



**MUNICIPAL NOTICE No.: 086 of 2022  
TENDER NO: 8/2/RNM0367**

**CONSTRUCTION OF MARGATE EXTENSION 3 PEDESTRIAN BRIDGE**

**CIDB CLASSIFICATION 4CE OR HIGHER**

Name of Tenderer: .....

This tender closes at 12h00 on 05 July 2022 at the offices of the Ray Nkonyeni Municipality located at 10 Connor Street, Port Shepstone

**NO LATE SUBMISSIONS WILL BE CONSIDERED**

**BID AMOUNT R \_\_\_\_\_**



**Issued by:**

**RAY NKONYENI MUNICIPALITY**

No.10 Conner Street  
Marburg  
Port Shepstone  
4240

Tel: 039 688 2000  
Fax: 039 682 0327  
Email: unathi.ngcobo@rnm.gov.za



**DARTINGO CONSULTING ENGINEERS (Pty) Ltd.**  
CONSULTING CIVIL & STRUCTURAL ENGINEERS

**Prepared By:**

**DARTINGO CONSULTING ENGINEERS**

P O Box 65596  
Reservoir Hills  
4090

Tel: (031) 266 0903  
Fax: (031) 266 0906  
Email: admin@dartingo.co.za

MBD1

**PART A  
INVITATION TO BID**

<b>YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE RAY NKONYENI MUNICIPALITY</b>					
BID NUMBER:	086 of 2022	CLOSING DATE:	05 July 2022	CLOSING TIME:	12H00
DESCRIPTION	CONSTRUCTION OF MARGATE EXTENSION 3 PEDESTRIAN BRIDGE				
<b>THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).</b>					

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX  
SITUATED AT (STREET ADDRESS)

10 Connor Street				
Port Shepstone				
4240				
<b>SUPPLIER INFORMATION</b>				
NAME OF BIDDER				
POSTAL ADDRESS				
STREET ADDRESS				
TELEPHONE NUMBER	CODE		NUMBER	
CELLPHONE NUMBER				
FACSIMILE NUMBER	CODE		NUMBER	
E-MAIL ADDRESS				
VAT REGISTRATION NUMBER				
TAX COMPLIANCE STATUS	TCS PIN:		OR	CSD No:
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	<input type="checkbox"/> Yes <input type="checkbox"/> No	B-BBEE STATUS LEVEL SWORN AFFIDAVIT		<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES &amp; QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]</b>				
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]	
TOTAL NUMBER OF ITEMS OFFERED		TOTAL BID PRICE	R	
SIGNATURE OF BIDDER	.....	DATE		
CAPACITY UNDER WHICH THIS BID IS SIGNED				
<b>BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:</b>			<b>TECHNICAL INFORMATION MAY BE DIRECTED TO:</b>	
DEPARTMENT	SUPPLYCHAIN MANAGEMENT		CONTACT PERSON	TECHNICAL SERVICES
CONTACT PERSON	BONGANI MFENQA		TELEPHONE NUMBER	UNATHI NGCOBO
TELEPHONE NUMBER	039 312 8304		FACSIMILE NUMBER	039 688 2197
E-MAIL ADDRESS	<a href="mailto:bongani.mfenqa@rnm.gov.za">bongani.mfenqa@rnm.gov.za</a>		E-MAIL ADDRESS	<a href="mailto:unathi.ngcobo@rnm.gov.za">unathi.ngcobo@rnm.gov.za</a>

## PART B TERMS AND CONDITIONS FOR BIDDING

<b>1. BID SUBMISSION:</b>	
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.	
1.2. <b>ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED (NOT TO BE RE-TYPED) OR ONLINE</b>	
1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.	
<b>2. TAX COMPLIANCE REQUIREMENTS</b>	
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.	
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.	
2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.	
2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3.	
2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.	
2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.	
2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.	
<b>3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS</b>	
3.1. IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)	<input type="checkbox"/> YES <input type="checkbox"/> NO
3.2. DOES THE ENTITY HAVE A BRANCH IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
3.3. DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
3.4. DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
3.5. IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	<input type="checkbox"/> YES <input type="checkbox"/> NO
<b>IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.</b>	

**NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.  
NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.**

SIGNATURE OF BIDDER:.....

CAPACITY UNDER WHICH THIS BID IS SIGNED:.....

DATE:.....

**RAY NKONYENI MUNICIPALITY**

**MUNICIPAL NOTICE No.: 086 of 2022  
TENDER NO: 8/2/RNM0367**

**CONSTRUCTION OF MARGATE EXTENSION 3 PEDESTRIAN BRIDGE**

**GENERAL TENDER INFORMATION**

<b>TENDER ADVERTISED</b>	:	02 June 20222
<b>ESTIMATED CIDB CONTRACTOR GRADING</b>	:	4CE OR HIGHER
<b>CLARIFICATION MEETING</b>	:	TUESDAY 14 JUNE 2022
<b>VENUE FOR CLARIFICATION MEETING</b>	:	VIRTUAL CLARIFICATION MEETING
<b>CLOSING DATE</b>	:	TUESDAY, 5 JULY 2022
<b>CLOSING TIME</b>	:	12H00
<b>CLOSING VENUE</b>	:	Bid Box at Municipal Offices at 10 Connor Street, Port Shepstone
<b>INSTRUCTIONS</b>	:	Fully completed Bid Documents, with two (2) copies of the original document in a sealed envelope clearly marked "Bid name and Bid number" containing the Tender Documents (completed in all respects including C.1.1 Form of Offer) plus any additional supporting documentation, must be deposited into the bid box.

<b>Contents</b>		
<b>Number</b>	<b>Heading</b>	<b>Pages</b>
<b>The Tender</b>		
<b>Part T1: Tendering Procedures</b>		
T1.1	Tender Notice And Invitation To Tender	T1.2
T1.2	Tender Data	T1.4
<b>Part T2: Returnable Documents</b>		
T2.1	List Of Returnable Documents	T2.2
T2.2	Returnable Schedules	T2.3
<b>The Contract</b>		
<b>Part C1: Agreements and Contract Data</b>		
C1.1	Form Of Offer and Acceptance	C1.2
C1.2	Contract Data	C1.7
C1.3	Performance Guarantee	C1.14
C1.4	Occupational Health and Safety Agreement	C1.17
<b>Part C2: Pricing Data and Bill of Quantities</b>		
C2.1	Pricing Instructions	C2.2
C2.2	Bill of Quantities	C2.7
<b>Part C3: Scope of Work</b>		
C3.1	Description of the Works	C3.2
C3.2	Engineering	C3.4
C3.3	Procurement	C3.5
C3.4	Construction	C3.6
C3.5	Management	C3.13
C3.6	Annexes	C3.15
<b>Part C4: Site Information</b>		
C4.1	Locality Plan	C4.2
C4.2	Geotechnical Report	C4.4
C4.3	Drawings	C4.5

## Part T1: Tendering Procedures

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T1.1	Tender Notice and Invitation to Tender	T1.2
T1.2	Tender Data	T1.4
T1.2.1	Standard Conditions of Tender	T1.4
T1.2.2	Variations to the Standard Conditions of Tender	T1.17
T1.2.3	Additional Conditions of Tender	T1.26

**RAY NKONYENI MUNICIPALITY**  
**NOTICE NO: 086 OF 2022**  
**TENDER NO: 8/2/RNM0367**  
**CONSTRUCTION OF MARGATE EXTENSION 3 PEDESTRIAN BRIDGE**  
**WARD 6**

**T1.1 TENDER NOTICE AND INVITATION TO TENDER**

Bids are hereby invited to tender for the **CONSTRUCTION OF MARGATE EXTENSION 3 PEDESTRIAN BRIDGE - WARD 6**, within Ray Nkonyeni Municipality as specified in the under-mentioned bid document. Tenderers who are registered with the Construction Industry Development Board (CIDB) with a classification grading of 4CE or HIGHER, are eligible to submit a tender and will be considered for award.

Bid documents can be downloaded for free from the e-tenders portal <https://www.etenders.gov.za/> or downloaded from Ray Nkonyeni Municipality website <http://www.rnm.gov.za/> , as from **Friday 03 June 2022**.

**A non-compulsory virtual clarification meeting will be held by the Department of Technical Services on Tuesday 14 June 2022 at 09h00. Bidders willing to participate in the meeting must send their email addresses to Unathi Ngcobo at [unathi.ngcobo@rnm.gov.za](mailto:unathi.ngcobo@rnm.gov.za) no later than 10 June 2022.**

Fully completed Bid documents, with two (2) copies of the original document in a sealed envelope, must be clearly marked with the relevant Bid Number as follows: - **TENDER NO: 8/2/RNM0367- CONSTRUCTION OF MARGATE EXTENSION 3 PEDESTRIAN BRIDGE - WARD 6.**

The completed Bids (**Original and 2 copies**) must be deposited in the bid box, situated in the foyer of the Municipal Offices at 10 Connor Street, Port Shepstone, no later than **Tuesday 05 JULY 2022 at 12h00**. After closure, the tender will be opened in public.

The successful bidder may be expected to subcontract 10% of the works to local sub- contractors as per Ray Nkonyeni Municipality SCM policy.

### **Stage 1: Pre-qualifying criteria**

#### **LOCAL CONTENT**

- Bidder will be disqualified if the Declaration Certificate and Annex C (Local Content Declaration Summary Schedule) are not submitted as part of the Bid.

Description of services, works or goods	Stipulated minimum threshold
Reinforcement Steel	100%
Structural Steel	100%
Gabions / Reno-Mattresses	100%
Cement	100%
Bolts and Nuts	100%

For the stipulated minimum threshold for local production and content, refer to MBD 6.2.

### **Stage 2 : Functionality**

The Functionality will comprise of the following based on the criteria indicated in the respective tender returnable: Attach all supporting documentation for the following table.

Criterion	Possible Full Points
Experience of the Bidder	35
Qualifications and experience of Site Agent	20
Experience of Foreman	20
Construction Methodology	25
<b>Total Possible Points</b>	<b>100</b>

Bidders must score a minimum of 60% to pass functionality evaluation.

### **Stage 3: Financial Offer and Preference**

The evaluation will be 80/20 Preference Point System for Financial Offer and Price.

All technical enquiries may be addressed in writing to Dartingo Consulting Engineers (Pty) Ltd, for the attention of **Premesh Jagganath**, Email: [premesh@dartingo.co.za](mailto:premesh@dartingo.co.za) / [admin@dartingo.co.za](mailto:admin@dartingo.co.za) or Tel no. **031 266 0309** by no later than three days before tender closure. Procurement enquiries may be addressed to **Bongani Mfenqa** of Ray Nkonyeni Municipality by no later than three days before tender closure on Tel No.: **039 312 8304** or Email: [bongani.mfenqa@rnm.gov.za](mailto:bongani.mfenqa@rnm.gov.za).



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**NOTE TO BIDDERS ON BID CONDITIONS:**

- The Supply Chain Management Policy of Ray Nkonyeni Municipality will apply. The Council reserves the right not to accept the lowest bid or any bid and reserves the right to accept the whole or part of the bid, or to reject all bids and cancel the notice to tender.
- Bids that are submitted late, incomplete, unsigned or by facsimile, electronically or not completed in black ink will be rejected and not accepted for further evaluation.
- Members or Directors of Companies or Service Providers who are state employees are not allowed to bid or quote.
- The bidder who will be awarded the contract may sub-contract a portion of works to the local Small, Medium and Micro-sized Enterprises (SMMEs) in accordance with approved Ray Nkonyeni SCM Policy
- Unsuccessful bidders will be informed of the tender outcome through Municipal website. Aggrieved unsuccessful bidders will be allowed to lodge, within fourteen (14) days of the decision or action, a written objection or complaint to the Office of the Municipal Manager through email, [mm@rnm.gov.za](mailto:mm@rnm.gov.za) or fax number 086 529 7195. Complaints or objections received after fourteen (14) days of the date of the notice **will not** be entertained.
- Bids submitted are to be valid for a period of **240 days**.

**NB: FAILURE TO SUBMIT TWO (2) COPIES WILL RESULT IN DISQUALIFICATION.**

Ray Nkonyeni Municipality  
SM Mbili-Municipal Manager  
P O Box 5  
Port Shepstone  
4240

## **T1.2 TENDER DATA**

### **T1.2.1 STANDARD CONDITIONS OF TENDER**

The Standard Conditions of Tender as contained in Annex C of the legislated Standard Conditions of Tender as published in Board Notice 423 of 2019 in Government Gazette 42622 of 8 August 2019

#### **C.1 GENERAL**

##### **C.1.1 Actions**

C.1.1.1 The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in C.2 and C.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices

C.1.1.2 The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

**Note:**

1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.

2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

C.1.1.3 The employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

##### **C.1.2 Tender Documents**

The documents issued by the employer for the purpose of a tender offer are listed in the tender data.

##### **C.1.3 Interpretation**

C.1.3.1 The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

C.1.3.2 These conditions of tender, the tender data and tender schedules which are required for tender evaluation purposes, shall form part of any contract arising from the invitation to tender

C.1.3.3 For the purposes of these conditions of tender, the following definitions apply

- a) conflict of interest means any situation in which:
  - i) *someone in a position of trust has competing professional or personal interests which make it difficult to fulfill his or her duties impartially;*
  - ii) *an individual or tenderer is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or*
  - iii) *incompatibility or contradictory interests exist between an employee and the tenderer who employs that employee.*
- b) comparative offer means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;
- c) corrupt practice means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;
- d) fraudulent practice means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels;

#### **C.1.4 Communication and employer's agent**

Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied and recorded. Communications shall be in the English language. The employer shall not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the tender data.

#### **C.1.5 Cancellation and Re-Invitation of Tenders**

C.1.5.1 An employer may, prior to the award of the tender, cancel a tender if-

- a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation;
- b) funds are no longer available to cover the total envisaged expenditure; or
- c) no acceptable tenders are received.
- d) there is a material irregularity in the tender process.

C.1.5.2 The decision to cancel a tender invitation must be published in the same manner in which the original tender invitation was advertised

C.1.5.3 An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.

#### **C.1.6 Procurement procedures**

C.1.6.1 General

Unless otherwise stated in the tender data, a contract will, subject to C.3.13, be concluded with the tenderer who in terms of C.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders

**C.1.6.2** Competitive negotiation procedure

**C.1.6.2.1** Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of C.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

**C.1.6.2.2** All responsive tenderers or at least a minimum of not less than three responsive tenderers that are highest ranked in terms of the evaluation criteria stated in the tender data shall be invited to enter into competitive negotiations based on the principle of equal treatment, keeping confidential the proposed solutions and associated information.

Notwithstanding the provisions of C.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

**C.1.6.2.3** At the conclusion of each round of negotiations, tenderers shall be invited by the employer to revise their tender offer based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.

**C.1.6.2.4** The contract shall be awarded in accordance with the provisions of C.3.11 and C.3.13 after tenderers have been requested to submit their best and final offer.

**C.1.6.3** Proposal procedure using the two stage-system

**C.1.6.3.1** Option 1

Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

**C.1.6.3.2** Option 2

**C.1.6.3.2.1** Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.

**C.1.6.3.2.2** The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

**C.2 TENDERER'S OBLIGATIONS**

**C.2.1 Eligibility**

C.2.1.1 Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.

C.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

**C.2.2 Cost of tendering**

C.2.2.1 Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.

C.2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

**C.2.3 Check documents**

Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission

**C.2.4 Confidentiality and copyright of documents**

Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation

**C.2.5 Reference documents**

Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

**C.2.6 Acknowledge addenda**

Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

**C.2.7 Clarification meeting**

Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

**C.2.8 Seek clarification**

Request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days before the closing time stated in the tender data.

**C.2.9 Insurance**

Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.

**C.2.10 Pricing the tender offer**

C.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable fourteen (14) days before the closing time stated in the tender data.

C.2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.

C.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data

C.2.10.4 State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

**C.2.11 Alterations to documents**

Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations

**C.2.12 Alternative tender offers**

C.2.12.1 Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.

C.2.12.2 Accept that an alternative tender offer must be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

C.2.12.3 An alternative tender offer must only be considered if the main tender offer is the winning tender.

**C.2.13 Submitting a tender offer**

C.2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

- C.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.
- C.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.
- C.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.
- C.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
- C.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
- C.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.
- C.2.13.8 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.
- C.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.
- C.2.14 Information and data to be completed in all respects**
- Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.
- C.2.15 Closing time**
- C.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.
- C.2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

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**C.2.16 Tender offer validity**

- C.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.
- C.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.
- C.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in C.2.16 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on Consumer Price Index (CPI).
- C.2.16.4 Where a tender submission is to be substituted, a tenderer must submit a substitute tender in accordance with the requirements of C.2.13 with the packages clearly marked as "SUBSTITUTE".

**C.2.17 Clarification of tender offer after submission**

Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.

Note: Sub-clause C.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.

**C.2.18 Provide other material**

- C.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment.

Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

- C.2.18.2 Dispose of samples of materials provided for evaluation by the employer, where required

**C.2.19 Inspections, tests, and analysis**

Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.

**C.2.20 Submit securities, bonds and policies**

If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data



**C.2.21 Check final draft**

Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

**C.2.22 Return of other tender documents**

If so instructed by the employer, return all retained tender documents within twenty-eight (28) days after the expiry of the validity period stated in the tender data.

**C.2.23 Certificates**

Include in the tender submission or provide the employer with any certificates as stated in the tender data.

**C.3 THE EMPLOYER'S UNDERTAKINGS**

**C.3.1 Respond to requests from the tenderer**

C.3.1.1 Unless otherwise stated in the tender Data, respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who collected tender documents.

C.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:

- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
- c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

**C.3.2 Issue Addenda**

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three (3) working days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who collected tender documents.

**C.3.3 Return late tender offers**

Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

### **C.3.4 Opening of tender submissions**

C.3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.

C.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where

applicable, the total of his prices, number of points claimed for its BBBEE status level and time for completion for the main tender offer only.

C.3.4.3 Make available the record outlined in C.3.4.2 to all interested persons upon request.

### **C.3.5 Two-envelope system**

C.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

C.3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

### **C.3.6 Non-disclosure**

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

### **C.3.7 Grounds for rejection and disqualification**

Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.

### **C.3.8 Test for responsiveness**

C.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and

- c) is responsive to the other requirements of the tender documents.

C.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.

### **C.3.9 Arithmetical errors, omissions and discrepancies**

C.3.9.1 Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.

C.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.3.11 for:

- a) the gross misplacement of the decimal point in any unit rate;
- b) omissions made in completing the pricing schedule or bills of quantities; or
- c) arithmetic errors in:
- (i) *line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or*
- (ii) *the summation of the prices.*

C.3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

C.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

- a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.

- b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total

of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

**C.3.10 Clarification of a tender offer**

Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

**C.3.11 Evaluation of tender offers**

The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project.

Conditions of tender are by definition the document that establishes a tenderer's obligations in submitting a tender and the employer's undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures.

<b>The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:</b>	
<b>Requirement</b>	<b>Qualitative interpretation of goal</b>
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

The activities associated with evaluating tender offers are as follows:

- a) Open and record tender offers received
- b) Determine whether or not tender offers are complete
- c) Determine whether or not tender offers are responsive
- d) Evaluate tender offers
- e) Determine if there are any grounds for disqualification
- f) Determine acceptability of preferred tenderer

- g) Prepare a tender evaluation report
- h) Confirm the recommendation contained in the tender evaluation report

**C.3.11.1 General**

The employer must appoint an evaluation panel of not less than three persons conversant with the proposed scope of works to evaluate each responsive tender offer using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

**C.3.12 Insurance provided by the employer**

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

**C.3.13 Acceptance of tender offer**

Accept the tender offer; if in the opinion of the employer, it does not present any risk and only if the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract;
- c) has the legal capacity to enter into the contract;
- d) is not; insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing;
- e) complies with the legal requirements, if any, stated in the tender data; and
- f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

**C.3.14 Prepare contract documents**

**C.3.14.1** If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents and
- c) other revisions agreed between the employer and the successful tenderer.

**C.3.14.2** Complete the schedule of deviations attached to the form of offer and acceptance, if any.

**C.3.15 Complete adjudicator's contract**

Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed

**C.3.16 Registration of the award**

An employer must, within twenty-one (21) working days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the employer, register and publish the award on the cidb Register of Projects.

**C.3.17 Provide copies of the contracts**

Provide to the successful tenderer the number of copies stated in the Tender Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

**C.3.18 Provide written reasons for actions taken**

Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender but withhold information which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

## T1.2.2. VARIATIONS TO THE STANDARD CONDITIONS OF TENDER

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this Tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of data given below is cross-referenced to the Clause in the Standard Conditions of Tender to which it mainly applies.

Clause No	Description
C.1.1.1	<p>The Employer is:</p> <p>RAY NKONYENI MUNICIPALITY</p> <p>No.10 Conner Street Marburg Port Shepstone 4240</p> <p>Tel: 039 688 2000 Ms. Unathi Ngcobo email: <a href="mailto:unathi.ngcobo@rnm.gov.za">unathi.ngcobo@rnm.gov.za</a>.</p>
C.1.2	<p>Tender Documents</p> <p>The Tender Documents issued by the Employer comprise:</p> <p>Part T1 T1.1 Tender Notice and Invitation to Tender T1.2 Tender Data</p> <p>Part T2 T2.1 List of Returnable Documents T2.2 Returnable Schedules</p> <p>Part C1 Agreements and Contract Data</p> <p>Part C2 Pricing data</p> <p>Part C3 Scope of work</p> <p>Part C4 Site information</p> <p>Tender Drawings</p> <p>The following documents form part of the Contract and is NOT provided by the Employer, the Contractor is required to obtain these documents for the execution of the contract:</p> <p>"General Conditions of Contract (GCC) for Construction Works -3rd Edition 2015"</p>

Clause No	Description												
	<p>This document is issued by the South African Institution of Civil Engineering. (Short title "General Conditions of Contract 2015") and is obtainable separately. Tenderers shall obtain their own copies.</p> <p>The Occupational Health and Safety Act No 85 of 1993 and Amendment Act No 181 of 1993, and the Construction Regulations 2014. This document is obtainable separately, and Tenderers shall obtain their own copies.</p> <p>Ray Nkonyeni Local Municipality's Occupational Health and Safety Specification in terms of the requirements of Construction Regulations 4(1)(a). This document is available for review at the offices of the Employer and/or the Employer's agent. Tenderers shall obtain their own copies.</p> <p>In addition Tenderers are advised, in their own interest, to obtain their own copies of the following acts, regulations and standards referred to in this document as they are essential for the Tenderer to get acquainted with the basics of construction management, the implementation of preferential construction procurement policies and participation of targeted enterprise and labour.</p> <p>The Construction Industry Development Board Act No 38 of 2000 and the Regulations in terms of the CIDB Act 38/2000, Government Notice No 692 of 9 June 2004,</p> <p>SANS 1921:2004 Construction and management Part 1: General Engineering and Construction Works; Part 6: HIV/AIDS Awareness.</p> <p>SANS 10396:2003 Implementing Preferential Construction Procurement Policies using Targeted Procurement Procedures</p> <p>SANS 1914:2003 Targeted Construction Procurement, Parts 1 to 6, dealing with Participation of Targeted Enterprises, Joint Ventures, Targeted Labour etc.</p> <p>CIDB, "The Standard for Uniformity in Construction Procurement Annex C, Standard Conditions of Tender", Board Notice 423 of 2019 of Government Gazette 426222 of 2019</p>												
C.1.4	<p>The Employer's Agent's (also referred to as the Engineer) details are as follows:</p> <table><tr><td>Name</td><td>: Dartingo Consulting Engineers (Pty) Ltd</td></tr><tr><td>Represented by</td><td>: Premesh Jagganath</td></tr><tr><td>Address</td><td>: 64 Underwood Road, Pinetown, 3610</td></tr><tr><td>Tel No</td><td>: (031) 266 0903</td></tr><tr><td>Fax No</td><td>: (031) 266 0906</td></tr><tr><td>E-mail</td><td>: premesh@dartingo.co.za</td></tr></table> <p>All communication between the tenderer and the employer shall be addressed to Mr Premesh Jagganath of Dartingo Consulting Engineers (Pty) Ltd, in writing</p>	Name	: Dartingo Consulting Engineers (Pty) Ltd	Represented by	: Premesh Jagganath	Address	: 64 Underwood Road, Pinetown, 3610	Tel No	: (031) 266 0903	Fax No	: (031) 266 0906	E-mail	: premesh@dartingo.co.za
Name	: Dartingo Consulting Engineers (Pty) Ltd												
Represented by	: Premesh Jagganath												
Address	: 64 Underwood Road, Pinetown, 3610												
Tel No	: (031) 266 0903												
Fax No	: (031) 266 0906												
E-mail	: premesh@dartingo.co.za												
C.2	<b>TENDERER'S OBLIGATIONS</b>												
C.2.1	<p><b>Eligibility</b></p> <p>The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to submit tenders:</p>												



Clause No	Description
	<ul style="list-style-type: none"><li>a. contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 4CE of construction work, and who satisfy the following criteria:<ul style="list-style-type: none"><li>1. Availability of resources</li><li>2. Availability of skills to manage and perform the contract – including staff which satisfies EPWP requirements (if applicable).</li><li>3. Previous experience on contracts of a similar value and nature.</li><li>4. Financial standing and capability.</li></ul></li> <li>b. Joint ventures are eligible to submit tenders provided that:<ul style="list-style-type: none"><li>1. every member of the joint venture is registered with the CIDB.</li><li>2. the lead partner has a contractor grading designation in the 4CE or Higher class of construction work: and,</li><li>3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 4CE class of construction works</li></ul></li></ul>
C.2.7	<p>Clarification meeting</p> <p>The arrangement for a non-compulsory virtual clarification meeting is as stated in the Tender Notice and Invitation to Tender is as follows:</p> <p>Date : 14 June 2022 Time : 09h00</p> <p>Tenderers should be represented at the clarification meeting by a person who is suitably qualified and experienced to comprehend the implications of the work involved.</p> <p>The briefing will be virtual there will be no site visits, however location will be shared for bidders to view the site.</p>
C.2.12	<p>Alternative Offers</p> <p>Delete the contents of Clause C.2.12 and replace with the following: Alternative tender do not apply</p>
C.2.13	<p>Submitting a Tender Offer</p> <ul style="list-style-type: none"><li>a. Add the following at the end of C3.2.13(c): Parts of each tender offer communicated on paper shall be submitted as an original, plus two (2) copies.</li> <li>b. Add the following after the first sentence of C3.2.13(d): The tender shall be signed by a person duly authorised to do so. Tenders submitted by joint ventures of two or more firms shall be accompanied by the document of formation of the joint venture, authenticated by a notary public or other official deputed to witness sworn statements, in which is defined precisely the conditions under which the joint venture will function, its period of duration, the persons authorised to represent and obligate it, the participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning.</li> <li>c. Add the following after the first sentence of C3.2.13(e):</li></ul>

Clause No	Description
	<p>The employer's address for delivery of tender offers and identification details to be shown on each tender offer package are: Location of tender box : Foyer of Ray Nkonyeni Local Municipality Offices Physical address : 10 Connor Street, Port Shepstone Identification details : Tender number - 8/2/RNM0367 Construction of Margate Extension 3 Pedestrian Bridge - Ward 6</p> <p>Sealed tenders with the Tenderer's name and address and the endorsement "Tender number - 8/2/RNM0367 CONSTRUCTION OF MARGATE EXTENSION 3 PEDESTRIAN BRIDGE - WARD 6" on the envelope, must be placed in the appropriate official tender box at the abovementioned address.</p>
C.2.15	<p><b>Tender Submissions</b> Add the following: The closing time for submission of tender offers is <b>05 JULY 2022 at 12h00</b>, as stated in the Tender Notice and Invitation to Tender. Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.</p>
C.2.16	<p><b>Tender Validity</b> The Tender Offer Validity Period is <b>240 days</b> from the tender closing date</p>
C.2.17	<p><b>Clarification of Tender Offer after Submission</b> Add the following: A tender may be rejected as non-responsive if the tenderer fails to provide any clarification requested by the employer, or confirmation of registration with CIDB within the time for submission stated in the employer's written request for such clarification or confirmation. A tender may be rejected if the unit rates or lump sums for some of the items in the bills/schedules of quantities are, in the opinion of the Employer, unreasonable or out of proportion, and the tenderer fails, within the time stated in writing by the Employer to justify any specific rates or lump sums (i.e. to provide a financial breakdown of how such rates or sums were obtained) or to adjust the unit rates or lump sums for such items while retaining the total of the prices unchanged.</p>
C.2.18	<p><b>Contractors Staff</b> The tender shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements</p>
C.2.20	<p><b>Performance Bond</b> The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part T2.2 of this procurement document</p>
C.2.23	<p><b>Certificates</b> Add the following: The tenderer is required to submit the following certificates with the tender:</p> <ol style="list-style-type: none"><li>a. Certificate of Contractor Registration (CIDB)</li></ol>

Clause No	Description
	<p>Either certified copy of the Certificate of Contractor Registration issued by the Construction Industry Development Board or of the Application Form for registration in terms of the Construction Industry Development Board Act (Form F006).</p> <p>Where a tenderer satisfies CIDB contractor grading designation requirements through joint venture formation, such tenderers must submit the Certificates of Contractor Registration in respect of each partner.</p> <p>b. Tax Clearance Certificate Tenderers shall be registered and in good standing with the South African Revenue Services (SARS) and shall submit/append documentary evidence/proof in the form of an original or certified copy of valid Tax Clearance Certificate issued by SARS. Failure to provide a valid Tax Clearance Certificate will result in the tender being rejected.</p> <p>Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance Certificate.</p> <p>c. Company Registration Certified Copies of company registration documents.</p> <p>Each party to a Consortium/Joint Venture shall submit separate company registration documents.</p> <p>d. Ownership Proof of Preference Points Claimed</p> <p>Each party to a Consortium/Joint Venture shall submit separate certified copies in the above regard.</p> <p>e. BBBEE Certificate Certified Copies of ID documents of Shareholders/Members/Directors of the business enterprises.</p> <p>Joint Venture shall submit a consolidated BBBEE Certificate of the new Legal Entity.</p>
C.3	<b>EMPLOYERS UNDERTAKINGS</b>
C.3.1	<b>Respond to Requests from the Tenderer</b>  C3.3.1(a) Respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.
C.3.4	<b>Opening of Tender Submissions</b>  Add the following: The time and location for opening of the tender offers is:  Time: 12H00, Tuesday 05 JULY 2022 Location: Tender Box, Foyer of Ray Nkonyeni Local Municipality Offices, 10 Connor Street, Port Shepstone  Tenders will be opened immediately after the closing time for tenders at 12H00.
C.3.8	<b>Test for Responsiveness</b>

Clause No	Description
	<p>Add the following after C3.3.8(b): Tenders will be considered non-responsive if:</p> <ul style="list-style-type: none"><li>• the tenderer has not completed and/or signed the Offer portion of Part C1: Agreements and Contract Data: Form of Offer And Acceptance.</li><li>• the tenderer does not comply with the Contractor's CIDB grading designation specified in C3.2.1(a) above.</li><li>• The tenderer has failed to clarify or submit any supporting documentation within the time for submission stated in the employer's written request.</li></ul>
C.3.11	<p>Method of Tender Evaluation</p> <p>General Add the following: The procedure for the evaluation of responsive tenders is Method 4, where the total number (TEV) of adjudication points achieved = NFO + NP + NQ as detailed below.</p> <p>where:</p> <ul style="list-style-type: none"><li>• NFO is the number of tender evaluation points awarded for the financial offer made in accordance with C3.3.11(g)</li><li>• Np is the number of tender evaluation points awarded for preferences claimed in accordance with C3.3.11(h).</li><li>• NQ is the number of tender evaluation points awarded for quality offered in accordance with C3.3.11(i).</li></ul> <p>Method 4, only, shall apply.</p> <p>Scoring Financial Offers Add the following: Score the financial offers of remaining responsive tender offers using the following formula:</p> $NFO = W1 \times A$ <p>where:</p> <ul style="list-style-type: none"><li>• NFO is the number of tender evaluation points awarded for the financial offer.</li><li>• W1 is the maximum possible number of tender evaluation points awarded for the financial offer as stated in the Tender Data.</li><li>• A is a number calculated using the formula and option described in Table C.1 as stated in the Tender Data.</li></ul> <p><b>Scoring Preferences</b></p> <p>Up to <b>20 points</b> (for financial values up to R50 000 000) or 10 points (for financial values over R50 000 000) will be awarded to tenderers who are found to be eligible for the preference claimed.</p> <p>Points will be awarded to Tenderers for attaining the BBBEE status level of contribution as per the Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2011 as detailed below.</p>

Clause No	Description	
	<b>BBBEE Status Level Contributor</b>	<b>Number of Points (80/20 Principle)</b>
	1	20
	2	18
	3	14
	4	12
	5	8
	6	6
	7	4
	8	2
	Non-Compliant Contributor	0

Score each of the criteria and sub criteria for quality in accordance with the provisions of the Tender Data.

Calculate the total number of tender evaluation points for quality using the following formula:

$$NQ = W_2 \times S_o / M_s$$

where:

- $S_o$  is the score for quality allocated to the submission under consideration;
- $M_s$  is the maximum possible score for quality in respect of a submission; and
- $W_2$  is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

#### QUALITY SCORING CRITERIA

Tenderers are to submit information in respect of the following criteria upon which they will be scored for Quality. Failure to submit the relevant information will/or may result in zero scores.

The quality will comprise scores for the following based on criteria indicated in the respective tender returnable:

- A maximum of **20 points** will be awarded for relevant qualifications and demonstrated experience of the proposed Site Agent.
- A maximum of **20 points** will be awarded for qualifications and demonstrated experience of the proposed Site Foreman.
- A maximum of **35 points** will be awarded for demonstrated experience with respect to undertaking construction of Gravel Roads, Reinforced Concrete Works, Box Culverts and Gabions.
- A maximum of **25 points** will be awarded for Construction Methodology

Score quality, rejecting all tender offers that fail to score the minimum number of **60% (60 out of 100)** of the points for quality stated in the tender data. Point system for functionality will be as per the table below:

#### DETAILED BREAKDOWN OF QUALITY POINTS

Details	Score	Max. Points
<b>Criteria 1: Approach</b>		
<b>1.1 Project Method Statement</b>		
<b>Project Method Statement must include:</b> <ol style="list-style-type: none"> <li>The demonstration of the applicant's approach and allocation of resources to achieve task within timeframes</li> <li>Programme which clearly indicate critical paths and time frame</li> </ol>		

Clause No	Description		
	c) Construction administration and site management approach d) Quality and Time Management		
	<b>Points will be scored as follows:</b>		
	• Project Approach Method	5	<b>25</b>
	• Time Frames and Critical Paths	5	
	• Activities	5	
	• Construction Administration	5	
	• Quality Management	5	
	• No Response	0	
	<b>Note:</b> Verification method will be based on Construction Methodology, Programme Work Quality Plan, Health and Safety Plan and Traffic accommodation Plan		
<b>Criteria 2: Applicant's Expertise</b>			
	<b>2.1 Site Agent (SA) personnel with at least a minimum qualification of a National Diploma (NQF6) or equivalent in Civil Engineering or built environment</b>		
	If SA has NQF level 6 (National Diploma) or Higher with 10 years' experience and has completed similar projects	20	<b>20</b>
	If SA has NQF level 6 (National Diploma) or Higher with 5 to 9 years' experience and has completed similar projects	10	
	If SA has NQF level 6 (National Diploma) or Higher with 4 years' or less experience in construction of similar projects	5	
	If SA does NOT have NQF level 6 (National Diploma) or Higher or does NOT have experience in construction of similar projects regardless of other experience or No response	0	
	<b>Note:</b> Verification method will be based on attached CV with Certified Copy of Qualification, with traceable reference. <b>Qualifications obtained from outside South Africa to be accompanied by SAQA certification.</b>		
	<b>2.2 Site Foreman (SF) personnel with at least a minimum experience in Civil Project</b>		
	If SF has 10 years' experience and has completed similar projects	20	<b>20</b>
	If SF has 5-9 years' experience and has completed similar projects	10	
	If SF has 1-4 years' experience and has completed similar projects	5	
	<b>If SF has NOT</b> completed similar projects in last 3 years, regardless of other experience and NO response	0	
	<b>Note:</b> Verification method will be based on attached CV With Certified traceable References		
<b>Criteria 3: Relevant Experience - The company has successfully completed Structural and other projects of similar nature in past five years.</b>			
	5 or more Projects in roads projects including Structural steel, Concrete, and Gabions and Reno-mattresses	35	
	4 or more Projects in roads projects including Structural steel, Concrete, and Gabions and Reno-mattresses	28	
	3 or more Projects in roads projects including Structural steel, Concrete, and Gabions and Reno-mattresses	21	

Clause No	Description		
	2 or more Projects in roads projects including Structural steel, Concrete, and Gabions and Reno-mattresses	14	<b>35</b>
	1 or more Projects in roads projects including Structural steel, Concrete, and Gabions and Reno-mattresses	7	
	No Projects in roads projects including Structural steel, Concrete, and Gabions and Reno-mattresses	0	
	<b>Note:</b> Verification method will be based on attached Appointment letters and Completion Certificates for the same projects		
	<b>TOTAL EVALUATION POINTS SCORE FOR QUALITY</b>		<b>100</b>

C.3.13 Acceptance of Tenders

*Add the following:*

Tender offers will only be accepted if:

- a) the tenderer has in his or her possession an original valid Tax Clearance Certificate issued by the South African Revenue Services or has made arrangements to meet outstanding tax obligations;
- b) the tenderer is registered with the CIDB with an appropriate category of registration; by the tender closing date
- c) the tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
- d) the tenderer has not:
  - abused the Employer's Supply Chain Management System or
  - i) failed to pay municipal rates and taxes or service charges and such rates, taxes and charges are in arrears for more than three months;
  - ii) failed to perform on any previous contract and has been given a written notice to this effect;
- e) the tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process.
- f) the tenderer is not in arrears for more than 3 months with the municipal rates and taxes and municipal services charges;

C.3.17 Copies of Contract

*Add the following:*

The number of paper copies of the signed contract to be provided by the employer is one (1) original plus one (1) original duplicate.

## **T1.2.2 ADDITIONAL CONDITIONS OF TENDER**

The additional conditions of tender are:

### **T.1.2.1.1 Compliance with Occupational Health and Safety Act 1993 and Construction Regulations (as amended 2014)**

Tenderers are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations 2014 issued in terms of Section 43 of the Act. The tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

Tenderers are to note that the Contractor is required to ensure that all sub-contractors or others engaged in the performance of the contract also comply with the above requirements.

