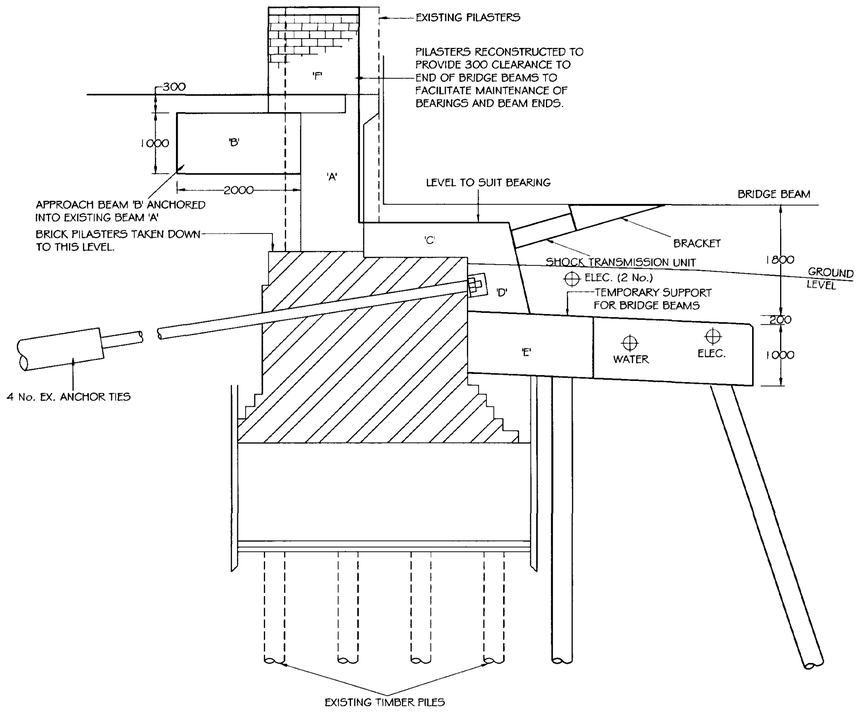


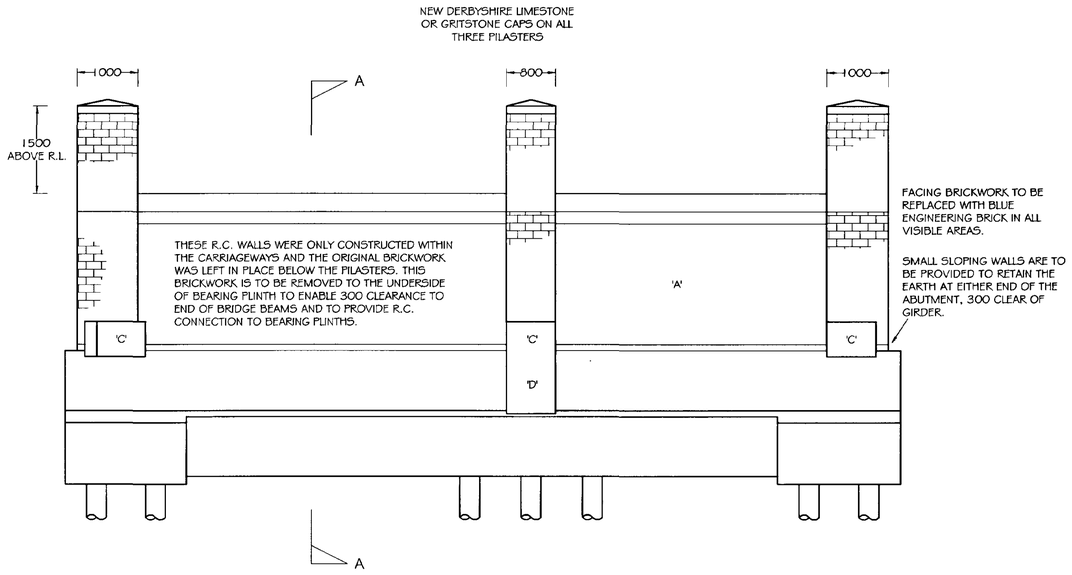
SECTION AT A - A

NOTES

1. PILING, REINFORCED CONCRETE, BEARINGS AND SHOCK TRANSMISSION UNITS TO BE DESIGNED BY CONTRACTOR - SEE BELOW FOR DESIGN ASSUMPTIONS.
2. SOILS INFORMATION IN 'SUTTON BRIDGE, GEOTECHNICAL REVIEW, INTERPRETIVE REPORT', WHICH IS INCLUDED IN THE A.I.P. REPORT.
3. ELECTRICITY AND WATER SERVICES WILL BE DIVERTED BY L.C.C. BEFORE START OF WORKS.
4. ALL CONCRETE EXCEPT PILES TO BE CLASS 50/20 INCORPORATING POLYPROPOLENE FIBRES MIN. CEMENT CONTENT 350kg/m³, MAX. FREE WATER/CEMENT 0.45. MIN. 50 COVER TO REINFORCEMENT.
5. DROP BARRIERS AND THEIR FOUNDATIONS ARE NOT AFFECTED BY THE WORK.
6. SURFACE FINISH FOR ALL EXPOSED CONCRETE IS TO BE F4.

