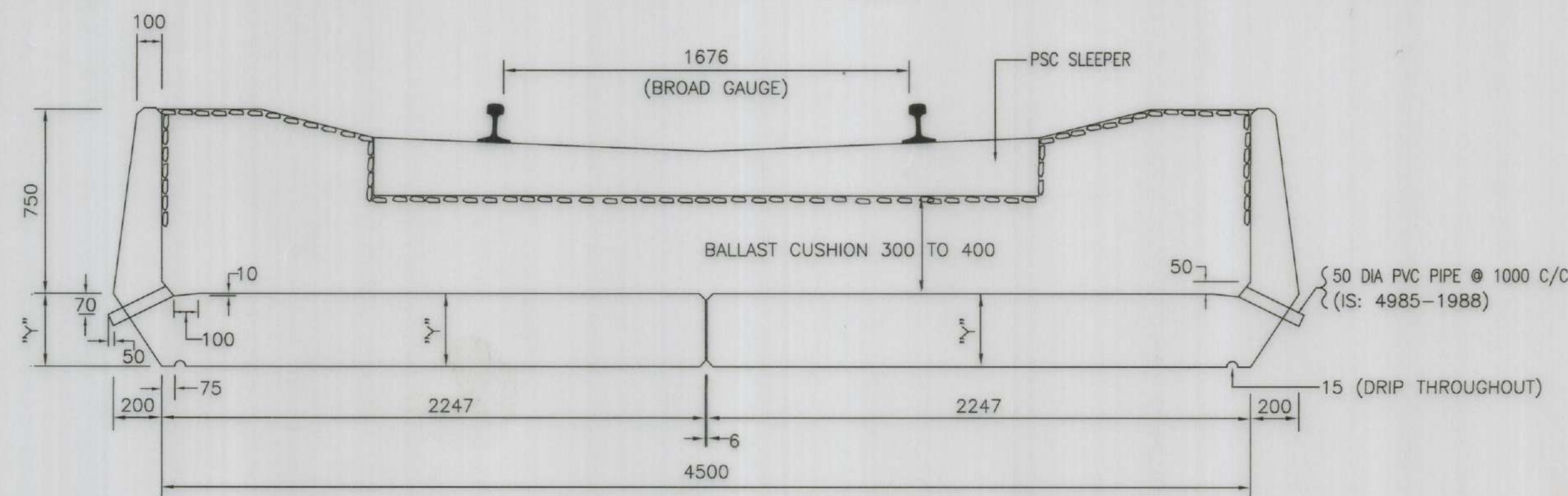
