



**KWAZULU-NATAL PROVINCE**

**TRANSPORT**  
REPUBLIC OF SOUTH AFRICA

**CONTRACT NO. ZNB1250/00000/00/PMC/INF/21/T**

**UPGRADE TO KWAMAGODA (NKHUKHU) RIVER BRIDGE 2002  
OVER KWAMAGODA RIVER ON DISTRICT ROAD D59 KM 0.108 IN  
THE PITERMARITZBURG REGION**

**BRIEFING NOTES**

**ZNB1250/00000/00/PMC/INF/21/T – UPGRADE TO KWAMAGODA (NKHUKHU) RIVER BRIDGE  
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**1. BACKGROUND AND PURPOSE**

The KZN Department of Transport's objectives are to deliver suitable public infrastructure in a cost-effective way, and in the process create employment and upliftment opportunities for local communities and contractors.

For this project the main objectives are the following:

Upgrade kwamagoda (nkhukhu) river bridge 2002 situated over Kwamagoda river on district road D59 km 0.108 in Richmond Zone, Pietermaritzburg.

The Employer's objectives in delivering public infrastructure and services for this project include the provision of temporary work opportunities to the local community through the application of labour-enhanced methods to the maximum extent feasible, in accordance with the Expanded Public Works Programme (EPWP) Guidelines.

The works has been divided to subcontract a minimum of 30% of the Contract Value to Targeted Enterprises to do the works and provide training and opportunities to the Targeted Enterprises. Various Work packages have been set out in Table G1/1 on page C145 to assist with the work allocation for Targeted Enterprise subcontractors. The main Contractors' obligations regarding the Targeted Enterprises has been set out under G7.1 (C140).

The main Contractor is obliged to not only manage the subcontractor but to also provide coaching, guidance, and mentorship to the Targeted Enterprise subcontractors as is summarized in section G of the Contract Document.

Part G of the project is developed for the following:

- It is a requirement of the contract that the Contractor facilitates the contractor development of targeted enterprises as a contract participation goal by means of subcontracting the scheduled work (not limited to) to contractors (See C3.3 Section G especially Page C143)
- The Contractor is required to provide sustainable work opportunities for these subcontractors and to aid these enterprises in the form of financial support for the procurement of goods and services.
- In addition, the Contractor is required to manage the skills development of the subcontractors by providing training, coaching, guidance, mentoring and a clear path of progression to the higher CIDB Grades.

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**2. PROJECT TEAM AND ENQUIRIES**

**Client** - KZN Department of Transport

**Client Representative** - Xolisile Mazeka

Queries relating to issues arising from these documents may be addressed to the following:

<b>Section</b>	<b>Contact Person</b>	<b>Email Address</b>	<b>Telephone</b>
Technical	Xolisile Mazeka	<a href="mailto:Xolisile.Mazeka@Kzntransport.gov.za">Xolisile.Mazeka@Kzntransport.gov.za</a>	(033) 392 6600
SCM	Thembehle Dlomo	<a href="mailto:Thembehle.Dlomo@Kzntransport.gov.za">Thembehle.Dlomo@Kzntransport.gov.za</a>	(033) 392 6607

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### **3. TENDERING PROCEDURE**

#### **T1.2 TENDER DATA (Page T6-T12)**

The conditions of tender are the standard conditions of tender contained in Annex C of the Construction Industry Development Board Standard for Uniformity in Engineering and Construction Works Contracts, published in Government Gazette No. 42622 dated 8 August 2019.

#### **Clause C1.2**

- (c) **'General Conditions of Contract for Construction Works, Third Edition (2015)'** issued by the South African Institution of Civil Engineering (abbreviated title 'General Conditions of Contract 2015' – 'GCC 2015'). This document is obtainable separately and Tenderers shall obtain their own copy.
- (d) **'Standard Specifications for Road and Bridge Works for South African Road Authorities (Draft Standard) (October 2020)**. This document is obtainable separately and Tenderers shall obtain their own copy.
- (e) **'Occupational Health and Safety Act No. 85 of 1993'**, **'Occupational Health and Safety Amendment Act No. 181 of 1993'**, and the **'Construction Regulations, 2014'** (Government Notice No. R. 489 published in Government Gazette No. 40883 of 2 June 2017,). These documents are obtainable separately and Tenderers shall obtain their own copies.
- (f) **'Construction Industry Development Board Act No. 38 of 2000'** as amended and the **'Regulations in terms of the Construction Industry Development Board Act No. 38 of 2000'** (Government Notice No. R. 692 published in Government Gazette No. 26427 of 9 June 2004, as amended).

**Clause C2.1** Only those tenderers who satisfy the following criteria are eligible to submit tenders.

- (a) CIDB registration  
Only those tenderers who are registered with the CIDB, at close of tender, in a contractor grading designation equal to or higher than a 7 for a CE class of construction work, are eligible to have their tenders evaluated.
- (b) Central Supplier Database  
Tenderers, or in the event of a joint venture, each member of the joint venture, must be registered on the Central Supplier Database at the closing date for tender submissions. Tenders received from such tenderers who do not comply with this requirement, will be considered non-responsive.
- (c) Local production and content of goods (Returnable Schedule C - SBD 6.2)  
Only locally produced goods or locally manufactured goods for construction meeting the minimum threshold for local production and content as stipulated in Returnable Schedule C - SBD 6.2 will be considered.

#### **Clause C2.13**

C.2.13.3 Tender offers shall be submitted as an original hard copy.

