MOGALAKWENA LOCAL MUNICIPALITY

COMPLETION OF MABUSELA AND MASOGE ROADS AND STORMWATER

CONTRACT NO.: 29-2023/2024

TENDERER	
ADDRESS OF TENDERER	
TELEPHONE	
FACSIMILE	
CIDB GRADING	
CSD NUMBER	
TENDER OFFER IN FIGURE (VAT INCLUSIVE)	
TOTAL AMOUNT IN WORDS (VAT INCLUSIVE)	

CLOSING DATE: 03 APRIL 2024

EMPLOYER	**EMPLOYERS AGENT** ROMH

MOGALAKWENA LOCAL MUNICIPALITY
54 RETIEF STREET
MOKOPANE
0601

Tel: (015) 491 9600
Fax: (015) 491 9755

ROMH CONSULTING **BUILDING 12**
HIGHGROVE OFFICE PARK
50 TEGEL AVENUE
HIGHVELD, CENTURION

Tel: (010) 035 1460
Email: info@romh.co.za

MOGALAKWENA LOCAL MUNICIPALITY

CONTRACT NO: 29-2023/2024

COMPLETION OF MABUSELA AND MASOGE ROADS AND STORMWATER

GENERAL TENDER INFORMATION

TENDER ADVERTISED	:	29 February 2024
CIDB GRADING	:	7CE OR HIGHER
BRIEFING DATE	:	11 MARCH 2024
TENDER CLOSING DATE	:	03 APRIL 2024
VENUE FOR BRIEFING MEETING	:	Mogalakwena Municipal Offices, 54 Retief Street, Mokopane, (Old Council Chamber)
CLOSING TIME	:	12: 00 PM
CLOSING VENUE	:	Mogalakwena Municipal Offices, 54 Retief Street, Mokopane, Tender Box

INSTRUCTIONS : Insert the large envelope containing the Tender Documents (completed in all respects) (including C.1.1 Form of Offer) plus any additional supporting documentation into the tender box.

CONTRACT NO: 29-2023/2024

FOR

COMPLETION OF MABUSELA AND MASOGE ROADS AND STORMWATER

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PART A: INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (*NAME OF DEPARTMENT/ PUBLIC ENTITY*)					
MIG ID NO:	358431	CLOSING DATE:	03 APRIL 2024	CLOSING TIME:	12:00 PM
BRIEFING	MOGALAKWENA MUNICIPAL OFFICES,54 REFIEF STREET MOKOPANE OLD COUNCIL CHAMBER				
DESCRIPTION	COMPLETION OF MABUSELA AND MASOGE ROADS AND STORMWATER				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*					
54 RETIEF STREET, MOKOPANE					

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO		**TECHNICAL ENQUIRIES MAY BE DIRECTED TO:**	
CONTACT PERSON	**D MAMOLOKO**	CONTACT PERSON	**R NTEKELE**
TELEPHONE NUMBER	015 491 9600	TELEPHONE NUMBER	**015 491 9795**
FACSIMILE NUMBER		FACSIMILE NUMBER	
E-MAIL ADDRESS		E-MAIL ADDRESS	

SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		**OR**	CENTRAL SUPPLIER DATABASE No:	MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] ☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT	[TICK APPLICABLE BOX] ☐ Yes ☐ No	

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]			
SCHEDULE 1: ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐Yes ☐No [IF YES ENCLOSE PROOF]	**SCHEDULE 2:** ARE YOU A FOREIGN BASED SUPPLIER FOR **THE GOODS /SERVICES /WORKS OFFERED?**	☐ Yes ☐ No [IF YES, ANSWER THE QUESTIONNAIRE BELOW]

QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS	
IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	☐ YES ☐ NO
DOES THE ENTITY HAVE A BRANCH IN THE RSA?	☐ YES ☐ NO
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	☐ YES ☐ NO
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	☐ YES ☐ NO

IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? ☐ YES ☐ NO **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 BELOW.**

PART B
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION. 1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.** 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC 2015) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT. 1.4. **THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).**
2. TAX COMPLIANCE REQUIREMENTS
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 VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS. 2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA. 2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID. 2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER. 2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED. 2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNED:

ENTERPRISE NAME	**DATE**

NAME	**POSITION** (Proof of authority must be submitted e.g. company resolution)	**SIGNATURE**

PART T1: TENDERING PROCEDURES

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T1.1 TENDER NOTICE AND INVITATION TO TENDER

CLOSING DATE & TIME: 03 APRIL 2024 AT 12H00 pm

NOTICE NUMBER: 29-2023/2024

Mogalakwena Local Municipality hereby invites suitably qualified service providers to tender for the below mentioned projects.

The details of the project are as follows:

Project Name	Tender Number	CIDB Grading	Briefing Venue	Briefing Date	Tender Closing
COMPLETION OF MABUSELA AND MASOGE ROADS AND STORMWATER	TENDER NO 29-2023/2024	7CE or HIGHER	MOGALAKWENA MUNICIPAL OFFICES,54 REFIEF STREET MOKOPANE OLD COUNCIL CHAMBER	Monday, 11 MARCH 2024 At 10H00	Friday 03 APRIL 2024 At 12H00

BID DOCUMENTS CONTAINING THE CONDITIONS OF BIDS AND REQUIREMENTS CAN BE DOWNLOADED ON E-TENDERS PUBLICATION PORTAL AT www.etenders.gov.za for free and also on www.mogalakwena.gov.za. Documents will be made available from Thursday 29 February 2024.

The official and compulsory briefing meeting will be held on 11 MARCH 2024 at 10h00 at the venue indicated in the table above.

The respective project name with the project number must be clearly marked on the envelope before submission. Complete tender documents, fully priced, signed and sealed in an envelope must be deposited in the Tender Box at Mogalakwena Municipality, 54 Retief Street, Mokopane, by no later than 12h00 on 03 APRIL 2024 for the above project when all tenders received will be opened in public in the Old Council Chamber, on the Ground Floor.

The bids will be evaluated according to the Procurement Policy of the Municipality and other applicable legislation. Late, faxed or telephonic tenders will not be accepted.

NB* Service providers should take note that no bid/service will be awarded to a service provider who is not registered on Web Based Central Supplier Database (CSD).

No late, faxed, telegraphic, emailed and telephonic tenders will be accepted. The council also reserves the right to negotiate further conditions and requirements with the successful tenderer.

Technical enquiries related to this tender must be addressed to Technical queries Mr. FR Ntekele PMU Manager on (015) 491 9795/98 and SCM queries must be addressed to MA Duba in the Supply Chain Management Unit at (015) 491 9649/47.

The Municipality does not bind itself to accept the lowest or any tender, and reserves the right to accept any tender or any part thereof, which may result in the acceptance of more than one tender, whichever the case may be.

MM MALULEKA
MUNICIPAL MANAGER
54 Retief Street
Mokopane
0601

LIST OF RETURNABLE DOCUMENTS

1. **Failure to fully complete the compulsory returnable documents shall render such a tender offer unresponsive and therefore disqualified.**
2. **Tenderers shall note that their signatures appended to each returnable form represents a declaration that they vouch for the accuracy and correctness of the information provided, including the information provided by candidates proposed for the specified key positions.**
3. **Notwithstanding any check or audit conducted by or on behalf of the Employer, the information provided in the returnable documents is accepted in good faith and as justification for entering into a contract with a tenderer. If subsequently any information is found to be incorrect such discovery shall be taken as willful misrepresentation by that tenderer to induce the contract. In such event the Employer has the discretionary to terminate the contract.**

The Tenderer must complete the following returnable Schedules:

COMPULSORY BID DOCUMENTS	**COMPLETED IN FULL (PLEASE TICK √)**	**CHECKED (PLEASE TICK √)**
INVITATION TO BID		
DECLARATION OF INTEREST		
PREFERENCE SCHEDULE		
CSD NOT OLDER THAN 3 MONTHS FROM THE DATE OF CLOSURE.		
DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES		
DECLARATION FOR PROCUREMENT ABOVE 10 MILLION (VAT INCLUDED)		
CERTIFICATE OF INDEPENDENT TENDER DETERMINATION		
FORM CONCERNING FULFILMENT OF CONSTRUCTION REGULATIONS 2014		
GENERAL INFORMATION (PROCUREMENT)		
DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT		
COMPULSORY ENTERPRISE QUESTIONNAIRE FOR CONSORTIA OR JOINT VENTURES		
AUTHORITY OF SIGNATORY ON COMPANY LETTERHEAD		
DECLARATION OF GOOD STANDING REGARDING TAX		
FINANCIAL REFERENCES /TENDERER'S CREDIT RATING AND FINANCIAL STATEMENTS		
PROOF THAT THE CONTRACTOR HAS ACCESS TO 10% OF THE TENDERED AMOUNT FROM THE BANK ***(NO LETTER OF INTENT)*** e.g. PRE-APPROVED LOAN, OVERDRAFT, PROOF OF SUFFICIENT BANK BALANCE ETC.		
MUNICIPAL UTILITY ACCOUNT		
PROOF OF GOOD STANDING WITH THE COMPENSATION COMMISSIONER		
TENDERER'S PROJECT STRUCTURE		

PROPOSED KEY PERSONNEL		
PROOF OF REGISTRATION WITH THE CONSTRUCTION INDUSTRY DEVELOPMENT BOARD		

T1.2 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained *SANS 10845-3, Construction procurement-Part 3 Standard Conditions of tender.*

The Tender Data makes several references to the SANS Standard Conditions of Tender 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 SANS 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.	Data
F.1.1	The Employer is: Mogalakwena Local Municipality (MLM) P O Box 34 Mokopane 0600
F.1.2	The Project Document issued by the employer consists of the following: **THE TENDER** Part T1: Tendering procedures: T1.1 Tender notice and invitation to tender T1.2 Tender Data Part T2: Returnable documents T2.1 List of Returnable Documents **THE CONTRACT** Part C1: Agreements and contract data C1.1 Form of Offer and Acceptance C1.2 Contract Data C1.2.1 Contract Data By the Employer C1.3 Performance Guarantee C1.4 Adjudication C1.5 Appointment in Terms of Section 4 of the Mine Health Safety Act Part C2: Pricing data C2.1 Pricing instructions C2.2 Bills of quantities C2.3 Summary of Bills of Quantities C2.4 Calculation of Tender Sum

	Part C3: Scope of work C3.1 Description of Works C3.2 Standard Specifications C3.3 Procurement C3.4 Additional Information

Clause No.	Data
	Part C4: Site information C4.1 Site Information C4.2 Locality Plan Part C5: Drawings
F 1.3	**Interpretation** 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 tender conditions. **The Employer's Representative is:** **Municipal Manager Mr MM Maluleka 015 491 9604** Attention is drawn to the fact that verbal communication given by the Employer's representative prior to the close of tenders will not be regarded as binding on the employer. Only information issued formally by the employer in writing to the tenders, under the signature of the Accounting Officer or his nominee will be regarded as amending the tender documents. Tender offer communicated on paper shall be submitted as an original. In the event that no correspondence or communication is received from the MLM within ninety (90) days after the stipulated closing date and time of the tender, the tender proposal will be deemed to be unsuccessful.
F 1.5.1	**Reject or Accept** The Employer may accept or reject any variation, deviation, tender offer, or alternative tender offer, and may cancel the tender process and reject all tender offers at any time before the formation of a contract. The employer shall not accept or incur any liability to a tenderer for such a cancellation and rejection but will give written reasons for such action upon written request to do so.

F 2.1	**Eligibility** Only those tenderers who satisfy the following criteria are eligible to submit tenders: Only those Tenderers who are registered with: • The National Treasury Central service provider data base for the designated group or category of works, • CSD Validity proof to be within 7 days from date of closure of this Bid. • The Construction Industry Development Board (CIDB), in a contractor grading designation equal to or higher than **7** class construction works, are eligible to have their tenders evaluated. Joint Ventures are eligible to submit tenders provided that: 1. Every member of the joint venture is registered with the CIDB. 2. The combined Contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher

Clause No.	Data
	than **7** class of construction work designated groups. 3. That both members of the Joint Venture be represented at the compulsory clarification meeting. Only tenderers who registered with CIDB and relevant grading are eligible to submit tenders.
F.2.2	**Compensation of tendering** Accept that 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 satisfy requirements.
F.2.3	**Check documents.** Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.
F.2.4	**Confidentiality and copyright** 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
F.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.
F.2.6	**Acknowledge Addenda** Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary, apply for an extension of the closing time stated in the tender data, in order to take the addenda into account.

F.2.7	**Compulsory clarification meeting** Is scheduled as follows: Applicable.
F.2.8	**Seek clarification.** Questions or queries must be submitted to the Engineer at least five (5) working days before the stipulated closing date and time of the tender. However, Mogalakwena Local Municipality shall not be liable nor assume liability for failure to respond to any questions and / or queries raised by the Tenderer.
F.2.10	**Pricing the tender** This will be requested on the second stage evaluation.
F.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 sign next to all such alterations. Erasures and the use of masking fluid are prohibited.

Clause No.	Data
F.2.12	**Alternative tender offers** Alternative offers may be submitted only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted. The alternative tender offer is to be submitted with the main tender offer together with a schedule that compares the requirements of the tender documents with the alternative requirements the tenderer proposes. Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements.

F.2.13	**Submitting a tender offer** No late, faxed, emailed or other form of tender will be accepted. Completed tenders with attached documents, if any, must be submitted in Black ink in sealed envelopes and clearly marked **"COMPLETION OF MABUSELA AND MASOGE ROADS AND STORMWATER**." must be placed in Tender Box, Mogalakwena Local Municipal Offices, 54 Retief St, Mokopane, not later than **12:00 PM on the 03 APRIL 2024,** at which hour and date the tenders will be opened in public. Tenders shall remain valid for a period of 90 days from the closing date and no late, faxed, e- mailed or other form of tender will be accepted. Accept that a tender submitted to the employer cannot be withdrawn or substituted. No substitute tenders will be considered. All tenders received by the Mogalakwena Local Municipality will remain in the Municipality's possession until after the stipulated closing date and time.
F.2.14	**Information and data are 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. Responsive tenders are ONLY those tenders with all documents and pages, contained herein, that have been signed by the responsible person duly authorized to sign all documents indicated on the returnable document "FORM B Authority of Signatory."

Clause No.	Data
F.2.15	**Tender Closing** Closing date: 03 APRIL 2024 Closing Time: 12:00 PM
F.2.16	**Tender offer validity** The Tender offer validity period is 90 days.

F.2.18	**Provide other information material for the evaluation.** **1. Proposed Key Personnel** The tenderer shall indicate. I. All staff positions/titles proposed for the team and the relationship between them. **II.** Names of key professional people, and **III.** Parent firm abbreviation and in brackets (for JVs) after each professional person. The text of this section shall include a concise statement of the duties of each individual of the organisation and the suitability of his/her qualifications for the assignment. In this part of the tender, the Tenderer shall also supply Curriculum Vitae (CV's) for the Professional Staff named on the organisational chart and working on full time basis for the Tenderer. The CV should follow the normal Professional Format as used by Professional Service Providers. Much importance will be placed on the experience of the staff proposed. The Tender must ensure that, if selected, the nominated staff will be assigned as proposed. Failure to do so may result in the annulment of any acceptance of the Tenders' proposal and/ or Agreement entered into by the Client for the execution of the services. The tenderer 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 labor-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements. **2. Joint Venture arrangements should be in accordance with the CIDB guidelines (D2 or latest version).** Joint venture must be constituted by means of a comprehensive and fair, written agreement between the members, which sets out their obligations, rights, risks and rewards. Joint venture members should share at least the following aspects of the joint venture

Clause No.	Data

	activities in a meaningful and equitable manner: 1. Control 2. Management 3. Operations 4. Risk 5. Profit and Loss The tenderer shall list in the appropriate Forms, the appropriate related projects undertaken by the member firms of the tenderer within the last five (5) years. Provide short precise report on 3 completed projects with client – specific evidential information (or consultant specific **ONLY** in the absence of client specific formats) Please fill in the exact required information. Failing to do so, your bid will be rendered nonresponsive. The tenderer shall provide documentation of company experience of each member of the Consortium/Joint Venture in design, project development, and project management for electrical projects. The tenderer is required to submit with his tender: non-Submission of the following documents will result in automatic disqualification: 1. A valid Tax and pin Clearance Certificate issued by the South African Revenue Services; and 2. A certified copy of the Company / CC Registration. In case of Joint Venture – both companies / cc to submit registration documentation. 3. In case of Joint Venture – the Joint Venture Agreement. 4. Certified copy of valid Certificate of Good Standing with Compensation commissioner.
F.3.6	**Non-disclosure** After the opening of the tender offers, no information relating to the clarification, determination of responsiveness, evaluation and comparison of tender offers and recommendations concerning the award of the tender shall be disclosed to any other tenderer or persons not concerned with such process until the award of the Tender has been announced by the MLM.

Clause No.	Data

F.3.11	**1. Evaluation of tender offers** The Tenderers notice is drawn to the fact that the evaluation, adjudication and awarding of this tender will be in terms of the Supply Chain Management Policy of the Mogalakwena Local Municipality and the Preferential Procurement Regulations of 2022 in compliance with the National Treasury Standard for Infrastructure Procurement and Delivery Management,1st Edition, October 2015. If the Tender does not comply with the Tender conditions, the Tender may be rejected. If specifications are not met, the Tender may also be rejected with regard to the above, certain actions or errors are unacceptable, and warrants **REJECTION OF THE TENDER**: • **Only valid tax clearance and pin certificates** must be attached to the Tender document). • Non submission of company registration certificates. • Non submission of active proof of CIDB and CSD • Non submission of the offer in the prescribed format • Pages to be completed, removed from the Tender document, and have therefore not been submitted. • Failure to fully complete the schedule of quantities as required. • Failure to fully complete form of offer. • Scratching out without initialing next to the amended rates or information. • Writing over / painting out rates / the use of tippex or any erasable ink, e.g. pencil. • Failure to attend compulsory briefing meetings. • The Tender has not been properly signed by a party having the authority to do so, according to the **Form D – "Authority for Signatory."** • No authority for signatory submitted. • Non-submission of certified academic qualification, the letter of employment and professional registration. • Particulars required in respect of the Tender have not been provided – non-compliance of Tender requirements and/or specifications. • The Tenderer's attempts to influence or has in fact influenced the evaluation and/or awarding of the contract. • Failure to fill and sign the record of addenda (if addendum was issued) • The Tender has been submitted after the relevant closing date and time. • If any municipal rates and taxes or municipal service charges owed by that Tenderer or any of its directors to the municipality, or to any other municipality or municipal entity, are in arrears for more than three months. • If any Tenderer who during the last five years has failed to perform satisfactorily on a previous contract with the municipality or any other organ of state after written notice was given to that Tenderer that performance was unsatisfactory. • Failure to complete in all returnable schedules and signing thereof will results an automatic disqualification. **2. Size of enterprise and current workload**

Clause No.	Data

Evaluation of the Tenderer's position in terms of:

- Previous and expected current annual turnover.
- Current contractual obligations
- Capacity to execute the contract.
- Previous experience in completing the high mast light projects.

3. Staffing profile

Evaluation of the Tenderer's position in terms of:

- Staff available for this contract being Tendered for
- Qualifications, registration and experience of key staff to be utilized on this contract.

4. Previous experience

Evaluation of the Tenderer's position in terms of his previous experience. Emphasis will be placed on the following:

- Experience in the Construction of roads and Stormwater related projects
- Experience with contracts of similar size for the Construction of roads and Stormwater.
- Some or all of the references will be contacted to obtain their input.

5. Financial ability to execute the contract:

Evaluation of the Tenderer's financial ability to execute the contract. Emphasis will be placed on the following:

- Contact the Tender's bank manager to assess the Tenderer's financial ability to execute the contract and the Tenderer hereby grants his consent for this purpose.
- It is the Tenderer's obligation to submit a bank letter confirming the bank rating of the firm.

6. Good standing with SA Revenue Services

- Determine whether an original valid tax clearance certificate has been submitted.
- The Tenderer must affix a valid Tax Clearance and tax pin Certificates to the designated page of the Tender document.

If the Tender does **not** meet the requirements contained in the Mogalakwena Local Municipality supply chain Policy, and the above-mentioned framework, it will be rejected by the Council, and may not subsequently be made acceptable by correction or withdrawal of the non-conforming deviation or reservation.

7. Penalties

Clause No.	Data
	The Mogalakwena Local Municipality will if upon investigation it is found that a preference in terms of the Act and these regulations has been obtained on a fraudulent basis, or any specified goals are not attained in the performance of the contract, one or more of the following penalties will be imposed: • Cancel the contract and recover all losses or damages incurred or sustained from the Tenderer. • Impose a financial penalty of twice the theoretical financial preference associated with the claim, which was made in the Tender. • Restrict the firm, its shareholders and directors on obtaining any business from the Mogalakwena Local Municipality for a period of 5 years. • Report such a firm to the National Treasury for listing as a defaulter firm. **8. Tender evaluation points** Tender evaluation points will be allocated as per the Supply Chain Management policy and the preferential procurement policy framework Act, 2000: preferential procurement regulations, 2022. Tender responsiveness shall mean tender compliance with all the prescribed key requirements for submission with this tender which are regarded as eliminating factors. Elimination factors include non-compliance with key requirements specified for the following: • Construction Manager qualifications and proven experience (15 Points). • Site Manager qualifications and proven experience (10 Points). • Foreman and proven experience (8 Points) • Health and Safety Officer (5 Points) • Physical and Other Resources (30 Points) • Experience of the firm (32 Points) NB!!!! Proof of academic qualifications in the form of certified copies as well as confirmation of employment must be attached to the personnel's CV.

Clause No.	Data

Construction Manager: (***Maximum Points obtainable 15)***

Name…….

Evaluation Criteria	**Minimum Required**	**Elimination Factor**	**Points obtainable**	**Points Claimed**
Academic Qualifications	BTech/Bsc/ BEng registered as professional project manager (SACPCMP as PrCPM or PrCM)	Yes	4	
Sub-total (maximum attainable)			**4**	
Years of experience	2 – 5	No	2	
	6 – 10	No	3	
	11 – 15	No	6	
	16 upwards	No	9	
Sub-total (maximum attainable)			**9**	
Current Employment	Full-time employed by the Firm. Letter of employment with company letterhead must be signed by both the director and the employee.	Yes	2	
Sub-total (maximum attainable)			**2**	
Total			**15**	

Clause No.	Data

Site Manager Roads and Stormwater: ***(Maximum Points obtainable 10)***

Name…….

