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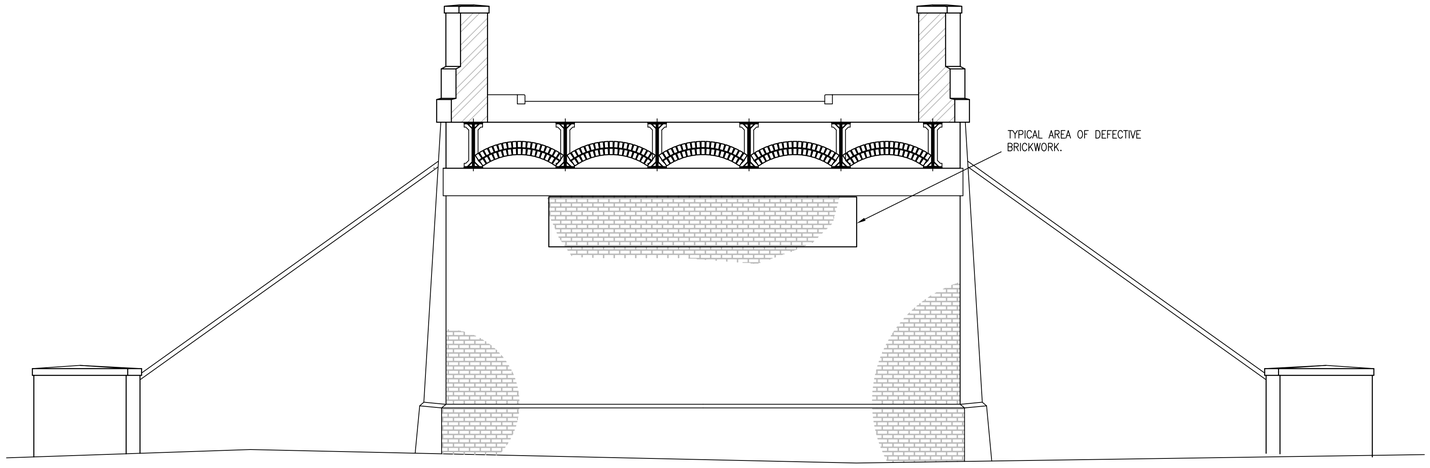
DO NOT SCALE THIS DRAWING

DRAWING No. NR/CIV/SD/114



ELEVATION

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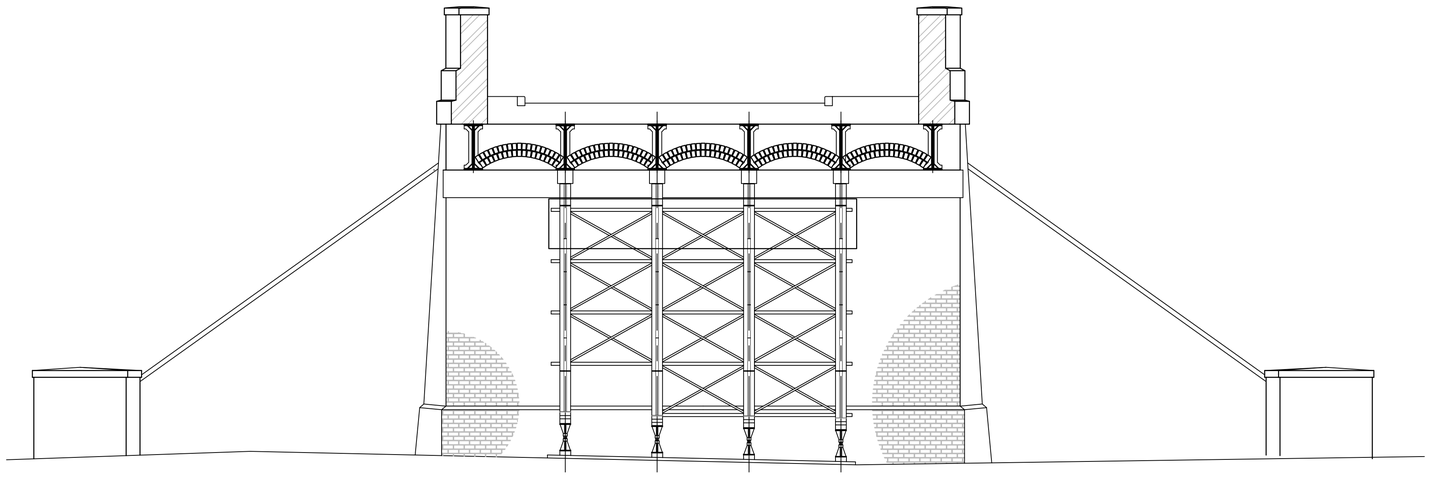