The Contractor shall prepare and maintain a Health and Safety File in respect of the project, which shall be available for inspection on Site at all times and handed over to the Employer on Final Completion of the project.

The Contractor is required to submit to the Employer the Occupational Health and Safety Agreement (included in Part C1: Agreements and Contract Data: C1.4 Occupational Health And Safety Agreement) of the Contract Document) and a letter of good standing from the Compensation Commissioner, or a licensed compensation insurer, within 14 days after the Commencement Date of the contract.

### **T.1.2.1.2 Eligibility with Respect to Expanded Public Works Programme**

This Contract does not qualify for consideration as an Expanded Public Works Programme project.

### **T.1.2.1.3 Claims Arising after Submission of Tender**

No claim for any extras arising out of any doubt or obscurity as to the true intent and meaning of anything shown on the Contract Drawings or contained in the Conditions of Contract, Scope of Work and Pricing Data, will be admitted by the Employer/Employer's Agent after the submission of any tender and the Tenderer shall be deemed to have:

- 1) Inspected the Contract Drawings and read and fully understood the Conditions of Contract.
- 2) Read and fully understood the whole text of the Scope of Work and Pricing Data and thoroughly acquainted himself with the nature of the works proposed and generally of all matters which may influence the Contract.
- 3) Visited the site of the proposed works, carefully examined existing conditions, the means of access to the site, the conditions under which the work is to be done, and acquainted himself with any limitations or restrictions that may be imposed by the Municipal or other Authorities in regard to access and transport of materials and plant to and from the site and made the necessary provisions for any additional costs involved thereby.
- 4) Requested the Employer or his duly authorised agent to make clear the actual requirements of anything shown on the Contract Drawings or anything contained in the Scope of Work and Pricing Data, the exact meaning or interpretation of which is not clearly intelligible to the Tenderer.

Before submission of any tender, the Tenderer should check the number of pages, and if any are found to be missing or duplicated, or the figures or writing indistinct, or if the Pricing Data contain any obvious errors, the tenderer must apply to the Employer/Employer's Agent at once to have the same rectified, as no liability will be admitted by the Employer/Employer's Agent in respect of errors in any tender due to the foregoing.

### **T.1.2.1.4 Imbalance in Tendered Rates**



In the event of tendered rates or lump sums being declared by the Employer to be unacceptable to it because they are either excessively low or high or not in proper balance with other rates or lump sums, the Tenderer may be required to produce evidence and advance arguments in support of the tendered rates or lump sums objected to. If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates or lump sums objected to, it may request the tenderer to amend these rates and lump sums along the lines indicated by it.

The Tenderer will then have the option to alter and/or amend the rates and lump sums objected to and such other related amounts as are agreed on by the Employer, but this shall be done without altering the Contract Price.

Should the Tenderer fail to amend the Tender in a manner acceptable to the Employer, the Employer may reject the Tender.

#### **T.1.2.1.5 Community Liaison Officer**

Democratically elected village members who in turn have representation on the overall Project Steering Committee (PSC) represents the residents being served by the project. The Contractor will be required to liaise through the CLO for any matters to do with the community.

#### **T.1.2.1.6 Labour Intensive Construction/Use of Local Labour**

This project does not qualify as EPWP. The contractor is encouraged to make use of local labour in order to promote labour intensive construction, the labour intensive works to be done under the contract is as stated below:

- Packing of gabion stone for gabion walls and mattresses
- Construction of concrete lined drains
- Construction of masonry storm water inlet and outlet structures
- Traffic accommodation
- Installation of road signs
- Installation of guardrails
- General cleaning.

The latest gazetted government labour rate for the Construction industry or the Municipality stipulated rate will to be used in the contract for remuneration of local labour. Currently the Municipality stipulated rates as follows:

- 3 Labour: as per the latest SAFEC rate or agreed rate by the municipality

The Contractor shall be required to fill in all posts for unskilled labourers, from the Ray Nkonyeni and Ugu District Jurisdiction respectively. The target beneficiaries are, but not limited to:

- Unemployed people, of whom, in aggregate, at least 54% women, and 4% should be people with disabilities
- People who have recently been the victims of natural or social disasters
- Retrenched workers
- Young people

#### **T.1.2.2.1 Invalid Tenders**

Tenders shall be considered invalid and shall be endorsed and recorded as such in the tender opening record, by the responsible official who opened the tender, in the following circumstances:

- a) if the tender offer is not submitted on the Form of Offer and Acceptance bound into this tender document (f Part C1: Agreements and Contract Data: Form Of Offer And Acceptance);
- b) if the tender is not completed in non-erasable ink;
- c) if the offer has not been signed;
- d) if the offer is signed, but the name of the tenderer is not stated or is indecipherable;

#### **T.1.2.2.2 Negotiations with Preferred Tenderers**

The Employer may negotiate the final terms of a contract with tenderers identified through a competitive tendering process as preferred tenderers provided that such negotiation:

- a) does not allow any preferred tenderer a second or unfair opportunity;
- b) is not to the detriment of any other tenderer; and
- c) does not lead to a higher price than the tender as submitted.

Minutes of any such negotiations shall be kept for record purposes.

## Part T2: Returnable Documents

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T2.1 List Of Returnable Documents

T2.2

T2.2 Returnable Schedules

T2.3

## LIST OF RETURNABLE DOCUMENTS

The tenderer must complete and return documents A1 to A23; B1 to B3; C1.1 and C2 as listed below as part of his/her tender submission:

SCHEDULE	DESCRIPTION
	Returnable documents required for tender evaluation purposes
<b>Schedule A</b>	<b>Documents incorporated in this tender document that must be completed and signed by all tenderers</b>
A1	Authority To Sign Documents
A2	Letter Of Good Standing With Workmen's Compensation Commissioner
A3	Certificate Of Authority For Joint Ventures (only if Tenderer is a JV)
A4	Schedule Of Work Carried Out By The Of Tenderer
A5	Current And Recent Projects For Ray Nkonyeni Municipality (RNM/MBD5.2)
A6	Schedule Of Construction Plant
A7	Schedule Of Estimated Monthly Expenditure
A8	Schedule Of Estimated Monthly Expenditure
A9	Details Of Key Personnel
A10	Bbbee Compliance Certificate
A11	Pricing Schedule – Firm Prices (Purchases) (RNM/MBD3.1)
A12	Pricing Adjustments (Rnm/Mbd3.2)
A13	Schedule Of Daywork Rates
A14	Record Of Addenda To Tender Documents
A15	Company Registration Documents
A16	Identity Documents of Shareholders/Directors/Members
A17	Joint Venture Disclosure Form
A18	Declaration Of Interest (Rnm/Mbd 4)
A19	Declaration Of Bidder's Past Supply Chain Management Practices (Rnm/Mbd 8)
A20	Certificate Of Independent Tender Determination (Rnm/Mbd 9)
A21	Form Concerning Fulfilment Of The Construction Regulations
A22	Declaration Certificate For Local Production And Content For Designated Sectors (Mbd 6.2)
A23	Preference Points Claim Form In Terms Of The Preferential Procurement Regulations 2017 (Rnm/Mbd 6.1)
<b>Schedule B</b>	
B1	Cidb Contractor Registration Certificate
<b>B2</b>	<b>Tax status pin</b>
B3	Preliminary Programme
<b>Schedule C</b>	
C1.1	Form Of Offer And Acceptance
C1.2	Contract Data
C1.3	Performance Guarantee
C1.4	Occupational Health And Safety Agreement
C2	Pricing Data and Bill of Quantities
C3	Scope of Work
C4	Site Information

**NB: TENDERERS MUST COMPLETE THESE DOCUMENTS / DATA SHEETS / FORMS IN BLACK INK**

## **T2.1 RETURNABLE SCHEDULES**

## A1. AUTHORITY TO SIGN DOCUMENTS

Signatories for firms must establish their authority thereto by attaching a duly signed and dated copy of the relevant resolution of the <sup>(1)</sup> Directors/Partners/Members to this form, or by the completion of this form.

### RESOLUTION

By resolution of the <sup>(1)</sup> Board of Directors / Partners / Members passed at a meeting held on .....(Date),

at.....(Place)

..... (Name of signatory)

whose signature appears below, has been duly authorised to sign all documents in connection with the Tender for;

**TENDER NO: 8/2/RNM0366** and any contract which may arise therefrom on behalf of :-

.....  
(Name Of Tenderer In Block Capitals)

**SIGNED ON BEHALF OF THE FIRM** (Director/Partner/Member):-

1.			
	NAME	SIGNATURE	DATE

2.			
	NAME	SIGNATURE	DATE

3.			
	NAME	SIGNATURE	DATE

**SIGNATURE OF AUTHORISED SIGNATORY:**

NAME	SIGNATURE	DATE

***Tenderers are to note that failure to comply with this requirement will render their tender invalid.***

**A2. LETTER OF GOOD STANDING WITH WORKMEN'S COMPENSATION  
COMMISSIONER**

### A3. CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

This Returnable Schedule is to be completed only if Tenderer is a joint venture.

We, the undersigned, are submitting this tender offer in joint venture and hereby authorise

Mr/Ms ..... , authorised signatory of the company, close corporation or partnership..... acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner		Signature :..... Name :..... Designation :.....
		Signature :..... Name :..... Designation :.....
		Signature :..... Name :..... Designation :.....
		Signature :..... Name :..... Designation :.....

**Note:**

A copy of the Joint Venture Agreement showing clearly the percentage contribution of each partner to the Joint Venture shall be appended to this Schedule.



#### A4. SCHEDULE OF WORK CARRIED OUT BY THE OF TENDERER

Tenderers shall insert in the Schedule hereunder details of work successfully carried out by them of a similar nature to that for which their tender is submitted. The tenderer's relevant experience must be supported by appointment letters and completion certificates for at least five (5) projects.

Failure to complete this Schedule and submit both appointment letters and completion certificates will result into tenderer scoring zero (0). It will be taken to indicate that the Tenderer has no experience in this class of work.

COMPLETED CONTRACTS				
Employer (Name, Tel, Fax, Email)	Consulting Engineer (Name, Tel, Fax, Email)	Nature Of Work	Value of Work R(M)	Date Completed
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

<b>CURRENT CONTRACTS</b>
--------------------------

<b>Employer (Name, Tel, Fax, Email)</b>	<b>Consulting Engineer (Name, Tel, Fax, Email)</b>	<b>Nature Of Work</b>	<b>Value of Work R(M)</b>	<b>Anticipated Completion Date</b>
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				

**If there is insufficient space above, the tenderer may append additional sheets.**

Number of additional sheets appended by the tenderer to this Schedule..... (If nil, enter NIL)

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

**A5. CURRENT AND RECENT PROJECTS FOR RAY NKONYENI MUNICIPALITY  
 (RNM/MBD5.2)**

Tenderers must furnish hereunder details of similar works/service, which they have satisfactorily completed in the past. The information shall include a description of the Works, the Contract value and name of Employer.

<b>CURRENT PROJECTS</b>			
<b>PROJECT NAME</b>	<b>AWARDED AMOUNT</b>	<b>CONTRACT START DATE</b>	<b>ANTICIPATED / ACTUAL COMPLETION DATE</b>
<b>TOTAL AMOUNT OF PROJECTS CURRENTLY UNDERTAKEN FOR NKONYENI MUNICIPALITY</b>			<b>R</b>

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>





## A7. SCHEDULE OF ESTIMATED MONTHLY EXPENDITURE

The tenderer shall state his estimated expenditure indicating the values of each monthly claim in terms of Clause 6.10 of the General Conditions of Contract, which he/she estimates will arise based on his/her preliminary programme and tendered rates, in the table below. ***The total of the monthly amounts shall be equal to the tender sum.***

MONTH	VALUE
1	R
2	R
3	R
4	R
5	R
6	R
7	R
8	R
9	R
10	R
11	R
12	R
<b>SUBTOTAL</b>	<b>R</b>
CONTINGENCIES (10%)	R
<b>SUBTOTAL</b>	<b>R</b>
VAT (15%)	R
<b>TOTAL (INCLUDING VAT @ 15%)</b>	<b>R</b>

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

**A8. SCHEDULE CONTRACT FORM – PAST EXPERIENCE  
(RNM/MBD5.1)**

Bidders must furnish hereunder details of similar works / service, which they have satisfactorily completed in the past. The information shall include a description of the works, the contract value and the name of the employer

Employer	Nature of Works	Value of Work	Duration and Completion Date	Employer's Contract No

**If there is insufficient space above, the tenderer may append additional sheets.**

Number of additional sheets appended by the tenderer to this Schedule..... (If nil, enter NIL)

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

## A9. DETAILS OF KEY PERSONNEL

Tenderers shall set out in the Schedule hereunder details of the experience of the Site Agent and Site Foreman in work of a similar nature to that for which this Tender is submitted.

Failure to complete this Schedule may result in the Tender not being considered.

<b>CONTRACT MANAGER</b>				
<b>NAME:</b>			<b>NQF LEVEL:</b>	
<b>Contract and Client</b>	<b>Nature Of Work</b>	<b>Position Held</b>	<b>Value Of Work</b>	<b>Year Completed</b>

<b>SITE AGENT</b>				
<b>NAME:</b>			<b>NQF LEVEL:</b>	
<b>Contract and Client</b>	<b>Nature Of Work</b>	<b>Position Held</b>	<b>Value Of Work</b>	<b>Year Completed</b>



SITE FOREMAN				
NAME:			NQF LEVEL:	
Contract and Client	Nature Of Work	Position Held	Value Of Work	Year Completed

If there is insufficient space above, the tenderer may append additional sheets.

Number of additional sheets appended by the tenderer to this Schedule..... (If nil, enter NIL)

**Tenderers are to attach (to this page) CV and certified copies of Qualifications and the relevant NQF Qualifications for the following personnel:**

- Site Agent
- Site Foreman

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

## **A10. BBBEE COMPLIANCE CERTIFICATE**

Tenderers are required to attach an original or certified copy of their BBBEE compliance certificate on this page or in the case of a joint venture, a joint certificate for the individual firms making up the joint venture, should they wish to claim for scores for BBBEE Compliance.

**SIGNED/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

**A11. PRICING SCHEDULE – FIRM PRICES (PURCHASES)  
(RNM/MBD3.1)**

**NOTE: ONLY FIRM PRICES WILL BE ACCEPTED. NON-FIRM PRICES (INCLUDING PRICES SUBJECT TO RATES OF EXCHANGE VARIATIONS) WILL NOT BE CONSIDERED**

**IN CASES WHERE DIFFERENT DELIVERY POINTS INFLUENCE THE PRICING, A SEPARATE PRICING SCHEDULE MUST BE SUBMITTED FOR EACH DELIVERY POINT**

Name of Bidder.....	Bid Number.....
Closing Time .....	Closing Date .....

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

**A12. PRICING ADJUSTMENTS (RNM/MBD3.2)**

**A NON-FIRM PRICES SUBJECT TO ESCALATION**

1. As per GCC 2015 Clause 6.8.2 and detailed on page 92 of the GCC

**B PRICES SUBJECT TO RATE OF EXCHANGE VARIATIONS**

1. Please furnish full particulars of your financial institution, state the currencies used in the conversion of the prices of the items to South African currency, which portion of the price is subject to rate of exchange variations and the amounts remitted abroad.

PARTICULARS OF FINANCIAL INSTITUTION	ITEM NO	PRICE	CURRENCY	RATE	PORTION OF PRICE SUBJECT TO ROE	AMOUNT IN FOREIGN CURRENCY REMITTED ABROAD
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		

2. Adjustments for rate of exchange variations during the contract period will be calculated by using the average monthly exchange rates as issued by your commercial bank for the periods indicated hereunder: (Proof from bank required)

AVERAGE MONTHLY EXCHANGE RATES FOR THE PERIOD:	DATE DOCUMENTATION MUST BE SUBMITTED TO THIS OFFICE	DATE FROM WHICH NEW CALCULATED PRICES WILL BECOME EFFECTIVE	DATE UNTIL WHICH NEW CALCULATED PRICE WILL BE EFFECTIVE

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

### A13. SCHEDULE OF DAYWORK RATES

This Daywork Schedule will be used at the discretion of the Engineer for valuation of extra work which cannot conveniently be valued at rates submitted in the Bill of Quantities. All price rates shall be exclusive of VAT.

The rates entered for labour and materials shall be exclusive of overhead charges and profit, site supervision of staff, insurance, holidays with pay and use and maintenance of small hand tools and non-mechanical plant, travelling allowances, other emoluments and allowances. Provision will be made for the insertion of percentages to cover all these items which are henceforth termed "on-costs", consumable stores, maintenance, etc.

In the case of plant no "on-costs" item is provided. The rate entered shall include any of the above "on-costs" which are pertinent and shall include profit, operator's costs, consumable stores, maintenance, depreciation, etc.

Failure to complete this Schedule may result in the Tender not being considered.

#### A. LABOUR

Normal Working Time:

1	Labourers	R.....	per hour plus	..... %	"On-Cost"
2	Gangers	R.....	per hour plus	..... %	"On-Cost"
3	Tradesmen	R.....	per hour plus	..... %	"On-Cost"
4	Other				
	(a).....	R.....	per hour plus	.....%	"On-Cost"
	(b)	R.....	per hour plus	..... %	"On-Cost"
	.....				

Overtime

1	Labourers	R.....	per hour plus	..... %	"On-Cost"
2	Gangers	R.....	per hour plus	..... %	"On-Cost"
3	Tradesmen	R.....	per hour plus	..... %	"On-Cost"
4	Other				
	(a).....	R.....	per hour plus	.....%	"On-Cost"
	(b)	R.....	per hour plus	..... %	"On-Cost"
	.....				

**B. PLANT**

DESCRIPTION	TYPE	ESTABLISHMENT AND DISESTABLISHMENT COST	RATE PER HOUR	
			WORKING	STANDING
Trucks and ADTs				
Bulldozers				
Excavators				
Tractor & Trailer				
Loaders				
Graders				
Tractor – Loader – Backhoe				
Water Pumps and Leadings				
Compressor including Hammers and Hoses				
Other				

**C. MATERIAL**

The Tenderer shall state here the percentage “On-costs” that should be added to the nett cost of materials:

.....%

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

**A14. RECORD OF ADDENDA TO TENDER DOCUMENTS**

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

No.	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		

If there is insufficient space above, the tenderer may append additional sheets.

Number of additional sheets appended by the tenderer to this Schedule..... (If nil, enter NIL)

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

## **A15. COMPANY REGISTRATION DOCUMENTS**

Tenderers are to attach certified copies of company registration documents (eg CK Documents) to this page.

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>



## **A16. IDENTITY DOCUMENTS OF SHAREHOLDERS/DIRECTORS/ MEMBERS**

Tenderers are to attach certified copies of ID Documents of Members/Directors to this page.

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

## A17. JOINT VENTURE DISCLOSURE FORM

### GENERAL

- i) All the information requested must be filled in the spaces provided. If additional space is required, additional sheets may be used and attached to the original documents.
- ii) A copy of the joint venture agreement must be attached to this form, in order to demonstrate the Affirmable, Joint Venture Partner's share in the ownership, control, management responsibilities, risks and profits of the joint venture, the proposed joint venture agreement must include specific details relating to:
  - a. the contributions of capital and equipment
  - b. work items to be performed by the Affirmable Joint Venture Partner's own forces
  - c. work items to be performed under the supervision of the Affirmable Joint Venture Partner.
- iii) Copies of all written agreements between partners concerning the contract must be attached to this form including those, which relate to ownership options and to restrictions/limits regarding ownership and control.
- iv) ABE partners must complete ABE Declaration Affidavits.
- v) The joint venture must be formalised. All pages of the joint venture agreement must be signed by all the parties concerned. A letter/ notice of intention to formalise a joint venture once the contract has been awarded will not be considered.
- vi) Should any of the above not be complied with, the joint venture will be deemed null and void and will be considered non-responsive.

### 1. JOINT VENTURE PARTICULARS

- a) Name.....
- b) Postal address.....  
.....  
.....
- c) Physical address .....  
.....  
.....
- d) Telephone .....
- e) Fax .....

### 2. IDENTITY OF EACH NON-AFFIRMABLE JOINT VENTURE PARTNER

- 2.1(a)** Name of Firm.....  
Postal Address.....  
Physical Address .....  
Telephone.....  
Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:

.....

- 2.2(a)** Name of Firm.....  
Postal Address.....

Physical Address .....

Telephone.....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:

.....  
(Continue as required for further non-Affirmable Joint Venture Partners)

**3. IDENTITY OF EACH AFFIRMABLE JOINT VENTURE PARTNER**

**3.1(a)** Name of Firm .....

Postal Address.....

Physical Address .....

Telephone.....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:

.....

**3.2(a)** Name of Firm .....

Postal Address.....

Physical Address .....

Telephone.....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:

.....

**3.3(a)** Name of Firm .....

Postal Address.....

Physical Address .....

Telephone .....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:

.....

**4. BRIEF DESCRIPTION OF THE ROLES OF THE AFFIRMABLE JOINT VENTURE PARTNERS IN THE JOINT VENTURE**

.....  
 .....  
 .....

**5. OWNERSHIP OF THE JOINT VENTURE**

- a) Affirmable Joint Venture Partner ownership percentage(s) ..... %
- b) Non-Affirmable Joint Venture Partner ownership percentage(s)..... %
- c) Affirmable Joint Venture Partner percentages in respect of : \*
  - i) Profit and loss sharing.....
  - ii) Initial capital contribution in Rands.....

(\*Brief descriptions and further particulars should be provided to clarify percentages).

- iii) Anticipated on-going capital contributions in Rands.....
- iv) Contributions of equipment (specify types, quality, and quantities of equipment) to be provided by each partner.

.....  
 .....  
 .....

**6. RECENT CONTRACTS EXECUTED BY PARTNERS IN THEIR OWN RIGHT AS PRIME CONTRACTORS OR AS PARTNERS IN OTHER JOINT VENTURES**

	NON-AFFIRMABLE JOINT VENTURE PARTNERS	PARTNER NAME
a)		
b)		
c)		
d)		
e)		

	AFFIRMABLE JOINT VENTURE PARTNERS	PARTNER NAME
a)		
b)		
c)		
d)		
e)		

**7. CONTROL AND PARTICIPATION IN THE JOINT VENTURE**

(Identify by name and firm those individuals who are, or will be, responsible for, and have authority to engage in the relevant management functions and policy and decision making, indicating any limitations in their authority e.g. co-signature requirements and Rand limits).

- a) Joint Venture cheque signing

.....  
.....  
.....

- b) Authority to enter into contracts on behalf of the Joint Venture

.....  
.....  
.....

- c) Signing, co-signing and/or collateralising of loans

.....  
.....  
.....

- d) Acquisition of lines of credit

.....  
.....  
.....

- e) Acquisition of performance bonds

.....  
.....  
.....

- f) Negotiating and signing labour agreements

.....  
.....  
.....

**8. MANAGEMENT OF CONTRACT PERFORMANCE**

(Fill in the name and firm of the responsible person).

- a) Supervision of field operations

.....

b) Major purchasing

.....

c) Estimating

.....

d) Technical management

.....

**9. MANAGEMENT AND CONTROL OF JOINT VENTURE**

a) Identify the “managing partner”, if any,

.....  
 .....  
 .....  
 .....

b) What authority does each partner have to commit or obligate the other to financial institutions, insurance companies, suppliers, subcontractors and/or other parties participating in the execution of the contemplated works?

.....  
 .....  
 .....  
 .....

c) Describe the management structure for the Joint Venture’s work under the contract

MANAGEMENT FUNCTION / DESIGNATION	NAME	PARTNER*

(Fill in “ex Affirmable Joint Venture Partner” or “ex non-Affirmable Joint Venture Partner”.

**10. PERSONNEL**

- a) State the approximate number of operative personnel (by trade/function/discipline) needed to perform the Joint Venture work under the Contract.

TRADE/FUNCTION/ DISCIPLINE	NUMBER EX AFFIRMABLE JOINT VENTURE PARTNERS	NUMBER EX NON- AFFIRMABLE JOINT VENTURE PARTNERS

(Fill in “ex Affirmable Joint Venture Partner” or “ex non-Affirmable Joint Venture Partner”).

- b) Number of operative personnel to be employed on the Contract who are currently in the employ of partners.

- (i) Number currently employed by Affirmable Joint Venture Partners

.....

- (ii) Number currently employed by the Joint Venture

.....

- c) Number of operative personnel who are not currently in the employ of the respective partner and will be engaged on the project by the Joint Venture

.....

- d) Name of individual(s) who will be responsible for hiring Joint Venture employees

.....

.....

- e) Name of partner who will be responsible for the preparation of Joint Venture payrolls

.....

.....

**11. CONTROL AND STRUCTURE OF THE JOINT VENTURE**

Briefly describe the manner in which the Joint Venture is structured and controlled.

.....

.....

.....

.....

.....

The undersigned warrants that he/she is duly authorised to sign this Joint Venture Disclosure Form and affirms that the foregoing statements are true and correct and include all material information necessary to identify and explain the terms and operations of the Joint Venture and the intended participation of each partner in the undertaking.

The undersigned further covenants and agrees to provide the Employer with complete and accurate information regarding actual Joint Venture work and the payment therefore, and any proposed changes in any provisions of the Joint Venture agreement, and to permit the audit and examination of the books, records and files of the Joint Venture, or those of each partner relevant to the Joint Venture, by duly authorised representatives of the Employer.

Signature .....

Duly authorised to sign on behalf of .....

Name.....

Address .....

Telephone.....

Date.....

---

Signature .....

Duly authorised to sign on behalf of .....

Name.....

Address .....

Telephone.....

Date.....

---

Signature .....

Duly authorised to sign on behalf of .....

Name.....

Address .....

Telephone.....

Date.....

---

Signature .....

---



Duly authorised to sign on behalf of .....

Name.....

Address .....

Telephone.....

Date.....

---

(Continue as necessary)

**A18. DECLARATION OF INTEREST**

**(RNM/MBD 4)**

(Please circle the applicable answer)

1. No bid will be accepted from persons in the service of the state\*. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.

**2. In order to give effect to the above, the following questionnaire must be completed and submitted with the tender.**

2.1. Full Name of Tenderer or his or her representative: .....

2.2. Identity Number: .....

2.3. Position occupied in the Company (director, trustee, shareholder<sup>2</sup>, member): .....

2.4. Registration number of company, enterprise, close corporation, partnership agreement or trust: .....

.....

2.5. Tax Reference Number: .....

2.6. VAT Registration Number: .....

\* SCM Regulations: "in the service of the state" means to be –

- (a) a member of –
  - (i) any municipal council;
  - (ii) any provincial legislature; or
  - (iii) the national Assembly or the national Council of provinces;
- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality or municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of Parliament or a provincial legislature.

2.7. Do you, have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

2.7.1. If so, furnish particulars:

.....  
.....  
.....

2.8. Are you, aware of any relationship (family, friend, other) between a bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

2.8.1. If so, furnish particulars:

.....

.....  
.....

2.9. Did Are any of the company's directors, managers, principle shareholders or stakeholders in service of the state?  
**YES / NO**

2.9.1. If so, furnish particulars:

.....  
.....  
.....

Are any spouse, child or parent of the company's directors, managers, principle shareholders or stakeholders in service of the state?  
**YES / NO**

2.9.2. If so, furnish particulars:

.....  
.....  
.....

**3. CERTIFICATION**

I,.....THE UNDERSIGNED CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.

I ACCEPT THAT THE COUNCIL MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

<b>SIGNATURE</b>

<b>DATE</b>

<b>POSITION</b>

<b>NAME OF BIDDER</b>

## A19. DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (RNM/MBD 8)

- 1 This Municipal Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be rejected if that bidder, or any of its directors have:
  - a) abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
  - b) been convicted for fraud or corruption during the past five years;
  - c) willfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
  - d) been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- 4 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?  (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).  <b>The Database of Restricted Suppliers now resides on the National Treasury's website (<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) and can be accessed by clicking on its link at the bottom of the home page.</b>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website ( <a href="http://www.treasury.gov.za">www.treasury.gov.za</a> ) by clicking on its link at the bottom of the home page.	<input type="checkbox"/>	<input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	<input type="checkbox"/>	<input type="checkbox"/>
4.3.1	If so, furnish particulars:		
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	<input type="checkbox"/>	<input type="checkbox"/>

Item	Question	Yes	No
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	<input type="checkbox"/>	<input type="checkbox"/>
4.5.1	If so, furnish particulars:		

**CERTIFICATION**

I, THE UNDERSIGNED (FULL NAME) .....

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

<b>SIGNATURE</b>

**POSITION**

<b>DATE</b>

**NAME OF BIDDER**

## **A20. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION (RNM/MBD 9)**

1. This Municipal Bidding Document (MBD) must form part of all bids<sup>1</sup> invited.
2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).<sup>2</sup> Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
  - (a) take all reasonable steps to prevent such abuse;
  - (b) reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
  - (c) cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
4. This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
5. In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

<sup>1</sup>Includes price quotations, advertised competitive bids, limited bids and proposals.

<sup>2</sup> Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

(RNM/MBD 9)

### CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting the accompanying tender:

---

(Tender Number and Description)

in response to the invitation for the tender made by:

---

(Name of Municipality/ Municipality Entity)

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of .....that:  
(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
  - (a) has been requested to submit a bid in response to this bid invitation;
  - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
  - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium<sup>3</sup> will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
  - (a) prices;
  - (b) geographical area where product or service will be rendered (market allocation);
  - (c) methods, factors or formulas used to calculate prices;
  - (d) the intention or decision to submit or not to submit, a bid;
  - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
  - (f) bidding with the intention not to win the bid.

8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

<b>SIGNATURE</b>	<b>DATE</b>
<b>POSITION</b>	<b>NAME OF BIDDER</b>

<sup>3</sup> Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.



## A21. FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS

In terms of regulation 4(3) of the Construction Regulations, 2014 (hereinafter referred to as the Regulations), promulgated 07 February 2014 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

1. I confirm that I am fully conversant with the Regulations and that my company has (or will acquire/procure) the necessary competencies and resources to timeously, safely and successfully comply with all of the requirements of the Regulations. (Tick)

YES	<input type="checkbox"/>
NO	<input type="checkbox"/>

2. Proposed approach to achieve compliance with the Regulations (Tick)

Own resources, competent in terms of the Regulations (refer to 3 below)	<input type="checkbox"/>
Own resources, still to be hired and/or trained (until competency is achieved)	<input type="checkbox"/>
Specialist subcontract resources (competent) - specify: ..... ..... ..... ..... .....	<input type="checkbox"/>

3. Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the Contract team as specified in the Regulations (CVs to be attached):

.....  
 .....  
 .....

4. Provide details of proposed training (if any) that will be undergone:

.....  
 .....  
 .....

5. Potential key risks identified and measures for addressing risks:

.....  
.....  
.....  
.....

6. I have fully included in my tendered rates and prices (in the appropriate payment items provided in the Schedule of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period.

(Tick)

YES	
NO	

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

## A22. DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS (MBD 6.2)

This Municipal Tendering Document (MBD) must form part of all tenders invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017 and the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

### 1. General Conditions

- 1.1. Preferential Procurement Regulations, 2017 (Regulation 9) make provision for the promotion of local production and content.
- 1.2. Regulation 9.(1) prescribes that in the case of designated sectors, where in the award of tenders local production and content is of critical importance, such tenders must be advertised with the specific tendering condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3. Where necessary, for tenders referred to in paragraphs 1.2 above, a two stage tendering process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where

x imported content in Rand

y tender price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by the South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as required in paragraph 4.1 below.

- 1.6. A bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation.

### 2. Definitions

- 2.1. **“bid”** includes written price quotations, advertised competitive bids or proposals;
- 2.2. **“bid price”** price offered by the bidder, excluding value added tax (VAT);
- 2.3. **“contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- 2.4. **“designated sector”** means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;
- 2.5. **“duly sign”** means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility(close corporation, partnership or individual).
- 2.6. **“imported content”** means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour and intellectual property costs), plus freight and other direct

importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;

- 2.7. **“local content”** means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;
- 2.8. **“stipulated minimum threshold”** means that portion of local production and content as determined by the Department of Trade and Industry; and
- 2.9. **“sub-contract”** means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.
3. **The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:**

Description of services, works or goods	Stipulated minimum threshold
Reinforcement Steel Bars	100%
Structural Steel	100%
Gabions or Reno-Mattresses	100%
Cement	100%
Bolts and nuts	100%

4. Does any portion of the services, works or goods offered have any imported content?  
(**Tick applicable box**)

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

- 4.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by the SARB for the specific currency at 12:00 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on [www.reservebank.co.za](http://www.reservebank.co.za).

Indicate the rate(s) of exchange against the appropriate currency in the table below:

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

**NB: Tenderers must submit proof of the SARB rate(s) of exchange used.**

5. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the Department of Trade and Industry (dti) must be informed accordingly in order for the dti to verify and in consultation with the Accounting Officer / Accounting Authority provide directives in this regard.

**LOCAL CONTENT DECLARATION**  
**(REFER TO ANNEX B OF SATS 1286:2011)**

**LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)**

**IN RESPECT OF TENDER No.** .....

**ISSUED BY:** (Ray Nkonyeni Municipality):

NB

- 1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.
- 2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on [http://www.thedti.gov.za/industrial\\_development/ip.jsp](http://www.thedti.gov.za/industrial_development/ip.jsp). Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, ..... (full names),

do hereby declare, in my capacity as.....

of .....(name of Tenderer entity),  
the following:

- (a) The facts contained herein are within my own personal knowledge.
- (b) I have satisfied myself that:
  - (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011;
- (c) The local content percentages (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C;

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for Local content (paragraph 3 above)	
Local content % as calculated in terms of SATS 1286:2011	

**If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above. The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.**

- (d) I accept that the Ray Nkonyeni Municipality has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Ray Nkonyeni Municipality imposing any or all of the remedies

as provided for in Regulation 13 of the Preferential Procurement Regulations, 2011 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

**SIGNATURE:** .....

**DATE:**.....

**WITNESS No. 1** .....

**DATE:** .....

**WITNESS No. 2** .....

**DATE:** .....

## Annex C

### Local Content Declaration - Summary Schedule

(C1) **Tender No.**

(C2) **Tender description:**

(C3) **Designated product(s)**

(C4) **Tender Authority:**

(C5) **Tendering Entity name:**

(C6) **Tender Exchange Rate:**

(C7) **Specified local content %**

Note: VAT to be excluded from all calculations

Pula       EU       GBP

Calculation of local content								Tender summary			
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Qty	Total tender value	Total exempted imported content	Total Imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
<b>(C20) Total tender value</b>									<b>R 0</b>		
<b>(C21) Total Exempt imported content</b>										<b>R 0</b>	
<b>(C22) Total Tender value net of exempt imported content</b>										<b>R 0</b>	
<b>(C23) Total Imported content</b>										<b>R 0</b>	
<b>(C24) Total local content</b>										<b>R 0</b>	
<b>(C25) Average local content % of tender</b>											

## Annex D

### Imported Content Declaration - Supporting Schedule to Annex C

(D1)	Tender No.		
(D2)	Tender description:		
(D3)	Designated Products:		
(D4)	Tender Authority:		
(D5)	Tendering Entity name:		
(D6)	Tender Exchange Rate:	Pula <input style="width: 50px;" type="text"/>	EU <input style="width: 50px;" type="text" value="R 9.00"/> GBP <input style="width: 50px;" type="text" value="R 12.00"/>

**Note:** VAT to be excluded from all calculations

A. Exempted imported content				Calculation of imported content						Summary	
Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Exempted imported value
(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)	(D17)	(D18)
<b>(D19) Total exempt imported value</b>											R 0

(D19) Total exempt imported value R 0

**This total must correspond with Annex C - C 21**

B. Imported directly by the Tenderer				Calculation of imported content						Summary	
Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)	(D30)	(D31)
<b>(D32) Total imported value by tenderer</b>											R 0

(D32) Total imported value by tenderer R 0



## Annex D

### Imported Content Declaration - Supporting Schedule to Annex C

**C. Imported by a 3rd party and supplied to the Tenderer**

C. Imported by a 3rd party and supplied to the Tenderer				Calculation of imported content						Summary	
Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Quantity imported	Total imported value
(D33)	(D34)	(D35)	(D36)	(D37)	(D38)	(D39)	(D40)	(D41)	(D42)	(D43)	(D44)
<b>(D45) Total imported value by 3rd party</b>										R 0	

**D. Other foreign currency payments**

D. Other foreign currency payments					Calculation of foreign currency payments				Summary of payments
Type of payment	Local supplier making the payment	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange					Local value of payments
(D46)	(D47)	(D48)	(D49)	(D50)					(D51)
<b>(D52) Total of foreign currency payments declared by tenderer and/or 3rd party</b>									
<b>(D53) Total of imported content &amp; foreign currency payments - (D32), (D45) &amp; (D52) above</b>									R 0

**This total must correspond with Annex C - C 23**



## A23. PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017 (RNM/MBD 6.1)

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

**NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.**

### 1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all tenders:

- the 80/20 system for acquisition of goods or services for Rand value equal to or above R30 000 and up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for acquisition of goods or services with a Rand value above R50 000 000 (all applicable taxes included).

1.2 The value of this tender is estimated to exceed R50 000 000 (all applicable taxes included) and therefore the 90/10 system shall be applicable.

1.3 Preference points for this tender shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contribution.

1.3.1 The maximum points for this tender are allocated as follows:

	<b>POINTS</b>
<b>1.3.1.1 PRICE</b>	90
<b>1.3.1.2 B-BBEE STATUS LEVEL OF CONTRIBUTION</b>	10
<b>Total points for Price and B-BBEE must not exceed</b>	<b>100</b>

1.4 Failure on the part of a Tenderer to fill in and/or to sign this form and submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA) together with the tender, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.5 The purchaser reserves the right to require of a Tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

### 2. DEFINITIONS

- (a) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) **“B-BBEE status level of contributor”** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- (d) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) **“EME”** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic



**6. B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1**

6.1 B-BBEE Status Level of Contributor: . = .....(maximum of 10 or 20 points)  
(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.

**7. SUB-CONTRACTING**

7.1 The bidders may need to make a provision to subcontract at least 10% of the Works, in rand value of the Project, to localsubcontractors from Ray Nkonyeni Municipality and or Ugu District Municipality Jurisdiction.