C.2.13.5 The Employer's address for delivery of tender offers and identification details to be shown on each tender offer package are:

<b>Location of Tender Box:</b>	The Foyer, Cost Centre Pietermaritzburg office, KZN Department of Transport
<b>Physical Address:</b>	1 Woodlands Road, Mountain Rise, Pietermaritzburg
<b>Identification Details:</b>	Contract No.: 1250/00000/00/PMC/INF/21/T

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C.2.13.6 A two-envelope system will NOT be followed.

**Clause C2.15**

The closing time for submission of Tender Offers is:

**11:00 on Tuesday 8 July 2022**

Telegraphic, telephonic, telex, facsimile, electronic, e-mail and late tenders will not be accepted.

**Clause C2.16**

The tender offer validity period is twenty-four (24) weeks, calculated from the date of bid closure.

**Clause C3.11**

The evaluation of tender offers will be based on administrative compliance, functionality, price and preference in accordance with the Preferential Procurement Regulations 2017, as amended.

(a) Functionality (Returnable Schedule N) – Technical Proposal

The scope of work for this contract is classified as Complex work: characterised by requirements for higher levels of skills, greater resources or not well-defined inputs and outputs.

The functionality criteria and weighting for each of the sub-criteria on which the Technical Proposal submitted with Returnable Schedule N will be evaluated.

(b) Price and preference

The weighting of tender Price and Preference (SBD 6.1- Page T22) for the tender will be awarded by way of a point system:

In the case of acquisition of services, works or goods with a Rand value of up to R50 000 000.00:

- 80 points are assigned to Price; and
- 20 points are assigned to Preference.

The total points for Price and Preference in each case above must add up to 100 points.

The tenderer's B-BBEE Status Level Verification Certificate must comply with the requirements of Returnable Schedule D and be submitted as an attachment to the returnable schedule.

**Returnable Schedules**

Notes to tenderer:

1. Returnable schedules have been based on the CIDB Standard for Uniformity in Construction Procurement and incorporates National Treasury requirements within them.
2. Failure to fully complete the relevant returnable documents shall render such a tender offer to be declared non-responsive.
3. Tenderers shall note that their signatures appended to each returnable form represents a declaration that they vouch for the accuracy and correctness of the information provided, including the information provided by candidates proposed for the specified key positions.
4. Notwithstanding any check or audit conducted by or on behalf of the Employer, the information provided in the returnable documents is accepted in good faith and as justification for entering a contract with a tenderer. If subsequently any information is found to be incorrect such discovery shall be taken as wilful misrepresentation by that tenderer to induce the contract.

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**The tenderer must complete the following returnable documents:**

Document Checklist: Page T2

Please complete all documents as required, use the checklist.

Returnable Schedules required for Tender Evaluation Purposes (A to N)

- A - RECORD OF ADDENDA TO TENDER DOCUMENTS  
The tenderer shall sign this page irrespective of the information being **N/A**
- B - COMPULSORY ENTERPRISE QUESTIONNAIRE  
All sections must be completed in full.
- C - STANDARD BIDDING DOCUMENTS
  - SBD 1: INVITATION TO BID

Page T14 must be completed in full. Pay special attention to the highlighted sections-

SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:	OR	CENTRAL SUPPLIER DATABASE No:	MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX <input type="checkbox"/> Yes <input type="checkbox"/> No	B-BBEE STATUS LEVEL SWORN AFFIDAVIT	TICK APPLICABLE BOX <input type="checkbox"/> Yes <input type="checkbox"/> No	
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]				
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER PART B:3]	

Are you a foreign based supplier – This answer should generally be **No** and the bottom section (QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS) does not need to be completed as the contractor has already indicated that he is not a foreign based supplier.

**T18 must be completed and signed thus accepting the terms for bidding.**

- SBD 4: BIDDER'S DISCLOSURE  
All questions must be answered and page T21 signed
- SBD 6.1: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017  
Note 6.1 must be completed to claim BBEE Points. It should be completed as follows:  
  
B-BBEE Status Level of Contributor: 1 (As the BBEE level the bidder's certificate or affidavit grants) = ...20 (Correlating points to level – see table 4.1) (maximum of 20 points)  
  
B-BBEE exempted affidavit for exempted micro enterprises is attached on page T27 for tenderers to complete
- SBD 6.2: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS (Complete and sign Annexure C listing all the items described in the Table on page T30; complete and sign SBD6.2 declaration- pages T31- T36)
- D - B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE  
The Sworn affidavit and the BBEE SANAS accredited certificates must be issued in terms of the amended construction sector codes – gazette Vol.630 No.41267

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- E - CERTIFICATE OF AUTHORITY FOR SIGNATORY

Provide Specimen Signature, ensure signatory remains constant and provide a Resolution letter, authorising the signatory to sign the bid documents with a specimen of his signature- both parts are required, if you don't submit any one of them your bid will be non-responsive.

- F - CONSTRUCTION EXPERIENCE

The tenderer to provide a statement of similar works of similar nature executed.

- G - KEY PERSONNEL

G1 – Management, provide names of the 3 Key personnel and attach their CV's;

G2 – Labour Enhanced activities – provide the names of Foreman/Supervisor and Site Agent/Construction Manager with copies of their Qualification certificates and CV's

- H - CONSTRUCTION EQUIPMENT

- I - PROPOSED SUBCONTRACTORS

- J - PARTICIPATION IN JOB CREATION USING LOCAL LABOUR (Minimum 6%)

T47 must be signed, dated and completed as indicated on the bottom of page T44. Please follow the instructions on page T46 on how to calculate the minimum labour percentage and note that the specified minimum labour percentage is **6.0%** as indicated. While tendering below the minimum is no longer a disqualification criterion, a penalty would apply to the bid, if awarded, for not achieving the minimum target.

