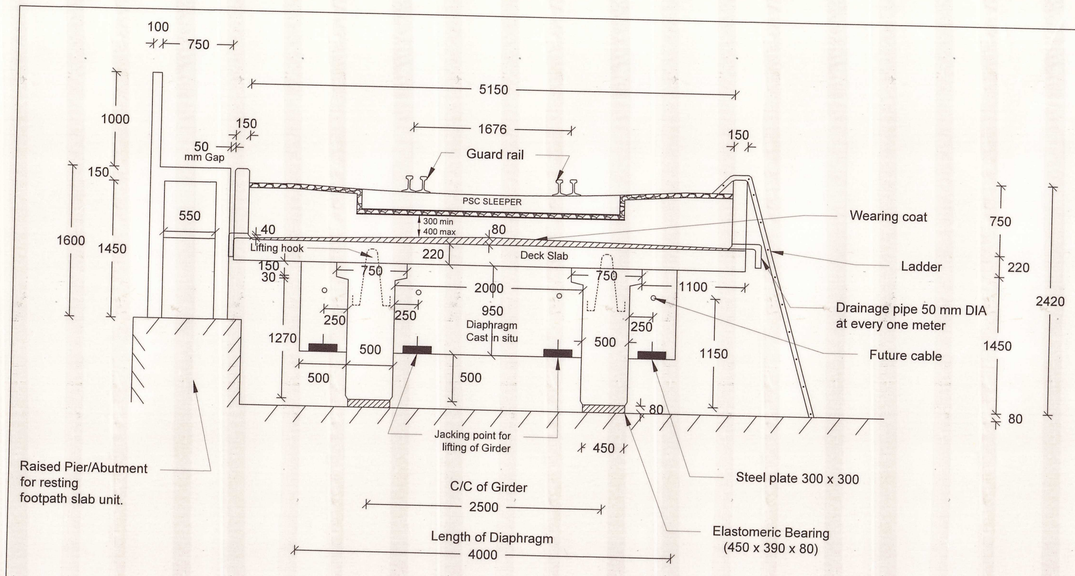
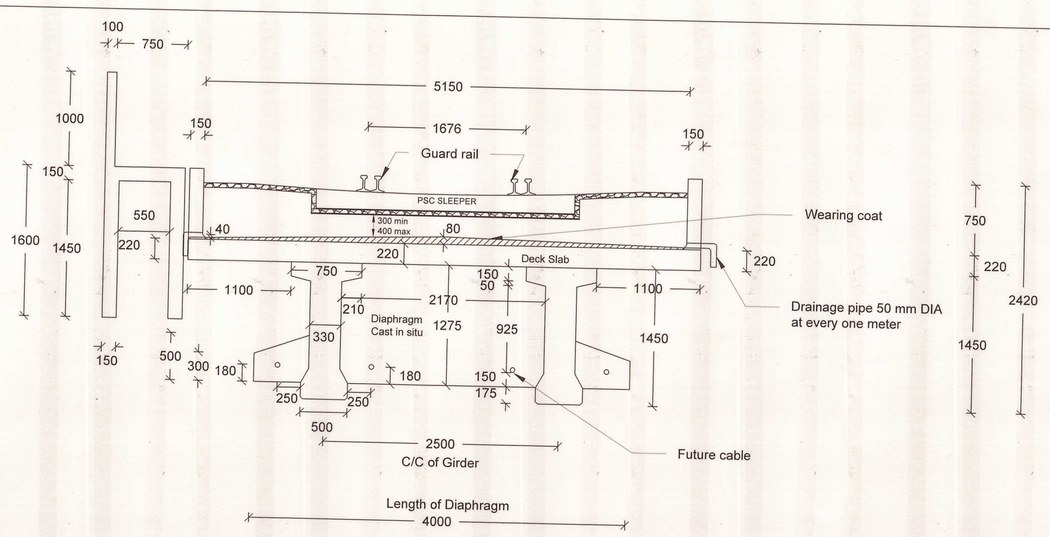
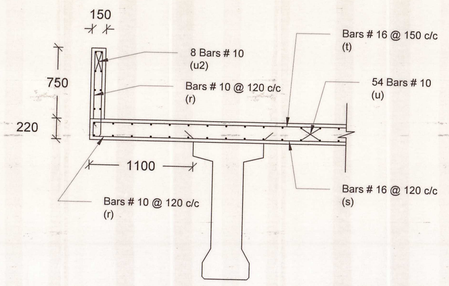