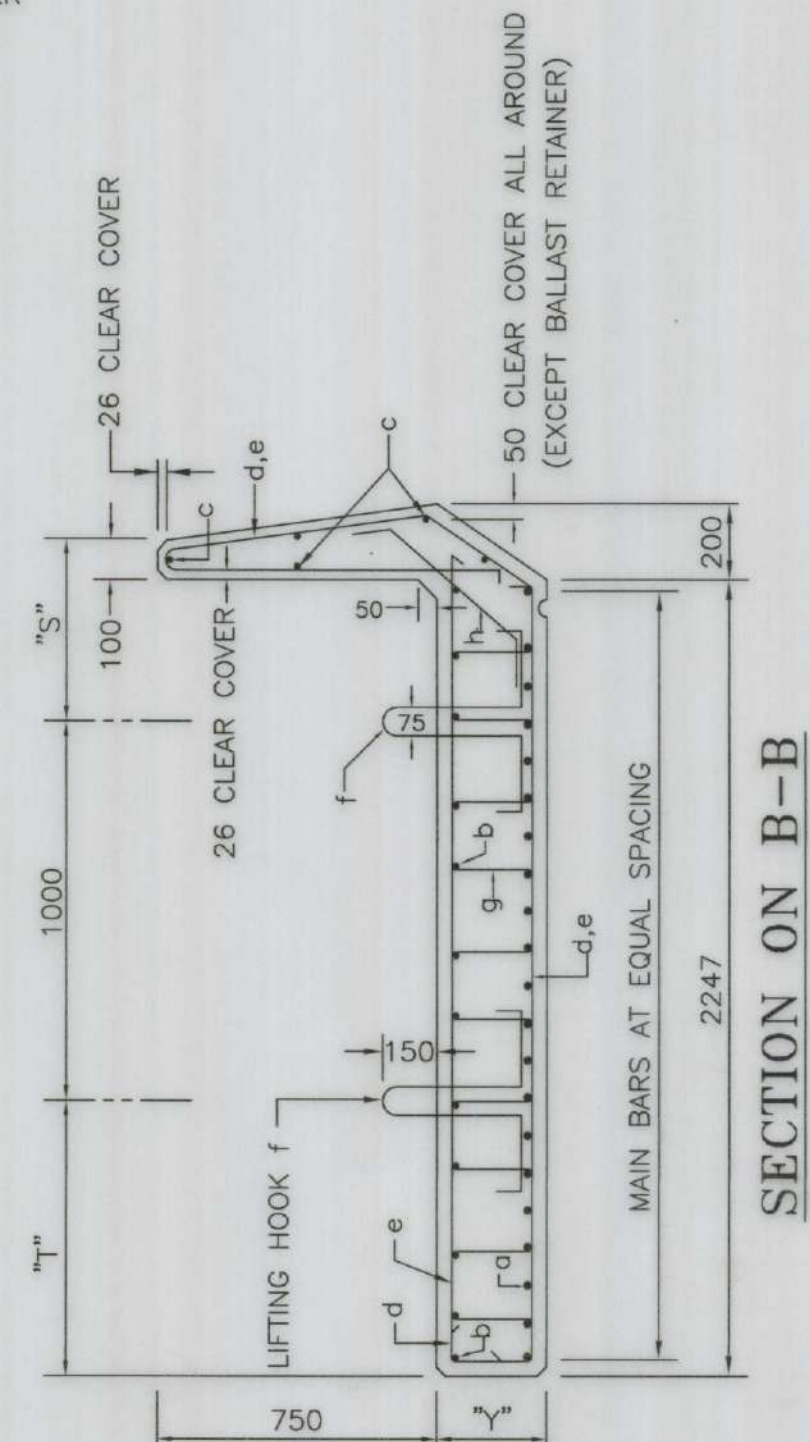
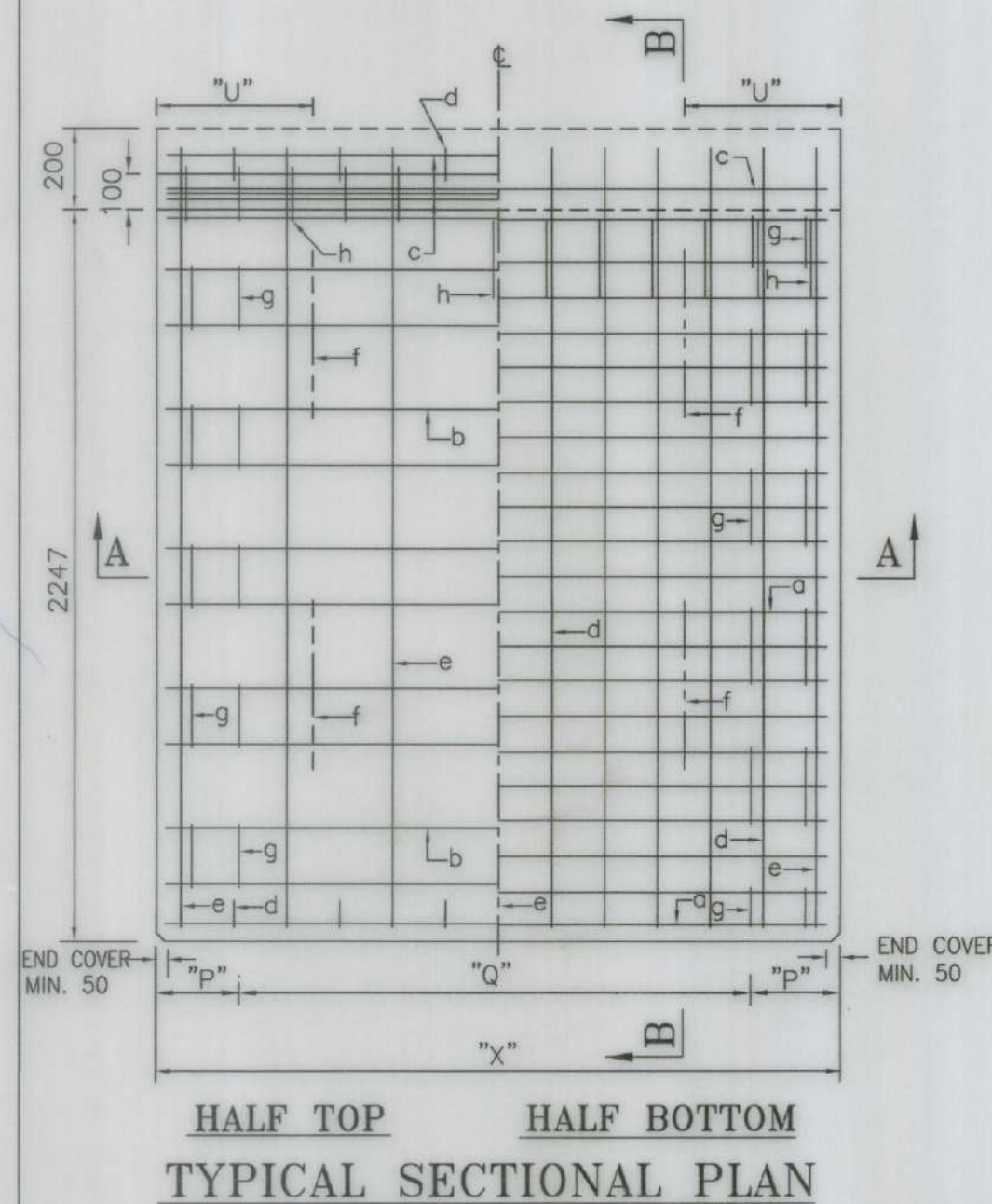
