSS GIRDER OF 16.0 m

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	D1	200 | 5920 | 200	25		6.32	6	37.92	3.858	146.31
2	D2	200 | 5920 | 200	20		6.32	3	18.96	2.469	46.82
3	D3	100 | 5920 | 100	10		6.12	4	24.48	0.617	15.11
4	D4	100 / 820 / 200	10	300	2.24	21	47.04	0.617	29.04
5	D5	100 500 500 100	10	200	1.20	31	37.20	0.617	22.96
6	D6	220 / 600	10		4.10	2	8.20	0.617	5.06
							TOTAL WEIGHT =		265.30
							TOTAL WEIGHT (FOR 2 CROSS GIRDER) =		530.60

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STANDARD DRAWINGS

Bridge Type: RCC T-Girder Bridge

Road Carriageway Width: 6.00m plus 2 Footpaths each 1.20 m wide | Overall Deck Width: 8.4 m

Effective Simply Supported Span (Center to Centre of Bearings): 16m to 25m

DRAWING TITLE
MAIN & CROSS GIRDER DETAIL
16 Span

Prepared by:
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Manbhawan, Lalitpur
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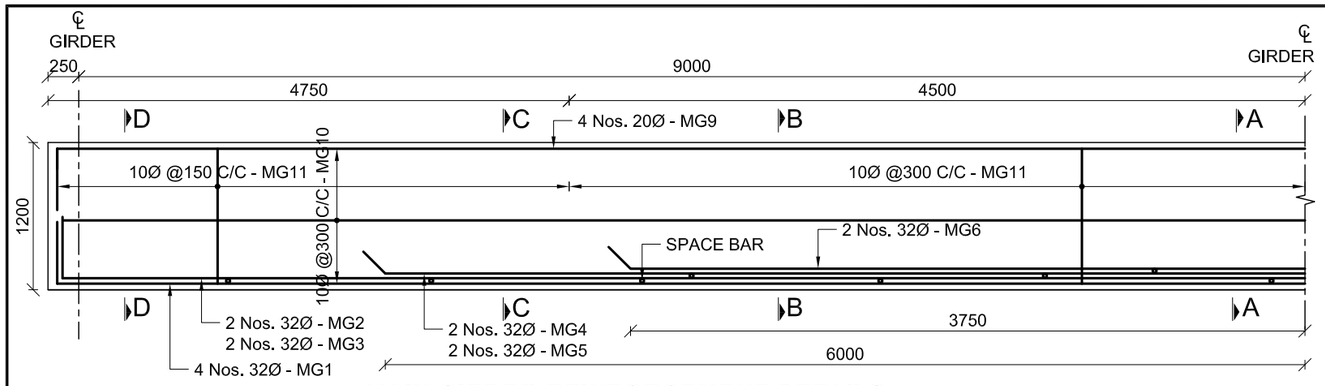
		Sign:	Date:
Designed by:			
Drawn by:			
Checked by:			
Approved by:			

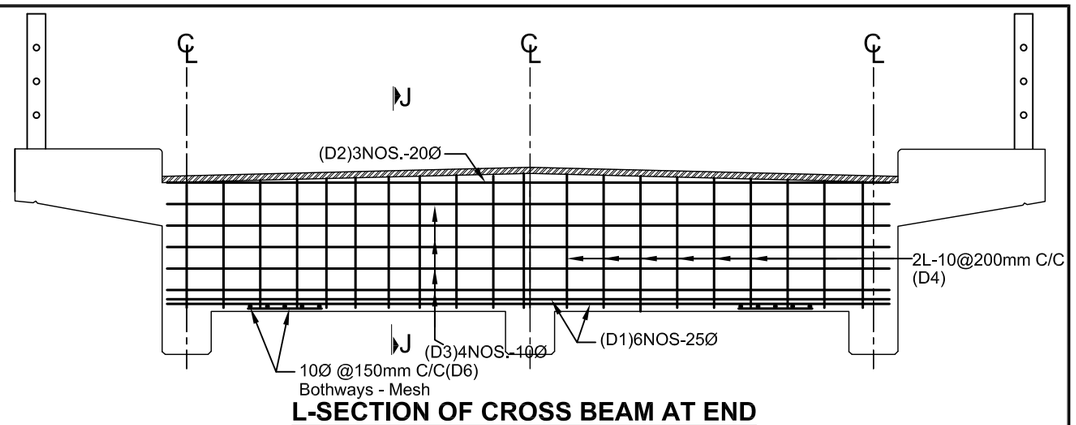
Date: Aug, 2021
Dwg No. SD- 3
Rev:

Print Date: 2021-08-14



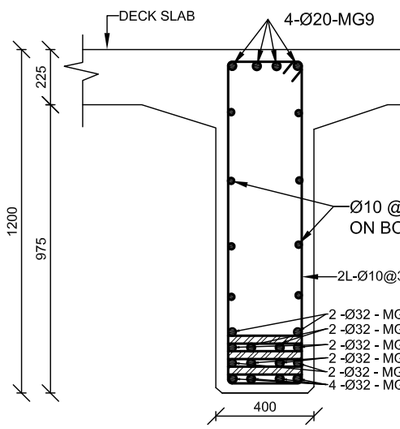
MAIN GIRDER REINFORCEMENT DETAILS

0.00 0.50 1.00 1.50 m



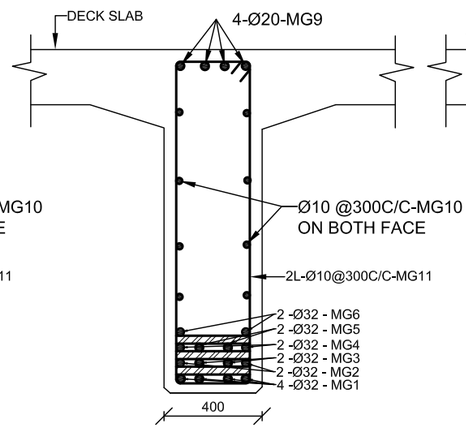
L-SECTION OF CROSS BEAM AT END

0.00 0.50 1.00 1.50 m



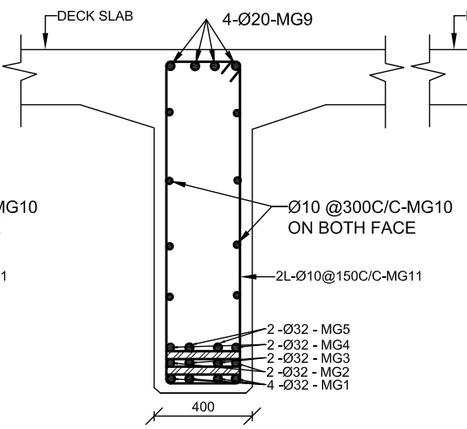
SECTION AT A-A

0.00 0.25 0.5 0.75 m



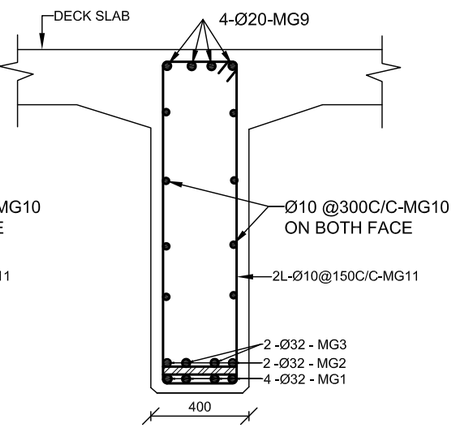
SECTION AT B-B

0.00 0.25 0.5 0.75 m



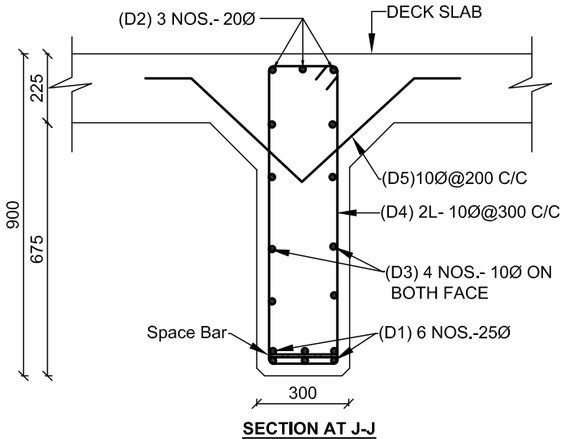
SECTION AT C-C

0.00 0.25 0.5 0.75 m



SECTION AT D-D

0.00 0.25 0.5 0.75 m



SECTION AT J-J

0.00 0.2 0.4 0.6 m

BAR SCHEDULE FOR MAIN GIRDER OF I8.0 M

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	MG1	500 | 18420 | 500	32		19.42	4	77.68	6.321	491.05
2	MG2	500 | 18420 | 500	32		19.42	2	38.84	6.321	245.52
3	MG3	500 | 18420 | 500	32		19.42	2	38.84	6.321	245.52
4	MG4	500 | 12000 | 500	32		13.00	2	26.00	6.321	164.36
5	MG5	500 | 12000 | 500	32		13.00	2	26.00	6.321	164.36
6	MG6	500 | 7500 | 500	32		8.50	2	17.00	6.321	107.46
7	MG9	500 | 18420 | 500	20		19.42	4	77.68	2.469	191.82
8	MG10	150 | 18420 | 150	10	300	18.72	4	74.88	0.617	46.23
9	MG11	100 / 1120 / 320	10	150/ 300	3.08	82	252.56	0.617	155.91
							TOTAL WEIGHT =		1812.22
							TOTAL WEIGHT (FOR 3 MAIN GIRDER) =		5436.66