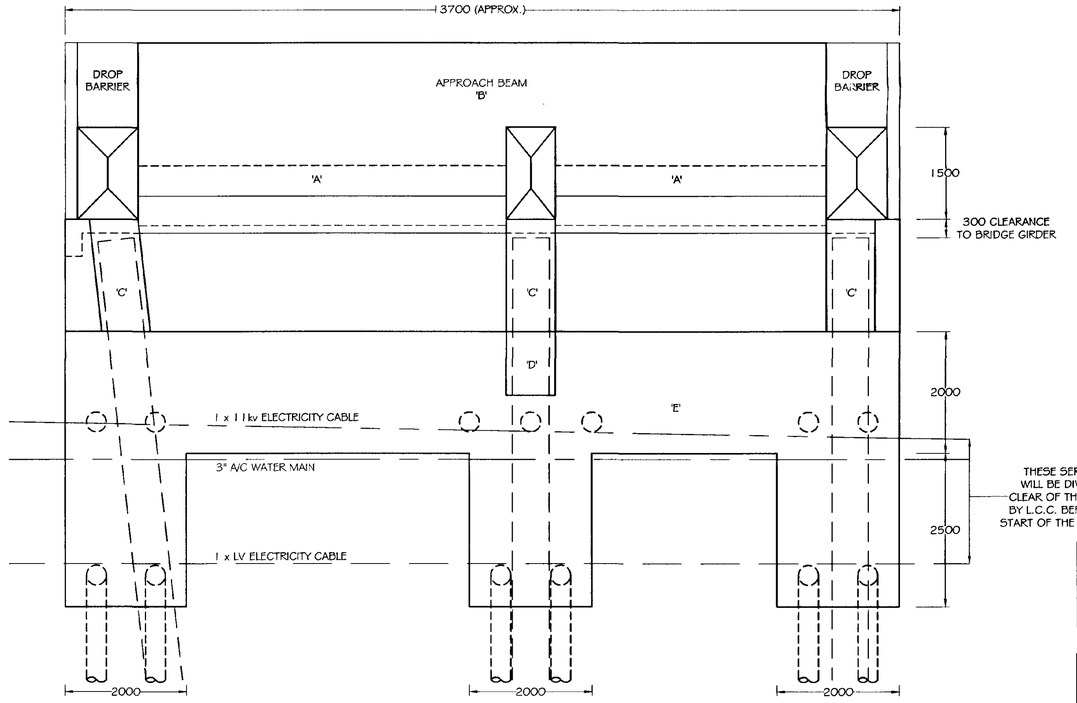
DESIGN ASSUMPTIONS

1. EXISTING CONCRETE BEAM 'A' IS DOWELLED INTO BRICK ABUTMENT.
   THIS IS ASSUMED AS ADEQUATE FOR SHEAR BUT MAY NOT BE SATISFACTORY FOR OVERTURNING.
2. NEW APPROACH SLAB 'B' IS TO BE CONSTRUCTED AS A BEAM, CONTINUOUS FOR THE FULL WIDTH OF THE ABUTMENT.
   IT IS TO BE DESIGNED TO PREVENT BEAM 'A' ROTATING FORWARD WITH A 300kN FORCE AT ROAD LEVEL.
3. BEARING PLINTHS AT 'C' ARE TO BE REINFORCED INTO 'A' AND 'B'. NOTE BEAM 'A' WAS CONSTRUCTED BETWEEN THE PILASTERS, THEREFORE THIS REQUIREMENT CAN BE ACHEIVED BY THE REMOVAL OF THE BRICKWORK BENEATH THE PILASTERS DOWN TO THE BOTTOM OF THE NEW BEARING PLINTH.
4. THE PLINTH EXTENSION 'D' HOLDS THE SHOCK TRANSMISSION UNIT AND MUST BE REINFORCED INTO PLINTH 'C' AND BASE 'E'.
5. THE BASE 'E' TOGETHER WITH THE PILES IS TO BE DESIGNED;
   A) TO CARRY THE TEMPORARY BEARINGS TO SUPPORT THE MAIN BRIDGE BEAM UNDER FULL LIVE LOADING.
   B) TO RESIST A FORCE OF 300kN FROM THE SHOCK TRANSMISSION UNIT ACTING AWAY FROM THE ABUTMENT.
   C) AS THE SHOCK TRANSMISSION UNIT LOADING IS FOR A VERY SHORT TIME PERIOD PILES CAN BE PERMITTED TO ACT IN TENSION.
6. THE PILASTERS 'F' ARE TO HAVE A R.C. CORE WITHIN THE FACING BRICKS WHICH WILL BE REINFORCED THROUGH TO BEAMS 'A' AND 'B'. THESE NEED ONLY BE PROVIDED WITH MINIMUM REINFORCEMENT.
7. THE BEARING SCHEDULE IS GIVEN IN APPENDIX 21/1. THIS IS FOR PERMANENT BEARINGS BUT MAY ALSO BE USED FOR THE TEMPORARY BEARINGS ADJUSTED AS NECESSARY FOR LOCATION.



ELEVATION

(BRIDGE BEAM OMITTED FOR CLARITY)



PLAN

(BRIDGE BEAMS SHOWN DASHED, SURFACING REMOVED)

DETERMINED PLAN

SHDC Planning & Development 5 MAY 2003 Ref 0569/03

L.C.C. 21 MAR 2003 HIGHWAYS & PLANNING DIRECTORATE

Rev:	Date:	Description: AMENDMENT DETAILS	Approved by: (Project Manager)

LINCOLNSHIRE - Part of the East Midlands Region

LINCOLNSHIRE COUNTY COUNCIL
HIGHWAYS & PLANNING DIRECTORATE
P.D. JAMESON, B.Sc.,C.Eng.,F.I.C.E., Head of Technical Services
Witham Park House, Witham Park, Waterside South, Lincoln LN5 7JN

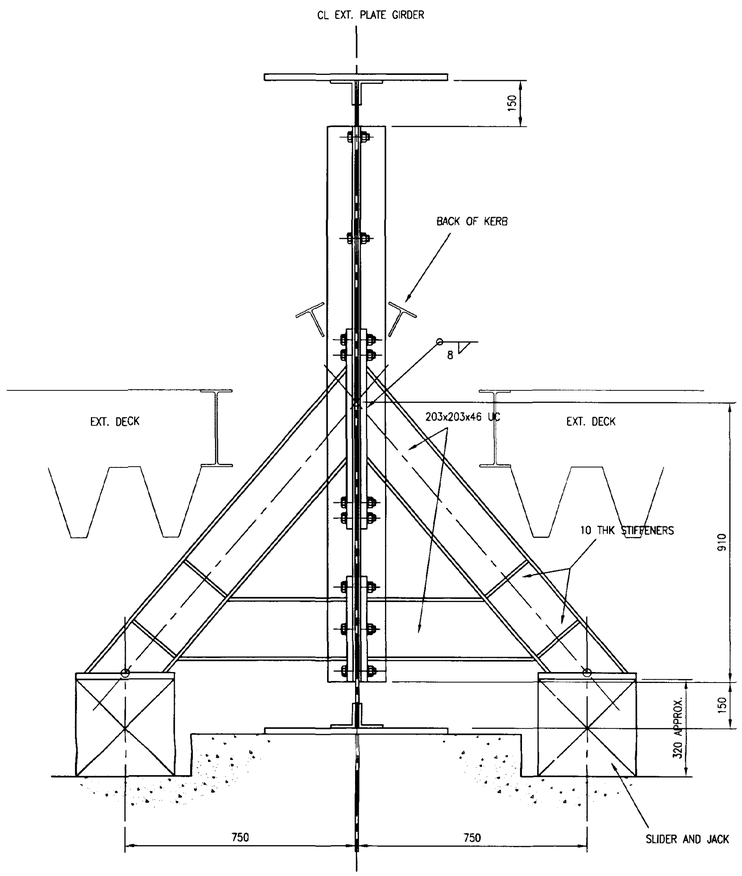
DRG.No. B/ C02888/3001
Structure No.
Rd No. Parish:
Scheme: CROSS KEYS BRIDGE - BEARING MODIFICATIONS
Drg. Description: PROPOSED EAST ABUTMENT ALTERATIONS
CONTRACT SHEET No:
SCALE: 1:50 Approved by (Project Manager): DC DATE: 6/11/02
Draughted By: LM Checked by: DC DATE: 6/11/02