ELEVATION EXAMPLE OF TEMPORARY WORKS FOR LIVE LOAD REPAIRS

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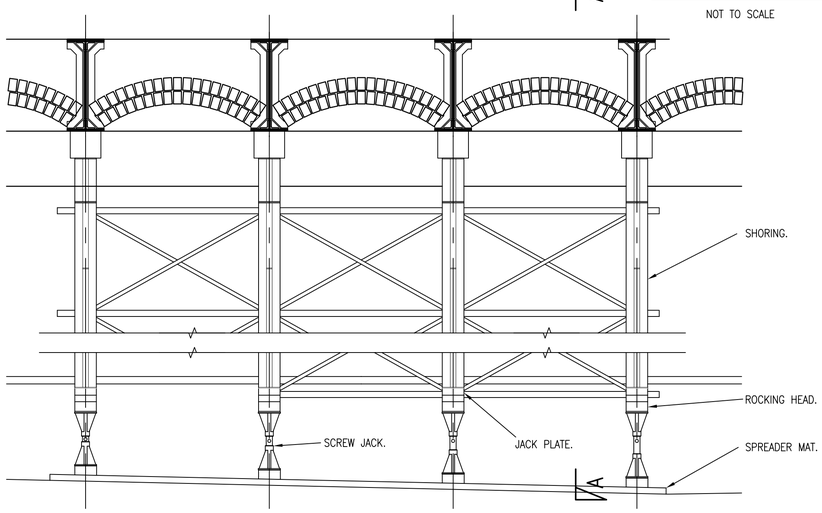

EXAMPLE OF TEMPORARY WORKS FOR ABUTMENT/PIER REPAIRS

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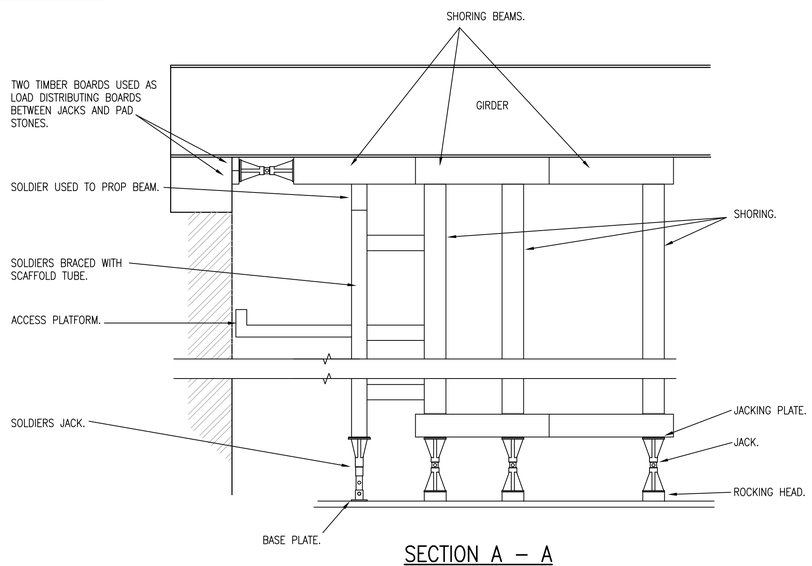

SECTION A – A

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NOTES

GENERAL

CONTINUOUS HORIZONTAL REPLACEMENT OF DEFECTIVE BRICKWORK IN THE UPPER HALF OF THE ABUTMENT/PIER WHERE THE VERTICAL MEMBER IS SUBJECT TO LIVE LOADING MAY ONLY GENERALLY BE UNDERTAKEN PROVIDED ADEQUATE TEMPORARY WORKS INCORPORATING A SHORING SUPPORT SYSTEM OF JACKS AND PROPS ARE IN PLACE. SEE DESIGN ASSUMPTIONS. WHERE THE REPAIR IS SMALL AND JUDGED TO BE IN AN AREA NOT SUBJECTED TO LIVE LOADING THEN PROVIDED IT IS SANCTIONED BY THE EMPLOYERS REPRESENTATIVE IT MAY BE ACCEPTABLE NOT TO EMPLOY TEMPORARY WORKS.

