Supplementary Information

The following information is associated with Network Rail Standard:
NR CIV/SD/1035 Rev B

Additional Content Access

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CAD Drawing

- CIV/SD/1035

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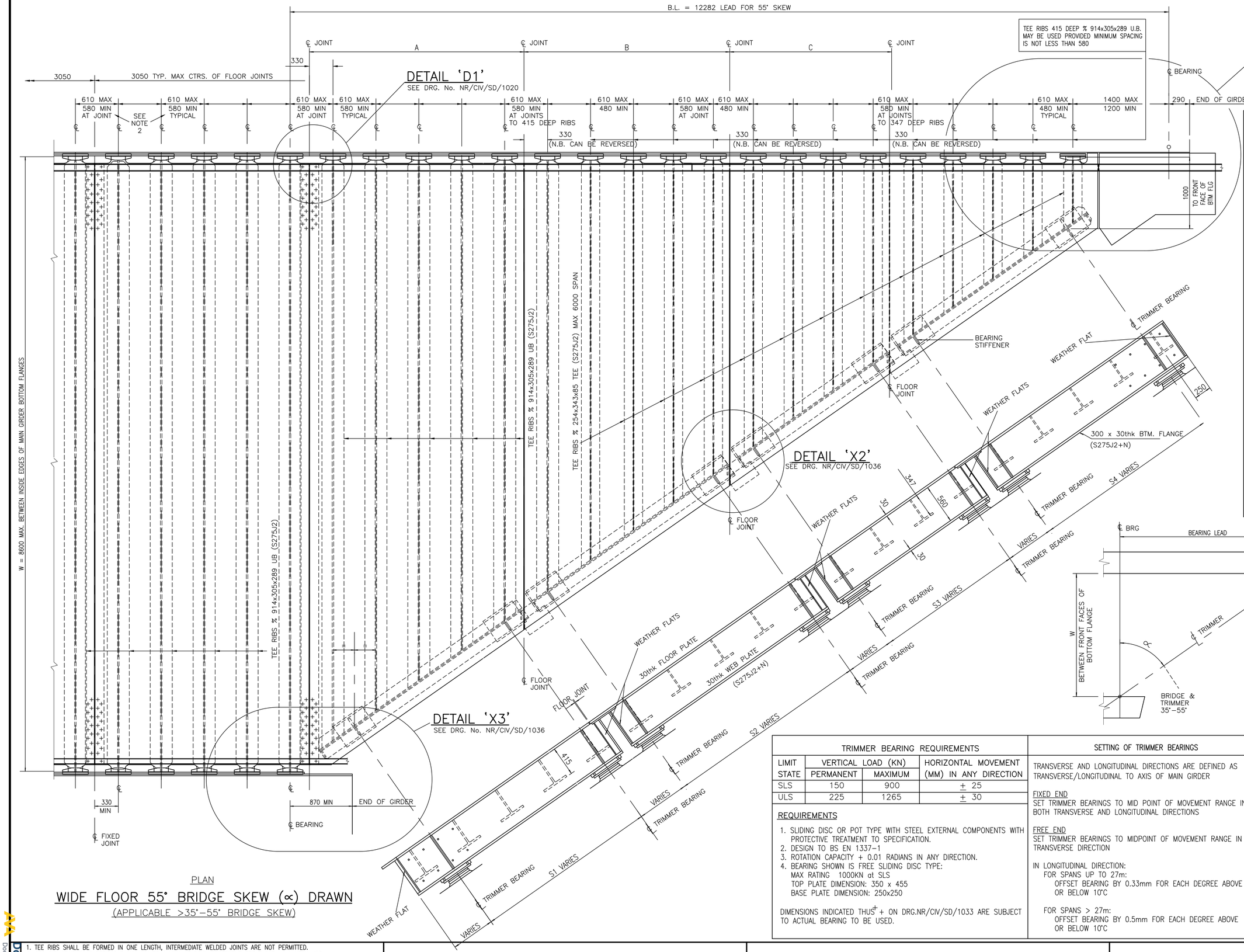
DRAWING No. NR/CIV/SD/1035



PLAN

WIDE FLOOR 55° BRIDGE SKEW (∝) DRAWN

(APPLICABLE >35°–55° BRIDGE SKEW)

TRIMMER SETTING OUT

TRIMMER LENGTHS TO BE MADE APPROXIMATELY EQUAL USING THE FOLLOWING FORMULA:

$\frac{BL}{4} - 300 < A < \frac{BL}{4} + 300$

$\frac{BL}{4} - 300 < B < \frac{BL}{4} + 300$

$\frac{BL}{5} - 300 < C < \frac{BL}{5} + 300$

BL = BEARING LEAD

THE ABSOLUTE MAXIMUM WIDTH FOR TRANSPORTATION IS 3500mm

WORKED EXAMPLE:

SKEW : ∝ = 55°
FLOOR WIDTH : W = 8600
BEARING LEAD : BL = 12282

A = 2770 < A < 3370
2770 < B < 3370
2156 < C < 2756

CHOOSE TEE RIB SPACING TO SUIT A, B AND C TO GIVE APPROXIMATELY EQUAL TRIMMER SPANS.

