

**Form A: Approval in Principle in Accordance with NR/SP/CIV/003
(Formerly RT/CE/S/003) Issue 9 February 2011 and Letter of Instruction
NR/BS/LI/189**

Project Title: Standard Design Detail – Plate Girder Footbridge –
Non-Mainline Station
Form A for: *Not Applicable*
Location. **ELR:** *Not Applicable*
Mileage: *Not Applicable*

TGP Document No: NR/CIV/SD/FORMA/700 **Revision:** B

Issue History Register.

B	17/03/14	RBL	SWF	Second Issue.
P2	22/10/13	SzT	SWF	For Approval.
P1	09/02/11	SzT	SWF	For Approval.
Rev	Date	By	Approval	Description of Modification

700 series
Form A.

DRNW 2 issued 20/6/14.
DPE signed 20/6/14.
CE/AE TBC.

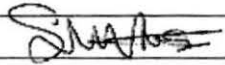
**NETWORK RAIL MP&I
FORM A: APPROVAL IN PRINCIPLE**

(Page 11 of 14)

Title of Scheme: Standard Design Detail – Plate Girder Footbridge – Non-Mainline Station			
Location: <i>Not Applicable.</i>			
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TGP Document No. NR/CIV/SD/FORMA/700			Revision B

Part 2: Designer Submission

I confirm that the criteria specified in Network Rail Company Specification NR/SP/CIV/003 (formerly RT/CE/S/003) have been considered, and the Design is submitted for Approval in Principle on behalf of Tony Gee and Partners.

Signed 	Title Regional Director (Rail)
Name (Print) SWM Fraser	Date 17 th March 2014
To be signed by the Designer responsible for the Design to AIP stage or other person authorised to sign on behalf of the organisation responsible for the Design	

Part 3: Construction organisation acknowledgement of submission by a Sub-contract Designer

The organisation named in Part 2 is engaged as a sub-contractor to the organisation stated below. I formally acknowledge the submission of this certificate to Network Rail in support of our contract * / sub-contract* obligation for provision of the AIP stage Design on behalf of:

(name and address of organisation responsible for Construction Works).

Signed	Title
Name (Print)	Date
To be signed by the Contractor's Responsible Engineer or other person authorised to sign on behalf of the organisation responsible for the Construction Works	

NR/CIV/SD/FORMA/700

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TGP Document No. NR/CIV/SD/FORMA/700			Revision B

Part 4: Designated Project Engineer Endorsement

I have considered the submission for the above Scheme and confirm that the information specified in Network Rail Company Specification NR/SP/CIV/003 (formerly RT/CE/S/003) is included in the submission. My comments on the submission are as shown below.

- REFER TO DRN v2 20/6/14.
- CLOSOUT ALL COMMENTS DURING DETAILED DESIGN.

Signed 	Title <i>DPE/SPE</i>
Name (Print) <i>SWILLANS</i>	Date <i>20/6/2014</i>
To be signed by the Designated Project Engineer	

NETWORK RAIL MP&I
FORM A: APPROVAL IN PRINCIPLE

(Page 13 of 14)

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Part 5: Civil Engineer Comments

I have considered the submission for Approval in Principle of the above Scheme in order to be satisfied that the Designer has adequately addressed the applicable criteria specified in Network Rail Company Specification NR/SP/CIV/003 (formerly RT/CE/S/003), and confirm that:

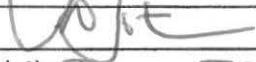
The Design of the permanent works shall be checked as category II .

The Design of the Temporary Works shall be checked as category II .

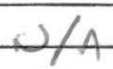
The Scheme does*/does not* require endorsement by Network Rail's Professional Head of Structures Engineering in accordance with Network Rail Company Specification NR/SP/CIV/003 (formerly RT/CE/S/003).

My comments on the submission are as shown below. Provided these comments are adequately addressed, I hereby give Approval in Principle to the Scheme.

Include reference to LO I/331 on drawing NR/CIV/SD/701 as well as within the risk assessment summary table eg. hazard: electric shock; mitigation: parapet arrangement in electrified (or routes planned to be electrified) shall comply with EN50122-1. Letter of Instruction NR/LI/CIV/331 and associated FAQ provide instruction/guidance on options on how to comply. TUM to also include short section to highlight EN50122-1 electrical

Signed 	Title Programme Engineering Manager
Name (Print) Jason Johnston	Date 04 th August 2014
To be signed by the Civil Engineer	

safety
provision
requirements
for
parapets.