Evaluation Criteria	Minimum Required	Elimination Factor	Points obtainable	Points Claimed
Academic Qualifications	National Diploma in Civil Engineering. Candidate or Registered as professional with SACPCMP as Pr CPM or PrCM.	No	3	
Sub-total (maximum attainable)			**3**	
Years of experience	3 – 5	No	1	
	6 – 10	No	2	
	11 – 16	No	3	
	17 upwards	No	5	
Sub-total (maximum attainable)			**5**	
Current Employment	Full time employed by the Firm. Letter of employment with company letterhead must be signed by both the director and the employee.	No	2	
Sub-total (maximum attainable)			**2**	
Total			**10**	

Clause No.	Data

Foreman Roads and Stormwater: ***(Maximum Points obtainable 10)***

Name…….

Evaluation Criteria	Minimum Required	Elimination Factor	Points obtainable	Points Claimed
Academic Qualifications	National Diploma in Civil Engineering. N6 or Higher	No	3	
Sub-total (maximum attainable)			**3**	
Years of experience	0 - 5	No	2	
	6 – 10	No	3	
	11 – 16	No	5	
	17 upwards			
Sub-total (maximum attainable)			**5**	
Current Employment	Full time employed by the Firm. Letter of employment with company letterhead must be signed by both the director and the employee.	No	2	
Sub-total (maximum attainable)			**2**	
Total			**10**	

Clause No.	Data

Health & Safety Officer: ***(Maximum Points obtainable 10)***

Name…….

Evaluation Criteria	Minimum Required	Elimination Factor	Points obtainable	Points Claimed
Academic Qualifications	NQF Level 3 higher, must be registered with a construction health and safety officer.	No	2	
Sub-total (maximum attainable)			**3**	
Years of experience	0 – 3	No	0.5	
	4 – 10	No	1	
	11 – 16	No	1.5	
	17 upwards	No	2	
Sub-total (maximum attainable)			**2**	
Current Employment	Full time employed by the Firm. Letter of employment with company letterhead must be signed by both the director and the employee.	No	1	
Sub-total (maximum attainable)			**1**	
Total			**5**	

Physical and Other Resources

It must be noted that a total points of **30** are obtainable by the Firm in relation to the requirements as mentioned on the table below, failure to submit evidential supporting documents is not an eliminating factor **BUT** a zero point will be scored.

Evaluation Criteria	Minimum Required	Elimination Factor	Points obtainable	Points Claimed
Sub-total (maximum attainable)			**5**	

Clause No.	Data

Company's Plant and Equipment (Certified ownership certificate if owned, if leasing, lease agreement signed by both parties on leaser letterhead and certified ownership certificate of leaser)	Related (relevant) Yellow Plant i.e., TLB x1	No	Own =6 Lease=3	
	Grader	No	Own =4 Lease=2	
Sub-total (maximum attainable)			**10**	
Company's vehicles	Tipper Trucks x 1	No	Own=6 Lease=3	
	LDVs x 1	No	Own=6 Lease=3	
	Watercart min 10000liters	No	Own=8 Lease=4	
Sub-total (maximum attainable)			**20**	
Total			**30**	

Evaluation Criteria	**Evaluation Criteria**	**Elimination Factor**	**Points obtainable**	**Points Claimed**
Company experience in terms of **Roads and Stormwater projects completed** Appointment letter and completion letter must be submitted	Number of projects completed 1	No	6	
	Number of projects completed 2	No	9	
	Number of projects completed 3	No	14	
	Number of projects completed 4	No	17	
Sub-Total (maximum attainable)			**17**	
Company experience in terms of the value of Construction Projects	R5 mil – R10 mil	No	6	
	R10 mil – R20 mil	No	10	

Completed (**Roads and Stormwater**) Appointment letter and completion letter must be submitted	R20 mil to R30 mil	No	12	
	+ R30 mil and above	No	15	

Clause No.	**Data**

Sub-Total (maximum attainable)	**15**	
TOTAL	**32**	

The Firm's tender responsiveness in relation to points is therefore summarized as follows:

Personnel	38
Physical and Other Resources	30
Experience of Firm	32
Sub-Total	100

A firm must obtain a minimum of **70 points** out of the 100 points above to be considered for price and special goals.

Regulations of disputes, objections, complaints and queries will be handled in accordance with Supply Chain Management Policy of Mogalakwena Local Municipality.

F.3.11.3

Method 2

Method 2: Financial offer and preferences will be used to evaluate tenderers.

F.3.11.6	The additional conditions of Bid Document 1. Mogalakwena Local Municipality may also request that the Tenderer provide written evidence that his financial, labour and resources are adequate for carrying out the project. 2. The Mogalakwena Local Municipality reserves the right to appoint a firm of chartered accountants and auditors and / or execute any other financial investigations on the financial resources of any Tenderer. The Tenderer shall provide all reasonable assistance in such investigations. The tenderer is to note that the following **Additional Relevant Documents** will form part of this contract: i. Mogalakwena Local Municipality Supply Chain Management Policy, ii. The Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2022.
F.3.17	**Provide copies of the contracts** The number of paper copies of the signed contract to be provided by the Employer is one.

PART T2: LIST OF RETURNABLE DOCUMENTS

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1. Failure to fully complete the **compulsory** returnable documents shall render such a tender offer unresponsive and therefore disqualified.

1. Tenderers shall note that their signatures appended to each returnable form **represents a declaration that they vouch for the accuracy and correctness of the information provided**, including the information provided by candidates proposed for the specified key positions.

2. Notwithstanding any check or audit conducted by or on behalf of the Employer, the information provided in the returnable documents is accepted in good faith and as justification for entering into a contract with a tenderer. **If subsequently any information is found to be incorrect such discovery shall be taken as willful misrepresentation by that tenderer to induce the contract**. In such event the Employer has the discretionary to terminate the contract.

The Tenderer must complete the following returnable Schedules:

MBD 1 INVITATION TO BID

TENDER NO: 29-2023/2024 CLOSING DATE: 03 APRIL 2024 CLOSING TIME: 12:00

DESCRIPTION

COMPLETION OF MABUSELA AND MASOGE ROADS AND STORMWATER

The successful bidder will be required to fill in and sign a written Contract Form (MBD 7).

DEPOSITED IN THE BID BOX SITUATED AT
Mogalakwena Local Municipality
54 Retief Street
Mokopane
Limpopo Province

Bidders should ensure that bids are delivered timeously to the correct address. If the bid is late, it will not be accepted for consideration.

The bid box is generally open FROM 7:30 TO 16:30 MONDAY TO FRIDAY

ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS – (NOT TO BE RE-TYPED)

THIS BID IS SUBJECT TO THE GENERAL CONDITIONS OF CONTRACT (GCC) 2015 3RD Edition AND, IF APPLICABLE, ANY

OTHER SPECIAL CONDITIONS OF THE CONTRACT

THIS BID WILL BE EVALUATED AND ADJUDICATED ACCORDING TO THE FOLLOWING CRITERIA:
Relevant specifications
Value for money
Capability to execute the contract.
PPPFA & associated regulations

NB: NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE (see definition on MBD 4 attached)

THE FOLLOWING PARTICULARS MUST BE FURNISHED
(FAILURE TO DO SO MAY RESULT IN YOUR BID BEING DISQUALIFIED)

NAME OF BIDDER .....

POSTAL ADDRESS .....

.....

.....

.....

STREET ADDRESS .....

.....

.....

.....

TELEPHONE NUMBER CODE……NUMBER .....

CELLPHONE NUMBER CODE……NUMBER .....

FACSIMILE NUMBER CODE……NUMBER .....

EMAIL ADDRESS.....

VAT REGISTRATION NUMBER .....

HAS AN ORIGINALTAX CLEARANCE CERTIFICATE BEENATTACHED (MBD 2)? **YES/NO**

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS/SERVICES OFFERED BY YOU? ..... **YES/NO**

(IF YES ENCLOSE PROOF)

SIGNATURE OF BIDDER
.....
DATE .....

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

.....

TOTAL BID PRICE .....
TOTAL NUMBER OF ITEMS OFFERED NAME OF BIDDER .....

MOGALAKWENA LOCAL MUNICIPALITY
TENDER No: 29-2023/2024

A1. DECLARATION OF INTEREST (MBD 4)

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.

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

3.1 Full Name of bidder or his or her representative:……..

3.2 Identity Number: …….

3.3 Position occupied in the Company (director, trustee, hareholder²):……..

3.4 Company Registration Number: ……

3.5 Tax Reference Number:……

3.6 VAT Registration Number: ……

3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state? **YES / NO**

3.8.1 If yes, furnish particulars. ….……

„MSCM Regulations: "in the service of the state" means to be –
a member of – any municipal council; any provincial legislature; or the national Assembly or the national Council of provinces; a member of the board of directors of any municipal entity;
an official of any municipality or municipal entity;
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); a member of the accounting authority of any national or provincial public entity; or an employee of Parliament or a provincial legislature.

† Shareholder" means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

3.9 Have you been in the service of the state for the past twelve months? …… **YES / NO**

3.9.1 If yes, furnish particulars.……..……..

3.10 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**

3.10.1 If yes, furnish particulars.
3.11 Are you, aware of any relationship (family, friend, other) between any other 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

3.11.1 If yes, furnish particulars

3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?

YES / NO

3.12.1 If yes, furnish particulars.

3.13 Are any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?

YES / NO

3.13.1 If yes, furnish particulars.

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract.

YES / NO

3.14.1 If yes, furnish particulars:

Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	State Employee Number

DECLARATION

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2 and 3 ABOVE IS CORRECT.
I ACCEPT THAT THE STATE MAY REJECT THE TENDER OR ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

POSITION	SIGNATURE	DATE

MOGALAKWENA LOCAL MUNICIPALITY
TENDER No: 29-2023/2024
COMPLETION OF MABUSELA MASOGE ROADS AND STORMWATER

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

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 specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE WITH RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

GENERAL CONDITIONS
The following preference point systems are applicable to invitations to tender: the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

The applicable preference point system for this tender is the 80/20 preference point system.
The 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.
Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:
Price; and

Specific Goals.
To be completed by the organ of state:
The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.
The organ of state 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 organ of state.

DEFINITIONS

"tender" means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
"price" means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
"rand value" means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
"tender for income-generating contracts" means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and "the Act" means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

POINTS AWARDED FOR PRICE

3.1.1 T**HE 80/20 PREFERENCE POINT SYSTEMS**

A maximum of 80 points is allocated for price on the following basis:

80/20

$$Ps = 80\ (1\ ,\ \frac{Pt-P}{P})$$ *Type equathon here.*

Where

Ps = Points scored for price of tender under consideration
Pt = Price of tender under consideration
Pmin = Price of lowest acceptable tender

FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT
POINTS AWARDED FOR PRICE

A maximum of 80 points is allocated for price on the following basis:

80/20

$$Ps = 80\ (1 + \frac{Pt-P}{P})$$

Where

Ps = Points scored for price of tender under consideration
Pt = Price of tender under consideration
Pmax = Price of highest acceptable tender

POINTS AWARDED FOR SPECIFIC GOALS

In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

Historically Disadvantaged Individuals - HDI	80/20 Preferential Point System 20	Means of Verification
Race – people who are Black, Coloured or Indian	6	CSD report and Certified Copy of Identification Documentation
Local Economic Development	4	Company head office residence within Mogalakwena Municipal Jurisdiction as per CSD and proof of residence

Gender - Women	3	CSD report and Certified Copy of Identification Documentation
Youth	4	CSD report and Certified Copy of Identification Documentation
Disability	3	Certified copy of Doctor's Certificate with medical practice number

DECLARATION WITH REGARD TO COMPANY/FIRM

Name of company/firm…….
Company registration number: ……...

TYPE OF COMPANY/ FIRM
- Partnership/Joint Venture / Consortium
- One-person business/sole propriety
- Close corporation
- Public Company
- Personal Liability Company
- (Pty) Limited
- Non-Profit Company
- State Owned Company

[Tick applicable box]

I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

The information furnished is true and correct;
The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have disqualify the person from the tendering process;
recover costs, losses or damages it has incurred or suffered as a result of that person's conduct; 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; recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted 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 forward the matter for criminal prosecution, if deemed necessary.

…….
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME:
…….

DATE: ……

MOGALAKWENA LOCAL MUNICIPALITY
TENDER No: 29-2023/2024
COMPLETION OF MABUSELA MASOGE ROADS AND STORMWATER

A2. DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (MBD 8)

This Standard Tendering Document must form part of all tenders invited.

It serves as a declaration to be used by institutions 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.

The tender of any Tenderer may be disregarded if that Tenderer, or any of its directors have abused the institution's supply chain management system, committed fraud or any other improper conduct in relation to such system; or failed to perform on any previous contract.

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

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 audi alteram partem rule was applied). The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
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 (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes	No
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?	Yes	No

4.3.1	If so, furnish particulars:

Item	Question	Yes	No
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?	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?	Yes	No
4.7.1	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.

POSITION	**SIGNATURE**	**DATE**

MOGALAKWENA LOCAL MUNICIPALITY
TENDER NO : 29-2023/2024
COMPLETION OF MABUSELA MASOGE ROADS AND STORMWATER

A3. DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (VAT INCLUDED)

TENDERERS MUST COMPLETE THE FOLLOWING QUESTIONNAIRE:

Are you by law required to prepare annual financial statements for auditing? **YES / NO**

If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.

If no, un-audited financial statements must be submitted with your tender.

Do you have any outstanding undisputed commitments for municipal services towards a municipality or any other service provider in respect of which payment is overdue for more than 30 days? **YES / NO**

If no, this serves to certify that the Tenderer has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days.

If yes, provide particulars.

Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract? **YES / NO**

If yes, 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.

POSITION	SIGNATURE	DATE

MOGALAKWENA LOCAL MUNICIPALITY
TENDER NO : 29-2023/2024
COMPLETION OF MABUSELA MASOGE ROADS AND STORMWATER

A4. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION (MBD 9)

This Municipal Bidding Document (MBD) must form part of all bids„ invited.

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 tendering (or tender rigging).† Collusive tendering is a pe se prohibition meaning that it cannot be justified under any grounds.

Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:

a. disregard the tender of any tenderer if that tenderer, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.

b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the tendering process or the execution of that contract.

This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when tenders are considered, reasonable steps are taken to prevent any form of tender-rigging.

In order to give effect to the above, the attached Certificate of Tender Determination (MBD 9) must be completed and submitted with the tender:

„ Includes price quotations, advertised competitive bids, limited bids and proposals.

† Bid rigging (or collusive tendering) 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.

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 Institution)

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 Tenderer)

I have read and I understand the contents of this Certificate;

I understand that the accompanying tender will be disqualified if this Certificate is found not to be true and complete in every respect;

I am authorized by the Tenderer to sign this Certificate, and to submit the accompanying tender, on behalf of the Tenderer;

Each person whose signature appears on the accompanying tender has been authorized by the Tenderer to determine the terms of, and to sign the tender, on behalf of the Tenderer;

For the purposes of this Certificate and the accompanying tender, I understand that the word “competitor” shall include any individual or organization, other than the Tenderer, whether or not affiliated with the Tenderer, who:

(a) has been requested to submit a tender in response to this tender invitation;
(b) could potentially submit a tender in response to this tender invitation, based on their qualifications, abilities or experience; and
(c) provides the same goods and services as the Tenderer and/or is in the same line of business as the Tenderer

The Tenderer has arrived at the accompanying tender independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium‡ will not be construed as collusive tendering.

In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:

prices;

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 tender;
(e) the submission of a tender which does not meet the specifications and conditions of the tender; or
(f) tendering with the intention not to win the tender.

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 tender invitation relates.

The terms of the accompanying tender have not been, and will not be, disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening or of the awarding of the contract.

‡ 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.

I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to tenders and contracts, tenders 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.

POSITION	SIGNATURE	DATE

MOGALAKWENA LOCAL MUNICIPALITY
TENDER NO : 29-2023/2024
COMPLETION OF MABUSELA MASOGE ROADS AND STORMWATER

FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS 2014

In terms of regulation 5(h) of the Construction Regulations, 2014 (hereinafter referred to as the Regulations), promulgated on 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.

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	
NO	

Proposed approach to achieve compliance with the Regulations (Tick)

Own resources, competent in terms of the Regulations (refer to 3 below)	
Own resources, still to be hired and/or trained (until competency is achieved)	
Specialist subcontract resources (competent) - specify:	

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):

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

Potential key risks identified and measures for addressing risks:

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:

NAME	SIGNATURE	DATE

MOGALAKWENA LOCAL MUNICIPALITY
TENDER NO : 29-2023/2024
COMPLETION OF MABUSELA MASOGE ROADS AND STORMWATER

A5. GENERAL INFORMATION (PROCUREMENT)

Name of tendering entity:

Contact details:

Contact name and number:

Address of tendering entity:

Postal code:

Tel no: ( ) Fax no: ( )

E-mail address:

Legal entity: Mark with an X.

Sole proprietor	
Partnership	
Close corporation	
Company (Pty) Ltd	
Joint venture	

In the case of a Joint venture, provide details on joint venture members:

Joint venture member	Type of entity (as defined above)

Income tax reference number: (COMPULSORY)
(In the case of a joint venture, provide for all joint venture members)

VAT registration number **(COMPULSORY):**
(In the case of a joint venture, provide for all joint venture members)

Company or closed corporation registration number **(COMPULSORY**):

(In the case of a joint venture, provide for all joint venture members)

Construction Industry Development Board (CIDB) registration number **(COMPULSORY)** (In the case of a joint venture, provide for all joint venture members)

Municipal rates and taxes or service charges accounts of tendering entities and its directors / members (COMPULSORY)
(In the case of a joint venture, provide for all joint venture members)

ATTACH COPIES OF ALL LATEST MUNICIPAL ACCOUNTS (SEE "NOTICE TO TENDERERS: VERY IMPORTANT NOTICE ON DISQUALIFICATIONS" A13)

Details of proprietor, partners, closed corporation members, or company directors, indicating technical qualifications where applicable (Form on the next page).

For joint ventures the following must be attached:

Written authority of each JV partner, for authorized signatory. The joint venture agreement.

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

DETAILS OF PROPRIETOR, PARTNERS, CLOSED CORPORATION MEMBERS OR COMPANY DIRECTORS
(In the event of a joint venture, to be completed by all joint venture partners)

Name and Surname	Identity Number	Relevant qualifications and experience	Years of relevant experience

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A6. SPECIFIC GOALS

Equity Ownership

List all partners, shareholders or members of tendering entity by name, identity number, citizenship, gender, race, HDI status and ownership. In the case of a JV, complete an Equity ownership for each JV member.

Name and Surname	Position Occupied in Enterprise	Identity Number	Date RSA Citizenship obtained	Gender Male / Female	Race	HDI Status (Yes/No)	Date of Ownership	% Owned by HDIs	% Owned by Women	% Owned by Disabled
TOTAL								A	B	C

Note: Where owners are themselves a company or partnership, identify the ownership of the holding firm.

In the case of joint ventures equity ownership for each of the JV members are determined as above, and the combined HDI ownership is then calculated as follows:

Joint venture members	a % Contribution to the JV	b %BBBEE	c = a * b 100 % BBBEE contribution
Total BBBEE contribution			

A COPY OF A VALID SIGNED JOINT VENTURE AGREEMENT MUST BE ATTACHED TO THE TENDER DOCUMENT. FAILURE TO COMPLY WITH ABOVE-MENTIONED WILL RESULT IN REJECTION OF THIS TENDER

NOTE: See table in paragraph 2.3.3.10 for specific goals and points to be awarded.

SMME Status

Provide details on the following.

Sector/Sub-Sector in accordance with the Standard Industrial Classification	
Total Full-time Equivalent of paid Employees	
Total Annual Turnover	
Total Gross Asset Value	
Size or Class (Medium, Small, Very Small, Micro)	

NOTE: If all of the above does not adhere to the definition of a single class, use the total Annual Turnover only to decide on the class.

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A7. DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT (MBD 6.2)

This Standard 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, Tenderers must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2022, 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 (Important Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

General Conditions

Preferential Procurement Regulations, 2022 (Regulation 8 make provision for the promotion of local production and content.

Regulation 8.(2) prescribes that in the case of designated sectors, organs of state must advertise with the specific tendering condition that only locally produced or manufactured goods with a stipulated minimum threshold for local production and content will be considered.

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 Specific goals

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.

The local content (LC) as a percentage of the tender 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 is the imported content in Rand
y is the 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) on the date of advertisement of the tender as required in paragraph 3.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on http:/www.thedti.gov.za/industrial development/ip.jsp at no cost.

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

The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this tender is/are as follows:

Description of services, works or goods	Stipulated minimum threshold
	%
	%

	%

Does any portion of the services, works or goods offered have any imported content? YES / NO

3.1If yes, the rate(s) of exchange to be used in this tender 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 on the date of advertisement of the tender.

The relevant rates of exchange information is accessible on www.reservebank.co.za.

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Tenderers must submit proof of the SARB rate(s) of exchange used.
Where, after the award of a tender, challenges are experienced in meeting the stipulated minimum threshold for local content the DTI must be informed accordingly in order for the DTI to verify and in consultation with the AO/AA provide directives in this regard.

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: (Procurement Authority / Institution):

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 Tenderer. 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. Tenderers should first complete Declaration D. After completing Declaration D, tenderers should complete Declaration E and then consolidate the information on Declaration C. Declaration C should be submitted with the tender documentation at the closing date and time of the tender in order to substantiate the declaration made in paragraph (c) below. Declarations D and E should be kept by the tenderers for verification purposes for a period of at least 5 years. The successful tenderer 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 tender comply with the minimum local content requirements as specified in the tender, and as measured in terms of SATS 1286:2011; and

The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 3.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Tender 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 tender 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 3.1 above and the information contained in Declaration D and E.

(d) I accept that the Procurement Authority / Institution 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 tender 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 Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2022 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: DATE:

WITNESS No. 1 DATE:

WITNESS No. 2 DATE:

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A9: COMPULSORY ENTERPRISE QUESTIONNAIRE FOR CONSORTIA OR JOINT VENTURES

In the case of a Joint Venture – Form "A9" needs to be completed.

SPECIAL RESOLUTION OF CONSORTIA OR JOINT VENTURES

RESOLUTION of a meeting of the duly authorized representatives of the following legal entities who have entered into a consortium/joint venture to jointly bid for the project mentioned below: (legally correct full names and registration numbers, if applicable, of the Enterprises forming a Consortium/Joint Venture)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Held at _____ (place)

On _____ (date)

RESOLVED that:

The above-mentioned Enterprises submit a Bid in Consortium/Joint Venture to the Mogalakwena Local Municipality in respect of the following project:

_____

Bid / Project Number: _____
{insert number}

A. Mr/Mrs/Ms: _____

in *his/her Capacity as: _____*(Position in the Enterprise)* and

who will sign as follows: _____

be, and is hereby, authorised to sign the Bid, and any and all other documents and/or correspondence in connection with and relating to the Bid, as well as to sign any Contract, and any and all documentation, resulting from the award of the Bid to the Enterprises in Consortium/Joint Venture mentioned above.

