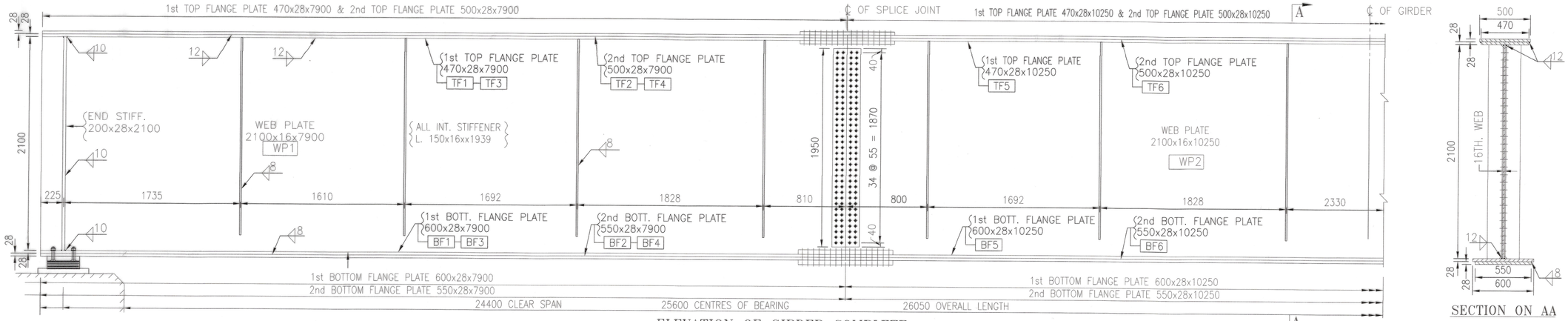
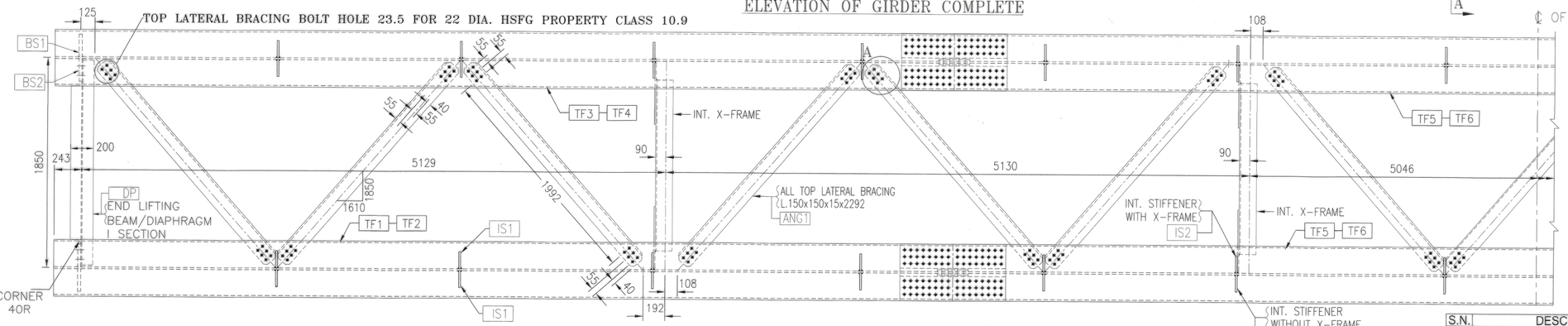
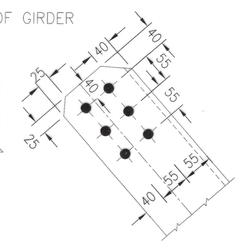



ELEVATION OF GIRDER COMPLETE




SECTION ON AA




DETAILS AT 'A' SHOWING ANGLE CORNER CHAMFER & RIVET DISTANCES

SCALE 1:5

| DESCRIPTION | SYMBOLS |
|---|---|
| FILLET WELD (ONE SIDE) | |
| FILLET WELD (BOTH SIDES) | |
| HSFG BOLTS | |

| DEFLECTION(MM) | | | |
|---|---|---|---|
| DUE TO DEAD LOAD OF STEEL GIRDER | DUE TO SIDL OF TRACK AND CHANNEL SLEEPERS | DUE TO LIVE LOAD WITH IMPACT LOAD | TOTAL DEFLECTION (MM) |
| 3.02 | 0.73 | 23.57 | 27.32 |