BAR SCHEDULE FOR CROSS GIRDER OF I8.0 M

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	D1	200 | 5920 | 200	25		6.32	6	37.92	3.858	146.31
2	D2	200 | 5920 | 200	20		6.32	3	18.96	2.469	46.82
3	D3	100 | 5920 | 100	10		6.12	4	24.48	0.617	15.11
4	D4	100 / 820 / 200	10	300	2.24	21	47.04	0.617	29.04
5	D5	100 500 500 100	10	200	1.20	31	37.20	0.617	22.96
6	D6	220 / 600	10		4.10	2	8.20	0.617	5.06
							TOTAL WEIGHT =		265.30
							TOTAL WEIGHT (FOR 2 CROSS GIRDER) =		530.60

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STANDARD DRAWINGS | Bridge Type: RCC T-Girder Bridge
Road Carriageway Width: 6.00m plus 2 Footpaths each 1.20 m wide | Overall Deck Width: 8.4 m
Effective Simply Supported Span (Center to Centre of Bearings): 16m to 25m

DRAWING TITLE
MAIN & CROSS GIRDER DETAIL
18m Span

Prepared by:
Local Roads Bridge Support Unit (LRBSU)
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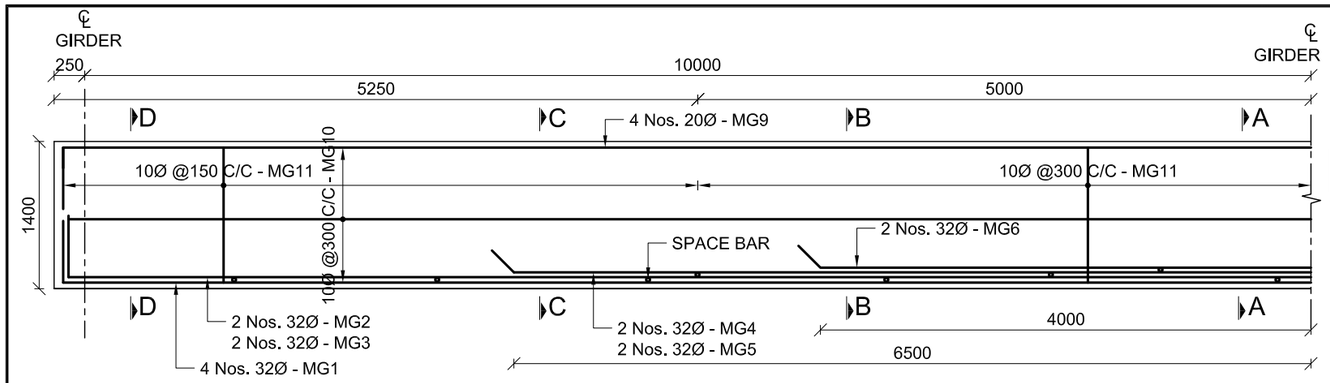
email: lrbp@lrbpnepal.org

		Sign	Date:
Designed by:			
Drawn by:			
Checked by:			
Approved by:			

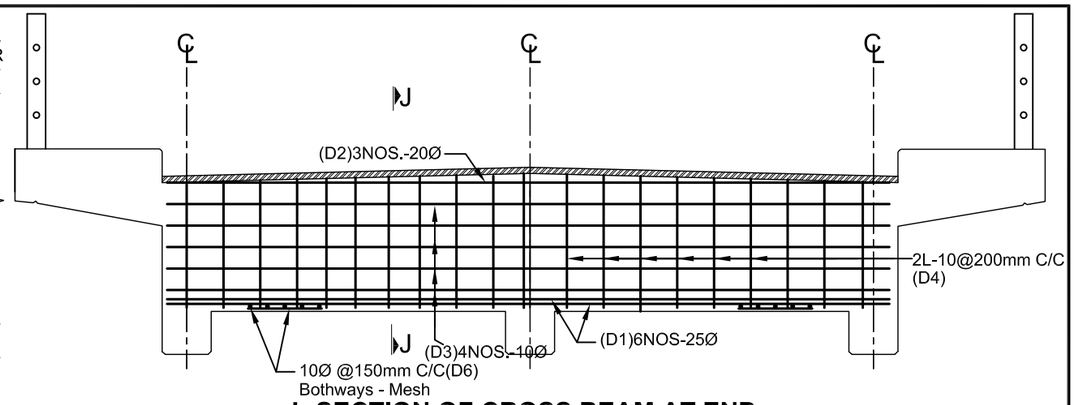
Date: Aug, 2021
Dwg No. SD- 4
Rev:

Print Date: 2021-08-14



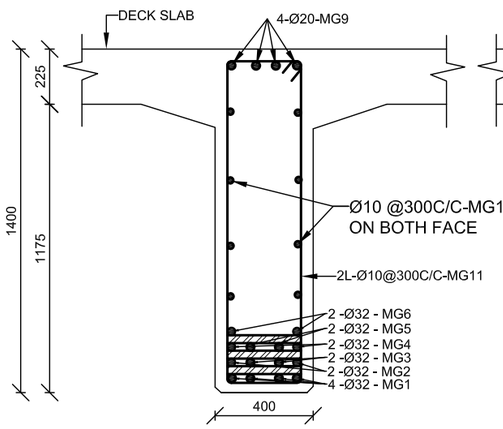
MAIN GIRDER REINFORCEMENT DETAILS

0.00 0.50 1.00 1.50 m



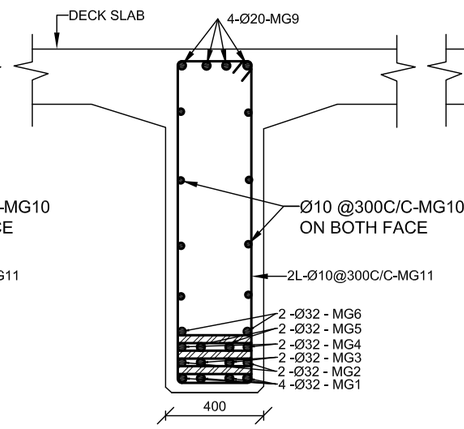
L-SECTION OF CROSS BEAM AT END

0.00 0.50 1.00 1.50 m



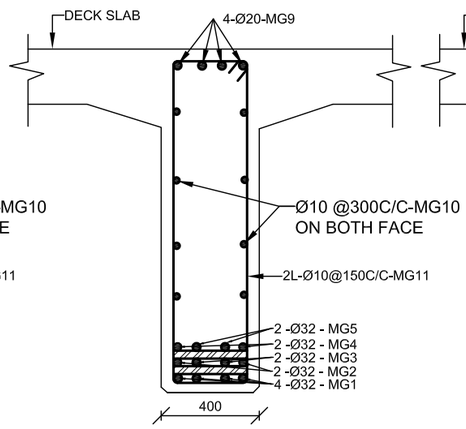
SECTION AT A-A

0.00 0.25 0.5 0.75 m



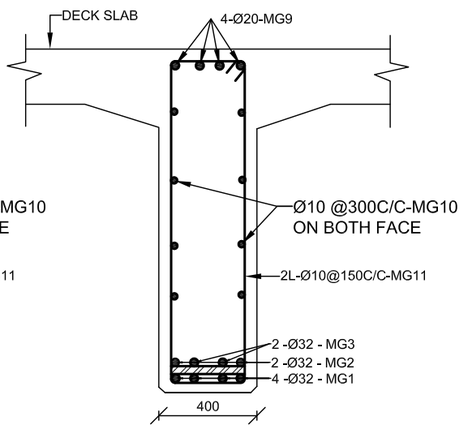
SECTION AT B-B

0.00 0.25 0.5 0.75 m



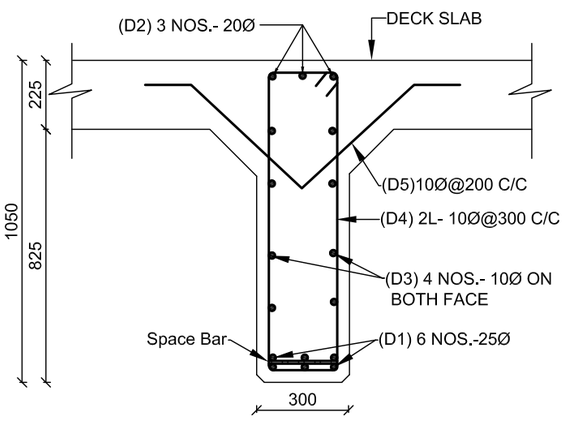
SECTION AT C-C

0.00 0.25 0.5 0.75 m



SECTION AT D-D

0.00 0.25 0.5 0.75 m



SECTION AT J-J

0.00 0.2 0.4 0.6 m

BAR SCHEDULE FOR MAIN GIRDER OF 20.0 m

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	MG1	500 | 20420 | 500	32		21.42	4	85.68	6.321	541.62
2	MG2	500 | 20420 | 500	32		21.42	2	42.84	6.321	270.81
3	MG3	500 | 20420 | 500	32		21.42	2	42.84	6.321	270.81
4	MG4	500 | 13000 | 500	32		14.00	2	28.00	6.321	177.00
5	MG5	500 | 13000 | 500	32		14.00	2	28.00	6.321	177.00
6	MG6	500 | 8000 | 500	32		9.00	2	18.00	6.321	113.79
7	MG9	500 | 20420 | 500	20		21.42	4	85.68	2.469	211.57
8	MG10	150 | 20420 | 150	10	300	20.72	6	124.32	0.617	76.75
9	MG11	100 / 1320 / 320	10	150/ 300	3.48	90	313.20	0.617	193.35
						TOTAL WEIGHT =			2032.68
						TOTAL WEIGHT (FOR 3 MAIN GIRDER) =			6098.04

BAR SCHEDULE FOR CROSS GIRDER OF 20.0 m

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	D1	200 | 5920 | 200	25		6.32	6	37.92	3.858	146.31
2	D2	200 | 5920 | 200	20		6.32	3	18.96	2.469	46.82
3	D3	100 | 5920 | 100	10		6.12	4	24.48	0.617	15.11
4	D4	100 / 970 / 200	10	300	2.54	21	53.34	0.617	32.93
5	D5	100 500 500 100	10	200	1.20	31	37.20	0.617	22.96
6	D6	220 / 600	10		4.10	2	8.20	0.617	5.06
						TOTAL WEIGHT =			269.19
						TOTAL WEIGHT (FOR 2 CROSS GIRDER) =			538.38

Civil Informatics & Solutions P. Ltd (CIAS) & MEH Consulting (P.) Ltd. JV
Chakupat, Patandhoka, Lalitpur
MLRBP-IV
2021

Government of Nepal
Ministry of Federal Affairs and General Administration
Department of Local Infrastructure (DoLI)
Motorable Local Roads Bridge Programme (MLRBP)

STANDARD DRAWINGS

Bridge Type: RCC T-Girder Bridge

Road Carriageway Width: 6.00m plus 2 Footpaths each 1.20 m wide | Overall Deck Width: 8.4 m

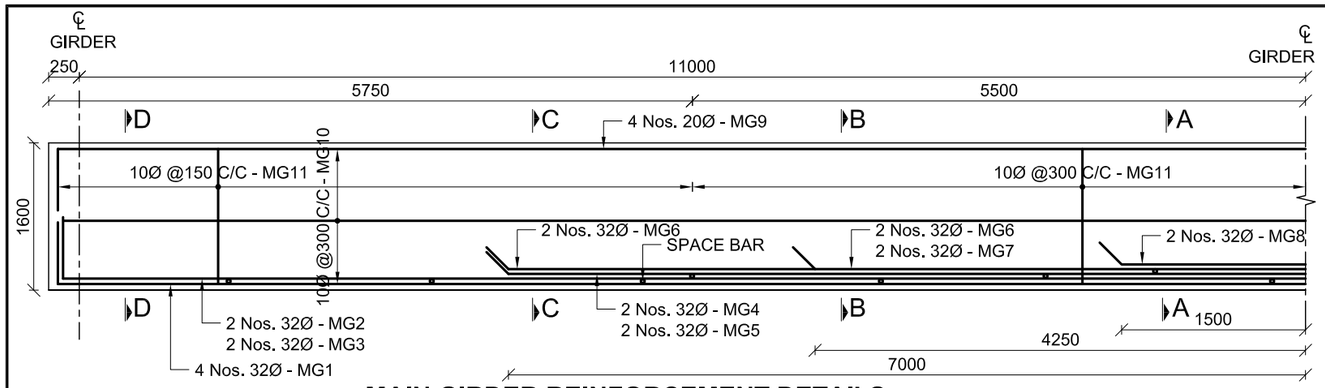
Effective Simply Supported Span (Center to Centre of Bearings): 16m to 25m

DRAWING TITLE
MAIN & CROSS GIRDER DETAIL
20m Span

Prepared by:
Local Roads Bridge Support Unit (LRBSU)
Manbhawan, Lalitpur
Tel: 01-5549589, 5532019
email: lrbp@lrbpnepal.org

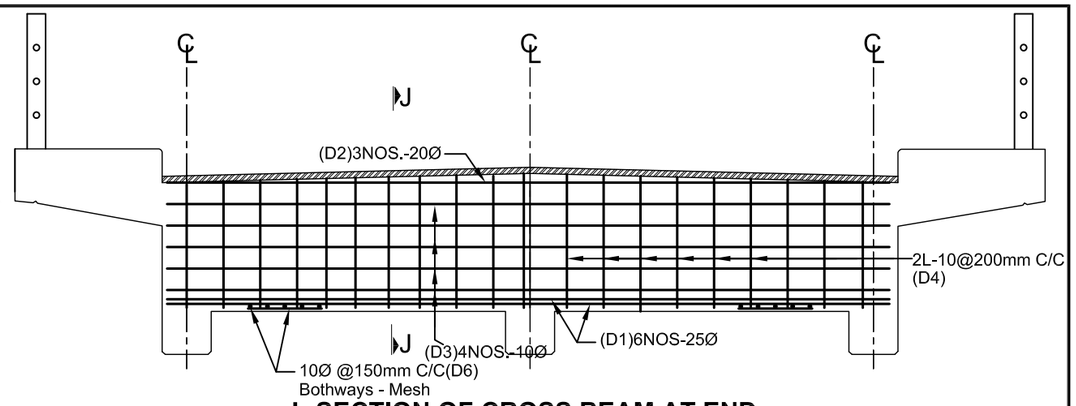
		Sign:	Date:
Designed by:			Date: Aug, 2021
Drawn by:			Dwg No. SD- 5
Checked by:			Rev:
Approved by:			