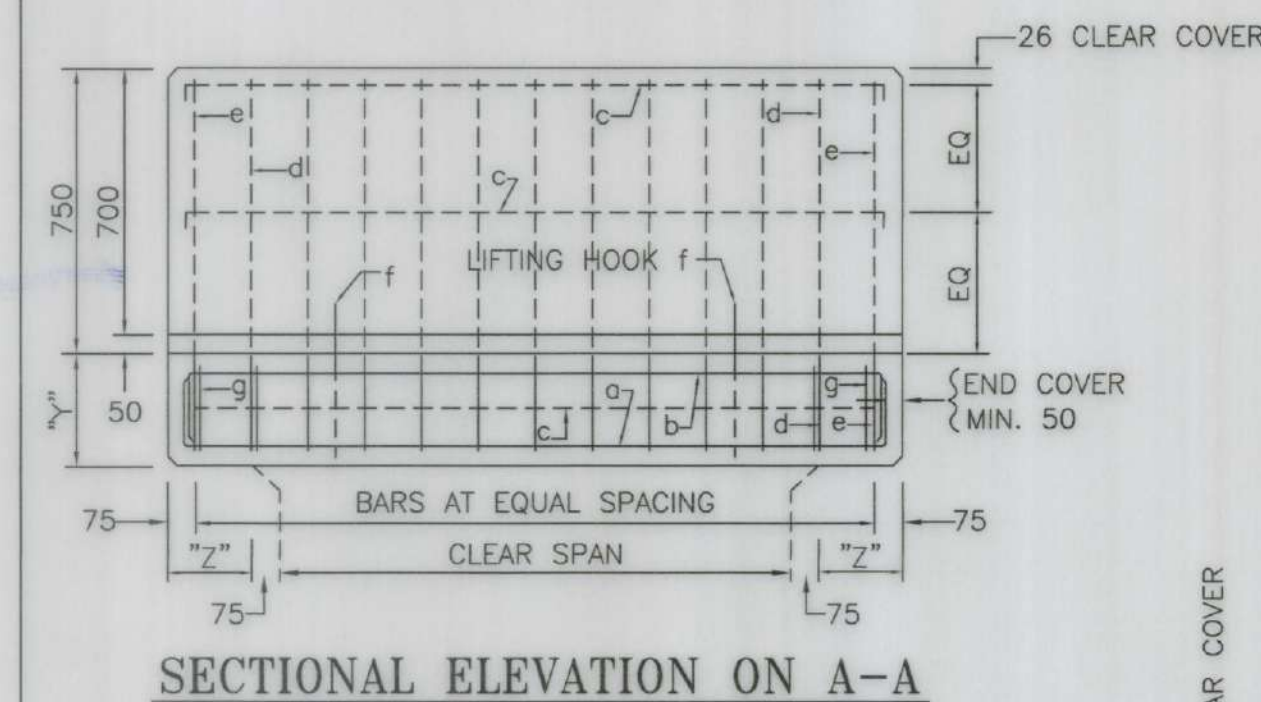


