Supplementary Information

The following information is associated with Network Rail Standard:
NR CIV/SD/1410 Rev B

Additional Content Access

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CAD Drawing

- CIV/SD/1410

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GENERAL

1. THE STANDARD DRAWING IS TO BE READ IN CONJUNCTION WITH THE GENERAL NOTES DRAWING NR/CIV/SD/1404.

GEOMETRY

B

2. CROSS MEMBERS AND END PLATES SHALL BE SET AT A CONSTANT DISTANCE FROM THE TOP OF THE MAIN GIRDER BOTTOM FLANGE. (i.e FOLLOWING THE CAMBER OF THE GIRDER).
3. FILLER BEAM AND COMPOSITE BRIDGE DECK CROSS MEMBERS ARE NORMALLY AT 1.5m CENTRES AND STEEL BRIDGE DECK TEE RIBS ARE NORMALLY AT 0.6m CENTRES, BUT THIS MAY REDUCED TO SUIT THE SPAN OF THE BRIDGE, AND THE CROSS GIRDER DECK ARRANGEMENT (FANNED OR SKEWED). REFER TO DETAIL DRAWINGS. THE SPACING SHALL NOT EXCEED THE MAXIMUM SHOWN (MEASURED ALONG MAIN GIRDER WEB CENTRE LINE).
4. CAMBER TO MAIN GIRDERS SHALL BE NIL FOR SPAN LENGTH <15m. CAMBER TO MAIN GIRDERS SHALL BE FOR SPAN LENGTH >15m

   $\frac{\text{SPAN}}{500}$
5. IF A FLANGE CURTAILMENT WOULD OTHERWISE FALL SHORT OF A STIFFENER BY LESS THAN A THIRD OF THE U–FRAME SPACING, EXTEND THE START OF THE CURTAILMENT 50mm BEYOND THE NEXT STIFFENER AS SHOWN ON THE MAIN GIRDER ELEVATION.
6. STIFFENERS MAY REQUIRE THICKER PLATE IF THE DECK IS LIFTED AT A STIFFENER. REFER TO STEELWORK DETAILS DRAWING FOR FLOOR TYPE AND SKEW CONSIDERED.
7. DRAWINGS ARE FOR A PARTICULAR SKEW. ARRANGEMENT OF DETAILS TO BE DETERMINED FOR THE SCHEME SPECIFIC SPAN AND SKEW.

MATERIALS & WORKMANSHIP–STEELWORK

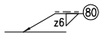
8. STEELWORK SHALL COMPLY WITH BS EN 1090–2 FOR EXECUTION CLASS EX3 AND TOLERANCE CLASS 2. B
9. ALL STEEL SHALL BE TO BS EN10025–2:2004 AND BS EN10025–3:2004. UNLESS STATED OTHERWISE GRADES TO BE S355J2+N.
10. ALL WELDS SHALL BE CONTINUOUS ON BOTH SIDES OF ALL JOINTS UNLESS STATED OTHERWISE. WELD SIZES SHALL BE AS SHOWN, BUT WHERE NOT STATED SHALL BE 8mm FILLET WELDS.
11. COPE HOLES SHOULD BE AVOIDED IN PREFERENCE OF SNIPES.
12. ALL MATING SURFACES TO BE WELD SEALED.
13. ADDITIONAL WELDS TO MAKE UP SPECIFIED SIZES OR LENGTHS MAY ONLY BE USED WHERE AUTHORISED BY WRITTEN APPROVAL BY THE ENGINEER UNDER THE CONTRACT. WHERE BUTT WELDS ARE PERMITTED THEY SHALL BE FULL PENETRATION BUTT WELDS WITH THE EDGES GROUND FLUSH – QUALITY AT LEAST EQUIVALENT TO DETAIL CATEGORY 80.
14. ALL HOLES SHALL BE TO THE SIZE STATED WITH THE HOLE IN ONE PART OF ALL MATING CONNECTIONS TO BE DRILLED AT TRIAL ERECTION.
15. BOLTS SHALL BE CLASS HR 8.8 TO BS EN 14399–3 AND SUPPLIED WITH DIRECT TENSION INDICATOR WASHERS AND NUTS TO CLASS HR8. GRADE S10T TENSION CONTROLLED BOLTS MAY BE USED AS AN ALTERNATIVE. B
16. WHERE REQUIRED AND SHOWN ON SUBSEQUENT DRAWINGS, STEEL WITH IMPROVED DEFORMATION PROPERTIES PERPENDICULAR TO THE SURFACE IS CALLED UP WITH THE REQUIRED CLASSIFICATION IN ACCORDANCE WITH BS EN 10164:2004. B

NOTATION

17. ALL DIMENSIONS ARE STATED IN MILLIMETRES.
18. WELD SYMBOLS ARE GENERALLY IN ACCORDANCE WITH BS EN22553. FILLET WELD SIZE GIVEN IS LEG LENGTH e.g.

BUTT WELDS ARE FULL PENETRATION OF THE THICKNESS JOINED UNLESS MINIMUM DEPTH OF PENETRATION IS STATED e.g.

19. ALL WELDS SHALL MEET THE REQUIREMENTS OF TABLES 8.1 TO 8.5 OF BS EN 1993–1–9 INCLUSIVE FOR THE MINIMUM DETAIL CATEGORY, AS AMENDED BY THE UK NATIONAL ANNEX NA BS EN 1993–1–9. WHERE A HIGHER DETAIL CATEGORY AND ADDITIONAL REQUIREMENTS ARE NECESSARY, THE REQUIRED DETAIL CATEGORY IS DENOTED THUS B



THE QUALITY OF WELDS SHALL CONFORM TO THE STANDARDS APPROPRIATE TO THESE CLASSIFICATIONS AS DEFINED BY THE SPECIFICATION.

DRAWING No. NR/CIV/SD/1410

NOTES

Rev	Date	Description of revision	Design'd	C'kd
B	MAY 10	EUROCODE ISSUE	AGW	NY
A	22.12.09	FIRST ISSUE	AGW	NY
P2	09.04.09	REVISED WHERE SHOWN	LZ	IP
P1	11.11.08	INDEPENDENT CHECK	LZ	IP

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Master copy with original signatures held by Network Rail HQ CIVIL ENGINEERING STANDARD DESIGN

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'D' TYPE UNDERBRIDGE STANDARD DRAWINGS

STEELWORK GENERAL ASSEMBLY DETAILS – NOTES

Scale: AS SHOWN

Drawing Number: NR/CIV/SD/1410 B

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