B. The Enterprises constituting the Consortium/Joint Venture, notwithstanding its composition, shall conduct all business under the name and style of: _____

C. The Enterprises to the Consortium/Joint Venture accept joint and several liability for the due fulfilment of the obligations of the Consortium/Joint Venture deriving from, and in any way connected with, the Contract entered into with the municipality in respect of the project described under item A above.

D. Any of the Enterprises to the Consortium/Joint Venture intending to terminate the consortium/joint venture agreement, for whatever reason, shall give the Department 30 days written notice of such intention. Notwithstanding such decision to terminate, the Enterprises shall remain jointly and severally liable to the municipality for the due fulfilment of the obligations of the Consortium/Joint Venture as mentioned under item C above.

E. No Enterprise to the Consortium/Joint Venture shall, without the prior written consent of the other Enterprises to the Consortium/Joint Venture and of the municipality, cede any of its rights or assign any of its obligations under the consortium/joint venture agreement in relation to the Contract with the municipality referred to herein.

F. The Enterprises choose as the *domicilium citandi et executandi* of the Consortium/Joint Venture for all purposes arising from the consortium/joint venture agreement and the Contract with the municipality in respect of the project under item A above:

Physical address: _____

_____

_____ (code)

Postal Address: _____

_____

_____ (code)

Telephone number: _____ (code)

Fax number : _____ (code)

NO	NAME OF ENTITY	NAME OF REPRESENTATIVE	CAPACITY	SIGNATURE
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Note:
1. * Delete which is not applicable
2. NB. This resolution must be signed by all the Duly Authorised Representatives of the Legal Entities to the Consortium/Joint Venture submitting this Bid
3. Should the number of Duly Authorised Representatives of the Legal Entities joining forces in this Bid exceed the space available above, additional names and signatures must be supplied on a separate page
4. Resolutions, duly completed and signed, from the separate Enterprises who participate in this Consortium/Joint Venture must be attached to the Special Resolution.

ATTACH THE FOLLOWING DOCUMENTS HERETO

1. **For Closed Corporations**

- CK1 or CK2 as applicable (Founding Statement) • Certified Copies of the ID's of the Directors

2. **For Companies**

- A copy of the Certificate of Incorporation
- Copies of the ID's of the Directors, and
- the shareholders register

3. **For Joint Venture Agreements**

- Copy of the Joint Venture Agreement between all the parties,
- as well as the documents in (1) or (2) of each Joint Venture member.

4. **For Partnership**

- Copies of the ID's of the partners

5. **One person Business / Sole trader**

- Copy of ID

6. **Details Of Tax Compliance Status from South African Revenue Service**

7. **Duly Signed and dated original or copy of Authority of Signatory on company Letterhead**

8. **Central Supplier Database [CSD] Detailed Report**

A10 : AUTHORITY OF SIGNATORY

Details of person responsible for tender process:
Name :

Contact number :

Office address :

Signatories for close corporations and companies shall confirm their authority by attaching to this form a duly signed and dated original or certified copy on the Company Letterhead of the relevant resolution of their members or their board of directors, as the case may be.

PRO-FORMA FOR COMPANIES AND CLOSE CORPORATIONS:

"By resolution of the board of directors passed on (date)

Pro-Forma

Mr

has been duly authorized to sign all documents in connection with the Tender for Contract Number

……and any Contract which may arise there from on

behalf of ……
(BLOCK CAPITALS)

SIGNED ON BEHALF OF THE COMPANY

IN HIS CAPACITY AS

DATE
FULL NAMES OF SIGNATORY

AS WITNESSES: 1. ……..

2. ……

PRO-FORMA FOR JOINT VENTURES:

Certificate of Authority for Joint Ventures

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize Mr/Ms ……., authorised signatory of the company ……, acting in the capacity of lead partner, to sign all documents in connection with the tender offer an any contract resulting from it on our behalf.

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

Pro-Forma

ATTACH HERETO THE DULY SIGNED AND DATED ORIGINAL OR A COPY OF AN AUTHORITY OF SIGNATORY ON COMPANY LETTERHEAD

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A11: DECLARATION OF GOOD STANDING REGARDING TAX (MBD 2)

DETAILS OF TAX COMPLIANCE STATUS:

TAXPAYER NAME	
TRADING NAME	
TAX REFERENCE NUMBER (S)	
VAT	
PIN	
EXPIRY DATE	

TAX CLEARANCE CERTIFICATE REQUIREMENTS

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 African Revenue Service (SARS) to meet the bidder's tax obligations.

1. In order to meet this requirement bidders are required to complete in full the attached form TCC 001"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.
2. SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
3. The original Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
4. In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.
5. Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website www.sars.gov.za.
6. Applications for the Tax Clearance Certificates 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

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A12: FINANCIAL REFERENCES, BANK RATING , FINANCIAL STATEMENTS AND AVAILABLE WORKING CAPITAL

Notes to tenderer:
The tenderer shall attach to this form an original letter from the bank not older than three (3) months confirming the bank account details and bank rating. Failure to provide the required letter And Bank Rating with the tender submission shall render the tenderer's offer unresponsive.
The tenderer shall attach to these signed financial statements by the accountant for the past three (3) years.
The tenderer shall attach to this confirmation of Available Capital a 10% contract value.
The tenderer's banking details as they appear below shall be completed.
In the event that the tenderer is a joint venture enterprise, details of all the members of the joint venture as mentioned above shall be similarly provided and attached to this form.

BANK NAME:	
ACCOUNT NAME: (e.g. ABC Civil Construction cc)	
ACCOUNT TYPE: (e.g. Savings, Cheque etc.)	
ACCOUNT NO:	
ADDRESS OF BANK:	
TEL. NO. OF BANK AND CONTACT PERSON :	
BANK RATING :	
How long has this account been in existence:	0-6 months _____ (Tick which is appropriate) 7-12 months ☐ 13-24 months ☐ More than 24 months ☐

Name of Tenderer: …… Date: ……

Signature: ……

Full name of signatory: ……

ATTACH HERETO AN ORIGINAL OR A COPY OF A LETTER FROM THE BANK AND BANK RATING LETTER TO THIS PAGE NOT OLDER THAN THREE (3) MONTHS

ATTACH HERETO FINANCIAL STATEMENTS ATTACH HERETO CONFIRMATION OF AVAILABLE CAPITAL

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A13: MUNICIPAL UTILITY ACCOUNT

DECLARATION BY THE TENDERER

I the undersigned _____, has been duly

authorized to sign all documents with the Tender for Contract Number _____on behalf of

_____ hereby make a declaration as follows:
(referred to herein as “the Bidder”)

1. I declare that the bidder and /or any of its director(s) / member(s) does not owe the municipality, or any other municipality and/or municipal entity any amount which is in arrears in respect of any municipal rates and taxes or municipal service charges.

2. I understand and accept that in the event that this declaration is proved to be false, the bid shall be rejected forthwith. All other rights of the municipality (including but not limited to the right to claim damages where applicable) shall remain reserved in full.

SIGNED ON BEHALF OF THE COMPANY _____

IN HIS CAPACITY AS _____

DATE _____

FULL NAMES OF SIGNATORY _____

UTILITY ACCOUNT NUMBER	NAME OF MUNICIPALITY	NAME OF OWNER

ATTACH AN ORIGINAL OR A COPY OF A MUNICIPAL UTILITY ACCOUNT (NOT OLDER THAN THREE (3) MONTHS)

Important: Note the following

- List Account(s) registered in both the name(s) of the Director(s) and the Company on the declaration form attached hereto.

- Attach Municipal Utility account of Company's registered office (if applicable) and in case of leased premises, attach lease agreement and the services account of leased premises. (issued in the name of the bidding company)

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A14: PROOF OF GOOD STANDING WITH COMPENSATION COMMISSIONER

A Proof of good standing with Compensation Commissioner must be attached hereto

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A15: TENDERER'S PROJECT STRUCTURE

Notes to tenderer:

1. **The intention of this form is to demonstrate the tenderer's project structure, as well as the lines of responsibility between members of the project team and between the project team and the overall company structure. The tenderer must attach his own organogram to this form.**
2. **Tenderers which are large companies may simplify the organogram by 'rolling up' portfolios e.g. combining directors/associates into one box of the organogram. However, the individual positions of the key personnel within the structure must still be shown.**
3. **Joint Venture tenders will require each element of the venture to submit separate organograms that show the individual structure of each member company and the lines of responsibility of the proposed personnel involved in the project. In addition there must also be a combined organogram that indicates how the joint venture itself will function and the proposed share of the work. Joint Venture tenderers shall note that the share of work indicated will be used in the analysis of such a tenderers preference proposed on returnable form D1, and that if awarded the share of work shall become a contractual obligation between the members of the joint venture.**
4. **State the city or town where the company's head office is located. The locality of regional or satellite office, regardless of degree of autonomy or size is not required. Only submit the number of offices other than the head office. Do not count offices outside RSA**
5. **Registered professional engineers, technicians or technologists' means those who are involved in the built industry as well as allied fields such as environmental professionals. Registered professionals of other disciplines (e.g. mechanical) are considered as employees only.**

Head Office:	
Other Offices:	
Registered Professionals:	
Total Employees :	
%share in JV agreement	

SIGNED ON BEHALF OF THE TENDERER:……

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A16: PROPOSED KEY PERSONNEL

The Tenderer shall list below the key personnel whom he proposes to employ on the project should his Tender be accepted,

No	Name	Qualification	Designation for the project tendered for

Provide two paged CV of Each key Personnel to be used in this project. Each CV should give at least the following:

- Position in the firm and within the organization of this assignment ○ PDI Status (describing population group, gender and disabilities) ○ Proof of Educational Qualifications ○ Proof of Professional Registrations ○ Relevant experience (actual duties performed, involvement and responsibility), including locations, dates and durations of assignments, starting with the latest.
- Language proficiency and
- References (company name, individual name, position held, contact details)

(Affix the CV's and Attachments in a form of a booklet to the following Page.)

ATTACH CV'S OF KEY PERSONNEL TO THIS PAGE

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A17 : PROOF OF REGISTRATION WITH CONSTRUCTION INDUSTRY DEVELOPMENT BOARD

The bidder is to affix to this page either:

- Written proof of his registration with the CIDB as a Category **7CE OR HIGHER.**

Or

- Written proof of his application to the CIDB for registration as a contractor in the category listed above.

Note:

1. Failure to affix such documentation as prescribed to this page shall result in this bid not being further considered for the award of the contract.
2. Should this bid be considered for award of the contract, based on proof of submission of application for registration in the appropriate category with the CIDB, and should proof of such subsequent registration not be forthcoming to the employer before the end of business, at the last working day, prior to evaluation by the Tender Evaluation Committee of the contract, then this bid will no longer be considered for the award of the contract.

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Part C1: Agreements and Contract Data

C1.1 FORM OF OFFER AND ACCEPTANCE

OFFER

The employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of:

CONTRACT NUMBER: 29-2023/2024

COMPLETION OF MABUSELA AND MASOGE ROADS AND STORMWATER

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

By the representative of the tenderer, deemed to be duly authorized, 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 PRICE INCLUSIVE OF VALUE ADDED TAX IS (CONTRACT PRICE)

.
.....

.
.....

.....Rand *(in words)*; . ..... *(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.

Signature(s)
.....

Name(s)
.....

Capacity
.....
for the tenderer
..... *(Name and address of organization)*

Name of witness tenderer .....

Signature ..... Date .....

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
PART C5	Annexures

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 Schedules 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.

The tenderer shall within two weeks of receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's Agent (whose details are given in the Contract Data) to arrange the delivery of any securities, 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 (5) working days of the date of such receipt notifies the Employer in writing of any reason why he/she cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

SIGNED ON BEHALF OF/BY THE EMPLOYER:

NAME	**SIGNATURE**

CAPACITY	DATE

MOGALAKWENA LOCAL MUNICIPALITY - address of Organisation

SIGNED BY WITNESS:

NAME	**SIGNATURE**	**DATE**

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 tender schedules, 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:

NAME	***SIGNATURE***
CAPACITY	***DATE***

SIGNED BY WITNESS:

NAME	***SIGNATURE***	***DATE***

SIGNED ON BEHALF OF/BY MOGALAKWENA LOCAL MUNICIPALITY:

NAME	***SIGNATURE***
CAPACITY	***DATE***

SIGNED BY WITNESS:

NAME	***SIGNATURE***	***DATE***

MOGALAKWENA LOCAL MUNICIPALITY

TENDER NO : 29-2023/2024

COMPLETION OF MABUSELA MASOGE ROADS AND STORMWATER

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:

NAME	**SIGNATURE**	**CAPACITY**

SIGNED BY WITNESS:

NAME	**SIGNATURE**	

MOGALAKWENA LOCAL MUNICIPALITY

TENDER NO : 29-2023/2024

COMPLETION OF MABUSELA MASOGE ROADS AND STORMWATER

C1.2 CONTRACT DATA

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 from 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.

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.

13 **The additional clauses to the General Conditions of Contract are:**

Extensions of time in respect of clause 5.12 in respect of abnormal rainfall shall be calculated using the following formula for each calendar month or part thereof:

$$V = (Nw - Nn) + \frac{(Rw - Rn)}{X}$$

Where:

V = Extension of time in calendar days in respect of the calendar month under consideration.

Nw = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded.

Nn = Average number of days in the relevant calendar month, as derived from existing rainfall records, as stated in the Site Information, on which a rainfall of 20mm or more has been recorded for the calendar month.

Rw = Actual average rainfall in mm recorded for the calendar month under consideration.

Rn = Average rainfall in mm for the calendar month as derived from existing rainfall records as stated in the Site Information.

For purposes of the Contract Nn, Rn, X and Y shall have those values assigned to them in the Appendix and/or the Specification.

If V is negative and its absolute value exceeds Nn, then V shall be taken as equal to minus Nn.

The total extension of time shall be the algebraic sum of all monthly totals for the period under consideration, but if the total is negative the time for completion shall not be reduced due to subnormal rainfall.

Extensions of time for part of a month shall be calculated using pro rata values of Nn and Rn.

This formula does not take account flood damage which could cause further or concurrent delays and will be treated separately as far as extension of time is concerned.

The factor (Nw – Nn) shall be considered to represent a fair allowance for variations from the average in the number of days during which rainfall exceeds 10 mm. The factor (Rw-Rn) shall be considered to represent a fair allowance for variations from the average in the number of days during which the rainfall did not exceed 10 mm but wet conditions prevented or disrupted work.

For the purpose of applying the formula, accurate rain gauging shall be taken at a suitable point on the Site and the Contractor shall at his own expense, take all necessary precautions to ensure that rain gauges cannot be interfered with by unauthorized persons.

12 **Payment for the labour-intensive component of the works**

Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the scope of work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

13

Applicable labour laws

The Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997by the Minister of Labour in Government Notice N R63 of 25 January 2002, as reproduced below, shall apply to works described in the scope of work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.

13.1

Introduction

.1 This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.

.2 In this document –

"department" means any department of the State, implementing agent or contractor;

"employer" means any department, implementing agency or contractor that hires workers to work in elementary occupations on a SPWP;

"worker" means any person working in an elementary occupation on a SPWP;

"elementary occupation" means any occupation involving unskilled or semi-skilled work;

"management" means any person employed by a department or implementing agency to administer or execute an SPWP;

"task" means a fixed quantity of work;

"task-based work" means work in which a worker is paid a fixed rate for performing a task;

"task-rated worker" means a worker paid on the basis of the number of tasks completed;

"time-rated worker" means a worker paid on the basis of the length of time worked.

13.2

Terms of Work

.1 Workers on a SPWP are employed on a temporary basis.

.2 A worker may NOT be employed for longer than 24 months in any five-year cycle on a SPWP.

.3 Employment on a SPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.

13.3

Normal Hours of Work

.1 An employer may not set tasks or hours of work that require a worker to work–

(a) more than forty hours in any week

(b) on more than five days in any week; and

(c) for more than eight hours on any day.

.2 An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.
.3 A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

13.4

Meal Breaks

A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.

.2 An employer and worker may agree on longer meal breaks.

.3 A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.

.4 A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

13.5

Special Conditions for Security Guards

.1 A security guard may work up to 55 hours per week and up to eleven hours per day.

.2 A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

13.6

Daily Rest Period

Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

13.7

Weekly Rest Period

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work (“emergency work”).

13.8

Work on Sundays and Public Holidays

.1 A worker may only work on a Sunday or public holiday to perform emergency or security work.

.2 Work on Sundays is paid at the ordinary rate of pay.

.3 A task-rated worker who works on a public holiday must be paid –

(a) the worker’s daily task rate, if the worker works for less than four hours;

(b) double the worker’s daily task rate, if the worker works for more than four hours.

.4 A time-rated worker who works on a public holiday must be paid –
the worker’s daily rate of pay, if the worker works for less than four hours on the public holiday;

(b) double the worker’s daily rate of pay, if the worker works for more than four hours on the public holiday.

13.9

Sick Leave

.1 Only workers who work four or more days per week have the right to claim sick-pay in terms of this clause.

.2 A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.

.3 A worker may accumulate a maximum of twelve days' sick leave in a year.

.4 Accumulated sick-leave may not be transferred from one contract to another contract.

.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.

.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.

.7 An employer must pay a worker sick pay on the worker's usual payday.

.8 Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is – absent from work for more than two consecutive days; or

absent from work on more than two occasions in any eight-week period.

.9 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.

.10 A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

13.10

Maternity Leave

.1 A worker may take up to four consecutive months' unpaid maternity leave.

.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.

.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.

.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.

.5 A worker may begin maternity leave –

(a) four weeks before the expected date of birth; or

(b) on an earlier date –

(i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or

(ii) if agreed to between employer and worker; or

(c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.

.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.

.7 A worker who returns to work after maternity leave, has the right to start a new cycle of twenty-four months employment, unless the SPWP on which she was employed has ended.

13.11

Family responsibility leave

.1 Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances - (a) when the employee's child is born;

(b) when the employee's child is sick; (c) in the event of a death of – the employee's spouse or life partner; the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

13.12 **Statement of Conditions**

.1 An employer must give a worker a statement containing the following details at the start of employment –

(a) the employer's name and address and the name of the SPWP;

(b) the tasks or job that the worker is to perform; and the period for which the worker is hired or, if this is not certain, the expected duration of the contract; the worker's rate of pay and how this is to be calculated; the training that the worker will receive during the SPWP.

.2 An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.

.3 An employer must supply each worker with a copy of these conditions of employment.

13.13

Keeping Records

.1 Every employer must keep a written record of at least the following –

(a) the worker's name and position;

(b) in the case of a task-rated worker, the number of tasks completed by the worker;

(c) in the case of a time-rated worker, the time worked by the worker; (d) payments made to each worker.

.2 The employer must keep this record for a period of at least three years after the completion of the SPWP.

Payment

13.14

.1 An employer must pay all wages at least monthly in cash or by cheque or into a bank account.

.2 A task-rated worker will only be paid for tasks that have been completed.

.3 An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.

.4 A time-rated worker will be paid at the end of each month.

,5 Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.

.6 Payment in cash or by cheque must take place –

(a) at the workplace or at a place agreed to by the worker;

(b) during the worker's working hours or within fifteen minutes of the start or finish of work; (c) in a sealed envelope which becomes the property of the worker.

.7 An employer must give a worker the following information in writing –

(a) the period for which payment is made;

(b) the numbers of tasks completed or hours worked;

(c) the worker's earnings;

(d) any money deducted from the payment; (e) the actual amount paid to the worker.

.8 If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it

.9 If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

Deductions

13.15

.1 An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.

.2 An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.

.3 An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.

.4 An employer may not require or allow a worker to –

(a) repay any payment except an overpayment previously made by the employer by mistake;

(b) state that the worker received a greater amount of money than the employer actually paid to the worker; or pay the employer or any other person for having been employed.

.5 Failure to pay labourers within 5 weeks cycle the Contractor will be penalised R2500 per day as stated on B13.03(i) in the Bill of Quantities

.6 A fixed penalty amount of R10,000.00 as stated on B13/E1000 (i) in the Bill of Quantities per occurrence shall be deducted for each and every occurrence of non-compliance with any of the requirements of the Environmental management plan.

.7 A fixed penalty amount of R10,000.00 as stated on B13/H1000 (i) in the Bill of Quantities per occurrence shall be deducted for each and every occurrence of non-compliance with any of the requirements of the Occupational health and Safety specifications.

.8 A penalty amount of R1,000.00 per day as stated on B15.16 in the Bill of Quantities per occurrence shall be deducted for each and every occurrence of non-compliance with any of the requirements of the Traffic Management plan.

13.16

Health and Safety

.1 Employers must take all reasonable steps to ensure that the working environment is healthy and safe.

.2 A worker must –

(a) work in a way that does not endanger his/her health and safety or that of any other person;

(b) obey any health and safety instruction;

(c) obey all health and safety rules of the SPWP;

(d) use any personal protective equipment or clothing issued by the employer;

(e) report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

13.17

Compensation for Injuries and Diseases

.1 It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on a SPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.

.2 A worker must report any work-related injury or occupational disease to their employer or manager.

.3 The employer must report the accident or disease to the Compensation Commissioner.

.4 An employer must pay a worker who is unable to work because of an injury caused by an accident at work

75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

13.18

Termination

.1 The employer may terminate the employment of a worker for good cause after following a fair procedure.

.2 A worker will not receive severance pay on termination.

.3 A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.

.4 A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

.5 A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

Certificate of Service

.1 On termination of employment, a worker is entitled to a certificate stating –

(a) the worker's full name;

(b) the name and address of the employer;

(c) the SPWP on which the worker worked;

(d) the work performed by the worker;

(e) any training received by the worker as part of the SPWP; (f) the period for which the worker worked on the SPWP; any other information agreed on by the employer and worker.

C1.2.1 Contract Data Provided by the Employer

The Conditions of Contract are the **General Conditions of Contract for Construction Works (2015, 3rd Edition)** published by the South African Institution of Civil Engineering. (GCC).

Section 1: Data provided by the Employer.

Clause	
1.1.1.5	Clause 1.1.1.5 of the GCC (2015) is replaced by the following: The "Commencement date" shall be the date the site is handed over to the Contractor.
1.1.1.15	The name of the Employer is the **Mogalakwena Local Municipality**
1.1.1.15	The Mogalakwena Local Municipality Engineer is **Mr Risimati Ntekelo**

1.1.1.16	The Engineer representing the Consultant (ROMH Consulting) is **Ms. B Mashele**
1.2.1	The employer's address for receipt of communication is: Telephone: **(015) 491 9600** Facsimile: **(015) 491 9755** Address: **54 Retief Street, Mokopane, 0601**
1.2.1	The Engineer's address for receipt of communication is: Telephone: (**010) 035 1460** e-mail: **bonganim@romh.co.za** (Subject line: ***Completion of Mabusela/Masoge roads and stormwater***) Address :**Building 12, Highgrove Office Park, 50 Tegel, Highveld Centurion.**
3.1.3	The engineer is required in terms of his appointment with the employer to obtain the following specific approvals from the employer: -. 1. Approval of extension of time. 2. Approval of additional costs. 3. Approval of variation orders. 4. Approval from Mogalakwena Local Municipality for the utilization of any Contingencies 5. Approval of penalties 6. Approval for termination of Contract

Clause	
4.3	The Health and Safety Plan shall be delivered to the Engineer and approved before the site hand-over/commencement date.

