

Structures Inventory

ETG-09-01

Applicability

ARTC Network Wide SMS

Publication Requirement

Internal / External

Primary Source

Document Status

Version #	Date Reviewed	Prepared by	Reviewed by	Endorsed	Approved
3.5	15 January 2019	National Bridges & Structures Engineer	Stakeholders	Manager Standards	GM Technical Standards 31/01/2019

Amendment Record

Amendment Version #	Date Reviewed	Clause	Description of Amendment
3.0	13 Nov 09		Applicability changed to ARTC network. Span length re-defined.
3.1	18 Jun 10		Banner added regarding mandatory requirements in other documents and alternative interpretations.
3.2	10 Feb 14	2	Definition of Culverts updated. Further updates to definition of Culverts following OSERG review 8/09/2014.
3.3	01 Jul 16	2	Minor editorial changes and rebrand. Definition of Exposure Classification removed as it is no longer used.
3.4			Removed information relating to the configuration and management of structures in BMS. Information removed is superseded by EGW-10-01
3.5	15 Jan 19		Definitions removed and referred to relevant Australian Standards. Some editorial changes. Section 4 removed and transferred to ETE-09-02

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Mandatory requirements also exist in other documents.

Where alternative interpretations occur, the Manager Standards shall be informed so the ambiguity can be removed. Pending removal of the ambiguity the interpretation with the safest outcome shall be adopted.

1 General

This document forms an integral part of Section 9 of the ARTC Track and Civil Code of Practice and details the requirements for inventory information associated with Structures listed in Table 9.1 of the Section 9.

Inventory is a set of descriptive data that defines structural assets and is used in the management of structures.

Typical rail structures assets and elements are defined in AS (AS/NZS) 5100 'Bridge Design' and AS 7636 'Railway Structures' codes.

2 Location

All bridges and structures are to have a track kilometrage either painted on the structure, or engraved on a plaque which is fixed to the structure.

The kilometrage marking is to be located as follows:

1. Underbridges: on the Up side of the No. 1 abutment and on the Down side of the No. 2 abutment. The kilometrage at No. 1 abutment is the identifying kilometrage for that structure. For underbridges less than 10 metres long, the marking may be shown on the No. 1 abutment only.
2. Overbridges: on the abutment or pier adjacent to the furthest Down track facing the direction of decreasing kilometrage.
3. Footbridges: as for overbridges.
4. Culverts, or structures without defined abutments, are to have suitable signage to indicate kilometrage next to the structure.
5. Tunnels: on the Down side of the No. 1 portal, and on the Up side of the No. 2 portal.
6. Miscellaneous Structures: on the Down side of the track facing the direction of decreasing kilometrage.

The above requirement is not to be applied retrospectively.

3 Span Length

The length of each span is measured as follows:

3.1 Single Span Bridge

The overall length of superstructure between abutment ballast walls/logs.

3.2 Multiple Span Bridge

- For end spans the distance between the end of the superstructure at the abutment and the centreline of the first intermediate support (eg a pier or trestle).
- For intermediate spans the distance between the centreline of the supports at each end of the span.