**8. DECLARATION WITH REGARD TO COMPANY/FIRM**

8.1 Name of company/firm:.....

8.2 VAT registration number:.....

8.3 Company registration number:.....

**8.4 TYPE OF COMPANY/ FIRM**

- Partnership/Joint Venture / Consortium
  - One person business/sole propriety
  - Close corporation
  - Company
  - (Pty) Limited
- [TICK APPLICABLE BOX]

**8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES**

.....  
.....  
.....  
.....

**8.6 COMPANY CLASSIFICATION**

- Manufacturer
  - Supplier
  - Professional service provider
  - Other service providers, e.g. transporter, etc.
- [TICK APPLICABLE BOX]

8.7 Total number of years the company/firm has been in business:.....

8.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
  - (a) disqualify the person from the bidding process;
  - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
  - (c) cancel the contract and claim any damages which it has suffered as a result of having

to make less favourable arrangements due to such cancellation;

- (d) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
- (e) forward the matter for criminal prosecution.

<p>WITNESSES</p> <p>1. ....</p> <p>2. ....</p>
--

<p>.....</p> <p>SIGNATURE(S) OF BIDDERS(S)</p> <p>DATE: .....</p> <p>ADDRESS .....</p> <p>.....</p> <p>.....</p>
--

**RAY NKONYENI MUNICIPALITY**

**NOTICE NO: 086 of 2022**

**TENDER NO: 8/2/RNM0366**

**CONSTRUCTION OF MARGATE EXTENSION 3 PEDESTRIAN BRIDGE - WARD 6**

**B1. CIDB CONTRACTOR REGISTRATION CERTIFICATE**

A Certificate of Contractor's Registration issued by the Construction Industry Development Board (CIDB) shall be attached to this page.

Where a tenderer satisfies CIDB Contractor grading designation requirements through joint venture formation, such tenderers must submit the Certificates of Contractor Registration in respect of each partner.

Alternatively furnish the CIDB registration no. and details in the space provided. This information will be verified with the CIDB via the CIDB website. It is the tenderer/contractor's responsibility to ensure that their details are displayed on the CIDB website. If in joint venture, details of all members require to be furnished.

<b>Name of Contractor or JV Member</b>	<b>CIDB registration No.</b>	<b>Category and class of registration, e.g. 6CE</b>

My/Our failure to submit the certificate(s) or furnish the required details, with my / our tender document will lead to the conclusion that I am / we are not registered with the CIDB and therefore not eligible to tender.

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

## B2. TAX CLEARANCE REQUIREMENTS

(RNM/MBD2)

It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with South Africa Revenue Services (SARS) to meet the bidder's tax obligation.

In order to meet the requirements bidders are required to complete in full the attached TCC1 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.

SARS will then furnish the bidder with a Tax clearance Certificate that will be valid for a period of 1 (one) year from date of approval / issue.

The Certified copy of a tax certificate with a pin number **must** be submitted together with the bid.

In the bids where consortia / joint ventures / sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.

Copies of the TCC "Application for a "Tax Clearance Certificate" forms are available from any SARS branch office nationally or on the website [www.sars.gov.za](http://www.sars.gov.za)

Applications for the Tax Clearance Certificate may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website [www.sars.gov.za](http://www.sars.gov.za).

### SIGNED BY/ON BEHALF OF TENDERER:

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>



### **B3. PRELIMINARY PROGRAMME**

The tenderer shall attach a preliminary programme, to this page.

This programme shall be in the form of a bar chart (Gantt chart) or similar acceptable time/activity form reflecting the proposed sequence and rate of progress of the various activities and the quantities that will be carried out every week under each of the elements, comprising the work for this contract. The programme shall also indicate the point where the tenderer intends to commence work operations and the direction in which the work will proceed. The working hours shall be indicated.

The tenderer shall also take into account the additional requirements stated in C3.5.1.3 Planning and Programming on page C3.13 when drawing up the programme.

**Details of the preliminary programme shall be appended to this Schedule.**

Number of sheets appended by the tenderer to this Schedule ..... (If nil, enter NIL)

**SIGNED BY/ON BEHALF OF TENDERER:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

## Part C1: Agreements and Contract Data

---

C1.1	Form Of Offer And Acceptance	C1.2
C1.2	Contract Data	C1.7
C1.3	Performance Guarantee	C1.14
C1.4	Occupational Health And Safety Agreement	C1.17

## C1.1. Form of Offer and Acceptance

### Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

**Tender No: 8/2/RNM0367**  
**Construction Of Margate Extension 3 Pedestrian Bridge - Ward 6**

The tenderer, identified in the offer signature block below, has examined the documents listed in the tender data and addenda thereto as listed in the Returnable Schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance, the tenderer offers to perform all of the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data.

**The Contract shall be completed within  weeks of the Commencement Date.**

### THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS:

.....

.....RAND (in words);

R ..... (in figures)

This offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

### SIGNED ON BEHALF OF/BY THE TENDERER:

<b>NAME</b>
<b>CAPACITY</b>

<b>SIGNATURE</b>
<b>DATE</b>

<b>Name and address of Organisation:</b> ..... ..... .....
---

### SIGNED BY WITNESS:

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

## Acceptance

*By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the Tenderer's offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract identified in the Contract Data. Acceptance of the tenderer's offer shall form an Agreement between the Employer and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.*

The terms of the contract are contained in:

- Part C1: Agreements and Contract Data (which includes this Agreement)
- Part C2: Pricing Data
- Part C3: Scope of Work
- Part C4: Site Information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C4 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto as listed in the Returnable Documents as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this schedule which must be duly signed by the authorised representative(s) of both parties.

The tenderer shall within two weeks of receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), or when or just after this Agreement comes into effect, contact the employer's agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the tenderer (now Contractor) within five days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

### SIGNED ON BEHALF OF/BY THE EMPLOYER:

<b>NAME</b>	<b>SIGNATURE</b>
<b>CAPACITY</b>	<b>DATE</b>

#### RAY NKONYENI MUNICIPALITY

No 10 Conner Street  
Port Shepstone  
4240

### SIGNED BY WITNESS:

<b>NAME</b>	<b>SIGNATURE</b>	<b>DATE</b>

**Schedule of Deviations**

**Notes:**

- 1. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
- 2. A tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid, become the subject of agreements reached during the process of Offer and Acceptance, the outcome of such Agreement shall be recorded here.
- 3. Any other matter arising from the process of Offer and Acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the Contract shall also be recorded here.
- 4. Any change or addition to the tender documents arising from the above Agreements and recorded here shall also be incorporated into the final draft of the Contract.

1. Subject .....

Details .....

.....

.....

.....

2. Subject .....

Details .....

.....

.....

.....

3. Subject .....

Details .....

.....

.....

.....

4. Subject .....

Details .....

.....

.....

.....

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Returnable Documents, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

**SIGNED ON BEHALF OF/BY THE TENDERER:**

<b>NAME</b>
<b>CAPACITY</b>

<b>SIGNATURE</b>
<b>DATE</b>

**SIGNED BY WITNESS:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

**SIGNED ON BEHALF OF/BY RAY NKONYENI MUNICIPALITY:**

<b>NAME</b>
<b>CAPACITY</b>

<b>SIGNATURE</b>
<b>DATE</b>

**SIGNED BY WITNESS:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

**CONFIRMATION OF RECEIPT**

The Tenderer, (now Contractor), identified in the Offer part of this Agreement hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations (if any) today:

the .....(day) of ..... (month)..... (year)

at ..... (place)

**SIGNED ON BEHALF OF/BY THE CONTRACTOR:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>CAPACITY</b>

**SIGNED BY WITNESS:**

<b>NAME</b>

<b>SIGNATURE</b>

## C1.2. Contract Data

### Part 1: Contract Data Provided by the Employer

#### **GENERAL CONDITIONS OF CONTRACT**

The following standardised General Conditions of Contract:

#### **General Conditions of Contract for Construction Works (Third Edition, 2015)**

Prepared by the South African Institution of Civil Engineering (SAICE) shall apply to and form the General Conditions of Contract for this contract. Copies of these Conditions of Contract are obtainable from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, email: [civilinfo@saice.org.za](mailto:civilinfo@saice.org.za).

Copies of the General Conditions of Contract are available for inspection and scrutiny at the offices of the Employer's Agent.

The General Conditions of Contract 2015 makes references to the Contract Data for specific data, which, together with these conditions, collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Specific Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the General Conditions of Contract.

The General Conditions of Contract shall be read in conjunction with the variations, amendments and additions set out in the Contract Specific Data below. Each item of data given is cross-referenced to the Clause in the General Conditions of Contract to which it mainly applies.

#### **CONTRACT SPECIFIC DATA**

The following Contract specific data are applicable to this Contract:

##### **Clause 1.1.1.13: Defects Liability Period**

The defects liability period is a period of 12 months, measured from the date of the Certificate of Completion.

##### **Clause 1.1.1.14: Due Completion Date**

The date for achieving Practical Completion is a date seven (7) months after the Commencement Date.

##### **Clause 1.1.1.15: Employer**

The **Employer** is Ray Nkonyeni Municipality, represented by Ms. Unathi Ngcobo and/or such person or persons duly authorised thereto by the Employer in writing, and the legal successors in title of this person and is referred to in this Contract Document as "Employer."

##### **Clause 1.1.1.16: Engineer**

The **Engineer**, referred to in the documents, is the firm of Consulting Engineers acting through a Director, an Associate or an official authorised thereto in writing.

The name of the Engineer is: Dartingo Consulting Engineers or their successors duly appointed by the Employer.

##### **Clause 1.1.1.26: Pricing Strategy**

The Pricing Strategy is Re-measurement.

##### **Clause 1.1.1.28: Scope of Work**

*Replace with the following:*



**“Scope of Work”** means the document(s) containing the Standard Specifications, the Project Particular Specifications and the Drawings, that specify and describe the Works which are to be provided, and any other requirements and constraint relating to the manner in which the work is to be carried out.

**Clause 1.1.1.34: Writing**

**Add the following Clause after Clause 1.1.1.34**

**1.1.1.35 “Drawings”** means all drawings, calculations and technical information forming part of the Tender Documents (other than information contained in the Specifications) and any modifications thereof or additions thereto from time to time approved in writing by the Engineer or delivered to the Contractor by the Engineer.

**Clause 1.2.1.2: Notices**

The name of the Employer is : **Ray Nkonyeni Municipality**

The address of the Employer is : **10 Connor Street  
Port Shepstone  
4240**

The name of the Engineer is : **Dartingo Consulting Engineers (Pty) Ltd**

The address of the Engineer is : **64 Underwood Road  
Hatton Estate, Pinetown  
3610**

**Clause 1.3.5: Contractor’s Copyright**

*Add the following to Clause 1.3.5:*

No part of any document or drawings issued with this enquiry may be copied, photographed or repeated in any manner or by any process without the written consent of the Engineer. Copyright is reserved on all designs, specifications, patents and patentable designs, systems and processes contained in the documents and drawings.

The person, firm, or body to whom these documents are issued or made available shall be held jointly and severally responsible in their personal and corporate capacities for any contravention of the requirements of Clause 1.3.5. The recipients of these documents shall treat the documents as well as the details contained herein as private and confidential.

**Clause 3.1.3: Employer’s Approval Required**

The Engineer is required to obtain the specific approval of the Employer before executing any of the following functions or duties:

1. Providing consent for subcontracting part of the contract in terms of Clause 4.4.
2. The issuing of an instruction to accelerate progress in terms of Clause 5.7.3.
3. Granting permission to work during non-working times in terms of Clause 5.8.1.
4. Suspend the progress of the works in terms of Clause 5.11.2.
5. The reduction of a penalty for delay in terms of Clause 5.13.2.
6. Issuing of instructions to carry out work on a daywork basis in terms of Clause 6.4.1.4.
7. The determination of additional or reduced costs arising from changes in legislation in terms of Clause 6.8.4.
8. The agreeing of the adjustment of the sums for general items in terms of Clause 6.11.
9. Authorizing the Contractor to repair and make good excepted risks in terms of Clause 8.2.2.2.

**Clause 4.3: Legal Provisions**

*Add the following Clauses after Clause 4.3.2:*

- 4.3.3 The Employer and the Contractor shall enter into an agreement to complete the work required for the construction of the works in terms of the provisions of Section 37(2) of the Occupational Health and

Safety Act (No. 85 of 1993) and the Construction Regulations promulgated thereunder, as well as any further requirements stipulated in this contract document.

- 4.3.4 The Contractor shall provide proof to the Employer, within 14 days of the Commencement Date, that he/she has paid all contributions required in terms of the Compensation for Occupational Injuries and Diseases Act (Act No. 130 of 1993).

#### **Clause 5.3: Commencement of Works**

The Contractor shall commence executing the Works within 14 days from the Commencement Date.

Notwithstanding the above, the Contractor will not be permitted to commence executing the Works before the Form of Guarantee and required insurances and other specified items have been submitted and approved.

#### **Clause 5.4: Access to the Site**

*Add the following clause after Clause 5.4.3:*

- 5.4.4 The Contractor shall bear all costs and charges for special and temporary rights of way required by him in connection with access to the Site. The Contractor shall also provide at his/her own cost any additional facilities outside the Site required by him/her for the purposes of the Works.

#### **Clause 5.5.1: Time for Practical Completion**

The Works shall be completed within the time frame stipulated or tendered (as applicable) on the Summary of the Bill of Quantities, exclusive of the special non-working days and the year-end break and inclusive of the 14 day period referred to in Clause 5.3 above.

#### **Clause 5.6.1: Programme of Works**

The Contractor shall deliver the programme of work within 14 days of the Commencement Date. The programme shall clearly show the order in which the Contractor proposes to carry out the work, including the critical path, the proposed rate of progress and a linked cash flow forecast. The programme shall be updated monthly.

#### **Clause 5.8: Non-Working Times**

The special non-working days are the days falling in the year-end break and all gazetted public holidays falling outside the year end break.

The year-end break commences on 15 December 2022 and ends on 13 January 2023.

#### **Clause 5.9: Instructions**

*Add the following Clauses after Clause 5.9.7:*

- 5.9.8 Tender Drawings shall be used for tender purposes only and shall not be used for construction.

The Engineer shall have full power and authority to supply to the Contractor from time to time during the progress of the Works copies of such further drawings and such instructions as shall be necessary for the purpose of the proper and adequate execution and maintenance of the Works, which the Contractor shall carry out and be bound by.

#### **Clause 5.12.2.2: Extension of Time**

Regardless of the cause of any delay an extension of time will only be considered if it can be shown that the activity delayed is on the critical path indicated on the Programme of Works (Clause 5.6.1).

No extension of time will be granted in respect of any delays attributed to normal climatic conditions. Normal Climatic Conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, in the event that delays to critical activities exceed the number of working days listed below for each month, then abnormal climatic conditions shall be deemed to exist, and an extension of time shall be granted in accordance with the provisions of that Clause.

The number of days quoted below shall be regarded as a fair estimate of the delays to be anticipated and allowed for under normal climatic conditions where inclement weather prevents or disrupts work on the critical path.

---

January	12 days	May	4 days	September	7 days
February	10 days	June	2 days	October	10 days
March	10 days	July	2 days	November	11 days
April	4 days	August	5 days	December	12 days

Claims for delays for abnormal climatic conditions shall be accompanied by substantiating facts and evidence, which shall be submitted timeously as each day or half-day delay is experienced. Should an extension of time be granted by the Engineer such extension of time will be added to the Time for Completion or set against any over-provision that may have occurred in the abovementioned schedule.

It shall be further noted that where the critical path is not affected, no extension of time for abnormal climatic conditions or for any other reason will be entertained.

**Clause 5.12.3: Adjustment to General Items**

*Add the following to Clause 5.12.3*

The cost of time related general items will be calculated on the basis of the number of days in Clause 5.5.1.

**Clause 5.13.1: Penalty for Delay**

The penalty for failing to complete the Works on time is 0.05% of the total Tender Sum per calendar day.

**Clause 6.2: Security**

The Deed of Guarantee is to be delivered to the Employer within 14 days of the Commencement Date. The Performance Guarantee shall be worded as set out in the document included in C1.3. The liability of the guarantee shall be for 10% of the Contract Price.

**Clause 6.8.2: Contract Price Adjustment**

*Add the following to Clause 6.8.2:*

The Contract Price shall not be subject to contract price adjustment.

**Clause 6.8.3: Variation in Cost of Special Materials**

Price adjustments for variations in the costs of special materials are not allowed.

**Clause 6.10.1.5: Interim Payments – Materials on Site**

The percentage advance on materials on site but not yet built into the Permanent Works is 80% (eighty percent).

**Clause 6.10.3: Retention Money**

The percentage retention on the amounts due to the Contractor is 10% (ten percent). The limit of retention is 5% of the Contract Price, including allowances for contingencies.

**Clause 6.10.5: Payment of Retention Money**

*In the second line, delete the words “ .. one half of the retention money shall become due and paid to the Contractor when the Engineer shall have issued a Certificate of Completion in terms of Clause 5.14.4 and the other half when the Engineer ..” and replace with the words “.. the full limit of retention money shall be held until the Engineer ..”*

**Clause 6.10.5.1**

*In the sixth line, delete the words “ .. of the second half ..”*

**Clause 6.10.6: Set-Off and Delayed Payments**

A guarantee in lieu of retention is not permitted.

**Clause 8.6.1: Insurances**

**Clause 8.6.1.1.2**

The value of the materials supplied by the Employer to be included in the insurance sum is R0.00 -Nil.

**Clause 8.6.1.1.3**

The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R0.00 -Nil.

**Clause 8.6.1.3**

The limit of indemnity for liability insurance is R5 000 000.00 for any single claim – the number of claims to be unlimited during the construction.

**Clause 8.6.1.5: Additional Insurance**

Additional Insurance is required for the following:

- a) Insurance of Construction Plant and Equipment (including tools, offices and other temporary structures and contents) and all other items (except those intended for incorporation into the Works) brought onto the site for a sum sufficient to provide for their replacement.
- b) Insurance in terms of the provisions of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993.
- c) Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" Risks including Passenger Liability Indemnity.
- d) Where the contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the Site, the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such works during manufacture or fabrication then such interest shall be noted by endorsement to the Contractor's Policies of Insurance.
- e) The insurance policy held by the Contractor shall cover "wet risks" because a portion of the works will be in the confines of an existing river and stormwater channel.
- f) Professional Indemnity Insurance providing cover in an amount of not less than R5 000 000.00 in respect of each and every claim. This insurance shall remain in force after completion of this contract for a period of not less than 1 (one) year.

**Clause 8.6.6: Proof of Payment**

*Add the following:*

The contractor shall within 14 days of the Commencement Date provide the Employer/Engineer the relevant policy or policies of insurance.

**Clause 9.2.1: Termination by the Employer**

*Add the following Clauses after Clause 9.2.1.3.7:*

- 9.2.1.3.8 The Contractor fails to provide the required Guarantee and insurances within the prescribed time.
- 9.2.1.3.9 The Contractor committed a corrupt or fraudulent act during the procurement process or the execution of the contract.
- 9.2.1.3.10 An official or other role player committed any corrupt or fraudulent act during the procurement process or in the execution of the contract that benefited the Contractor.

**Clause 10.5 and 10.6: Dispute Resolution**

Dispute resolution shall be by standing adjudication panel or ad-hoc adjudication.

## **ADDITIONAL CONDITIONS OF CONTRACT**

*The additional Conditions of Contract are:*

### **Clause 11: Contractor to Provide Everything Necessary**

The Contractor is to provide all labour, material, workmanship, machinery and everything which is or may be necessary in and for the execution and entire completion of the Contract in accordance with the Conditions of Contract, Drawings and Scope of Work.

### **Clause 12: Details to be Confidential**

The Contractor shall treat the details of the Works comprised in this Contract as private and confidential (save in so far as may be necessary for the purposes hereof) and shall not publish or disclose the same or any particulars thereof in any trade or technical paper elsewhere without prior written consent of the Engineer.

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**Part 2: Data Provided by the Contractor**

**Clause 1.2.1: Delivery of Notices**

The name of the Contractor is .....

The address of the Contractor is .....

Physical Address

Postal Address

.....  
.....  
.....  
.....

.....  
.....  
.....  
.....

Telephone:.....

Fax: .....

Email:.....

**SIGNED ON BEHALF OF/BY THE TENDERER:**

<b>NAME</b>

**CAPACITY**

<b>SIGNATURE</b>

**DATE**

## C1.3. Performance Guarantee

### GUARANTOR DETAILS AND DEFINITIONS

“Guarantor: means: \_\_\_\_\_

Physical address: \_\_\_\_\_

“Employer” means: **RAY NKONYENI MUNICIPALITY**

“Contractor” mean: \_\_\_\_\_

“Engineer” means: **DARTINGO CONSULTING ENGINEERS (Pty) Ltd**

“Works” means: **CONSTRUCTION OF MARGATE EXTENSION 3 PEDESTRIAN BRIDGE - WARD 6**

“Site” means: \_\_\_\_\_

“Contract: means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

“Contract Sum” means: The accepted amount inclusive of tax of R: \_\_\_\_\_

Amount in words: \_\_\_\_\_

“Guaranteed Sum” means: The maximum aggregate amount of R \_\_\_\_\_

Amount in words: \_\_\_\_\_

“Expiry Date” means: **ON ISSUE OF COMPLETION CERTIFICATE**

### CONTRACT DETAILS

Engineer issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Works as defined in the Contract.

### PERFORMANCE GUARANTEE

1. The Guarantor’s liability shall be limited to the amount of the Guaranteed Sum.
2. The Guarantor’s period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.
3. The Guarantor hereby acknowledges that:
  - 3.1. any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
  - 3.2. its obligation under this Performance Guarantee is restricted to the payment of money.
4. Subject to the Guarantor’s maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
  - 4.1. A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

- 4.2. A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
- 4.3. A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
  - 5.1. the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
  - 5.2. a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
  - 5.3. the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.
8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
10. The Employer shall have the absolute right to arrange his/her affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his/her release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
14. Where this Performance Guarantee is issued in the Republic of South Africa, the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

**SIGNED AT:** .....



<b>GUARANTOR (1)</b>	<b>SIGNATURE</b>
<b>DATE</b>	<b>CAPACITY</b>
<b>GUARANTOR (2)</b>	<b>SIGNATURE</b>
<b>DATE</b>	<b>CAPACITY</b>
<b>WITNESS (1)</b>	<b>SIGNATURE</b>
<b>WITNESS (2)</b>	<b>SIGNATURE</b>

## C1.4. Occupational Health and Safety Agreement

### AGREEMENT MADE AND ENTERED INTO BETWEEN RAY NKONYENI MUNICIPALITY (HEREINAFTER CALLED THE "EMPLOYER") AND

.....  
(Contractor/Mandatory/Company/CC Name)

#### **IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, ACT No. 85 OF 1993 AS AMENDED.**

I, .....

Representing ....., as an employer in its own right, do hereby undertake to ensure, as far as is reasonably practicable, that all work will be performed, and all equipment, machinery or plant used in such a manner as to comply with the provisions of the Occupational Health and Safety Act (OHSA) and the Regulations promulgated thereunder.

I furthermore confirm that I am/we are registered with the Compensation Commissioner and that all registration and assessment monies due to the Compensation Commissioner have been fully paid or that I/We are insured with an approved licensed compensation insurer.

COID ACT Registration Number: .....

OR Compensation Insurer: ..... Policy No.:.....

I undertake to appoint, where required, suitable competent persons, in writing, in terms of the requirements of OHSA and the Regulations and to charge him/them with the duty of ensuring that the provisions of OHSA and Regulations as well as the Council's Special Conditions of Contract, Way Leave, Lock-Out and Work Permit Procedures are adhered to as far as reasonably practicable.

I further undertake to ensure that any subcontractors employed by me will enter into an Occupational Health and Safety Agreement separately, and that such subcontractors comply with the conditions set.

I hereby declare that I have read and understand the appended Occupational Health and Safety Conditions and undertake to comply therewith at all times.

I hereby also undertake to comply with the Occupational Health and Safety Specification and Plan.

Signed at ..... on the ..... day of ..... 20 .....

#### **SIGNED BY/ON BEHALF OF CONTRACTOR - MANDATORY**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

#### **SIGNED BY WITNESS:**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

Signed at ..... on the ..... day of ..... 20 .....

#### **SIGNED BY/ON BEHALF OF RAY NKONYENI MUNICIPALITY**

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

**SIGNED BY WITNESS:**

<b>NAME</b>
-------------

<b>SIGNATURE</b>
------------------

<b>DATE</b>
-------------

**Occupational Health and Safety Conditions**

1. The Chief Executive Officer of the Contractor shall assume the responsibility in terms of Section 16(1) of the Occupational Health and Safety Act (as amended). Should the Contractor assign any duty in terms of Section 16(2), a copy of such assignment shall immediately be provided to the representative of the Employer as defined in the Contract.
2. All work performed on the Employer's premises shall be performed under the supervision of the construction supervisor who understand the hazards associated with any work that the Contractor performs on the site in terms of Construction Regulations 2014.
3. The Contractor shall appoint a Competent Person who shall be trained on any occupational health and safety aspect pertaining to them or to the work that is to be performed.
4. The Contractor shall ensure that he familiarises himself with the requirements of the Occupational Health and Safety Act and that he/she, his/her employees, and any sub-contractors, comply with them.
5. Discipline in the interests of occupational health and safety shall be strictly enforced.
6. Personal protective equipment shall be issued by the Contractor as required and shall be worn at all times where necessary.
7. Written safe work procedures and appropriate precautionary measures shall be available and enforced, and all employees shall be made conversant with the contents of these practices.
8. No substandard equipment/machinery/articles or substances shall be used on the site.
9. All incidents referred to in terms of Section 24 of the Occupational Health and Safety Act shall be reported by the Contractor to the Department of Labour and the Employer.
10. The Employer hereby obtains an interest in the issue of any formal inquiry conducted in terms of Section 32 of the Occupational Health and Safety Act and into any incident involving a Contractor and/or his/her employees and/or his/her sub-contractor/s.
11. No use shall be made of any of the Employer's machinery/plant/equipment/substance/personal protective equipment or any other article without prior arrangement and written approval.
12. No alcohol or any other intoxicating substance shall be allowed on the site. Any person suspected of being under the influence of alcohol or any other intoxicating substance shall not be permitted access to, or allowed to remain on the site.
13. Prior to commencement of any work, verified copies of all documents mentioned in the agreement, must be presented to the Employer.

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## Part C2: Pricing Data and Bill of Quantities

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C2.1	Pricing Instructions	C2.2
C2.2	Bill Of Quantities	C2.7

## C2.1. Pricing Instructions

### 1. GENERAL

The Bill comprises items covering the Contractor's profit and costs of general liabilities and of the construction of Temporary and Permanent Works.

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents, which include the Conditions of Tender, Conditions of Contract, contract data, the Specifications (including the Project Specification) and the Drawings.

The Tenderer is advised to check the number of pages and should any be found missing or in duplicate or the figures or writing indistinct or these Bill of Quantities contain any obvious errors, the Tenderer must inform the Engineer at once and have it rectified. No liability whatsoever will be admitted in respect of errors due to the foregoing.

Should there be any doubt or obscurity as to the meaning of any particular item, the Tenderer must obtain an explanation of it, in writing, from the Employer's Agent. No claims for extras arising from any such doubt or obscurity will be admitted after delivery of the tender.

### 2. DESCRIPTION OF ITEMS IN THE SCHEDULE

The Bill of Quantities has been drawn up generally in accordance with Civil Engineering Quantities 1990 issued by the SA Institution of Civil Engineers.

The short descriptions of the items in the Bill of Quantities are for identification purposes only and comply in general with the measurement and payment clauses of the Standardized Specifications, the Project Specifications and the Particular Specifications, read together with the relevant clauses of the Scope of Work and directives on the drawings, set out what ancillary or associated work and activities are included in the rates for the operations specified.

### 3. QUANTITIES REFLECTED IN THE SCHEDULE

The quantities given in the Bill of Quantities are the estimated quantities of work to be done, and will be subject to re-measurement during the execution of the work. The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it. Any additional works or any extension of work quantities over and above that contained in the Bill of Quantities shall be agreed before the work is completed in the form of an Extra Works Authorization in the case of additional works or a Change Order in the case of an increase in quantities, whichever is the applicable. All documentation must be signed by the Engineer before the work is commenced and such additional works or increased quantities will not be paid for if certified for payment without the approved documentation.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities, and the contract price for the completed contract shall be computed at the relevant unit rates and prices, all in accordance with the General and Special Conditions of Contract, the Specifications and 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.

### 4. PRICING OF THE BILL OF QUANTITIES

The Tenderer shall complete the Bill in **Black Ink**. Unit prices, extensions and totals submitted in electronic format will not be acceptable.

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to be paid by the Employer for the work described under the several items, and shall include full compensation for all costs and expenses that may be required in and for the completion of the work and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based. Reasonable unit rates and prices shall be entered in the Bill of Quantities as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

Each item shall be priced and extended to the "Total" column by the Tenderer, with the exception of the items for which only rates are required, or items which already have Prime Cost or Provisional Sums affixed thereto. If the Contractor omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

The Tenderer shall fill in rates for all items where the words "rate only" appears in the "Total" column. "Rate Only" items have been included where:

- a) an alternative item or material is contemplated and may be used at the discretion of the Engineer;
- b) variations of specified components in the make-up of a pay item may be expected; and
- c) no work under the item is foreseen at tender stage but the possibility that such work may be required is not excluded.

For "Rate Only" items no quantities are given in the "Quantity" column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

All rates and amounts quoted in the Bill of Quantities shall be in Rand and cents and shall include all levies and taxes (other than VAT). VAT will be added in the summary of the Bill of Quantities.

A Tenderer is NOT PERMITTED to group a number of items together and tender one sum for such group of items. IF THIS IS DONE IT WILL RENDER THE TENDER INVALID.

The tendered rates, prices and sums shall, subject only to the provisions of the Conditions of Contract, remain valid irrespective of any change in the quantities during the execution of the Contract.

## **5. GOODS AND SERVICES SOURCED INTERNATIONALLY**

It will be the Contractor's responsibility to obtain Forward Cover to avoid price increases for the Employer on any goods and services in this category. In failing to do that, any increase in prices on these items, after the Commencement Date of the Contract, shall be for the Contractor's account.

## **6. BUDGETARY ALLOWANCE ITEMS & PROVISIONAL SUMS**

All items described as "Budgetary Allowance" shall be used as directed by the Employer and measured and valued or paid for. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract, such approval shall be granted by the Managing Director.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Unauthorized changes made by the Tenderer to provisional items in the Bill of Quantities, or to the stated provisional percentages and sums in the Summary of the Bill of Quantities, will not be permissible.

No work for which "Budgetary Allowance" items are allowed shall be commenced without written instructions from the Project Manager. The contractor is duly informed in this document that the Budgetary Allowance Items are completely subject to the discretion of the employer and will only form part of the contract value once duly authorised by the employer and executed by the contractor to the full satisfaction of the principal agent, irrespective of the fact that the Budgetary Allowance formed part of the contract sum

## **7. CORRECTION OF ENTRIES**

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialed by the Tenderer.

## **8. ARITHMETICAL ERRORS**

Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication or addition, will be corrected by the Employer's Agent at the tender evaluation stage, as set out in the Standard Conditions of Tender Clause C.3.9.

## **9. MONTHLY PAYMENTS**

Unless otherwise specified in the Specifications and Project Specifications, progress payments in Interim Certificates, referred to in Clause 6.10 of the General Conditions of Contract 2015, in respect of "sum" items in the Bill of Quantities shall be by means of interim progress installments assessed by the Engineer and based on the measure in which the work actually carried out relates to the extent of the work to be done by the Contractor.

## **10. CONTINGENCY**

The sum provided under contingency in the Bill of Quantities is under the sole control of the Employer and may be deducted in whole or in part and shall only be expended by order of the Employer as Variation Order.

## **11. VALUE ADDED TAX**

The tender price must include for Value Added Tax (VAT). All rates, budgetary allowances, etc. in the Bills of Quantities must however be net (exclusive of VAT) with VAT calculated and added to the Total Value thereof in the Final Summary.

## **12. PRICES FOR VARIATIONS**

Where prices or quotations for variations are submitted by the Contractor during the currency of the Contract, it is to be clearly understood that these are for the purpose of consideration by the Project Manager and that there is no assumption of acceptance. The Contractor will be notified of acceptance of prices or quotations either by insertion of the amount on the variation order or by written intimation.

## **13. ADDITIONAL WORK**

Although the Tenderer is at liberty to insert a rate of his own choosing for each item in the Bill, he should note the fact that the Contractor is entitled, under various circumstances, to payment for additional work carried out and that the Employer's Agent is obliged to base his assessment of the rates to be paid for such additional work on the rates the Contractor inserted in the Bill. Clause 8 of each Standardized Specification, and the measurement and payment clause of each Particular Specification, read together with the relevant clauses of the Project Specifications, all set out which ancillary or associated activities are included in the rates for the specified operations.

## **14. STANDARD SYSTEM OF MEASUREMENT WHERE BILLS OF QUANTITIES FORM PART OF THE TENDER DOCUMENTS**

The work executed under this Contract has been measured in accordance with the sixth (6th) edition of the "Standard System of Measuring Building Work", including all amendments unless descriptions of items indicate a deviation and it shall be understood that the system of measurement which is herein adopted is the only system of measurement which will be recognised in connection with this contract

Any contradictions to this system of measurement contained in the "Standard Preambles to all Trades" shall be disregarded (unless same have been accommodated in the system of measurement) but applicable rates shall be included for all requirements stated and not measured separately in compliance with this system.

## **15. LABOUR INTENSIVE WORKS**

Those parts of the works to be constructed using labour-intensive methods have been marked in the schedule of quantities with the letters LI in a separate column filled in against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The items marked with the letters LI are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour-intensive specification in the Scope of Works.

Where minimum labour intensity is specified by the design the contractor is expected to use his/her initiative to identify additional activities that can be done labour intensively in order to comply with the set minimum labour intensity target.

Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment

## **16. FIXED PRICE CONTRACT**

Tenderers are to take note that the contract price adjustments are not applicable to this contract. Tenderers should therefore make provision in the Contract Sum, schedule of rates, etc. for possible price increases during the contract period, as no claims in this regard shall be entertained.

## **17. SCALE**

The scale to which the Drawings are made is only to be made use of when no figured dimensions are given either on the Drawings or in the tender documents and the figured dimensions are always to be followed though they may not coincide with the scale of the Drawings, but dimensions where possible are to be taken from the buildings.

## 18. DEFINITIONS

For the purposes of this Bill of Quantities, the following words shall have the meanings hereby assigned to them:

Unit	:	The unit of measurement for each item of work as defined in the Standardized, Project or Particular Specifications
Quantity	:	The number of units of work for each item
Rate	:	The payment per unit of work at which the Tenderer tenders to do the work
Amount	:	The quantity of an item multiplied by the tendered rate of the (same) item

## 19. UNITS OF MEASUREMENT

The units of measurement described in the Bill of Quantities are metric units for which the standard international abbreviations are used. Abbreviations used in the Bill of Quantities, including some non-standard abbreviations, are as follows:

metre	m
kilometre	km
kilogram	kg
metric ton	ton
square metre	m <sup>2</sup>
hectare	ha
square kilometre	km <sup>2</sup>
cubic metre	m <sup>3</sup>
Sum	Lump Sum
Provisional Sum	P.Sum
Prime Cost Sum	PC Sum
Percentage	%
Number	No.
Man-day	day
hour	hr

## 20. MATERIALS AND BRAND NAMES

Items that contain materials or products of special make with names of manufacturers are to be taken as samples of what will be required. Subject to the Employer/Employer's Agent approval, the Contractor may, at his discretion, offer similar products of other make if the equivalent quality of the specified materials is obtained.

In this case, the Contractor shall submit a description and/or drawing showing all technical conditions, characteristics, make, type and address of Manufacturer, etc., of the materials offered as alternatives.



