Supplementary Information

The following information is associated with Network Rail Standard:
NR CIV/SD/818 Rev A

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CAD Drawing

- CIV/SD/818

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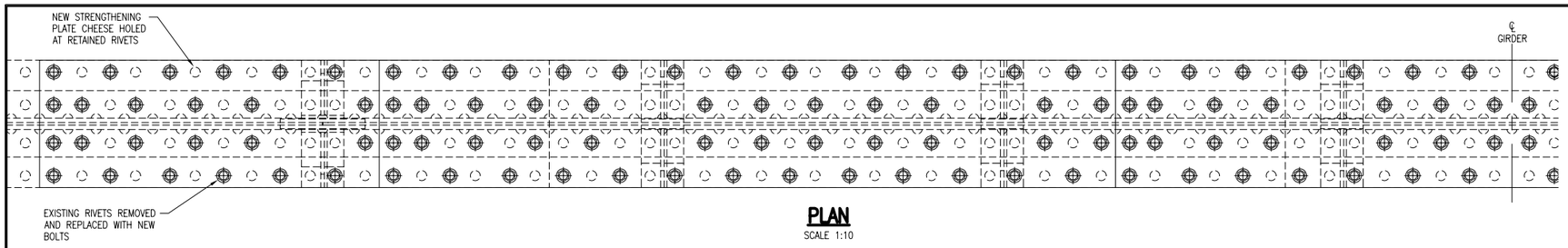

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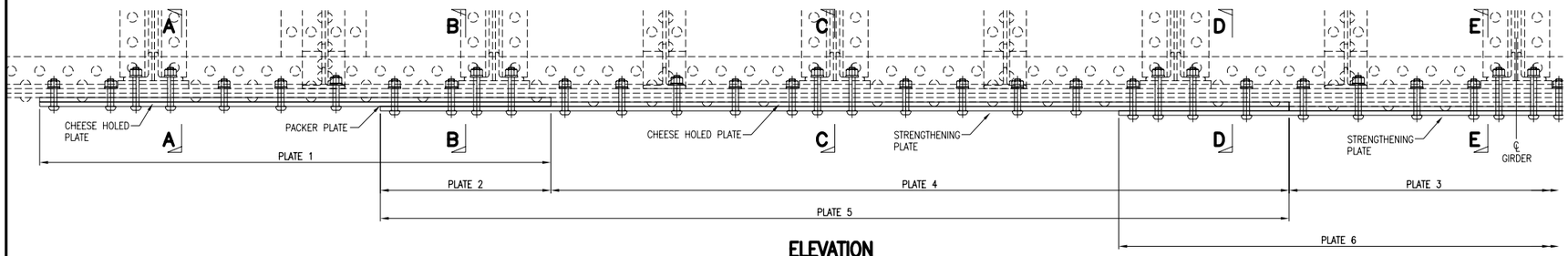

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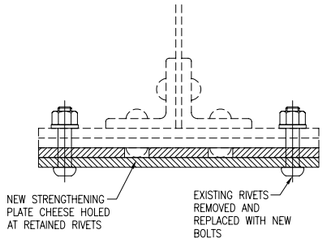

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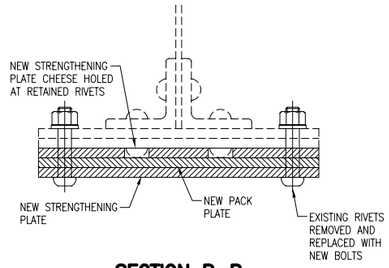

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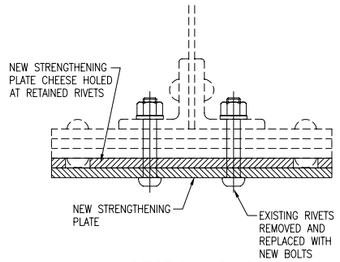

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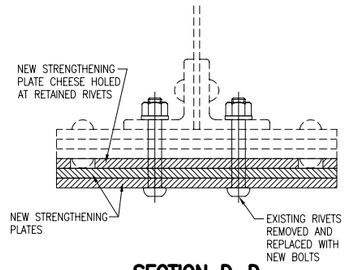

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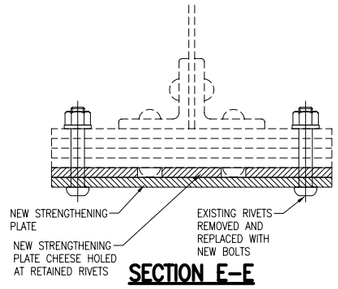

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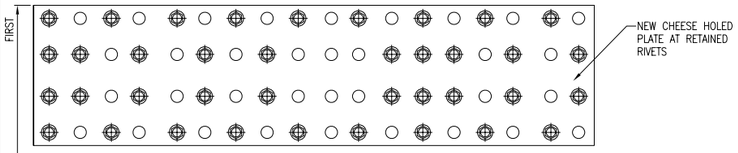

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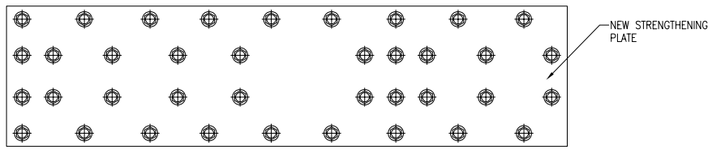