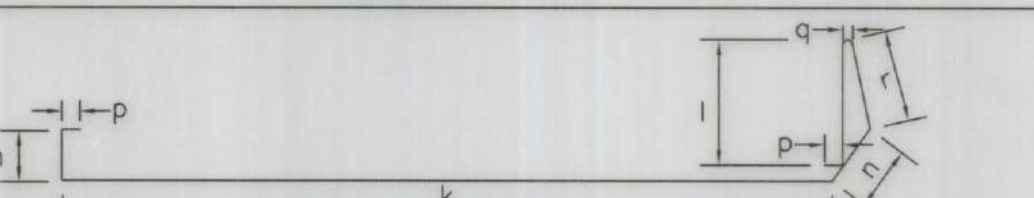
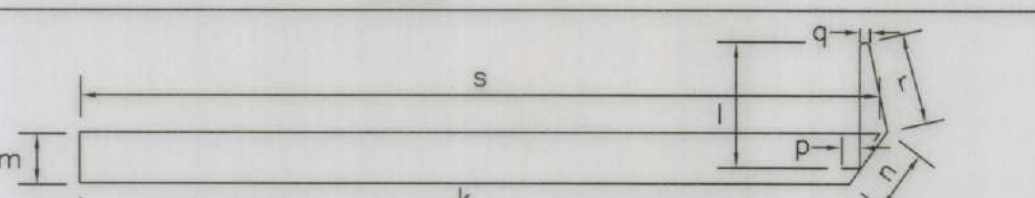