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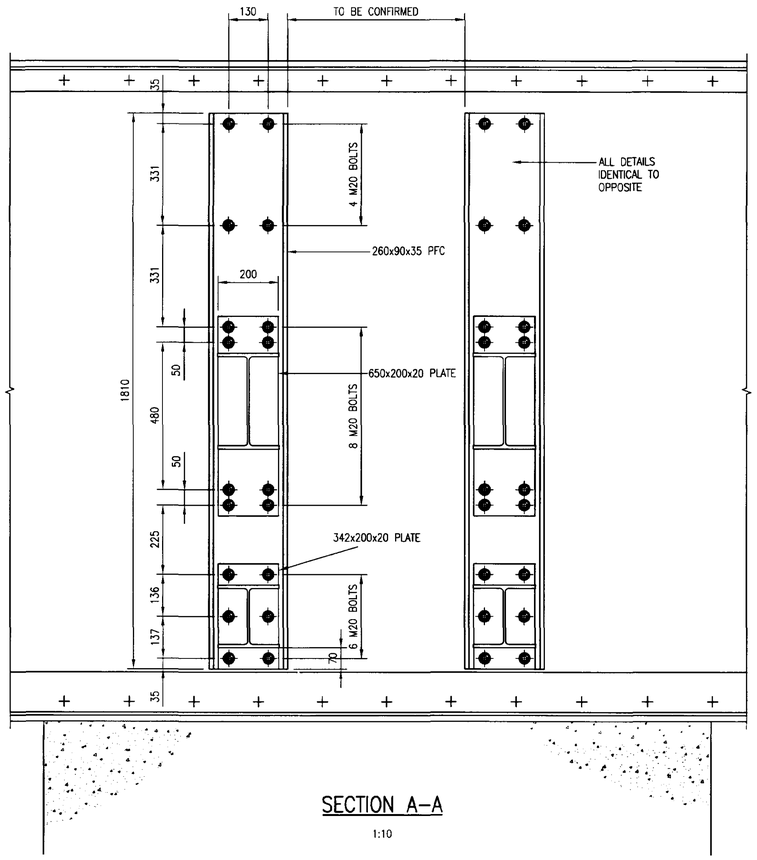
FILE PATH:

X REFS USED:



EAST PIER BRACKETS AT TYPICAL PLATE GIRDER

1:10



SECTION A–A

1:10

DETERMINED PLAN

SHDC
Planning & Development
- 6 MAY 2003
Ref 0569/03

21 MAR 2003

DRAWING No. A102053/116

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NOTES

1. FOR GENERAL NOTES REFER TO DRWG A102053/113.

REV.	BY	CHK'D	APP'D	DATE	DESCRIPTION
A	SMC			06.03.03	FIRST ISSUE

CONSULTING ENGINEERS
TONY GEE and PARTNERS
COBHAM SURREY
ASHFORD KENT
HALESOWEN W. MIDLANDS

ON BEHALF OF

INTERSERVE CIVILS

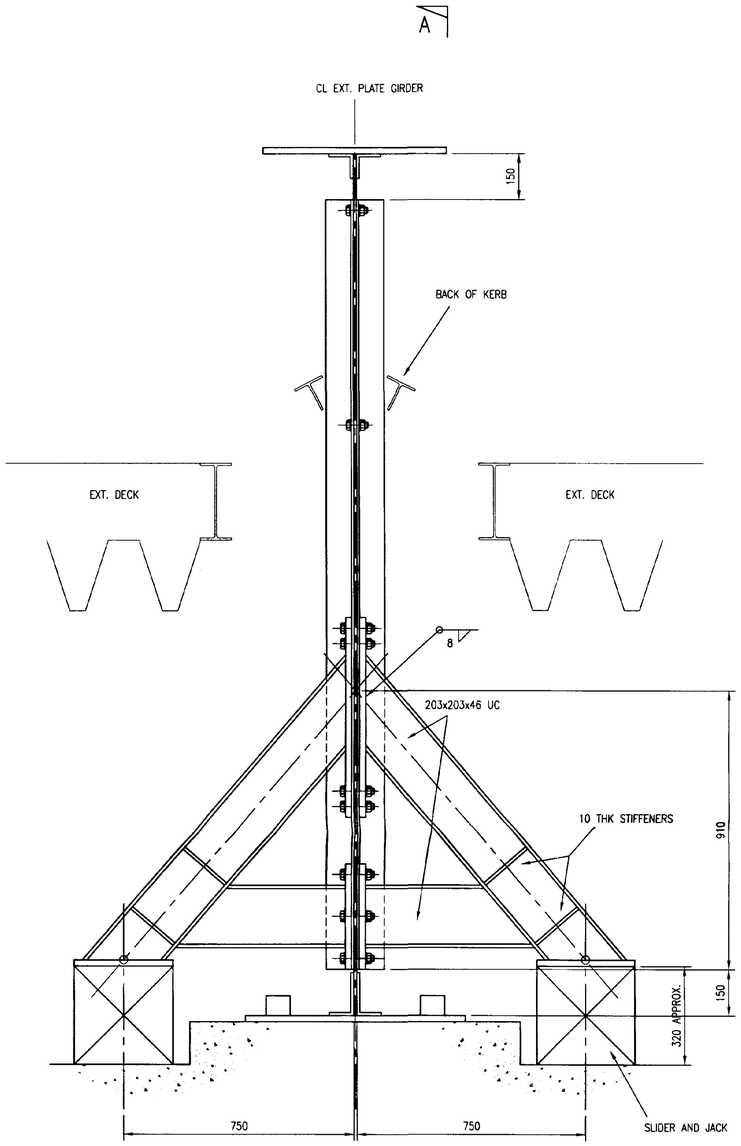
CROSS KEYS SWING BRIDGE BEARING MODIFICATIONS

