



BLOUKRANS & QABANGO RIVER BRIDGES

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The construction of the Bloukrans (No. 2590) and Qabango River Bridge (No.3735) are two projects that the Nankhoo team are currently working on. The structures are located on District Road D489 and are 3.224 km apart. The sites are situated in the Inkosi Langalibalele Local Municipality (KZN 237), approximately 17km North of the Estcourt Town.



CURRENT SITUATION:

The construction of District Road 489 from gravel to asphalt surfacing and required road alignment amendments includes the upgrade of the existing bridges to high-quality crossings to ensure compliance with road safety and the Department of Transport standards. The design of the new structures is underway and will link the road in a safe and reliable manner by focussing on the environmental impacts and the safety of the road users through detailed design and safety codes.

SCOPE OF WORKS:

Nankhoo Consulting Engineers have been appointed by the KZN Department of Transport as the Civil/Structural Engineering Consultant to provide the following:

- Analyse the site location and the surrounding area. This includes a search and investigation, verifying its feasibility for construction purposes.
- Develop a detailed design and design report, keeping the requirements of the Client in mind and highlighting potential risks and challenges of the project
- Site supervision to ensure that the construction work is in compliance with the project's specifications.
- Ensuring that construction work is completed within budget and within the agreed timeframe.



Qabango River Bridge is a 42m long reinforced concrete bridge consisting of three spans and a dual lane configuration with a pedestrian walkway. The total width of the bridge is 11.34m.

The bridge is designed to accommodate the 1:25 year flood to pass under the deck soffit. The abutments and piers are founded directly on the rock and anchored with dowel bars.

The proposal is to construct a new bridge downstream of the existing one. The existing bridge shall be used as a detour during the construction period and thereafter, demolished.

Bloukrans River Bridge is an 84m long reinforced concrete bridge consisting of six spans and a dual lane configuration with a pedestrian walkway. The total width of the bridge is 11.34m.

This bridge, like the Qabango bridge, has been designed for a 1:25 flood return period. The abutments and piers are founded on exposed bedrock and secured via dowelling.

The new construction involves the demolition of the existing bridge and the construction of the new bridge. A detour will be managed via an existing crossing on the upstream side of the current structure.



SOCIAL BENEFITS:

The local community will benefit from the proposed D489 structures by providing a crucial link between neighbouring communities in order to access amenities such as:

Schools: Cornfields, Thembalihle, Darul Hikma Islamic, Chieveley Islamic Primary School.

Health Facilities: Cornfields Clinic

CONCLUSION:

The purpose of these projects is to provide a safe and easier crossing for vehicles and pedestrians to cross the Bloukrans and Qabango River during flood events and link the newly upgraded road.

These structures will benefit the community by aiding in the growth of their social and economic standing by providing greater access to other communities and critical amenities and the creation of job opportunities.