5.3.1.	The documentation required before commencing with the Works are: • Health and Safety Plan • Initial Programme • Security (Refer Clause 15) • Insurance (Refer Clause 21) • Letter of Good Standing from the Compensation commissioner (if not insured with a Licensed Compensation Insurer).
5.3.1.1	The time to deliver the documentation required before commencement of the Works is 14 days from acceptance of the offer.
5.3.3	The Works are to be commenced within fourteen (14) Days of the Commencement Date taken as Date of Site Hand-over.
5.4.2	Access to and possession of the site shall not be exclusive to the Contractor insofar as the provisions of Clause 4.8 apply, and where ongoing use by the general public is required.
5.4.4	Add the following clause after Clause 5.4.3: 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
5.5.1	The Works shall be completed within 12 months as envisaged by the employer, measured from commencement/site hand-over date to due completion date.
5.6	The Works programme is to be delivered within fourteen (14) days of the from acceptance of the offer.
5.8.1	The special non-working days are all designated public holidays (including all foreseeable statutory declared election days), Saturdays and Sundays.
5.12.2.2	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 may be claimed in accordance with the provisions of Clause 5.12.

5.13.1	The penalty for failing to complete the Works is 0,01% of the contract amount per calendar day

Clause	
5.14.1	The requirements for achieving practical completion are for the Works to be fit for the intended purpose and occupation without danger or undue inconvenience to the Employer.
5.14.7	Practical completion will be issued upon achieving the requirements for practical completion for the scope of the Works.
5.14.5.2	The Defects Liability Period is twelve (12) calendar months after the date of the final certificate of completion.
5.16.3	The latent defect liability period is 10 years after the date of the final approval certificate
6.2.1.	The Guarantee is to contain the same wording as indicated in the document included as C1.3 under returnable documents
6.2.1.	The amount of the Guarantee is to be 10% surety of the Contract Price.
6.5.1.2.3	Daywork allowances as tendered in Section 1800 of the Bill of Quantities: Materials at cost plus 15%.
6.8.2	The value of payment certificates is to be adjusted in accordance with the Contract Price Adjustment Schedule, where. The value of “x” is 0,150 The values of the co-efficients are: $(1-x)\left[\frac{aLt}{Lo}+\frac{bPt}{Po}+\frac{cMt}{Mo}+\frac{dFt}{Fo}-1\right]$ The rates in the project are Fixed: Estimate less than R10 000 000 or a contract period of not more than 6 months. CPA: Not Applicable. Projects predominantly: New Road Construction / Rehabilitation / Concrete Work *(major structures only)* a = 0,20 / 0,20 / 0,15 b = 0,40 / 0,35 / 0,20

	c = 0,25 0,35 0,55 d = 0,15 0,10 0,10 "L" is the "Labour Index" and shall be the "Consumer Price Index" for the urban area nearest to the Site as specified by the Engineer in the Appendix to the Tender and as published in the Statistical News Release, P0141, Table 7.1 (previously P0141.1 Table 21) of Statistics South Africa. "P" is the "Plant Index" and shall be the "Civil Engineering Plant Index" as published in the Statistical News Release P0142.1, Table 12 (previously P0142.1 Table 16) of Statistics South Africa.

Clause	
	"M" is the "Materials Index" and shall be the "Civil Engineering Materials Index" as published in the Statistical News Release P0142.1, Table 11 (previously P0142.1 Table 15) of Statistics South Africa. "F" is the "Fuel Index" and shall be the "Diesel at wholesale level – Coast/Witwatersrand Index" as published in the Statistical News Release P0142.1, Table 12 (previously P0142.1 Table 16) of Statistics South Africa. The suffix "o" denotes the basic indices applicable to the base month, which shall be the month prior to the month in which the closing date for the tender falls. The suffix "t" denotes the current indices applicable to the month in which the last day of the period falls to which the relevant payment certificate relates. If any index relevant to any particular certificate is not known at the time when the certificate is prepared, the Engineer shall estimate the value of such index. Any correction, which may be necessary when the correct indices become known, shall be made by the Engineer in subsequent payment certificates. The urban area nearest the site **is Mokopane.** The base month is **February 2024** *(the month prior to the month in which the closing date of the tender falls)*
6.8.3	The following are special materials: Bitumen binder extracted from petroleum-based products and used on site, including that used in asphalt, irrespective of whether it is produced and/or placed by the Contractor or an approved subcontractor. The rates and prices for the special materials shall be furnished by the contractor, which rates and prices ex refinery with the base date specified under 6.8.2 and shall exclude VAT but shall include all other obligatory taxes and levies on the basis specified in the contract price adjustment schedule (paragraph 4(i) and 4(ii)).
6.8.4	Notwithstanding the above, in the event that a public holiday is proclaimed after 28 days before the closing date for tenders, no costs other than those that can be claimed under Clause 5.12.3 shall be added to the contract price.

6.10.1.5	The percentage limit on materials not yet built into the Permanent Works is 80%.
6.10.3	The limit of retention money is 10% of the Contract Price. A retention Money Guarantee is required / permitted
6.10.4	Furthermore, payment shall be subject to the Employer being in possession of an original valid tax clearance certificate at the time payment is due (it is the responsibility of the Contractor to submit an updated original tax clearance certificate to the Supply Chain Management Department) should any current certificate expire during the contract period). As well as the CSD report, Progress report, EPWP report, and Proof of payment for laborers.

Clause	
	Notwithstanding anything above, the Engineer shall be empowered to withhold the delivery of the payment certificate until the Contractor has complied with his obligations to report in terms of Clause 4.10.2 and as described in the Scope of Work.
8.6.1.	The amount to be included in the sum insured to cover the value of the construction Amount.
8.6.1.1.2	a) Materials supplied by the employer for incorporation into the works is R nil.
8.6.1.1.3	b) Professional fees not included in the Contract Price is R nil.
8.6.1.2	The following additional and varied insurances are required: CAR& SASRIA.
8.6.1.3	The limit of indemnity for the liability insurance required is R 20 000 000-00 (Twenty Million Rand)

8.6.1.5	In addition to the insurance required in terms of General Conditions of Contract Clauses 8.6.1.1 to 8.6.1.4 the following insurance is also required: (a) Insurance of Construction Equipment (including tools, offices and other temporary structures and contents) and other things (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.
9.2.1.3.2	Clause 9.2.1.3.2 is replaced by the following “Has failed to submit documentation or to commence the Works in terms of Clause 5.3, or has suspended the progress of the Works for fourteen (14) consecutive days after receiving from the Engineer written notice to proceed,”
Clause	
10.5.1/2	Disputes are to be referred to a standing ad-hoc adjudication
10.7	Disputes are to be referred for final settlement to **arbitration.**

Section 2: Data provided by the Contractor.

Clause	Description
1.1.1.9 1.2.1.2	The Contractor is the …… The Contractor's address for receipt of communications and notices is: Telephone: Facsimile: E-mail : Address (Postal) : Address (Physical) :
1.1.1.14	The Works shall be completed in weeks *[State the total number of weeks which must include the special non-working days and the year end break].*
6.8.3	Each material dealt with as a special material in terms of Clause 4.1 of the Contract Price Adjustment Schedule of the General Conditions of Contract is stated in the list below. The provisions of Clause 6.8.3 of the General Conditions of Contract shall apply to such special materials. The base rates and prices for the special materials (current at the time of tender) shall be as stated in the schedule below, or where required, shall furnished by the tenderer. Rates or prices furnished by the tenderer shall not include VAT but shall include all other obligatory taxes and levies). Only those materials listed below shall be considered as special materials. When called upon to do so, the tenderer/contractor shall substantiate rates or prices furnished at the time of tender, or during the execution of the contract, with acceptable documentary evidence. In the case of bituminous products, the tenderer shall state, in the schedule above, the source of the bitumen upon which the tendered rates are based. The variation in cost of special materials is: Type of Material Unit Rate or Price

SIGNED ON BEHALF OF/BY THE TENDERER:

NAME	**SIGNATURE**
CAPACITY	**DATE**

C1.3 PERFORMANCE GUARANTEE

THE MUNICIPAL MANAGER
MOGALAKWENA LOCAL MUNICIPALITY
54 RETIEF STREET
MOKOPANE,
0601

CONTRACT NO: 29-2023/2024

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor: means:
.....

Physical address:
.....

"Employer" means: **MOGALAKWENA LOCAL MUNICIPALITY**

"Contractor" means:
.....

"Employer's Agent" means: ROMH Consulting

"Works" means:
.....

"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: .....

CONTRACT DETAILS

Employer's Agent 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 Employer's Agent of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Employer's Agent 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 Employer's Agent 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:

.....

GUARANTOR (1)	**SIGNATURE**
DATE	**CAPACITY**
GUARANTOR (2)	**SIGNATURE**
DATE	**CAPACITY**

WITNESS (1)	**SIGNATURE**
WITNESS (2)	**SIGNATURE**

ANNEXURE

LIST OF APPROVED FINANCIAL INSTITUTIONS

The following financial institutions are currently approved for issue of contract guarantees:

National Banks:
ABSA Bank Ltd.
FirstRand Bank Ltd.
Investec Bank Ltd.
Nedbank Ltd.
Standard Bank of SA Ltd.
Capitec Bank Ltd.

International Banks (with branches in SA):
Barclays Bank plc.
Citibank n.a.
Credit Agricole Corporate and Investment Bank
Deutsche Bank AG HSBC Bank plc.
JP Morgan Chase Bank
Societe Generale
Standard Chartered Bank

Insurance companies:
ABSA Insurance AIG
South Africa Coface
s.a.
Compass Insurance Co.
Constantia Insurance Co.
Credit Guarantee Insurance Co.
Guardrisk Insurance Co.
Hollard Insurance Company Ltd. Home
Loan Guarantee Co.
Infiniti Insurance Limited
Lombard Insurance
Mutual & Federal Insurance Co.
New National Assurance Co.
Regent Insurance Co.
Renasa Insurance Company
Ltd. Santam Limited Zurich
Insurance Co.

C1.4 ADJUDICATION

Adjudication shall be carried out in terms of Clauses 10.5, and 10.6 of the General Conditions of Contract (2015)B 3RD Edition

The Disclosure Statement and the Adjudication Board Member Agreement to be used in this Contract are contained Appendices 4 and 5 of the General Conditions of Contract 2015.

Evaluation Criteria:

•Returnable Documents (Completed in Full)

•Price

MOGALAKWENA LOCAL MUNICIPALITY

TENDER NO : 29-2023/2024

COMPLETION OF MABUSELA MASOGE ROADS AND STORMWATER

C1.5 AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO. 85 OF 1993)

AGREEMENT MADE AND ENTERED INTO BETWEEN MOGALAKWENA LOCAL 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 sioner and that all registration and assessment monies due to the Compensation sioner 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

NAME	**SIGNATURE**	**DATE**

SIGNED BY WITNESS:

NAME	**SIGNATURE**	**DATE**

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

SIGNED BY/ON BEHALF OF MOGALAKWENA LOCAL MUNICIPALITY

NAME	**SIGNATURE**	**DATE**

SIGNED BY WITNESS:

NAME	**SIGNATURE**	**DATE**

C1.6 Occupational Health and Safety Conditions

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.

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.

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.

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.

Discipline in the interests of occupational health and safety shall be strictly enforced.

Personal protective equipment shall be issued by the Contractor as required and shall be worn at all times where necessary.

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.

No substandard equipment/machinery/articles or substances shall be used on the site.

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.

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.

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.

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.

Prior to commencement of any work, verified copies of all documents mentioned in the agreement, must be presented to the Employer.

PART C2: PRICING DATA

C2.1 PRICING INSTRUCTIONS

1. The Conditions of Contract, the Contract Data, the Specifications (including the Project Specifications) and the Drawings shall be read in conjunction with the Bill of Quantities. The agreement is based on the General Conditions of Contract for Construction Works, prepared by the South African Institution of Civil Engineering, 2015. The additions, deletions, and alterations to the General Conditions of Contract for Construction Works as well as the contract specific variables are as stated in the Contract Data. Only the headings and clause numbers for which allowance must be made in the Bills of Quantities are recited.

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

3. 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 Engineer 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.

4. Descriptions in the Bill of Quantities are abbreviated and may differ from those in the Standardized and Project Specifications. No consideration will be given to any claim by the Contractor submitted on such a basis. The Bill has been drawn up generally in accordance with the latest issue of Civil Engineering Quantities. Should any requirement of the measurement and payment clause of the appropriate Standardized or Project Specification(s) be contrary to the terms of the Bill or, when relevant, to the Civil Engineering Quantities, the requirement of the appropriate Standardized, Project, or Particular Specification as the case may be, shall prevail.

5. Unless stated to the contrary, items are measured net in accordance with the Drawings without any allowance having been made for waste.

6. The amounts and rates to be inserted in the Bill of Quantities shall be the full inclusive amounts to the Employer for the work described under the several items. Such amounts shall cover all the costs and expenses that may be required in and for the construction of the work described, and shall cover the costs of all general risks, profits, taxes (but excluding value-added tax), liabilities and obligations set forth or implied in the documents on which the Tender is based.

7. An amount or rate shall be entered against each item in the Bill of Quantities, whether or not quantities are stated. An item against which no amount or rate is entered will be considered to be covered by the other amounts or rates in the Bill.

8. The Tenderer shall also fill in a rate against the items where the words "rate only" appear in the amount column. Although no work is foreseen under these items and no quantities are consequently given in the quantity column, the tendered rates shall apply should work under these items actually be required.

9. The standard system of measurement of civil engineering quantities published by the South African Institution of Civil Engineers.

10. Should the Tenderer group a number of items together and tender one sum for such group of items, the single tendered sum shall apply to that group of items and not to each individual item, or should he indicate against any item that full compensation for such item has been included

11. in another item, the rate for the item included in another item shall be deemed to be nil. 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.

12. The quantities of work as measured and accepted and certified for payment in accordance with the Conditions of Contract, and not the quantities stated in the Bill of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by differences between the quantities in the Bill of Quantities and the quantities certified for payment. The Ordering of materials is not to be based on the Bill of Quantities, but only on information issued for construction purposes.

13. 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 Sum : An amount tendered for an item, the extent of which is described in the Bill of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units

14. The units of measurement indicated in the Bill of Quantities are metric units. The following abbreviations may appear in the Bill of Quantities:

mm	=	millimetre
m	=	metre
km	=	kilometre
km-pass	=	kilometre-pass
m†	=	square metre
m†-pass	=	square metre-pass
ha	=	hectare
m‡	=	cubic metre
m‡-km	=	cubic metre-kilometre
kW	=	kilowatt
kN	=	kilonewton
kg	=	kilogram
t	=	ton (1 000 kg)
%	=	per cent
MN	=	meganewton
MN-m	=	meganewton-metre
PC Sum	=	Prime Cost Sum
Prov Sum	=	Provisional Sum

15. Occupational Health and Safety Act and Construction Regulations

A payment item in the schedule of Quantities / Bill of Quantities must allow the tenderers to price for compliance with OHSA and the Construction Regulations. This payment item must include for the erection of Visitors Indemnity Signs and for ensuring that visitors receive instructions and sign an indemnity declaration.

SIGNED ON BEHALF OF TENDERER: ……

DATE: ……

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1200	**GENERAL REQUIREMENTS AND PROVISIONS**	Prov. Sum	1	R 1 50 000,00	R 1 50 000,00
B12.01	**Protection, removal, realignment and replacement of services**	%	150 000,00		
	Provisional sum for protection, or relocation of existing services and detection of (a) underground services				
	(b) Contractor's charge to allow for handling costs and profit in respect of subitem 12.01(a)	Prov. Sum	1 1	R 8 0 000,00	R 8 0 000,00
B12.02	**Remuneration of the Community Liaison Officer and members of the Steering Committee**	Prov. Sum	1	R 2 2 400,00	R 2 2 400,00
	(a) Community Liaison Officer (CLO)	Prov. Sum	462 400,00	R 3 60 000,00	R 3 60 000,00
	(b) Payment of 7 x PSC members at R200/ meeting/ month	%	1		
	(b) Payment of a Social Facilitator for the duration of the Contract				
B12.03	Contractor's charge to allow for handling costs and profit in respect of subitem 12.03(a) (c) and (b)	Prov. Sum	1 1	R 1 00 000,00	R 100 000,00
	Training				
	(a) Accredited Technical skills	Prov. Sum	270 000,00	R 5 0 000,00	R 5 0 000,00
	(b) Remuneration of workers undergoing training and other Labourers including wages during training	Prov. Sum	3	R 1 20 000,00	R 120 000,00
B12.04	(c) Training and wages of student	%			
	Contractor's charge to allow for handling costs and profit in respect of subitem B12.06(a), (d) (b), (c),	No.			
	Supply and erection of contract sign boards (as per drawing ROMH-042-07-00-03)				
1200	**TOTAL CARRIED TO SUMMARY**				**R 8 82 400,00**

BID NUMBER: 29-2023/2024
COMPLETION OF MABUSELA_MASOGE ROADS AND STORMWATER

SECTION 1300 CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1300	(a) **TRACTOR'S ESTABLISHMENT ON SITE AND GENERAL GATIONS**	Lump Sum	1,00	-R 1 0 000,00	Rate
B13.01	(b) **Contractor's general obligations:**	Monthly	12,00		
	Fixed obligations				
	Time related obligations		12,00		Rate
B13/E1000	**(i) ombined total tendered for subitems (a) and (c) above should not ed 15% of the Tender Sum (Excl. contingencies and VAT) i.e. TOTAL EDULE A**	month	-	-R 1 0 000,00	Rate
	actor's obligation in respect of complying with Environmental gement plans and Specifications		12,00	-R 2 500,00	
B13/H1000	**(ii) Fixed Penality for Occurrence per day for non-compliance with any of the requirements of the Environmental management plan**	Day month	1,00		
	(i) actor's obligation in respect of complying with Health and Safety ifications	Lump Sum	-		
B13.03	**(i) Fixed obligation to comply with Occupational health and Safety specifications**	Day	-		
	Fixed Penality for Occurrence per day for non-compliance with any of the requirements of the Occupational health and Safety specifications	Day			
	Fixed Penality for Occurrence per day for non payment of local Laboours				
1300	**TOTAL CARRIED TO SUMMARY**				**R -**

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1400	**HOUSING, OFFICES AND LABORATORIES AND GENERAL OBLIGATIONS**	m†	40		
14.01	**Office and laboratory accommodation:**	m†	2		
	(a) Offices (interior floor space only) of utility services	m†	10		
	(b) Ablution units				
	(c) Boardroom (Accommodate at least 20 people)	No	16		
14.02	**Office and laboratory furniture:**	No	2		
	(a) Chairs	No	1		
	(c)Desks, complete with drawers and locks				
	(e)Conference tables	No	8		
B14.03	**Office and laboratory fittings, installations and equipment:**	No	2		
	(a) Items measured by number:				
	(i) 220/250 volt power points	No	10		
	(ii) Hand wash basins complete with taps and drains	No	2		
	Fire extinguishers, 9,0 kg all purpose dry powder type, complete mounted on wall (iii) with brackets	No	1		
	(iv) Air-conditioning units with 2.2kw minimum capacity mounted on wall with brackets	No	1		
	(v) Refrigerators	No	1		
	(vii) Plan holder	No	1		
	Supply of Computer and Printer (Lenovo P17 Gen 2 Workstation i7 11850H / 32GB (xi) / 1TB SSD / 17.3" FHD Display / Nvidia Quadro T1200 4GBi; PRINTER:Epson EcoTank L3150 Printer	PC Sum	1		
	(xiii) Flood Lights complete with poles and 500 Watt min globes	%	50000		
	(b) Prime-cost items and items paid for in a lump sum:				
	(i) The provision of telephone service, including the cost of calls in connection with contract administration and telephone rental and internet connection				
	(ii)Handling costs and profit in respect off sub-item B14.03(b)(i) above				
				50 000,00	50 000,00
	TOTAL CARRIED FORWARD				**R 50 000,00**

BID NUMBER: 29-2023/2024
COMPLETION OF MABUSELA_MASOGE ROADS AND STORMWATER
SECTION 1400 HOUSING, OFFICES, LABORATORIES AND GENERAL OBLIGATIONS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	BALANCE BROUGHT FORWARD				**R 5 0 000,00**
1400	**HOUSING, OFFICES AND LABORATORIES AND GENERAL OBLIGATIONS**	No	6	R 60 000,00	R 6 0 000,00
14,04	**Car-ports:**				
	Car ports, 3.0m wide and 2,5m high, at offices	Prov Sum	1		
14,07	**Rented, hotel and other accomodation**	%	60000		
	Provisional sum for providing rented housing, hotel or other accommodation as (a) described in subsubclause 1403(c)(ii)		1		
	(b) **Handling costs and profit in respect of sub-item 14.07 (a) above**	Lump Sum	12		
	(a)Services at offices:	Month	12		
	(i) Fixed costs	Month	1		
	(iii) Running costs	Number			
B14.11	(c) Services for rented houses				
	Provision of mobile outdoor weather station				
1400	**TOTAL CARRIED TO SUMMARY**				**R 1 10 000,00**

SECTION 1500 ACCOMMODATION OF TRAFFIC

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT

1500	**ACCOMMODATION OF TRAFFIC**				
15.01	**Accommodating traffic and maintaining temporary deviations:**				
	(a) On the Route	km	4		
	(b) On the cross roads	km	1		
15,02	**Earthworks for temporary deviations**				
	(a)Shaping of temporary deviations	km	1		
B15.03	**Temporary traffic-control facilities**				
	(a) Flagmen(SAFCEC)	man-day	1 380		
	(b) Portable STOP and GO-RY signs	No	4		
	(e) Road signs, R- and TR-series:				
	(i) 900mm diameter	No	15		
	(f) Road signs, TW-series, (with distance board)				
	(i) 1200mm diameter	No	10		
	Road signs, STW-, DTG-, TGS-, TG- and TIN-series ((excluding delineators and (g) barricades)	m2	20		
	(h) Delineators (W401 or W402) (200 mm x 800 mm sides) complete with stand and ballast:				
	(i) Single sided	No	200		
	(ii) Double sided	No	100		
	(j) Traffic cones (800 mm)	No	100		
	(l) Moveable barriers (Plastic "New Jersey" type)	m	200		
	(m) Two-way communlcatlon devices	No	2		
	(n) Other traffic control measures ordered by the Engineer:				
	(i) Provision of other traffic control measures	Prov. Sum	1	R 000,0050	R 50 000,00
	(ii) Handling costs and profit in respect of subitem 15.03(n)(i)	%	50000		
15,06	**Watering of temporary deviations**	kl	400		
15.10	**Accomodation of traffic where the road is constructed in half-widths**	km	4		
B15.14	**Amber flashing lights mounted on signs (rotating)**	No	10		
B15.15	**Provision of traffic safety equipment for use by the Engineer**				
	(a) Safety jackets	No	10		
	(b) Amber rotating flashing lights for mobile use	No	4		
B15.16	**Penality to be deducted for non-compliance with the requirements for accomodation of traffic and/or traffic management plan**	Day	-		
B15.17	**Traffic Safety Officer**	Month	12	-R 1 000,00	Rate
1500	**TOTAL CARRIED FORWARD**				**R 5 0 000,00**