EAST PIER BRACKETS

DRG. No. A102053/116 REV. A

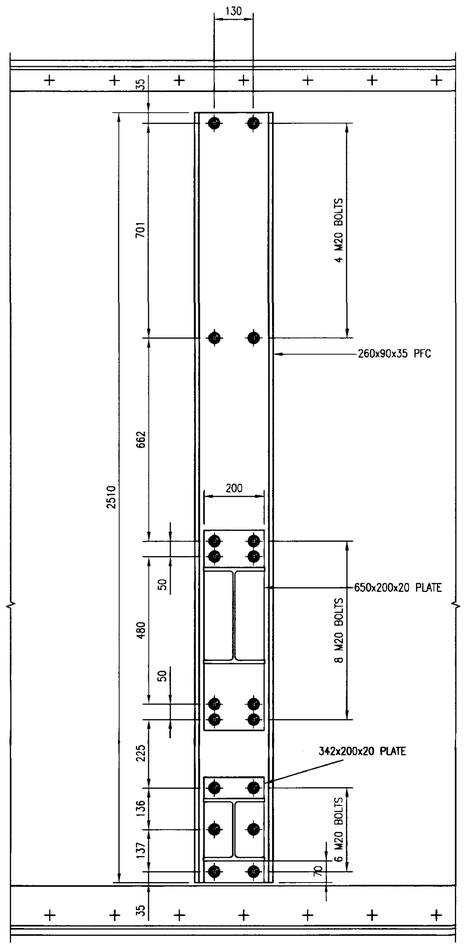
DRAWN : SMC DESIGNED : RJL

SCALE : AS SHOWN



NOSE PIER BRACKETS AT TYPICAL PLATE GIRDER

1:10



SECTION A–A

1:10

DETERMINED PLAN

SHDC Planning & Development 5 MAY 2003 Ref 0569/03

E.C.C. 21 MAR 2003 HIGHWAYS & PLANNING SECTION

DRAWING No. A102053/115

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NOTES

1. FOR GENERAL NOTES REFER TO DRWG A102053/113.

REV.	BY	CHK'D	APP'D	DATE	DESCRIPTION
B	SMC			06.03.03	MODS TO STEELWORK
A	SMC	RJL	JLV	26.02.03	FIRST ISSUE

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TONY GEE and PARTNERS
COBHAM SURREY
ASHFORD KENT
HALESOWEN W. MIDLANDS

ON BEHALF OF

INTERSERVE CIVILS

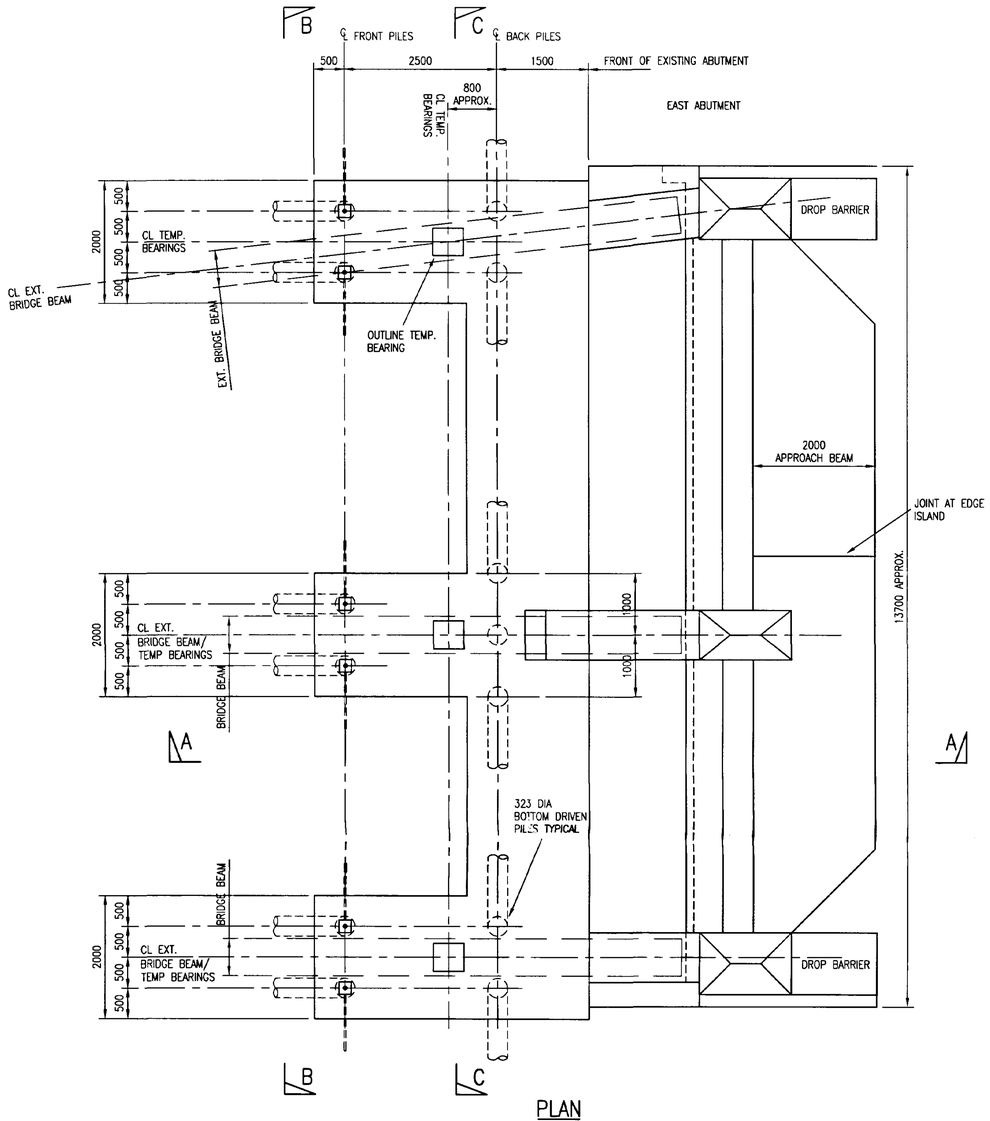
CROSS KEYS SWING BRIDGE BEARING MODIFICATIONS