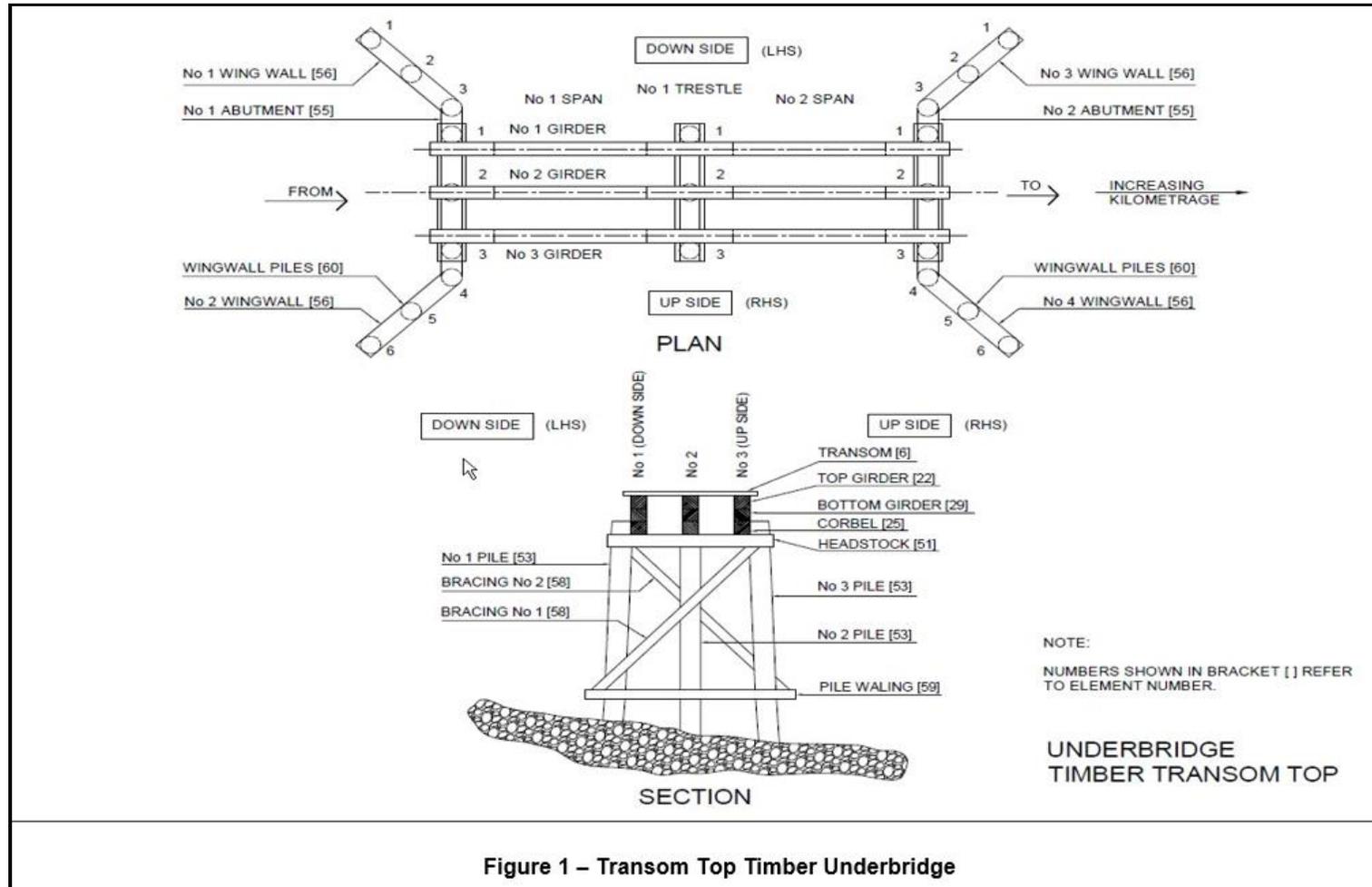
3.3 Culvert

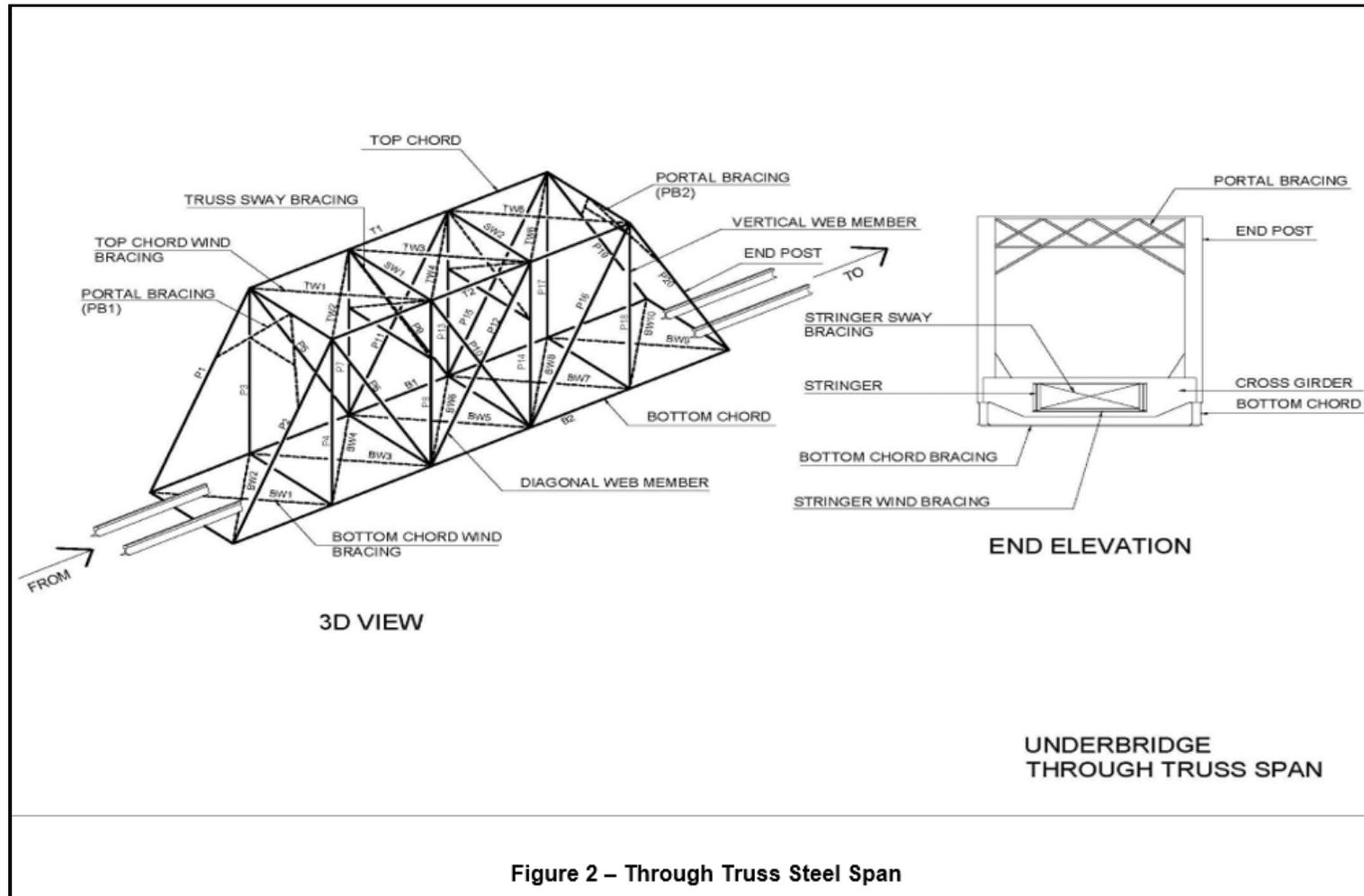
The maximum internal width (or diameter) of individual openings.