GENERAL ARRANGEMENT FOR SINGLE TRACK

QUANTITY SCHEDULE FOR EACH UNIT

DESCRIPTION					
CLEAR SPANS	0.610m	0.915m	1.22m	1.83m	2.44m
WEIGHT (kN)	22.61	31.86	44.90	67.89	92.36
CUBICAL QUANTITY (cu m)	0.90	1.27	1.80	2.72	3.69
NET WEIGHT OF BARS # 8 (kg)	42.36	46.41	—	—	—
NET WEIGHT OF BARS # 10 (kg)	—	—	98.18	120.89	155.11
NET WEIGHT OF BARS # 20 (kg)	88.55	116.26	169.80	—	—
NET WEIGHT OF BARS # 25 (kg)	—	—	—	299.81	374.85
NET WEIGHT OF STEEL + 10% WASTAGE (kg)	144.00	178.93	294.78	462.77	582.96
NET WEIGHT OF STEEL + 10% WASTAGE (kN)	1.41	1.75	2.89	4.54	5.72

BAR BENDING SCHEDULE FOR EACH UNIT

CLEAR SPAN (m)	DEPTH "Y" (mm)	BAR "a"							BAR "b"						BAR "c"						BAR "d"										BAR "e"										BAR "f"									
																																																		
		DIA	NOS	k	l	LENGTH	TOTAL	DIA	NOS	k	l	LENGTH	TOTAL	DIA	NOS	k	l	LENGTH	TOTAL	DIA	NOS	k	l	m	n	p	q	r	LENGTH	TOTAL	DIA	NOS	k	l	m	n	LENGTH	TOTAL	DIA	NOS	k	l	m	n	LENGTH	TOTAL				
		(mm)	REQD			OF ONE	(mm)	REQD			OF ONE		REQD			OF ONE		REQD			OF ONE		REQD							OF ONE		REQD						OF ONE		REQD				OF ONE						
0.610	270	20	24	1090	152	1274	30576	8	24	1062	75	1212	29088	8	5	1102	75	1252	6260	8	6	2143	928	162	266	75	50	732	4407	26444	8	3	2143	928	162	266	75	50	732	2343	6726	20179	20	4	322	120	250	95	1318	5273
0.915	310	20	25	1395	192	1659	41475	8	14	1367	75	1517	21238	8	5	1407	75	1557	7785	8	8	2143	958	202	300	75	50	732	4511	36089	8	4	2143	958	202	300	75	50	732	2343	6830	27321	20	4	362	120	250	95	1398	5593
1.220	340	20	29	1850	220	2170	62930	10	16	1820	75	1970	31520	10	5	1860	75	2010	10050	10	10	2143	980	230	326	75	50	732	4580	45805	10	6	2143	980	230	326	75	50	732	2343	6892	41355	20	4	390	120	250	95	1454	5817
1.830	400	25	25	2455	278	2861	71525	10	14	2420	75	2570	35980	10	5	2470	75	2620	13100	10	13	2143	1025	290	381	75	50	732	4740	61617	10	7	2143	1025	290	381	75	50	732	2343	7052	49363	25	4	440	150	250	100	1587	6348
2.440	430	25	25	3165	308	3631	90775	10	14	3130	75	3280	45920	10	5	3180	75	3330	16650	10	17	2143	1048	320	409	75	50	732	4821	81949	10	9	2143	1048	320	409	75	50	732	2343	7133	64193	25	4	470	150	250	100	1647	6588

- ALL DIMENSIONS ARE IN MILLIMETRES EXCEPT OTHERWISE SHOWN.
- ALL REINFORCEMENT BARS SHALL BE OF HIGH STRENGTH DEFORMED BARS (HSD/TMT) HAVING Fe 415/500 D GRADE CONFORMING TO IS:1786.
- BAR BENDING DIMENSIONS ARE WITH REFERENCE TO THE CENTRE LINES OF BARS. ALL BARS SHOULD BE PLACED IN ACCORDANCE WITH THE TABLE SHOWN ABOVE FOR EACH SPAN.
- CLEAR COVER TO THE REINFORCEMENT AT TOP AND BOTTOM OF THE SLAB HAS BEEN TAKEN AS 50mm IN DESIGN AS PER CLAUSE No. 15.9.2 OF IRS CONCRETE BRIDGE CODE.
- THE DESIGN IS SUITABLE FOR EXTREME ENVIRONMENT EXPOSURE CONDITION (i.e., DESIGN CRACK WIDTH NOT TO EXCEED 0.10 mm AS PER CLAUSE No. 10.2.1(a) OF IRS CONCRETE BRIDGE CODE).
- SLABS HAVE BEEN DESIGNED FOR 400 mm BALLAST CUSHION AND CHECKED FOR 300 mm BALLAST CUSHION VIDE CLAUSE NO. 2.2.2 OF IRS BRIDGE RULES.
- CONTROLLED CONCRETE GRADE M-35 SHALL BE USED. THE LETTER 'M' REFERS TO THE MIX AND NUMBER INDICATES THE CHARACTERISTIC CUBE STRENGTH AT 28 DAYS IN N/mm².
- MAXIMUM SIZE OF AGGREGATE TO BE USED IS 20 mm.
- WEIGHT OF REINFORCED CONCRETE HAS BEEN ASSUMED AS 25 kN/Cu m.
- 'DIA' INDICATED IN THIS DRAWING REFERS TO NOMINAL DIAMETER OF THE HSD/TMT BARS AS PER IS:1786.
- ALL CORNERS OF SLAB SHALL HAVE A CHAMFER OF 25 mm UNLESS OTHERWISE SHOWN. HOWEVER ABUTMENT WILL HAVE A CHAMFER OF 75mm.
- TOP SURFACE OF THE SLAB SHOULD BE GIVEN A FEW COATS OF COAL TAR/BITUMEN OR ANY OTHER SUITABLE WATER PROOFING TREATMENT BEFORE THE TRACK IS LAID ON THEM.
- UNITS SHOULD BE PROVIDED WITH A UNIFORM BEDDING BY PLACING IT OVER A LAYER OF CEMENT AND CAST IRON BORINGS IN 1:1 PROPORTION. THE PASTE SHOULD BE OF STIFF CONSISTENCY.
- THESE SLABS ARE SUITABLE FOR CURVED TRACK UP TO 10 DEGREE.
- THESE SLABS CAN ALSO BE USED FOR REPLACEMENT OF EXISTING SLABS, IF CLEAR SPAN OF EXISTING SLAB IS LESS THAN THAT OF THE PROPOSED SLABS SUBJECT TO AVAILABILITY OF BEARING ON ABUTMENT/PIER.
- BALLAST CUSHION MAY BE ADJUSTED TO CATER FOR SUPER ELEVATION WHILE PLACING THE SLABS ON CURVES.
- DATE OF CASTING AND NAME OF CASTING DEPOT SHOULD BE ENGRAVED ON EACH UNIT.
- THESE SLABS CAN BE USED IN YARDS, CARRYING TURNOUT OR MULTIPLE LINE SECTIONS ELIMINATING BALLAST RETAINER PORTION AND SHAPE OF BAR "d" AND "e" MAY BE MODIFIED, BAR "h" MAY BE REMOVED, IF NECESSARY.
- FOR NEW CONSTRUCTION, MINIMUM SPAN SHALL NOT BE LESS THAN 1.0 METRE.
- TO FACILITATE THE WORKING OF BALLAST CLEANING MACHINE, LIFTING HOOKS SHALL BE CUT AFTER THE PLACEMENT OF THE SLAB AND SUITABLE WATER PROOFING COAT SHALL BE APPLIED ON THE CUT.