NOSE PIER BRACKETS

DRG. No. A102053/115 REV. B

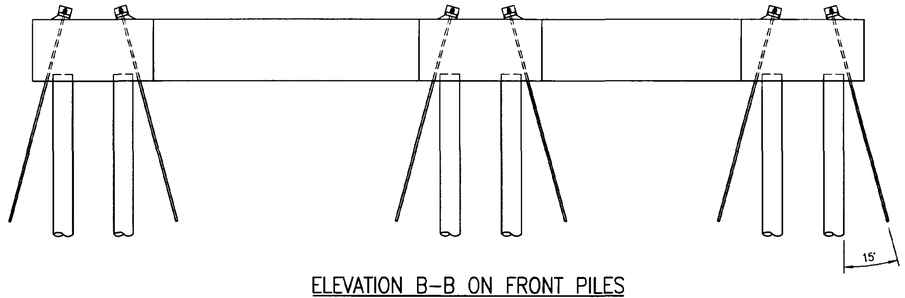
DRAWN : SMC DESIGNED : RJL

SCALE : AS SHOWN



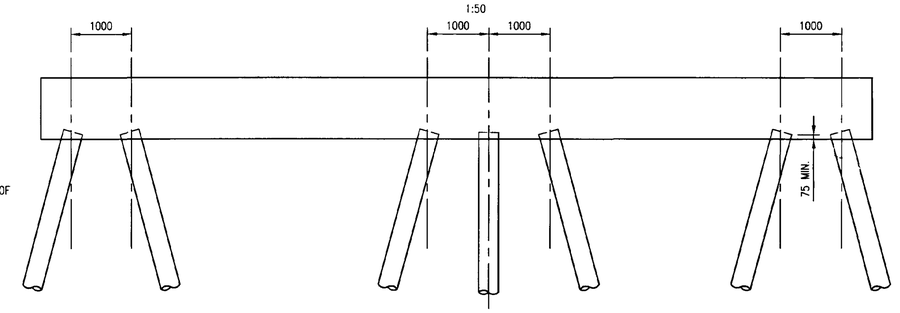
PLAN

1:50



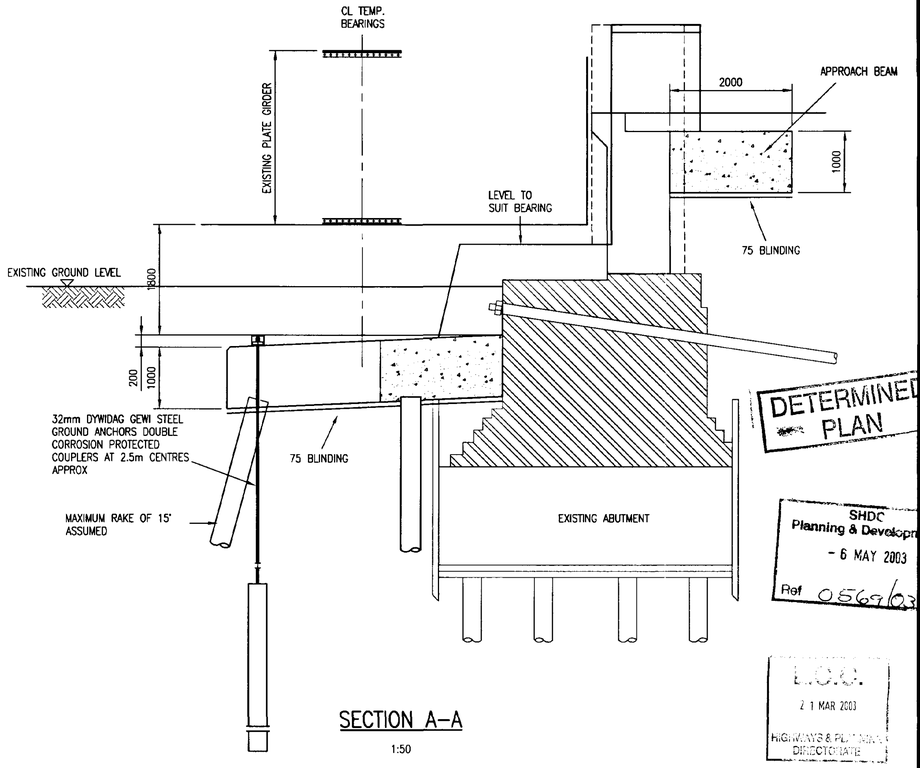
ELEVATION B–B ON FRONT PILES

1:50



ELEVATION C–C ON BACK PILES

1:50



SECTION A–A

1:50

DETERMINED PLAN

SHDC Planning & Development - 6 MAY 2003 Ref 0569/03

H.O.C. 21 MAR 2003 HIGHWAYS & PLANNING DIRECTORATE

DRAWING No. A102053/110

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NOTES:

1. WORKS IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS.
2. GROUND ANCHORS TO HAVE A PRESTRESS OF 30kN.
3. PILES TO HAVE A SWL OF 500kN.
   GROUND ANCHORS TO HAVE SWL OF 200kN.
4. ALL CONCRETE OTHER THAN GROUT INFILL TO PILES TO BE CLASS 50/20 WITH ADDED POLYPROPYLENE FIBRES. SEE CL 17.1.1 OF SPECIFICATION.
5. FINISHES TO CONCRETE:
   F1/U1 PERMANENTLY COVERED BELOW FINISHED GROUND LEVEL
   F2/U2 TO EXPOSED FACE OF CURTAIN WALL.
6. DETAILED MANUFACTURERS DRAWINGS SHALL BE PROVIDED FOR GROUND ANCHORS.