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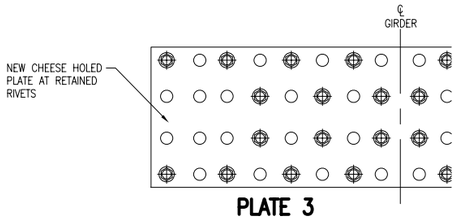

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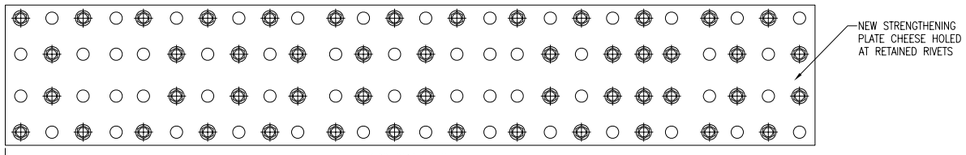

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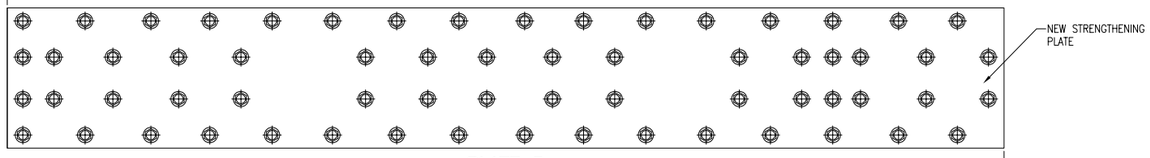

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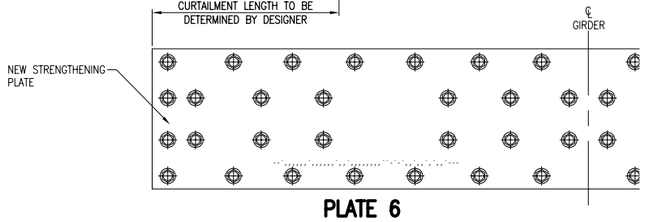

PLATE 6

ORDER OF FIXING

LAST

DRAWING No. NR/CIV/SD/818

NOTES

GENERAL NOTES

1. THIS DRAWING SHOWS A TYPICAL EXAMPLE OF BOTTOM FLANGE STRENGTHENING USED TO GENERATE ADDITIONAL CAPACITY TO EXISTING METALLIC LONGITUDINAL GIRDERS.
2. THE SIZES AND DIMENSIONS SHOWN ON THIS DRAWING RELATE TO EITHER A TYPICAL EDGE OR CENTRE LONGITUDINAL GIRDER. THE CONFIGURATION OF STRENGTHENING PLATE IS THE RESPONSIBILITY OF THE DESIGNER.
3. ALL EXISTING PLATES, STIFFENERS AND CONFIGURATION OF THE GIRDER ARE TO BE CONFIRMED ON SITE BY THE DESIGNER.

SPECIFICATION

1. FOR SPECIFICATION REFER TO DRG. NR/CIV/SD/801.

DESIGN ASSUMPTIONS

1. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE STRENGTHENING SYSTEM WHICH SHALL ADDRESS AS A MINIMUM THE FOLLOWING.
   - A) CLEARANCES FOR ACCESS TO THE WORKS
   - B) 'LOCKED IN' PERMANENT LOAD STRESSES
   - C) CONDITION OF EXISTING FLANGES
   - D) CLEARANCES BETWEEN BOLTS
   - E) EXTENT AND SEQUENCE OF RIVET REPLACEMENT IF REQUIRED
   - F) INTEGRITY OF FLOOR CONNECTIONS
2. THE DESIGNER SHALL CHECK THE VARIOUS STAGES IN THE CONSTRUCTION SEQUENCE TO ENSURE THE INTEGRITY OF THE GIRDER AND OTHER CONNECTING PARTS ARE MAINTAINED THROUGHOUT THE WORKS. (SAFETY)
3. THE DESIGNER SHALL SPECIFY THE SLIP FACTOR (μ) REQUIRED FOR FAYING SURFACES TO SATISFY THE DESIGN.
4. THE DESIGNER SHALL CHECK THE NUMBER OF RIVETS OR BOLTS THAT CAN BE REMOVED AT ANY ONE TIME UNDER THE LOADING REGIME FOR THE GIVEN WORK ITEM. (SAFETY)

NOTE

- DENOTES NEW BOLT IN EXISTING HOLE REAMED TO SUIT.
- DENOTES NEW BOLT IN PRE DRILLED HOLE.
- DENOTES EXISTING RIVET TO BE LEFT IN PLACE.
- DENOTES HOLE OVER RETAINED RIVET.

Rev	Date	Description of revision	Design'd	C'kd
A	22.06.12	FIRST ISSUE	MK	AGW
P2	01.07.11	DRAFT FOR PUBLICATION	MK	AGW
P1	24.01.11	DRAFT ISSUE	MK	AGW

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	Name	Position	Signature	Date
Approved	Paul Clark	Head of Engineering Infrastructure Projects Central Region	P.C.	June 12

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

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METALLIC STRUCTURE REPAIRS STANDARD DRAWINGS

BOTTOM FLANGE STRENGTHENING DETAILS

3 OF 4

Scale	AS SHOWN	
Drawing Number	NR/CIV/SD/818	A

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