Signed 	Title N/A
Name (Print)	Date
To be signed by other responsible non-technical person (if applicable)	

NR/CIV/SD/FORMA/700

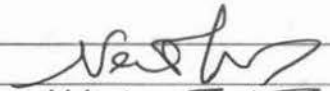
NETWORK RAIL MP&I
FORM A: APPROVAL IN PRINCIPLE

(Page 14 of 14)

Title of Scheme: Standard Design Detail – Plate Girder Footbridge – Non-Mainline Station			
Location: Site Specific Details to be Provided			
ELR TBC	Mileage TBC	OS grid ref. TBC	Structure No. TBC
TGP Document No. NR/CIV/SD/FORMA/700			Revision P2

Part 6: Asset Engineer Endorsement (Schemes and Maintenance Work for existing infrastructure only)

I have considered the submission for the above Scheme and confirm that the information specified in Network Rail Company Specification NR/SP/CIV/003 (formerly RT/CE/S/003) is included in the submission. My comments on the submission are as shown below.

Signed		Title	LNW - ROUTE ASSET MANAGER (STRUCTURES)
Name (Print)	NEIL JONES	Date	14 th JANUARY 2015
To be signed by the Asset Engineer			

Part 7: Endorsement by Network Rail's Professional Head of Track/Structures* Engineering (* Delete as applicable)

I have considered the submission for Approval in Principle of the above Scheme as required by Network Rail Company Specification NR/SP/CIV/003 (formerly RT/CE/S/003) in order to be satisfied that the applicable criteria specified in Network Rail Company Specification NR/SP/CIV/003 (formerly RT/CE/S/003) have been adequately addressed by the Designer, and my comments on the submission are as shown below.

Provided these comments are adequately addressed I hereby endorse the Approval in Principle submission that has been signed by the Civil Engineer in Part 5 of this Form A.

Signed	Title
Name (Print)	Date
To be signed on behalf of Network Rail's Professional Head of Track/Structures* Engineering (* Delete as applicable)	

NR/CIV/SD/FORMA/700

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1 Network Rail Sponsor

Professional Head (Buildings and Civils).

2 External organisation (s) for whose benefit the scheme is required

Not Applicable.

3 Proposed date for completion of construction

Not Applicable.

4 Organisation responsible for design to AIP stage

Network Rail

5 Existing conditions

5.1 Brief general description

Not Applicable.

5.2 Structures or Permanent way affected, e.g. bridge underline/ overline/foot/ intersection bridge No./ mileage

Not Applicable.

5.3 Existing headroom/ lateral clearance/platform width.

Not Applicable.

5.4 Local road name/ road No./ river name/station or building name.

Not Applicable.

5.5 Public or private right of way affected

Not Applicable.

5.6 Number and layout of tracks/ whether electrified/ OHLE wire height/station layout.

Not Applicable.

5.7 Adjacent earthworks and terrain.

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Not Applicable.

5.8 Details of defects to be remedied.

Not Applicable.

5.9 Details of design criteria for existing structure (if known).

Not Applicable.

5.10 Known hazards at the site (including overhead/ surface/ underground services)

Not Applicable.

6 Proposed works

6.1 Brief general description giving details of the proposed works.

This Form A addresses the design of additional elements required for the adoption of the standard footbridge described by Form A NR/CIV/SD/FORMA/400 at non mainline stations. These include:

- *Main span Lighting*
- *Ramp Lighting*
- *Stairs Lighting*
- *Positive drainage to ground level*

It shall be noted that the following are not included in this scheme:

- *The design of any structure required to shield the bridge supports from train impact.*
- *M&E design. This shall be addressed on a site specific basis.*

The standard drawings contain structural and furniture details associated with the above items.

Options are available to suit OHLE and non-OHLE lines.

6.2 Number and layout of tracks

Not Applicable.

6.3 Details of assumptions made in developing the proposals regarding any existing structures, earthworks or permanent way.

Not Applicable.

6.4 Foundation and substructure

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TGP Document No. NR/CIV/SD/FORMA/700			Revision B

Not Applicable.

6.5 Superstructure including building layout if applicable.

Not Applicable.

6.6 Span/ bearing/ articulation arrangement for bridges.

Not Applicable.

6.7 Headroom/Lateral clearances.

Additional elements are not to reduce the clearances specified in section 6.7 of NR/CIV/SD/FORMA/400.

