



Specifications for Culvert bridge ARC-SGI

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Table of Contents

1.	SCOPE OF WORK	3
2.	SITE LOCATION	3
3.	PHOTOS OF THE SITE.....	4
4.	SERVICES	4
5.	GENERAL	5
6.	NATIONAL AND INTERNATIONAL STANDARDS	6
7.	TECHNICAL ENQUIRIES	6
8.	SITE CLEANING & SAFETY	6
9.	OWNERSHIP	7

1. Scope of work

To repair a damage culvert gravel road crossing over a tributary of the Liebenbergsvalei river that was damage by rainstorms. Stabilising / rehabilitation the road and shoulders of the bridge structure with Gabion baskets and matrass for $\pm 14\text{m}$.

Service supplier will be responsible for:

- Geotechnical investigation
- Engineering services to design and signing of the culvert bridge, road and gabion structure.
- Construction as per Engineering design and specification
- Material and equipment as per Engineering design

It is estimated that tenderers should have a CIDB contractor grading designation of 1CE or higher.

The Responsible civil Engineer for the design and signing of this project must be register at ECSA.

2. Site location

Site	Province	GPS coordinate of site
SGI - bridge	Free state	-28.167132° 28.311430°



3. Photos of the damage culvert



4. Services require

4.1 Geotechnical investigation

No Investigation was done. Service provider is responsible for all tests require. All test reports must be handed over to the ARC

4.2 Engineering design

The service provider must provide all services to do a complete design, specifications and signing off the bridge and road structure

4.3 Drawings, specifications and shop drawings

Drawings and specifications are instruments of service and as such shall remain the property of the Engineer and shall be returned by the service supplier on completion of estimating and/or construction of the work. The service supplier shall be responsible for keeping complete sets of working drawings, shop drawings,

details, sketches, and specifications available on the job. Should any drawing be amended, the service supplier shall make sure that all originals are destroyed and replaced with amended sheets.

A complete set of all such documents should be available conveniently mounted in the construction office.

On completion of the project, a complete set off drawings and documentations must be hand over to the ARC before final payment will be consider.

4.4 Construction

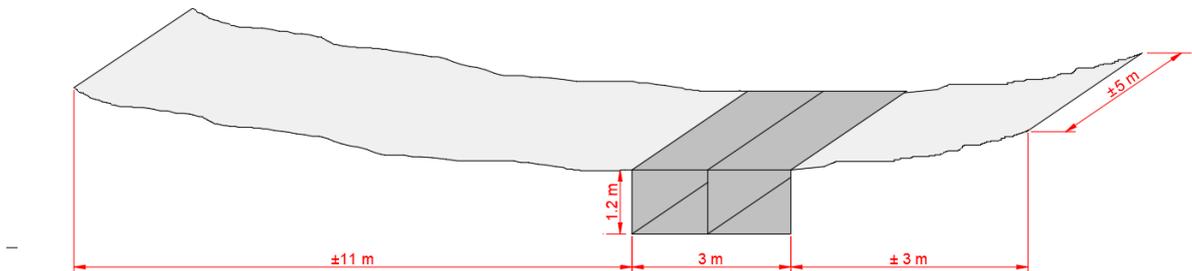
The service provider must supply all material and equipment to complete this turnkey project as set out by the Engineering design and instructions

5. General

5.1 Road classification

The road is classified as a Farm Road, 5m width with light vehicle crossing.

5.2 Bridge dimensions



5.3 Dealing with Water

Where necessary, the Contractor shall construct temporary drainage channels to divert river flow and ground water from his excavation and excess water must be pumped out.

5.4 Existing structure

The removal of the existing structure is to be included as part of the contract

All broken concrete, steel, etc. and other trash shall be removed from the site and disposed of by the Contractor.

6. National and International Standards

The following specifications shall apply for the construction of the Works.

- COLTO (Standard Specifications for Road and Bridge Works for State Road Authorities)
- TRH 25 (1994), Guidelines for the hydraulic design and maintenance of river crossings
- TMH7 Parts 1 & 2, Code of practice for the Design of Highway bridges and culverts in South Africa
- BS 5400 Parts 1 & 4: Code of Practice for design of concrete bridges.
- SANS 2001-CC1:2012: Concrete works (structural).
- SANS 10100-1:2010: Structural Use of Concrete (Design).
- SANS 10100-2:2010: Structural Use of Concrete (Material and Execution of works).
- Draft TRH4 (1996), Structural Design of interurban and Rural roads.
- TRH14 (1995), Guidelines for road construction material. SANRAL drainage manual 6th edition
- Environmental Management Act 1998, and Regulations Occupational Health and Safety Act 1993, and Regulation

7. Technical enquiries

- All technical enquiries are to be directed to:
- Mr Francois Swanepoel

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8. Site cleaning & safety

- The site must be clean at all time
- The service supplier is liable for the safety of workers and work conditions according to the OHS act.
- Remove all building rubble and clean site after completion of work before the final payment will be considering.

9. Ownership

- The service supplier will be responsible for the safekeeping of all building material and tools until the official site handover.