SECTION 1700 CLEARING AND GRUBBING

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
17.00	**CLEARING AND GRUBBING**	ha	0,50	R 1 0 000,00	R 10 000,00
17.01	**Clearing and grubbing**				
17.02	**Removal and grubbing of large trees and tree stumps**	No	1,00		
	(a) Girth exceeding 1m up to and including 2m	ha	0,20	R 100 000,00	R 100 000,00
17.03	**Re-clearing of surfaces (on the written instructions of the Engineer only)**	m†	1 000,00		
17.04	**Clearing and grubbing at inlets and outlets of hydraulic structures**				
17.05	**Cleaning out of hydraulic structures**	m‡	5,00		
	(c)Box culverts up to and including 1,5 m vertical dimension	m‡	5,00		
	(d)Box culverts exceeding 1,5 m vertical dimension				
17,06	**Removal and storage of selected vegetation:**	Prov sum	1,00		
	(a) Cost of removal, storing, protection and replanting in a protected and fenced- off area of selected vegetation	%	10 000,00		
	(b) Charge on provisional sum	Prov sum	1,00		
	(c) Relocation of House Holds boundaries	%	100 000,00		
	(b) Charge on provisional sum				
1700	**TOTAL CARRIED TO SUMMARY**				**R 1 10 000,00**

SECTION 1800 DAYWORKS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1800,00	**DAYWORKS**	Hour	40,00		
B18.01	**Personnel:**	Hour	40,00		
	(a)Personnel during normal working hours:	Hour	30,00		
	(i) Unskilled labour	Hour	40,00		
	(ii) Semi-skilled labour	Hour	20,00		
	(iii)Skilled labour				
	(iv) Ganger	Hour	8,00		
	(v) Flagperson	Hour	8,00		
	(b) Extra over B18.01(a) for night works	Hour	8,00		
	(i) Unskilled labour	Hour	8,00		
	(ii) Semi-skilled labour	Hour	8,00		
	(iii)Skilled labour				
	(iv) Ganger	Hour	8,00		
	(v) Flagperson	Hour	8,00		
	(c) Extra over B18.01(a) for Sundays and other special non-working days:	Hour	8,00		
	(i) Unskilled labour	Hour	8,00		
	(ii) Semi-skilled labour	Hour	8,00		
	(iii)Skilled labour				
	(iv) Ganger				
	(v) Flagperson				
1500	**TOTAL CARRIED FORWARD**				R -

BID NUMBER: 29-2023/2024
COMPLETION OF MABUSELA_MASOGE ROADS AND STORMWATER

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	BALANCE BROUGHT FORWARD				**R -**
B18.02	**Contractor's Equipment**	hour	8,00		
	(a) Backhoe loader, 55-70 kW 0,5 m3 bucket	hour	8,00		
	(b) Compressor, 7,0 m3 per min	hour	8,00		
	(c) Self-propelled vibratory roller, 9-12 tons	hour	8,00		
	(d) Hand propelled vibratory roller, 0,5 ton mass	hour	8,00		
	(e) Vibrating plate compactor minimum power 2 kW	hour	8,00		
	(f) Jack hammer (including compressor and ancillary equipment)	hour	8,00		
	(g) Tip truck minimum load capacity 10 tons	hour	8,00		
	(h) Water tank truck minimum capacity 10 kl	hour	8,00		
	(i) Flat steel wheeled roller, 9-12 tons mass	hour	8,00		
	(j) Grid Roller, 9-12 tons mass	hour	8,00		
	(k) Whacker compacter	hour	16,00		
	(l) Grader	hour	8,00		
	(m) Excavator				
B18.03	**Transport**	km	200,00		
	(a) LDV	km	200,00		
	(b) Flatbed truck	km	200,00		
	(c) 10m3 tip truck				
1800,00	**TOTAL CARRIED TO SUMMARY**				**R -**

BID NUMBER: 29-2023/2024
COMPLETION OF MABUSELA_MASOGE ROADS AND STORMWATER

SECTION 2100 DRAINS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
2100	**2100 DRAINS**	m‡	500		
B21.01	**Excavation of open drains:**	m‡	100		
	(a) Excavating soft material situated within the following depth ranges below the surface level:	m‡	250		
	(i) 0 m up to 1,5 m	m‡	10		
	(ii) Exceeding 1,5 m and up to 3,0 m				
	(b) Extra over subitem 21.01(a) for excavation in hard material irrespective of depth	m‡	125		
21,02	**Clearing and shaping existing open drains**	m‡	10		
21,03	**Excavation for subsoil drainage systems:**	m‡	150		
	(a) Excavating soft material situated within the following depth ranges below the surface level:	m‡	9		
	(i) 0 m up to 1,5 m	m‡	9		
	(ii) Exceeding 1,5 m and up to 3,0 m	m‡	10		
B21.04	(b) Extra over subitem 21.03(a) for excavation in hard material irrespective of depth	m‡	10		
	Impermeable backfilling to subsoil drainage systems:				
	(a) Using the excavated material				
	(b) Using G5 imported material	m‡	18		
21,05	(c) Extra over subitems B21.04(a) and B21.04(b) for soil cement (soilcrete) backfilling containing 5% cement				
21,06	**Banks and dykes**				
	Natural permeable material in subsoil drainage systems (crushed stone):	m	66		
21.08	(b)Crushed stone obtained from commercial sources:	m	7		
	(ii) Coarse grade (19mm stone size)	m	44		
	Pipes in subsoil drainage systems:	m	4		
	(b) Unplasticized PVC pipes and fittings, normal duty, complete with couplings:				
	(i) 100 mm internal dia, perforated or slotted	m†	48		
	(ii) 100 mm internal dia, unperforated	m†	323		
	(iii)150 mm internal dia, perforated				
21.09	(iv)150 mm internal dia, unperforated				
21.10	**Polyethylene sheeting, 0,15 mm thick, or similar approved material, for lining subsoil drainage systems**				
	Synthetic-fibre filter fabric (Grade 2)				
2100	**TOTAL CARRIED TO SUMMARY**				**R -**

SECTION 2100 DRAINS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	BALANCE BROUGHT FORWARD				**R -**
B21.12	**Concrete outlet structures, manhole boxes, junction boxes and cleaning eyes for subsoil drainage systems:**	number	4		
	(a) Outlet structures (Type A)	number	10 2		
	(c) Junction boxes	number	10		
	(d) Cleaning eyes	number	2118		
21.13	**Concrete caps for subsoil drain pipes**	m‡-km	10		
21/B16.01	**Overhaul for material hauled in excess of 1,0 km free-haul (normal overhaul)**	number	4		
21,17	**Test flushing of pipe subsoil drains**	number	4		
B21.20	**Subsoil outlet marker board**	m‡ number	4		
B21.21	**Class 20/20 cast in situ concrete for the encasing of subsoil drainage systems, including formwork**				
B21.22	**Galvanized wire mesh at outlets of subsoil drainage systems**				

SECTION 2200: PREFABRICATED CULVERTS

2100	TOTAL CARRIED TO SUMMARY	R -

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT

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2200	**PREFABRICATED CULVERTS**				
B22.01	**Excavation:**				
	(a) Excavating soft material situated within the following depth ranges below the surface level:				
	(i) 0 m up to 1,5 m				
	(ii) Exceeding 1,5 m and up to 3,0 m				
	(b) Extra over subitem 22.01(a) for excavation in hard material , irrespective of depth	m‡	580		
	(c) Extra over sub-item 22.01(a) for additional excavation required by the engineer after the excavation has been completed.	m‡	630		
B22.02	**Backfilling:**	m‡	300		
	(a) Using the excavated material	m‡	20		
22,05	Extra over subitems B22.02(a) for soil cement (soilcrete) backfilling containing 5% (c) cement	m‡	530		
	Portal and rectangular culverts:	m‡	20		
	(b) Complete with prefabricated floor slabs:				
	(i) 900 mm x 450 mm, Class 175S				
	(b) Without prefabricated floor slabs:	m	55,0		
22,07	(i) 1500 mm x 1200 mm, Class 100S				
	(ii) 3000 mm x 2400 mm, Class 75S	m	54,9		
	Cast in situ concrete and formwork:	m	20,00		
	(a) In class A bedding, screeds (75mm thick) including formwork:				
	(i) Class 15/19 concrete				
	(b) In floor slabs for portal or rectangular culverts, including formwork, joints and Class U2 surface finish:	m‡	33,00		
	(i) Class 30/19 concrete				
	(c) In inlet and outlet structures, skewed ends, catchpits, manholes, thrust and anchor blocks, excluding formwork but including Class U2 surface finish:	m‡	100,00		
	(i) Class 20/19 concrete (manholes, Catchpits and anchor blocks)				
	(ii) Class 30/19 concrete (Wingwalls, cutoff walls, headwalls and appron slab)	m‡	40		
	(d) Formwork of concrete under subitem B22.07(c) above:	m‡	140		
22,08	(i) Class F1 surface finish				
22.10	(ii) Class F2 surface finish	m†	264		
	Concrete backfill for culverts (class 1:4:8/38 concrete between precast culverts)	m†	511		
	Steel reinforcement (for base slab and cutoff walls, wingwalls, headwalls, appron slab):	m‡	45		
	(a) Mild steel bars	t	0,8		
		t	5,5		

SECTION 2200: PREFABRICATED CULVERTS

	(b) High-tensile steel bars				
2200	**TOTAL CARRIED FORWARD**				**R -**

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SECTION 2200: PREFABRICATED CULVERTS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
2200	**BALANCE BROUGHT FORWARD**				**R -**
2200	**PREFABRICATED CULVERTS**	kg	1 050		Rate Only
22.10	**Steel reinforcement (for base slab and cutoff walls, wingwalls, headwalls, appron slab):**	kg	1 395		Rate Only
	(c) Welded steel fabric	kg	1 680		Rate Only
	(i) Mesh Ref.311	m‡	6		
	(ii) Mesh Ref.617	m‡	70		
	(iii) Mesh Ref 888	m	61,00		
B22.12	**Removing existing concrete:**				
	(a) Plain concrete	m			
	(b) Reinforced concrete	m			
B22.14	**Removing and stacking existing prefabricated culverts (all sizes)**	Number			
B22.23	**Service ducts:**				
	(a) Ordinary pipes, 150 mm internal dia uPVC pipes	m‡-km	1 500		
	(b) Split pipes, 150 mm internal dia uPVC pipes	m‡	20		
B22.24	**Utility marker, class 30/19 concrete, complete as shown on the drawing ROMH-042-07-06-03**				
22,25	**Overhaul on excavated material carted to spoil, backfill material (but excluding portland cement in the case of soil cement), existing structures demolished and removed to spoil, and removing and relaying, and removing and stacking existing prefabricated culverts**	Number	6,00		
22,26	**Hand excavation to determine the positions of existing services**	m	500		
B22.28	**Extra over payment items B22.03 and 22.05 for supplying end units for culverts with a skew angle: @60 Degrees**				
	(b)Portal and rectangular culverts:				
	(i) 1500 mm x 1200 mm, Class 100S	m‡	500		
B22.29	**Waterproofing of prefabricated culvert joints with a 500 mm wide composite membrane strip consisting of rubberized asphalt and cross-laminated high-density polyethylene**	m‡	500		
22/B33.20	**Fill constructed with material obtained from commercial sources or sources provided by the contractor, including all haul**	Lump Sum	1		
	(a) Gravel material (G7) in compacted layer thicknesses of 200 mm and less:	Lump Sum	1		
	(i)Compacted to 93% of Maximum Dry Density				
22/B61.03	(b) Rock fill (as specified in subclause 3209(c))				
	Access and drainage				
	(a) Access:				
	(b) Drainage where no access has been provided:				
2200	**TOTAL CARRIED FORWARD**				**R -**

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
2200	BALANCE BROUGHT FORWARD				R -
2200	**PREFABRICATED CULVERTS**	m‡			
22/B61.05	**Fill in within a restricted area (extra over item 33.01) Using imported selected material (G9 quality material obtained from commertial sources**		323		
22/61.08	**Foundation fill consisting of:**	m‡			
	(b) Mass Concrete Class 15/38 (Handrail upstand and drainage pipe bed) as shown on drawing: ROMH-042-07-10-012		42		
22/66.06	**Filled Joints**				
	(a) Joints measured per square metre:	m†			
	(i) Transverse joints between the culvert barrel walls and wingwalls with 10mm bitumen impregnated softboard as shown on drawing ROMH-042-07-10-02 & 05	m†	40		
22/66.08	(b) Joints measured per square metre:		30		
	(i) Joints between culvert floor slabs and apron slabs with 10mm bitumen impregnated softboard as shown on drawing ROMH-042-07-10-02 & 05	m m	421		
	Sealing joints with:	m	46		
22/66.16	(a) Sealant (Dow Corning 888 silicone sealant or equivalent subject to the approval of the engineer):	m	40 160		
22/66.19	(i) Barrel wall Joints				
	(ii) Floor slabs Joint and Apron slabs Joint				
	(iii) Barrel wall and Wing wall Joints	No			
	Pedestrian Parapet Precast Concrete as shown on drawing ROMH-042-07-10-012		70		
22/66.21	**Drainage pipes and weepholes:**	m†			
	(b) WeepHoles:	m	1 135		
22/B66.27	(i) Measured by number:				
	(1)Type UPVC (50mm diameter) to wingwalls:	m	85		
22/B66.28	Synthetic-fibre filter fabric (non-woven):				
22/B66.29	(a) Filter fabric to bottom and sides of foundation rock fill (geotextile properties as specified in subclause B6606(c))	kg kg	70 850		
	Drainage strips 300 mm wide (Kaytech WickDrain GPA 330 or equivalent subject to the approval of the engineer), including wrapping the strips in stitched grade 2 filter fabric sleeves		550		
	Perforated drainage pipes (Kaytech M65 geopipe or equivalent subject to the approval of the engineer), including wrapping the pipes in grade 2 filter				

	fabric and constructing the 200 mm x 100 mm concrete bedding strips (class 15/19 concrete) **Galvanised high yield stress steel reinforcement bars:** (a) In the box culvert floor slabs at the expansion joints (b) Fixing the gabion mattress to the apron slab				
2200	**TOTAL CARRIED TO SUMMARY**				**R** **-**

SECTION 2300: CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, CONCRETE DRIFTS AND CONCRETE LININGS FOR OPEN DRAINS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT

SECTION 2200: PREFABRICATED CULVERTS

2300	**CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND**	m	4010,00		
23.01	**Concrete kerbing:**	m	250,00		
	(a) Precast kerbing to SABS 927	m	1070,00		
	(1) Figure 8c kerb (all types)				
	(i) Straight sections				
	(ii) Curved sections, radius over 4m, but up to and including 20m	m	1700,00		
	(2) Figure 10a kerb	m	125,00		
23.02	**Concrete kerbing-channelling combination:**				
	(a) Precast concrete fig 8c kerb to SABS 927 and cast In-situ channel (concrete class 25/19) 200mm wide x 150 mm high	Number	3,00		
	(i) Straight Sections				
	(ii) Curved sections, radius over 4m, but up to and including 20m	Number	3,00		
23,05	**Inlet, outlet, transition and similar structures (typical designs):**				
	(a) Inlet structures, for downpipes down fill side slopes complete as shown on the drawing ROMH-042-07-06-02, class 30/20 concrete, single from one side only (L = 2,3m)	m†	500		
	(b) Outlet structures for downpipes down fill side slopes, complete with prefabricated reinforced-concrete blocks, class 30/20 concrete, complete as shown on the drawing ROMH-042-07-06-02,	m†	50		
B23.07	**Trimming of excavations for concrete-lined open drains:**				
	(a) In soft material	m‡	40		
	(b) In hard material	m‡			
B23.08	**Concrete lining for open drains:**	m‡	45,00		
	(a) Cast in situ concrete lining	m‡			
	(i) Class 30/20 concrete	m‡	40		
	(1) 1.0m wide Type-E drain		40		
	(2) 2.0m wide Type-E drain		50,00		
	(3) 2.0m wide Type-F drain				
	(4) 0.8m wide drain at guardrails				
	(5) Concrete Drifts as per drawing no.ROMH-042-07-04-08				
2300	**TOTAL CARRIED FORWARD**				R -

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SECTION 2300: CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, CONCRETE DRIFTS AND CONCRETE LININGS FOR OPEN DRAINS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
2300	**BALANCE BROUGHT FORWARD**				R -
2300	**CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND**	m†	250,00		
B23.08	**Concrete lining for open drains:**	m†	310,00		
	(b) Class U2 surface finish to cast in situ concrete	m†	210,00		
	(i) 1.0m wide Type-E drain	m†	60,00		
	(ii) 2.0m wide Type-E drain	m†	250,00		
	(iii) 2.0m wide Type-F drain	m†	40		
	(iv) 0.8m wide drain at guardrails	m†	1		
	(v) Concrete Drifts as per drawing no.ROMH-042-07-04-08	m†	300		
23,09	**Formwork to cast in situ concrete lining for open drains (Class F2 surface finish):**	m	100		
	(a) To sides with formwork on the internal face only	t	1,0		
	(b) To sides with formwork on both internal and external faces (each face measured)	t	2		
23,10	(c)To ends of slabs	kg	3 000		
23,12	**Sealed joints in concrete linings of open drains with Dow Corning 888 and polystyrene, complete as shown on the drawing ROMH-042-07-06-01**	m†	300		
	Steel reinforcement:	no.	100		
	(a) Mild steel bars	litre	230		
23,13	(b) High-tensile steel bars				
23,15	(c)Welded steel fabric	m‡	20		
B23.16	**Polyethylene sheeting (0,15 mm thick) for concrete-lined open drains**				
B23.17	**Precast concrete blocks in outlet structures**				
	Spraying trimmed surfaces of excavations for concrete-lined open drains with invert bituminous emulsion (MSP 1 or approved equivalent)				
	Removal of unsuitable material and replacement with "selected" G7 quality material in excavations for concrete lined open drains and also alongside concrete lined drains				
2300	**TOTAL CARRIED TO SUMMARY**				R -

SECTION 3100: BORROW MATERIALS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3100	**BORROW MATERIALS**	m‡	1 900,00	250 000,00	250 000,00
31,01	**Excess overburden (Identified Borrow Pit)**				
31,03	**Finishing-off borrow areas in:**	ha	0,20		
	(a) Hard excavation	ha	0,20		
	(b) Intermediate excavation	ha	0,60		
	(c) Soft excavation	PC Sum	1,00		
B31.04	**(a) Allowance for Rehabilitation of Borriw Pit**	%	250 000,00		
	(i)Handling costs and profit in respect of submitem B31.04(a) above				

3100	TOTAL CARRIED TO SUMMARY	R 2 50 000,00

SECTION 3300: MASS EARTHWORKS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT

3300	**MASS EARTHWORKS**				
33,01	**Cut and borrow to fill, including free-haul up to 0,5km**				
	(a)Material in compacted layer thckness of 200mm and less				
	(ii)Compacted to 93% of modified AASHTO density	m‡	2 978,70		
33,03	**Extra Over item 33.01 for excavating and breaking down material in:**				
	(a) Intermediate excavation	m‡	893,61		
	(b) Hard Excavation	m‡	280,00		
	(c) Boulder Excavation class A	m‡	150,00		
33,04	**Cut to spoil (at a licenced dumping site within a radius of 10km), including free-haul up to 0,5 km. Material obtained from:**				
	(a) Soft excavation	m‡	9 994,80		
	(b) Intermediate excavation	m‡	371,50		
	(c) Hard excavation	m‡	371,50		
	(d) Boulder Excavation class A	m‡	241,50		
33,07	**Removal of unsuitable material (including free-haul of 1.0 km)**				
	(b)In layer thickness exceeding 200 mm				
	(i) Stable material	m‡	770,00		
	(ii) Unstable material	m‡	770,00		
33,10	**Roadbed preparation and the compaction of material:**				
	(b)Compaction to 93% of MDD	m‡			
	(i) On roadway	m‡	2 625,00		
33/B16.02	**Overhaul to a licenced spoil site (within a radius of 5km)**	m‡.km	32 550,00		
33,13	Finishing-off cut and fill slopes, medians and interchange areas:				
	(a) Cut slopes	m†	800,00		
	(b) Fill slopes	m†	10 500,00		
B33.20	**Fill constructed with material obtained from commercial sources or sources provided by the contractor, including all haul**				
	(a) Gravel (G7) material in compacted layer thicknesses of 200 mm and less:	m‡	2230,00		
	(i)Compacted to 93% of Maximum Dry Density	m‡	3450,00		
	(b) Rock fill (as specified in subclause 3209(c))				
3300	**TOTAL CARRIED TO SUMMARY**				**R -**

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SECTION 3400: PAVEMENT LAYERS OF GRAVEL MATERIAL

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3400	**PAVEMENT LAYERS OF GRAVEL MATERIAL**	m‡	2175		
B34.01	**Pavement layers constructed from gravel taken from Borrow Pit, including haulage**	m‡	3700		
	(a)Gravel selected layer (G7) compacted to:				
	(i)93% of Maximum Dry Density (150mm)				
	(c) Gravel subbase using G6 material (unstabilized gravel) compacted to:				
	(i) 100% of Maximum Dry Density (MDD) (150mm layer thickness)				
3400	**TOTAL CARRIED TO SUMMARY**				**R -**

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SECTION 3500: STABILIZATION

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3500	**STABILIZATION**	m‡	3 385,00		
B35.01	**Chemical stabilization (150mm C4) extra over unstabilized compacted layers (subbase layer)**	t	348,18		
B35.02	**Chemical stabilizing agent:**	kl	620,00		
	(a) Ordinary portland cement (CEMII32.5N)	m‡	225,00		
35,04	**Provision and application of water for curing**				
B35.13	**Extra over item for B35.01 the construction of a trial section**				
3500	**TOTAL CARRIED TO SUMMARY**				R -