- K - HEALTH AND SAFETY DECLARATION

Must be completed correctly and signed. This should be read and completed accordingly. Question 3 has three sub-headings. Generally, the contractor will answer yes to only one of these. The corresponding number in question 4 must then also be completed. Example – If 3(a) is answered yes then the contractor must answer 4(a) as well, If 3(b) then 4(b) etc.

- L - DEVIATIONS AND QUALIFICATIONS

- M - SCHEDULE OF ALTERNATIVE TENDERS

The attention of tenderers is specifically drawn to clause C.2.12 Alternative tender offers of Annex C Standard Conditions of Tender and to clause C.2.12 of section T1.2 TENDER DATA in this project document.

- N – TECHNICAL PROPOSAL

The tenderer is required to submit a technical proposal which covers experience of key personnel and relevant experience in bridge construction as indicated under form G and Tender Data Clause C3.11.1 (a)

The maximum of 100 score will be allocated as below:

Experience of personnel = 60 points

Construction experience = 40 points

Key Personnel:

**Contracts Manager (weight = 25):**

Must be professionally registered with ECSA and / or SACPCMP (Pr Eng / Pr Tech Eng / Pr Techni / Pr CPM or Pr CM only)



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Years of relevant experience - calculated post qualification:

10 years and above	= 5
9 years	= 4
8 years	= 3
7 years	= 2
6 years	= 1
0-5 years	= 0

**Construction Manager (Senior Site Agent) (weight = 20):**

Minimum LIC NQF 5 "Manage Labour-Intensive Construction Processes" or equivalent Quality Council for Trades and Occupations (QCTO) qualifications at NQF level 5 or 7.

Years of relevant experience:

13 years and above	= 5
11-12 years	= 4
9-10 years	= 3
7-8 years	= 2
5-6 years	= 1
0-4 years	= 0

**Foreman / Supervisor (weight = 15):**

Minimum LIC NQF level 4 "National Certificate: Supervision of Civil Engineering Construction Processes";

Years of relevant experience:

5 years and above	= 5
4 years	= 4
3 years	= 3
2 years	= 2
1 years	= 1
0 years	= 0

The tenderer will be Scored from the above submission as below

**= 25(point/5) + 20(point/5) + 15(point/5)**

The experience of key personnel shall be clearly indicated to be evaluated with reference to tender data Clause C3.11.1 (a). The CVs shall be attached to support the information attached.

Tenderer's relevant experience will be evaluated as below:

**CONSTRUCTION EXPERIENCE (weight = 40):**

Appointment Letters and Final Approval Certificates for 5 projects and above	= 5
Appointment Letters and Final Approval Certificates for 4 projects	= 4
Appointment Letters and Final Approval Certificates for 3 projects	= 3
Appointment Letters and Final Approval Certificates for 2 projects	= 2
Appointment Letters and Final Approval Certificates for 1 project	= 1
Appointment Letters and Final Approval Certificates for 0 projects	= 0

Score = 40(point/5)

Appointment letters and Final Approval Certificates to be provided with contact details of references. **Appointment letters and Final Approval Certificates for projects completed older than 15 years will not be considered as proof of experience.**

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**Tenderers scoring 60% and above of the functionality score will qualify for further evaluation AND it is mandatory that at least 10% of this score must be from the Tenderers Relevant Experience.**

**Page C3 as the FORM OF OFFER must be signed and the amount in words must be completed failure to do this will invalidate the tender.**

Please check that the amount on C3 (Form of Offer) and C39 (BOQ Summary) match.

On a contractual note, the following must be mentioned:

It is of extreme importance that the financial risks be factored into the pricing of the documents as the bidders' price is also compared to realistic market value of the works that has been assessed by a third party to guide if the quoted price is reasonable.

Pay special attention to all the pages that contain this heading -

**Failure to complete, sign and date this form shall result in the tender being considered non-responsive and rejected in terms of clause C.3.8 of the Conditions of Tender.**

If this heading is displayed and a contractor feels that it is **N/A** and **does not** sign the page, the tender will be **non-responsive**. The content may be marked as **N/A** if so applicable but the **Bidder must still sign and date the required spaces as instructed.**

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#### **4. THE CONTRACT**

##### **C1.2 - CONTRACT DATA**

###### **C1.2.2: DATA PROVIDED BY THE EMPLOYER**

Clause 1.1.1.14: The time for achieving Practical Completion is **15 months** from the Commencement Date, including non-working days and special non-working days.

Clause 1.1.1.26: Pricing Strategy: The Contract is to be a Re-Measurement Contract.

Clauses SCC 4.1.1: The contract participation goal for local labour content is 6%.

The penalty for failing to achieve the monetary value of the above target set by the Employer for local labour content in terms of Part E: Expanded Public Works Programme of section C3.3 Particular Specifications in Part C3: Scope of Work, is 5% of the monetary value by which the achieved monetary value falls short of the target monetary value.

The contract participation goal for Targeted Enterprises is 30%.