TOP PLAN OF GIRDER COMPLETE

| S. No. | MEMBER | FATIGUE LOADS | | WITH OCCASIONAL LOADS | |
|---|---|---|---|---|---|
| | | ACTUAL (MODIFIED) STRESS RANGE Kg/mm² | ALLOWABLE STRESS RANGE Kg/mm² | ACTUAL STRESS Kg/mm² | ALLOWABLE STRESS Kg/mm² |
| 1 | TOP FLANGE PLATE | 5.87 (7.62) | 11.08 | 9.90 | 16.57 |
| 2 | BOTTOM FLANGE PLATE (ON NET AREA) | 7.73 (10.04) | 11.08 | 10.74 | 16.57 |
| 3 | WEB PLATE | 2.96 (3.85) | 8.7 | 3.55 | 10.97 |

| WEIGHT OF SPAN IN TONNES (STEEL) | |
|---|---|
| SPAN WITHOUT BEARING* | ELASTOMERIC BEARING |
| 47.84 | 1.664 |

* THE TOTAL WEIGHT OF SPAN INCLUDES WEIGHT OF RIVET HEADS AND WELD @ 2%.

| S.N. | DESCRIPTION | REFERENCE |
|---|---|---|
| 1 | DETAILS OF SPLICE JOINT & BOTTOM SECTIONAL PLAN | RDSO/B-16016/1R1 |
| 2 | DETAILS OF X-FRAME | RDSO/B-16016/2R1 |
| 3 | ELASTOMERIC BEARING DETAILS | RDSO/B-16016/3R1 |
| 4 | WELDING SEQUENCE | RDSO/B-16016/4R1 |
| 5 | PART LIST & ASSEMBLY DRAWING | RDSO/B-16016/5R1 |
| 6 | NOTES FOR USE OF HSFG BOLTS IN BRIDGES | RDSO/B-11760/R1 |
| 7 | PROVISION OF SIDE PATHWAY | CBS-0042 to 0042/3 |

17. ANTI-SKID CHEQUERED PLATES FOR GANGWAY,TROLLY REFUGE,MAN REFUGE,SIDE PATHWAY ETC.SHALL BE CONFORMING TO LATEST IS 6911,ISS SYMBOL 409M,MINIMUM 6MM THICK (EXCLUDING BEAD HEIGHT) WITH FLAT BOTTOM AND TOP PATTERN CONFORMING TO IS3502,1A. FOR COASTAL/CORROSIVE AREAS, THICKNESS MAY BE SUITABLY INCREASED DEPENDING UPON SEVERITY OF CORROSION. APPROPRIATE MATCHING STAINLESS STEEL GRADE FASTENERS AS RECOMMENDED BY MANUFACTURER SHALL BE USED.
16. THIS DESIGN IS SUITABLE FOR MAXIMUM PERMISSIBLE SPEED AS GIVEN IN PARA 3.3.1 OF THE BRIDGE RULE AND MAXIMUM PERMISSIBLE SPEED ON TRACK DUE TO CURVE WHICHEVER IS LESS.
15. MAXIMUM DEFLECTION COMPUTED IS 27.32 mm i.e. 1 in 937.
14. GUARD RAIL SHALL BE PROVIDED AS PER PROVISIONS OF IRPWM.
13. CONCRETE BED BLOCKS FOR NEW WORKS SHALL BE MINIMUM M25. FOR EXISTING WORKS, BED BLOCKS SHALL BE MINIMUM M20.
12. ALL STEEL FOR MAIN GIRDERS INCLUDING STIFFENERS SHALL BE AS PER IS: 2062 AS GIVEN IN PARA 8.2 OF IRS B1-2001. FOR OTHER MEMBERS LIKE BRACING, X-FRAMES AND DIAPHRAGMS, STEEL SHALL BE AS PERIS: 2062 AS GIVEN IN PARA 8.1 OF IRS B1-2001.
11. THE SURFACE PREPARATION, TIGHTENING PROCEDURE AND OTHER DETAILS FOR HSFG BOLTS SHALL BE AS PER DRG. NO. RDSO/B-11760/R1.
10. THE GIRDER HAS BEEN CHECKED FOR LAUNCHING AS SINGLE LEAVES WITHOUT ANY BRACING. SINGLE GIRDER LEAF CAN BE HANDLED NEAR THE BEARING STIFFENER.
9. ALL HOLES ARE 23.5 DIA FOR 22 DIA. HSFG BOLTS OF PROPERTY CLASS 8.8 EXCEPT WHERE OTHERWISE SHOWN TOP LATERAL BRACING WHICH IS PROPERTIES CLASS 10.9.
8. ALL INTERMEDIATE STIFFENERS SHALL BE CONNECTED TO THE WEB BY FILLET WELDS AND NOT WELDED TO FLANGE. THE INTERMEDIATE STIFFENERS SHALL BE MACHINE FIT WHEREVER THESE TOUCH THE FLANGES.
7. END STIFFENERS SHALL BE CONNECTED TO WEB BY 10 mm FILLET WELD ALL AROUND, INCLUDING WITH FLANGES.
6. FILLET WELDS IN FLANGES TO WEB CONNECTION SHALL BE MADE ONLY BY AUTOMATIC SUB-MERGED ARC WELDING TECHNIQUE. ALL OTHER WELDS SHOULD BE DONE BY SAW AS FAR AS POSSIBLE, IN CASE SAW IS NOT POSSIBLE OR DIFFICULT TO BE DONE, OTHER WELDS SHALL BE PREFERABLY MADE BY GMAW/FCAW. MMAW MAY BE USED IF APPROVED BY ENGINEER-IN-CHARGE.
5. FABRICATION SHALL BE DONE AS PER STIPULATIONS OF IRS B1. ALL WELDS SHALL BE MADE BY USING APPROVED WELDING PROCEDURES AND BY QUALIFIED WELDERS APPROVED FOR APPROVED WELDING PROCEDURE.
4. DESIGN IS SUITABLE FOR BALLAST CUSHION FROM 300 TO 400 mm.
3. THIS DESIGN IS SUITABLE FOR 50 GMT TRAFFIC FOR 100 YEARS OF 25t LOADING-2008 AS PER FATIGUE PROVISIONS.
2. THE DESIGN IS IN ACCORDANCE WITH IRS BRIDGE RULES, STEEL BRIDGE CODE, IRS SEISMIC CODE, WELDED BRIDGE CODE, CONCRETE BRIDGE CODE,AND UIC BEARING DESIGN CODE-772-2R.
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED. NO DIMENSION SHOULD BE SCALED FROM THIS DRAWING.