DESIGN ASSUMPTIONS

1. CONSTRAINTS GOVERNING THE TYPE OF REPAIR ARE DETERMINED BY:
LOADING FACTORS OF THE SUPPORTING VERTICAL MEMBER EITHER VERTICAL OR HORIZONTAL.
SIZE OF REPAIR: THE SMALLER THE REPAIR THE LESS RISK OF STRUCTURAL WEAKNESS DURING REPAIR.
MATERIALS USED: BRICKS, MASONRY OR CONCRETE.
TIME (POSSESSIONS)
RESTRICTED ACCESS
THE LEVEL OF SKILL AVAILABLE (CRAFTSMEN) TO ACHIEVE A MATCHING FAIR FACE IF UNSIGHTLY PATCHWORK REPAIR IS TO BE AVOIDED.

2. PRIOR TO THE INSTALLATION OF TEMPORARY WORKS, A DESIGN FOR WHICH, TOGETHER WITH FORM C MUST BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NETWORK RAIL SPECIFICATION NR/SP/CIV/003 TECHNICAL APPROVAL OF DESIGN, CONSTRUCTION AND MAINTENANCE OF CIVIL ENGINEERING INFRASTRUCTURE AND MUST TAKE INTO ACCOUNT STRUCTURE CLEARANCES AND GAUGING. REFER BACK TO DRAWING NR/CIV/SD/112 FOR DETAILS.

3. TEMPORARY WORKS IN THE FORM INDICATED ARE SUITABLE FOR CARRYING OUT REPAIR UNDER FULLY OPERATIONAL RAILWAY OR ROAD.

4. THE DESIGNER SHOULD CONSIDER CAREFULLY THE EFFECT OF APPLYING JACKING LOADS TO AREAS OF THE PERMANENT WORKS SUCH AS GIRDERS NOT SPECIFICALLY DESIGNED FOR SUCH LOADS. IF CONSIDERED NECESSARY SUCH AREAS SHOULD BE TEMPORARILY RESTRAINED/STIFFENED BY APPROPRIATE MEANS. IN THE CASE OF HALF THROUGH GIRDERS, IT MAY BE FOUND THAT TIMBERS INSERTED AND WEDGED BETWEEN FLANGES ON BOTH SIDES OF THE WEB MAY WELL BE ADEQUATE IN LIEU OF FORMAL STEEL BOLTED STIFFENERS. HOWEVER IN THE CASE OF UNDERSLUNG GIRDERS WITH JACK ARCHES, THE INSERTION OF STIFFENERS MAY NOT BE POSSIBLE. THEREFORE IT MAY BE MORE APPROPRIATE TO SPREAD THE JACKING LOAD OVER A LONGER LENGTH OF GIRDER.

INSTALLATION GUIDANCE

REFER TO DRAWING NR/CIV/SD/101.

SPECIFICATION

REFER TO DRAWING NR/CIV/SD/101.

RISK ASSESSMENT

REFER TO DRAWING NR/CIV/SD/101.

Rev	Date	Description of revision	Design'd	C'kd
A	22.06.06	FIRST ISSUE –NR APPROVED	RMA	NGAY
P3	17.03.06	REVISED FORM B.	RMA	NGAY
P2	31.01.06	FORM B ISSUE.	RMA	NGAY
P1	13.01.06	PRELIMINARY DRAFT	RMA	NGAY

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CIVIL ENGINEERING STANDARD DESIGN

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BRICK AND MASONRY REPAIR STANDARD DRAWINGS

TEMPORARY WORKS ARRANGEMENTS USING SHORING FOR LIVE LOAD CONDITIONS

Scale	AS SHOWN	
Drawing Number	NR/CIV/SD/114	REV. A

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