The penalty for failing to achieve the monetary value of the above target set by the Employer for contract participation by Targeted Enterprises in terms of Part F: Small Contractor Development of section C3.3 Particular Specifications in Part C3: Scope of Work, is 5% of the monetary value by which the achieved monetary value falls short of the target monetary value.

Clause SCC 6.2.1 The security to be provided by the Contractor shall be: Fixed Performance guarantee of 8% of the first One Million Rand plus 3.5% of the balance of the Accepted Contract Sum.

Clause 6.5.1.2.3: The percentage allowance to cover overhead charges is 10%.

Clause 6.8.2: The values of the coefficients for calculating the Contract Price Adjustment Factor are:

Road works – upgrade (Schedules A, D, F and G):

a = 0,2            b = 0,4            c = 0,25            d = 0,15, and

Structures (Schedule B and G):

a = 0,15            b = 0,2            c = 0,55            d = 0,1

The “Consumer Price Index” will be as for the province of KwaZulu-Natal.

Clause 6.8.3: Price adjustments for variations in the costs of special materials are allowed.

Clause 6.10.1.5: The percentage advance on materials not yet built into the Permanent Works is 80%.

Clause 6.10.3: The percentage retention on the amounts due to the Contractor is 10%. The limit of retention money is 5% of the first One Million Rand plus 1.6% of the remaining amount of the tender offer excluding contract price adjustment, contingencies and VAT.

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A retention guarantee in lieu of a cash retention is permitted.

The Risk and related matters regarding insurances are in accordance with page C13

Clause G2.9: The local labour and targeted enterprise should be sourced within Richmond Municipality and liaison with project PLC and CLO.

C1.2.3 Clause 6.8.3 Tenderer shall provide rates of special materials and proof supporting the indicated rate from the supplier.

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**5. PRICING DATA**

**PART C2: PRICING DATA**

**C2.1 PRICING ASSUMPTIONS C24**

The quantities given in the Bill of Quantities are estimates only, and are subject to re-measure during the execution of the work. The quantities finally accepted and certified for payment, and not the quantities given in the Bill of Quantities, shall be used to determine payments to the Contractor. The Contractor shall obtain the Employer's Agent's detailed instructions for all work before ordering any materials or executing work or making arrangements for it. The quantities of material or work stated in the Bill of Quantities shall not be regarded as authorisation for the Contractor to order material or to execute work.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020, the Project Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste. The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

**The Bill of Quantities has been separated into two separate bills:**

- 1. Main Contractor Bill (Pg C29-C49) – this must be priced**
- 2. Small Contractor Development Bill (Page C159-C182)- don't price this-only indicates the quantities and type of Small Contractors' packages the Main Contractor has to subcontract.**

A provisional sum has been made available for the Small Contractor Development Bill under Items G10.02(a). Furthermore a management fee per month has been included under item G10.02(e) for the management, coaching, guidance and mentoring of the Targeted Enterprise subcontractors as per the description on Page C148

The bill of quantities is issued separately in Excel format to assist the tenderer in balancing the formulars. It is the responsibility of the tenderer to ensure the formulars are correct and the amounts are carried over to the summary page.

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## **6. PROJECT SPECIFICATIONS**

### **C3.1 PROJECT SPECIFICATIONS - PART A**

#### **1.1 DESCRIPTION OF THE WORKS**

The project comprises the upgrade of the existing causeway to a 40m long, 3X13.35m span bridge. The works includes 450m length, 7.0m width of roadworks upgrade, this being from gravel to blacktop earthworks, pavement layers, asphalt surfacing, surfacing of bridge deck including the associated road prism drainage and ancillary works. Two farmers accesses will also be realigned and upgraded to 6m wide type 7A and Type 7B gravel roads, approximately 100m long in length.

District Road D59, provides the primary access route to Main Road R56, for the communities of Magadaleneni, Engqokweni and to the Sigunge Primary School and KwaNkhukhu Secondary School, all located within Ward 6 of the Richmond Local Municipality.

The existing causeway drainage structure on D59, over the Kwamagoda River is the only river crossing en route to the R56. This structure is continuously prone to overtopping during heavy rainfall thereby preventing access to the R56 for these communities.

#### **EXISTING INFRASTRUCTURE:**

##### **(a) District Road D59**

The existing causeway over the Kwamagoda River, is located on District Road D59 which joins the R56. Joubertstroom on the west. District Road D59 has the following key features:

- Length of road is 15.8km
- Provides access to rural settlements, farming areas, schools and tourist centres
- Classified as a Class 4 road.
- 5-6m wide gravel surface
- On the south, D59 forms a T-junction with main road R56
- Vehicular traffic has to give each other right of way at the causeway and the north facing incline approximately 20m from the causeway, as both these areas have restricted roads widths for simultaneous passage of vehicles

##### **(b) Existing Causeway**

The existing drainage structure over the Kwamagoda River comprises a 26m long by 5.4m wide concrete slab with two 750mm diameter pipes, at each end. The causeway has a sag profile. Hydraulic investigations carried out established that the causeway gets overtopped by 430mm during a 2-year flood. The contractor attention is drawn to the fact the existing causeway may be overtopped during construction, and provision to made for stormwater management.

##### **(c) Main Road P5-3 (R56)**

Main Road P5-3 (R56) forms a T-junction with District Road D59. The R56 intersection is 108m from the existing causeway on D59.

Main Road R56 is a heavily trafficked major regional road which joint Pietermaritzburg, the capital city of KwaZulu Natal to the town of Kokstad in the Eastern Cape via the towns of Richmond, Ixopo and Umzimkulu. The R56 is a Class 3 (to 2), two lane surfaced road.