SECTION 3600 CRUSHED STONE BASE

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3600	**CRUSHED STONE BASE**	m‡	3014,00		
B36.01	**Crushed-stone base:**	m‡	225,00		
	e. Constructed from type G3 material obtained from commercial sources, and compacted to 100% of MDD (150mm thickness 37mm nominal maximum stone size)	m^2	9930,00		
B36.03	Crushed-stone base trial section (150mm) constructed in accordance with the provisions of clause 3603				
B36.16	**Finishing off base layer by slushing using water**				
3600	**TOTAL CARRIED TO SUMMARY**				**R -**

SECTION 4100 PRIME COAT

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
4100	**PRIME COAT**	litre	16 790		
41.01	**Prime coat:**	litre	3 358		
	(c) MC30 or ECO Environmentally friendly bitumen based prime				
41,03	**Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment**				

4100	TOTAL CARRIED TO SUMMARY	R -

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SECTION 4200 ASPHALT BASE AND SURFACING

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT

4200	**ASPHALT BASE AND SURFACING**	m†	23590,00		
42,02	**Asphalt surfacing (30 mm A-E2)**	litre	11795,00		
	(a) Continuously graded asphalt (10mm maximum aggregate)				
42.04	**Tack coat of 30% stable-grade emulsion**	t	2,00		
42,05	**Binder variations:**				
	(b) Class A-E2 modified binder	t	2,00		
42.06	**Variations in active filler content:**	No	45,00		
	(a) Cement				
B42.08	**100 mm cores in asphalt paving**	No	12,00		
B42.21	**Installation of speedhumps using continuously graded asphalt (using Class A-P1 modified binder and 30 mm maximum aggregate size), complete including saw cutting, tack coat and shaping but excluding signs and markings. Refer detail on Drawing No. ROMH-045-07-05-06**	t	30,00		
B42.22	**Variation in aggregates**				
4200	**TOTAL CARRIED FORWARD**				**R -**

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
51,00	**5100: PITCHING,STONEWORK AND PROTECTION AGAINST EROSION**	m†	700		
51.01.	**Stone pitching:**				
	(b) Grouted stone pitching	m‡	96		
51,04	**Concrete edge beams of:**	Prov. Sum	1		
	(a) Class 25/19 cast in-situ concrete				
B51.06	**Provision of vegetation destroyer and ant poison:**				

5100	**TOTAL CARRIED TO SUMMARY**	**R** **-**

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SECTION 5200 GABIONS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5200	**GABIONS**				
52,01	**Foundation trench excavation and backfilling:**				
52,02	(a) In solid rock (material which requires blasting)	m‡	110,00		
52,03	(b) In all other classes of materials	m‡	1400,00		
	Surface preparation for bedding the gabions	m†	3800,00		
	GABIONS				
	(a) Galvanized gabion boxes with 80 mm x 100 mm mesh and 2,7 mm dia mesh wire				
	(i) 0,5 m x 0,5 m x 1,0 m	m‡	35,00		
	(ii) 1,0 m x 0,3 m x 1,0 m	m‡	1,00		
	(iii) 1,0 m x 1,0 m x 1,0 m	m‡	285,00		
	(b) Galvanised gabion mattresses				
52,04	0,3 m deep with 80 mm x 100 mm mesh and diaphragms at 1,0 m centres and 2,7	m‡	800,00		
	(i) mm dia mesh wire	m‡	1,00		
	0,5 m deep with 80 mm x 100 mm mesh and diaphragms at 1,0 m centres and 2,7				
	(ii) mm dia mesh wire	m†	4800,00		
	Filter fabric				
	(b) Synthetic-fibre filter fabric Grade 3				

5200	TOTAL CARRIED TO SUMMARY	R -

SECTION 5400 GUARDRAILS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5400	**GUARDRAILS**	m	380,00		
B54.01	**Guardrails on 3,81 m spaced**	m	69,00		
	posts: (a) Complete galvanised				
	system on:	No	8,00		
	(i) Timber posts	No	8,00		
	(ii) Galvanised Steel Posts				
	(a)Complete galvanised system on:	No	8,00		
	(i) Flared ends (including end wing)	No	1,00		
	(ii) End treatments where singled guardrail sections are used (including additional posts)				
	(iii) End treatments where doubled guardrail sections are used (including additional posts)	m	30,00		
54,03	(ii)Bridge adaptors (including extra rail and posts)	m	15,00		
	Extra over item 54.01 for horizontally curved guardrails factory bent to a radius of less than 45m:	No	37,00		
	(a) Guardrail at a radius of 8m	No	24,00		
54,06	(a) Guardrail at a radius of 10m	No	204,00		
54.12	Reflective plates				
B54.14	Extra over items 54.01 and 54.02 for drilling and blasting holes for guardrail posts				
	Nailing of gang nail plates on top of timber guardrial posts				

5400	TOTAL CARRIED TO SUMMARY	R -

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5600	**ROAD SIGNS**				
56.01	**Road sign boards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or in Class 1 retro-reflective material, where the sign board is constructed from:**				
	(c) Prepainted galvanized steel plate (chromadek 1,6 mm thick or approved equivalent):	m†			
	(1) Area not exceeding 2 m†	m†			
	(2) Area exceeding 2 m† but not 10 m†	m†			
	(3) Area exceeding 10 m†				
56,02	**Extra over item 56.01 for using:**		15,00		
	(a) Background of retro-reflective material of:	m†	1,00		
	(1) Class 1	m†	1,00		
	(2) Class 11				
	(b) Lettering, symbols, numbers, arrows, emblems and borders of retro-reflective material:	m†			
	(1) Class 1	m†	3,00		
	(2) Class 11		2,00		
56,03	**Road sign supports (overhead road sign structures excluded):**	t			
	(a) Steel tubing (76mm dia., 3mm wall thickness)	t	1,00		Rate Only
	(b) Timber (76mm diameter S.A pine timber that is Creosote, or CCA treated complete with breakaway holes)		1,00		
56.05	Excavation and backfilling for road sign supports (not applicable to kilometre posts)	No			
56.06	Extra over item 56.05 for cement-treated soil backfill	No			
56.07	Extra over item 56.05 for rock excavation	No	1,00		
56.08	Dismantling, storing and re-erecting road signs with a surface area of:	No	35,00		Rate Only
	(a) Up to 2 m†	No	35,00		
56,09	(b) Exceeding 2 m† but not 10 m†	No			Rate Only
	Dismantling and storing road signs with a surface area of:	No			Rate Only
	(a) Up to 2 m†	No			
	(b) Exceeding 2 m† but not 10 m†	No			
B56.10	(c)Exceeding 10 m†				Rate Only
	Danger plates at culverts/structures (W401 - 800 x 200mm)		28,00		Rate Only
5600	**TOTAL CARRIED TO SUMMARY**				**R -**

SECTION 5700 ROAD MARKINGS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5700	**ROAD MARKINGS**	km	2,50		Rate Only
57,01	**Road marking paint:**	km	0,30		Rate Only
	(a)White lines (broken or unbroken)	m†	200,00		
	(2) 150 mm wide	m†			
	(4) 300mm wide	m†			
	(d) White lettering and symbols				
	(e) Yellow lettering and symbols				
	(f) Transverse lines, painted island and arrestor bed markings (any colour)	km	2,50		
57,03	**Thermoplastic road-marking paint:**	km	0,30		Rate Only
	(a)White lines (broken or unbroken)	m†	200,00		Rate Only
	(2) 150 mm wide	m†			
	(4) 300mm wide	m†			
	(d) White lettering and symbols	litre	50,00		Rate Only
	(e) Yellow lettering and symbols	litre			
57,04	(f) Transverse lines, painted island and arrestor bed markings (any colour)	kg	50,00		
	Variations in rate of application:	km	3,00		
	(a) White paint				
	(b) Yellow paint				
57,06	(d) Retro-reflective beads				
	Setting out and premarking the lines (Excluding traffic-island markings, lettering and symbols)				
5700	**TOTAL CARRIED TO SUMMARY**				**R -**

BID NUMBER: 29-2023/2024
COMPLETION OF MABUSELA_MASOGE ROADS AND STORMWATER

SECTION 5900 FINISHING THE ROAD AND ROAD RESERVE

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5900 59,01	**FINISHING THE ROAD AND ROAD RESERVE** **Finishing the road and road reserve:** (b) Single-carriageway road	km	3,0		
5900	**TOTAL CARRIED TO SUMMARY**				**R -**

SECTION 7300 CONCRETE BLOCK PAVING FOR ROADS

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
7300	**CONCRETE BLOCK PAVING FOR ROADS**	m†	1400,00		
B73.01	**60mm interlocking block paving (Type S-A Class 25 MPa)**	m‡	285,00		
73/B35.01	**Chemical stabilization (150mm C4 using G6 gravel material) extra over unstabilized**				
73/B35.02	**Chemical stabilizing agent:**	t	20,00		
	(a) Ordinary portland cement	kl	40,00		
73/35.04	**Provision and application of water for curing**				
73/B33.10	**Roadbed preparation and the compaction of material:**				
	(b) Compaction to 93% of MDD	m‡	1 400,00		
	(i) On roadway and side walks				

7300	TOTAL CARRIED TO SUMMARY	R -

SECTION 8100 TESTING MATERIALS AND WORKMANSHIP

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
8100 81.02	**TESTING MATERIALS AND WORKMANSHIP**	Prov Sum	1 150 000,00	R 150 000,00	R 150 000,00
	Other special tests requested by the	%			
	engineer (a) Cost of Testing				
	(i) Charge on Provisional Cost sum				

8100	TOTAL CARRIED TO SUMMARY	R 1 50 000,00

BID NUMBER: 29-2023/2024

COMPLETION OF MABUSELA_MASOGE ROADS AND STORMWATER

SUMMARY OF ROAD WORKS: SCHEDULE A

SECTION	DESCRIPTION	AMOUNT
1200	GENERAL REQUIREMENTS AND PROVISIONS	R 882 400,00
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	R -
1400	HOUSING OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE STAFF	R -
1500	ACCOMMODATION OF TRAFFIC	R -
1700	CLEARING AND GRUBBING	R 110 000,00
1800	DAYWORKS	R 50 000,00
2100	DRAINS	R -
2200	PREFABRICATED CULVERTS	R 110 000,00
2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND	R -
3100	BORROW MATERIALS	R -
3300	MASS EARTHWORKS	R -
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	R -
3500	STABILIZATION	R -
3600	CRUSHED STONE BASE	R -
4100	PRIME COAT	R -
4200	ASPHALT BASE AND SURFACING	R -
5100	PITCHING,STONEWORK AND PROTECTION AGAINST EROSION	R -
5200	GABIONS	R 250 000,00
5400	GUARDRAILS	R -
5600	ROAD SIGNS	R -
5700	ROAD MARKINGS	R -
5900	FINISHING THE ROAD AND ROAD RESERVE	R -
7300	CONCRETE BLOCK PAVING FOR ROADS	R -
8100	TESTING MATERIALS AND WORKMANSHIP	R -
TOTAL SCHEDULE A		R 0

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000,00 **R 1**
552 400,00

ADD 10% CONTIGENCY	**R 155 240,00**
SUBTOTAL EXCLUDING VAT	**R 1 707 640,00**
ADD VALUE ADDED TAX (15%)	**R 256 146,00**
TENDER SUM CARRIED TO FORM OF OFFER	**R 1 963 786,00**

MOGALAKWENA LOCAL MUNICIPALITY

TENDER NO : 29-2023/2024

C2.1 BILL OF QUANTITIES

C2.2 CALCULATION OF TENDER SUM

SCHEDULE A: ROAD CONSTRUCTION (MABUSELA AND MASOGE ROADS AND STORMWATER)

SUMMARY OF BILLS OF QUANTITIES

ADD 10% CONTINGENCY

SUBTOTAL

VAT (15%)

CALCULATION OF TENDER SUM

SIGNED BY/ON BEHALF OF TENDERER

NAME	**SIGNATURE**	**DATE**

MOGALAKWENA LOCAL MUNICIPALITY

CONTRACT NO: 29-2023/2024

COMPLETION OF MABUSELA AND MASOGE ROADS AND STORMWATER

Declaration

(In respect of completeness of Tender)

I/we, the undersigned, do hereby declare that these are the properly priced Bill of Quantities forming Part C2.2 of this Contract Document + the Bill of Quantities upon which my/our tender for the

CONTRACT NO: 29-2023/2024 AND

COMPLETION OF MABUSELA AND MASOGE ROADS AND STORMWATER has been based.

SIGNED BY/ON BEHALF OF TENDERER

NAME	**SIGNATURE**	**DATE**

PART C3: SCOPE OF WORK

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C3.2 ENGINEERING C3-141
C3.3 PROCUREMENT C3-144
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C3.5 MANAGEMENT C3-270

Status

Should any requirement or provision in the parts of the Scope of Work conflict with any requirement of any Standardised Specification, particular specification or any drawings, the order of precedence, unless otherwise specified, is:

Drawings
Scope of Work (Parts C3.1, C3.4, C3.5 and C3.6)
Particular Specifications
COLTO Standardised Specifications

C3.1 DESCRIPTION OF THE WORKS

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C3.1.1 INTRODUCTION

All data and descriptions contained in this section of the contract documents are given for information purposes only and cannot be interpreted as prescriptive despite the fact that the text may give the opposite perspective. If any conflict arises between the content of this section and other sections of the contract documents, the latter take precedence.

C3.1.2 EMPLOYERS OBJECTIVES

The primary objective of this tender is to appoint a competent Contractor for the rehabilitation and resurfacing of the road in Mogalakwena, Mabusela and Masoge Village in accordance with the specified design and Project Specifications as defined in the Scope of Works to extend the pavement life.

It is the objective of the Employer to complete all required work in such a way that it would always minimise any inconvenience to the public user while retaining functional operation of the road .

C3.1.3 DESCRIPTION OF THE SERVICES REQUIRED

The successful contractor will be required to provide all plant and labour to complete the specified work to a high level of quality. Below is a list of the major plant required on site, but are not limited to:

- Pneumatic rollers (22 ton)
- Steel drum rollers (3,5 and 8 ton)
- TLB
- Tipper trucks (10 m3)
- Asphalt paver (5 m wide)

C3.1.4 APPLICABLE NATIONAL AND INTERNATIONAL STANDARDS

The Service Provider shall take cognisance of, and adhere to, all applicable national and international standards in the execution of his own work. International standards should only be used where no national standards exist, or where it is the norm to use or refer to international standards.

C3.1.5 SITE/TECHNICAL MEETINGS

During the construction of this project, the Contractor shall be required to attend monthly site meetings at which the Employer and the Consulting Engineers will be present, as well as any technical meetings with the Consulting Engineers as may be required to ensure the successful implementation of this project.

C3.1.6 DESCRIPTION OF THE WORKS

The description of the works shall inter alia contain the following particulars regarding the work to be constructed and maintained under the contract.

C3.1.6.1 ROADWORKS

Project Location and Limits
The proposed project is located in Mogalakwena, Mabusela and Masoge Village, about 35km outside of Mokopane town. The coordinate positions of the settlement for Mabusela are: 23 56’20.06"S and 28 51’18.52"E and for Masoge Village are 23 57’11.79"S and 28 48’58.86"E.

Existing Cross Section
The route consists of two gravel main lanes (average 3.0m wide), with a total width of 6 metres.

Extent of works
For ease of reference, the project has been divided into various uniform section. The sections identified are summarised as follows and these uniform sections are also indicated on the locality plan of this document.

Maintenance of Existing Storm Water System
Some of the stormwater pipes crossing the road will be deconstructed and hauled to approved waste disposal site and replaced with new pipe culverts. The cleaning of catchpits and stormwater pipes along with the replacement of broken catch pits, kerbs and channels will also be done along the rest of the project.

C3.1.6.2 EXISTING *PAVEMENT DESIGN*

Existing pavement
The existing pavement is an unpaved gravel road.

C3.1.6.3 ACCOMMODATION OF TRAFFIC

All construction work on these sections will be done during the day between the hours of 07:00 and 16:30. No traffic accommodation will be permitted during the night unless written permission is given by the Employer.

C3.1.6.5 ANCILLARY WORKS

The following ancillary works will be required apart from the resurfacing and rehabilitation of the carriageway:

- Precast kerbs and channelling replacement
- Kerb inlet repairs
- Drop inlet repairs
- Cleaning of the stormwater systems
- Reconstruction of stormwater pipes
- Sidewalk repairs / resurfacing
- Road sign boards

C3.1.6.6 QUANTITIES

The work that is to be carried out under this contract is as provided for in the schedule of quantities. However, if during the course of the construction conditions are found to differ from those anticipated, the Engineer reserves the right to modify the scope of the work to suit the prevailing conditions and circumstances. Variations introduced in this manner will be measured and paid for at the rates tendered for under appropriate items listed in the schedule of quantities. In the absence of appropriate payment items in the schedule of quantities, the work will be completed as extra work.

C3.1.7 DRAWINGS

The drawings that form part of the tender document are issued for tender purposes only.

The Contractor will be supplied with one set of paper prints plus a CD containing all the construction documentation.

Only figured dimensions may be used and drawings may not be scaled unless so instructed by the engineer. The Engineer will supply all figured dimensions omitted from the drawings.

C3.1.8 CAMP ESTABLISHMENT, POWER SUPPLY AND OTHER SERVICES

The Contractor is to make his own arrangements concerning the supply of electrical power and all other services. No direct payment will be made for the provision of electrical and other services. The cost thereof is deemed to be included in the rates and amounts tendered for the various items of work for which these services are required.

C3.1.9 CONSTRUCTION TIME PERIOD

The time-span period specified for completion by the Engineer, as stated in the Contract Data in terms of Clause 1.1.1.14 of the Conditions of Contract, is 12 months , inclusive non-working days (Sundays) and exclusive of special non-working days (public holidays and SAFCEC year-end break). The Contractor shall plan and programme his construction sequence for completion within the time period specified.

C3.1.10 CONSTRUCTION WORK PROGRAMME

The Contractor shall take note of various factors contained in these specifications, which will have a significant influence on the compilation of the construction work programme. Prominent items are those specified in clause B1215 (anticipated days lost due to climatic conditions) of Section 1200 and Section 1500 of the Project Specifications dealing with limitations regarding construction areas, time allowed for construction activities, temporary installations of road signs and traffic-control facilities and time restrictions regarding construction work. Detailed directives for compiling the programme of work are given in clause B1204 of Section 1200 of the Project Specifications.

C3.1.11 CONSTRUCTION IN CONFINED AREAS

It will be necessary for the Contractor to work within confined areas. In certain places the width of the fill material and pavement layers may decrease to zero and the working space may be confined. The method of construction in these confined areas largely depends on the Contractor's constructional plant.

Regardless, measurement and payment will be in accordance with the specified cross-sections and dimensions only, irrespective of the method used for achieving these cross-sections and dimensions. It is deemed that the rates tendered in the Pricing Schedule include full compensation for all special equipment and construction methods and for all difficulties encountered when working in confined areas and narrow widths, and at or around obstructions. No extra payment will be made nor will any claim for additional payment be considered in such cases. (Refer to project specification sub-clause B1209(g)).

C3.1.12 MANAGEMENT OF THE ENVIRONMENT

The Contractor will be responsible for construction according to an environmental management plan in terms of Section C3.5 Management.

The Contractor must take the utmost care to minimise the impact of his establishment and other construction activities on the environment and must adhere to the requirements as set out in Section C of the Scope of Works. Where the Contractor fails to adhere to these requirements the specifications in Section E of the Scope of Works provide the methodology and cost liability of remedy.

C3.1.13 SITE FACILITIES REQUIRED FOR ENGINEER

Site facilities comprising an office / conference unit and an ablution unit with service facilities for the Engineer's representative and his supervisory site staff is required.

C3.1.14 FEATURES REQUIRING SPECIAL ATTENTION

C3.1.14.1 WAYLEAVES, PERMISSIONS AND PERMITS

The Contractor shall be responsible for obtaining all of the necessary wayleaves, permissions or permits applicable to working near any existing services or other infrastructure on Site, and shall ensure that any wayleaves, permissions or permits obtained by the Employer's Agent prior to the award of the contract are transferred into the Contractor's name.

The Contractor shall abide by any conditions imposed by such wayleaves, permissions or permits.

Further details on wayleaves are specified in Clause 1202 of the Project Specifications.

C3.1.14.2 HEALTH AND SAFETY PLAN

Prior to commencing work, the Contractor shall submit a Health and Safety Plan, compiled in accordance with the Health and Safety Specifications in C3.4: Part G of the Works Specifications to the Engineer for approval. The Contractor may not commence construction without the Engineer's approval of the Health and Safety Plan

C3.1.14.3 STANDARD OF MATERIALS, WORKMANSHIP, TESTING AND PERFORMANCE

The attention of Tenderers is particularly drawn to the high standard of materials, workmanship, testing and performance applicable to his Contract as a whole and he shall convey this requirement to his proposed subcontractors.

The Contractor will carry out control testing of materials and workmanship as required in terms of the specifications. Where necessary, the Engineer may carry out acceptance control testing. The Employer will not pay claims or grant extension of time for delays to the works resulting from the awaiting of test results. Testing as required by the Engineer will be effected as promptly as possible but it is in the Contractors own interest to submit material samples and other components of workmanship for testing in good time to assist in avoiding or minimising delays.

C3.1.14.4 WATERPROOF PROTECTION FOR WORKERS

All staff required to continue working during rain shall be provided with oilskins and rubber knee boots, or other approved protective clothing and footwear.

C3.1.14.5 NIGHT WORK AND WORK ON PUBLIC HOLIDAYS

No night work construction is required for this project. The Contractor will be responsible to ensure that any night work which is required, is done in a safe and well-illuminated environment. Where the Contractor requires staff to work overtime, he shall make the necessary arrangements with the Engineer and obtain written approval from the Engineer. In addition to above requirements the Contractor will be required to adhere to specific requirements stated in Clause 1202 to reduce noise emissions during night work. The Contractor shall bear the cost of his overtime work.

C3.1.14.6 MAINTENANCE

The Contractor shall be responsible for the maintenance of all temporary traffic control facilities provided for the purposes of traffic accommodation through the sites of the various parts of the Works, and for the maintenance of the Works during the Defects Liability Period of 12 months from the date of completion of the Works in accordance with the provisions of the General Conditions of Contract Contractor shall be responsible for obtaining all of the necessary wayleaves, permissions.

C3.1.14.7 RECLAIMED MATERIALS

The Contractor shall be responsible for haulage of the various materials recovered from the works to the appropriate plant or depot. All milled asphalt wearing course material shall be hauled to the contractor's asphalt supply plant, for purchase and re-use by the asphalt plant. Milled or excavated asphalt base course and granular material shall be hauled to the Employer's nominated depot and reclaimed concrete (including the concrete pavement, concrete kerbs and pipes removed as part of the scope of works) shall be hauled to an approved reclaimed concrete crushing plant. The Contractor shall take due care during deconstruction of asphalt or concrete pavement layers to ensure that reclaimed material is not contaminated with soil, granular material or any unwanted materials.