Print Date: 2021-08-14



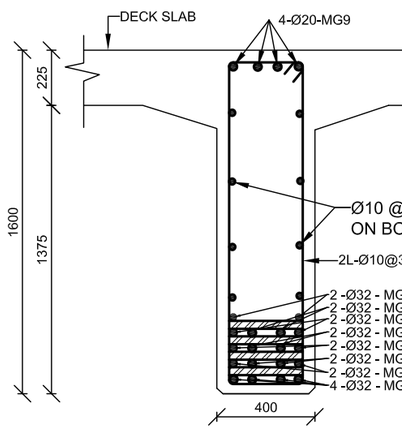
MAIN GIRDER REINFORCEMENT DETAILS

0.00 0.50 1.00 1.50 m



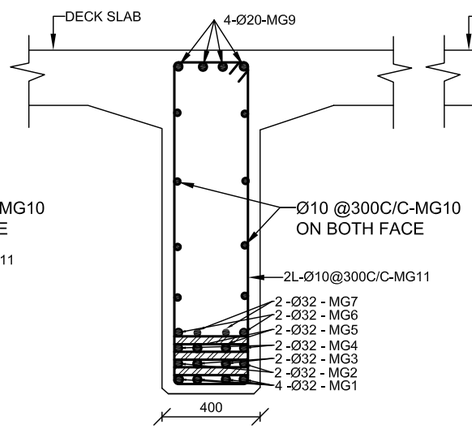
L-SECTION OF CROSS BEAM AT END

0.00 0.50 1.00 1.50 m



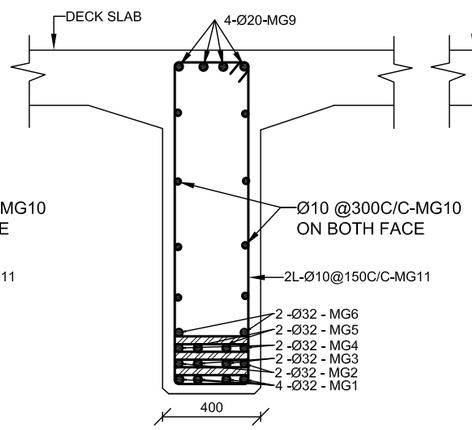
SECTION AT A-A

0.00 0.25 0.5 0.75 m



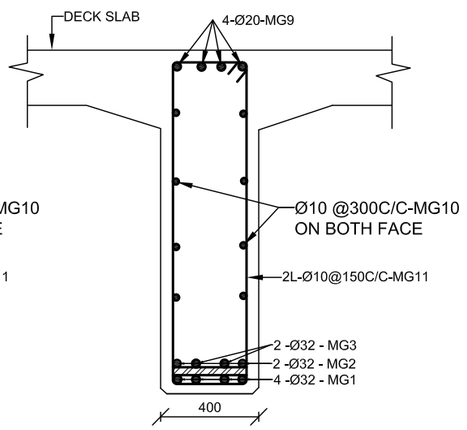
SECTION AT B-B

0.00 0.25 0.5 0.75 m



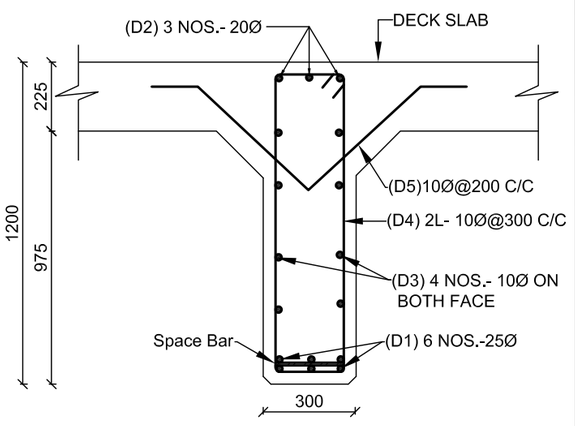
SECTION AT C-C

0.00 0.25 0.5 0.75 m



SECTION AT D-D

0.00 0.25 0.5 0.75 m



SECTION AT J-J

0.00 0.2 0.4 0.6 m

BAR SCHEDULE FOR MAIN GIRDER OF 22.0 M

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	MG1	500 | 22420 | 500	32		23.42	4	93.68	6.321	592.19
2	MG2	500 | 22420 | 500	32		23.42	2	46.84	6.321	296.09
3	MG3	500 | 22420 | 500	32		23.42	2	46.84	6.321	296.09
4	MG4	500 | 14000 | 500	32		15.00	2	30.00	6.321	189.64
5	MG5	500 | 14000 | 500	32		15.00	2	30.00	6.321	189.64
6	MG6	500 | 14000 | 500	32		15.00	2	30.00	6.321	189.64
7	MG7	500 | 8500 | 500	32		9.50	2	19.00	6.321	120.11
8	MG8	500 | 3000 | 500	32		4.00	2	8.00	6.321	50.57
9	MG9	500 | 22420 | 500	20		23.42	4	93.68	2.469	231.32
10	MG10	150 | 22420 | 150	10	300	22.72	6	136.32	0.617	84.15
11	MG11	100 / 1520 / 320	10	150/ 300	3.88	100	388.00	0.617	239.52
							TOTAL WEIGHT =		2478.98
							TOTAL WEIGHT (FOR 3 MAIN GIRDER) =		7436.94

BAR SCHEDULE FOR CROSS GIRDER OF 22.0 M

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	D1	200 | 5920 | 200	25		6.32	6	37.92	3.858	146.31
2	D2	200 | 5920 | 200	20		6.32	3	18.96	2.469	46.82
3	D3	100 | 5920 | 100	10		6.12	6	36.72	0.617	22.67
4	D4	100 / 1120 / 200	10	300	2.84	21	59.64	0.617	36.82
5	D5	100 500 500 100	10	200	1.20	31	37.20	0.617	22.96
6	D6	220 / 600	10		4.10	2	8.20	0.617	5.06
							TOTAL WEIGHT =		280.64
							TOTAL WEIGHT (FOR 2 CROSS GIRDER) =		561.27

MLRBP-IV 2021

Government of Nepal
Ministry of Federal Affairs and General Administration
Department of Local Infrastructure (DoLI)
Motorable Local Roads Bridge Programme (MLRBP)

STANDARD DRAWINGS | Bridge Type: RCC T-Girder Bridge
Road Carriageway Width: 6.00m plus 2 Footpaths each 1.20 m wide | Overall Deck Width: 8.4 m
Effective Simply Supported Span (Center to Centre of Bearings): 16m to 25m

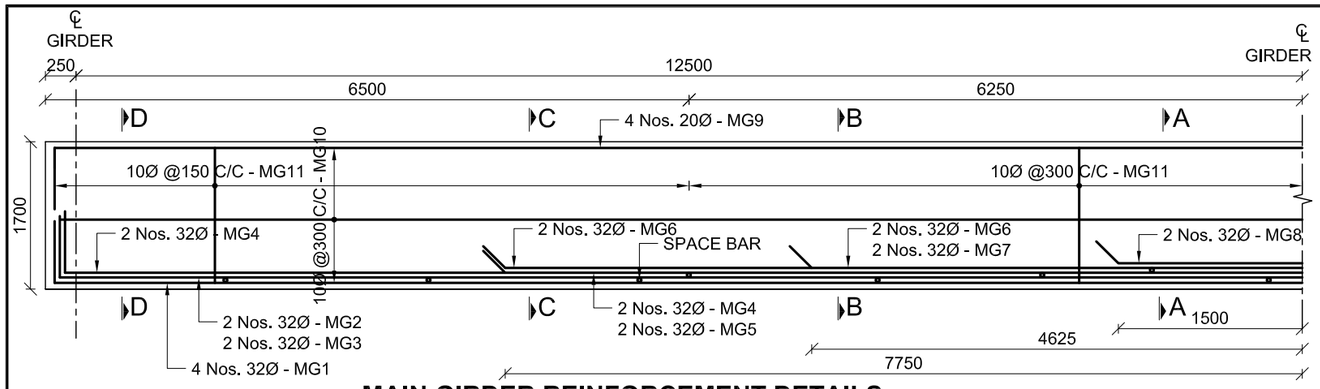
DRAWING TITLE
MAIN & CROSS GIRDER DETAIL
22 m Span

Prepared by:
Local Roads Bridge Support Unit (LRBSU)
Manbhawan, Lalitpur
Tel: 01-5549589, 5532019
email: lrbp@lrbpnepal.org

		Sign:	Date:
Designed by:			
Drawn by:			
Checked by:			
Approved by:			

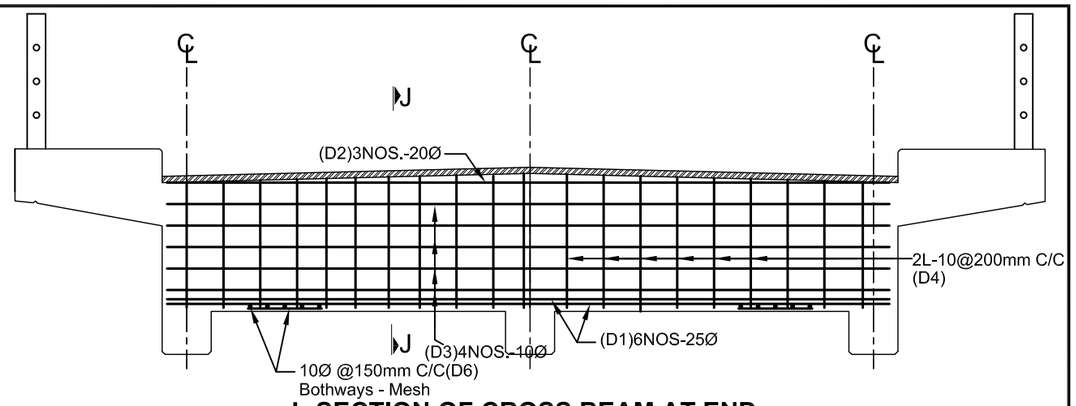
Date: Aug, 2021
Dwg No. SD-6
Rev:

Print Date: 2021-08-14



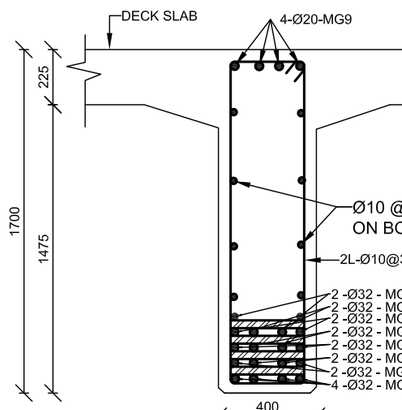
MAIN GIRDER REINFORCEMENT DETAILS

0.00 0.50 1.00 1.50 m



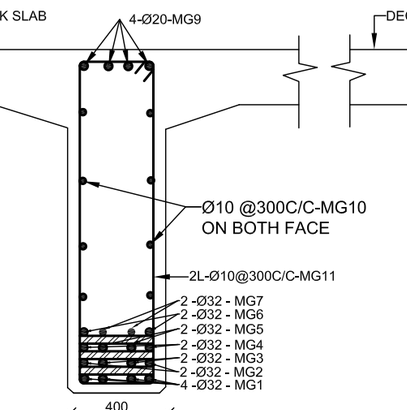
L-SECTION OF CROSS BEAM AT END

0.00 0.50 1.00 1.50 m



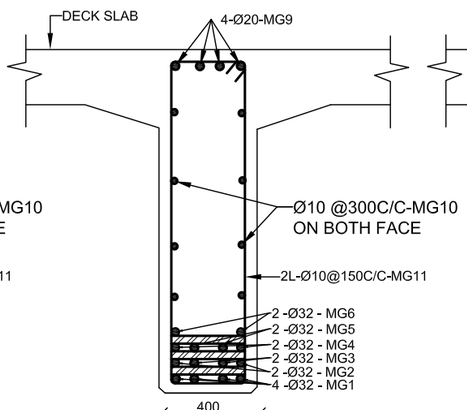
SECTION AT A-A

0.00 0.25 0.5 0.75 m



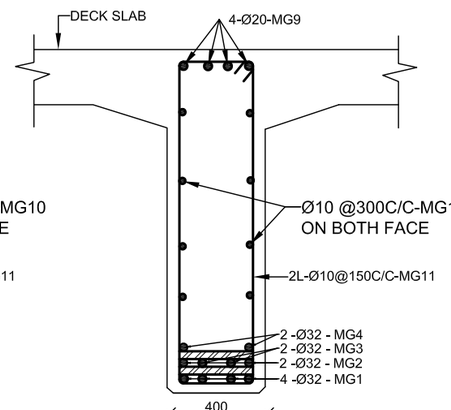
SECTION AT B-B

0.00 0.25 0.5 0.75 m



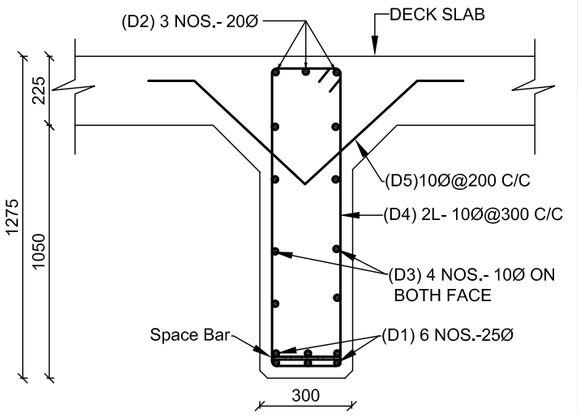
SECTION AT C-C

0.00 0.25 0.5 0.75 m



SECTION AT D-D

0.00 0.25 0.5 0.75 m



SECTION AT J-J

0.00 0.2 0.4 0.6 m

BAR SCHEDULE FOR MAIN GIRDER OF 25.0 M

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	MG1	500 | 25420 | 500	32		26.42	4	105.68	6.321	668.05
2	MG2	500 | 25420 | 500	32		26.42	2	52.84	6.321	334.02
3	MG3	500 | 25420 | 500	32		26.42	2	52.84	6.321	334.02
4	MG4	500 | 25420 | 500	32		26.42	2	52.84	6.321	334.02
5	MG5	500 | 15500 | 500	32		16.50	2	33.00	6.321	208.61
6	MG6	500 | 15500 | 500	32		16.50	2	33.00	6.321	208.61
7	MG7	500 | 9250 | 500	32		10.25	2	20.50	6.321	129.59
8	MG8	500 | 3000 | 500	32		4.00	2	8.00	6.321	50.57
9	MG9	500 | 25420 | 500	20		26.42	4	105.68	2.469	260.96
10	MG10	150 | 25420 | 150	10	300	25.72	8	205.76	0.617	127.02
11	MG11	100 / 1620 / 320	10	150/ 300	4.08	112	456.96	0.617	282.09
							TOTAL WEIGHT =		2937.56
							TOTAL WEIGHT (FOR 3 MAIN GIRDER) =		8812.67

BAR SCHEDULE FOR CROSS GIRDER OF 25.0 M

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	D1	200 | 5920 | 200	25		6.32	6	37.92	3.858	146.31
2	D2	200 | 5920 | 200	20		6.32	3	18.96	2.469	46.82
3	D3	100 | 5920 | 100	10		6.12	6	36.72	0.617	22.67
4	D4	100 / 1195 / 200	10	300	2.99	21	62.79	0.617	38.76
5	D5	100 500 500 100	10	200	1.20	31	37.20	0.617	22.96
6	D6	220 / 600	10		4.10	2	8.20	0.617	5.06
							TOTAL WEIGHT =		282.58
							TOTAL WEIGHT (FOR 2 CROSS GIRDER) =		565.16

MLRBP-IV 2021

Civil Informatics & Solutions P. Ltd (CIAS) & MEH Consultants (P) Ltd (Joint Venture of CIAS & MEH)
Chakupat, Patandhoka - Lalitpur

Government of Nepal
Ministry of Federal Affairs and General Administration
Department of Local Infrastructure (DoLI)
Motorable Local Roads Bridge Programme (MLRBP)

STANDARD DRAWINGS

Bridge Type: RCC T-Girder Bridge

Road Carriageway Width: 6.00m plus 2 Footpaths each 1.20 m wide | Overall Deck Width: 8.4 m

Effective Simply Supported Span (Center to Centre of Bearings): 16m to 25m

DRAWING TITLE
MAIN & CROSS GIRDER DETAIL
25 m Span

Prepared by:
Local Roads Bridge Support Unit (LRBSU)
Manbhawan, Lalitpur
Tel: 01-5549589, 5532019
email: lrbp@lrbpnepal.org

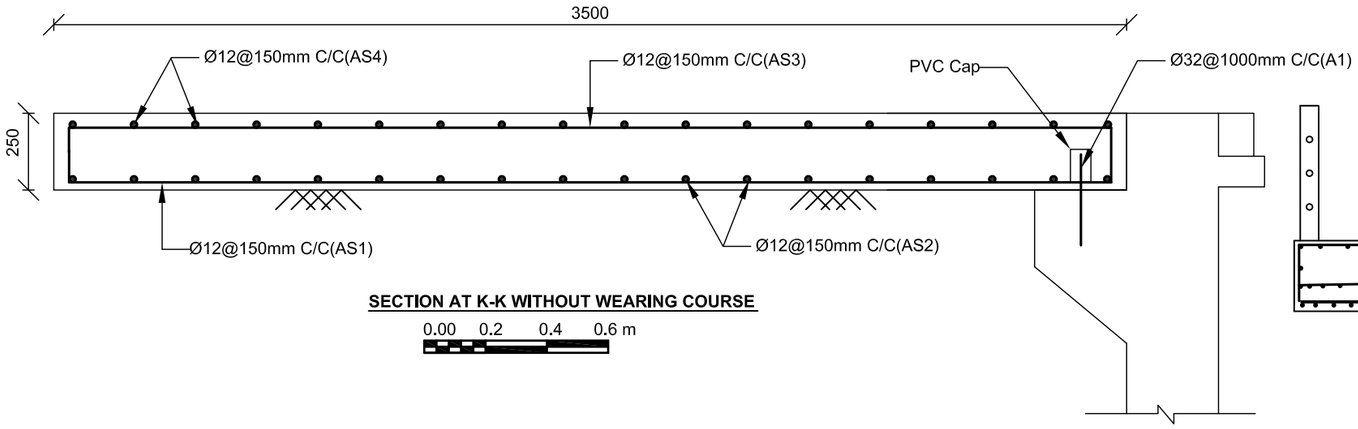
		Sign:	Date:
Designed by:			
Drawn by:			
Checked by:			
Approved by:			

Date: Aug, 2021

Dwg No. SD- 7

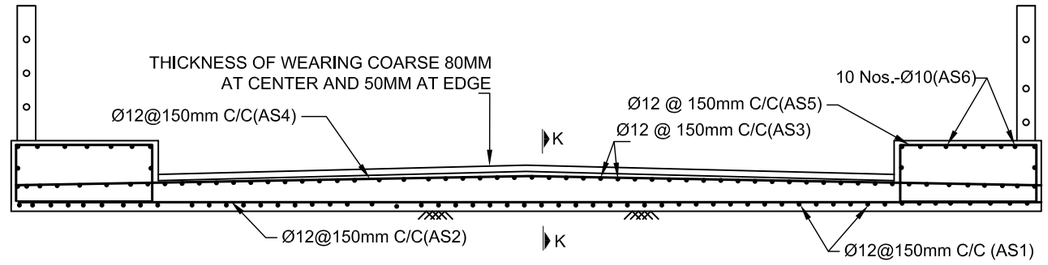
Rev:

Print Date: 2021-08-14



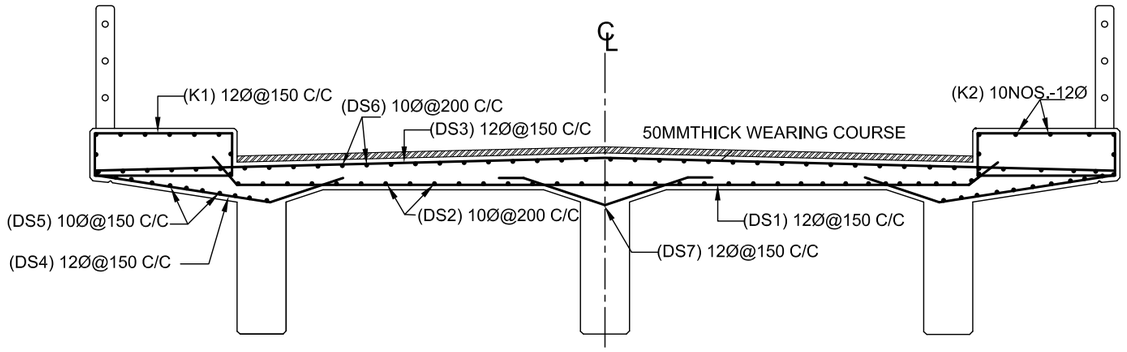
SECTION AT K-K WITHOUT WEARING COURSE

0.00 0.2 0.4 0.6 m



APPROACH SLAB X-SECTION

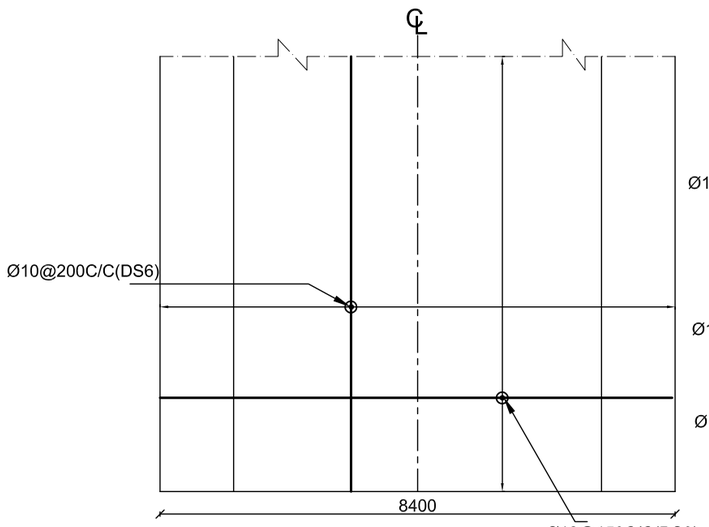
0.00 0.50 1.00 1.50 m



CROSS SECTION (CONCRETE OUTLINE DECK SLAB)

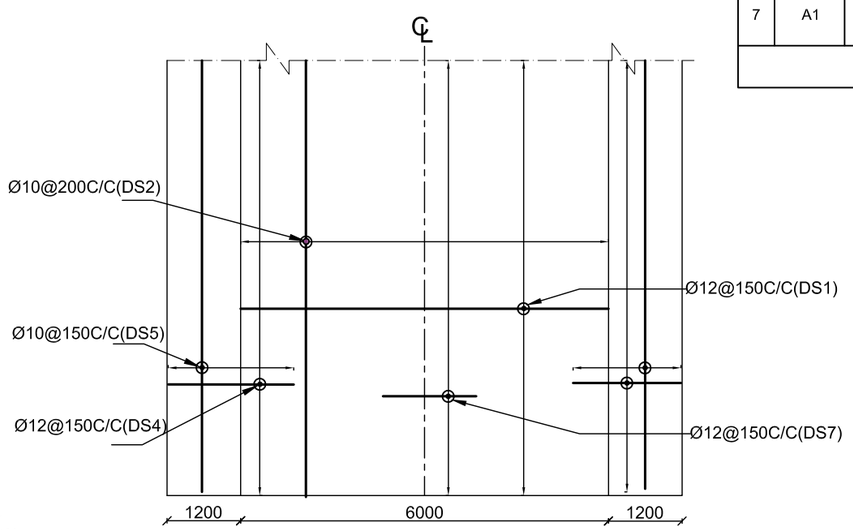
0.00 0.50 1.00 1.50 m

BAR BENDING SCHEDULE FOR APPROCH SLAB									
S. No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (KG/M)	TOTAL WEIGHT (KG)
1	AS1	100 — 3450 — 100	12	150	3.65	57	208.05	0.889	184.95
2	AS2	100 — 8350 — 100	12	150	8.55	24	205.20	0.889	182.41
3	AS3	100 — 3450 — 100	12	150	3.65	57	208.05	0.889	184.95
4	AS4	100 — 8350 — 100	12	150	8.55	24	205.20	0.889	182.41
5	AS5	1150 / 100 / 375	12	150	3.25	48	156.00	0.889	138.68
6	AS6	100 — 3450 — 100	10		3.65	20	73.00	0.617	45.06
7	A1	500	32	1000	0.50	9	4.50	6.321	28.45
							TOTAL KG =		918.46



TOP PLAN

0.00 1.00 2.00 3.00 m



BOTTOM PLAN

0.00 1.00 2.00 3.00 m

Government of Nepal
Ministry of Federal Affairs and General Administration
Department of Local Infrastructure (DoLI)
Motorable Local Roads Bridge Programme (MLRBP)

STANDARD DRAWINGS | Bridge Type: RCC T-Girder Bridge
Road Carriageway Width: 6.00m plus 2 Footpaths each 1.20 m wide | Overall Deck Width: 8.4 m
Effective Simply Supported Span (Center to Centre of Bearings): 16m to 25m

DRAWING TITLE
APPROACH SLAB AND DECK DETAIL

Prepared by:
Local Roads Bridge Support Unit (LRBSU)
Manbhawan, Lalitpur
Tel: 01-5549589, 5532019
email: lrbp@lrbpnepal.org

		Sign:	Date:	
Designed by:				Date: Aug, 2021
Drawn by:				Dwg No.: SD- 8
Checked by:				Rev:
Approved by:				

Print Date: 2021-08-14

BAR SCHEDULE FOR DECK SLAB OF 16.0 M

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	DS1	100 6000 100	12	150	6.20	113	700.60	0.889	622.80
2	DS2	100 16720 100	10	200	16.92	31	524.52	0.617	323.80
3	DS3	100 8350 100	12	150	8.55	113	966.15	0.889	858.86
4	DS4	100 1450 650	12	150	2.20	226	497.20	0.889	441.98
5	DS5	100 16720 100	10	150	16.92	22	372.24	0.617	229.79
6	DS6	100 16720 100	10	200	16.92	43	727.56	0.617	449.14
7	DS7	100 700 700 100	12	150	1.60	113	180.80	0.889	160.72
8	K1	1150 / 100 / 350	12	150	3.20	226	723.20	0.889	642.89
9	K2	100 16720 100	12		16.92	20	338.40	0.889	300.82
							TOTAL WEIGHT=		4030.80

BAR SCHEDULE FOR DECK SLAB OF 18.0 M

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	DS1	100 6000 100	12	150	6.20	126	781.20	0.889	694.45
2	DS2	100 18720 100	10	200	18.92	31	586.52	0.617	362.07
3	DS3	100 8350 100	12	150	8.55	126	1077.30	0.889	957.66
4	DS4	100 1450 650	12	150	2.20	252	554.40	0.889	492.83
5	DS5	100 18720 100	10	150	18.92	22	416.24	0.617	256.96
6	DS6	100 18720 100	10	200	18.92	43	813.56	0.617	502.23
7	DS7	100 700 700 100	12	150	1.60	126	201.60	0.889	179.21
8	K1	1150 / 100 / 350	12	150	3.20	252	806.40	0.889	716.85
9	K2	100 18720 100	12		18.92	20	378.40	0.889	336.38
							TOTAL WEIGHT=		4498.64

BAR SCHEDULE FOR DECK SLAB OF 20.0 M

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	DS1	100 6000 100	12	150	6.20	140	868.00	0.889	771.61
2	DS2	100 20720 100	10	200	20.92	31	648.52	0.617	400.35
3	DS3	100 8350 100	12	150	8.55	140	1197.00	0.889	1064.07
4	DS4	100 1450 650	12	150	2.20	280	616.00	0.889	547.59
5	DS5	100 20720 100	10	150	20.92	22	460.24	0.617	284.12
6	DS6	100 20720 100	10	200	20.92	43	899.56	0.617	555.32
7	DS7	100 700 700 100	12	150	1.60	140	224.00	0.889	199.12
8	K1	1150 / 100 / 350	12	150	3.20	280	896.00	0.889	796.50
9	K2	100 20720 100	12		20.92	20	418.40	0.889	371.94
							TOTAL WEIGHT=		4990.61