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## BILL OF QUANTITIES

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### DECLARATION

#### (In respect of completeness of Tender)

RAY NKONYENI MUNICIPALITY  
Construction of Margate Extension 3 Pedestrian Bridge - Ward 6  
Tender No: 8/2/RNM0367

I/we, the undersigned, have read and understood the pricing instructions, all project specifications and drawings before pricing the Bill of Quantities. I/we hereby declare that the Bill of Quantities are properly priced forming Part C2.2 of this Contract Document which my/our tender for the above Contract

**The offered total of the prices inclusive of value added tax (VAT) is:**

R ..... (in figures) .....  
.....  
.....  
.....RAND (in words)

### SIGNED ON BEHALF OF/BY THE TENDERER:

<b>NAME</b>
<b>CAPACITY</b>

<b>SIGNATURE</b>
<b>DATE</b>

---

### SIGNED BY WITNESS:

<b>NAME</b>

<b>SIGNATURE</b>

<b>DATE</b>

GENERAL REQUIREMENTS AND PROVISIONS

Item	Description	Unit	Quantity	Rate	Amount (Rand)
1200	GENERAL REQUIREMENTS AND PROVISIONS				
B12.01	Community Liaison Officer:				
	(a) Remuneration for Community Liaison Office	Prov sum			42 000.00
	(b) Handling cost and profit in respect of sub item on B12.01 (a)	%	42 000.00		
B12.02	Civil Engineering Student:				
	(a) Remuneration for Civil Engineering Trainee Student appointed by Employer / Engineer	Prov sum			30 000.00
	(b) Handling cost and profit in respect of sub item on B12.01 (a)	%	30 000.00		
B12.03	Contractor's general obligation in respect of compliance with the Environmental Management Plan				
	(a) Fixed obligations	L/sum	1.0		
	(b) Time related obligations	month	6.0		
	(c) Environmental Monitoring Officer appointed by Engineer	Prov sum	1.0	90 000.00	
	(d) Handling cost and profit in respect of sub item on B12.03 (c)	%	90 000.00		
B12.04	Contractor's general obligation in respect of Occupational Health and Safety Act and Construction regulations - Including Covid-19				
	(a) Fixed obligations	L/sum	1.0		
	(b) Time related obligations	month	6.0		
	(c) Health and Safety Practitioner appointed by Engineer	Prov sum			90 000.00
	(d) Handling cost and profit in respect of sub item on B12.04 (c)	%	90 000.00		
B12.05	Relocation and Protection of services existing				
	(a) Electrical Services				
	(i) Provisional sum for existing services to be relocated and / or protected during construction	Prov sum			75 000.00
	Handling cost and profit in respect of subitem B12.05 (a)(i)	%	75 000.00		
	(b) Water, Stormwater, Sanitation Services relocation				
	(i) Excavation in soft to intermediate material	m <sup>3</sup>	80.0		
	(ii) 160 Diameter sewer Class 51 Solid Wall (normal duty) Pipe - 100 kPa pipe stiffness	m	50.0		
	(iii) Precast concrete Sewer manholes (1m dia) complete as per detail	No	3.0		
	(iv) Class C bedding	m	50.0		
	(v) 1.2m x 1.2m stormwater manhole to depth of 2m complete as per detail	No	3.0		
Total Carried Forward					

GENERAL REQUIREMENTS AND PROVISIONS

Item	Description	Unit	Quantity	Rate	Amount (Rand)
Brought Forward					
B12.06	Construction of new survey beacons				
	(a) Provisional sum for additional survey required by the Engineer	Prov sum			25 000.00
	(b) Handling costs and profit in respect of B12.06 (a)	%	25 000.00		
B12.07	Recruitment processes of Sub-Contractor				
	(a) Sub-Contractor Mentorship and Skills Transfer (Mentorship of sub- contractors for duration of contract by Mentors appointed by the Employer)	Prov sum			30 000.00
	(b) Handling costs and profit in respect of B12.07 (a)	%	30 000.00		
B12.08	Existing Structures				
	(a) Demolish and removal of existing structures	Prov sum			50 000.00
	(b) Handling costs and profit in respect of B12.08 (a)	%	50 000.0		
Total Carried Forward To Summary					

CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

Item	Description	Unit	Quantity	Rate	Amount (Rand)
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS				
B13.01	The contractor's general obligations:				
	a) Fixed obligations	L/sum	1.0		
	b) Value-related obligations	L/sum	1.0		
	c) Time-related obligations	month	6.0		
B13.02	Supply,transport to site and erection of the Nameboards Project name board as per drawing	No	1.0		
Total Carried Forward To Summary					

HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL

Item	Description	Unit	Quantity	Rate	Amount (Rand)
1400	HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL				
B14.01	Office and laboratory accommodation				
	a) Offices (interior floor space only)	m <sup>2</sup>	16.0		
	e) Ablution units	m <sup>2</sup>	2.0		
B14.02	Office and laboratory furniture				
	a) Chairs	No	6.0		
	d) Desks, complete with drawers and locks	No	2.0		
B14.08	Services:  The provision of water, electricity, sewerage, septic tanks, and sewage and rubbish removal, cleaning service, maintenance of access roads, all as specified in Clause 14,04 ,including the construction road, footpaths etc:				
	(a) Service at office				
	(i) Fixed costs	L/sum	1.0		
	(ii) Running cost	month	6.0		
Total Carried Forward To Summary					

CLEARING AND GRUBBING

Item	Description	Unit	Quantity	Rate	Amount (Rand)
1700	CLEARING AND GRUBBING				
B17.01	Clearing and grubbing	ha	0.2		
B17.02	Removal and grubbing of large trees and tree stumps a) Girth exceeding 1m up to and including 2m	No	2.0		
Total Carried Forward To Summary					

DAYWORKS

Item	Description	Unit	Quantity	Rate	Amount (Rand)
1800	DAYWORKS				
B18.01	a) LABOUR				
	i) Unskilled	hr	40.0		
	ii) Semi-Skilled	hr	30.0		
	iii) Skilled	hr	30.0		
	iii) Foreman	hr	20.0		
B18.02	(b) PLANT AND EQUIPMENT				
	(i) 6 m3 Tipper truck	hr	20.0		
	(ii) 10 m3 Tipper truck	hr	20.0		
	(iii) 10000L water tanker	hr	10.0		
	(iv) Loader, min. 111kW	hr	10.0		
	(v) TLB, min. 71 kW	hr	10.0		
	(vi) Excavator, min.213 kW	hr	10.0		
	(vii) Vibratory roller, self propelled, min. 99kW	hr	10.0		
	(viii) Tractor-trailer (43kw-3ton min.)	hr	10.0		
	(ix) Pedestrian roller, min. 40kN	hr	20.0		
18.03	TRANSPORT				
	i) LDV	km	100.0		
	i) Flat-bed truck	km	100.0		
Total Carried Forward To Summary					

MASS EARTHWORKS

Item	Description	Unit	Quantity	Rate	Amount (Rand)
3300	MASS EARTHWORKS				
B33.01	Cut and borrow to fill,including free-haul up to 0.5 km:  (a) Material in compacted layer thicknesses of 200 mm and less:  (i) Compacted to 93% of modified AASHTO density	m <sup>3</sup>	500.0		
B33.03	Extra over item 33.01 for excavating and breaking down material in:  (a) Intermediate excavation	m <sup>3</sup>	50.0		
B33.04	Cut to spoil, including free-haul up to 0,5 km. Material obtained from:  (a) Soft excavation  (b) Intermediate excavation  (c) Boulder Excavation Class A  (d) Boulder Excavation Class B  (e) Hard Excavation	m <sup>3</sup>	40.0		
		m <sup>3</sup>	80.0		
		m <sup>3</sup>	5.0		
		m <sup>3</sup>	5.0		
		m <sup>3</sup>	25.0		
B33.10	Walkway preparation and the compaction of material:  (b) Compaction to 93% of modified AASHTO density	m <sup>3</sup>	500.0		
Total Carried Forward To Summary					



PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION

Item	Description	Unit	Quantity	Rate	Amount (Rand)
5100  B51.01	PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION  (TO BE UNDRETAKEN BY LOCAL SUB-CONTRACTOR UNDER THE SUPERVISION OF MAINCONTRACTOR)  Stone pitching: a) Grouted stone pitching	m <sup>2</sup>	50.0		
Total Carried Forward To Summary					

GABIONS

Item	Description	Unit	Quantity	Rate	Amount (Rand)
5200	GABIONS  (TO BE UNDERTAKEN BY LOCAL SUB-CONTRACTOR, UNDER SUPERVISION BY MAIN CONTRACTOR)				
B52.01	Foundation trench excavation and backfilling:  a) In all other classes of materials	m <sup>3</sup>	90.0		
B52.02	Surface preparation for bedding the gabions	m <sup>2</sup>	180.0		
B52.03	Gabions-Complete with hand stones and bracings:  a) Galvanized gabion boxes with a nominal wire diameter of 2,7 mm and a 80 mm x 100 mm mesh  (i) 1,0 m wide by 1,0 m thick x 1,0 m long	m <sup>3</sup>	160.0		
	(b) Galvanized gabion mattresses with a nominal wire diameter of 2,5 mm and a 80 mm x 100 mm mesh, diaphragm spacing of 1,0m  (i) 1,0 m wide by 0,3 m thick x 2,0 m long	m <sup>3</sup>	40.0		
B52.07	Filter fabric:  (a) Bidim U14 or similar	m <sup>2</sup>	300.0		
Total Carried Forward To Summary					

FOUNDATION FOR STRUCTURES

Item	Description	Unit	Quantity	Rate	Amount (Rand)
6100	FOUNDATION FOR STRUCTURES				
61.01	(a) Additional foundation investigations	PC sum			50 000.00
	(b) Handling costs and profit in respect of B61.01 (a)	%	50 000.00		
B61.02	Excavation				
	a) Excavation in soft material situated within the following successive depth ranges:				
	(i) 0m up to 2m	m <sup>3</sup>	80.0		
	(ii) Exceeding 2m and up to 4m	m <sup>3</sup>	20.0		
	(iii) Exceeding 4m and up to 6m	m <sup>3</sup>	2.0		
B61.03	Access and Drainage				
	a) Access (Diverting of surface water)	L/sum	1.0		
B61.04	Backfill to excavation utilizing:				
	b) Imported material	m <sup>3</sup>	20.0		
B61.05	Fill within restricted area (extra over to item 61.04)	m <sup>3</sup>	10.0		
B61.06	Overhaul in excess of 1.0km on excavated and imported material for backfill, foundation fill and fill for caissons.	m <sup>3</sup> -km	90.0		
B61.07	Over break in excavation in hard material	m <sup>2</sup>	10.0		
B61.08	Foundation fill consisting of:				
	(a) Rock fill	m <sup>3</sup>	120.0		
	(b) Mass Concrete, Class 25/19	m <sup>3</sup>	40.0		
	(c) Compacted granular material	m <sup>3</sup>	20.0		
B61.11	Drilling of holes of 30mm dia. for Y25 dowels 1500mm deep into bedrock	m	20.0		
B61.12	Grouting, approved Cementous non-shrink grout	kg	5.0		
B61.13	Dowel bars				
	(b) High tensile bars				
	(i) Y25 galvanised rock anchors 2200 mm long grouted into 30 mm diameter holes 1500 mm into rock	kg	100.0		
B61.14	Control blasting for foundations, excavation and spoiling of loose rock	m <sup>3</sup>	5.0		
Total Carried Forward To Summary					

FALSEWORK, FORMWORK AND CONCRETE FINISH

Item	Description	Unit	Quantity	Rate	Amount (Rand)
6200	FALSEWORK, FORMWORK AND CONCRETE FINISH				
B62.01	a) Vertical formwork to provide class F1 surface finish to:				
	(i) Foundations	m <sup>2</sup>	20.0		
	(ii) Abutments	m <sup>2</sup>	15.0		
	(iii) Columns	m <sup>2</sup>	10.0		
	b) Vertical to provide class F2 surface finish to:				
	(i) Abutments	m <sup>2</sup>	30.0		
	(ii) Columns	m <sup>2</sup>	16.0		
	(iii) Concrete Walkways	m <sup>2</sup>	45.0		
B62.02	a) horizontal formwork to provide class of finish indicated as F1 surface finish to:				
	(i) Concrete walkway	m <sup>2</sup>	55.0		
Total Carried Forward To Summary					

STEEL REINFORCEMENT FOR STRUCTURES

Item	Description	Unit	Quantity	Rate	Amount (Rand)
6300	STEEL REINFORCEMENT FOR STRUCTURES				
B63.01	Steel reinforcement for:				
	a) Abutments				
	ii) High-Yield steel bars, hot rolled deformed	t	1.5		
	b) Columns				
	i) High-Yield steel bars, hot rolled deformed	t	0.8		
	c) Deck walkway				
	i) Welded mesh fabric ref:617	m <sup>2</sup>	150.0		
	ii) Stainless Steel (12 Dia) Dowel 300mm long cast 1150 deep into one side of joint	kg	15.0		
	Dowelling				
	i) High-Yield steel bars, for dowels (20-40Dia.) drilled and expoy into existing rockbed	t	0.2		
Total Carried Forward To Summary					

CONCRETE FOR STRUCTURES

Item	Description	Unit	Quantity	Rate	Amount (Rand)
6400	CONCRETE FOR STRUCTURES				
B64.01	Cast in situ concrete:				
	a) Class 15/19 in blinding	m <sup>3</sup>	3.0		
	b) Class 30/19 in abutments	m <sup>3</sup>	13.0		
	c) Class 30/19 in piers	m <sup>3</sup>	7.0		
B64.02	Cast 50- 100mm thick concrete members:				
	a) Deck slab (Class 25/19 concrete)	m <sup>3</sup>	5.0		
	b) Walkway Concrete (Class 30/19)	m <sup>3</sup>	25.0		
Total Carried Forward To Summary					

JOINTS, BEARINGS, BOLTS AND DRAINAGE FOR STRUCTURES

Item	Description	Unit	Quantity	Rate	Amount (Rand)
6600	JOINTS, BEARINGS, BOLTS AND DRAINAGE FOR STRUCTURES				
B66.06	Filled Joints:				
	a) 10mm wide movement joints filled with jointex	m <sup>2</sup>	20.0		
B66.08	Sealing of joints with approved sealant	m	20.0		
66.11	Bearing(Glacier line rocker bearing) or similar approved	No	8.0		
B66.19	Drainage pipes and weep holes:				
	(ii) 50 dia. UPVC weep holes	No	20.0		
	Drainage pipes:				
	i) m65 netlon drainage pipes behind abutment	m	10.0		
	ii) 325mm wide DN netlon drainage strips covered with Kaymat U34 behind abutment	m	28.0		
B66.21	Synthetic fiber filter fabric				
	ii) Grade 3 geofabric for abutments	m <sup>2</sup>	25.0		
Total Carried Forward To Summary					

STRUCTURAL STEELWORK

Item	Description	Unit	Quantity	Rate	Amount (Rand)
6700	STRUCTURAL STEELWORK				
B67.01	(a) Manufacture, Supply and erect on site Grade 350W structural steel bridge structure and all components comprising Grade 8.8 bolt connections, HDB, bearing plates and bolts, bracings all complete as per drawing	t	4.5		
B67.02	Anchor bolts:  (a) M 24 10.8 complete with anchor plate nuts and washers as detailed on the drawing	kg	150.0		
B67.03	Corrosion protection  (b) Hot-dip galvanizing:  (1) Bridge Structure - Minimum mean thickness of 85 micros, galvanized in accordance with SABS ISO 1461:1999	t	4.5		
B67.04	BONDLOK  Provide bondlok sheeting with M12 studs for	m <sup>2</sup>	40.0		
B67.05	FENCE  Expanded Metal Mesh	m <sup>2</sup>	100.0		
Total Carried Forward To Summary					



CONCRETE PAVEMENTS

Item	Description	Unit	Quantity	Rate	Amount (Rand)
7100	CONCRETE PAVEMENTS				
B71.04	Texturing and curing the concrete pavement:				
	b) Curing	m <sup>2</sup>	210.0		
	i) Supply and placing of LuminTech stones as directed by the engineer: Application rate of 250g/square meter	m <sup>2</sup>	180.0		
B71.06	Joints:				
	a) Expansion joints complete at 3m centers	m	20.0		
	(b) Longitudinal hinges				
	(ii) Unsealed hinge joints	m	20.0		
B71.08	Steel Reinforcement in concrete pavement				
	(c) Welded steel fabric (Ref 193)	m <sup>2</sup>	33.0		
Total Carried Forward To Summary					

TESTING MATERIAL AND WORKMANSHIP

Item	Description	Unit	Quantity	Rate	Amount (Rand)
8100	TESTING MATERIAL AND WORKMANSHIP				
B81.01	Other special tests requested by the engineer:				
	(a) Cost of testing	Prov sum			50 000.00
	(b) Handling Costs in respect of B81.01 (a)	%	50 000.0		
Total Carried Forward To Summary					

SUMMARY

Section	Description	Amount (Rand)
1200	GENERAL REQUIREMENTS AND PROVISIONS	
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
1400	HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL	
1700	CLEARING AND GRUBBING	
1800	DAYWORKS	
3300	MASS EARTHWORKS	
5100	PITCHING, STONework AND PROTECTION AGAINST EROSION	
5200	GABIONS	
6100	FOUNDATION FOR STRUCTURES	
6200	FALSEWORK, FORMWORK AND CONCRETE FINISH	
6300	STEEL REINFORCEMENT FOR STRUCTURES	
6400	CONCRETE FOR STRUCTURES	
6600	JOINTS, BEARINGS, BOLTS AND DRAINAGE FOR STRUCTURES	
6700	STRUCTURAL STEELWORK	
7100	CONCRETE PAVEMENTS	
8100	TESTING MATERIAL AND WORKMANSHIP	
	SUBTOTAL "X"	
.	CONTINGENCIES (Add: 10% of the above Sub Total "X" as a Provisional Sum to cover to cost of Contingencies and to be expended only as the Engineer may direct)	
	SUBTOTAL "Y"	
.	ESCALATION (Add: 5% to above Sub Total "Y", being a provisional sum to provide for Variation of Price)	
	SUBTOTAL "Z"	
.	Add: 15% Value Added Tax of the above Sub total "Z"	
Total Carried Forward To Form of Offer		

## Part C3: Scope of Work

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	<b><u>Page</u></b>
C3.1 Description Of The Works	C3.2
C3.2 Engineering	C3.4
C3.3 Procurement	C3.5
C3.4 Construction	C3.6
C3.5 Management	C3.13
C3.6 Annexes	C3.15

### **Status**

Should any requirement or provision in the parts of the Scope of Work conflict with any requirement of any Specification(s) forming part of this contract or any drawings, the order of precedence, unless otherwise specified, is:

Drawings  
Scope of Work  
Specifications

## C3.1. Description of the Works

### C3.1.1 Employer's Objectives

As part of its service delivery mandate the Ray Nkonyeni Municipality intends to appoint a Contractor to undertake the Construction of Margate Extension 3 Pedestrian Bridge – Ward 6. The construction of the pedestrian bridge will eliminate the need for the existing dangerous, old and partially burnt timber walkway. This walkway is throughfare for residents between Mourant Road and Lawenski Drive

### C3.1.2 Overview of the Works

The Works to be carried out by the Contractor under this Contract comprise mainly the following:

The Pedestrian Bridge will be constructed as a two span 30 m structural steel frame supported on reinforced concrete column and abutments with a 2.0 m wide deck.

The COLTO Standard Specifications for Road and Bridge Works for State Road Authorities (1998 Edition) shall apply for the construction of the Works.

### C3.1.3 Extent of the Works

The proposed pedestrian bridge to be constructed is a two span bridge spanning 30m. The position and footprint of the proposed infrastructure is shown in Drawing A101, under Section C4.3

- Site clearance.
- Exposing of existing services.
- Relocation of existing services.
- Excavation of foundations.
- Foundation fill with rock fill and/or mass concrete
- Gabion protection along embankment, columns, and piers.
- Reinforced concrete bases construction
- Abutments and pier construction
- Assembly and construction Structural steel bridge with concrete deck with luminescent stone finish.
- Import material for walkway approaches.
- Construction approximately 100m Walkway slab on grade with luminescent stone finish.
- Construction of side drains
- Construction of edged beams
- Application to electricity department for walkway streetlights along the route

All operations necessary for the execution of the works and for the construction of any temporary works shall, as far as compliance with the requirements of the contract permit, be carried on so as to cause minimum interference with the local community and other contractors working in the area.

Note that it is the Ray Nkonyeni Municipality's objective to construct this project using labour intensive methods in accordance with the EPWP Guidelines. In particular and where physically possible, the activities able to should be undertaken 'by hand', using labour intensive construction techniques

### C3.1.4 Location of the Works

The site is located in Margate Extension 3 in Ward 6 of Ray Nkonyeni, approximately 20 km south of Port Shepstone town. Margate Extension 3 falls within the jurisdiction of Ugu District Municipality and Ray Nkonyeni Local Municipality

District Municipality	Local Municipality	Description	Co-ordinates of Approximate Project Site	
			Latitude	Longitude
Ugu District Municipality	Ray Nkonyeni Local Municipality	Pedestrian Bridge	30°51'38.74" S	30°21'7.90" E

### C3.1.5 Description of Site and Access

The bridge has been positioned to avoid encroaching onto private property and negates the need for relocation of services.

It has been noted that the boundary fence of the property north of the existing concrete walkway is encroaching on municipal property. This landowner will need to be notified of the encroachment and the fence will be relocated to within his/her property, allowing for construction of the new walkway to remain within the cadastral boundary

### **C3.1.6 Temporary Works**

Temporary works will comprise of dealing with stream whilst installing gabions and reno-matresses.

The Contractor shall be required to carry out the following temporary works in accordance with minimum acceptable quality standards as stipulated in the reference standards.

The temporary works include the following:

- Trench dewatering and site water control
- Shoring of trenches
- Construction of temporary earth mounds and channels, inlet manholes, protection berms etc. that may be deemed necessary for the uncontrolled flow of stormwater

The Contractor shall be responsible for the design of the following:

- Shoring where required for deep excavations
- Dewatering of trench / existing pump station during excavations
- Stormwater control during construction
- Concrete Mix designs
- Site layouts for the contractor's camp and office accommodation
- Site layouts for the Engineer Representative's temporary office accommodation
- Construction Methodology
- Formwork
- Scaffolding and all staging work
- All other temporary works
- Concrete Mix designs

## **C3.2. Engineering**

### **C3.2.1 Design Services and Activity Matrix**

The responsibilities for design are as follows:

Permanent works :	
Concept, feasibility and overall process	Employer
Basic engineering and detail layouts to tender stage	Employer
Final design to approved for construction stage	Employer
Temporary works	Contractor
Preparation of as-built drawings	Contractor

- The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.
- The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works.
- The Contractor shall supply all details necessary to assist the Engineer in the compilation of the record drawings

### **C3.2.2 Employer's Design**

The entire Permanent Works have been designed by the Employers representative, i.e. the Engineer

### **C3.2.3 Design Brief**

The Contractor will supply a typical layout for accommodation of traffic. Any alterations to this layout need to be approved by the Engineer and Employer.

### **C3.2.4 Design Procedures**

All statutory requirements shall be taken into consideration.

## **C3.3. Procurement**

### **C3.3.1 Preferential Procurement Procedures**

#### **C3.3.1.1 Requirements**

The Preferential Procurement Procedures are detailed in C1.3 (Tenderer's Direct Participation of Targeted Labour) and C1.4 Tenderer's Direct Participation of Targeted Enterprises.

#### **C3.3.1.2 Resource Standard Pertaining to Targeted Procurement**

- SANS 1914-1:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Enterprises
- SANS 1914-2:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Partners in Joint Ventures
- SANS 1914-3:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Enterprises and Targeted Partners in Joint Ventures
- SANS 1914-4:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Enterprises and Targeted Labour (local resources)
- SANS 1914-5:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Labour
- SANS 1914-6:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Enterprises in Concession Contracts

### **C3.3.2 Subcontracting**

#### **C3.3.2.1 Scope of Mandatory Subcontract Works**

No requirements specified.

#### **C3.3.2.2 Preferred Subcontractors / Suppliers**

No requirements specified.

#### **C3.3.2.3 Subcontracting Procedures**

The Contractor may be required to subcontract at least 10% of the of Works, in rand value of the Project, to local subcontractors from Ray Nkonyeni Municipality Jurisdiction. Failure to find suitable subcontractors in this region will lead to recruiting from the required subcontractors from the Ugu District Jurisdiction.

Unless approved by a written order by the Accounting Officer, all contracts above R2.5 million, shall be subject to subcontracting to advance designated groups as set out below;

- |   |     |
|---|-----|
| a) For contracts with a contract value of between R2 million up to 5million   | 10% |
| b) For contracts with a contract value above R 5million and below R 8million  | 20% |
| c) For contracts with a contract value above R 8million and below R15 million | 20% |
| d) For contracts with a contract value above 15million                        | 30% |

SubContractors shall be appointed in line with Clause 4.4 of the General Conditions of Contract (GCC 2015) and were required / necessary a subContractor shall be selected in consultation with the Employer.

Subcontractors shall submit their Health and Safety Plan to be approved by the Engineer.

#### **C3.3.2.4 Attendance on Subcontractors**

The provisions of Clause 4.4 of the General Conditions of Contract (GCC 2015) shall be applicable.



## **C3.4. Construction**

### **C3.4.1 Works Specifications**

#### **C3.4.1.1 Applicable Specification**

The specification for the contract is the COLTO Standard Specification for Road and Bridge Works for State Authorities 1998 (Green Book) for Civil Engineering Construction.

##### **C3.4.1.1.1 Applicable Technical Recommendations For Highways (TRH)**

- TRH 14 Guidelines for Road Construction Materials
- TRH 20 The Structural Design, Construction and Maintenance of Unpaved Roads

##### **C3.4.1.1.2 Applicable Technical Methods For Highways (TMH)**

- TMH 1 Standard Methods for Road Construction Materials
- TMH 5 Sampling Methods for Road Construction Materials
- TMH 6 Special Methods for Testing Roads
- TMH 10 Manual for the Completion of As-Built Materials Data Sheets
- TMH 11 Standard Survey Methods

#### **C3.4.1.2 Particular Specifications**

Refer to C3.5.

#### **C3.4.1.3 Certification by Recognised Bodies**

Certified by the CIDB

### **C3.4.2 Plant and Materials**

#### **C3.4.2.1 Plant and Materials Supplied by the Employer**

None

#### **C3.4.2.2 Materials, Samples and Shop Drawings**

All materials are to be tested by a commercial laboratory.

### **C3.4.3 Construction Equipment**

#### **C3.4.3.1 Requirements for Equipment**

The Contractor is required to use plant and equipment that is sufficient for the construction of roads and the ancillary works.

#### **C3.4.3.2 Equipment Provided by the Employer**

None

### **C3.4.4 Existing Services**

#### **C3.4.4.1 Known Services**

All known services are shown on the Construction Drawings. However all existing service should be proven prior to construction. The onus still lies with the Main Contractor to ensure that no services are damaged during the construction period.

#### **C3.4.4.2 Treatment of Existing Services**

It is envisaged that some of the existing services may require temporary or permanent relocation. The relevant local authorities should be contacted before relocating any services.

#### **C3.4.4.3 Use of Detection Equipment for the Location of Underground Services**

Not applicable.

#### **C3.4.4.4 Damage To Services**

It is the responsibility of the Contractor to ensure that no services are damaged during the construction process. In case the known services indicated on the drawings are damaged, the main Contractor shall be responsible for the repair of the services to the original state before it was damaged, as well as all cost associated with the damaged service

#### **C3.4.5 Site Establishment**

##### **C3.4.5.1 Services and Facilities Provided by the Employer**

###### **(a) Water Source**

A potable water supply is available in the vicinity of the Site. Should the Contractor wish to utilise such water supply, he/she shall be responsible for making his own arrangements with the responsible water supply authority for the supply of all water that he may require from such reticulation network for construction purposes as well as for domestic consumption.

If so required by the responsible water supply authority, the Contractor shall further be responsible, at his own cost, for making or otherwise providing metered connections to the available services at the positions specified by the water authority, as well as for the removal of such connections on completion of the Contract.

No warranty is offered or given by the Employer that the existing available reticulated water supply will necessarily be adequate for the Contractor's purposes nor that such supply is in any way guaranteed.

All charges as may be levied by the responsible water supply authority in respect of water consumed by the Contractor shall be for the Contractor's account and payment to the Contractor in respect thereof shall, in accordance with the provisions of subclause, be deemed to be included in the sums tendered by the Contractor for the various items listed in the Bill of Quantities, as well as in the rates tendered by the Contractor for the various other items listed in the Bill of Quantities which require the consumption of water.

The Contractor shall, when reasonably required by the Engineer, produce documentary proof that all amounts as may have become due and payable by the Contractor to the responsible water authority have been promptly paid in full.

###### **(b) Electricity supply**

A electrical power supply is available in the vicinity of the Site. Should the Contractor wish to avail himself of such supply, he shall, in accordance with the provisions of relevant subclause, and at his own cost, be responsible for making his own arrangements with the responsible electricity supply authority for the supply of all electrical power he may require from such reticulation network for construction purposes as well as for domestic consumption.

If so required by the responsible electricity supply authority, the Contractor shall, at his own cost, be responsible for making metered connections to the available services at the positions specified by the electricity supply authority, as well as for the removal of such connections on completion of the Contract.

No warranty is offered or given by the Employer that the existing available reticulated electrical power supply will necessarily be adequate for the Contractor's purposes nor that its supply is in any way guaranteed.

All charges as may be levied by the responsible water supply authority in respect of water consumed by the Contractor shall be for the Contractor's account and payment to the Contractor in respect thereof shall, in accordance with the provisions of subclause, be deemed to be included in the sums tendered by the Contractor for the various items listed in the Bill of Quantities, as well as in the rates tendered by the Contractor for the various other items listed in the Bill of Quantities which require the consumption of electricity.

The Contractor shall, when reasonably required by the Engineer, produce documentary proof that all amounts as may have become due and payable by the Contractor to the responsible electricity supply authority have been promptly paid in full.

###### **(c) Area for Contractor's site establishment**

The Contractor may erect his site offices and storage depot within the boundaries of the area indicated by the Engineer at the clarification meeting or during the site handover meeting.

The Contractor shall submit a general layout drawing to a scale of not less than 1:200 to the Engineer for approval before any work on the camp or offices is commenced.

No housing is available and the Contractor shall make his own arrangements to house his employees and transport them to and from the site. All arrangements for housing workmen shall be made in accordance with and subject to applicable regulations and requirements.

The Contractor shall use this area only for the purposes of erecting his site offices, workshops, stores and other facilities required for the execution of the Contract. The Contractor shall not use the area nor allow it to be used for any purposes not directly associated with the execution of the Contract.

The Contractor shall be responsible for arranging, at his own cost, for the provision of all services he may require in the area, as well as elsewhere on the Site.

Should the Contractor deem the area made available by the Employer to be inadequate or unsuitable for the Contractor's particular needs, then the Contractor shall be at liberty to make his own arrangements with the owners of other sites which he considers are better suited to his needs; provided always that the use by the Contractor of any area other than that made available to him by the Employer shall be subject to the prior written approval of the Engineer, which approval shall not be unreasonably withheld; and provided further that the Contractor shall have no claim against the Employer in respect of any costs incurred by him, either directly or indirectly in consequence of utilising any area other than that made available to him by the Employer, and which costs exceed those costs allowed for by the Contractor in his Tender.

#### **C3.4.5.2 Facilities Provided by the Contractor**

##### **(a) Facilities for the Engineer**

The Contractor shall provide on the Site, for the duration of the Contract and for the exclusive use of the Engineer and/or his Representative (as applicable), the various facilities described hereunder. All such facilities shall be provided promptly on the commencement of the Contract and failure on the part of the Contractor to provide any facility required in terms of this specification shall constitute grounds for the Engineer to withhold payment of the Contractor's tendered items until the facility has been provided or restored as the case may be.

The following are typical facilities to be provided:

- Office accommodation
- Site meeting venue
- Contract nameboards
- Survey equipment and assistants
- Electricity supply for the Engineer
- Site diary.

##### **(b) Water**

The Contractor shall, at his own expense, be responsible for obtaining and distributing all water as may be required for the purposes of executing the Contract, including water for both construction purposes and domestic use, as well as for making all arrangements in connection therewith. The Contractor shall further, at his own expense, be responsible for providing all necessaries for procuring, storing, transporting and applying water required for the execution of the Contract, including but not limited to all piping and other plant and equipment, as well as for all work and superintendence associated therewith.

The sources of all water utilised for the purposes of the Contract shall be subject to the prior approval of the Engineer, which approval shall not be unreasonably withheld.

The Contractor shall comply with all prevailing legislation in respect of drawing water from natural and other sources and shall, when required by the Engineer, produce proof of such compliance. The distribution of water shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

All water provided by the Contractor for construction purposes shall be clean, free from undesirable concentrations of deleterious salts and other materials and shall comply with any further relevant specifications of the Contract. The Contractor shall, whenever reasonably required by the Engineer, produce test results demonstrating such compliance. Water provided by the Contractor for human consumption shall be healthy and potable to the satisfaction of the health authorities in the area of the Site.

No separate payment will be made to the Contractor for the obtainment, distribution and consumption of water, the costs of which will be deemed to be included in the Contractor's tendered rates.

**(c) Electricity**

The Contractor shall, at his own expense, be responsible for obtaining and distributing all electricity as he may require for the purposes of executing the Contract, including electricity for both construction purposes and domestic use, as well as for making all arrangements in connection therewith.

The distribution of electricity shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

No separate payment will be made to the Contractor for the obtainment, distribution and consumption of electricity, the costs of which will be deemed to be in the Contractor's tendered rates and prices.

**C3.4.5.3 Storage And Laboratory Facilities**

No requirements are specified. A commercial laboratory will be utilised

**C3.4.5.4 Vehicles and Equipment**

No requirements are specified

**C3.4.5.5 Advertising Rights**

It is the Main Contractor's responsibility that no suppliers advertise on site. Any advertisement from suppliers shall be removed at the cost of the Main Contractor.

**C3.4.5.6 Notice Boards**

The main Contractor is allowed to place a Notice board on site. The maximum allowed size of this board should be as per the attached notice board drawing.

**C3.4.6 Site Usage**

The Contractors are not allowed to work outside the allowed working hours, as agreed with the Employer's Agent. The disturbance to the residence should be kept at a minimum.

**C3.4.7 Permits and Way Leaves**

Before construction of the Works, or any phase of the Works, the Contractor shall contact all relevant parties and authority officials to establish the existence of existing services on site. The Contractor shall be responsible for obtaining permission to proceed. No claims shall be lodged by the Contractor for delays in obtaining these permissions

**C3.4.8 Water for Construction Purposes**

The onus lies with the Main Contractor to source and pay for construction water. The quality of the construction water should be as specified is COLTO.

**C3.4.9 Survey Control and Setting Out of the Works**

The survey control points and setting out data is provided by the Employer. It is the Contractor's responsibility to ensure that the survey control points are correct and to use these control points for setting out.

**C3.4.10 Extension of Time Due to Abnormal Rainfall**

- (a) Regardless of the cause of any delay an extension of time will only be considered if it can be shown that the activity delayed is on the critical path indicated on the Works Programme.
- (b) No extension of time will be granted in respect of any delays attributed to normal climatic conditions. Normal Climatic Conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, in the event that delays to critical activities exceed the number of working days listed below for each month, then abnormal climatic conditions shall be deemed to exist, and an extension of time shall be granted in accordance with the provisions of that Clause.
- (c) The number of days quoted below shall be regarded as a fair estimate of the delays to be anticipated and allowed for under normal climatic conditions where inclement weather prevents or disrupts work on the critical path.

- 3 working days per month for the months of May to October
  - 2 working days per month for the months of November to April
- (d) Claims for delays for abnormal climatic conditions shall be accompanied by substantiating facts and evidence, which shall be submitted timeously as each day or half-day delay is experienced. Should an extension of time be granted by the Engineer such extension of time will be added to the Time for Completion or set against any over-provision that may have occurred in the abovementioned schedule.
- (e) It shall be further noted that where the critical path is not affected, no extension of time for abnormal climatic conditions or for any other reason will be entertained.
- (f) Any extension of time in respect of wet climatic conditions granted in terms of this clause shall not be deemed to take into account delays experienced by the Contractor in repairing or reinstating damage to or physical loss of the Works arising from the occurrence of abnormal climatic conditions. Extension of time in respect of any such repairs or reinstatement regarding damage shall be the subject of a separate application for extension of time in accordance with the provisions of the Conditions of Contract.

### **C3.4.11 Features Requiring Special Attention**

#### **(a) Site Maintenance**

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner, and shall keep the Site free from debris and obstructions.

#### **(b) Subcontractors**

All matters pertaining to subcontractors (including Nominated Subcontractors) and the work executed by them shall be dealt with directly between the Engineer and the Contractor in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.

The Engineer will not liaise directly with any Subcontractors nor will he issue instructions concerning the subcontract works directly to any Subcontractor.

All matters arising from the subcontract agreements shall be dealt with directly between the Contractor and the Subcontractors and the Engineer will not become involved.

#### **(c) Access to Properties**

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working.

If, as a result of restricted road reserve widths and the nature of the work, the construction of bypasses is not feasible, construction shall be carried out under traffic conditions to provide access to erven and properties.

Notwithstanding the foregoing, the Contractor may, with the prior approval of the Engineer (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the occupiers of erven and properties to close off part of a street, road, footpath or entrance temporarily, provided that the Contractor duly notifies the occupiers of the intended closure and its probable duration, and reopens the route as punctually as possible. Where possible, such streets, roads, footpaths and entrances shall be made safe and reopened to traffic overnight. Such closure shall not absolve the Contractor from his obligations under the Contract to provide access at all times. Barricades, traffic signs, drums and other safety measures appropriate to the circumstances shall be provided by the Contractor to suit the specific conditions.

#### **(d) Existing Residential Areas**

Electricity and water supply interruptions in existing residential areas shall be kept to a minimum. The Engineer's approval shall be obtained prior to such interruptions and residents shall be notified in writing at least **24 hours** but not more than 48 hours in advance. Supplies shall be normalised by 16:00 on the same day.

#### **(e) Employment of Local Labour**

The Tenderer shall limit the utilisation of his permanently employed personnel to Key Personnel, such as Contracts Managers, Site Agents, Foremen, Supervisors, Plant Operators, Materials and Survey

Technicians, Artisans, Trainers, Buyers, Storemen and the like should such expertise not be available out of the community.

The Tenderer shall make maximum use of the human resources existing in the local community. The Tenderers shall apply to the employment labour desk, conveyed by the Project Steering Committee for details of those labourers who are available in the area of work and he shall provide preference to those labourers identified by the Steering Committee.

The employment of labour from outside the local area will only be considered and permitted by the Engineer in the event of:

- the unavailability of sufficient numbers of local labourers to execute the work;
- the unavailability within the local community of the required skills necessary for the execution of specific portion of work, and where the completion period does not permit the creation of the necessary skills through training.

In both cases the Tenderer shall prove to the satisfaction of the Engineer that he has exercised his best endeavours and taken all reasonable actions to recruit local labour.

The Tenderer shall maintain accurate and comprehensive daily records of all labour engaged on the tender and shall submit to the Engineer at two weekly intervals detailed labour returns substantiating the actual numbers of labourers employed, the amounts actually paid in respect thereof, and details of the various activities undertaken by the labourers.

***The employment of casual labour will be done in co-operation with community leaders and local structures. The Tenderer shall ensure that all remuneration paid to employees is in line with the relevant sectorial determination in terms of the Basic Conditions of Employment Act, as determined by the Department of Labour.***

**(f) Monthly Statements and Payment Certificates**

The statement to be submitted by the Contractor in terms of the Conditions of Contract shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Engineer, in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit two (2) A4 size paper copies of the statement.

For the purposes of the Engineer's payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Engineer for the purposes of accurately reflecting the actual quantities and amounts which the Engineer deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Engineer within three (3) normal working days from the date on which the Engineer communicated to the Contractor the adjustments required. The Contractor shall submit to the Engineer five (5) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Engineer the requisite copies of the adjusted statement for the purposes of the Engineer's payment certificate will be added to the times allowed to the Engineer in terms of the Conditions of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the Employer is required to make payment to the Contractor.

**(g) Construction in Restricted Areas**

Working space is sometimes restricted. The construction method used in these restricted areas largely depends on the Contractor's Plant. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and prices tendered will be deemed to include full compensation for any difficulties encountered by the Contractor while working in restricted areas. No extra payment or any claim for payment due to these difficulties will be considered.

**(h) Notices, Signs, Barricades and Advertisements**

All notices, signs and barricades, as well as advertisements, may be used only if approved by the Engineer. The Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his tendered rates.

The Engineer shall have the right to instruct the Contractor to move any sign, notice or advertisement to another position, or to remove it from the Site of the Works if in his opinion it is unsatisfactory, inconvenient or dangerous.