Currently the junction of these roads is not at right angles, with District Road D59 intersecting the R56 on a crest curve which may impact negatively on sight distance.

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**(d) Existing Pump House**

There is an existing pumphouse and electricity transformer 30m upstream of the existing causeway. The pumphouse and the transformer will not be effected by the works, however shall be protected during the works



**Existing bridge**



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**NEW INFRASTRUCTURE:**

**(a) Roadworks**

The works includes 450m of roadworks upgrade to the following:

- 2x3.5 surfaced lanes (No shoulders)
- 0.5m kerb and channel shoulders
- New access to the bridge from R56

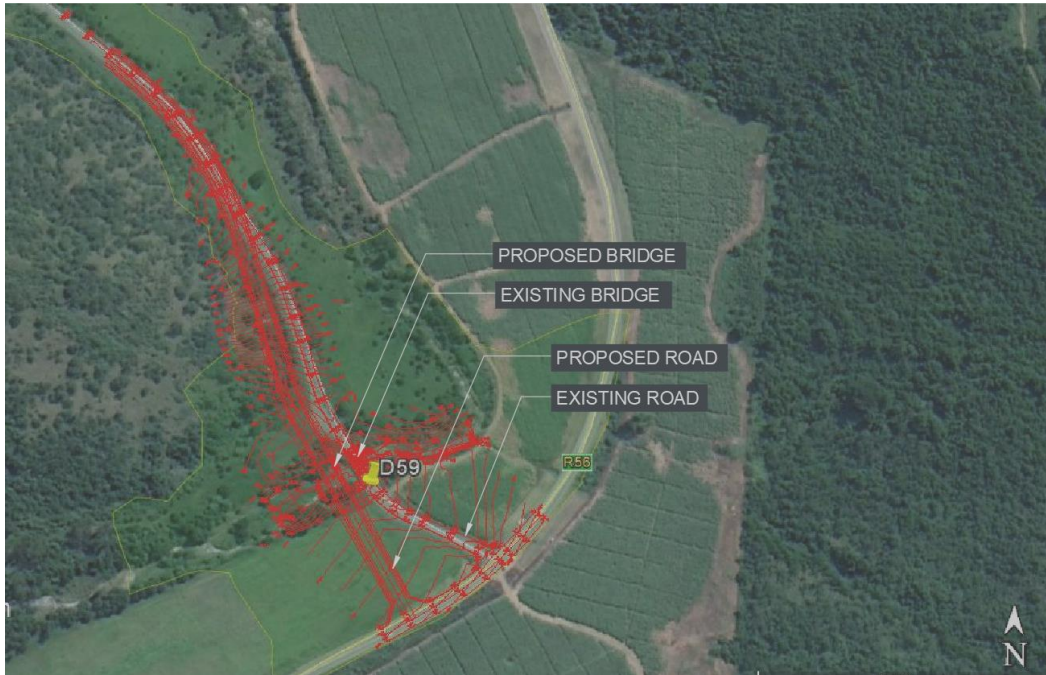
**(b) Structures**

The works comprises of upgrading the existing 26m x 5.4m causeway to a 40m long, 3x13.35m span bridge as per following:

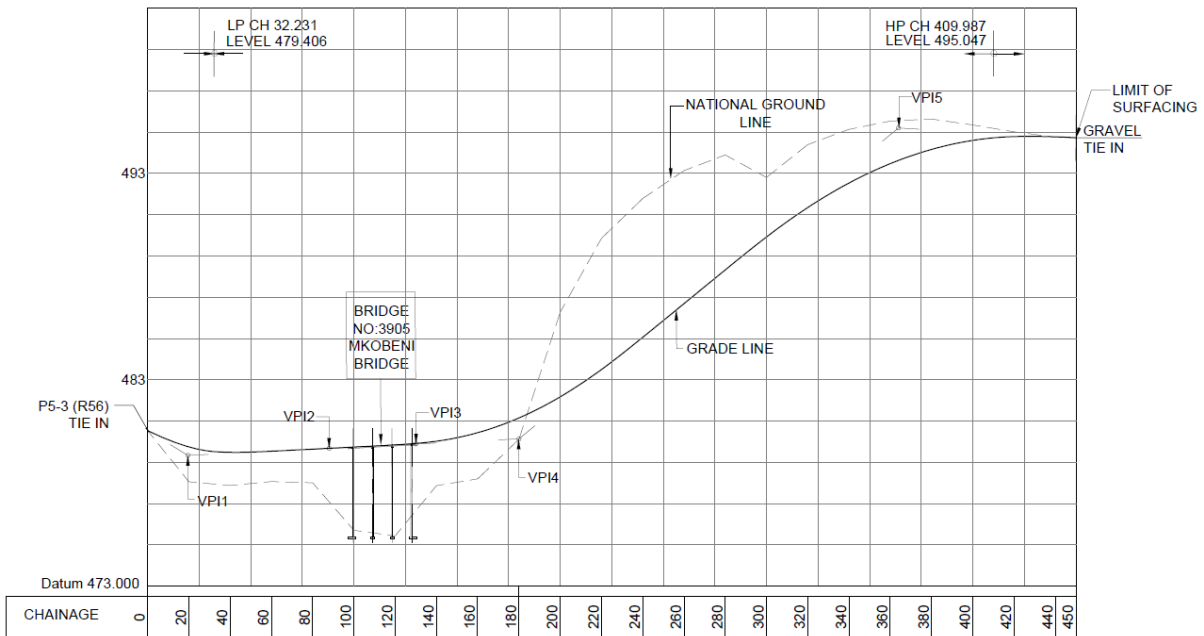
- 2 x 3.5m lanes
- 1.0m shoulders each side, serving as sidewalks for pedestrians.
- simply supported solid slab deck.
- Cantilever abutments with butterfly wingwalls and wall type piers supported on spread foundations on rock substructure.