C3.1.15 SMALL CONTRACTOR DEVELOPMENT, TRAINING AND COMMUNITY LIAISON

Section D of the Scope of Works covers the Contractor's requirements in detail, as well as defining the targets that comprise the Contract Participation Goal (CPG).

C3.1.16 REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS 2014

Refer to Section H of the Scope of Works for general requirements in terms of the OH&S requirements.

C3.1.17 OTHER INFORMATION

C3.1.17.1 WATER SOURCES

It is proposed that all the water required for construction purposes should be procured from the Municipality.

C3.1.17.2 CONSTRUCTION MATERIAL SOURCES

Tenderers should make provisions for either establishing their own plant or to procure asphalt from commercial sources. However, no extension of time will be considered due to delays in establishing a private asphalt plant.

C3.2 ENGINEERING

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3.2.1 DRAWINGS ISSUED WITH THIS DOCUMENT C-142

3.2.1 DRAWINGS ISSUED WITH THIS DOCUMENT

The Works shall be carried out in accordance with the following reduced Drawings listed below

PROJECT TENDERD DRAWINGS

DRAWING NO.	TITLE	REV
INDEX & LIST OF DRAWINGS:		
ROMH-042-07-00-01	MABUSELA AND MASOGE VILLAGE: LOCALITY PLAN & LIST OF DRAWINGS	B
ROMH-042-07-00-02	MABUSELA AND MASOGE VILLAGE: KEY PLAN & LIST OF DRAWINGS	B
ROMH-042-07-00-03	MABUSELA AND MASOGE VILLAGE: INFORMATION NAME BOARD	B
ROAD LAYOUT PLANS & LONGITUDINAL SECTIONS		
ROMH-042-07-01-01	MABUSELA VILLAGE: ROAD 1_DETAILED ROAD CROSS SECTION @ 20m INTERVALS	B
ROMH-042-07-01-02	MABUSELA VILLAGE: ROAD 2_DETAILED ROAD CROSS SECTION @ 20m INTERVALS	B
ROMH-042-07-01-03	MASOGE VILLAGE: ROAD_DETAILED ROAD CROSS SECTION @ 20m INTERVALS	B
ROAD CROSS SECTIONS @ 20m INTERVALS		
ROMH-042-07-02-01	MABUSELA VILLAGE: ROAD 1_DETAILED ROAD CROSS SECTION @ 20m INTERVALS	B
ROMH-042-07-02-02	MABUSELA VILLAGE: ROAD 2_DETAILED ROAD CROSS SECTION @ 20m INTERVALS	B
ROMH-042-07-02-03	MASOGE VILLAGE: ROAD_DETAILED ROAD CROSS SECTION @ 20m INTERVALS	B
INTERSECTION LAYOUT		
ROMH-042-07-03-01	MASOGE VILLAGE: INTERSECTION LAYOUT PLAN	B
ROMH-042-07-03-02	MASOGE VILLAGE: INTERSECTION LAYOUT: EXISTING SURFACING AND WIDENING SECTION SETTING OUT POINTS	B
ROMH-042-07-03-03	MASOGE VILLAGE: INTERSECTION LAYOUT AND LONG SECTION	B
ROAD MARKING AND SIGNAGE		
ROMH-042-07-04-01	MABUSELA VILLAGE: ROAD 1_ROAD MARKING LAYOUT	B
ROMH-042-07-04-02	MABUSELA VILLAGE: ROAD 2_ROAD MARKING LAYOUT	B
ROMH-042-07-04-03	MASOGE VILLAGE: ROAD_ROAD MARKING LAYOUT	B
TYPICAL DETAIL DRAWINGS (ROADS)		
ROMH-042-07-05-01	MABUSELA & MASOGE VILLAGES: TYPICAL DETAILS, SHEET 1 OF 7	
STANDARD DETAIL DRAWING (ROADS)		
ROMH-042-07-04-01	MABUSELA & MASOGE VILLAGES: TYPICAL DETAILS, SHEET 1 OF 7	A
ROMH-042-07-04-02	MABUSELA & MASOGE VILLAGES: TYPICAL DETAILS, SHEET 2 OF 7	A
ROMH-042-07-04-03	MABUSELA & MASOGE VILLAGES: TYPICAL DETAILS, SHEET 3 OF 7	A
ROMH-042-07-04-04	MABUSELA & MASOGE VILLAGES: TYPICAL DETAILS, SHEET 4 OF 7	A
ROMH-042-07-04-05	MABUSELA & MASOGE VILLAGES: TYPICAL DETAILS, SHEET 5 OF 7	A
ROMH-042-07-04-06	MABUSELA & MASOGE VILLAGES: TYPICAL DETAILS, SHEET 6 OF 7	A
ROMH-042-07-04-07	MABUSELA & MASOGE VILLAGES: TYPICAL DETAILS, SHEET 7 OF 7	A

STRUCTURAL		
ROMH-042-07-10-01	**MASOGE VILLAGE: GENERAL ARRANGEMENT, MAJOR CULVERT**	**A**
ROMH-042-07-10-02	**MASOGE VILLAGE: MAJOR CULVERT, CONCRETE LAYOUT DETAIL**	**A**
ROMH-042-07-10-03	**MASOGE VILLAGE: MAJOR CULVERT, REINFORCEMENT LAYOUT AND DETAIL**	**A**
ROMH-042-07-10-04	**MABUSELA VILLAGE: GENERAL ARRANGEMENT, MAJOR CULVERT**	**A**
ROMH-042-07-10-05	**MABUSELA VILLAGE: MAJOR CULVERT, CONCRETE LAYOUT AND DETAIL**	**A**
ROMH-042-07-10-06	**MABUSELA VILLAGE: MAJOR CULVERT, REINFORCEMENT LAYOUT AND DETAIL**	**A**
TYPICAL DETAIL DRAWINGS (STRUCTURES)		
ROMH-042-07-10-10	**MABUSELA AND MASOGE VILLAGE: TYPICAL DETAIL OF CULVERTS SHEET 1**	**A**
ROMH-042-07-10-11	**MABUSELA AND MASOGE VILLAGE: TYPICAL DETAIL OF CULVERTS SHEET 2**	**A**
ROMH-042-07-10-12	**MABUSELA AND MASOGE VILLAGE: PEDESTRIAN PARAPET PRECAST CONCRETE 4.5kN/m DESIGN - LAYOUT & DETAILS SHEET 3**	**A**

The reduced drawings that form part of the tender documents shall be used for tender purposes only.

The Contractor will be supplied with 3 unreduced paper prints of each of the drawings required for construction. These copies are issued free of charge and the Contractor shall make any additional copies he may require at his own cost.

Only figured dimensions shall be used and drawings shall not be scaled unless otherwise instructed.

The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract. The position of pipe bends, junction boxes, duct ends and all other underground infrastructure shall be given by either co-ordinates, or stake value and offset. Where necessary, levels shall also be given. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Engineer's Representative on a regular basis.

Any information in the possession of the Contractor, which the Engineer requires to complete his record drawings shall be supplied to the Engineer's Representative before a certificate of completion will be issued.

C3.3 PROCUREMENT

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C3.3.1. PREFERENTIAL PROCUREMENT C3-145
C3.3.2. SUB-CONTRACTING PROCEDURES C3-145
C3.3.3. GENERIC LABOUR-INTENSIVE SPECIFICATION C3-145

C3.3.1. PREFERENTIAL PROCUREMENT

The Works shall be executed in accordance with the conditions associated with the granting of preferences detailed in the Preference Schedule where preferences are granted in respect of BBBEE contribution.

Financial penalties, as described in the Preference Schedule, shall be applied in the event that the Contractor is found to have breached and of the conditions contained in the Preference Schedule (unless proven to be beyond the control of the Contractor).

Notwithstanding the application of penalties, the Contractor's attention is drawn to other sanctions that may be applied by the Employer (listed in the Preference Schedule) with due consideration to the circumstances.

C3.3.2. SUB-CONTRACTING PROCEDURES

Subcontracting will be done as per the Municipality and Treasury Guidelines"

C3.3.3. GENERIC LABOUR-INTENSIVE SPECIFICATION

All labour intensive will be implemented as per *Guidelines for The Implementation of LabourIntensive Infrastructure projects Under The Expanded Public Works Programme* (EPWP) Third Edition 2015 by the Department of Public Works and the Ministerial Determination for Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice N R63 of 25 January 2002,

This section provides the description of the project and the general requirements for executing the work.

The employer's objectives are to deliver public infrastructure using labour intensive methods in accordance with EPWP Guidelines

The main objective of this project is to provide easy and reliable access roads and stormwater provision with surface standards to the community of Mabusela and Masoge village.

The project scope of work is as follows:

- Relocation and lowering of services
- Clearing and grubbing of the streets reserve
- Construction of layer works (2.43km) – roadbed, selected, sub-base and base
- Stabilization of layer works (2.43km) - sub-base
- Surfacing with 30mm Continuously Graded Asphalt
- Installation of kerbs and Concrete edge beams
- Storm-water drainage
- Low level Precast culvert bridge (1.5m x 1.2m) and (3.0m x 3.0m)
- Installation of 60mm interlocking paving blocks at Mabusela culvert bridge.
- Grouted Stone pitching
- Installation of Gabions
- Road marking and road signs
- Construction of concrete drifts
- Construction of speed-humps
- Road-markings

The scope of the work for this contract is for the contractor to primarily have a management role, as it is a requirement of the contract for the targeted amount of the scheduled work under the operational section to be sublet to SMME. The Contractor is required to provide sustainable work opportunities for SMME. In addition, the Contractor is required to provide assistance to the SMME in the form of financial support for the procurement of goods and services, and provide training, guidance and mentoring.

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C3.1.2	**LOCATION OF WORKS** <u>Location of Site</u> The proposed project is located in Mogalakwena, Mabusela and Masoge Village, about 35km outside of Mokopane town. The coordinate positions of the settlement are: Mabusela 23 56’20.06"S and: 28 51’18.52". Masoge 23 57’11.79"S and 28 48’58.86"E.
C3.1.4	**TIME FOR COMPLETION** The duration of this project is **(12) Twelve months.**
C3.1.5	**LABOUR REGULATIONS**
A27	**Payment for the labour-intensive component of the works** Payment for works identified in clause 2.3 “the Extent of the Project” in the Project Specifications as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the scope of work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.
A28	**Applicable labour laws** The Ministerial Determination for Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice N R63 of 25 January 2002, as reproduced below, shall apply to works described in the scope of work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.
A29	**Introduction** This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.

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A29.2	In this document –	
	(a)	“department” means any department of the State, implementing agent or contractor;
	(b)	“employer” means any department, implementing agency or contractor that hires workers to work in elementary occupations on a SPWP;
	(c)	“worker” means any person working in an elementary occupation on a SPWP;
	(d)	“elementary occupation” means any occupation involving unskilled or semi-skilled work;
	(e)	“management” means any person employed by a department or implementing agency to administer or execute an SPWP;
	(f)	“task” means a fixed quantity of work;
	(g)	“task-based work” means work in which a worker is paid a fixed rate for performing a task;
	(h)	“task-rated worker” means a worker paid on the basis of the number of tasks completed;
	(i)	“time-rated worker” means a worker paid on the basis of the length of time worked.
A30	**Terms of Work**	
A30.1	Workers on a SPWP are employed on a temporary basis.	
A30.2	A worker may NOT be employed for longer than 24 months in any five-year cycle on a SPWP.	
A30.2	Employment on a SPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.	
A31	**Normal Hours of Work**	
A31.1	An employer may not set tasks or hours of work that require a worker to work–	

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	(a)	more than forty hours in any week

	(b) on more than five days in any week; and
	(c for more than eight hours on any day.
A31.2	An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.
A31.3	A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.
A32	**Meal Breaks**
A32.1	A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.
A32.2	An employer and worker may agree on longer meal breaks.
A32.3	A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.
A32.4	A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.
A33	**Special Conditions for Security Guards**
A33.1	A security guard may work up to 55 hours per week and up to eleven hours per day.
A33.2	A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.
A34	**Daily Rest Period** Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.
A35	**Weekly Rest Period** Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work (“emergency work”).
A36	**Work on Sundays and Public Holidays**
A36.1	A worker may only work on a Sunday or public holiday to perform emergency or security work.
A36.2	Work on Sundays is paid at the ordinary rate of pay.
A36.3	A task-rated worker who works on a public holiday must be paid –
	(a) the worker’s daily task rate, if the worker works for less than four hours;
	(b) double the worker’s daily task rate, if the worker works for more than four hours.
A36.4	A time-rated worker who works on a public holiday must be paid –
	(a) the worker’s daily rate of pay, if the worker works for less than four hours on the public holiday;
	(b) double the worker’s daily rate of pay, if the worker works for more than four hours on the public holiday.
A37	**Sick Leave**
A37.1	Only workers who work four or more days per week have the right to claim sickpay in terms of this clause.
A37.2	A worker who is unable to work on account of illness or injury is entitled to claim one day’s paid sick leave for every full month that the worker has worked in terms of a contract.
A37.3	A worker may accumulate a maximum of twelve days’ sick leave in a year.
A37.4	Accumulated sick-leave may not be transferred from one contract to another contract.
A37.5	An employer must pay a task-rated worker the worker’s daily task rate for a day’s sick leave.
A37.6	An employer must pay a time-rated worker the worker’s daily rate of pay for a day’s sick leave.
A37.7	An employer must pay a worker sick pay on the worker’s usual payday.
A37.8	Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –
	(a) absent from work for more than two consecutive days; or

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	(b) absent from work on more than two occasions in any eight-week period.
A37.9	A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.
A37.10	A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.
A38	**Maternity Leave**
A38.1	A worker may take up to four consecutive months' unpaid maternity leave.
A38.2	A worker is not entitled to any payment or employment-related benefits during maternity leave.
A38.3	A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.
A38.4	A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.
A38.5	A worker may begin maternity leave –
	(a) four weeks before the expected date of birth; or
	(b) on an earlier date –
	(i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or
	(ii) if agreed to between employer and worker; or
	(c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.
A38.6	A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.
A38.7	A worker who returns to work after maternity leave, has the right to start a new cycle of twentyfour months employment, unless the SPWP on which she was employed has ended.
A39	**Family responsibility leave**
A39.1	Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances -
	(a) when the employee's child is born;
	(b) when the employee's child is sick;
	(c) in the event of a death of –
	(i) the employee's spouse or life partner;
	(ii) the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.
A40	**Statement of Conditions**
A40.1	An employer must give a worker a statement containing the following details at the start of employment –
	(a) the employer's name and address and the name of the SPWP;
	(b) the tasks or job that the worker is to perform; and
	(c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;
	(d) the worker's rate of pay and how this is to be calculated;
	(e) the training that the worker will receive during the SPWP.
A40.2	An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.
A40.3	An employer must supply each worker with a copy of these conditions of employment.
A 41	**Keeping Records**
A41.	Every employer must keep a written record of at least the following –
	(a) the worker's name and position;
	(b) in the case of a task-rated worker, the number of tasks completed by the worker;
	(c) in the case of a time-rated worker, the time worked by the worker;

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	(d) payments made to each worker.
A41.2	The employer must keep this record for a period of at least three years after the completion of the SPWP.
A42	**Payment**
A42.1	An employer must pay all wages at least monthly in cash or by cheque or into a bank account.
A42.2	A task-rated worker will only be paid for tasks that have been completed.
A42.3	An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.
A42.4	A time-rated worker will be paid at the end of each month.
A42.5	Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.
A42.6	Payment in cash or by cheque must take place –
	(a) at the workplace or at a place agreed to by the worker;
	(b) during the worker's working hours or within fifteen minutes of the start or finish of work;
	(c) in a sealed envelope which becomes the property of the worker.
A42.7	An employer must give a worker the following information in writing –
	(a) the period for which payment is made;
	(b) the numbers of tasks completed, or hours worked;
	(c) the worker's earnings;
	(d) any money deducted from the payment;
	(e) the actual amount paid to the worker.
A42.8	If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it
A42.9	If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.
A43	**Deductions**
A43.1	An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.
A43.2	An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.
A43.3	An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.
A43.4	An employer may not require or allow a worker to –
	(a) repay any payment except an overpayment previously made by the employer by mistake;
	(b) state that the worker received a greater amount of money than the employer actually paid to the worker; or
	(c) pay the employer or any other person for having been employed.
A44	**Health and Safety**
A44.1	Employers must take all reasonable steps to ensure that the working environment is healthy and safe.
A44.2	A worker must–
	(a) work in a way that does not endanger his/her health and safety or that of any other person;
	(b) obey any health and safety instruction;
	(c) obey all health and safety rules of the SPWP;
	(d) use any personal protective equipment or clothing issued by the employer;
	(any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.
A45	**Compensation for Injuries and Diseases**
A45.1	It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on a SPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.

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A45.2	A worker must report any work-related injury or occupational disease to their employer or manager.
A45.3	The employer must report the accident or disease to the Compensation Commissioner.
A45.4	An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.
A46	**Termination**
A46.1	The employer may terminate the employment of a worker for good cause after following a fair procedure.
A46.2	A worker will not receive severance pay on termination.
A46.3	A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.
A46.4	A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be reengaged if a position becomes available for the balance of the 24-month period.
A46.5	A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.
A47	**Certificate of Service**
A47.1	On termination of employment, a worker is entitled to a certificate stating –
	(a) the worker's full name;
	(b) the name and address of the employer;
	(c) the SPWP on which the worker worked;
	(d) the work performed by the worker;
	(e) any training received by the worker as part of the SPWP;
	(f) the period for which the worker worked on the SPWP;
	(g) any other information agreed on by the employer and worker.
A48	**Contractor's default in payment to Labourers and Employees** Any dispute between the Contractor and labourers, regarding delayed payment or default in payment of fair wages, if not resolved immediately may compel the Employer to intervene. The Employer may, upon the Contractor defaulting payment, pay the moneys due to the workers not honoured in time, out of any moneys due or which may become due to the Contractor under the Contract.
A49	**Provision of Hand tools** The Contractor shall provide his labour force with hand tools of adequate quality, sufficient in numbers and make the necessary provisions to maintain the tools in good and safe working conditions
A50	**Reporting** The Contractor shall submit monthly returns/reports as specified below: •Signed Muster rolls/pay sheets of temporary workers and permanent staff detailing the number, category, gender, rate of pay and daily attendance. •Plant utilization returns •Progress report detailing production output compared to the programme of works The Contractor should submit the following at the beginning of the Contract: **(a)** Contracts of all the workers employed on the contracts including their certified identity documents. **(b)** Proof of Registration for COIDA and UIF;

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	(c) OHS Files The Contractor shall submit monthly returns/reports as specified below: (a) Signed Muster rolls/pay sheets of temporary workers and permanent staff detailing the number, category, gender, rate of pay and daily attendance.
	(b) Copies of certified identity documents of workers
	(c) Number of persons who have attended training including nature and duration of training provided
	(d) Assets created, rehabilitated or maintained in accordance with indicators in the EPWP M&E framework
	(e) Plant utilization returns
	(f) Progress report detailing production output compared to the programme of works
A51	**Use of local Workers for LI designated activities** Labour-intensive works shall be constructed/maintained using local workers who are temporarily employed in terms of this Scope of Work
A52	**Competencies of LI Management and Supervisory staff** Contractors shall engage supervisory and management staff in labour-intensive works that have completed the skills programme including Foremen/Supervisors at NQF "National Certificate: Supervision of Civil Engineering Construction Processes" and Site Agent/Manager at NQF level 4 "Manage labour-intensive Construction Processes" or equivalent QCTO qualifications.
A53	**Requirement for Sourcing and engagement of Labour** Unskilled and semi-skilled labour required for the execution of all labour-intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.
	The rate of pay set for the EPWP is **R 165.91** per task or per day. ' Tasks established by the contractor must be such that: a) the average worker completes 5 tasks per week in 40 hours or less; and b) the weakest worker completes 5 tasks per week in 55 hours or less. d) The contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 1.1.3. (e The Contractor shall, through all available community structures, inform the local community of the labour intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and / or who come from households: a) where the head of the household has less than a primary school education; b) that have less than one full time person earning an income; c)where subsistence agriculture is the source of income. d) those who are not in receipt of any social security pension income Required minimum EPWP target will be 30.
A54	Employment demographics The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions: a) 60 % women; b) 55% youth who are between the ages of 18 and 35; and c) 2% on persons with disabilities.

C3.4 CONSTRUCTION

1 STANDARD SPECIFICATIONS C3-153
2 WAYLEAVES, PERMISSIONS AND PERMITS C3-153
3 CONSTRUCTION EQUIPMENT C3-153
4 EXISTING SERVICES C3-153
5 SITE ESTABLISHMENT C3-154
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12 ACCOMMODATION OF TRAFFIC ON PUBLIC ROADS OCCUPIED BY THE CONTRACTOR C3-155
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22 PROJECT SPECIFICATIONS REFERRING TO COLTO STANDARD SPECIFICATIONS . C3-157

1 STANDARD SPECIFICATIONS

The following relevant standardised specifications, as listed below, shall form the Standard Specifications and apply to this contract:

The **COLTO Standard Specifications for Road and Bridge Works for State Road Authorities 1998**, prepared by the Committee of Land Transport Officials, which the Tenderer shall obtain / purchase from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: civilinfo@saice.org.za.

This COLTO Standard Specification may also be inspected, by appointment, at the offices of the Employer and the Consulting Engineers during normal office hours.

STANDARD SPECIFICATIONS

Where reference is made to the standard specifications in this contract, it shall mean the **COLTO Standard Specifications for Road and Bridge Works for State Road Authorities 1998**, prepared by the Committee of Land Transport Officials complete with any corrections and amendments applicable at the time of tendering. Amendments to the standard specifications are bound in the contract documents in Part B: Project Specifications.

2 WAYLEAVES, PERMISSIONS AND PERMITS

The Contractor shall be responsible for obtaining all of the necessary wayleaves, permissions or permits applicable to working near any existing services or other infrastructure on Site, and shall ensure that any wayleaves, permissions or permits obtained by the Employer's Agent prior to the award of the contract are transferred into the Contractor's name.

The Contractor shall abide by any conditions imposed by such wayleaves, permissions or permits.

The Contractor shall ensure that all wayleaves, permissions and permits are kept on site and are available for inspection by the relevant service authorities on demand.

The Contractor shall also ensure that any wayleaves in respect of electricity services are renewed timeously every three months.