**(i) Workmanship and Quality Control**

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide suitably qualified and experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times.

The cost of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates tendered for the related items of work.

The Contractor's attention is drawn to the provisions of the various Standardized Specifications regarding the minimum frequency of testing required. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion and submission of every part of the work to the Engineer for examination and measurement, the Contractor shall furnish the Engineer with the results of the relevant tests, measurements and levels to demonstrate the achievement of compliance with the Specifications.

**(j) Survey Control and Setting Out of the Works**

Before commencement of work, the Contractor shall liaise with the Engineer to establish and verify the position and level of benchmarks, and the status of all boundary pegs. The Contractor shall record the exact position of all erf pegs on a marked-up print of the site.

On Completion of the contract, the pegs that have been unavoidably disturbed will be replaced by the Employer. Pegs which have, in the opinion of the Engineer, been disturbed due to the negligence of the Contractor, will be replaced at the Contractor's cost.

## **C3.5. Management**

### **C3.5.1 Management of the Works**

#### **C3.5.1.1 Applicable Specification**

As specified under Clause C3.4

#### **C3.5.1.2 Particular Specifications (C3.6 - Annexes)**

As specified under Clause C3.4 and C3.6

#### **C3.5.1.3 Planning and Programming**

If, during the progress of the Works, the quantities of work performed per week fall below those shown on the approved Contractor's programme, or if the sequence of operations is altered, or if the programme is deviated from in any other way, the Contractor shall, within one week after being notified by the Engineer, submit a revised programme clearly indicating how he intends to regain lost time to ensure completion of the Works within the period defined in term of Conditions of Contract or any extended time granted.

Proposal to increase the tempo of work must incorporate positive steps to increase production either by more labour and plant on the Site, or by using the available labour and plant in a more efficient manner.

Failure on the part of the Contractor to submit or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as set out in the Conditions of Contract.

The approval of a programme by the Engineer shall have no contractual significance other than that the Engineer will be satisfied if the work is carried out according to the programme. The said approval shall not limit the right of the Engineer to instruct the Contractor to vary the programme if necessary.

#### **C3.5.1.4 Sequence Of The Works**

As specified elsewhere. (Refer also C3.5.1.3 and the Contract Data)

#### **C3.5.1.5 Software Application For Programming**

Not applicable.

#### **C3.5.1.6 Methods And Procedures**

The Works shall be executed in terms of the various and applicable COLTO specifications, the EMP, the general Health and Safety Specifications and subsequent Health and Safety Plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

#### **C3.5.1.7 Quality Plans and Control**

Refer the various and applicable COLTO specifications, the EMP, the general Health and Safety Specifications and subsequent Health and Safety Plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

#### **C3.5.1.8 Environment**

The Contractor shall, for the duration of the contract, take appropriate measures to control the dust and soil movement which may arise due to his operations.

#### **C3.5.1.9 Accommodation of Traffic on Public Roads Occupied by the Contractor**

Refer the various and applicable COLTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

#### **C3.5.1.10 Other Contractors On Site**

Refer the various and applicable COLTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.



#### **C3.5.1.11 Testing, Completion, Commissioning and Correction of Defects**

Refer the various and applicable COLTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

#### **C3.5.1.12 Recording of Weather**

Refer C3.4.9

#### **C3.5.1.13 Format of Communications**

All contractual communication shall be in writing.

The Contractor shall, for the full duration of the Contract Period, supply and maintain the following documentation:

- (a) Site Diary and Instruction Book.
- (b) Safety File containing all relevant safety data.
- (c) Daily register of all labour, plant and equipment.
- (d) Quality Control file containing all quality control/assurance forms and records.
- (e) One full set of Contract Drawings and documents.
- (f) Latest revision of the Construction Programme.

The above-mentioned shall be kept on Site and shall be accessible to the Engineer at all times.

#### **C3.5.1.14 Key Personnel**

Key personnel shall be on site at all times to control and supervise construction activities.

#### **C3.5.1.15 Management Meetings**

The Contractor shall have regular site management meeting to coordinate and manage the Works. Monthly Contract Meeting shall be held on site. This meeting shall be chaired by the Engineer.

#### **C3.5.1.16 Forms for Contract Administration**

The Employer, the Contractor and the Engineer shall operate and maintain their own individual contract administration systems.

#### **C3.5.1.17 Daily Records**

Refer the various and applicable COLTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

#### **C3.5.1.18 Payment Certificates**

Refer the various and applicable COLTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

#### **C3.5.1.19 Proof of Compliance with the Law**

Refer the various and applicable COLTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

#### **C3.5.1.20 Insurance Provided by the Employer**

Refer the various and applicable COLTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

## **C3.6. Annexes**

	<b><u>Page</u></b>
C3.6.1 Variations And Additions To Standard Specifications	C3.16
C3.6.2 Health and Safety Specifications by the Employer	C3.92
C3.6.3 Construction Environmental Management Plan	C3.95

## SECTION B1100: DEFINITIONS AND TERMS

### B1115 GENERAL CONDITIONS OF CONTRACT

Replace Clause 1115 with the following:

The General Conditions applicable to this Contract are the Conditions of Contract for Construction for Building and Engineering Works designed by the Employer, (1999) published by the Federation Internationale des Ingenieurs-Conseils (FIDIC).

Accordingly, all reference in the Standard Specifications to any other General Conditions of Contract (GCC) has to be amended. The Standard Specifications have been scrutinized and clauses which refer to another GCC identified. These are tabulated below together with the relevant equivalent clause in the FIDIC Conditions of Contract. The context of the reference to the GCC is also noted.

Whereas every effort has been made to include all of the affected clauses in the table, there may be some omissions. In every case, however, the FIDIC Conditions of Contract, as amended by the Particular Conditions of Contract in Part C1.2 of this Volume, shall apply.

#### CHANGES TO REFERENCES BY THE COLTO STANDARD SPECIFICATIONS TO THE COLTO GENERAL CONDITIONS OF CONTRACT AND FIDIC CONDITIONS OF CONTRACT

COLTO Standard Specification		COLTO General Conditions of Contract 1998		FIDIC Conditions of Contract 1999	
Clause No	Page No	Clause No	Description or Reference	Clause No	Description or Reference
1115	1100-2		Definition of GCC		Definition of FIDIC
1204	1200-2	15	Construction programme	8.3	Construction programme
1204	1200-2		General reference to GCC		Applicable to FIDIC
1206	1200-3	14	Setting out of works	4.7	Setting out of works
1209(a)	1200-4		General references to GCC		Applicable to FIDIC
1209(e)	1200-5	52(2)	Valuation of material brought onto site	14.5	Plant and material intended for use in the works.
1210	1200-5	54(1)	Certificate of practical completion	10.1	Taking-over certificate
1212(1)	1200-7	49(2)	CPA on alternative designs	13.8	CPA on alternative designs
1215	1200-9	45(2)	Extension of time for completion due to abnormal rainfall.	8.4	Extension of time for completion due to abnormal rainfall.
1217	1200-10	35	Care of the works	17.2	Care of the works
1303(ii)	1300-1		General reference to GCC		Applicable to FIDIC
1303(iii)	1300-1	49	Price adjustment Item 13.01(a)	13.7&13.8	Price adjustment Item 13.01(a)
1303(iii)	1300-2	49	Price adjustment Item 13.01(b)	13.7&13.8	Price adjustment Item 13.01(b)
1303(iii)	1300-1	53	Variations exceeding 20%		Not applicable to this contract
1303(iii)	1300-2	53	Variations exceeding 20%		Not applicable to this contract
1303	1300-2	12	Payment Item 13.01(c)	8.1	Payment Item 13.01(c)
1303	1300-2	45	Payment Item 13.01(c)	8.4	Payment Item 13.01(c)
1403(c)(ii)	1400-4	40(1)	Variation for rented accommodation	13.3	Variation for rented accommodation
1505	1500-3	40(1)	Variation for temporary drainage	13.3	Variation for temporary drainage

COLTO Standard Specification		COLTO General Conditions of Contract 1998		FIDIC Conditions of Contract 1999	
Clause No	Page No	Clause No	Description or Reference	Clause No	Description or Reference
Item 15.08	1500-8	48	Payment of Provisional Sum	13.5	Payment of Provisional Sum
Item 15.09	1500/8	48	Payment of Provisional Sum	13.5	Payment of Provisional Sum
Item 15.11	1500-8	48	Payment of Provisional Sum	13.5	Payment of Provisional Sum
Note (2)	3100-4	40	Payment for prospecting for materials	13.5	Payment for prospecting for materials
3204(b)(ii)	3200-2	40	Payment for oversize material	13.3	Payment for oversize material
3303(b)	3300-2	2	Engineer's decisions, with reference to materials classification	3	Engineer's decisions, with reference to materials classification
Item 44.06	4400-3		General reference to GCC, PC Sums	13.5	Provisional Sums in FIDIC
Item 45.06	4500-3		General reference to GCC, PC Sums	13.5	Provisional Sums in FIDIC
5803(c)	5800-3	40	Variation, for landscaping	13.3	Variation, for landscaping
5805(d)	5800-4	40	Variation, for grassing	13.3	Variation, for grassing
Item 58.10	5800-10	48	Payment for Extra Work	13.5	Payment for Extra Work
8103(c)	8100-1	40	Variation, for testing material	13.3	Variation, for testing material
Item 81.02	8100-26		General reference to GCC, Provisional Sums		Applicable to FIDIC, Provisional Sums
Item 81.03	8100-26	22	Clearance of site on completion, with reference to core drilling	11.11	Clearance of site on completion, with reference to core drilling

#### **B1155 WORK IN RESTRICTED AREAS**

*Add the following:*

"Any omission of payitems from the pricing schedule with regard to additional or extra over payment for work in restricted areas should be regarded as deliberate and any additional cost incurred shall be included in the bulk rates tendered. (Refer also to clause B1209(g))"

*Add the following clauses:*

#### **"B1156 OTHER DEFINITIONS**

The COLTO Standard Specifications for Roads and Bridge Works for State Road Authorities (1998 edition) has been written for all contractors, employers and engineers. The works and the site are not defined and the general nature of the entities and elements that collectively constitute construction under a contract are characterized by the use of lower case letters throughout.

These project specifications continue to use lowercase spellings in order to avoid the appearance of the capitalised and non-capitalised words to describe or prescribe the same elements of work required on this project. However, for the purposes of this contract the following definitions shall apply:

##### Contractor

The Contractor and the contractor is the same persona defined under clause 1.1.2.3 of the FIDIC Conditions of Contract, but who will only be formally identified by the completed Form of Acceptance C1.1.2 in this document and which will be bound into the final contract document.

##### Employer

The Employer and employer is the same persona and is defined in C1.2.2 Contract Data, and clause 1.1.2.2 of the FIDIC Conditions of Contract.

#### Engineer

The Engineer and engineer is the same persona and is defined in the C1.2.2 Contract Data, and clause 1.1.2.4 of the FIDIC Conditions of Contract.

#### Site

The site is defined in clause 1.1.6.7 of the FIDIC Conditions of Contract. It is bound by the limits of construction as shown in the drawings or the title of the project and extends to also include the following:

- Areas outside the construction zone areas where accommodation of traffic is placed.
- All borrowpits defined in the applications approved by the relevant Department of Minerals and Energy.
- All haul roads constructed by the contractor for purposes of access.
- Any non-adjacent sites specified in the contract documentation.
- The contractors and his subcontractors camp sites

#### Works

The works is described in Part C4 of this document and is as defined in clause 1.1.5.8 of the FIDIC Conditions of Contract and prescribed in Sections B, C, D & E of this Volume.

#### Prime cost

Is a specific type of Provisional Sum for which payment is made on the production of invoices showing the cost price of the implementation or installation of the service required. Services rendered in this manner carry a mark-up for which a rate is offered at tender stage to cover all the tenderer's handling, supervision and liability costs and profit in providing the item or services.

#### Provisional Sum

Is a sum which is specified in the contract as a provisional sum, for the execution of any part of the works or the supply of plant, materials or services under sub-clause 13.5 (Provisional sums).

### **B1157 SABS SPECIFICATIONS**

Where reference is made in this specification or the standard specifications to SABS specifications, the latest published national standard shall be applicable. Use:

[https://www.sabs.co.za/content/uploads/files/SABS%20Catalogue%20February%202012%20\(a bridged\).pdf](https://www.sabs.co.za/content/uploads/files/SABS%20Catalogue%20February%202012%20(a%20bridged).pdf)

for the most up-to-date versions of the various standards.

### **B1158 AGGREGATE SIZE**

Where reference is made in this specification or the standard specifications to aggregate size, nominal aggregate size or maximum aggregate size, the aggregate size as listed shall be replaced with the new corresponding aggregate size as indicated in the following table:

<b>Aggregate size</b>	<b>New aggregate size</b>
26,5	28
19	20
13,2	14
9,5	10
6,7	7
4,75	5
2,36	2
1,18	1

**B1159      COMPACTION**

In December 2017 the TMH1 will cease to exist and be replaced by SANS 3001. In preparation for this change-over, SANRAL has already adopted the new test methods and all site Laboratories are required to perform testing according to the SANS 3001 test methods.

Therefore, the standard for compaction efforts should change from Modified AASHTO Density as per TMH1 Test Method to Maximum Dry Density (MDD) as per SANS 3001. Where reference is made to compaction or of Modified AASHTO Density in the tender documentation or the standard specifications or wherever there is conflict between the tender documentation and the standard specifications, the SANS 3001 specification and terminology shall govern.”

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## SECTION B1200: GENERAL REQUIREMENTS AND PROVISIONS

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### **B1202 SERVICES**

*Add the following:*

“A provisional sum is included in the Schedule of Quantities to cover the costs of relocating the known services. This provisional sum shall be used for the services relocation work carried out by the Contractor upon written instruction from the Engineer’s representative. The Contractor is to submit a quotation to the Employer’s Agent for approval prior to relocation of any services.”

### **B1204 PROGRAMME OF WORK**

#### **a) General requirements**

*Add the following as a continuation of the first paragraph:*

“In drawing up the programme the contractor shall make allowance for the following:

- i) All special non-working days.
- ii) The expected delays defined in 1215: Extension of time resulting from inclement weather as a terminal float.
- iii) The following embargo hours and days:
  - No work is to be undertaken on the surfacing seal from 01 May to 31 August, unless approved by the Engineer.
  - Day before and day after public holiday long weekends, including Easter Weekends.
  - Last working day of the building / construction industry prior to the Christmas holidays.
- iv) The following restricted working conditions:
  - During the contractor’s annual shutdown period between December and January, the contractor shall maintain two-way traffic within the contract limits.
  - During the contractor’s annual shutdown periods between December and January and over Easter Weekends, the contractor shall maintain unrestricted two-way traffic within the contract limits.
  - Construction constraints as described in sections 1500, 3300, 3400, 3500, 4200, 4300, 4600 and 5700.
- v) Meeting the requirements of the Environmental Management Plan (EMPI) or Environmental Specifications.
- vi) The time needed for preparation and approval of the various mix designs specified in the relevant construction sections of the Scope of Works.
- vii) The time needed to comply with statutory requirements (e.g. Health and Safety).
- viii) The time needed to satisfy approval requirements for the use of explosives as per Clause B1222.
- ix) Search and rescue operation for sensitive vegetation in road reserve and at borrowpits and quarries.

This initial programme shall realistically account for the forecast cashflow within the defined contract period. If an alternative contract period is offered, the contractor shall submit a separate programme with the alternative tender.”

*Insert the following paragraphs:*

**“c) Additional programme requirements**

In addition to the requirements of clauses B1204(a) and B1204(b), and of clause 5.6 of the GCC 2015 (3<sup>rd</sup> Edition), the programme of work shall include the following details:

- (i) A work breakdown structure that identifies all major activities.
- (ii) Scheduled start and end dates for each activity.
- (iii) Linkages between activities that clearly identify sequence, floats and critical path.
- (iv) Intended working hours and resource allocations (plant and labour).
- (v) Production rates.
- (vi) Monthly cashflow projections.
- (vii) Key dates in respect of information required or due delivery.”
- (viii) The contractor’s payment weekends
- (ix) A risk assessment schedule with mitigating plans of issues that could prevent the due completion date being met.

Should the engineer require an electronic version of the programme for review purposes, the contractor shall supply the programme in a format compatible with the engineers’ software.

**“d) Programme revisions**

The programme will be reviewed at the monthly site meetings at which the contractor shall provide sufficient detail that will allow the comparison of completed work per activity against the current programme. The contractor shall indicate what resources and programme changes he intends to implement in order to remedy any activity that has fallen behind. The engineer may demand from the contractor a major revision of the programme. Such a revision shall be submitted for comment within 14 days of the demand.”

**B1205 WORKMANSHIP AND QUALITY CONTROL**

*Insert the following heading after the title:*

**“a) General:”**

*Insert the following as sub-clauses after the first paragraph:*

**“b) Quality Systems**

The contractor shall implement a quality assurance system that replicates an ISO 9002 and appoint a quality manager who shall ensure that members of the contractor’s staff comply with the requirements of the quality system. The quality system and the methods used to implement it shall be described in a quality plan produced by the contractor. The quality manager shall be resident on site full time.

The contractor shall submit the quality assurance system he proposes using to the engineer, for his approval, within two weeks of the site handover. The system shall record the lines and levels of responsibility and indicate the method by which testing procedures will be conducted. Once accepted by the engineer the contractor shall not deviate from it unless written notification of proposed changes have similarly been submitted and approved.

The system shall provide for a method statement for each construction activity for which a pay item is provided in the Pricing Schedule. Each method statement shall be submitted to the engineer for his approval two weeks prior to commencement of the activity. Where appropriate the contractor shall make use of the employer’s manuals in preparing his



method statements. No construction activity shall commence before the engineer has approved the contractor's quality assurance system."

**B1206 THE SETTING OUT OF WORK AND PROTECTION OF BEACONS**

*Replace "clause 14" in the first paragraph with "clause 4.7"*

*Add the following at the end of the fourth paragraph:*

"Road markings, particularly the divergent/convergent lines of ramp interchanges and no overtaking barriers are also elements of the road that require proper setting out. The contractor shall prove to the engineer that critical reference points have been satisfactorily recorded for later reinstallation before any work commences that will obliterate the existing markings."

*Delete "and of clause 14 of the general conditions of contract" in the sixth paragraph.*

*Add the following paragraphs:*

"The contractor shall take care that property beacons, trigonometrical survey beacons or setting-out beacons are not displaced or destroyed without the consent of the engineer. Property beacons and trigonometrical survey beacons that have been displaced or destroyed shall be replaced by a registered land surveyor, who shall certify such replacement.

The cost of replacing all beacons displaced or destroyed during the course of the contract without the consent of the engineer shall be the contractor's responsibility and included in the tender rates".

**B1207 NOTICES, SIGNS AND ADVERTISEMENTS**

*Delete the third paragraph and replace with the following:*

"All signboards erected in accordance with the drawings shall be removed at the same time as the de-establishment of the contractor's camp. Payment under subitem 13.01 for the final instalment of 15% of the tendered lump sum shall not be made unless all the advertisements, notices and temporary signs have been removed.

**B1209 PAYMENT**

**b) Rates to be inclusive**

*Add the following to the first paragraph:*

"VAT shall be excluded from the rates."

*Insert the following after "constructional plant" in lines 6 and 7 of the first paragraph:*

*"(distinguishing between operational costs and hire costs)".*

**c) The meanings of certain phrases in payment clauses**

Procuring and furnishing ... (material)

*Add the following:*

"Payment for procuring and furnishing material from commercial sources shall include all transport costs, irrespective of distance hauled".

**e) Materials on the site**

*Replace "clause 52" in the first line with "sub-clause 14.5"*

*Add the following sub-clauses:*

**“g) Work in confined areas**

Except where provided for in the specification and the Pricing Schedule no extra payment shall be made nor shall any claim for additional payment be considered for construction in confined areas. The omission of standard payitems from the schedule of quantities shall be taken to be deliberate and any additional costs incurred shall be included in the bulk rate.

**h) Split quantities**

Wherever in the Pricing Schedule allowance has been made to price items of work for which a product or material is uncertain and quantities split between pricing items, the Employer reserves the right to choose whichever is the most appropriate or combination thereof, regardless of any adverse effect on the Contractor's costs and no claims for additional compensation shall be entertained.”

**B1210 CERTIFICATE OF PRACTICAL COMPLETION OF THE WORKS**

*Amend the heading of this clause to read:*

**“TAKING-OVER CERTIFICATE”**

*Replace the 1<sup>st</sup> paragraph with the following:*

“Notwithstanding that there might be natural or programmed sections of the works that will result in them being completed in their entirety before other sections, no consideration shall be given to the issuing of taking-over certificates for parts of the works. The use of any completed roadway or parts of the work, whether for unhindered use by the public or for accommodation of traffic while other parts are being constructed, shall not constitute use or occupation by the Employer.

The notice to the engineer, i.t.o clause 10.1 of the Conditions of Contract applying for a Taking-Over Certificate, shall include the contractor's own list of what it considers to be the outstanding minor works that do not substantially affect the use of the Works. As justification that the issue of a Taking-Over Certificate is warranted the contractor shall take note that the following sections of the works are to be completed to the satisfaction of the engineer:”

*Add the following to sub-clause (e) before the semicolon:*

“(including road studs)”

*Add the following paragraphs after item (h):*

“In addition to the above itemised sections of the works and regardless of the degree of beneficial occupation by the Employer, the outstanding works contained in the lists produced by the contractor and the engineer shall be considered for taking-over only if the following criteria have been met:

- (i) The estimated cost to complete the listed outstanding work is less than 2% of the tendered value of work plus the cost of any variation or extra work orders, but excluding CPA and VAT.
- (ii) The written lists of outstanding items of work can be completed within 28 days of the lists having been issued.
- (iii) Any information in the contractor's possession, which is required by the engineer and has been requested in writing, has been supplied.
- (iv) The Regional Manager of the Department of Mineral Resources (DMR) has issued written confirmation to the contractor that they are satisfied with the final shaping to all

quarries, borrow pits, stockpile areas, and spoil sites used or intended to be used under this contract. In the event this written confirmation is not obtained from DMR, acceptance by the Environmental Assessment Practitioner (EAP) will be sufficient for the issuing of the Taking-Over Certificate.

If any of the listed criteria (i) through (iv) are not met at the date of the contractor's notice of application, the engineer is to reject the application without providing any corresponding list of outstanding work. If an application is rejected, the contractor shall rectify what has been identified as deficient before submitting a new notice of application."

**B1213 VARIATION FROM SPECIFIED NOMINAL RATES OF APPLICATION OR NOMINAL MIX PROPORTIONS**

*Amend the last line of the second paragraph to read as follows:*

"... materials, condition of the site and cement type (in order to comply with the durability requirements described in sub-clause B6404(h)."

**B1214 CONTRACTOR'S ACTIVITIES IN RESPECT OF PROPERTY OUTSIDE THE ROAD RESERVE AND OF SERVICES MOVED, DAMAGED OR ALTERED**

*Add the following to the last paragraph of subclause (d):*

"These written statements shall be handed to the engineer before the final certificate will be issued. Failing to obtain these written statements from all landowners and authorities concerned, the Defects Notification Period will be extended including all conditions related to such an extension, until such time that all these statements are obtained.

The obtaining of any such written statements will not relieve the contractor of the execution of any of his obligations to the satisfaction of the landowner or authority concerned, and to the approval of the engineer."

*Under sub-clause (e) replace the opening paragraph with:*

"Should the contractor use land not provided by the Employer for the purpose of his own establishment, engineer's offices and laboratory, or storing of equipment or materials required for construction or disposal, it shall be subject to the following:"

*and add the following sub-sub-clauses:*

- "(vi) That lease agreements are concluded with the owner or owners of such land for the full period that such areas are required. The leases shall provide for possible extensions to match the duration of the contract. The lease agreements shall also provide for the contract being terminated by contractor's default or liquidation and the resulting possibility for them to be taken over by a succeeding contractor.
- (vii) That copies of lease agreements shall be submitted to the engineer prior to signature by the signing parties, and copies lodged with the engineer after signing. Notwithstanding the engineer's approval of the conditions of a lease the contractor shall be solely responsible for adherence to the terms of the agreements.
- (viii) Adherence to the principles of the environmental management plan and legal obligations"

*Add the following sub-clause:*

**"f) Cleaning of public roads**

Where material is spilled on public roads during the haul of material, the road shall be cleaned immediately."

**B1219 WATER**

Add the following:

“Water for use on site other than municipal, shall be subject to the required permit from Department of Water Affairs and Sanitation (DWS). This shall include such extraction points as rivers, dams, streams, and boreholes.

Use Table B1219 below to determine the suitability of water for construction purposes.

**TABLE B1219: WATER CLASSIFICATION FOR CONSTRUCTION: TESTING**

		Water Quality Classification Code						
		H0	H1	H2	H3	H4	H5	
Property	Unit	Pure water (AR)	Clean water (Rain)	Treated water (Municipal)	Silty (muddy) water with low salt content	Highly mineralised chloride sulphate water (brackish)	Waste brack, sewage, marsh, sea, etc. water	Method
PH*	-	7.0	5.7 – 7.9	4.5 – 6.5	4.5 – 8.5	9.0	-	SABS M113 SM 11 - 1990
Dissolved solids*	ppm	0	1000	1500	3000	-	-	SABS 213 SM213 - 1990
Total hardness*	-	None	None	Temporary	Temporary	Permanent	-	SABS 215 SM 215 – 1971
Suspended matter	ppm	0	2000	2000	5000	-	-	SABS 1049 SM 1049 – 1990
Electrical conductivity	mS/m	0	200	200	500	-	-	SABS 1057 SM 1057 – 1982
Sulphates (SO4)	ppm	0	200	300	500	1000	-	SABS 212 SM 212 – 1971
Chlorides (Cl)	ppm	0	500	1000	3000	5000	-	SABS 202 SM 202 – 1983
Alkali Carbonates (CO3) & Bicarbonates (HCO3)	ppm	0	500	1000	1000	2000	-	SABS 241 – 1999
Sugar	-	Negative	Negative	Negative	Negative	Negative	-	SABS 833
Quality of water required		Untreated layer works	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Investigate the effect on the quality of the material	
		Chemically treated	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Investigate the effect on		

	layer works				the quality of the material
	Concrete mass	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Investigate the effect on the quality of the material
	Concrete prestressed	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>		
	Slurry & emulsion	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>		
	Soil/gravel tests	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>		
	Chemical or control tests	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>		

References:  
1. Concrete Technology – Dr S Fulton (1989)  
2. Materials Manual (PAWC)

- A primary property. The quality of the water is that quality where all three of the primary properties are within the limits.
- The tabulated single values are maximum value except in the case of the pH value for pure water, which must be 7.0

**B1222 USE OF EXPLOSIVES**

Add the following sub-clauses:

**“h) Definitions**

- (i) **“Specified excavation or Payment line”** means the excavation profile given on the Drawings or determined by the engineer for the Works, within which no unexcavated or loose material shall occur after the excavation is complete except as allowed within the specified tolerances. It is also the line to which payment for excavation will be made.
- (ii) **“Pre-splitting”** comprises drilling a line of closely spaced parallel holes of appropriate diameter, spaced not more than ten times the hole diameter or 600mm, whichever is the smaller and charging the holes with an appropriate amount (decoupled if necessary) and type of explosive to shear the rock, forming a surface along the line of drill holes.

Either all the holes in a presplit line shall be drilled, charged and detonated simultaneously prior to drilling the production holes for the excavation adjacent to the presplit line, or pre-splitting shall be accomplished by delaying detonation in the production holes to allow the presplit holes to fire first. The first line of production holes next to the presplit face shall be lightly charged to ensure that the presplit face is not damaged when the charges in the production holes are detonated.

- (iii) **“Smooth blasting”** comprises the drilling of a number of closely spaced parallel holes along the required excavation surface, with a suitable burden/spacing ratio, loading all the holes lightly with a uniform continuous charge of small diameter explosive and detonating all these charges simultaneously, after the detonation of the main production blast.
- (iv) **“Line Drilling”** comprises drilling a line of holes of appropriate diameter spaced not

more than twice the hole diameter to form a surface of weakness along which the rock will break. Blasting is not permitted in the line drilled holes, and the first line of production holes next to the line drilled holes shall be lightly charged to avoid damage to the line drilled break surface.

- (v) “**Cushion Blasting**” comprises the separate removal of a protective zone of rock which has been purposely left within the specified limits of excavation for flat areas and shallow slopes. Drilling for cushion blasting shall consist of a regular pattern of holes at appropriate spacings and angles and to accurate depths.

The holes shall be lightly charged and detonated in relays to lift the rock progressively to form the final excavated surface without shattering the surrounding rock.

- (vi) “**Overbreak**” means any excavation area which extends beyond the payment line, irrespective of the reason for such excavation.

**i) General**

A copy of all certificates issued to workmen to permit them to undertake blasting, and to the contractor to cover the purchasing, storage and transport of explosives shall be handed to the engineer before any blasting work is undertaken.

The contractor shall submit to the engineer at least 28 days before the commencement of any excavation work, full details of his proposed methods and sequence of excavation and programme for the use of explosives.

Within 2 weeks of receipt of the proposals, the engineer shall indicate acceptance in part or in whole, in writing, to the contractor. The engineer reserves the right to reject the proposals if, in his opinion, undesirable damage to permanent rock surfaces or existing structures will result from carrying out the blasting as proposed. If acceptance is withheld, new proposals in whole or in part shall be submitted. No drilling or blasting shall be carried out in areas for which the proposals have not been accepted by the engineer, and any changes to the accepted methods shall be subject to the engineer’s approval.

The work shall be programmed so as to minimise blasting adjacent to previously constructed sections of the Works.

Where blasting is necessary every precaution including the use of blast mats, timber boarding or other means shall be exercised to protect the Works and persons, animals and property in the vicinity of the Site. The contractor shall accept responsibility for all injury or damage occasioned by any blasting operations and shall make good such damage without any additional payment.

The contractor shall, in particular, note the requirement that he must limit to the maximum extent practicable the spillage of material from surface excavations, whether by blasting or other means. To this end the contractor shall take all necessary precautions including, if necessary, covering the rock prior to blasting with sufficient loose material to prevent the blasted material being thrown. If, however, during the course of excavation on a hillside, the engineer is of the opinion that insufficient precautions are being taken to minimise the spillage of material, he may instruct the contractor to adopt further measures to reduce the spillage. No separate payment will be made for any such measures required.

Each separate blast shall be designed in accordance with modern blasting practice to break out the rock with the minimum explosive force. Full details of each blast shall be submitted to the engineer for scrutiny not later than 24 hours prior to the commencement of drilling for that blast, unless such blast is unchanged from the previous one. The details shall include the location, depth and area of blast holes, the type, strength, amount, column load and distribution of explosives to be used per hole, per delay and per blast, the sequence and pattern of delays, the maximum expected level of shockwaves on adjacent structures, and the description and purpose of any special methods to be adopted by the contractor.

The consent by the engineer to any blasting proposals shall not relieve the contractor of his responsibilities under the Contract and the law.

Should the contractor excavate to dimensions in excess of those specified or instructed by the engineer, whether to remove damaged material or for reasons of safety or for his own convenience, he shall at his own expense and when required by the engineer, fill in the excess excavation with concrete or sprayed concrete of approved quality or with other material approved by the engineer, or carry out additional trimming to the satisfaction of the engineer.

The contractor shall provide the engineer each day with a copy of the record for the previous day's excavations. Where applicable the following data shall be recorded for each working area together with other such data as the engineer may request:

- location of the excavation and position within the excavation,
- drilling pattern,
- type and amount of explosive used, including blasting pattern and delays used,
- details of rock support,
- surface area of classification of labour and plant,
- number and classification of labour and plant,
- unusual occurrences, rock falls, unstable or soft ground and inflows of water,
- progress, delays and reasons for delays,
- name and permit number of blaster,
- date, and
- distance of blasts to structures and existing services.

**j) Quality of Excavated Surface**

Unless otherwise instructed by the engineer all blasting work shall be carried out using controlled blasting techniques to minimise any damage to the final profile.

Use shall be made of approved special explosives and/or blasting techniques which will minimise blasting induced fractures, or disturbance, on the rock faces outside the excavation line so preserving the rock in the soundest possible condition. No separate payment will be made for cushion blasting. The cost of using cushion blasting techniques shall be included in the rates for excavation.

The surface after blasting shall exhibit a regular fracture plane between barrels without back break and with half barrels visible over the major portion of the surface. The surface shall be scaled down of all loose and hollow sounding rock to leave a solid, intact surface. Light charges shall be used for enlarging or correcting the excavated profile and also for excavating trenches.

If in the opinion of the engineer, the methods of blasting are at any time causing excessive or undesirable disturbance of the rock mass surrounding the excavated space, he may order the contractor to change his methods of blasting and/or carry out blasting trials until the desired results are achieved. No additional payment shall be made for any change or further trials ordered by the engineer or any delays resulting there from.

The spacing of holes and explosive charges shall be adjusted so that a minimum of oversize material is produced (a maximum particle size of 600mm). The engineer shall have the right to order the contractor to adjust his blasting pattern and/or carry out secondary blasting at his own cost, should he be of the opinion that the contractor is not taking sufficient care to produce rock of the required size.

**k) Monitoring of Blasts**

The contractor shall supply and operate an approved tri-axial particle velocity meter equipped with a permanent paper trace output, which shall be used as and where directed by the engineer to monitor blasting work.

The paper trace output records shall show the time and location of each blast, the type and amount of explosive used, together with any other relevant data.

**l) Notification of Blasts**

Prior to any blasting, 7 days' notice is to be given to the engineer, relevant authorities and the media. The contractor shall further notify the engineer of the intention to blast at least 24 hours before that operation is carried out. The notification shall show the location of and the intended time of each blast and the name of the licensed blaster and shift foreman responsible.

The contractor shall distribute written notification to all organisations on site, and relevant authorities, 24 hours prior to undertaking blasting. Any delay or postponement of any blasts shall be notified to all organisations immediately. The firing of explosives shall be restricted as detailed in Item B1222(r) of this specification.

**m) Blasting near Structures**

The amount of explosives that may be detonated shall not result in a ground vibration with a peak particle velocity in excess of 25mm/sec at the nearest point of any part of Permanent Works. Where circumstances dictate, such as when blasting near to partially cured concrete, the peak particle velocity permitted may be reduced by the engineer.

Blasting shall not be carried out within 10m of any Works, unless otherwise agreed to in writing by the engineer.

**n) Controlled Blasting**

Controlled blasting methods shall comprise pre-splitting, smooth blasting, line drilling or cushion blasting techniques.

All charges shall be accurately made up and inserted into the holes at the correct spacing, and all holes shall be correctly stemmed and connected in the correct sequence, with detonators being correctly delayed.

If at any time the methods of drilling and blasting do not produce the desired results of a uniform profile and shear face without overbreak, all within the tolerances specified, the contractor shall be required to undertake tests as until a technique is arrived at that will produce the desired results.

**Controlled blasting shall be used in the widening of the cuttings or otherwise where called for by the engineer.**

**o) Drilling**

In all controlled blasting, drilling accuracy of perimeter holes is of prime importance and the contractor shall take particular care and make use of sight lines and guide rails in surface work to control the alignment and depth of blast holes. Holes which are likely to protrude more than 100mm beyond the excavation profile, shall not be charged up, but shall be redrilled.

The blast pattern shall be accurately set out and holes shall be collared within 50mm of the required position. Holes which are overdrilled shall be fully stemmed to the required depth before charging up takes place.



The length of perimeter holes for any individual lift shall not exceed 10m or any lesser depth detailed on the drawings. All perimeter holes for surface blasting shall be drilled to a depth of 1m below the bottom of any production holes adjacent to the perimeter plane.

**p) Use of Explosives**

Both cartridge and bulk explosives may be used where appropriate.

In controlled blasting the type, size, decoupling and charge concentration of perimeter and bulk charges shall be within established parameters unless otherwise proven acceptable by site trials.

The bottom charge of a pre-split hole shall not be larger than the line charges unless otherwise directed. The top charge of the pre-splitting hole shall be placed far enough below the collar to avoid overbreaking the final profile.

Adequate stemming shall be used to avoid blow-outs.

**q) Checking and Correcting the Excavated Profile**

The excavated profile shall be checked for line, level and underbreak using methods approved by the engineer. No projections of rock shall protrude within the payment line, except as allowed within the specified tolerances.

The contractor shall submit his proposals for removing any underbreak to the engineer for his consent prior to carrying out any such work of removal. Any work executed or delays, which are due to the contractor having to re-excavate underbreak and then re-install support shall be carried out without additional payment, and no extension of time will be allowed for this work.

**r) Accommodation and Protection of Existing Services and Infrastructure**

In the event of the laid-down vibration parameters as detailed in (m) above being exceeded or in the event of a valid recording not being made available as stipulated above, the engineer reserves the right to ascertain by whatever means, whether damage was caused by the blast to the service or structure. All costs incurred in establishing such possible resultant damage and the repair thereof will be to the contractor's account.

Cover blasting shall be used in the vicinity of overhead services (e.g. telephone and power lines) where overhead services may be damaged or affected by blasting activities. The cover blasting shall be such that it sufficiently protects overhead services to prevent any damage to such services."

**B1229 SABS CEMENT SPECIFICATIONS**

*Delete this clause.*

*Add the following clauses:*

**"B1230 MATERIALS**

**(a) General**

The contractor, when using materials that are required to comply with any standard specification, shall, if so ordered, furnish the engineer with certificates showing that the materials do comply with this specification.

Where so specified, materials shall bear the official mark of the appropriate authority. Samples ordered or specified shall be delivered to the engineer's office on the site free of charge.

Where materials are specified under trade names tenders must be based on these materials. Alternative materials may be submitted as alternative tenders and the engineer may, after receipt of tenders, approve the use of equivalent materials. The tender must be clearly marked as an alternative tender, failing which the tender may be rejected.

Unless otherwise specified, all proprietary materials shall be used and placed in strict accordance with the relevant manufacturer's current published instructions. Agrément certified products shall be used and placed in accordance with its Agrément certification criteria.

Unless anything to the contrary is specified, all manufactured articles or materials supplied by the contractor for the permanent works shall be unused.

Any materials excavated or present on the site or within the road reserve, or in borrow areas shall not become the property of the contractor, but will be at his disposal only in so far as they are approved for use on the contract, unless otherwise indicated in the project specification.