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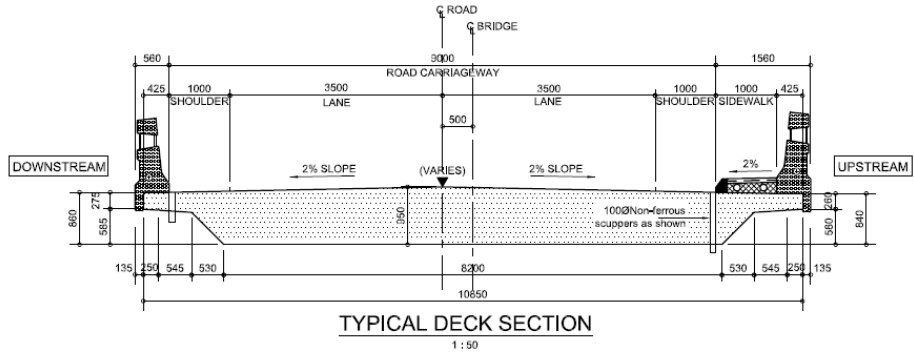
**Proposed Alignment vs Existing Alignment**



**Long section**



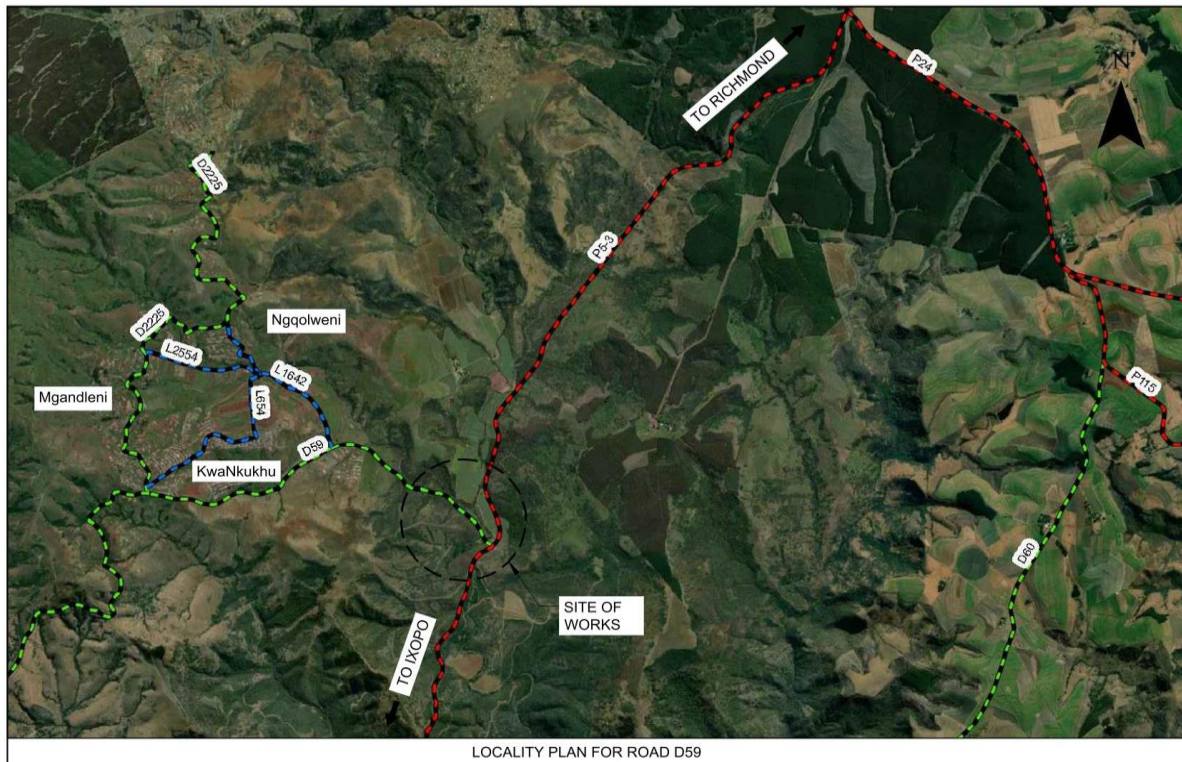
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**Bridge deck section**

**1.2 LOCATION OF THE WORKS**

The works are located on the Kwamagoda river, approximately 12km along the R56 traveling from Richmond to Ixopo, turning right and traveling 108m along district road D59 at geographic co-ordinates 29°58'8.27"S 30°15'13.62"E in the Richmond Municipality KZ No. 227 Ward 6. The Locality Plan Included in Pat C4: Site Information



**Figure C4.1 – Locality Plan**

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**Table C4.1 – Approximate project limit of construction co-ordinates**