NOTE

IRS BRIDGE RULES
IRS CONCRETE BRIDGE CODE
IS: 1786



APPROVED BY B.S. BSC
VIDE REVIEW ITEM NO. 1009

DATE: 21.03.2012

DESCRIPTION FOR EACH UNIT

DIMENSION OF SLAB			POSITION OF LIFTING HOOK			BEARING PRESSURE AT SUPPORT	
CLEAR SPAN (m)	LENGTH "X"	DEPTH "Y"	"S"	"T"	"U"	SUPPORT "Z"	kN/m ²
0.610	1210	270	498	849	300	225	1260
0.915	1515	310	518	829	375	225	1290
1.220	1970	340	530	817	375	300	1020
1.830	2580	400	549	798	500	300	1080
2.440	3290	430	557	790	500	350	1060

ARRANGEMENT FOR SHEAR REINFORCEMENT

CLEAR SPAN (m)	PORTION "P"		PORTION "Q"		TOTAL Nos OF STIRRUPS (BAR-"g")
	LENGTH (mm)	Nos OF STIRRUPS	LENGTH (mm)	Nos OF STIRRUPS	
0.610	138	2	935	—	4
0.915	128	2	1259	—	4
1.220	124	2	1722	—	4
1.830	130	2	2320	—	4
2.440	127	2	3036	—	4

RELATED DRAWINGS

DESCRIPTION	DRAWING NO.
MODERATE ENVIRONMENT CONDITION	BA-10063
SEVERE ENVIRONMENT EXPOSURE CONDITION	RDSO/B-10063/1

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RDSO

PRECAST R.C. BRIDGE SLAB
STANDARD SPANS 0.61,0.915,1.22,1.83 & 2.44m
FOR 25t LOADING-2008 (CONCRETE GRADE M-35)
(FOR EXTREME ENVIRONMENT EXPOSURE CONDITION)

PROVISIONAL DATE: 21.03.2012

RDSO/B-10063/2

BA - 10063/2