Existing structures on the site shall remain the property of the Employer and except as and to the extent required elsewhere in the contract, shall not be interfered with by the contractor in any way.

Materials to be included in the works shall not be damaged in any way and, should they be damaged on delivery or by the contractor during handling, transportation, storage, installation or testing they shall be replaced by the contractor at his own expense.

All places where materials are being manufactured or obtained for use in the works, and all the processes in their entirety connected therewith shall be open to inspection by the engineer (or other persons authorised by the engineer) at all reasonable times, and the engineer shall be at liberty to suspend any portion of work which is not being executed in conformity with these specifications.

The contractor shall satisfy himself that any quarry selected for use provides the necessary mined material in accordance with the specification.

**(b) Banned materials**

No tar fluid products shall be used in the construction works.

**B1231 MIX DESIGNS**

Before commencing with certain construction activities, the contractor shall, except where specified otherwise in the relevant construction sections in the Scope of Works, apply the following procedures with regards to mix designs:

- Taking and submitting samples of the relevant materials.
- Undertake the required mix design(s) or allow the engineer to undertake them.
- Produce, where required, laboratory, production/plant and/or trial mix(es).
- Undertake the required adjustments to the mix design(s) and reproduce required laboratory, production/plant and/or trial mix(es).
- Complete trial section(s) where required.
- Await the engineer's approval of the mix design(s) and trial section(s).

**B1232 MEASUREMENT AND PAYMENT**

**Item** **Unit**

**B12.01 Protection, removal, realignment and replacement of services**

- (a) Relocation, including lowering or raising, protection and/or repair of existing services which are not allowed for under items in the schedule of quantities..... Prov. Sum
- (b) Handling cost and profit in respect of subitem B12.01(a).....percentage (%)

The provisional sum item shall be paid in accordance with the provisions of sub-clause 6.6 of the GCC 2015. The tendered percentage is a percentage of the amount actually spent under the prime-cost item, which shall include full compensation for the profit in connection with providing the specified service.

**B12.02 Relocation and/or replacement of existing fences**

- (a) Relocation and/or replacement of existing fences (with similar).....Prov. Sum
- (b) Handling cost and profit in respect of subitem B12.02(a).....percentage (%)

The relocation and/or replacement of existing fences is to be at the discretion of the Engineer and should only commence upon written instruction from the Engineer's representative.

**B12.03 Occupational Health & Safety**

- (a) Provisional sum for the appointment of an independent health and safety agent... Prov. Sum
- (b) Handling cost and profit in respect of subitem B12.03(a).....percentage (%)

The health and safety agent to be appointed will be at the discretion of the Engineer/Employer.

**B12.04 Environmental Audits**

- (a) Provisional sum for the appointment of an Environmental Control Officer for environmental audits..... Prov. Sum
- (b) Handling cost and profit in respect of subitem B12.04(a).....percentage (%)

The Environmental Control Officer to be appointed will be at the discretion of the Engineer/Employer.

**Item** **Unit**

**B12.05 Survey**

- (a) Additional survey required by the Engineer..... Prov. Sum
- (b) Handling cost and profit in respect of subitem B12.05(a).....percentage (%)

This item will be used should there be additional survey required by the Engineer.

**B12.06 Provision of a Community Liaison Officer**

- (a) Wages, salary, allowances, etc ..... Prov. Sum
- (b) Handling cost and profit in respect of subitem B12.06(a).....percentage (%)

The role and responsibilities of the appointed Community Liaison Officer (CLO) will be outlined in the respective CLO appointment letter.

**B12.07 Training**

- (a) Appointment of local trainee students for the duration of the contract... .. Prov. Sum
- (b) Handling cost and profit in respect of subitem B12.07(a) ..... percentage (%)

The local trainee student(s) will be identified by the Employer or Employer's Agent and employed for the duration of the contract or as long as deemed necessary.

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## SECTION B1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

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### B1302 GENERAL REQUIREMENTS

#### a) Camps, constructional plant and testing facilities

*Insert the following after the first paragraph:*

In the event that municipal-owned land will be made available for the use of the contractor for his construction camps, offices, stores, workshops and/or testing facilities, the use of such land will not be treated as a lease but will form part of the contract. In this regard the contractor shall complete the prescribed agreement and comply with all the conditions thereof as if it is part of the contract. The Employer's appointed service provider who administers and manages municipal owned land will facilitate the process and the contractor shall liaise and co-operate with the municipality in this regard.

#### c) Legal and Contractual Requirements and responsibilities to the public

*Add the following:*

"Legislation imposes mutual obligations on the Employer and contractor in the performance of their duties to society and to the built and natural environment. To assist the contractor in understanding and assessing his obligations, and thus to make allowances for the cost of compliance with this legislation, the following additional specifications are included in the project specifications.

Part C3 (Scope of Work) contains the Environmental Management Plan (EMPr) or Environmental Specifications for this project. Its provisions regulate the contractor's construction methods to ensure responsible conduct and treatment of the environment relevant to the project.

*Add the following subclause:*

#### d) Monthly reporting

When submitting any information required and interim certificates for payment, the Contractor shall use the Employer's standard forms and formats. No payment can be made before the Contractor is registered as a vendor on the Employer's system.

The Contractor shall submit payment certificates for all work rendered in the Employer's financial year within that specific year.

The Contractor shall submit and update on a monthly basis all the appendices to the site meeting minutes and a cash flow forecast for the works.

The above information shall form part of supporting documentation required for making interim payments in terms of the General Conditions of Contract.

Failure to comply may result in payments being withheld.

**B1303 PAYMENT**

<b>Item</b>		<b>Unit</b>
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**B13.01 The contractor's general obligations**

*Add the following pay subitems:*

**(d) Health and safety compliance**

(i) Preparation of risk assessments, safe work procedures, the project H&S file and the H&S plan, and any other H&S matters the contractor deems necessary, including Completing and checking the project H&S file and handing over to the Client on completion of the works..... L/Sum

(ii) Full compliance with all General Safety, Safety Plan, Monitoring and Review. The sum shall include all fixed costs necessary in complying with the OHS Act (1993 as amended) and the Construction Regulations (2014) and the Umzumbe Local Municipality Health and Safety Specifications (refer to Particular specifications – “PE”).....L/Sum

(iii) The provision of PPE and protective clothing and other H&S matters that the contractor deems necessary ..... L/Sum

(iv) Full compliance with OHS Act, Act 85 of 1994 regarding H&S matters during the construction of the works under this contract, including Updating and amending the risk assessments, safe work procedures, the project H&S file, the H&S plan, provision of protective clothing and any other H&S matters that the contractor deems necessary.....month

**(e) Environmental Compliance**

(i) Compliance with all Environmental procedures and specifications.....L/Sum

(ii) Preparation and establishment of all procedures required to achieve and ensure compliance with the requirements of the Environmental Management Plan (refer to Particular specifications – “PES”)..... month

**(f) Security on site**

(i) Fixed obligations ..... L/Sum

(ii) Time-related obligations ..... month

**(g) Compliance with all EPWP conditions and specifications (refer to Particular specifications – “PLW”)**

(i) Fixed obligations ..... L/Sum

(ii) Time-related obligations ..... month

**(h) As-builts and Photographic Record**

Contractor to mark up a set of construction drawings with "as built" information and provide photographic records, and submit on a monthly basis to the Engineer for records (refer to Particular Specifications – “PRI”).

(i) Fixed obligations ..... L/Sum

(ii) Time-related obligations ..... month

(j) Provide access to site

The contractor should provide and maintain access to the site for the duration of the contract.

(i) Fixed obligations ..... L/Sum

(ii) Time-related obligations ..... month

*Add the following at the end of the second last paragraph of the payment clause:*

“ Such limitations to payments shall occur whenever the contractor falls behind by more than 3 month(s) on his initial approved programme, in which case the application of this payment item shall be the same as for 13.01(b) (i.e. the total price offered for 13.01(c) is converted to a lump sum and treated as a value-related item). Normal application continues once the contractor’s progress has returned to within the time set for the limitation.”

*Add the following paragraphs:*

“Should the combined total tendered for subitems (a), (b), (c), (d), (e), (f), (g), (h) and (j) exceed 20% of the tender sum (excluding CPA, contingencies and VAT), the tenderer shall state his reasons in writing for tendering in this manner.

Payment of the rate per month for subitems B13.01(c), (d) and (e) shall include full compensation for all the contractor’s obligations relevant to health and safety legislation, environmental compliance and security on site.

A contractor who tenders zero for this pay item shall not be relieved of his statutory obligations. A nil rate offered shall be deemed not as an omission but as deliberate notice that costs have been included in the tendered rates for individual items of work or in the other preliminary and general pay items.

All pay items for which the unit of measurement is "month" are deemed to be based on 23 working days per month and shall become applicable only for use in calculations of approved extensions of time in terms of the Conditions of Contract.”

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**SECTION B1400: HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE  
PERSONNEL**

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**B1402 OFFICES AND LABORATORIES**

**a) General**

*Add after first paragraph:*

"The Contractor shall supply, transport and erect a site office for the exclusive use of the Engineer, within the Contractors site establishment.

The contractor shall arrange for the provision of an electrical power supply for the duration of the contract for the Engineers office. Should this not be available immediately, a generator is to be provided in the interim.

The following furnishings must be provided for the sole use of the Engineer:

The Contractor shall supply and furnish one-air conditioned "Kwikjack" (6m x 3m) for the use of the Engineer and his/her staff and one air-conditioned "Kwikjack" (9m x 3.4m) conference facility for conducting meetings."

**b) Offices**

*Amend sub-clause (xii) to read as follows:*

"(xii) A complete telephone service capable of delivering electronic and facsimile data, together with ..."

*Amend sub-clause (xvii) to read as follows:*

"(xvii) A combination colour printer/copier/scanner/facsimile machine for A3 and A4 size documents."

*Add the following sub-clauses:*

"(xviii) Plan holders which shall be able to accommodate at least 6 clamps suitable for hanging A0-sized drawings hanging vertically and of a robust construction to withstand continuous use over the duration of the contract.

(xix) An electric refrigerator of at least 100 litre capacity.

(xx) Floodlights which are to be controlled by a photocell for security purposes at the offices and laboratory.

(xxi) Kettle of at least 2 litre capacity

(xxii) Tea set comprising six cups and saucers, six teaspoons, one teapot, one sugar bowl and one milk jug.

**c) Laboratories**

*In the second paragraph, second line substitute "drawings" with "figures included in the project document"*

**B1404 SERVICES**

**b) Water electricity and gas**

*Add the following to the end of the third paragraph:*

"The power supply shall be regulated by a suitable voltage regulator in order to maintain a constant current and voltage level at all times to prevent damage to the office and



laboratory equipment and related machinery during power surges. In the event of damage to the office and laboratory equipment and related machinery because of a faulty voltage regulator, the contractor shall be liable for payment of all repair or replacement costs of such damaged items.”

*Add the following to the end of the fourth paragraph:*

“An on-site motor-alternator shall supply electricity when power from a recognized power-supply authority is not available.”

**B1405 GENERAL**

*Add the following to paragraph (e):*

“In addition, the offices and laboratories shall be supplied with approved burglar proofing and the whole site shall be guarded full time during the day and night, as well as over weekends and holidays. The site shall also be fenced with a 2,4m high security fence with a razor-cut wire being used as strands or with a brick wall. The cost of this protection shall be included in item B13.01.”

*Add the following to paragraph (f):*

“The offices and any living accommodation must be separated by at least 200m.”

**B1406 MEASUREMENT AND PAYMENT**

<b>Item</b>	<b>Unit</b>
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**B14.03 Office and laboratory fittings, installations and equipment**

**a) Items measured by number**

*Add the following subitems:*

- ”(xix) Plan holder ..... number (No)
- (xx) Floodlights complete with poles and 500Watt minimum globes ..... number (No)
- (xxi) Kettle..... number (No)
- (xxii) Tea set..... number (No)
- (xxiii) Rain gauge ..... number (No)

The tendered rate for subitem B14.03(a)(xx) shall include for the operation of the lights from sunset to sunrise for the full duration of the contract.”

*Add the following pay item:*

**B14.11 Documentation for the sole use of the Engineer**

- a) COLTO Standard Specifications 1998 Edition (Green Book).....number (No)
- b) General Conditions of Contract (GCC) 2015 – Third Edition ..... number (No)

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## SECTION B1600: OVERHAUL

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### **B1601 SCOPE**

*Insert in the second line between "excavation" and "or stockpile" the following:*

*" ..., crushing and screening,"*

### **B1602 DEFINITIONS**

#### **(a) Overhaul material**

*(iv) Insert "selected layers" before "subbase" in the first line.*

*Insert the following as a final paragraph*

*"Material procured from commercial sources shall not be regarded as overhaul material."*

#### **b) Overhaul**

*Replace the sub-clause with:*

*"Regardless that the Standard Specification makes allowance for payment of restricted overhaul payment shall only be made for material hauled in excess of 1 kilometre. Overhaul shall be measured as the product of the volume of material hauled and the overhauled distance.*

#### **c) Haul distance**

*Add the following paragraph:*

*"Where material from one carriageway of a road is to be used on the opposite carriageway, the haul route shall be on the national route and crossing over at the nearest interchange or approved median crossing point. For this situation, the haul distance shall be measured from the position of obtaining the material, along the carriageway until centre point of the next interchange or approved median crossing point, and then back along the other carriageway. Only the distance on the national road will be measured and additional distances for travelling on the ramps, loops and cross roads will not be considered.*

*Return travel may have to be along other roads but will not be measured separately. Existing municipal streets can be used for haul of material.*

#### **d) Free-haul distance**

*Replace the last sentence with:*

*"This distance shall be 1 kilometre in the case of all overhaul materials and this specification shall be deemed to have replaced the 'free-haul' distance in all other sections of the standard specifications."*

**B1603 MEASUREMENT AND PAYMENT**

*Amend item 16.02 as follows:*

<b>Item</b>	<b>Unit</b>
<b>B16.02 Overhaul on material hauled in excess of 1 km .....</b>	<b>cubic metre - kilometre (m<sup>3</sup>km)"</b>

*Delete the first paragraph of the first set of notes and replace it with the following:*

“Only ordinary overhaul for haul in excess of 1.0 km will apply to all types of fill and layerwork materials. No restricted overhaul will be applicable on this contract.”

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## SECTION B1700: CLEARING AND GRUBBING

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### **B1701 SCOPE**

*Add the following as a final paragraph:*

“Clearing and grubbing for the construction of site offices shall not be measured separately and shall be deemed to be included in the rates tendered for item B13.01.”

### **B1702 DESCRIPTION OF WORK**

#### **c) Conservation of topsoil**

*Add to the end of the 1st paragraph:*

“The depth of topsoil removed shall be reliant on the terrain, suitability of material and topsoil requirements of the work. Generally the contractor will not be required to remove topsoil to more than an average depth of 400mm unless approved by the engineer before commencing with topsoil removal from any particular area.”

*Replace the second paragraph of this clause with the following:*

“After clearing and grubbing, all topsoil shall be removed to either windrows alongside the construction area or to stockpile. Where ordered by the engineer, any topsoil that shall be required for the topsoiling of new banks and cuts, but which cannot be accommodated within the construction site, shall be loaded and hauled to the designated stockpile area where it shall be placed in temporary stockpiles for later use in the rehabilitation of the site affected by construction activities. Where new borrow pits are to be opened up the topsoil shall first be removed (independently of the overburden) and placed in temporary stockpiles at the edge of the borrow pit. The moving of topsoil from windrow or the loading of topsoil from temporary stockpiles and the placing and spreading thereof on cut or fill slopes or on borrow pit spoil sites, is covered in Section 5800.”

### **B1704 MEASUREMENT AND PAYMENT**

*Add the following payment item:*

<b>Item</b>	<b>Unit</b>
<b>B17.07 Removal and temporary stockpiling of topsoil:</b>	
<b>(b)</b> In temporary stockpiles after loading material into trucks including 1,0km freehaul .....	cubic metre (m <sup>3</sup> )

The unit of measurement for items (b) shall be the cubic metre of topsoil removed to windrow or temporary stockpile. The volume of topsoil removed shall be measured in cut, calculated from the difference in cross-sections of the natural ground level before the commencement of clearing to cross-sections taken after the removal of the topsoil.

The contractor shall constantly liaise and agree with the engineer as to the depth of topsoil to be removed. Where, in the opinion of the engineer, material that would normally be classed as topsoil has also been excavated, the excavation shall be backfilled and compacted with selected material at the contractor's expense. Should material that is deemed by the engineer not to be topsoil, be removed and stockpiled together with material classed as topsoil, the contractor shall be responsible for the removal of this unsuitable soil from the stockpile and the replacement of the quantity of topsoil contaminated by the unsuitable material at his cost. The quantity of topsoil to be replaced shall be determined by the engineer.

The rates tendered shall include for the excavation of the topsoil and where required, the loading and hauling thereof to temporary stockpile as well as the maintenance of the stockpile until re-use of the material. The rates tendered shall also include for all supervision required to ensure that only topsoil is removed.”

Add the following Section B1800: Dayworks :

**SECTION B1800: DAYWORKS**

**B1801 SCOPE**

This section covers the listing of daywork items in accordance with sub-clause 6.5 of the GCC 2015, for the use in determining payment for work which cannot be quantified in specific units in the Pricing Schedule, or work ordered by the engineer during the construction period which was not foreseen at tender stage and for which no applicable rate exists in the Pricing Schedule.

**B1802 ORDERING OF DAYWORK**

No daywork shall be undertaken unless written authorisation has been obtained from the engineer.

**B1803 MEASUREMENT AND PAYMENT**

<b>Item</b>		<b>Unit</b>
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**B18.01 Personnel**

- |     |                           |          |
|-----|---------------------------|----------|
| (a) | Unskilled labour.....     | hour (h) |
| (b) | Semi-skilled labour ..... | hour (h) |
| (c) | Skilled labour.....       | hour (h) |
| (d) | Ganger.....               | hour (h) |
| (e) | Foreman .....             | hour (h) |

<b>Item</b>		<b>Unit</b>
-------------	--	-------------

**B18.02 Equipment**

- |     |               |          |
|-----|---------------|----------|
| (a) | Specify ..... | hour (h) |
|-----|---------------|----------|

<b>Item</b>		<b>Unit</b>
-------------	--	-------------

**B18.03 Materials**

- |     |  |                        |
|-----|--|------------------------|
| (a) | Procurement of materials.....  | provisional (Prov) sum |
| (b) | Contractor's handling costs, profit and all other charges<br>in respect of sub-item B1803(a) ..... | percentage (%)         |

<b>Item</b>		<b>Unit</b>
-------------	--	-------------

**B18.04 Transport**

- |     |  |                |
|-----|--|----------------|
| (a) | LDV.....   | kilometre (km) |
| (b) | Flatbed truck .....  | kilometre (km) |
| (c) | "Lowbed" horse and trailer for transporting tracked vehicles ..... | kilometre (km) |

The unit of measurement for items B18.01 and B18.02 shall be the hour for the item of equipment or personnel. Non-working hours for transport breakdown, lack of operator of any other reason shall not be measured. The time shall be taken from the time that the personnel and/or equipment depart until return.

Measurement shall only be for work instructed and directed by the engineer, where the engineer considers no other appropriate rate is applicable in the Pricing Schedule. Prior to the commencement of any work by the personnel described under item B18.01 the contractor must obtain written consent from the engineer regarding their classification in terms of "unskilled", semi-skilled" and "skilled" personnel.

The tendered rates for labour under B18.01 shall include full compensation to cover overhead charges and profit, leave pay, bonuses, subsistence, allowances, Employer's contributions, additional payment for overtime where applicable, insurances, housing, site supervision, use of small hand tools and appliances, non -mechanical plant and equipment and consumable stores, for all administrative, supervisory, operative and contingent costs, relating to the supply of personnel.

The tendered rates for plant for item B18.02 shall be an all-inclusive hire charge for the use of the vehicle and driver or plant/equipment and operator and shall apply only to vehicles plant and equipment nominated in writing by the engineer, for all administrative, supervisory, operative and contingent cost, and profit relating to the running of the plant.

The unit of measurement for subitem B18.03(a) shall be the amounts actually paid for the procurement of materials to be purchased and shall be made in accordance with the provision of the GCC 2015. Only the actual quantities of materials used, as verified by the engineer, shall be paid for.

The percentage tendered for subitem B18.03(b) shall be the percentage of the amounts actually paid for the procurement of materials as ordered under subitem B18.03(a) and shall be in full and final compensation in respect of the contractor's handling costs, profit and all other charges in connection with the procurement and supply of the materials to the point of usage.

The unit of measurement for item B18.04 shall be the kilometre distance that the vehicle travelled for transporting personnel and/or plant. All travelling shall be approved by the engineer.

The tendered rate for item B18.04 shall include full compensation for the cost of the vehicle including fuel, maintenance depreciation and running costs.

The above mentioned tendered rates shall be full compensation for the various items as specified and no further profit shall be paid.

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**SECTION B3100: BORROW MATERIALS**

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**B3103 OBTAINING BORROW MATERIALS**

*Add the following paragraph:*

"The contractor shall adhere to the requirements within the environmental management plan for the preparation of the area to be utilised as a borrow pit. This shall include the removal and storage of the topsoil within the affected area, maintenance of the area during use and the rehabilitation of the area to its natural state on completion. A photographic record shall be kept of all borrow pit areas. Any construction material spoiled within these sites shall be buried to a depth of no less than 300mm below the surface soil. No construction material of any nature shall be left visible after topsoiling. The engineer shall confirm this before grassing commences. The area shall be kept free of all undesirable plant material."

**a) General**

Tender No.: 8/2/RNM0367 *Add the following:*

"The acquisition and compensation for land from which borrow material is obtained shall be negotiated and paid for by the employer."

**c) Use of borrow materials**

*Delete the last sentence of the second paragraph and replace with the following:*

"Compensation to owners and arrangements with owners for taking material from alternative borrow pits proposed by the contractor shall be the contractor's responsibility and entirely at his own expense and risk. Such borrow pits may be accepted by the engineer only if the material complies in all respects with the specifications, it is the best economic alternative and the contractor can provide proof of compliance with all relevant legislation."

*Add the following new paragraphs to the end of this sub-clause:*

"The engineer shall instruct the contractor as to the applicable usage of borrow pits always employing the best economic alternative (lowest cost in terms of tendered rates) taking cognizance of the following:

- Quality of material;
- Haulage distance;
- Hardness of material;
- Overburden.

Under no circumstances shall the contractor be entitled to any additional compensation in respect of any instruction by the engineer as to the usage of borrow pit material."

**B3108: MEASUREMENT AND PAYMENT**

Item	Unit
<b>B31.01 Excess overburden.....</b>	cubic metre (m <sup>3</sup> )

*Delete the word "stripping" in the 1st sentence of the 2nd paragraph under the payment description as payment for this item of work is covered under payment items 17.01 and B17.07(c).*

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**SECTION B3200: SELECTION, STOCKPILING AND BREAKING-DOWN THE MATERIALS FROM BORROW PITS AND CUTTINGS, AND EXISTING PAVEMENT LAYERS, AND PLACING AND COMPACTING THE GRAVEL LAYERS**

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**B3203 STOCKPILING THE MATERIAL**

*In the first paragraph, in the first sentence insert the following before “borrow pits”:*

“commercial sources, existing pavement layers, ...”

*In the third paragraph, replace the second and third sentences with:*

“Before any stockpiling may be done the area shall be cleared of topsoil to a sufficient depth that will subsequently allow for the complete rehabilitation of the site with a cover of topsoil that does not exceed 100mm in depth and is not less than 75mm in depth. If there is insufficient topsoil; the contractor shall acquire whatever balance is needed to rehabilitate the area at his own cost. No make-up topsoil shall be taken from the road reserve. The topsoil shall be stored in an area that shall not be affected by construction activities nor impede the natural flow of water. The topsoil so windrowed or stockpiled and its surrounds shall be kept free of all undesirable vegetation. The contractor shall not commence his stockpiling activities without prior written approval from the engineer that the site has been adequately prepared.

Stockpile sites shall be graded smooth with an adequate slope to ensure proper drainage. The surface shall be watered and compacted to a depth of at least 150 mm and to a density of 90% of modified AASHTO density. The compacted surface shall be firm. Upon completion, the surface shall be swept clean.

Stockpile sites shall be large enough to allow the different types of material to be stockpiled without overlapping or exceeding the limits of the prepared site. Enlargement of the stockpile sites after the stockpiles have been placed will not be permitted without the engineer's approval.

After the stockpiled material has been removed, the site shall be reinstated as closely as possible to its original condition by ripping of the affected areas, re-landscaping if necessary, re-instatement of the topsoil and re-vegetation.”

**B3204 BREAKING-DOWN THE MATERIAL**

**(b) Further breaking-down of pavement material**

*Add the following at the end of the 1st paragraph:*

“This shall apply mutates mutandis for in situ recycling of pavement layers.”

**B3208 PLACING AND COMPACTING THE MATERIALS IN LAYER THICKNESSES OF 200mm AND LESS AFTER COMPACTION**

*Add the following before the 1st paragraph:*

“In the case of in situ reconstruction of existing pavement layers, the contents of this clause shall apply regardless of the layer thickness after compaction.”



**(c) In place reworking of pavement layers**

*Add the following paragraphs:*

“Where the new layer is to be constructed by in situ recycling one or more existing pavement layers, with or without the addition of extra material, the preparation procedures of subclause B3403 and B3512 shall apply so as to achieve a uniform pulverised layer complying with the target grading as specified in Table 3402/7.

The recycled layer shall not contain more than 40% of recycled asphalt or bituminous layers (RAP) measured as after compaction thickness of the designed layer.

New layers thicker than 200mm constructed using the above processes may be permitted by the engineer if the contractor can provide sufficient proof that his recycler has the capability to provide a homogenous layer with respect to moisture, stabiliser content and compaction.”

*Add the following new sub-clause:*

**d) Construction joints in new layers**

Where construction joints are formed between adjacent portions of the same layer the following conditions shall apply:

- (i) Joints shall be either at right angles or parallel to the road centreline.
- (ii) Joints in successive layers shall not correspond with those of the layers below and shall be offset at a minimum of 150mm or as indicated on the drawings.
- (iii) The need for and positions of all proposed joints shall be approved by the engineer prior to the commencement of work.
- (iv) During the creation of a joint in a layer, the existing material or the material previously placed for the specific layer shall either be cut back sufficiently (minimum 150mm) to ensure the incorporation of any loose or disturbed material, or ripped (minimum 150mm) and compacted together with the new portion of the layer to be constructed or only re-compacted together with the new portion of the layer as may be required by the engineer to ensure that a sound fully compacted joint is formed.”

**B3212 MEASUREMENT AND PAYMENT**

*In the introductory paragraph replace the comma after “below” in the penultimate line with a full stop and delete the remainder of the paragraph.*

*Add the following as a 2nd paragraph:*

“Separate payment for work applicable to these payment items shall be made under the relevant sections in these specifications pertaining to the construction material required. For example, material procured from borrow that is crushed and screened for use in selected and sub-base layers shall be measured for payment under Section 3400: PAVEMENT LAYERS OF GRAVEL MATERIAL as:

34/32.01(d) and 34/32.03(d) etc., whichever is the relevant pairing of pay items under sections 3200/3400.”

**Item**

**Unit**

**B32.03      Crushing and screening**

*In the fifth line of the second paragraph of the payment description insert the following between "fuel," and "handling":*

"..., preparation for drilling and blasting, drilling and blasting, excavation, loading, transport to the crusher/screener,"

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## SECTION B3300: MASS EARTHWORKS

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### B3302 MATERIALS

#### b) Fill

*Add the following under item (iv):*

"The maximum swell at 100% Mod AASHTO compaction shall not be more than 2%."

### B3303 CLASSIFICATION OF CUT AND BORROW EXCAVATION

*Classification of cut and borrow excavation shall be revised as follows:*

#### "a) Classes of excavation

##### (ii) Intermediate excavation

No distinction shall be made between soft and intermediate excavation, and all intermediate excavation shall be classified and measured as soft excavation."

### B3305 TREATING THE ROADBED

#### a) Removing unsuitable material

*Replace "or" in the eight line of the third paragraph with "and"*

#### d) In situ treatment of roadbed

*Add the following after the second paragraph:*

"Shales and mudstone shall be treated as directed by the engineer."

### B3306 CUT AND BORROW

#### e) The temporary stockpiling of materials

*Replace the contents of this subclause with the following:*

"The contractor shall plan his activities in such a manner so that materials excavated from borrow areas and cuttings can be directly transported to and placed at the designated points.

The temporary stockpiling of material will not be paid for separately unless instructed by the engineer, and full compensation will be deemed to have been included in the rates tendered for the various payment items for work for which the stockpiled material is to be used."

#### g) General

*Add the following after the first sentence of the second paragraph:*

"The final cut surface in hard excavation shall not be more than 0,5 m below the specified slope face, measured at right angles to the strike and dip directions of the slope face."

**B3307 FILLS**

**a) General**

*Add the following:*

"Where existing embankments are to be widened, or where new embankments are to be constructed adjacent to existing embankments, the existing side slopes shall be benched as specified in subclause 3307(d) and in accordance with the details on the drawings.

In addition the material in the fill widening shall, unless otherwise instructed by the engineer, be compacted as follows:

- (i) where the thickness exceeds 1,5 m, it shall be compacted to a minimum of 93% modified AASHTO density to a depth of at least 1,5 m below the final road level; or
- (ii) where the thickness is less than 1,5 m, the in situ roadbed and fill material shall be compacted to 93% modified AASHTO density."

**d) Benching**

*Replace the first sentence of the second paragraph with the following:*

"The dimensions of benches as well as the extent to which existing fills have to be cut back to form benches shall be as indicated on the drawings or indicated by the engineer."

*Add the following after the second paragraph:*

"In order to obtain sufficient working width for road-building equipment when the existing road fill is widened, it may be necessary to form benches that extend beyond the normal road prism or to cut back into the existing road fill or both. The contractor shall submit his proposals in this regard to the engineer for approval before proceeding with such work. The contractor will be paid in accordance with the relevant payment items for work required to obtain a working width of up to 4 m. Additional work required to provide a working width in excess of 4 m shall be at the contractor's expense."

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## SECTION B6100: FOUNDATIONS FOR STRUCTURES

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### B6103 GENERAL

#### a) Subsurface Data

*Add the following:*

“It is expressly understood that, while all subsurface information is given in good faith, the correctness of the information furnished is not guaranteed. Where the actual foundation conditions encountered are considerably at variance with conditions visualised and described in the Contract documents and those terms for which the rate or price provided for in the Contract is rendered unreasonable or inapplicable, such other rate or price consistent with the rates set out in the Contract shall be fixed as set out in Clause 13 of the FIDIC Conditions of Contract subject always to a founding depth variation not exceeding 2.5m in any foundation component (except piling depth) of the permanent structure not, by itself, being held to constitute cause for variation for the Contract rates or prices.”

### B6104 ACCESS AND DRAINAGE

#### c) Drainage

*Add the following:*

“Where dewatering and keeping dry of excavations has not been billed separately as per item 61.03 “Access and Drainage”, it shall be deemed to be included in the rates tendered and paid for excavation and backfill.”

### B6105 EXCAVATION

#### a) General

*Add the following:*

“Excavation required for diverting, channelling or widening streams within 5.0m of concrete structures shall be measured and paid for under item 61.02. Excavations beyond the 5.0m limit shall be measured and paid for under the appropriate items in Sections 2100 and 3300.”

#### c) Excavation

*Add the following paragraphs:*

“Where excavation is in soft material, the final 0.75m and in the case of hard material, the final 0.25m of material shall be removed using suitable hand tools such as pick and shovel or pneumatic tools.

During construction of the river bridges the Contractor will only be permitted to construct, subject to the approval of the Directorate of Water Affairs, low level causeways access the rivers that cause negligible backing up and cofferdams around the piers and abutments for the construction of the foundations using material excavated in the road prism consisting of natural alluvial deposits of sand boulders, etc. These obstructions must be removed at the end of the contract and the river and banks restored to their original condition.

#### g) The safety of excavations

*Add the following paragraph:*

“The design for shoring, signing of the drawings and inspection prior to construction of the permanent works of excavations to ensure it is safe shall be undertaken by the contractor’s

competent person, who shall be a professional engineer with the relevant experience. The contractor shall ensure that all temporary works undertaken shall comply with the relevant sections of the Occupational Health and Safety Act and the Construction Regulations”.

**B6106 FOUNDING**

*Add the following clause at the end of the last paragraph:*

“Where foundation slabs or pile caps are cast directly against the face of the excavations, the volume of concrete measured for payment shall be the total volume of concrete placed or the volume based on the plan dimensions detailed on the drawings plus a 100mm allowance for overbreak on each applicable side whichever is the lesser. No formwork to the footing shall be measured when the concrete is cast against the face of the excavations”.

**B6109 FOUNDATION FILL**

*In the 5th paragraph, 7th line delete “60” substitute “45”.*

*Add the following after the 6th paragraph:*

“Concrete blinding shall extend 100mm all round beyond the horizontal dimensions of all formed footings to facilitate placing of the formwork, unless otherwise directed by the engineer.

In the case of structures where excessive ground water is encountered, the blinding layer may extend over the full plan area of the base of the excavation and beyond the edge of the foundation where required. Payment shall be made for the quantity of concrete calculated as the product of the specified thickness of blinding layer and the actual area of blinding placed subject to a maximum distance of 500mm beyond the edge of the foundation.”

**B6115 MEASUREMENT AND PAYMENT**

*Add the following pay item:*

<b>“Item</b>	<b>Unit</b>
--------------	-------------

<b>B61.51</b>	<b>Lateral support to excavations</b>
---------------	---------------------------------------

- |                          |                                |
|--------------------------|--------------------------------|
| (a) State Location:      |                                |
| (i) 0 to 5m depth .....  | Square metre (m <sup>2</sup> ) |
| (ii) 5 to 10m depth..... | Square metre (m <sup>2</sup> ) |
| (b) Other locations      |                                |

The unit of measurement shall be the square metre of excavated face supported over the successive depth ranges, measured down from the existing road levels.

The tendered rate shall include full compensation for procuring and installing the lateral support system, as well as for removal, if required. It shall include for all materials, labour, plant, equipment and incidentals to provide support to the excavated faces for the duration of substructure construction.

The work will be paid for by way of a lump sum, 50% of which shall become payable when all equipment and material is on site and the first element of the lateral support system has been installed. The second instalment of 40% of the lump sum shall become payable after the excavation platform has been completed, and the final 10% of the lump sum shall be paid after the system has been removed from the site.

The cost of excavating the material shall not be included, but paid for under items B61.02 and B61.03(A).”



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## SECTION B6200: FALSEWORK, FORMWORK AND CONCRETE FINISH

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### B6204 DESIGN

#### a) General

*Add the following:*

“The Contractor shall submit to the Engineer at least 4 weeks before the structure is scheduled for construction a detailed analysis showing the effect of the stresses that will be induced by the Contractor’s chosen method of construction. The cost of any additional prestressing, reinforcing steel, concrete, etc. required as a result of the Contractor’s chosen method of construction shall be to the Contractor’s account. No construction shall commence until the Engineer has given his written approval.”

#### b) Falsework

“Unless instructed otherwise by the Engineer, the Contractor shall submit his design criteria and detailed drawings of the staging to the formwork. The design, signing of the drawings and inspection of the falsework prior to construction of the permanent works shall be undertaken by the contractor’s competent person, who shall be a professional engineer with the relevant experience.”

### B6205 CONSTRUCTION

#### b) Formwork

##### (i) General

*Add the following:*

“Formwork to faces of structures with a gradient equal to or greater than ten vertical to one horizontal shall be classified as vertical formwork.

Formwork to faces of structures with a gradient less than ten vertical to one horizontal, or equal to or greater than one vertical to ten horizontals, shall be classified as inclined formwork.

Formwork to faces of structures with a gradient of less than one vertical to ten horizontal shall be classified as horizontal formwork.”

##### (ii) Formwork to exposed surfaces

*Add the following:*

“The formwork at construction joints shall have moulding strips 25mm x 25mm neatly butted and set at the position of the construction joint”.

##### (vi) Permanent formwork

*Add the following paragraph:*

“Anchor ties shall be designed to resist full buoyancy forces and details of such shall be submitted to the engineer for approval. Void formers shall be held in position in order that no movement exceeding 1% of the deck thickness takes place during concreting.”



**d) Class F3 surface finish**

*Replace the second paragraph with the following:*

“The use of steel forms shall be permitted to form surfaces for which Class F3 surface finish has been specified, provided that only undamaged forms shall be used for such work and that the forms shall be subject to the approval of the engineer.”

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## SECTION B6300: STEEL REINFORCEMENT FOR STRUCTURES

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### **B6306 PLACING AND FIXING**

*Replace the second and third paragraphs with the following:*

“The concrete cover for all structural concrete shall be within the acceptance ranges shown in Table B6404/6. Prior to fixing the steel, samples of the proposed cover and spacer blocks shall be submitted to the engineer along with a written statement for in situ manufacture, if applicable, for approval.

Overlap of steel reinforcement bars shall be such that the cover to the lapped bars remains constant at the specified cover.”

### **B6307 COVER AND SUPPORT**

*Amend the second paragraph as follows:*

*Replace the second sentence, commencing with:*

”Where no cover is indicated...shown in Table 6306/1” with the sentence “Where no cover is indicated, the contractor shall inform the engineer who shall after consultation with the design engineer indicate the required cover in writing and the as-built drawings shall indicate such cover”.

*Add the following to the end of the fifth paragraph:*

“Concrete cover and spacer blocks shall be made using the same cement and aggregate type as the main concrete with the same water/ cement ratio so that differences in shrinkage, thermal movements and strain are minimised. Cover blocks shall be water cured by submersion for a minimum of 7 days and thereafter kept submerged in water until immediately before fixing onto reinforcing steel. Where concrete cover blocks, subsequent to fixing, have visually dried out they shall be remoistened by an appropriate method so that they are damp before the placing of concrete. Only semi-spherical concrete cover blocks shall be used. Where fixing wire is inserted into cover blocks, it shall be galvanised. Cover and spacer blocks manufactured from other materials e.g. plastic or wood, shall not be permitted. All cover blocks regardless of the type of material manufactured from, shall not be visible on exposed concrete surfaces.”

*Delete Table 6306/1 in its entirety.*

*Add the following paragraph:*

“Where the concrete cover specified has not been achieved after cover tests have been carried out in accordance with clause B8106(j), reduced payment as determined under clause B8212 shall be applied to all the relevant payitems under section 6300.”