REV.	BY	CHK'D	APP'D	DATE	DESCRIPTION
B	SMC			06.03.03	NOTE 6 ADDED.
A	SMC	RJL	JLV	21.02.03	FIRST ISSUE

CONSULTING ENGINEERS

TONY GEE and PARTNERS

COBHAM SURREY
ASHFORD KENT
HALESOWEN W. MIDLANDS

ON BEHALF OF

INTERSERVE CIVILS

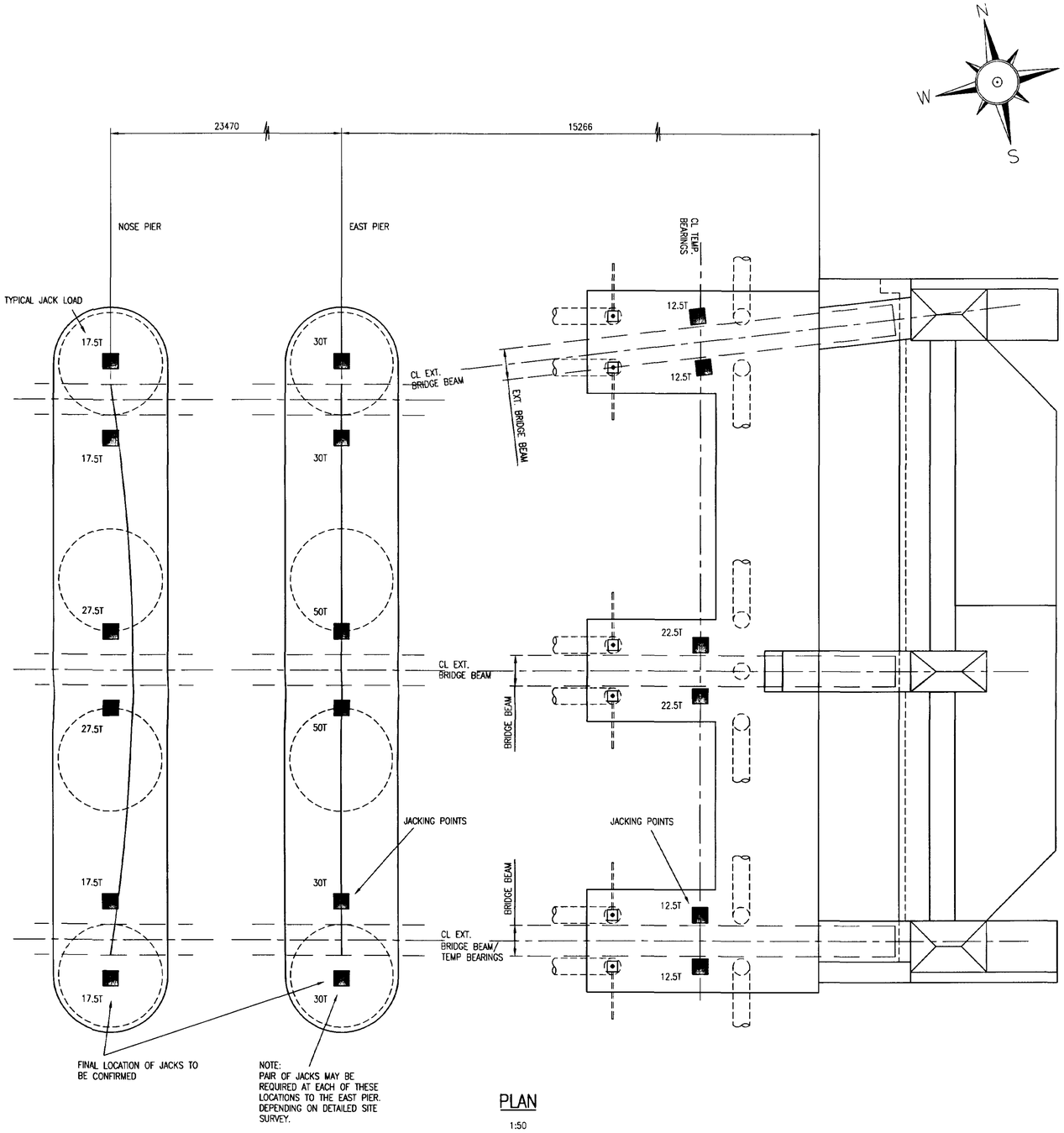
CROSS KEYS SWING BRIDGE BEARING MODIFICATIONS

ABUTMENT AND PILE ELEVATIONS

DRG. No. A102053/110 REV. B

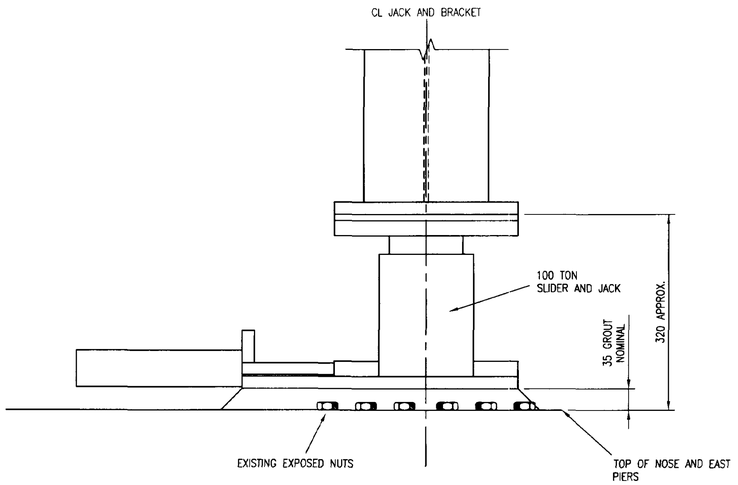
DRAWN : SMC DESIGNED : RJL

SCALE : AS SHOWN



PLAN

1:50



ELEVATION ON TYPICAL SLIDER AND JACK

1:5

DETERMINED PLAN

SHDC
Planning & Development
- 6 MAY 2003
Ref 0569/03

1 MAR 2003

DRAWING No. A102053/109

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NOTES:

1. FOR JACKING SEQUENCE REFER TO CONTRACTORS METHOD STATEMENT.
2. THE LOADS GIVEN ON THE DRAWING ARE THE ASSUMED BRIDGE DEAD LOAD REACTIONS.
3. THE DETAILS ON THE SERIES OF DRAWINGS INCLUDING TGP A102053/109 TO 116 ARE TO BE READ IN CONJUNCTION WITH CONTRACT DOCUMENTS ISSUED BY LINCOLNSHIRE COUNTY COUNCIL IN CONNECTION WITH THE CROSS KEYS BRIDGE REFURBISHMENT, INCLUDING DRAWINGS GENERAL ARRANGEMENT B / C02888 / 3000 AND ALTERATIONS 3001. TGP DRAWINGS SHOW THE CONTRACTOR DESIGNED REINFORCED CONCRETE ELEMENTS AND TEMPORARY EQUIPMENT FOR TRANSFER OF JACKING AND RESTRAINT FORCES TO THE EXISTING STRUCTURE.
4. A DETAILED CONTRACTORS METHOD STATEMENT IS REQUIRED TO ENSURE THAT THE WORKS ARE CONSTRUCTED IN ACCORDANCE WITH THE LINCS CC WORKS INFORMATION AND IN THE MANNER ASSUMED IN THE PREPARATION OF THESE DETAILS.
5. ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS AND ASSOCIATED DESIGN AND OTHER STANDARDS.
6. WHERE NOT SHOWN DIMENSIONS SHALL RELATE TO AND FIT WITH EXISTING CONSTRUCTION.