6.8 Effect on sighting distances

Not Applicable.

6.9 Unusual features of design

Not Applicable.

6.10 Materials to be used.

Steelwork:

- *hollow sections to be hot finished, grade S355 J2H to BS EN 10210:2006.*
- *plate steel and all other sections to be hot rolled, S275 J2G3 to BS EN 10025:2004.*

Surface Protection: system N1 with minimum 25 year service life in accordance with Network Rail Standard NR/GN/CIV/002.

Drainage pipes to be galvanised steel tubular sections.

6.11 Special finishes/ architectural involvement

Pipe section finish (colour) to suit requirements for consents / appearance.

Colour Scheme to be detailed on project specific Form A.

Main Span Lighting Selection – 1200mm LED light modules to be used with anti-climb covering or similar approved with 250mm spacing along span.

Stairs/Ramp Lighting Selection – LED handrail to be used or similar approved,

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positioned to provide design lux levels to suit handrail length and gradient.

6.12 Special access/ inspection/ maintenance arrangements

No special access requirements. Time to first maintenance of corrosion protection to be minimum 20 years.

Maintenance of the lighting and its attendant junction boxes and cable duct can be carried out from bridge deck.

Maintenance of the drainage system will require working at height over the station platform, including at the platform edge.

6.13 Significant interface with Network Rail non-civil engineering disciplines or equipment

Not Applicable. Interface with Network Rail non-civil engineering disciplines or equipment must be determined for each project and detailed in the project specific Form A/ Form B.

These will generally include interfacing with the following:

- Electrical engineering disciplines for connection of footbridge lighting to the mains.*
- Connection of footbridge positive drainage into the station or outside party drainage system.*

6.14 Significant interface with external organisations

Not Applicable. Interface with Network Rail non-civil engineering disciplines or equipment must be determined for each project and detailed in the project specific Form A/ Form B.

These will generally include interfacing with the following:

- Electrical engineering disciplines for connection of footbridge lighting to the mains.*
- Connection of footbridge positive drainage into the station or outside party drainage system.*

6.15 Method of construction/ erection envisaged, and any temporary works known to be required.

Installation of lighting and positive drainage features is recommended to commence after erection of the main structure is complete.

No temporary works unless required due to specific site constraints.

6.16 Disruption to rail/ road/ pedestrian/ station/ river traffic caused by construction

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Not Applicable.

6.17 Environmental constraints

Generic environmental constraints are detailed in the Safety, Health and Environment Risk assessment on drawing NR/ CIV/ SD/ 400. Project specific constraints should be included in the Form A submission.

A project specific Environmental Assessment shall be provided by the Scheme Designer.

6.18 Other relevant information

No drilling or fixing into sealed box sections.

Light fixing plates on main span are to be welded to the deck web as specified in drawing NR/CIV/SD/750. No light fixings are to penetrate the deck web.

6.19 Accompanying drawings and/ or other supporting information

Appendix A – Schedule of Design Documents.

7 Alternative solutions to the remit considered

Not Applicable.

8 Design criteria (underline bridge)

Not Applicable.

9 Design criteria (overline bridge)

Not Applicable.

10 Design Criteria (Footbridge)

Lighting criteria are those used for station platform in GI/RT/7010.

- Horizontal illuminance. Minimum permitted illuminance of 10 lux with a minimum horizontal uniformity of 0.4 and a minimum diversity of 0.1.*
- Vertical illuminance. Minimum permitted illuminance of 2 lux and a minimum diversity of 0.5.*

All drainage shall be designed to have a fall of no less than 1 in 100.

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11 **Design criteria (Equipment Support Structure)**

Not Applicable.

12 **Design criteria (Soil Retaining Structure)**

Not Applicable.

13 **Design criteria (Station Platform)**

Not Applicable.

14 **Design criteria (Station Canopy or Building)**

Not Applicable.

15 **Design criteria (Earthwork)**

Not Applicable.

16 **Design criteria (other structures)**

Not Applicable..

17 **Design criteria (permanent way)**

Not Applicable.

18 **Design life**

Design life of drainage and lighting equipment is 30 years.

For time to first maintenance/ design life of finishes refer to section 6.12..

19 **Organisations proposed to be responsible for detailed design**

Network Rail

20 **Design Standards (See Appendix A)**

20.1 **Railway Group Standards/ Network Rail Line Standards**

See Appendix A .