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## SECTION B6400: CONCRETE FOR STRUCTURES

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### B6401 SCOPE

*Add the following paragraph:*

“The contractor shall take and submit samples of materials and/or mixtures to the engineer who must approve mix designs before construction work can commence.”

### B6402 MATERIALS

#### a) Cement

*Replace the colon at the end of the first paragraph with a comma, and add the following:*

“taking into account the adoption of the new SANS 50197-1:2000 code for cements: (refer to C&CI website [www.cnci.org.za](http://www.cnci.org.za))”

*Add the following paragraphs:*

“The type of cement to be used in any concrete element shall take into account the environmental conditions and durability requirements at the location of the site of the works, and shall be as approved by the engineer.

With the exception of the standard SANS approved cement blends supplied by the primary cement producers, the blending of CEM1 and extenders shall not be permitted unless specifically approved by the engineer on the basis of an acceptable quality assurance procedure.

#### b) Aggregates

*Delete the remainder of the sentence after “exceed” in sub-clause (i)(1) and replace with the following:*

“150% of that of the reference norite aggregate or any of the other three reference aggregates”

*Delete the remainder of the sentence after “exceed” in sub--clause (i)(2) and replace with the following:*

“200% and of the coarse aggregate 175% of that of the reference norite aggregate or any of the other three reference aggregates”

*Delete the remainder of the sentence after “exceed” in the first paragraph of sub-clause (i)(3) and replace with the following:*

“235% of that of the reference norite aggregate or any of the other three reference aggregates”

*Delete the entire last paragraph of sub-sub-sub-clause (i)(3) commencing with “The drying shrinkage of concrete...”*

*Add the following sub-sub-clause:*

“(vi) The maximum chloride ion content of fine aggregate shall be 0,03% by mass of aggregate as specified by SANS 1083:2002. Where concrete is situated in a chloride environment the value shall be reduced from 0,03% to 0,01%.”

**d) Water**

*Add the following:*

“Water for concrete other than prestressed concrete, shall not contain chlorides, calculated as sodium chloride, in excess of three thousand parts per million (3000ppm) nor sulphates, calculated as sodium sulphate, in excess of two thousand parts per million (2000ppm).

Water for curing concrete shall not contain impurities in sufficient amount to cause discolouration of the concrete or produce etching of the surface.

No sea-water or water containing salts shall be used.

No water shall be added on site to ready mix concrete prior to placing to improve workability. All concrete delivered to site shall be checked for workability using the slump cone test and slump measured outside of the limit set from the design mix shall be rejected.”

**e) Admixtures**

*Add the following sub-sub-clauses:*

“(v) Admixtures, which have a retarding effect on the rate of hydration of the cement, may not be used when the concrete temperature is below 20°C.

(vi) A retarding admixture shall be used if the temperatures of concrete mixes using cements of strength class 42.5 or higher is between 20 to 30°C or where the ambient temperature is between 20 to 30°C.”

*Add the following:*

“Note: Only admixtures of the type that do not increase the water content of the mix will be considered by the Engineer. In addition, no admixtures shall be added on site to ready mix concrete prior to placing to improve workability.”

**B6404 CONCRETE QUALITY**

**a) General**

*Insert the following paragraph after the second paragraph:*

“When structural concrete prefixed ‘W’ is shown on the drawings, it shall, in addition to the strength requirement, comply with the durability requirements specified in sub-clause 6404(h), ‘W’ class concrete shall not apply to minor structural elements such as side drains and catchpits except in very severe environmental conditions of exposure. Requirements for concrete quality (including any durability requirements) for concrete pavements are found in Section 7100 of the specifications.”

**b) Strength concrete**

*Replace the sixth paragraph with the following:*

“Where concrete is designated by the prefix “W”, e.g. class W30/19, such designations shall denote concrete achieving the durability criteria specified in the relevant tables under sub-clause B6404(h).”

*Add the following sub-clauses:*

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**“h) Concrete durability**

(i) General

Concrete designated by the prefix ‘W’ shall, in addition to the requirements of sub-clause 6404(b) comply with the durability parameters described below. Durability is influenced by the materials used in the concrete, their mix proportions, transporting, placing, compacting and, in particular, curing of the finished cover concrete (concrete layer between the outermost layer of steel reinforcement and the exposed outer surface of the concrete element). The tests required to prove durability performance of the placed concrete are given under sub-clause B8106(i).

It is the engineer’s responsibility to approve the component materials and their mix properties, however it is the contractor’s responsibility to utilise acceptable component material and to achieve mix properties complying to the specifications. It is the contractor’s responsibility to design and blend materials to produce concrete of the specified quality

(ii) Durability parameters

Water sorptivity: Sorptivity is sensitive to surface effects and may be used to assess the effectiveness of initial curing.

Oxygen permeability: Permeability is sensitive to changes in the coarse pore fraction and thus a means of assessing compaction of concrete. It is used to quantify the microstructure of the concrete and sensitive to macro-defects such as voids and cracking.

Chloride conductivity: Chloride conductivity provides a method of characterisation of concretes in the marine environment and is used to assess the chloride resistance of concrete.

Cover concrete: Cover concrete is the outer concrete layer that protects reinforcing steel. Concrete cover is a requirement for all concrete whether specified as durability concrete (Class “W”) or normal reinforced concrete.

Individual Cover Depth Measurement (CDM): Individual cover depth measurement determined by an electromagnetic cover meter, complying with BS 1881, Part 204.

Average Cover: The average of at least 30 individual CDM’s per m<sup>2</sup> determined on a clearly identified area.

Overall Cover: The mean average cover determined for the scanned area per structure.

Scan Area: Areas of approximately 1m<sup>2</sup>, randomly distributed over the entire structure, representing at least 5% of total surface area for that structure.

Individual bar reading: A minimum of 3 linear CDM’s, spaced at 100mm intervals, representing a single bar of reinforcement.

Capped CDM: The value applied to all CDM’s in excess of the maximum allowed CDM, determined by the engineer (e.g. 40mm (specified cover) + 15mm (upper limit) = 55mm) or

**Capped Value:** A value in mm, assigned to a cover reading where the raw reading exceeds the specified cover, plus a value (mm) specified by the engineer.

**Quick/Linear Scan:** For evaluation of cover depth measurements taken perpendicular to closest rebar in a line covering required area to be scanned.

**Image/Block/Grid Scan:** Provides an overview of rebar layout. Measurements taken over a square meter clearly indicating position of first and second layer of rebar.

**Notes:**

1. Water sorptivity and Oxygen Permeability tests are required to assess carbonation resistance
2. Water sorptivity, permeability and chloride conductivity tests are required to assess chloride resistance

**Concrete cover:** Concrete cover is a dimensional indicator of cover concrete depth and it varies according to the requirements of the different environmental exposure classes.

When tested in accordance with the test protocols described in B8106 for each potential durability parameter, the concrete shall meet the limits listed in tables B6404/4 and B6404/6.

(iii) Cement content

In order to meet the durability criteria, the proportions of cementitious binder used shall be determined to suit the fine and coarse aggregate and cement type used in order to achieve the durability limits specified in tables B6404/4 and B6404/6 under the Acceptance Category of "Concrete made, cured and tested in the laboratory."

In order to avoid the possibility of Alkali Silica Reaction (ASR), the following shall be taken into account when designing the mixes:

1. Where the cementitious contents is less than  $350\text{kg/m}^3$ , the maximum equivalent sodium monoxide content (calculated as  $\text{Na}_2\text{O}$ ) permitted shall be 0.60%, unless a test certificate from the CSIR (Built Environment) is provided stating that the long term testing has proved the aggregate to be non-reactive.
2. Where the cement content exceeds  $350\text{kg/m}^3$ , the maximum equivalent sodium monoxide content permitted shall be  $2.1\text{kg/m}^3$  of concrete.
3. Where potentially reactive aggregate is used, the maximum cement content shall be  $400\text{kg/m}^3$  and the equivalent sodium oxide ( $\text{Na}_2\text{O}$ ) content permitted shall be  $2.4\text{kg/m}^3$  of concrete.
4. The contractor shall prior to the use of cement provide test certificates from an approved laboratory confirming the equivalent sodium oxide ( $\text{Na}_2\text{O}$ ) content of the batch of cement to be used.
5. Special literature should be consulted e.g. Fulton's Concrete Technology.

(i) Environmental Classes of Exposure

For this project, the environmental classes for carbonation and chloride exposure for the different structural elements are as shown below in Table B6404/3.

**TABLE B6404/3: ENVIRONMENTAL CLASSES OF EXPOSURE FOR ELEMENTS OF STRUCTURE**

Element	Carbonation Environment (OPI)	Chloride Environment (Chloride Conductivity)
Foundations	n/a	XS1
Substructures	XC3	XS1
Superstructures	XC3	XS1

(v) Acceptance ranges

**TABLE B6404/4: DURABILITY PARAMETERS ACCEPTANCE RANGES**

Acceptance Category	Test No./ Description/ Unit				
	Water Sorptivity (mm/ h)	Oxygen Permeability (log scale)			
		Parapets	Sub-structures	Super-structure	Etc for other members
Concrete made, cured and tested in the laboratory using Trial Panels	<10.0	>9.45	>9.45	>9.45	> 9.45
Full acceptance of in situ concrete using Test Panels	<10.0	>9.45	>9.45	>9.45	>9.45
Conditional acceptance of in situ concrete based on results of Test Panels	Not applicable <sub>2</sub>	9.1 - 9.45	9.1 - 9.45	9.1 - 9.45	9.1 - 9.45
Rejection based on results of Test Panels	Not applicable <sub>2</sub>	<9.1	<9.1	<9.1	<9.1

Notes:

1. A value has been given, but the value to be adopted shall be based on the results from design mixes.
2. Although no value has been given due to ongoing research, values above 12 are regarded as poor quality concrete.
3. For purposes of interpretation, substructure is deemed to be all supporting elements below the deck (superstructure), including buried lengths of columns, etc, but excluding foundation elements like bases and spread footings.

Chloride index testing is required where specified by the engineer. The maximum water: binder (only blended binders omitted) content of concrete used in the XS environment classes shall be 0,55.

Chloride conductivity testing shall be used for materials selection and design of mixes in aggressive chloride conditions. It will therefore only be used as a check on mix designs during the initial stages of construction (based on trial panels) and on the test panels constructed as described in clause B6404(i). Testing shall be undertaken during the construction as described in clause B8106(i).

Where a cement blend is used which is different from that given in Table B6404/5, the appropriate limits shall be discussed with the engineer for approval.

**TABLE B6404/5: APPROPRIATE LIMITS FOR CHLORIDE CONDUCTIVITY**  
(mS/cm) (For a range of possible cement blends, with minimum cover of 50mm)

ENV Class	70:30 CEM1 : FA	50:50 CEM1 : GGBS	50 : 50 CEM1 : GGCS	90 : 10 CEM1 : CSF
XS 1	1.8	1.9	2.45	0.45
XS 2a	1.1	1.225	1.55	0.325
XS 2b, XS 3a	0.875	1.1	1.225	0.3
XS 3b	1.1	1.3	1.55	0.3

FA=Fly Ash, GGBS = Ground Granulated Blast furnace Slag, GGCS = Ground Granulated Corex Slag, CSF = Condensed Silica Fume

Notes:

- Table B6404/5 shows typical blends of cements only with appropriate chloride conductivity values. These are minimum values to be achieved in the as-built structure. Cement blends used under the contract that differs from these must be tested in the laboratory to obtain appropriate values.
- Acceptable cement blends shall be as approved by the Design Engineer.

**TABLE B6404/6: DURABILITY PARAMETERS ACCEPTANCE RANGES: COVER FOR ALL CONCRETE TYPES**

Test No.	Description of Test	Specified Cover (mm)	Acceptance Range	
			Min	Max
			Overall cover	Overall cover
B8106(g) (iv)	Concrete cover to reinforcement (mm)	30 to 80	85% of specified cover – 5mm	Specified cover + 15mm or where member depth is less than 300mm the limit accepted in writing by Design Engineer.

(v) Site Testing

To ensure that the concrete has been placed, compacted and cured correctly, a number of tests shall be carried out on the concrete by an approved laboratory.

(vi) Non-compliance with specified criteria

The Contractor should also note that there is specific provision made for curing of concrete under payment item B64.07 of the project specification. The amount priced under this item will be subject to reduced payments should the durability tests indicated under B8106(h) fail to meet the required targets. Similarly, failure to achieve the required durability test results will be sufficient cause to apply partial payment factors for all the payitems of the elements of the structure under sections 6300 and 6400 of the standard and project specifications or in some cases the removal of the rejected concrete.

Add the following sub-clauses:

**“i) Mix design approval procedures**

(i) General

The compressive strength achieved on ‘W’ class concrete shall generally exceed the characteristic strength class structurally required. The contractor shall note that the process of finalising ‘W’ class mix designs could take up to two months. In order to expedite the process, the contractor must submit samples of aggregate and cement



to an approved laboratory within seven days of the Commencement Date. Should 'W' class concrete be required before the mix design is finalised, the engineer will approve a preliminary mix design in consultation with the contractor.

(ii) Laboratory designs and site tests based on Trial Panels

Good mix design practice is essential and the following criteria shall be taken into consideration when pricing and determination of the mix design:

1. Selection of sands and aggregates to achieve a good grading is important if the desirable concrete density and durability have to be achieved.
2. The selection and use of the correct cement grade and type for the environmental conditions (and not based solely on costs) is fundamental
3. Water: cement ratios are critical, dictating both the structural strength and the durability requirements

Mix proportions for the concrete to be used on site need to be determined by an approved laboratory, Cylindrical specimens,  $70 \pm 2\text{mm}$  in diameter shall be made or cored from a trial panel during the laboratory trial mix for performance of tests B8106(g)(i), (ii) (if required).

Note that concrete cubes are not cored for durability testing during design trial mix stage or during the construction stage.

Testing for approval purposes shall be carried out by an accredited laboratory approved by the engineer, the costs of which are deemed to be included in the contractor's rates for structural concrete. Concrete as designed shall satisfy the limits set out in Table B6404/4 under the heading "Concrete made, cured and tested in the laboratory, using Trial Panels". It is therefore a requirement that the trial panels be cast on the site and the cores extracted and tested in the laboratory as part of the mix design approval process. Where the site is remote from the laboratory, the Trial Panels may be cast at the laboratory in accordance with the requirements of sub-clause B8106(g).

It will be necessary for the contractor to establish a target mean strength with a margin above the minimum requirement so that small fluctuations due to material changes or workmanship can be accommodated. In general, mean target strength = characteristic strength +  $1,645 \times S_n$ .

Once the mix is approved, the target mean compressive strength for quality control purposes for durability class concrete shall be the mean compressive strength obtained from the mix that satisfies the durability requirements."

**B6407 PLACING AND COMPACTION**

*Add the following:*

**"b) Placing**

Casting of the in situ parapets or placing of precast parapets shall only commence after removal of the deck staging, and in addition, in the case of prestressed decks, the stressing must be complete. Where specified on the drawings the top of the parapets after placing shall follow the pre-camber levels specified on the drawings to allow for future creep effects. This is of particular importance on the edges of very long skew decks and prestressed simply supported decks. The levels of the top rail of each panel of the balustrades/parapets shall be confirmed in writing by the design engineer"

**B6408 CONSTRUCTION JOINTS**

**a) General**

*Add the following:*

“No construction joints other than those indicated on the drawings will be permitted without the written approval of the engineer. In all cases the proposed method of forming the joint shall be discussed and agreed with the engineer.”

**B6409 CURING AND PROTECTION**

*Add the following to the end of sub-clause 6409(f):*

“Where a curing compound is used, it shall consist of an approved water based low viscosity clear wax emulsion applied in accordance with the manufacturer’s instructions.”

*Add the following paragraphs to the end of this sub-clause:*

“Where curing by retention of formwork is used as the only method of curing the concrete, it must be left in place for the minimum period specified in Table 6206/1 but in no instance shall it be less than 7 days.

The materials used for formwork shall take into account properties such as thermal insulation and moisture absorption when assessing the suitability of the material, to the approval of the engineer.

If impermeable curing membranes are to be used as a curing method, they shall be installed at the same time as formwork is removed and no portion of a concrete surface may be left unprotected for a period in excess of 2 hours. If the surface is an unformed finish e.g. top of deck slab, then the surface must be protected immediately by appropriate methods approved by the engineer after it is finished, without damage to that surface, since it is vulnerable to plastic shrinkage cracking due to high rates of evaporation while the concrete is still in a plastic state. Plastic shrinkage and settlement shall not be permitted on any of the structural elements since it compromises the durability of the concrete. In order to prevent early settlement and shrinkage of the concrete, the concrete placed shall be re-vibrated after initial compaction while the concrete is still in a plastic state. Any remedial measures shall be as approved in writing by the engineer. On bridge decks, the top surface shall be cured using the method described in clause 6409(d) i.e. “Constantly spraying the entire area of exposed surfaces with water”.

For all concrete curing shall be excluded from the make-up of rates for measurement under items B64.01 and B64.02 and will be paid for separately under payitem B64.07. Where the application of a curing compound is used, the type and nominal application rate thereof shall be as specified in the schedule of quantities or to the manufacturer’s nominal specified rates.”

**B6410 ADVERSE WEATHER**

*Add the following sub-clause:*

**“d) Temperature and hydration of concrete**

Site batched concrete: The temperature of concrete delivered to site shall be within the range 10°C to 30°C. Concrete which has a temperature outside of this range shall not be placed in the structure.

Ready mix concrete: In the case of ready mix concrete the temperature limits at point of delivery shall be as specified in SANS 878 2004 unless the engineer has specified other limits due to specific design requirements. If slump loss occurs at concrete temperatures of over 30°C and more than two hours after mixing, the concrete shall be rejected. Also if after addition of allowed water the concrete begins to stiffen again such as to place in doubt that full compaction and finishing can be achieved, the concrete shall be rejected.

Care must also be taken not to cast concrete onto hot steel shutters as this might induce cracking.

The rate of hydration of the cement in the concrete shall be such that the concrete can be placed and properly compacted within 2 hours after the addition of water to the mix ingredients. The initial set of the concrete shall not be unduly delayed due to inappropriateness of admixtures or cement type, which could promote bleeding."

#### **B6413 PRECAST CONCRETE**

*Add the following final paragraph:*

"Precast concrete units shall comply with the requirements of the latest SANS 986:2006 specification.

Prior to the manufacture of any units the manufacturer shall submit his Quality Plan to be approved by the engineer. The quality plan must incorporate all requirements and frequency for durability index testing i.e. Sorptivity, Oxygen Permeability, Chloride Conductivity (if required) and Cover Testing. As part of the Quality Plan submitted for approval, copies of calibration certificates of both gauges used for proof loads and cover meters used at the factory shall be supplied to the engineer. The originals of these certificates shall at all stages also be available for inspection at the factory premises. The manufacturer shall check each precast unit for cover compliance, and random checking of units shall not be permitted. The engineer's representative may visit the factory at any stage to ascertain adherence to the quality plan including test results from the durability index testing as well as to check covers before delivery to site. Any substandard cover shall result in the applicable structural element or part thereof being rejected. Should the manufacturer not be adhering to their Quality Plan the engineer may exercise the right to reject the use of products from the manufacturer concerned. The Employer shall also be informed in all such cases.

For durability requirements due to the reduced cover provided for precast culverts, all such durability testing shall be done in accordance with clause B6404(h). "

#### **B6414 QUALITY OF MATERIALS AND WORKMANSHIP**

##### **a) Criteria for compliance with the requirements**

*Add the following paragraphs after the first paragraph:*

"The cores shall be taken from the Trial Panels cast using the design mixes made in the laboratory. Where the site is remote from the laboratory, the Trial Panels may be cast at the laboratory in accordance with the requirements of sub-clause B8106(g).

In the event that for 'W' classed concrete strength requirements the actual achieved average cube strengths of an element are less than 85% of the target mean strength needed to meet durability requirements or less than 100% of the target mean strength to meet strength requirements, it may result in the durability parameters not meeting the prescribed targets and the engineer will instruct the taking of cores from the test panel and structure for additional testing. The cost of these in situ tests shall be borne by the contractor.

The approved quality control criteria for process control testing for durability concrete shall be coring and testing of test panels. The frequency of manufacture and coring of test panels shall be as ordered by the engineer and indicated in Tables B8106/1 and B8106/2.

Tests B8106(g)(i), (ii) and (iii) (when required), shall be conducted on cores extracted from the test panels when the concrete reaches the age of at least 28 days. To allow for variability in the material potential, the type of chloride conductivity values shall be limited to 90% of the values indicated in table B6404/5. Test no. B8106(g)(iv) shall be conducted

to confirm that the specified depth of concrete cover has been achieved. The frequency of these tests shall be as described under item B8106(g). The test results shall be accepted or rejected on the criteria set out in Table B6404/4 and B6404/5 based on the following categories:

(i) Full acceptance

Concrete shall be accepted unconditionally and full payment shall be made.

(ii) Conditional acceptance

Concrete may be accepted, based on the cube strength and durability index results with a warning that construction methods be examined to improve the durability criteria. A reduced payment shall be applied to all the relevant payitems of the specific element under B6300 where the cover requirements are not achieved and B6400 where the oxygen permeability and strength requirements are not achieved for the non-conforming element or concrete pour as set out in Tables B8212/1 and B8212/2. The decision to accept the substandard concrete at reduced payment shall rest solely with the Employer.

Should the test result(s) indicate conditional acceptance of the element tested, the Contractor shall have the option of carrying out additional tests (on 4 extracted cores) on that element of the structure, at his own expense to confirm or disapprove the original test result(s). These cores shall be extracted within 56 days from the date of the element being cast.

Should the additional test confirm the original test result, then the original test result shall serve to determine payment in accordance with Tables B8212/1 and B8212/2.

Should the additional test show that the structure meets the targets, the penalty shall be halved.”

(iii) Rejection

The concrete shall be removed and replaced with fresh concrete at the expense of the contractor, as directed by the engineer.

## **B6416 MEASUREMENT AND PAYMENT**

The tendered rates shall include full compensation for providing the curing agent and applying it to the fresh concrete surface by means of an approved pressure distributor (or other approved methods of application) in accordance with the manufacturer's specified nominal rates of application. Wet fine mist spray curing is also permitted providing it is done for 7 days. Payment will also be made under this item if this is the preferred method to be used. Should no curing method be specified at time of tender then it will be assumed wet fine mist spray curing is to be done. Partial payment shall be applied in the event that the engineer allows conditional acceptance.”

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**SECTION B6600: NO-FINES CONCRETE, JOINTS, BEARINGS, PARAPETS AND DRAINAGE FOR STRUCTURES**

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**B6603 JOINTS IN STRUCTURE**

**a) Materials**

(i) General

*Add the following after the last paragraph:*

“It is a firm requirement that all contracts have full Agrément certification for bridge deck joints, with the target date for new applications for Agrément assessment one year from receipt and acceptance by Agrément South Africa of each application. Proof of original acceptance of application by Agrément is required in such a case.

(1) current Agrément assessments: 1 September 2010.

(2) new applications for Agrément assessment one year from receipt and acceptance by Agrément South Africa of each application. Proof of original acceptance of application by Agrément is required in such a case.”

**(g) Installing the expansion joints**

*Delete the first paragraph and replace with the following:*

“All deck expansion joints shall be installed by approved specialist subcontractors only. Installed deck expansion joints shall have the following guarantees:

Proprietary joints - 15 years  
Asphalt plug type joints - 10 years  
Concrete nosings (replacement) - 10 years  
Joint sealant - 5 years

All deck expansion joints will only be considered for use on this contract if the manufacturer has obtained Agrément certification. New applications for Agrément assessment takes up to one year from receipt to acceptance by Agrément South Africa.”

**B6608 MEASUREMENT AND PAYMENT**

<b>Item</b>	<b>Unit</b>
<b>B66.04 Installation of proprietary expansion joints .....</b>	<b>metre (m)</b>

*Add the following to the end of the second paragraph:*

“The tendered rate for subitems (a) and (b) shall also include for water test required to prove the joint. The water shall be ponded and maintained to a minimum depth of 150mm above the top of the joint for a period of one hour each. Testing should follow the installation of the various sections of joints to take advantage of the existing traffic accommodation and each test shall cover the length of each joint installed (generally half width of bridge)”.

<b>Item</b>	<b>Unit</b>
<b>B66.05 Expansion Joints.....</b>	<b>metre (m)</b>

*Add the following to the measurement clause of subitem (b):*

“The joint measured shall be the complete joint shown on the drawings including termination details and recesses at balustrades and cover plates and fixings.”

*Add the following to the end of the second paragraph:*

“The tendered rate for subitems (a) and (b) shall also include for water test required to prove the joint. The water shall be ponded and maintained to a minimum depth of 150mm above the top of the joint for a period of one hour each. Testing should follow the installation of the various sections of joints to take advantage of the existing traffic accommodation and each test shall cover the length of each joint installed (generally half width of bridge)”.

<b>Item</b>	<b>Unit</b>
<b>B66.06 Filled Joints .....</b>	<b>metre (m)</b>

*Add the following to the end of the second paragraph:*

“The tendered rate for subitems (a) and (b) shall also include for water test required to prove the joint. The water shall be ponded and maintained to a minimum depth of 150mm above the top of the joint for a period of one hour each. Testing should follow the installation of the various sections of joints to take advantage of the existing traffic accommodation and each test shall cover the length of each joint installed (generally half width of bridge)”.

<b>Item</b>	<b>Unit</b>
<b>B66.15 Concrete parapets .....</b>	<b>metre (m)</b>

*Add the following to this clause:*

“The tendered rate shall include for sealing of joints between balustrade units as shown on the drawings.

*Add the following payment items:*

<b>Item</b>	<b>Unit</b>
<b>B66.27 Concrete pedestrian railings.....</b>	<b>metre (m)</b>

The unit of measurement shall be the metre of railing complete in accordance with the drawings. The concrete railing shall include the concrete upstand for fixing the concrete railing and all work above the concrete upstand and for any kerbing and coping forming an integral part of the railing.

The tendered rate shall include full compensation for all labour, plant and materials (including reinforcing steel and prestressing requirements) for the manufacture and erection of the precast concrete railings.

<b>Item</b>	<b>Unit</b>
<b>B66.28 Drainage strips .....</b>	<b>metre (m)</b>

The unit of measurement shall be the linear metre of drainage strips laced behind the earth faces as shown on the drawing.

The tendered rate shall include full compensation for all material, labour, and equipment to supply and install the strips as shown.

<b>Item</b>	<b>Unit</b>
<b>B66.29 Perforated drainage pipes - M65 Netlon drainage pipe wrapped in Kaymat U34 or similar approved .....</b>	<b>metre (m)</b>

The unit of measurement shall be the linear metre of perforated drainage pipes placed behind the earth faces as shown on the drawing.

The tendered rate shall include full compensation for all material, labour, and equipment to supply and install the perforated pipes as shown including the 300mm wide by 50mm thick mortar bed under the core.

<b>Item</b>	<b>Unit</b>
<b>B66.30</b> <b>Joint protection plates .....</b>	<b>metre (m)</b>

The unit of measurement shall be the linear metre of specified width installed. The tendered rate shall include full compensation for supplying all materials, including fastening or adhesives, for galvanizing and installation, including all labour and equipment, and for any wasted material.

<b>Item</b>	<b>Unit</b>
<b>B66.31</b> <b>Additional water tests for joints ordered by the engineer .....</b>	<b>number (No)</b>

The unit of measurement shall be the number of additional water tests for proving the expansion joints, as ordered by the engineer. The test shall be executed by ponding water to a minimum depth of 150mm deep above the top of the joint for a period of one hour each. Testing should follow the installation of the various sections of joints to take advantage of the existing traffic accommodation and each test shall cover the length of each joint installed (generally half width of bridge).

The tendered rate shall include full compensation for providing the pond of water and maintaining its minimum depth of 150mm for the full one hour period, and clearing away the ponding materials on completion.”

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## SECTION B8100: TESTING MATERIALS AND WORKMANSHIP

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### B8102: TESTING METHODS

*Insert the following as a new first paragraph:*

“Where reference is made to TMH test methods in this specification or the standard specifications, it shall be replaced with the relevant current published SANS test method.”

### B8103: THE COSTS OF TESTING

#### (a) Process Control

*Rename the heading as “Materials Quality Control” and replace the contents with the following:*

“Testing shall be undertaken by a combined laboratory facility for process control (where the process control testing can be utilised as acceptance control), acceptance control and correlation testing subject to the following requirements laid down by the Employer:

- (i) The contractor accepts the test results of the combined laboratory. Should there be any doubts with regard to certain test results, this will be settled by an independent laboratory mutually agreed upon. The cost in such cases will be to the account of the party at fault. The contractor shall apply in writing, quoting this clause, as to which specific tests are in doubt, providing test reference numbers and details as to the reasons why the test result is in doubt.
- (ii) The contractor accepts that the engineer will be in charge of the combined laboratory.
- (iii) The contractor will be allowed to place a permanent representative in the combined laboratory to observe the laboratory operations. The cost of such representation cannot be claimed as a payment contribution towards payment item B81.04, but will be for the account of the contractor. The contractor shall indicate in writing within 14 days of the commencement date if such representation will be required or declined.

The total cost of the combined laboratory for the 27 month contract period has been estimated at R 10, 800,000.

The estimated cost per month to establish and operate the combined laboratory for the contract period as listed above, allows for the following items:

- (i) Establishment of laboratory buildings
- (ii) Salaries and labour for all laboratory staff members
- (iii) Housing for all laboratory staff members
- (iv) Transport requirements (based on distance) for staff and material testing
- (v) Provision of laboratory equipment (as required for the contract)

A pay item for the monthly contribution from the contractor’s interim payment certificates has been provided under payment item B81.04.”

### B8105 TESTING OF AGGREGATES

*Add the following sub-clause:*

#### “g) Determination of Ethylene Glycol Durability Index

The Ethylene Glycol Durability Index shall be determined as follows:



(i) Apparatus

- Suitable pans or basins
- Ethylene Glycol solution
- Stirring rod

(ii) Method

Obtain three or more representative samples from the source to be evaluated.

If not already crushed, crush the material in order to obtain sufficient minus 19mm plus 13mm sized aggregate in order to totally cover the bottom of the basin or pan with a single layer of stone. Add sufficient ethylene glycol to each basin ensuring that every aggregate particle is completely submerged.

After soaking for 24 hours, gently stir the aggregate and allow to settle. Observe and record the response of the aggregate to the ethylene glycol according to the criteria listed in (iii) below. Continue the above cycle at intervals of 24 hours for a further 4 days, in each case recording the observed response. After 5 days allow the samples to remain submerged in the solution and observe and record the disintegration response after a total period of 15, 30 and 60 days have elapsed.

(iii) Classification of response

After each cycle, classify and record the response of the aggregate as follows:

DISINTEGRATION CLASS

Class 1: No obvious effects, or only very minor spalling of sand sized particles or very small flakes.

Class 2: Splitting of rock, accompanied by any other disintegrative effects.

Class 3: Fracturing (spheroidal and/ or internal) without extensive spalling or distortion.

Class 4: Fracturing (spheroidal and/or internal) with extensive spalling or distortion.

Class 5: Complete disintegration.

TIME CLASS

The time factor in the above disintegrative process is classified according to the time taken for the most serious effect of the expansive stresses to occur i.e.

Class 4: 0 - 5 days

Class 3: 6 - 15 days

Class 2: 16 - 30 days

Class 1: 31 - 60 days

Class 0: Over 60 days

(iv) Determination of Glycol Durability Index

The Ethylene Durability Index is determined by adding the class number as assigned for the specific disintegrative response observed to the class number as assigned for the period for this response to occur. A durability index ranging from 1 (no response) to 9 (rapid and complete disintegration) is thus determined."

Amend the heading of B8106 to read as follows:

**“B8106 TESTING THE CONCRETE AND COVER TO STEEL REINFORCEMENT”**

Add the following sub-clauses under B8106:

**“g) Trial panels for durability concrete (W class concrete)**

As part of the durability class concrete mix design approval process, trial panels shall be constructed on the site (or at the laboratory) before construction of structural elements commences, to ensure that the contractor can successfully achieve the oxygen permeability and sorptivity targets set for the in situ concrete with method of construction to be adopted. Each trial panel shall be constructed using the same type of concrete mix, shuttering type, placing and curing methods (including application rates of curing compounds if applicable) as to be used on the final structural element to be constructed. The dimensions of such a trial panel shall be 0.40m wide, 0.60m high and 150mm thick. The panel shall be constructed vertically. It is suggested that 2 lifting hooks be cast into the panel to facilitate lifting, moving or disposal of panel. It most likely will be that one trial panel will be required for substructures (piers, abutments, retaining walls, etc.) if the same grade concrete is specified for all substructures and another for the decks due to type of casting and curing methods.

The test area for taking of cores (taken in horizontal direction) shall not be less than 100mm from all horizontal and vertical edges. The number of cores to be extracted and tested is described under B8106(i).

**h) Test panels for durability concrete (W class concrete)**

During casting of concrete on site, test panels shall be constructed on the site adjacent to where the concrete element is being placed. Each test panel shall be constructed with the same concrete, shutter type, compaction and curing methods being used in the element being cast (including same vibrator frequency and curing compound application rates), and be left to cure for 28 days adjacent to the concrete element. Thereafter it shall either be cored on site or transported to the laboratory for testing of the required durability parameters. The dimensions of the test panels shall be 0,4m wide, 0,6m high and 150mm thick and be cast vertically to simulate vertical casts of the substructures and vertical faces of bridge decks. It is suggested that 2 lifting hooks be installed at both top ends of the test panel to assist with transport. For precast concrete, test panels will not be constructed, as cores will be drilled from the concrete elements at the Precast yard before being placed at its final location. For the horizontal faces of in situ bridge decks and culverts, test panels will also not be constructed. Instead cores will be extracted from the top surface of the decks.

The frequency of the testing and number of cores to be extracted is described under B8106(i).

The test area for the taking of cores (taken in a horizontal direction) shall not be less than 100mm all horizontal and vertical edges.

The costs for construction of the test panels shall be deemed to be included under rates for payitem 64.01.”

**i) Testing for concrete durability**

Durability predictions for durability concrete prefixed ‘W’ will be based on the following tests that shall be carried out by an accredited laboratory approved by the Engineer:

- (i) Oxygen permeability
- (ii) Water sorptivity
- (iii) Chloride conductivity (if specified)

Notes:

The test methods shall be as described below.

For test no's (i) and (ii) (and (iii) when required), cores of  $70 \pm 2$ mm diameter shall be extracted from the test panels when the concrete reaches the age of at least 28 days and tested for the durability criteria set out in clause B6404(h) and used to determine the payment as per Table B8212/1. Test No. (iii) may only be required where specified (e.g. within a chloride environment along the coast or where chlorides are present in ground water).

A sample for the purposes of durability testing is as defined in Table B8106/1. The cores for durability testing shall be extracted from the test panels for process and acceptance control (at the frequency as shown in Table B8106/2). Durability testing shall only be required for concrete specified as durability concrete with the prefix "W". The number of samples to be taken shall be as shown in Table B8106/2.

**TABLE B8106/1: NUMBER OF CORE RESULTS REQUIRED FOR A SINGLE SAMPLE FOR DURABILITY TESTING**

Durability Parameter	No. of Core Results
a. Sorptivity	2
b. Oxygen Permeability	4
c. Chloride Conductivity	4

\* Test undertaken only if specified and within a chloride environment.

**TABLE B8106/2: NUMBER OF TEST PANELS REQUIRED FOR DURABILITY TESTING**

Element	No. of Test Panels to be taken (see Table B8106/1 for number of core results required for a single sample)
In situ Bridge Decks	1 (per pour) <sup>1</sup>
Bridge Piers/Abutments	1 (per element) <sup>2</sup>
Precast Elements	1 (per element) <sup>2, 3</sup>
Bridge / Culvert Parapets	1 (per element) <sup>2</sup>
Culvert walls / wingwalls / slabs	1 (per wall section) <sup>1, 2</sup>
Retaining walls	1 (per wall section) <sup>2</sup>
All bases	1 (per element/pour) <sup>2</sup>

Notes:

1. Test panels required to be cast vertically. Additional cores required to be extracted from top of deck / major culvert slabs, i.e. in situ cores.
2. Note that where group of elements are cast on the same day, only one test panel will be required, but only if the same grade concrete is used.
3. Sample required to be taken from Precast element in casting yard. For edge beams, inner face to be cored.

For cores to be extracted from precast elements and top of bridge decks, the engineer will indicate the positions at which the cores will be extracted. Filling of the holes left by the drilling of the cores shall be the responsibility of the contractor and shall be carried out using an approved proprietary non-shrink repair mortar so as to restore structural integrity and durability of the structural element tested.

If the test results indicate that the durability requirement has not been achieved, then the structural element shall be cored and tested for the durability criteria. The engineer will indicate the positions at which the cores will be extracted. The costs for testing of the structure shall be borne by the contractor. Filling of the holes left by the drilling of the cores shall be the responsibility of the contractor and shall be carried out with material as described in the paragraph above.

Note that if testing has to be undertaken on sides of decks and walls, the cores shall be taken on the exposed faces of the concrete i.e. the sidewall face taking care not to cut the reinforcing bars. Where the cores do contain pieces of reinforcing steel, they shall not be used for the tests. The cores shall be extracted through the cover concrete from the Test Panels or constructed concrete element as applicable. The outer 5mm of the exposed surface of the core shall be cut off and then a slice ( $30 \pm 2$ mm thick) shall then be cut and prepared for testing. The engineer will indicate the positions at which the cores will be extracted.

The methodology and latest revisions for the durability index tests are available at the University of Cape Town's web address at [www.civil.uct.ac.za](http://www.civil.uct.ac.za). In addition, the results of all the durability testing shall be submitted at least once a month in the required format to the SANRAL regional materials representative as well as to Mr Andrew Mackellar - email: [mackellara@nra.co.za](mailto:mackellara@nra.co.za).

**j) Testing for concrete cover**

Concrete cover testing shall be conducted using an approved calibrated electromagnetic cover meter, able to comply to requirements as defined in linear and block scans, and has the ability to save and calculate data measured.