REV.	BY	CHK'D	APP'D	DATE	DESCRIPTION
A	SMC			06.03.03	FIRST ISSUE

CONSULTING ENGINEERS
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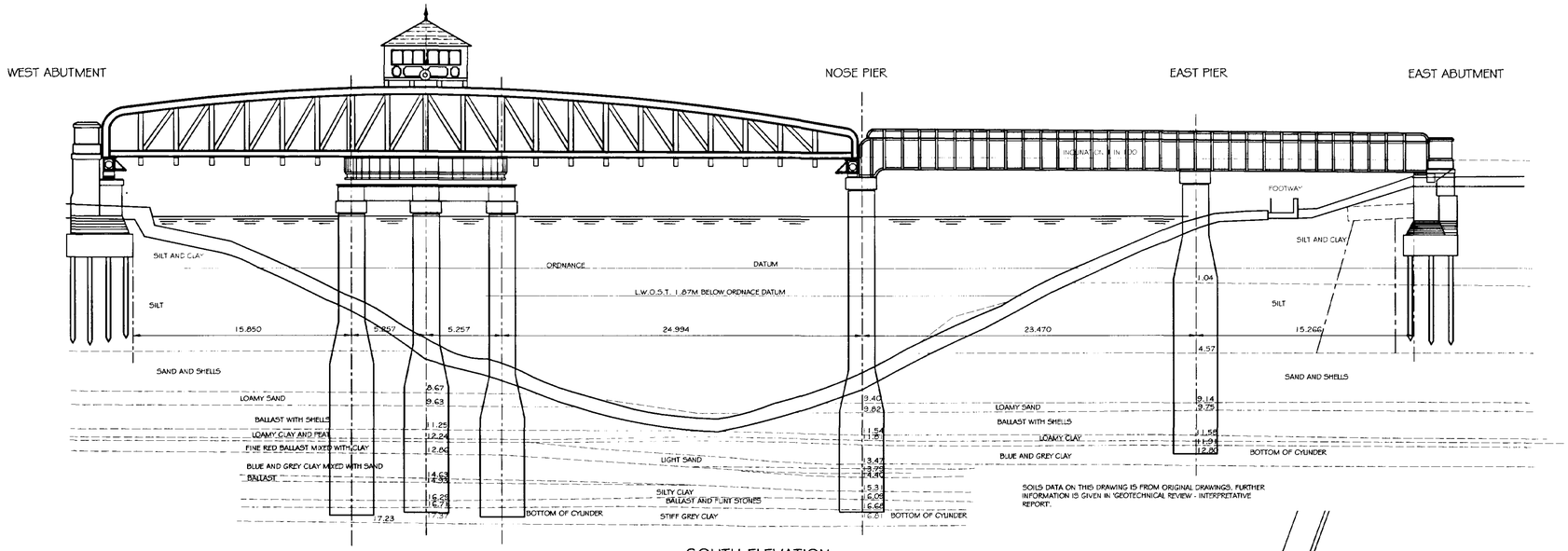
CROSS KEYS SWING BRIDGE BEARING MODIFICATIONS

GENERAL ARRANGEMENT SHOWING JACKING POINTS

DRG. No. A102053/109 REV. A

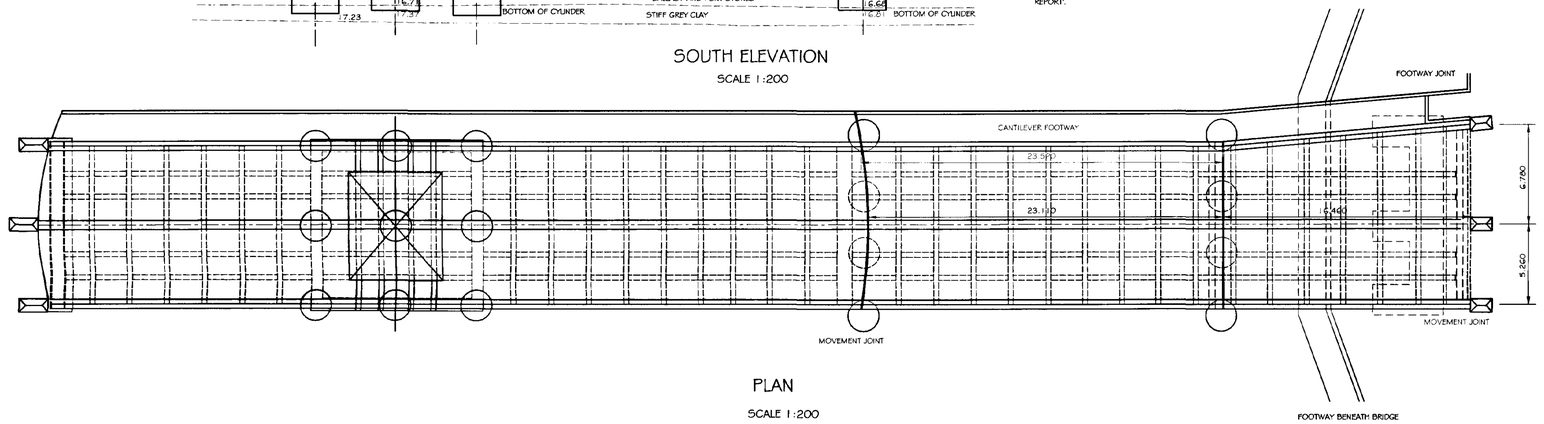
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SCALE : AS SHOWN