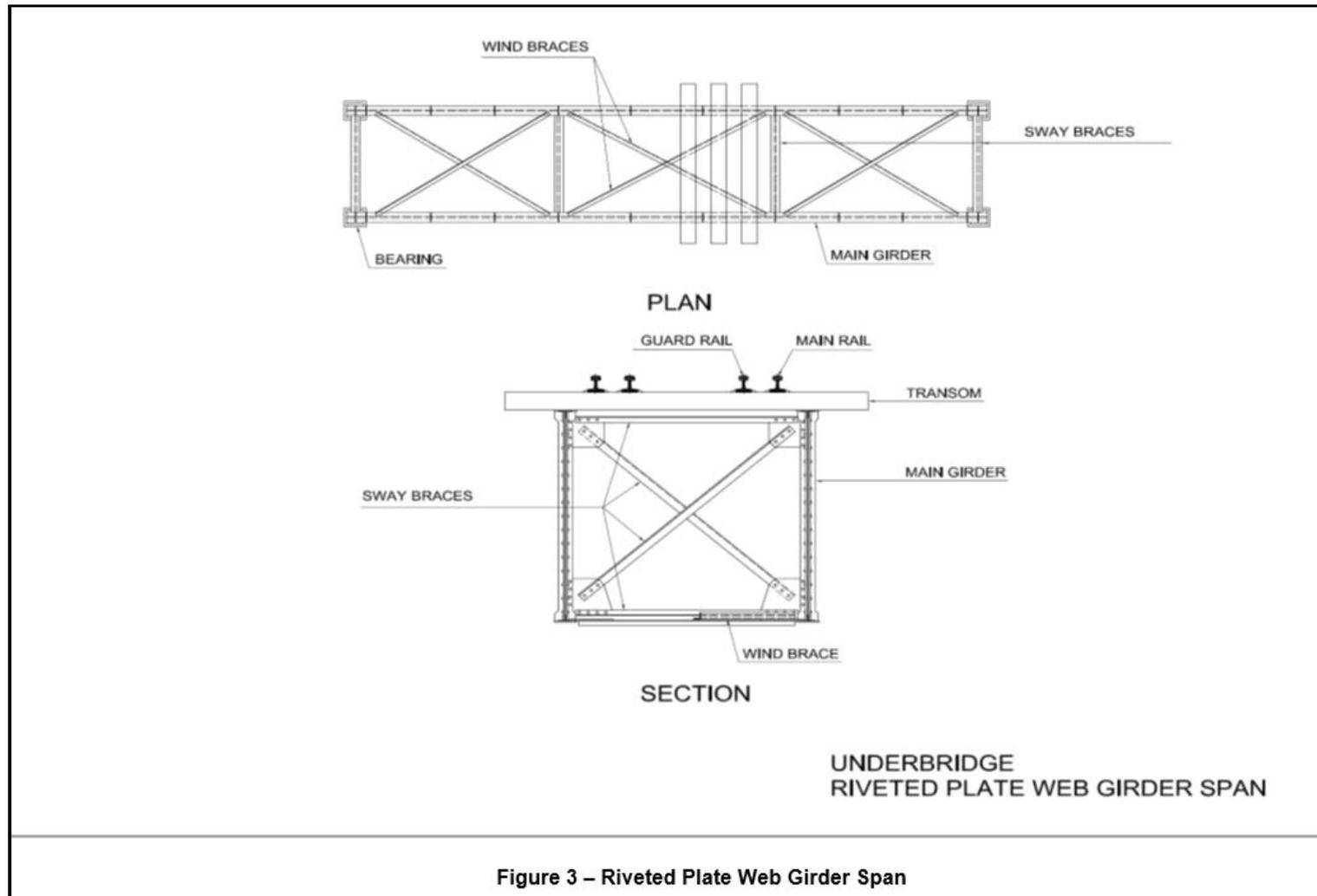
3.4 Tunnel

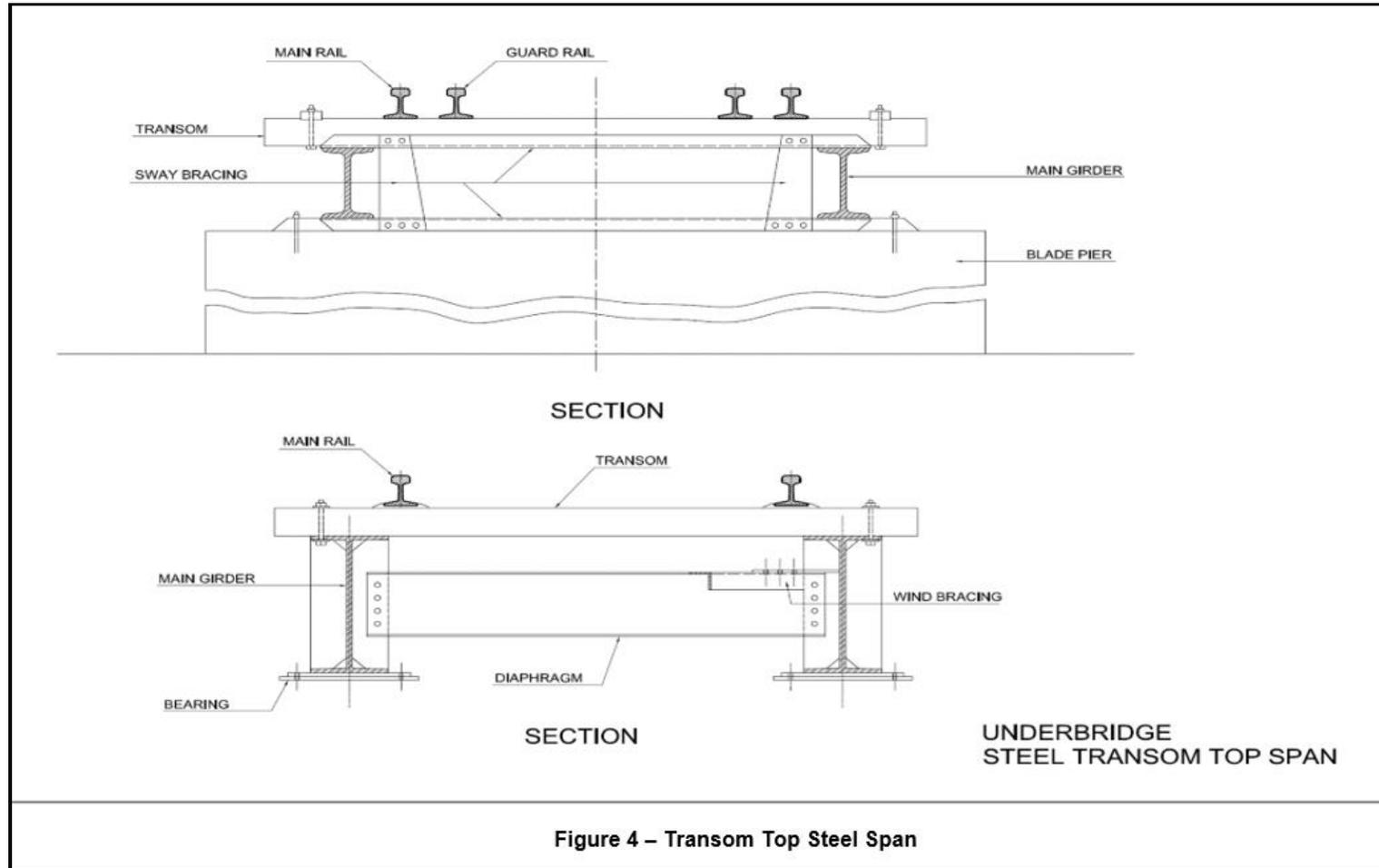
The length between the facing wall of each portal.

