

Complete Guide to Bridge Structures in South Africa



Article Overview

South Africa features a diverse range of bridge structures, from historic stone and steel bridges to modern cable-stayed and suspension designs, governed by national standards and environmental considerations.

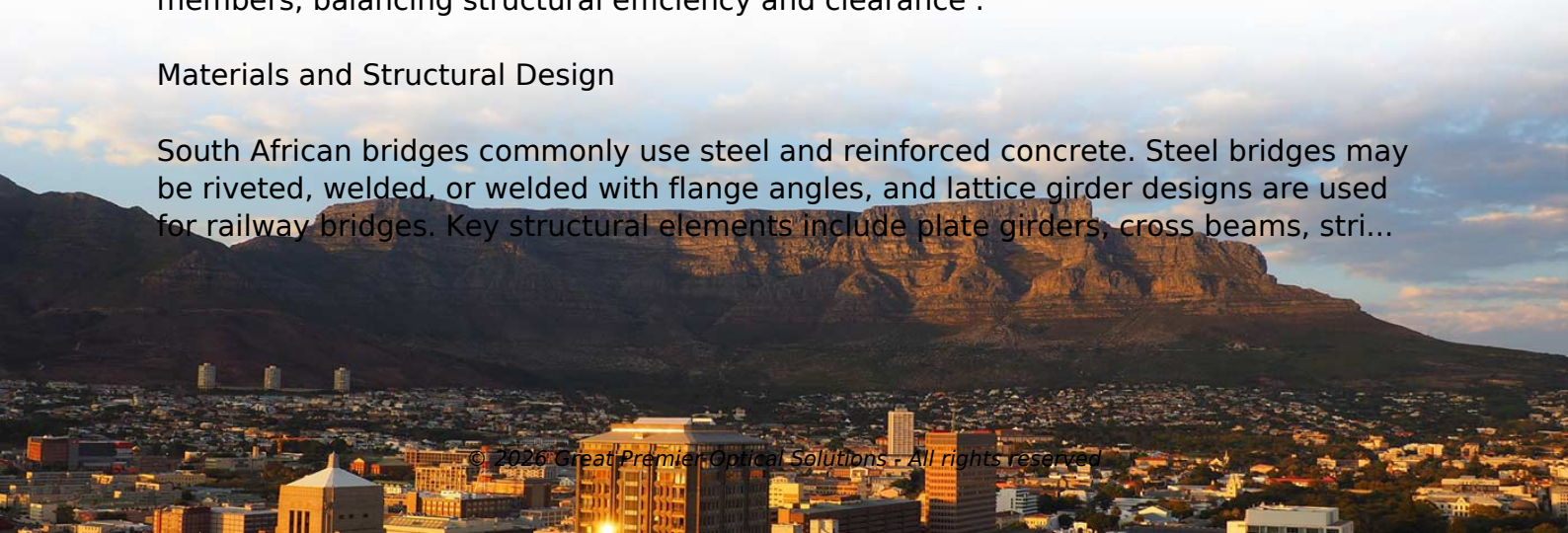
Types of Bridges

Bridges in South Africa are classified based on support, floor location, and purpose:

- Footbridges: Designed exclusively for pedestrian use.
- Aqueduct bridges: Carry canals or pipelines.
- Deck-type bridges: The deck is placed on top of the main load-carrying members. Subtypes include plate girder and truss girder bridges, where bracing is minimal above the traffic.
- Through-type bridges: The deck is supported at the bottom of the main members, with bracing above the traffic.
- Half-through bridges: The deck lies between the top and bottom of the main members, balancing structural efficiency and clearance .

Materials and Structural Design

South African bridges commonly use steel and reinforced concrete. Steel bridges may be riveted, welded, or welded with flange angles, and lattice girder designs are used for railway bridges. Key structural elements include plate girders, cross beams, stri...



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Bridge Management and Maintenance

The course will provide participants meaningfully guidance to quantify their bridge infrastructure deficit and prioritize bridge

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Bridge Construction Process 101: Exciting Details!

Explore the complete bridge construction process, from planning and design to foundations, superstructure

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Enhanced methodology for visual bridge inspections in South Africa

In South Africa, principal visual inspections for all bridge structures are required every five years (COTO 2020a; COTO 2020b).

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Steel bridge design and construction: A Southern African experience

Bridge design and construction has gone through several phases in Southern Africa. The first phase was dominated by

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The Nelson Mandela Bridge as an Example of the Use of Composite ...

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COTO Standard Specification - The Department of Transport

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List of bridges in South Africa

List of bridges in South Africa Historical and architectural interest bridges ... Major road and railway bridges

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List of bridges in South Africa

List of bridges in South Africa The list of bridges in South Africa encompasses a diverse array of engineering structures that span the

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Traffic characteristics and bridge loading in South Africa

LM1 loading generally results in higher internal forces when compared to TMH-7 loading. A direct adoption would thus imply more

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Code of practice for the design of highway bridges and culverts in ...

The actions (loads) and situations that affect bridges are defined and classified and the various considerations are described that are

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Objectives: Participants will learn about modelling, analysis & structural design of new bridge structures as well as assessment of

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Questionnaire on

This work shall include excavations not provided for elsewhere in these specifications, which are required for founding the structures

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Types of Bridges – A Complete Guide to Bridge Structures, Materials ...

Types of Bridges- A bridge is a man-made structure built to span a physical obstacle such as a river, valley, road, or

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The Nelson Mandela Bridge as an Example of the Use of Composite ...

The Nelson Mandela Bridge is a landmark quality structure suspended across a maze of railway tracks connecting

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Road Bridge Design Standards SADC | PDF | Risk

This document provides guidelines for the design of road bridges and culverts in Southern Africa. It aims to standardize bridge

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the most expensive investment asset of any country's civil ...

Bridges and tunnels constitute significant and critical discrete components of a transportation system and they are among the most

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Bridges and Engineering Structures | TÜV SÜD South Africa

TÜV SÜD offers a complete suite of services to ensure the structural stability and safety of engineering structures such as bridges,

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agement practices are required to obtain the best value from limited resources. The course will provide participants meaningfully

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Chapter 2 Services 2020

Existing publication: ##### The new COTO Standard Specifications for Road and Bridge Works for South African Road Authorities

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Bengu, Thabane and Tsomo Bridges, South Africa

See how the installation of 3 modular steel bridges in South Africa has had a positive effect on local communities.

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TMH19 MANUAL FOR THE VISUAL ASSESSMENT OF ROAD STRUCTURES

Road structures are an integral part of the road network. This Manual provides the official requirement for the visual assessment of

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