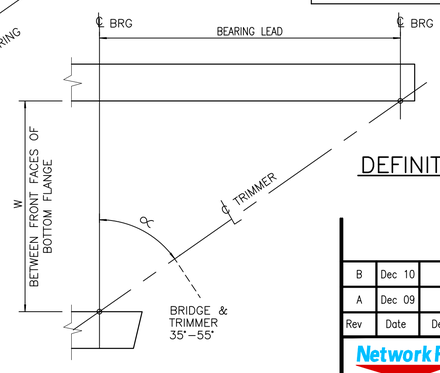
A (SHOWN) = 3000
B (SHOWN) = 2875
C (SHOWN) = 2233

S1 (SHOWN) = 2564
S2 (SHOWN) = 2828
S3 (SHOWN) = 2044
S3 (SHOWN) = 2620

E.G. $S1 = \sin^{-1}\propto (A - 330 - \frac{600}{2} - (600 - 330))$

$= \sin^{-1} 55(3000 - 330 - \frac{600}{2} - (600 - 330))$

$= \underline{2564}$



DEFINITION OF SKEW

(NTS)

TRIMMER BEARING REQUIREMENTS

LIMIT STATE	VERTICAL LOAD (KN) PERMANENT	VERTICAL LOAD (KN) MAXIMUM	HORIZONTAL MOVEMENT (MM) IN ANY DIRECTION
SLS	150	900	± 25
ULS	225	1265	± 30

REQUIREMENTS

1. SLIDING DISC OR POT TYPE WITH STEEL EXTERNAL COMPONENTS WITH PROTECTIVE TREATMENT TO SPECIFICATION.
2. DESIGN TO BS EN 1337–1
3. ROTATION CAPACITY + 0.01 RADIANS IN ANY DIRECTION.
4. BEARING SHOWN IS FREE SLIDING DISC TYPE:
   MAX RATING 1000KN at SLS
   TOP PLATE DIMENSION: 350 x 455
   BASE PLATE DIMENSION: 250x250

DIMENSIONS INDICATED THUS + ON DRG.NR/CIV/SD/1033 ARE SUBJECT TO ACTUAL BEARING TO BE USED.

SETTING OF TRIMMER BEARINGS

TRANSVERSE AND LONGITUDINAL DIRECTIONS ARE DEFINED AS TRANSVERSE/LONGITUDINAL TO AXIS OF MAIN GIRDER

FIXED END
SET TRIMMER BEARINGS TO MID POINT OF MOVEMENT RANGE IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS

FREE END
SET TRIMMER BEARINGS TO MIDPOINT OF MOVEMENT RANGE IN TRANSVERSE DIRECTION

IN LONGITUDINAL DIRECTION:
FOR SPANS UP TO 27m:
OFFSET BEARING BY 0.33mm FOR EACH DEGREE ABOVE OR BELOW 10°C

FOR SPANS > 27m:
OFFSET BEARING BY 0.5mm FOR EACH DEGREE ABOVE OR BELOW 10°C

1. TEE RIBS SHALL BE FORMED IN ONE LENGTH, INTERMEDIATE WELDED JOINTS ARE NOT PERMITTED.
2. 580 RIB SPACING IS DESIRABLE MINIMUM TO ALLOW WELDING, PROTECTIVE TREATMENT & MAINTENANCE.
3. SEE DRAWING No. NR/CIV/SD/1020 FOR LOCATION OF FLOOR PLATE BUTT WELDS.

Rev	Date	Description of revision	Design'd	C'kd
B	Dec 10	EUROCODE ISSUE	CH	MM
A	Dec 09	ORIGINAL ISSUE	CH	MM

Network Rail Infrastructure Ltd
Registered Office:
Kings Place
90 York Way
London
N1 9AG

	Name	Position	Signature	Date
Approved	P Clark	Senior Programme Engineering Manager (Building & Civils)	P.C.	Dec–10

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

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STANDARD HALF THROUGH UNDERBRIDGES
BOX GIRDERS & TRANSVERSE RIBBED FLOORS

DOUBLE TRACK – 2 GIRDERS ALTERNATIVE TRIMMER WIDE FLOOR >35° – 55° SKEW SHEET 2 OF 3

Scale	1:25	
Drawing Number	NR/CIV/SD/1035	B

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