NOTES

| SPECIFICATION | |
|---|---|
| ELASTOMERIC BEARINGS | : UIC 772-2R |
| STEEL FOR EVERY MEMBER | : IS: 2062-2011 Gr. B0 OR EQUIVALENT AS PER IRS B1 |
| SCHEME OF SYMBOLS FOR WELDING | : IS: 813 |
| METAL ARC WELDING | : IS: 9595 |
| SUBMERGED ARC WELDING | : IS: 4353 |
| ELECTRODES | : IRS M-28 |
| WIRE FLUX COMBINATION FOR SAW | : IRS M-39 |
| FABRICATION SPECIFICATION No. IRS/B1-2001, REVISED-2008 | |

SCALE

(SIZE A1)

MILLIMETERS

50 0 50 100 150 200 1:5

200 0 200 400 600 800 1:20

| ALT. | DESCRIPTION | DATE |
|---|---|---|
| | | |



R. D. S. O.

"25t LOADING-2008"

PLATE GIRDER-WELDED TYPE

24.4m SPAN

GENERAL ARRANGEMENT AND DETAILS OF MAIN GIRDER

(ELEVATION & TOP PLAN)

PROVISIONAL DATE- 28.02.2023

RDSO/B-16016/R1

| DESIGN REGISTER No. DD/2023/ | | | | | | |
|---|---|---|---|---|---|---|
| DESIGN BY-NILESH KUMAR(SSRE/SB-II) | DRAWN BY-ALOK RANJAN(J.E/D/SB-II) Alok Ranjan | SCRUTINISED & CHECKED BY- | SCRUTINISED & RECOMMENDED BY- | APPROVED BY- | AUTOCAD FILE No. RDSO-B-16016-R1 |
| CHECKED BY-SONU (JE/D/SB-II) | CHECKED BY-ASHOK KUMAR(SSRE/SB-II) | SANDEEP AGARWAL (ADE/SB-II/B&S) | MANISH KUMAR (DBS-VII/B&S) | RAJESH KUMAR SRIVASTAVA(ED/B&S) | NOTIFICATION No. |