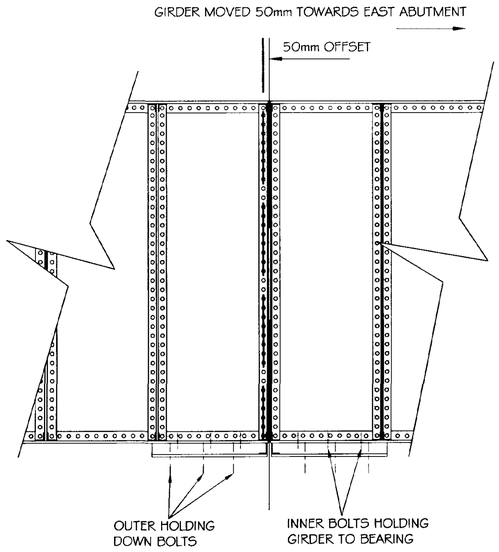
SOUTH ELEVATION

SCALE 1:200



PLAN

SCALE 1:200



THESE BEARINGS WERE DESIGNED TO SLIDE AND THE GIRDER FLANGES AND BEARING PLATES HAVE SLOTTED HOLES.

PROPOSED POSITION OF GIRDER AT EAST PIER

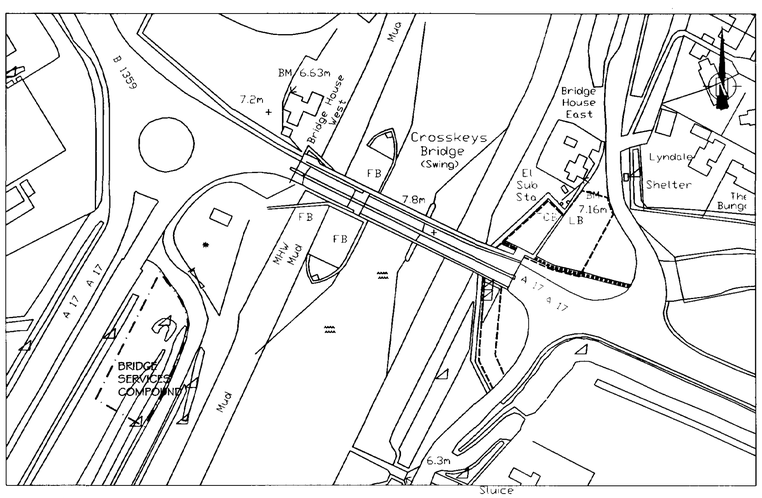
SCALE 1:25

NOTES

1. DETAILS OF THE METHOD TO ACHIEVE THE 50mm MOVEMENT ARE GIVEN IN WORKS INFORMATION FOR ACTIVITY 4 - 'GENERAL DESCRIPTION'.
2. PHOTOGRAPHS LISTED IN THE WORKS INFORMATION FOR ACTIVITY 4 SHOW THE BEARING BOLTS, NOSE PIER STOOLS, ETC. WITH EXPLANATORY NOTES.
3. JACKING INFORMATION:-
   DEAD LOAD REACTION ON BEARINGS (APPROACH SPANS)

POSITION	GIRDER	FORCE (kN)
NOSE PIER	EDGE	350
NOSE PIER	CENTRE	550
EAST PIER	EDGE LONG SPAN	350
EAST PIER	CENTRE LONG SPAN	550
EAST PIER	EDGE SHORT SPAN	250
EAST PIER	CENTRE SHORT SPAN	450

THESE FORCES DO NOT INCLUDE EFFORT NEEDED TO BREAK BOND IN THE BEARINGS WHICH ARE WELL RUSTED.



LOCATION PLAN

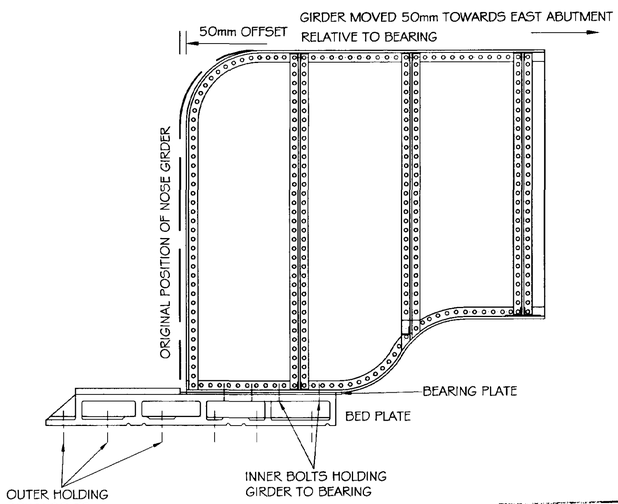
NOTE

FENCED BRIDGE SERVICES COMPOUND MAY BE USED FOR LIMITED STORAGE SUBJECT TO AGREEMENT WITH L.C.C.

AREA AVAILABLE FOR STORAGE AND/OR ACCESS DURING WORKS

AREA AVAILABLE FOR STORAGE

FOOTWAY COULD BE CLOSED FOR DURATION OF WORKS



PROPOSED POSITION OF GIRDER AT NOSE PIER

SCALE 1:25

L.C.C. 21 MAR 2003 DEVELOPMENT PLANNING

DETERMINED PLAN SHDC Planning & Development 6 MAY 2003 Ref 0569/03

Rev:	Date:	Description.	Approved by (Project Manager)
A1	19/3/03	EAST ABUTMENT BASE ADDED.	DC

AMENDMENT DETAILS

LINCOLNSHIRE - Part of the East Midlands Region

LINCOLNSHIRE COUNTY COUNCIL
HIGHWAYS & PLANNING DIRECTORATE
P.D. JAMESON, B.Sc.,C.Eng.,F.I.C.E., Head of Technical Services
Witham Park House, Witham Park, Waterside South, Lincoln LN5 7JN

DRG.No. B/ C02888/3000/A1
Structure No. A17/13.20
Rd No: A17 Parish: SUTTON
Scheme: CROSS KEYS BRIDGE
Drg. Description: AIP GENERAL ARRANGEMENT

CONTRACT SHEET No:

SCALE: 1:200 1:25 Approved by (Project Manager): DC DATE: 6/11/02

Draughted By: PJS/LM Checked by: DC DATE: 6/11/02

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