<b>Road Name</b>	<b>Km</b>	<b>Latitude</b>	<b>Longitude</b>
<b>D59</b>	<b>KM 0.000</b>	<b>29°58'11.03"S</b>	<b>30°15'15.13"E</b>
	<b>KM 0.450</b>	<b>29°58'5.47"S</b>	<b>30°15'12.22"E</b>
<b>Access Road 1</b>	<b>KM 0.000</b>	<b>29°58'9.29"S</b>	<b>30°15'13.73"E</b>
	<b>KM 0.095</b>	<b>29°58'8.09"S</b>	<b>30°15'15.37"E</b>
<b>Access Road 2</b>	<b>KM 0.000</b>	<b>29°58'11.02"S</b>	<b>30°15'16.16"E</b>
	<b>KM 0.103</b>	<b>29°58'13.54"S</b>	<b>30°15'20.54"E</b>

#### **1.4 EXTENT OF THE WORKS**

The Works to be carried out include the following main activities:

- (a) Establishment on site and clearing and grubbing.
- (b) Provision of traffic accommodation facilities.
- (c) Survey requirements.
- (d) Construction of a new road over river bridge at KM 0.108
- (e) Construction of mass earthworks.
- (f) Construction of all pavement layers, stabilised subbase and base layer.
- (g) Construction of asphalt surfacing.
- (h) Construction of gravel wearing course
- (i) Road prism drainage.
- (j) Construction of erosion protection measures (gabions, stone pitching, etc.)
- (k) Installation of guardrails.
- (l) Relocation of fences
- (m) Demolition of existing causeway
- (n) Finishing and cleaning up of the road and road reserve.
- (o) Continuous quality control over materials and workmanship, and compliance with the Particular Specifications with regard to environmental management and occupational health and safety, during all the above construction activities.
- (p) Removal of all site establishment facilities and constructional plant on completion of the Works.
- (q) Making good of any defects during the Defects Liability Period.

#### **1.5.1 ACCESS TO SITE**

Access to the Site can be obtained from the Main Road R56, approximately 12km traveling from Richmond to Ixopo. The works commence at the intersection of R56 and D59.

#### **1.5.6 MATERIAL SOURCES, SPOIL AND STOCKPILE AREAS**

The approximate leading quantities for the permanent Works to be constructed are as follows:

<b>Description</b>	<b>Source</b>	<b>Approximate quantity</b>
Surfacing – 40mm continuously grade asphalt	Commercial	350 m <sup>2</sup>
Mass earthworks - G9:	Bulk Earthworks	9 864 m <sup>3</sup>
Cut available		3 099 m <sup>3</sup>
Fill required		5 779 m <sup>3</sup>
Excess cut to stockpile		986 m <sup>3</sup>
Cut to spoil		
Selected layers – G9 and G7	Commercial	1 400 m <sup>3</sup>
Stabilised subbase layer – G5B	Commercial	470 m <sup>3</sup>

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Base layer – G4	Commercial	455 m <sup>3</sup>
Concrete for structures	Commercial	980 m <sup>3</sup>
Concrete for lined drains	Commercial	105 m <sup>3</sup>
Guardrails	Commercial	230 m
Reinforcement for structures	Commercial	105 t

The tenderer shall familiarise himself with materials information furnished in section C4.4 of the tender document

The G9 and G7 materials for the lower and upper selected layers respectively shall be obtained either from borrow or from commercial source, and the material for the stabilised subbase layer shall be obtained from stockpile, all as described in the materials report in section C4.4.

The material for the G5B subbase, G4 base, asphalt and all concrete materials shall be obtained from contractor's own sources.

Spoil areas and areas for the temporary stockpiling of construction materials shall be determined and agreed on site in conjunction with the Employer's Agent, the PLC (where applicable) and the local communities (where applicable). The Contractor shall be permitted to use only these agreed spoil and stockpile areas, which shall be landscaped and vegetated on completion of the work.

A borrow pit located on D59 KM 3.5 is available for the contractor to spoil surplus excavated soft material for the employer's later use on other projects. The availability of this borrow pit will be confirmed with the Employer on contractor's appointment.

### **1.5.7 ACCOMMODATION OF TRAFFIC**

The contractor shall appoint a full time traffic safety officer with specific responsibilities. The Contractor shall be required to accommodate traffic on the existing roadway as the detour. During construction of the proposed bridge, the vehicles will use the existing causeway which shall remain open to traffic until the new bridge and associated roadworks are complete.

Some sections of the works on the D59, traffic accommodation will be required to divert the traffic around the construction works. Half-width traffic accommodation with STOP/GO traffic control shall be used between sunrise and sunset only.

The travelling public has the right of way on all public roads. The contractor shall employ suitable, approved methods to control the movement of his equipment in such a way that the travelling public is not endangered.

The overall responsibility of ensuring that adequate temporary traffic control and safety measure are in place at all times shall be that of the contractor.

### **1.5.9 EXISTING SERVICES**

The Contractor shall make himself acquainted with the position of all existing services before any excavation or other work likely to affect the existing services is commenced. The Contractor will be held responsible for any damage to known existing services caused by or arising out of his operations and any damage shall be made good at his own expense. Damage to unknown services shall be repaired as soon as possible and liability shall be determined on site when such damage should occur.



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The known services on the site include:

<b>Service</b>	<b>Description</b>
1.Farm fences	There are farm fences and access gates which are in the vicinity of the development. These will require to be relocated in liaison with the owner.
2. Pump house	There is a pump house in the vicinity of the project which will need to be protected during construction. It is envisaged that irrigation pipework may be affected by the works and will have to be replaced.
3. Power lines, Power Posts and stay wires	The road construction on the south side traverses under power lines which need to be protected during construction. One pole is affected by the roadworks and will have to be relocated
4.Farmland	The proposed new road alignment is in private farmland. The owner needs to be engaged in terms of land acquisition. Engagement with the landowner has already commenced.