BAR SCHEDULE FOR DECK SLAB OF 22.0 M

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	DS1	100 6000 100	12	150	6.20	153	948.60	0.889	843.26
2	DS2	100 22720 100	10	200	22.92	31	710.52	0.617	438.62
3	DS3	100 8350 100	12	150	8.55	153	1308.15	0.889	1162.88
4	DS4	100 1450 650	12	150	2.20	306	673.20	0.889	598.44
5	DS5	100 22720 100	10	150	22.92	22	504.24	0.617	311.28
6	DS6	100 22720 100	10	200	22.92	43	985.56	0.617	608.41
7	DS7	100 700 700 100	12	150	1.60	153	244.80	0.889	217.61
8	K1	1150 / 100 / 350	12	150	3.20	306	979.20	0.889	870.46
9	K2	100 22720 100	12		22.92	20	458.40	0.889	407.49
							TOTAL WEIGHT=		5458.45

BAR SCHEDULE FOR DECK SLAB OF 25.0 M

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	DS1	100 6000 100	12	150	6.20	173	1072.60	0.889	953.48
2	DS2	100 25720 100	10	200	25.92	31	803.52	0.617	496.03
3	DS3	100 8350 100	12	150	8.55	173	1479.15	0.889	1314.89
4	DS4	100 1450 650	12	150	2.20	346	761.20	0.889	676.67
5	DS5	100 25720 100	10	150	25.92	22	570.24	0.617	352.02
6	DS6	100 25720 100	10	200	25.92	43	1114.56	0.617	688.05
7	DS7	100 700 700 100	12	150	1.60	173	276.80	0.889	246.06
8	K1	1150 / 100 / 350	12	150	3.20	346	1107.20	0.889	984.24
9	K2	100 25720 100	12		25.92	20	518.40	0.889	460.83
							TOTAL WEIGHT=		6172.27

MLRBP-IV 2021

Government of Nepal
Ministry of Federal Affairs and General Administration
Department of Local Infrastructure (DoLI)
Motorable Local Roads Bridge Programme (MLRBP)

STANDARD DRAWINGS

Bridge Type: RCC T-Girder Bridge

Road Carriageway Width: 6.00m plus 2 Footpaths each 1.20 m wide | Overall Deck Width: 8.4 m

Effective Simply Supported Span (Center to Centre of Bearings): 16m to 25m

DRAWING TITLE

APPROACH SLAB AND DECK DETAIL

Prepared by:
Local Roads Bridge Support Unit (LRBSU)
Manbhawan, Lalitpur
Tel: 01-5549589, 5532019
email: lrbp@lrbpnepal.org

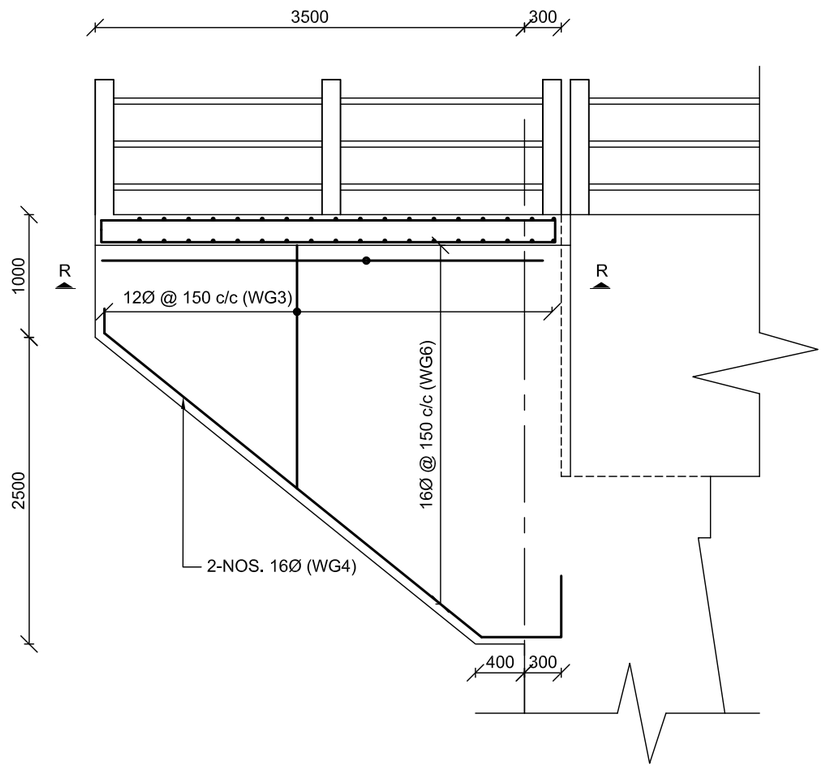
Designed by:		Sign:	Date:
Drawn by:			
Checked by:			
Approved by:			

Date: Aug, 2021

Dwg No.: SD- 9

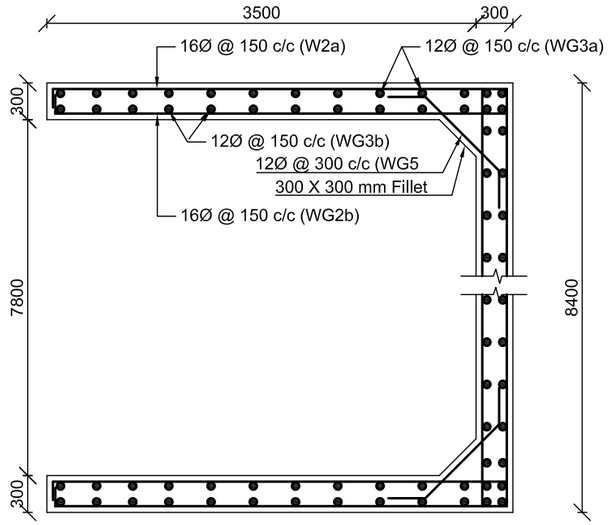
Rev:

Print Date: 2021-08-14



WING WALL DETAIL

0.00 0.50 1.00 1.50 m



SECTION AT R-R

0.00 0.50 1.00 1.50 m

BAR BENDING SCHEDULE OF WING WALL (2 nos)

S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
1	WG1	200 [3450] 600	12		4.25	4	17.00	0.89	15.09
2	WG2	200 [3720] 295	12	150	4.22	31	129.26	0.89	114.76
3	WG2a	200 [2170 AVERAGE] 295 VARIIES FROM 620 TO 3720	12	150	2.67	35	94.16	0.89	83.60
4	WG2b	2170 AVERAGE 200 [VARIIES FROM 620 TO 3720] 200	16	150	2.57	35	90.81	1.58	143.32
5	WG3a	200 [2185 AVERAGE] 445 VARIIES FROM 920 TO 3450	12	150	2.83	52	146.22	0.89	129.81
6	WG3b	200 [2185 AVERAGE] 295 VARIIES FROM 920 TO 3450	12	150	2.68	52	138.47	0.89	122.93
7	WG4	200 3450 620 500	16		4.77	4	19.08	1.58	30.11
8	WG5	300 750 300	12	300	1.35	51	68.40	0.89	60.73
TOTAL									700.36

Government of Nepal
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STANDARD DRAWINGS

Bridge Type: RCC T-Girder Bridge

Road Carriageway Width: 6.00m plus 2 Footpaths each 1.20 m wide | Overall Deck Width: 8.4 m

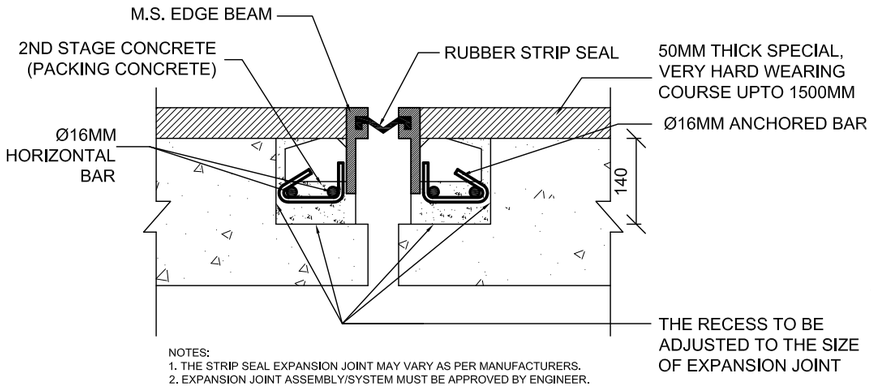
Effective Simply Supported Span (Center to Centre of Bearings): 16m to 25m

DRAWING TITLE
WING WALL DETAILS (Substructure 20m)

Prepared by:
Local Roads Bridge Support Unit (LRBSU)
Manbhawan, Lalitpur
Tel: 01-5549589, 5532019
email: lrbp@lrbpnepal.org

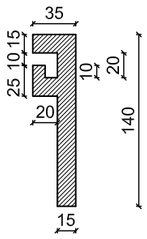
		Sign:	Date:	
Designed by:				Date: Aug, 2021
Drawn by:				Dwg No. SD-10
Checked by:				Rev:
Approved by:				