The testing (non-destructive) shall be conducted to confirm that the specified depth of concrete cover has been achieved. The cover meter tests shall cover at least  $1\text{m}^2$  for every  $20\text{m}^2$  surface area of concrete placed. Readings shall be taken to identify individual bars, with at least 3 readings at 100mm spacing on every single bar within  $1\text{m}^2$ . The average cover of the  $1\text{m}^2$  subjected to the test shall be used to determine the payment as per Table B8212/2 unless the Contractor chooses to carry out additional tests as detailed in the final paragraph of clause B6414(a). The cover meter must be calibrated whenever being used to test for cover on each project. Standard Calibration block must be used on each project, and where substantial testing is required, the calibration block shall be kept on site. Cover meters shall comply with the relevant modern standards (e.g. EN55011, 50082-1, 6100-6-1, 6100-6-2, 6100-6-3, 6100-6-4 and BS18881 Part 204).

Critical elements for cover surveys are parapets, deck edges including underside of cantilevers, lower portions of columns and abutments and walls. Soffits should be excluded from measurements. All parapets (F-shaped) including the parapet beam shall be fully tested for cover compliance. In addition, the entire area up to 1,5m high on piers, walls and abutments, including the rear of abutments and wingwalls, shall be fully tested before being backfilled. The engineer will identify other critical areas required to be surveyed. Should any of these areas shows deficiencies, the engineer may order additional cover tests on other areas at the contractors costs.

The procedure for testing for depth of reinforcement from concrete surface shall be in accordance with the manufacturer's requirements for the relevant electromagnetic cover meter, but further requirements are set out in clause B8119. All cover meters shall be calibrated on site under the control of the engineer. The number of readings taken of the layer of rebar closest to the concrete surface to each  $1\text{m}^2$  to be tested shall be such that an accurate average cover can be determined for the tested area. For the purposes of calculating the average depth of cover bars that have covers 15mm or greater than what is specified shall be capped at specified cover plus 15mm in the calculations. For calculation of payment, specified cover to be reduced by 5mm (allowance for variation of equipment) before apply criteria as defined in Table B8212/2.

Example, where Specified cover = 40mm, test as 35mm, then apply limits,  $85\% * 35 = 30\text{mm}$ .

Quick Scan readings are to be taken perpendicular to the layer of rebar closest to the concrete surface for each scan area ( $\pm 30$  per  $\text{m}^2$ ), so that an *average cover* to reinforcement can be determined for the tested area.

Readings are to be taken to identify individual bars within each  $1\text{m}^2$ . At least three cover readings, at 150mm spacing, per an individual bar shall be shown in the test results but

only overall cover measurement would be used for payment purposes. Reports generated by the equipment shall be used for determining payment. Where more than 10% of readings are below specified lower limit, the area shall be re-scanned, by *Image, Block or Grid scan* method, to verify the average cover. For calculation refer to specific worksheet (attached)

Cognizance to be taken of the effect to cover depth measured, where spliced bars are measured in same area as single bars. The size of rebar shall be corrected manually on the device by means of applying the following formula (approximately 1.41 x diameter of rebar as shown in design).

Where insufficient cover are established before placing of concrete, e.g. Starter bars from base not correct position, remedial action to be performed before continuing with next concreting – these actions to be clearly recorded and area identified.

**B8108 DETERMINING THE TOTAL APPROXIMATE DRY BULK RELATIVE DENSITY AND THE APPARENT DENSITY**

*Add the following at the end of this clause:*

“For materials where the total water absorption, when determined according to SANS 3001-AG20 (replacing TMH1 Method B14) and SANS 3001-AG21 (replacing TMH1 Method B15), is in excess of 1,5%, the Apparent Density shall be calculated in accordance to the following formula:

$$\frac{(b - a)}{(d - a) + \{ (w - 1.0)/100 \times (b - a) \} - (c - b)}$$

This formula shall be used as an alternative to note (5) regarding soaking period, when so instructed by the engineer.”

**B8110 TESTS RELATING TO CHEMICAL STABILISATION**

*Add the following sub-clause:*

**“d) The Wet-Dry Durability Test for cement and/or lime-treated materials using the hand-brush method (SANRAL METHOD)**

1. Scope

This method covers the procedure for determining the soil-cement losses obtained by repeated wetting, drying and hand brushing of hardened soil-cement specimens (see 5.4).

2. Apparatus

2.1 A moisture curing room capable of maintaining a relative humidity of 95 to 100 percent and a temperature of 22 to 25°C, or suitable plastic bags capable of holding specimens and carriers in an air tight condition in a water bath as described in 2.2 below.

2.2 A suitable water bath with thermostatic control capable of maintaining a temperature of 22 to 25°C.

2.3 A balance to weigh up to 10kg, accurate to 0.5g.

2.4 A drying oven capable of maintaining temperatures of 71 ± 3°C and 110 ± 5°C.

- 2.5 A wire scratch brush made of 50mm by 1.6mm flat 26 gauge wire bristles assembled in 50 groups of 10 bristles and mounted to form five longitudinal rows and 10 transverse rows on a 200 by 65mm wooden block.

3. Method

3.1 *Preparation of specimens*

Prepare specimens in accordance with the procedure described in the Appendix to method A19 in the TMH 1 with the following exceptions:

Use the material passing the 37.5mm sieve and discard the material remaining on the sieve.

Use the apparatus and compaction method as described in SANS 3001-GR30 (replacing TMH 1 method A7) (100% Modified AASHTO at predetermined OMC).

3.2 *Curing of specimens*

Rapid cure the specimens (see 5.6). Alternatively, and where instructed by the engineer, the specimens may be cured for seven days at a relative humidity of 95% to 100% and a temperature of 22°C to 25°C in a suitable curing room or in plastic bags and a suitable water bath.

3.3 *Wetting, drying and brushing*

After curing, remove the specimens from the curing room or plastic bags, allow to cool and submerge them in water at room temperature for a period of five hours. Remove the specimens from the water and place them in an oven at 71°C for 42 hours.

Remove the specimens from the oven. Give each specimen two firm strokes over the full surface area with the wire scratch brush. The brush must be held parallel to the long axis of the specimen or parallel to the ends as required to cover all areas of the specimen. Apply these strokes to the full height and width of each specimen with a firm stroke corresponding to approximately 13.5 kN force (see note 5.5).

3.4 *Determination of soil-cement losses*

After 12 cycles, dry the specimens to constant mass at 100°C and determine the oven dry mass of the specimens. The data collected will permit the calculation of the soil-cement losses of the specimens after the prescribed 12-cycle test.

4. Calculations

- 4.1 Calculate the soil-cement loss of the specimens as a percentage of the original oven-dry mass of the specimens as follows:

$$L = \frac{W - N}{W} \times 100$$

Where

L = soil-cement loss (%)

W = original calculated oven-dry mass (g) (calculated according to paragraph 3.5 in the Appendix to method A19 in the TMH 1).

N = final oven-dry mass (g).

4.2 The percentage loss shall be calculated and reported to the nearest 0.1 percent. The results are normally required for stabilisation design purposes and should be reported graphically against relevant cement contents.

5. Notes

5.1 Mass determinations of the specimens before and after brushing are usually made at the end of each cycle during research or special investigations.

5.2 Care is required when assessing results obtained on very coarse graded materials as "plucking" out of the aggregate pieces during the brushing process could result in very high losses of material, which may however not be truly indicative of its potential erosion resistance.

5.3 If it not possible to run the cycle continuously because of Sundays or holidays, or for any other reason, the specimens should be held in the oven during the layover period.

5.4 The test was originally developed to determine wet-dry durability of cement-treated material. It can, however, be used with equal success on material tested with other chemical stabilizers, for example lime, or mixes of lime and milled blast furnace slag, or cement and milled blast furnace slag.

5.5 The pressure of the brushing stroke is determined as follows:

Clamp a specimen in a vertical position on the edge of a platform scale and zero the scale. Apply vertical brushing strokes to the specimen and note the force necessary to register approximately 1.36kg.

5.6 Rapid curing:

Seal each specimen airtight in a suitable container or plastic bag. Carefully place the briquettes on suitable holders or in pans and place in the oven at the relevant temperature and period given below:

Stabilizing agent	Temp (°C)	Time (Hours)
Cement	70 – 75	24 ±0.5
PBFC	70 - 75	24 ±0.5
Lime	60 ±2	45 ±1
Lime / FA	60 ±2	45 ±1
Lime / MBFS	60 ±2	45 ±1

**B8114 GEOTEXTILE AND GEOTEXTILE – SOIL COMPATIBILITY TESTS**

Add the following new sub-clause:

**“c) Other Tests:**

- i. Thickness (mm):  
The thickness of the material shall be specified by the contractor (or supplier). Thickness and compressibility tests shall be carried out in accordance with Code of Practice SABS 0221:1988. The Testing of Geo-textile, to check that the material supplied conforms to the thickness specified by the contractor.
- ii. Mass per unit area (g/m<sup>2</sup>):  
Testing shall be carried out in accordance with Code of Practice SABS 0221.
- iii. Tensile strength (kN/m):  
Testing shall be carried out in accordance with Code of Practice SABS 0221.

- iv. Penetration load (kN):  
Testing shall be carried out in accordance with Code of Practice SABS 0221.
- v. Puncture resistance (mm):  
Testing shall be done in accordance with test procedures laid down by CSIR, Pretoria.
- vi. Permeability (l/s/m<sup>2</sup>):  
Testing shall be carried out in accordance with Code of Practice SABS 0221.”

**B8117 MEASUREMENT AND PAYMENT**

*Amend payitem 81.02 as follows:*

<b>Item</b>	<b>Unit</b>
<b>B81.02 Other special tests requested by the engineer</b>	
"(a) Employer's contribution to concrete durability tests	
(i) Tests for water sorptivity .....	Provisional (Prov) sum
(ii) Tests for oxygen permeability .....	Provisional (Prov) sum
(iii) Tests for chloride conductivity .....	Provisional (Prov) sum
(iv) Tests for concrete cover .....	Provisional (Prov) sum
<b>(b) Other tests .....</b>	<b>Provisional (Prov) sum</b>

The provisional sum provided to cover the cost of special tests as requested by the engineer in terms of clause 8115 shall be expended in accordance with the provisions of the FIDIC Conditions of Contract. Payment will not be made for any special tests should the result indicate that the specifications have not been complied with.”

*Add the following payment items before the “Note:”*

**“B81.04 Financial contribution for the combined laboratory .....month**

The unit of measurement shall be the month.

The negative rate tendered per month shall cover the contractor's contribution towards the establishment and operation of the combined laboratory over the contract period including any approved extension of time, and shall be deducted from the contractor's payment certificates.

The contractor's tendered contribution for the establishment and operation of the combined laboratory shall be deducted monthly from the payment certificates over the contract period, including approved extension of time. However, excluded from the tendered contribution shall be the costs of all other special tests requested by the engineer.”

*Insert “(a) & (b)” after “81.03” in the 1st line of the 2nd paragraph of the Note*

**B81.05 Surface regularity tests as described in subclauses B3405(f) and B4213(a)(v)**

- (a) Establishment of equipment:
  - (i) Inertial Laser Profilometer..... number (No)
  - (ii) Other profilometer type, e.g. ARRB Walking or Face Dipstick : (Specify type)..... number (No)
- (b) Profiler surveys on:



- (i) Base layers using:
  - (1) Profilometer, e.g. Inertial Laser, ARRB Walking or Face Dipstick (Specify type).....kilometre (km)
- (ii) Asphalt surfacing using:
  - (1) Inertial Laser Profilometer .....kilometre (km)

The unit of measurement for sub-item B81.05(a) shall be the number of times the particular piece of equipment is established and de-established on site to perform acceptance control measurements, as approved by the engineer.

The tendered rates for sub-item B81.05(a) shall include full compensation for providing and establishing the equipment on site, and for the subsequent de-establishing and removal of the equipment from site when no longer required.

The unit of measurement for sub-item B81.05(b) shall be the kilometre of road surveyed in accordance with, and as specified in, sub-clauses B3405(f) and B4213(a)(v) respectively.

The tendered rates for sub-item B81.05(b) shall include full compensation for surveying the specified layer, and for analyzing and determining the longitudinal profiles and 100m International Roughness Index (IRI), all as specified in sub-clauses B3405(f) and B4213(a)(v) of the specifications. The tendered rates must also include full compensation for the number of runs per lane as specified.”

*Add the following clauses:*

**“B8119 CONCRETE COVER TESTING PROCEDURE**

**1. Scope**

This procedure covers all measurements to be done on concrete structures to establish conformance to specified concrete cover requirements.

**2. Guidelines and Preparation**

- a. The contractor is to complete a cover survey request and forward it to the engineer.
- b. The selected area for cover measurement is to be indicated on a sketch (see example attached).
- c. The responsible person must identify the area to be scanned, take measurements on the required date and calculate the results in terms of project specification.
- d. The cover meter is to be checked against a calibration box/block constructed with typical reinforcement of known parameters, on each day of use. Any deviations from actual measurement must be recorded on a Cover Survey Request.
- e. Cognizance shall be taken of the effect to cover depth measured, where spliced bars are measured in the same area as single bars (typically, the rebar diameter is increased by a factor of 1.44).
- f. The depth of cover shall be determined with equipment, complying with BS 1881, Part 204 and capable of identifying the location and depth of reinforcement on a scanned area. The results shall be recorded electronically by the equipment software.
- g. Measurements are to be taken in accordance with cover meter manufacturer’s guidelines.
- h. The person responsible for measurements must indicate the position, dimension, type and splicing of reinforcement on the sketch for each scanned area.

**3. Method of Measurement**

Two methods of measurement are proposed as follows:

a. Quick/Linear Scan Method

- (i) Readings are to be taken perpendicular to the layer of rebar closest to the concrete surface for each scan area (+/- 30 per m<sup>2</sup>), so that an *average cover* to reinforcement can be determined for the tested area.
- (ii) Readings are to be taken to identify individual bars within each 1m<sup>2</sup>. At least three cover readings, at 150mm spacing, per individual bar shall be shown in the test results but only the overall cover measurement would be used for payment purposes. Reports generated by the equipment shall be used for determining payment. Further specified cover to be reduced by 5mm (allowance for variation of equipment), before applying criteria as defined in table B8212/2a.

e.g. If specified cover is 40mm, the lower limit for full acceptance is:

$$(40 \text{ mm} - 5 \text{ mm}) \times 85\% = 30 \text{ mm.}$$

- (iii) Where more than 10% of readings are below specified lower limit, the area shall be re-scanned, by *Image, Block or Grid scan method*, to verify the average cover. Refer to item 3.2 below.

An example of Quick Scan information and presentation is shown in Figure B8119-1 below.

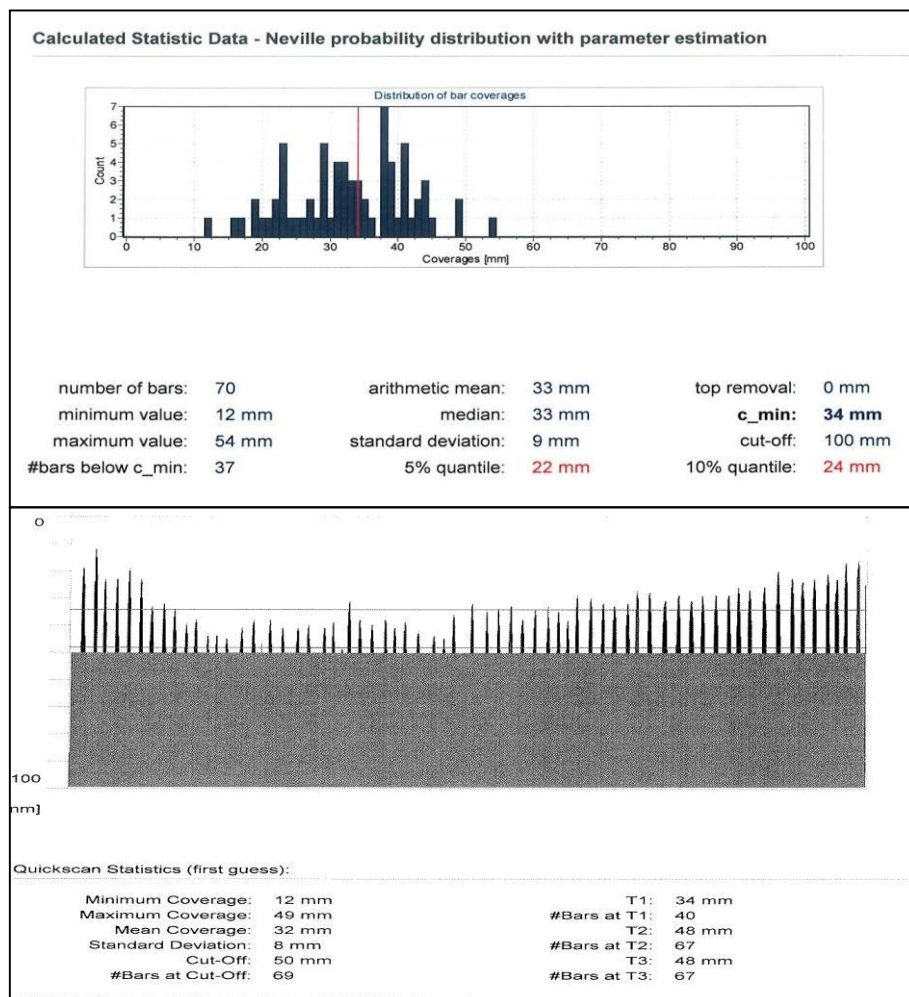


Figure B8119-1 : Example of a Quickscan output

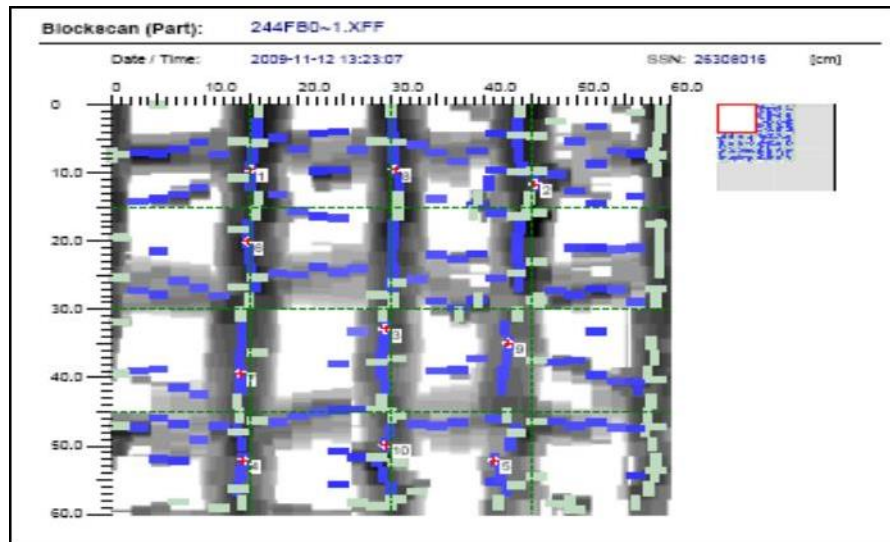
b. Image/Block/Grid Scan Method

- (i) Readings are to be taken in both directions of a marked grid as per the equipment manufacturer’s recommendations.
- (ii) This method shall be used to determine the average cover to reinforcement when more than 10% of the Quick/Linear Scan results do not meet the specified lower limit for overall cover.
- (iii) For purposes of calculation of the averages for cover of a rebar layer, readings exceeding upper limit (cover + 15mm) to be capped on upper limit. Further specified cover to be reduced by 5mm (allowance for variation of equipment), before applying criteria as defined in Table B8212/2a.

e.g. If specified cover is 40mm, the lower limit for full acceptance is:

$$(40 \text{ mm} - 5 \text{ mm}) \times 85\% = 30 \text{ mm.}$$

An example of Image Scan information and presentation is shown in Figure B8119-2 below:



Point:	x: [cm]	y: [cm]	Cov.: [mm]	Bar:	Orientation:	Usage:
1	15,0	9,6	59	12mm	Vertical	Measurement
2	45,8	11,7	56	12mm	Vertical	Measurement
3	29,6	33,1	68	12mm	Vertical	Measurement
4	14,4	52,4	71	12mm	Vertical	Measurement
5	41,4	52,4	80	12mm	Vertical	Measurement
6	14,8	20,3	60	12mm	Vertical	Measurement
7	13,9	39,6	69	12mm	Vertical	Measurement
8	30,7	9,6	61	12mm	Vertical	Measurement
9	43,0	35,3	76	12mm	Vertical	Measurement
10	29,6	50,3	72	12mm	Vertical	Measurement

Figure B8119-2 : Example of a Imagescan output

If the equipment used is not able to provide the above presentation it has to be done manually by determining the grid of rebar, first and second layer closest to surface, and manually record readings in order to establish the depth of rebar, as shown in Figure B8119-3 below.

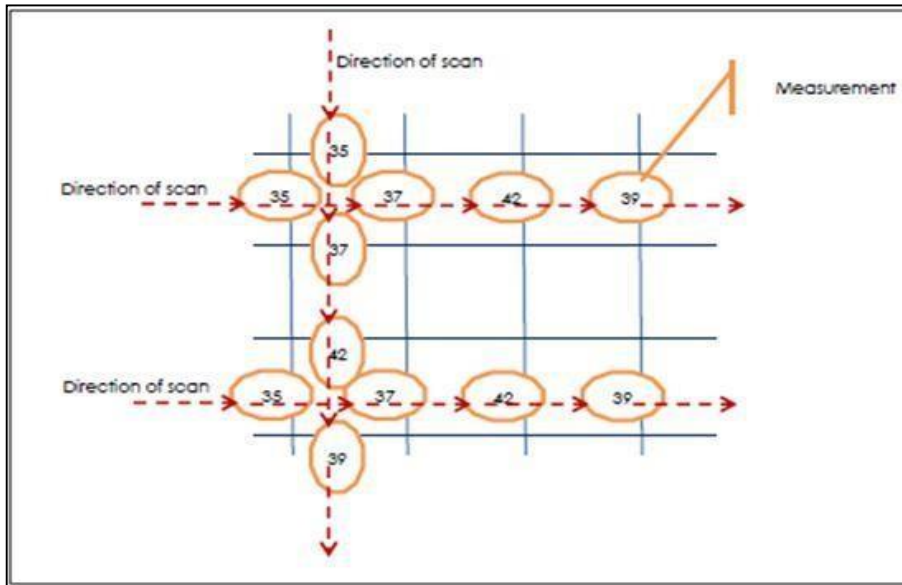


Figure B8119-3 : Manual recording of readings”

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**SECTION B8200: QUALITY CONTROL**

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**B8206 JUDGEMENT PLAN B**

Notes (Table 8206/3)

(1) Asphalt base or surfacing: Specification limits for-

**(c) Voids**

*Delete and replace the contents of this subitem with the following:*

$L_s = \text{specified values } -1,0\% \text{ points}$   
 $L'_s = \text{specified values } +1,0\% \text{ points}$

*Add the following clause:*

**"B8212 DETERMINING BOTH REDUCED PAYMENTS FOR 'W' CLASS CONCRETE AND COVER METER TESTING**

Payments for all durability concrete prefixed 'W' shall be based on the test results of the compressive strengths and of the durability parameters, i.e. oxygen permeability (from test panels) and for both durability and non-durability class concrete, cover meter testing as indicated in Tables B8212/1 and B8212/2 a and b.

General note:

The percentage payment shall be applied to a specific concrete member and shall apply to the relevant payitems of sections 6300 (based on concrete cover test) and 6400 (based on the worst results from the oxygen permeability and compressive strength tests.

**TABLE B8212/1: TABLE OF REDUCED PAYMENTS FOR OXYGEN PERMEABILITY INDEX - 'W' CLASS CONCRETE**

Description of test	Oxygen permeability index (log scale)	Percentage (%) payment
Full acceptance	See Table B6404/4 for limit	100%
Conditional acceptance (with reduced payment)	See Table B6404/4 for limit	80%
Rejection	See Table B6404/4 for limit	Not Applicable

**TABLE B8212/2: TABLE OF REDUCED PAYMENTS FOR CONCRETE COVER**

Concrete cover (mm)	% of specified cover	Percentage (%) payment
	Overall cover	
Full acceptance	≥ 85% <(100%+15mm)	100%
Conditional acceptance (with reduced payment)	<85% ≥75%	85%
Conditional acceptance (with remedial measures as approved by the Engineer and reduced payment)	<75% ≥65%	70%
Non-conforming (non-conformance raised with remedial measures as approved by the Engineer)	<65%	Agreed by Engineer <i>(Note: remedial measures at the contractor's costs should restore full payment)</i>

The following notes shall apply to Table B8212/2:

1. Specified cover to be reduced by 5mm (allowance for variation of equipment) before applying criteria as defined in Table B8212/2, e.g. where specified cover = 40mm, test as 35mm, apply limits, 85% \* 35 = 30mm.
2. For cantilevers, the cover shall in no instance be greater than 10mm of the specified cover for the top reinforcement.
3. Percentage payment for concrete cover shall be based on the average number of cover meter tests performed on a particular concrete element.

In addition, the engineer shall confirm to the Employer whether substandard cover at a reduced payment shall be acceptable by agreement with the contractor.”

## **Annex C3.6.2 Health and Safety Specifications by the Employer**

### **1. Interpretations**

#### **1.1 Application**

This specification is a compliance document drawn up in terms of South African legislation and is therefore binding. It must be read in conjunction with relevant legislation as noted previously.

#### **1.1 Definitions**

The definitions as listed in the Occupational Health & Safety Act 85/1993 and Construction Regulations (2014) shall apply.

### **2. MINIMUM ADMINISTRATIVE REQUIREMENTS**

#### **2.1 Notification of Intention to Commence Construction Work**

The Contractor shall notify the Provincial Director of the Department of Labour in writing before construction work commences. A copy of this notification must be forwarded to the client on appointment.

#### **2.2 Assignment of Contractor's Responsible Persons to Supervise Health and Safety on Site**

The Contractor shall submit supervisory appointments as well as any relevant appointments in writing (as stipulated by the OHS Act and Construction Regulations 2014), prior to commencement of work. Proof of competency must be included. See Annexure B.

#### **2.3 Competency for Contractor's Appointment Competent Persons**

Contractor's competent persons for the various risk management portfolios shall fulfil the criteria as stipulated under the definition of Competent in accordance with the Construction Regulations (2014). Proof of competence for the various appointments must be included.

#### **2.4 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)**

The Principal Contractor shall submit a letter of good standing with its Compensation Insurer to the client as proof of registration. Sub-Contractors shall submit proof of registration to the Principal Contractor before they commence work on site.

#### **2.5 Occupational Health and Safety Policy & Asbestos**

The Principal Contractor and all Sub Contractors shall submit a Health and Safety Policy signed by their Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented by the contractor.

##### **Asbestos**

If the contractor intends to carry out any work with asbestos, the appointed contractor required to appoint a registered asbestos remover/contractor to handle all asbestos work.

#### **2.6 Health and Safety Organogram**

The Principal Contractor and all Sub Contractors shall submit an organogram, outlining the Health and Safety site Management Structure including the relevant appointments/competent persons. In cases where appointments have not been made, the organogram shall reflect the intended positions.

intended positions. The organogram shall be updated when there are any changes in the site Management Structure.

#### **2.7 Preliminary Hazard Identification and Risk Assessment and Progress Hazard Identification and risk Assessment**

The Contractor shall ensure a hazard identification to be performed by a competent person before commencement of construction work, and the assessed risks shall form part of the construction phase health and safety plan submitted for approval by the Client. The risk assessment must include;

- a) A list of hazards identified as well as potentially hazardous tasks;
- b) A documented risk assessment based on the list of hazards and tasks;
- c) A set of safe working procedures (method statements) to eliminate, reduce and/or control the risks assessed;
- d) A monitoring and review procedure of the risks assessment as the risks change.

The Principal Contractor shall ensure that all Sub Contractors are informed, instructed and trained by a competent person regarding any hazards, risks and related safe work procedures before any work commences and thereafter at regular intervals as the risks change and as new risks develop. Proof of this must be kept for inspection by the Client or Client Representative.

The Principal Contractor Shall be responsible for ensuring that all persons who could be negatively affected by its operations are informed and trained according to the hazards and risks and are conversant with the safe work procedures, control measures and other related rules (tool box talk strategy to be implemented).

## **2.8 Health and Safety Representative(s)**

The Principal Contractor shall ensure that Health and Safety Representative(s) are appointed under consultation and trained to carry out their functions. The appointment must be in writing. The Health and Safety Representative shall carry out regular inspections, keep records and report all findings to the Responsible person forthwith and at health & safety meetings.

## **2.9 Health and Safety Committees**

The Principal Contractor shall ensure that project health and safety meetings are held monthly and minutes are kept on record. Meetings must be organized and chaired by the Principal Contractor's responsible person. All Contractors Responsible Persons and Health & Safety Representative shall attend the monthly health & safety meetings. Sub-contractors shall also have their own internal health & safety committees in accordance with the OHS Act 85/1993 and minutes of their meetings shall be forwarded to the Principal Contractor on a monthly basis.

## **2.10 Health and Safety Training**

### **2.10.1 Induction**

The Principal Contractor shall ensure that all site personnel undergo a risk-specific health & safety induction training session before starting work. A record of attendance shall be kept in the health & safety file. **A suitable venue must be supplied to house this training.**

### **2.10.2 Awareness**

The Principal Contractor shall ensure that, on site, periodic toolbox talks take place at least once per week. These talks should deal with risks relevant to the construction work at hand. A record of attendance shall be kept in the health & safety file. All Contractors have to comply with this minimum requirement. At least one of the Toolbox talks shall be on any environmental related issue.

### **2.10.3 Competency**

All competent persons shall have the knowledge, experience, training, and qualifications specific to the work they have been appointed to supervise, control and carry out. This will have to be assessed on regular basis e.g. periodic audits by the Client, progress meetings, etc. The Principal contractor is responsible to ensure that competent sub-contractors are appointed to carry out construction work.

### **2.10.4 Rules of conduct**

Principal contractors, their sub-contractors and all employees under the control, including any visitor brought onto site must adhere to the following Rules of conduct on site.

#### **YOU MAY NOT:**

- \* Partake, possess or sell drugs or alcoholic beverages on site. Any employee or visitor whose action and demeanour show symptoms of possible narcosis or drunkenness shall be removed from site.
- \* Indulge in practical jokes, horseplay, fighting or gambling.
- \* Destroy or tamper with safety devices, symbolic signs or wilfully and unnecessarily discharge fire extinguishers.



- \* Bring onto site or have in your possession a firearm, lethal weapon.
- \* Assault, intimidate or abuse any other person.
- \* Operate construction equipment (vehicles or plant) without the necessary training and authorisation.
- \* Display insubordination toward any supervisor, foreman or Manager in respect to carrying out of properly issued instructions or orders for health and Safety reasons.
- \* Enter any area where you have no business unless authorised to do so by the person in charge.
- \* Negligently, carelessly or wilfully cause damage to property of others.
- \* Refuse to give evidence or deliberately make false statements during investigations.

## **2.11 General Record Keeping**

The Principal Contractor and all Sub Contractors shall keep and maintain Health and Safety records to demonstrate compliance with this Specification, with the OHS Act 85/1993; and with the Construction Regulations (2014). The Principal Contractor shall ensure that all records of incidents/accidents, training, inspections; audits, etc. are kept in a health & safety file held in the site office.

Then Principal Contractor must ensure that every Sub Contractor opens its own health & safety file, maintains the file and makes it available on request.

## **2.12 Inspection of equipment and tools.**

The following items of equipment must be regularly inspected and maintained and appropriate records kept.

- \* First Aid dressing registers.
- \* Firefighting equipment
- \* Lifting equipment
- \* Lifting gear
- \* Portable electrical equipment
- \* Stacking and storage inspections
- \* Explosive power tools
- \* Materials hoist (where applicable)
- \* Pressure Vessels
- \* Ladders
- \* Excavations
- \* Safety harnesses
- \* Scaffold-static and mobile.
- \* Pneumatic tools
- \* Construction vehicles and mobile plant.
- \* Health and Safety Representatives checklists

## **2.13 Health & Safety Audits, Monitoring and reporting**

The Client shall conduct monthly health & safety audits of the work operations including a full audit of physical site activities as well as an audit of physical site activities as well as an audit of the administration of health & safety. The Principal Contractor is obligated to conduct similar audits on all Sub Contractors appointed by them. Detailed reports of the audit findings and results shall be reported on at all levels of project management meetings/forums. Copies of the Client audit reports shall be kept in the primary Project Health & Safety File while the Principal Contractor audit reports shall be kept in their file, a copy being forwarded to the Client. Principal Contractors have to audit their sub-contractors and keep records of these audits in their health & safety files, available on request

**Annex C3.6.3 Environmental Management Programme (EMPr)**

The environmental management report shall form part of this contract and be made available to the successful contractor

## Part C4: Site Information

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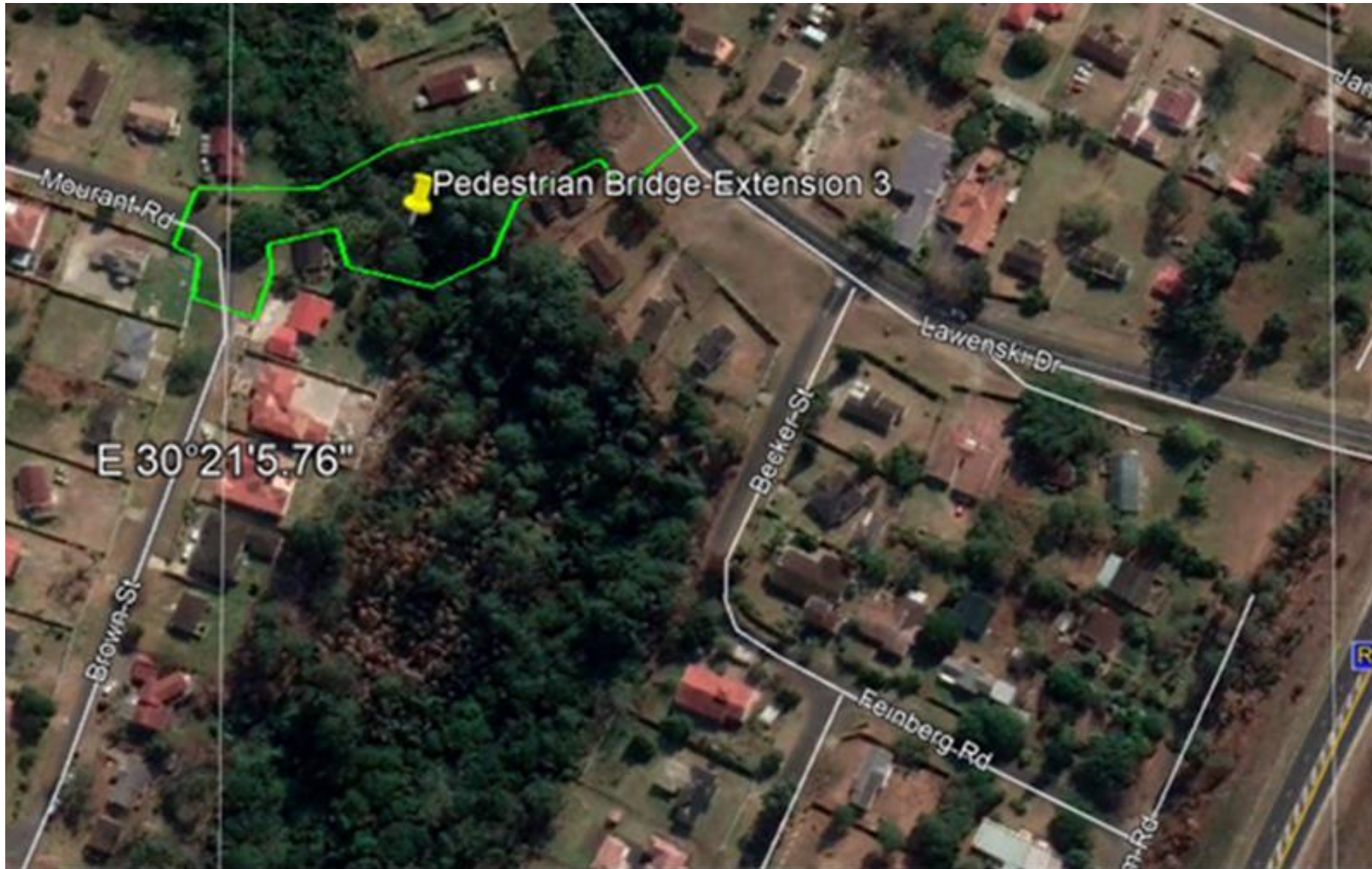
C4.1	Locality Plan	C4.2
C4.2.	Geotechnical Report	C4.4
C4.3	Drawings	C4.5

#### **C4.1. LOCALITY PLAN**

The site is located in Margate Extension 3, approximately 20 km south of Port Shepstone town. Margate Extension 3 falls within the jurisdiction of Ugu District Municipality and Ray Nkonyeni Local Municipality. The locality of the site is shown below.

District Municipality	Local Municipality	Description	Co-ordinates of Approximate Project Site	
			Latitude	Longitude
Ugu District Municipality	Ray Nkonyeni Local Municipality	Proposed Bridge	30°51'38.74" S	30°21'7.90" E

*Refer to attached locality plan*



## **C4.2. GEOTECHNICAL REPORT**

### **NATURE OF GROUND AND SUBSOIL CONDITIONS**

The detailed geotechnical investigation report shall be made available for viewing at the offices of the Consulting Engineer. It shall be the responsibility of the Contractor to have inspected the site and have satisfied himself as to the nature of the ground and subsoil conditions.

The information given only serves as a guide and an indication to the contractor as to the conditions that may be expected and shall not be taken as representative of the subsoil conditions of the entire site. No claims for additional payment or an extension of time shall be considered on account of the existing site conditions and nature of the ground and subsoil.

### **C4.3. DRAWINGS**

The drawings issued to tenders as part of the tender documents must be regarded as provisional and preliminary for the tenderer's benefit to generally assess the scope of work. The drawings are issued as a separate book of drawings.

The work shall be carried out in accordance with the latest available revision of the drawings approved for construction (AFC)

At commencement of the contract, the Engineer shall deliver to the Contractor copies of the AFC drawings and any instructions required for the commencement of the works. From time to time thereafter during the progress of the works, the Engineer may issue further drawings for construction purposes as may be necessary for adequate construction, completion and defects correction of the works.

All drawings and specifications and copies thereof remain the property of the Employer, and the Contractor shall return all drawings and copies thereof to the Employer at the completion of the contract.

Tender drawings are issued separately in the Book of Drawings.