4 Appendix 1 – Sketches of Typical Bridges & Spans









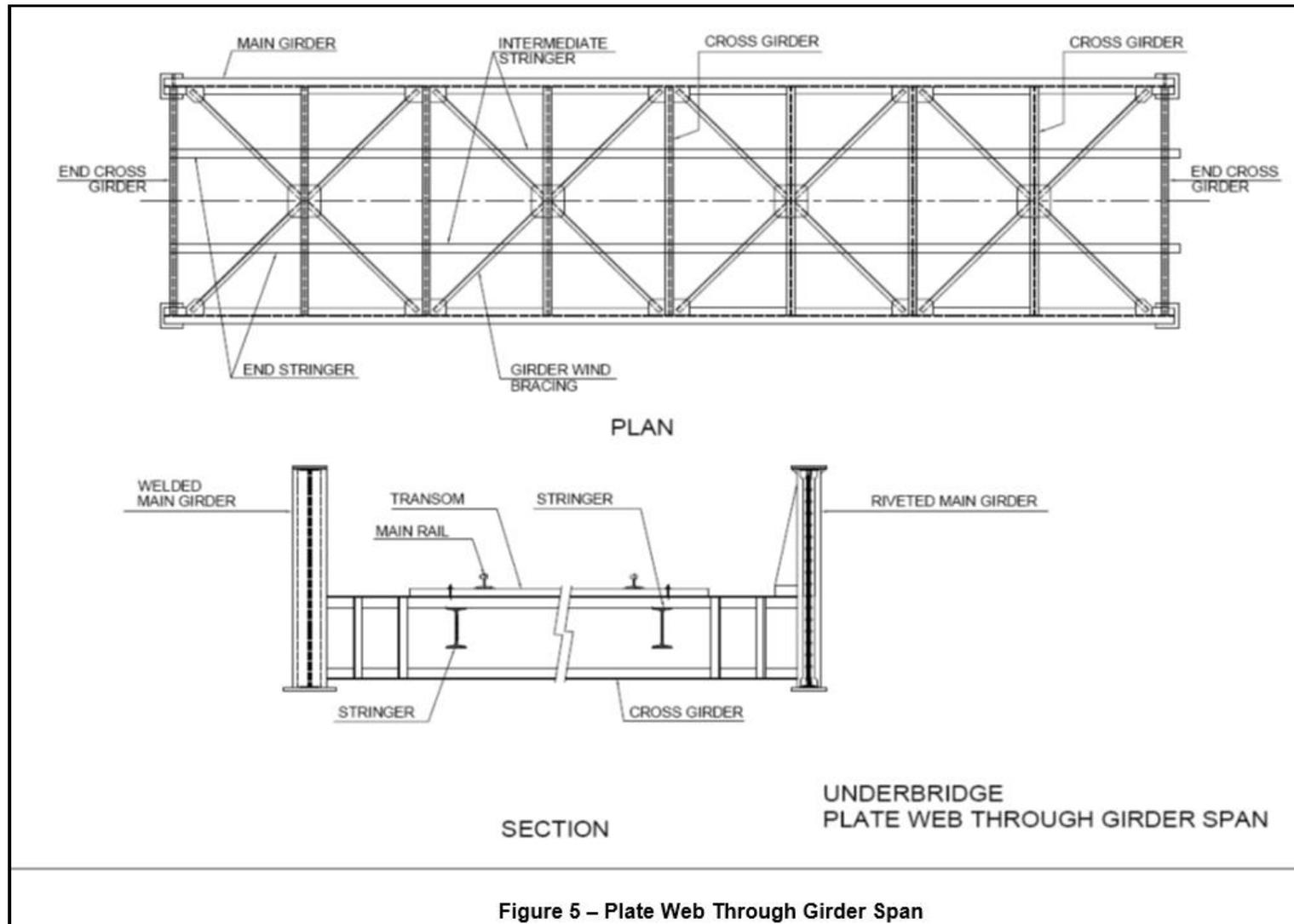
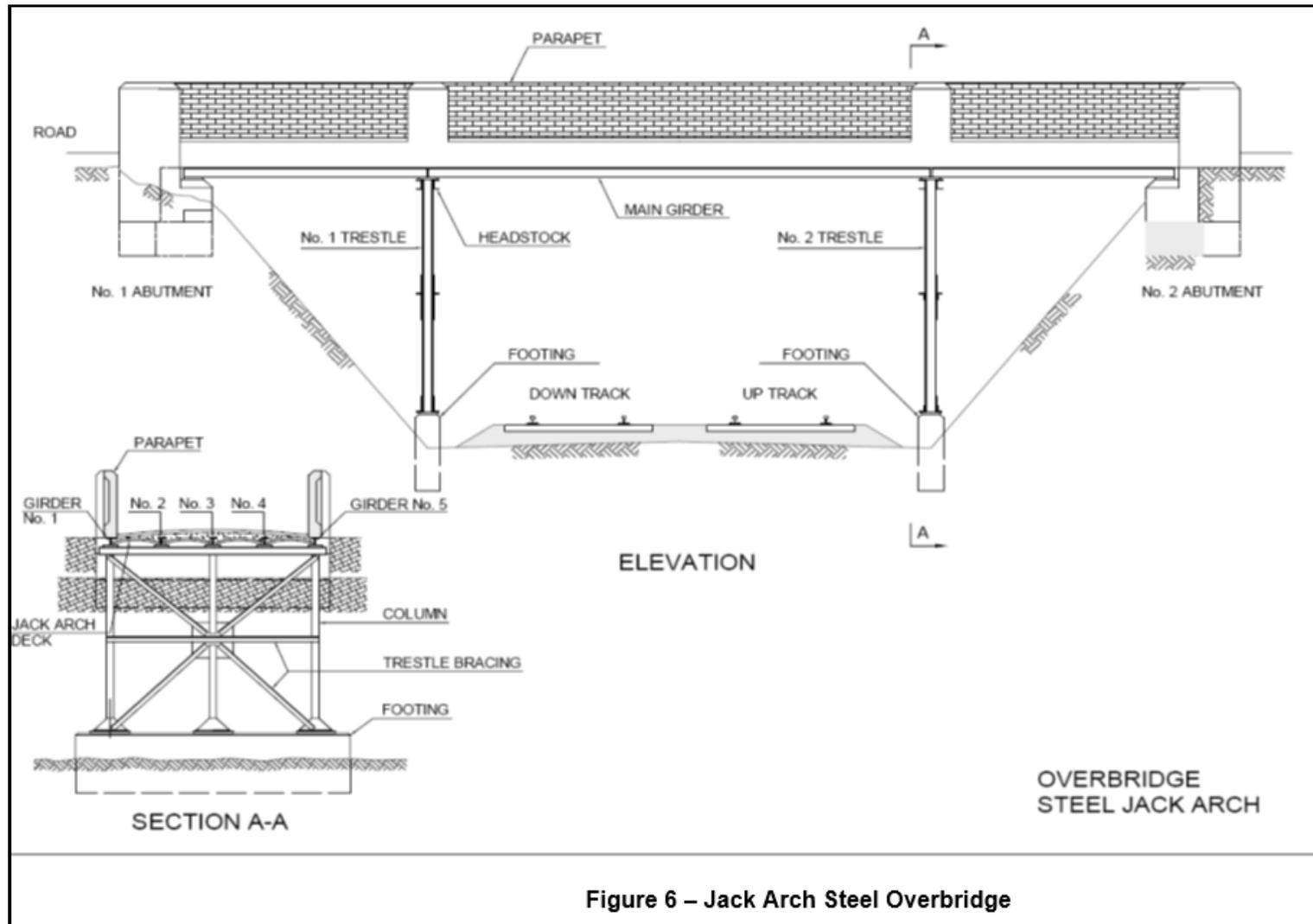