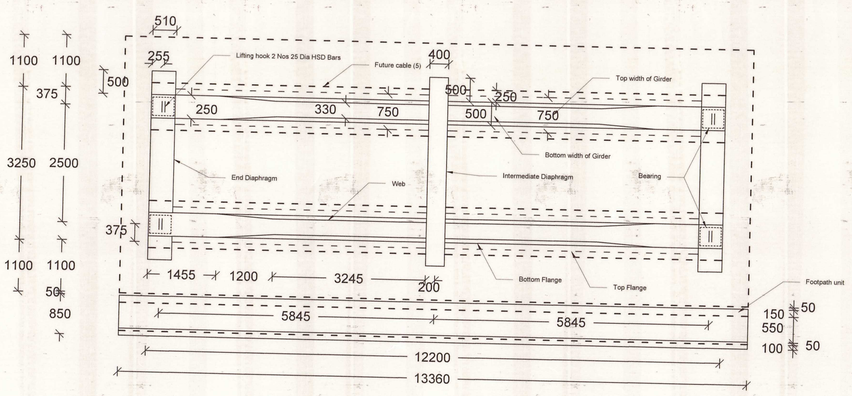

CROSS SECTION OF GIRDER AT END (scale 1:30)




CROSS SECTION OF GIRDER AT Middle (scale 1:30)




REINFORCEMENT DETAILS OF DECK SLAB AND BALLAST RETAINER(scale 1:30)




PLAN VIEW SCALE (1:60)

## Bar bending schedule for Deck Slab and Ballast retainer

| BAR MARK | DESCRIPTION AND SHAPE | DIA Ø (mm) | Nos. | Length in mm | Weight per meter in Kg | Total Weight in Kg |
|---|---|---|---|---|---|---|
| r | 70, 890, 50, 1060, 750 | 10 | 222 | 3710 | 0.62 | 510.65 |
| s | 3250 | 16 | 111 | 3250 | 1.58 | 570 |
| t | 5370 | 16 | 89 | 5370 | 1.58 | 756 |
| u | 12120 | 10 | 54 | 12120 | 0.62 | 405.8 |
| u1 | 70, 1550, 545, 1005 | 16 | 57 | 3170 | 1.58 | 286 |
| u2 | 4350 | 10 | 48 | 4350 | 0.62 | 129.46 |

**NOTES**

1. All dimensions are in **'milli metres'** except otherwise specified against the dimensions. No Dimensions shall be scaled only written dimensions shall be followed.
2. This drawing is to be **read** in conjunction with **RDSO/B-10258** (12.2 m 2I Girder for 25 T-2008 Loading standard
3. **I- Girder** shall be cast as per **RDSO/B-10258.**
4. **1st stage pre-stressing** of Girders shall be done as per **RDSO/B-10258/1.**
5. **2nd stage pre-stressing** after casting of deck slab and diaphragm shall be done as per **RDSO/B-10258/1** duly **adding two strands** of 12.7 mm diameter in **cable 4.**
6. **Initial pre-stressing force at jacking end** shall be **1543 KN** and **theoretical elongation** at each end before slip shall be **40 mm** for **Cable 4** with 12 strands.
7. All other conditions, Notes etc. given in the RDSO drawings RDSO/B-10258, RDSO/B-10258/1, RDSO/B-10258/2 and RDSO/B-10258/3 shall be followed.
8. **Reinforcement in deck slab** shall be provided as per **this drawing**.

REFERENCES

1. I.R.S Concrete Bridge Code 2014 (Revised) including latest ACS read in conjunction with relevant I.S. Specifications mentioned therein.
2. I.R.S Bridge Rules-2014 including latest ACS.
3. Indian Railways Unified Standards Specification for materials and work 2019.
4. For 'h' Shape footpath precast R.C.C. unit refer drawing No. GM(W)SC/BR/TR/RCC/STD/148/2020

| Weight of each span | |
|---|---|
| Weight of Girder | 40517 Kg |
| Weight of Diaphragm | 10348 Kg |
| Weight of Deck Slab | 47562 Kg |

**SOUTH CENTRAL RAILWAY**

**DRG. NO.** GM(W)SC/BR/TR/RCC/STD/159/2020

**Pre-stressed concrete 2 I Girder of span 12.2 m (Post-tensioned type) for straight track alignment for 25 T Loading-2008 to suit deck width of 5.15 m**

| | |
|---|---|
| CBE/SC | (K.RAMAKRISHNA) 23/9/2020 |
| DY.CE/BR.D/SC | (P. RAJAGOPAL RAO) 23/09/2020 |
| AXEN/BR.D/SC | (P. SRINIVAS) 23.09.2020 |
| SSE/W/BR.D/HQ/SC | (G. M. SARMA) |
| SSE/DESIGNS/BR.D/HQ/SC | (MITHUN KUMAR SINGH) |