### **1.5.12 LABOUR**

A Project Liaison Committee will be established and will a vital means of communication between all parties involved with the project. The composition of the PLC comprises representatives of the Employer, the Employer's Agent and formal structures within the community.

The Contractor shall make use of these communication channels, and shall appoint from amongst his site personnel a responsible person to participate in the affairs of the PLC, and this representative will be also required to attend the monthly PLC meetings.

It is mandatory that the Contractor shall interact with the community via proactive project liaison and project participation by its leaders and constituted organisations and forums, as well as through the employment of its people, and these activities shall constitute essential facets of the project.

Local labour is to be used and the employment of such labour is to be done in conjunction with the PLC. The PLC will form a Labour Committee who shall assist the Contractor with the recruitment of local labourers to ensure an equal distribution of people employed between the various Amakhosi in the area.

### **1.7 TESTING OF MATERIALS**

The Contractor shall arrange for all tests required for process control to be done by a laboratory acceptable to and approved by the Engineer.

### **1.12 CONSTRUCTION PROGRAM**

The Contractor shall submit a detailed time programme in accordance with clause 5.6.2 of the General Conditions of Contract 2015, clause A1.2.7 of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

Under item C1.2.2.1 The program to be submitted must be a Scheme 1 Program due to the nature of the project. As per COTO Pg1-18 and 1-19 a Scheme 1 Program is a relatively simple program in the form of a Bar chart. The main activities that are to be programmed is the implementation of the Small Contractor Development Contracts and Training that is to be provided under the Expanded Public Works Programme.

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The programme shall allow for the value of expected delays due to rainfall.

**2. DRAWINGS**

The drawings that form part of the Tender document shall be used for Tender purposes only. The following drawings are applicable to this project and are attached separately as Annexure D of the document.

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<b>DESCRIPTION</b>	<b>PLAN NO.</b>
<b>Standard Drawings</b>	
Concrete Pipe Culvert Bedding	SD 0401/B
Pipe Culvert Headwall (Masonry)	SD 0406
Subsoil Drainage Road Edge Subsoil Drains	DS 0501/A
Drainage in cuttings: Side Drains	SD 0601/C
Drainage in cuttings: Side Drain Outlet	SD 0603/A
Mitre Chute	SD 0604/A
Pipe Chute, Open Chute and Catchwater Bank Details	SD 0605/A
Service Markers – Positioning and Structural Details	SD 1003/B
Guardrail Erection	SD 1101/B
Guardrail End Treatment	SD 1102/A
Wooden Supported Stockproof Fencing	SD 1202/A
Concrete Pipe Culvert Bedding	SD 0401/B
Pipe Culvert Headwall (Masonry)	SD 0406
Signposting at Roadworks	SD 1304/A
Signposting for Detours and Lane Closures	SD 1303/B
<b>Roadworks Drawings</b>	
Plan Layout	C46797
D59 and Access Road Longitudinal Section	C46798
Cross Sections (Sheet 1 Of 2)	C46799
Cross Sections (Sheet 2 Of 2)	C46800
Access Road and R56 (P5-3) Cross Sections	C46801
Farmer's Access Road Cross Sections, Long sections and Setting Out Details	C46802
<b>Bridgeworks Drawings</b>	
General Arrangement	2002/01
Longitudinal Section	2002/02
Borehole Data	2002/03
Foundation Plan and Setting-out Detail	2002/04
Piers Dimensions	2002/05
Deck Dimension Details	2002/06
Left Abutment Dimension Details	2002/07
Right Abutment Dimension Details	2002/08
Parapets and End Blocks Dimension Details	2002/09
Deck Reinforcement Details	2002/10
Piers Reinforcement Details	2002/11
Left Abutment Reinforcement Details	2002/12
Right Abutment Reinforcement Details	2002/13
Parapets Reinforcement Details	2002/14



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Bending Schedule Sheet 1 of 3	2002/15
Bending Schedule Sheet 2 of 3	2002/16
Bending Schedule Sheet 3 of 3	2002/17

### **C3.2 PROJECT SPECIFICATIONS - PART B**

#### **Amendments to the standard specifications**

**Please read the Entire Part B of the document in conjunction with the relevant supporting documentation and ensure that all items in the bill are priced accordingly.**

The tenderer shall make note of amendments to the following chapters, additional pay items are also included in the Bill Of Quantities:

CHAPTER 1.2 GENERAL REQUIREMENTS AND PROVISIONS

CHAPTER 1.5 ACCOMMODATION OF TRAFFIC

CHAPTER 4.2 CUT MATERIALS

CHAPTER 13.4 CONCRETE

### **7. CONSULTANT/PROJECT SUPERVISOR'S REQUIREMENTS**

- a. The following meetings will be held on site and that attendance by the site agent is compulsory:-
  - i. Monthly Client Progress Meetings.
  - ii. Monthly Technical Meetings.
  - iii. Monthly PLC Meetings.
  - iv. PMT Meetings, TBA.
  
- b. Measurements for Payments
  - i. Measurements for payment will be finalised and closed off by the 20<sup>th</sup> of each month and submitted to the Client within 7 days,
  - ii. Claims for CPG payments shall be paid based on proof of payment.