Figure 5 – Plate Web Through Girder Span



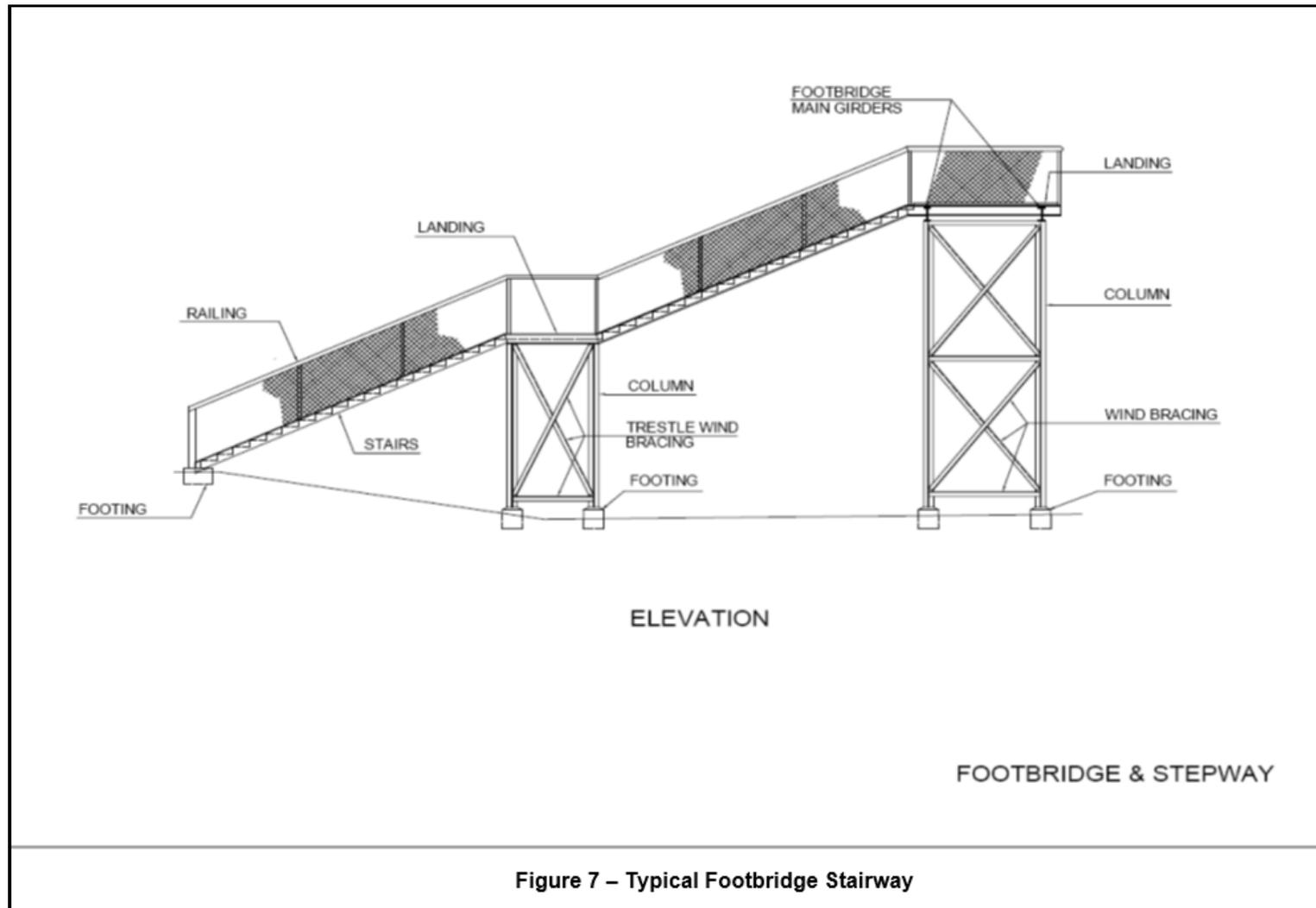


Figure 7 – Typical Footbridge Stairway