Print Date: 2021-08-14



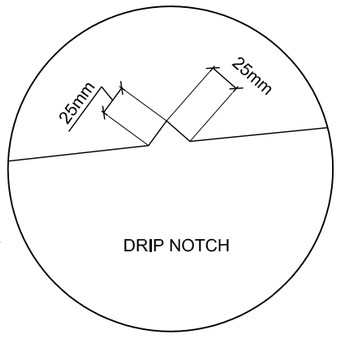
TYPICAL STRIP SEAL EXPANSION JOINT ASSEMBLY/SYSTEM

0.00 0.10 0.20 0.30 m



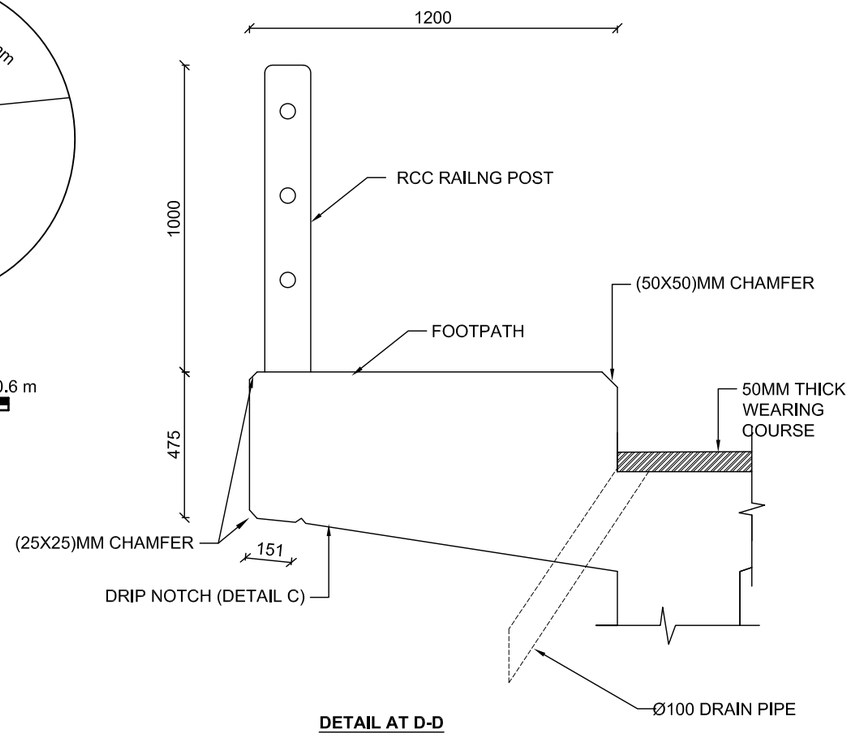
M.S. EDGE BEAM OF EXPANSION JOINT

0.00 0.05 0.10 0.15 m



DETAIL AT C-C

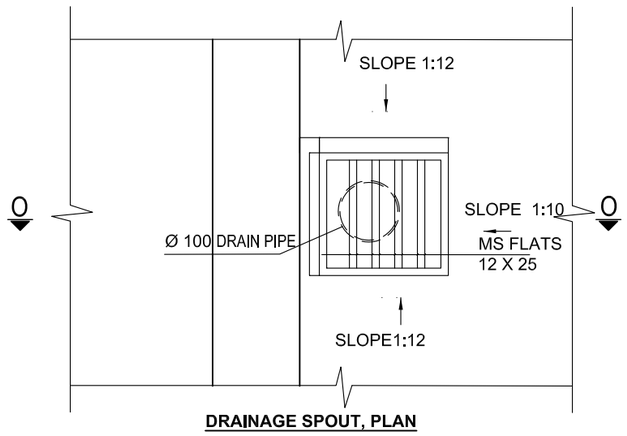
0.00 0.2 0.4 0.6 m



DETAIL AT D-D

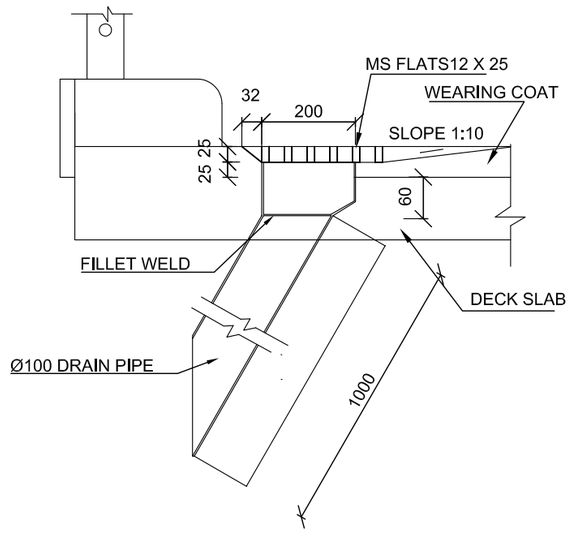
(REFER DWG NO.- SD2)

0.00 0.2 0.4 0.6 m



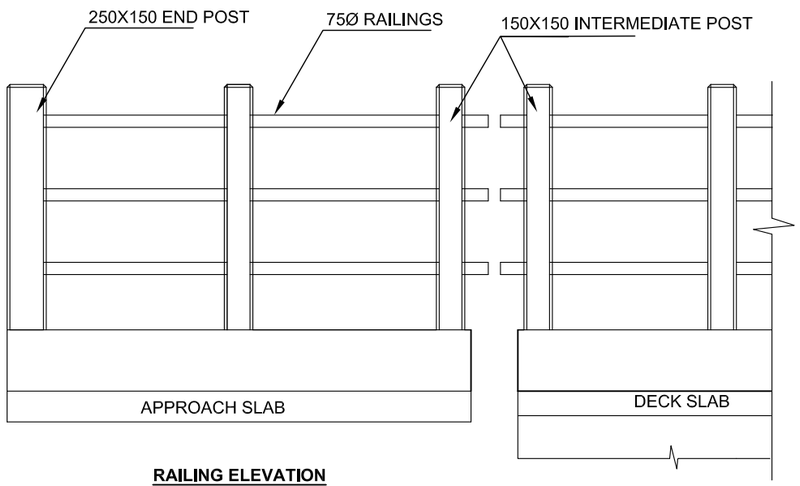
DRAINAGE SPOUT, PLAN

0.00 0.50 1.00 1.50 m



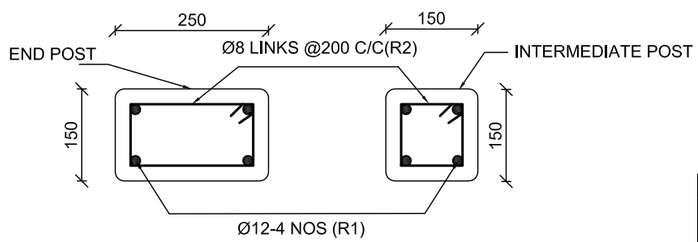
DRAINAGE SPOUT, SECTION O-O

0.00 0.50 1.00 1.50 m



RAILING ELEVATION

0.00 0.50 1.00 1.50 m



RAILING POST SECTION

0.00 0.10 0.20 0.30 m

BAR SCHEDULE FOR RAILING END POST									
S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (KG/M)	TOTAL WEIGHT (KG)
1	R1	1350, 50, 300	12		1.70	4	6.80	0.889	6.04
2	R2	100, 100, 200	8	200	0.80	6	4.80	0.395	1.90
						TOTAL WEIGHT=			7.94

BAR SCHEDULE FOR INTERMEDIATE RAILING POST									
S.No.	BAR MARK	DESCRIPTION OF BARS	BAR DIA. (MM)	SPACING (MM)	BAR LENGTH (M)	NO. OF BARS	TOTAL LENGTH (M)	UNIT WEIGHT (KG/M)	TOTAL WEIGHT (KG)
1	R1	1350, 50, 300	12		1.70	4	6.80	0.889	6.04
2	R2	100, 100, 100	8	200	0.60	6	3.60	0.395	1.42
						TOTAL WEIGHT=			7.47

Civil Informatics & Solutions P. Ltd (CIAS) & MEH Consultants (P.) Ltd. Joint Venture of MLRBP-IV 2021 Chakupat, Patandhoka, Lalitpur

Government of Nepal
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Department of Local Infrastructure (DoLI)
Motorable Local Roads Bridge Programme (MLRBP)

STANDARD DRAWINGS | Bridge Type: RCC T-Girder Bridge
Road Carriageway Width: 6.00m plus 2 Footpaths each 1.20 m wide | Overall Deck Width: 8.4 m
Effective Simply Supported Span (Center to Centre of Bearings): 16m to 25m

DRAWING TITLE
MISCELLANEOUS

Prepared by:
Local Roads Bridge Support Unit (LRBSU)
Manbhawan, Lalitpur
Tel: 01-5549589, 5532019
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Designed by:				Date: Aug, 2021
Drawn by:				Dwg No. SD- 11
Checked by:				Rev:
Approved by:				

Print Date: 2021-08-14