3 CONSTRUCTION EQUIPMENT

The Contractor is to provide in the contract for the following plant, but are not limited to:

- Pneumatic rollers (22 ton)
- Steel drum rollers (3,5 and 8 ton)
- TLB
- Tipper trucks (10 m^3)
- Concrete breakers

4 EXISTING SERVICES

The following known services are located on the construction site:

- Telkom
- Municipal Electrical
- Eskom
- Municipal Sewer and Stormwater

It is the Contractor's responsibility to locate, mark, record and protect such services. Service owners must be contacted as per section 2 above. The Contractor will be held responsible for damage to all services, known and unknown, and for specific requirements when working in close proximity to services.

5 SITE ESTABLISHMENT

Services and facilities provided by the Employer

No facilities will be provided for by the Employer for site camp establishment. Requests for permission to occupy land must be made and approved by the relevant land-owner or authority before such land is occupied. The Contractor is to make provision for water, electricity, telecommunication services, ablution facilities, accommodation, medical and first aid facilities, fire protection, back-up generators and any other services as required. The Contractor is to clean and make good the site camp to the same standard or better than the condition they were before the Contractor first made use of them, fair wear and tear excluded. The Contractor will continuously clear and dispose of waste and surplus materials to maintain the site in a tidy state.

The Contractor is provide construction camps and offices for the due and proper fulfilment of the contract and those facilities for use by the Employer and his agents. The facilities will remain the property of the Employer, if paid for under item 1400 of the Project Specifications, unless agreed otherwise.

The location and setting out of the site camps and offices must be approved by the Employer or his agent before establishment commences.

The facilities, site camps and offices may not be located within the road reserve.

6 ALTERATIONS, ADDITIONS, EXTENSIONS AND MODIFICATIONS TO EXISTING WORKS

It's the Contractors responsibility to familiarise himself with the dimensional accuracy, alignment, levels and setting out of existing structures or components and consequently compatible with the proposed works and procedures. The Employer's representative shall be notified if this is not the case.

"The cost of alterations to services necessitated by the construction of the road will be borne by the Employer.

The Contractor shall allow all reasonable access to any authority or department for the purpose of maintaining, laying and/ or altering any service cables or mains during the construction period.

a) Owing to the possible inaccuracy of records of existing services (water mains, electric cables, telephone cables, etc.) the Contractor shall locate by means of specialized

equipment the services that may be affected by this contract prior, to the commencement of excavations.

Payment for the exposure of services by excavation will be on the basis of the tendered rates.

b) The Contractor shall not damage adjoining fences and buildings when depositing spoil and/ or materials. All claims arising from such causes shall be settled by the Contractor. The Contractor shall prevent damage to buildings, fences and other objects in the vicinity of the Works, as a result of the execution of this Contract. The Contractor shall supply and erect shoring, screens, barricades, temporary supports and other items necessary for preventing such damage."

7 INSPECTIONS OF ADJOINING PROPERTIES

As this project entails only working within the existing road reserve which provides and adequate buffer, no detrimental effects are foreseen to any properties within close proximity of the working site. It is however the Contractors responsibility to monitor all operations and ensure that no damage is done to adjoining properties due to construction activities.

8 SURVEY CONTROL AND SETTING OUT OF THE WORKS

It is a specific requirement of this Contract that the Contractor will have to establish his own reference and control beacons for the setting-out and control of the works. The position of the works shall generally be as indicated on the drawings but shall be confirmed on site by the Engineer. Survey work will not be measured and paid for directly and compensation for any work involved in staking or setting out will be deemed to be covered by the rates tendered and paid for the various items of work included in this Contract.

9 SEQUENCE OF THE WORKS

The staging of construction should be planned such that there is minimal that traffic disruption.

10 METHODS AND PROCEDURES

The Contractor shall address the following procedures:

- The Contractor shall submit details of his temporary Works, planned traffic accommodation and all other items required for the Works to the Engineer for review and acceptance.
- The Contractor shall submit to the Engineer samples and test results of all materials to be used in the Works and which are to be supplied by the Contractor. The tests are to be done on dedicated materials earmarked to be incorporated into the works. The Contractor shall request approval for the use of the material from the Engineer before incorporation into the Works. If accepted, the samples so submitted will be kept by the Engineer as standards for the duration of the Contract. No material inferior in quality, workmanship or appearance to the accepted samples shall be used.
- All alternative material not defined herein or COLTO proposed by the Contractor shall be tested for acceptability by the Contractor and the results of the test made available to the Engineer. All such material will then require the approval of the Engineer.
- The costs of all tests shall be borne by the Contractor

11 QUALITY PLANS AND CONTROL

The Contractor shall implement a quality assurance system that replicates an ISO 9001 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 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."

The following must be included in the Quality Management System:

- Quality Plan for the contract
- Quality Policy
- Index of Procedures to be used
- A schedule of internal and external audits during the contract

The Engineer indicates those documents required to be submitted for either information, review or acceptance and the Contractor indicates such requirements within his register of documents. The register shall indicate the dates of issue of the documents with the Engineer responding to documents submitted by the Contractor for review or acceptance within the period for reply prior to such documents being used by the Contractor.

12 ACCOMMODATION OF TRAFFIC ON PUBLIC ROADS OCCUPIED BY THE CONTRACTOR

The Contractor shall submit details of his temporary Works, planned traffic accommodation (road traffic management plans) and all other items required for the Works to the Engineer for review and acceptance.

Construction to be done during the daytime with lane closures in place. The road will accordingly be closed in half widths for the respective section under construction with viable detour routes at intersections. Daytime construction, according to the hours set out under B1204, will be carried out to limit the inconvenience to the road user. The proposed traffic accommodation layout for daytime closures which will be provided to the Contractor, shall form part of the set of drawings.

13 OTHER CONTRACTORS ON SITE

There will be no other contractors on site. Municipal contractors performing emergency roadworks or any other work within the road reserve will have right of way. The Contractor should make adequate provision within his programme to accommodate any delays as a result.

14 TESTING, COMPLETION, COMMISSIONING AND CORRECTION OF DEFECTS

The work to be done by the Completion Date

On or before the Completion Date the Contractor shall have done everything required to provide the Works including the work listed below which is to be done before the Completion Date and in any case before the dates stated. The Engineer cannot certify Completion until all the work listed below has been done and is also free of Defects, which would have, in his opinion, prevented the Employer from using the Works and others from doing their work.

Item of work	To be completed by
As-built drawings of the completed pavement layers and surfacing levels and material results	At least 7 days prior to completion.
Complete process control and acceptance testing results that proves the Works compliance, in accordance with the Provision of Sections 8100, 8200 and 8300 of the COLTO Specifications.	At least 7 days prior to completion
Site snag list Inspection completed by the *Engineer* or his designated representatives.	At least 21 days prior to completion

The Contractor is permitted to carry out the following Works after completion:

- Items identified as snag list items during the Completion Inspection.
- Provision of materials, facilities and samples for tests and inspections.

The Contractor provides the following:

- The Contractor is to provide all materials, facilities and apparatus required for any test and /or inspections required by the Works Information.
- The Contractor is to provide samples as required by the Works Information.

15 RECORDING OF WEATHER

Recording of weather data (temperature, rainfall and wind) is the responsibility of the Contractor and will be agreed with the Engineer. The Contractor shall submit to the Engineer claims for all time lost due to inclement weather within 1 working day of the claim day. A record of inclement weather shall be kept by the Contractor and recorded at site meetings on a regular basis. The onus is on the Contractor to prove these claims.

16 FORMATS OF COMMUNICATIONS

Different types of communications used:

- Site instructions
- Requests for inspections
- Weekly and monthly meetings
- Email correspondence

17 KEY STAFF

The Contractor shall provide an organogram and CVs of his key staff and their line of authority and communication for approval by the Engineer.

18 MANAGEMENT MEETINGS

The Contractor shall attend management meetings at the Engineer's request. It is envisaged that at least monthly contract management meetings will be held.

The Contractor will also be required to attend a safety meeting once a month. The Contractor will also attend a kick-off meeting and a close off meeting. The Contractor will be required to present all relevant information including early warnings of compensation events (claims), quality plans, schedules, (including progress), subcontractor management, and health, environmental and safety issues at such meetings.

All meetings are to be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register are not to be used for the purposes of confirming actions or instructions under the contract as these are to be done separately by the person identified in the conditions of contract to carry out such actions or instructions.

19 FORMS FOR CONTRACT ADMINISTRATION

Forms for contract administration will be supplied by the Contractor for approval before the Works commence.

20 ELECTRONIC PAYMENT

Contractors invoices:

- The Contractor is paid by electronic bank transfer within the period stated in the Contract Document for performance of work.
- The Contractor provides the Employer with his correct banking information to make the transfer.

- All payments are provisional and subject to audit.
- The Contractor preserves its records for such a period as the Department of Internal Revenue may require, but in any event for not less than five years.

21 DAILY RECORDS

The Contractor shall keep detailed daily records of all his personnel and plant engaged on Site and the working areas (including subcontractors) with access to such daily records being available for inspection by the Engineer at all reasonable times.

A daily site diary will be kept by the Contractor which will be signed off by the Engineer's Representative. The diary will include the following: plant on site, weather data, site instructions, personnel on Site, drawings received, progress, production, main activities and incidents on Site.

22 PROJECT SPECIFICATIONS REFERRING TO COLTO STANDARD SPECIFICATIONS

Amendments to the standard specifications are included in this Section: Project Specifications.

(i) The Project Specifications form an integral part of the contract documents and supplement the standard specifications.

(ii) In the event of any discrepancy between the Project Specifications and a part of the standard specifications, the schedule of quantities, or the Drawings, the Project Specifications shall take precedence.

(iii) The standard specifications, which form part of this contract, have been written to cover all phases of work normally required for road contracts, and they may therefore cover items not applicable to this particular contract.

In certain clauses the standard specifications allow a choice to be specified in the Project Specifications between alternative materials or methods of construction and for additional requirements to be specified to suit a particular contract. Details of such alternatives or additional requirements applicable to this contract are contained in this part of the Project Specifications. It also contains some additional specifications required for this particular contract.

The number of each clause and each payment item in this part of the Project Specifications consists of the prefix B followed by a number corresponding to the number of the relevant clause or payment item in the standard specifications. The number of a new clause or a payment item which does not form part of a clause or a payment item in the standard specifications and which is included here, is also prefixed by B followed by a new number. The new numbers follow on the last clause or item number used in the relevant section of the standard specifications.

PART B: PROJECT SPECIFICATIONS RELATING TO STANDARD SPECIFICATIONS

The number of each clause and each payment item in this part of the project specifications consists of the prefix B followed by a number corresponding to the number of the relevant clause or payment item in the standard specifications. The number of a new clause or a new payment item, which does not form part of a clause or a payment item in the standard specifications and is included here, is also prefixed by B followed by a new number. The new numbers follow on the last clause or item number used in the relevant section of the standard specifications.

Clauses and pay items referring to labour intensive methods are prefixed by L in the project specifications. Clauses and pay items referring to emerging contractors are prefixed by E in the project specifications. As much as is economically feasible all work shall be implemented by employing Labour Intensive Construction methods. Over and above the normal Building and Allied works to be implemented by employing skilled and unskilled labour the works specified in the “Guidelines for the Implementation of Labour-Intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP)” shall be undertaken using Labour Intensive Construction methods.

The standard specifications that form part of this contract have been written to cover all phases of work normally required for road contracts, and may therefore cover items of work not applicable to this particular contract.

PROJECT SPECIFICATIONS REFERRING TO COLTO STANDARD SPECIFICATIONS

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COLTO SERIES 1000: GENERAL

SECTION B1100 : DEFINITIONS AND TERMS

B1115 GENERAL CONDITIONS OF CONTRACT

Replace Clause 1115 with the following:

The General Conditions of Contract for Construction Works (2ND Edition) 2015 published by the South African Institute of Civil Engineering, together with the Special Conditions of Contract form part of the contract.

All references in the COLTO Standard Specifications for Road and Bridge Works are to the COLTO General Conditions of Contract for Road and Bridge Works for State Road Authorities. Consequently, all references in the COLTO Standard Specifications have to be amended accordingly to reflect the appropriate General Conditions of the Contract relevant for the Contract. The COLTO Standard Specifications have been scrutinized and the clauses, which refer to the COLTO General Conditions of Contract, identified. Each COLTO clause reference is tabulated in Table 1115/1 below (context of reference is also given) together with the relevant equivalent clause in the SAICE General Conditions of Contract for Construction Works applicable for this contract.

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 SAICE General Conditions of Contract for Construction Works, as amended by the Special Conditions of Contract in the Contract Data, shall apply and the Contractor shall be responsible for the interpretation of the equivalent clause

TABLE 1115/1: REFERENCES IN COLTO STANDARD SPECIFICATIONS TO THE COLTO GENERAL CONDITIONS OF CONTRACT AND RELEVANT SAICE GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS 2010

COLTO Standard Specification		COLTO General Conditions of Contract 1998 (GCC)		SAICE General Conditions of Contract for Construction Works 2nd Edition 2015	
Clause No	Page No	Clause No	Description or Reference	Clause No	Description or Reference
1115	1100-2		Definition of GCC		Definition of SAICE
1204	1200-2	15	Construction programme	5.6	Programme of the Works
1204	1200-2		General reference to GCC		Applicable to SAICE
1206	1200-3	14	Setting out of works		Omitted
1209(a)	1200-4		General references to GCC		Applicable to SAICE
1209(e)	1200-5	52(2)	Valuation of material brought onto site	6.10.2	Valuation of material brought onto site
1210	1200-5	54	Certificate of practical completion	5.14	Certificate of Practical Completion
1212(1)	1200-7	49 (2)	CPA on alternative designs	6.8.2	CPA on alternative designs
1215	1200-9	45	Extension of time for completion due to abnormal rainfall.	5.12r	Extension of time for completion due to abnormal rainfall.
1217	1200-10	35	Care of the works	8.2	Care of the works
1303(ii)	1300-1		General reference to GCC		Applicable to SAICE
1303(iii)	1300-1	49	Price adjustment Item 13.01 (a)	6.8	Price adjustment Item 13.01 (a)

1303 (iii)	1300-2	49	Price adjustment Item 13.01 (b)	6.8	Price adjustment Item 13.01 (b)
1303 (iii) 1303 (iii)	1300-1 1300-2	53 53	Variations exceeding 20% Variations exceeding 20%	6.11	Variations exceeding 15% Variations exceeding 15%
1303	1300-2	12	Payment Item 13.01 (c)	5.2	Commencement of the Works
1303	1300-2	45	Payment Item 13.01 (c)	5.12	Payment Item 13.01 (c)
1403(c) (ii)	1400-4	40 (1)	Variation for rented accommodation	6.4	Variation for rented accommodation
1505	1500-3	40 (1)	Variation for temporary drainage	6.4	Variation for temporary drainage
Item 15.08	1500-8	48	Payment of Provisional Sum	6.6	Payment of Provisional Sum
Item 15.09	1500/8	48	Payment of Provisional Sum	6.6	Payment of Provisional Sum
COLTO Standard Specification		**COLTO General Conditions of Contract 1998 (GCC)**		**SAICE General Conditions of Contract for Construction Works 2nd Edition 2015**	
Item 15.11	1500-8	48	Payment of Provisional Sum	6.6	Payment of Provisional Sum
Note (2)	3100-4	40	Payment for prospecting for materials	6.5.2	Payment for prospecting for materials
3204(b) (iii)	3200-2	40	Payment for oversize material	6.5.237	Payment for oversize material
3303(b)	3300-2	2	Engineer's decisions, with reference to materials classification	3.1	Engineer's decisions, with reference to materials classification
Item 44.06	4400-3		General reference to GCC, PC Sums	6.6.2	Prime Cost Sums
Item 45.06	4500-3		General reference to GCC, PC Sums	6.6.2	Prime Cost Sums
5803 (c)	5800-3	40	Variation, for landscaping	6.4	Variation, for landscaping
5805 (d)	5800-4	40	Variation, for grassing	6.4	Variation, for grassing
Item 58.10	5800-10	48	Payment for Extra Work	6.4	Payment for Extra Work
8103 (c)	8100-1	40	Variation, for testing material	6.4	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	5.15	Clearance of site on completion, with reference to core drilling

The relevant definitions of the SAICE General Conditions of Contract (First Edition) 2004 shall apply to the contract with the following reference to the terms used in the COLTO Standard Specifications:

SAICE General Conditions of Contract (2nd Edition) 2015 : Subclause 1.1 Definitions

Replace Subclause 1.1.1.2 with the following:

"1.1.1.2 "**Bill of Quantities**" means the Schedule of Quantities document so designated in, and forming part of, the Tender. The Schedule of Quantities forms part of the Pricing Data that lists the items of work and the quantities and rates associated with each item to allow the Contractor to be paid at regular intervals an amount equal to the agreed rate for the work multiplied by the quantity of work completed."

Replace Subclause 1.1.1.4 with the following:

"1.1.1.4 "**Contract Data**" means the specific data in the document so designated in, and forming part of, the Tender. The Contract Data together with the General Conditions of Contract and the Special Conditions of Contract, collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract."

Replace Subclause 1.1.1.25 with the following:

"1.1.1.25 "**Pricing Data**" means the document that contains the Schedule of Quantities and provides

the criteria and assumptions which it will be assumed in the Contract that were taken into account by the Contractor when developing his prices."

Replace Subclause 1.1.1.28 with the following:

"1.1.1.28 "**Scope of Work**" means the document(s) containing the Works Specifications (Standard Specifications, the Project Specifications and other documents) and the Drawings, that specifies and describes the Works, which are to be provided, and any other requirements and constraints relating to the manner in which the work is to be performed."

Add the following new Definitions:

"1.1.1.37 "**Project Specifications**" means any specifications appearing under this heading and forming part of the Contract, and containing any amendments to, omissions from or additions to the Standard Specifications that may be required in connection with a specific project."

"1.1.1.38 "**Special Conditions**" means any addition to, departure from or amendment of the General Conditions of Contract as set out in the Contract Data forming part of the Tender Documents."

"1.1.1.39 "**Works Specifications**" means all specifications forming part of the Contract whether they appear in the Standard Specifications, the Project Specifications or on the Drawings, or be they instructions given to the Contractor, or any other specifications referred to in the above-mentioned Specifications."

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))"

B1158 SANS SPECIFICATIONS

Where reference is made in this specification or the standard specifications to SANS specifications, the latest published national standard shall be applicable. Use:

All TMH1 test methods are currently being revised and translated into SANS methods. To check the latest situation regarding publication, go to

www.sabs.co.za and find the Web Store page.

Under "Quick Search Criteria" enter "3001" to get a list of methods published to date.

B1159 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:

Aggregate size	New aggregate size
26,5	28
19	20
13,2	14
9,5	10
6,7	7
4,75	5
2,36	2
1,18	1

SECTION B1200 : GENERAL REQUIREMENTS AND PROVISIONS

B1201 SERVICES

Add the following after the first paragraph of Clause 1201 of the Specifications:

"Various types of services, both overhead and underground, exist within the boundaries of the site. It is not envisaged that it will be necessary for the Contractor to arrange for the removal, relocation or protection of existing services. Should any work become necessary due to unforeseen circumstances then all work shall be done strictly in accordance with the requirements of the relevant service owner and in accordance with the requirements of these Project Specifications and the Standard Specifications where applicable."

Add the following after the sixth paragraph of Clause 1201 of the Specifications:

"The Contractor's attention is drawn to the relevant clauses of the General and Special Conditions of Contract regarding liability for damage to the works, or property, or injury to persons arising from the construction of the works. His attention is also drawn to Clause 8.6 of the General Conditions of Contract regarding insurance to be effected by the Contractor. Special attention is drawn to the exclusions in this insurance policy and particularly to the exclusions regarding consequential damage."

Add the following after the eighth paragraph of Clause 1201 of the Specifications:

"Unless otherwise specified or ordered, the Contractor shall not execute any alterations to existing services. Generally the Engineer will instruct the Contractor to arrange for the relevant service authority owner to move, relocate and reinstate or protect their own services interfering with the works. Where the service authority owner carries out any service alterations or protective measures as instructed, the Contractor shall co-operate with and allow such authority reasonable access and sufficient space and time to execute the required work. Location of services using specialised detection equipment, protection, relocation and/or reinstatement of existing services shall be measured and paid for under this Section 1200 of the Schedule of Quantities. Excavation and backfilling for exposing and locating existing services shall be paid for under Section 2200."

Add the following after the ninth paragraph of Clause 1201of the Specifications:

"Should any work become necessary due to unforeseen circumstances then all work shall be done strictly in accordance with the requirements of the relevant service owner and in terms of the Specifications. This clause shall in no way relieve the Contractor of his responsibilities for existing services. Payment for such work shall be determined according to Subclause 6.4 or 6.5 of the General Conditions of Contract as authorised by the Engineer."

Add the following:

"WAYLEAVES, PERMISSIONS AND PERMITS

The Contractor shall be responsible for obtaining all of the necessary wayleaves, permissions or permits applicable to working near any existing services or other infrastructure on Site, and shall ensure that any wayleaves, permissions or permits obtained by the Employer's Agent prior to the award of the contract are transferred into the Contractor's name.

The Contractor shall abide by any conditions imposed by such wayleaves, permissions or permits.

The Contractor shall ensure that all wayleaves, permissions and permits are kept on Site and are available for inspection by the relevant service authorities on demand.

The Contractor shall also ensure that any wayleaves in respect of electricity services are renewed timeously every three months.

EXISTING SERVICES

During the period of time allowed for the commencement of work in terms of Clause 5.3.1 of the General Conditions of Contract and before commencing work on site the Contractor shall confer with all authorities and departments concerned regarding all services both overhead and underground affected by the works. At such conferences, which will be convened by the Engineer's Representative, the Contractor shall satisfy them self that he has obtained all the information regarding existing services that he needs to complete the Contract. The Contractor will also be informed which existing services, if any, will be altered in any way and whether it is proposed to lay any new services during the period of the Contract, and a schedule of operations, insofar as the services are concerned, shall be drawn up and agreed upon. No work shall be started until such schedule of operations has been agreed upon.

The Contractor shall carry out the works with the minimum interference to existing services. He shall co-operate with all Authorities and Departments concerned and he shall be solely responsible for carrying out the following operations and checks:

(1) He shall inform all Authorities and Departments in good time before the correct stage of the construction is reached for the laying and/or relaying of any particular services.

(2) He shall set out the lines and levels of kerbs, pipes, culverts and any other necessary features of the Contract in order that Authorities and Departments are able to lay and/or relay services correctly.

It shall be clearly understood that obtaining the necessary wayleaves and any extra work, such as the removal of any portion of the Works already executed either by the Contractor or other Authority or Department and its subsequent re-execution, which is caused by the Contractor's failure to observe and carry out his responsibilities as specified, will be at his own cost.

If the Contractor considers that the progress of the works is being retarded by the failure of any Authority or Department to lay, remove or divert pipes, ducts, services, cables or poles within a reasonable time, he shall immediately notify the Engineer in writing, stating clearly the number of days of delay claimed. The Engineer will then decide whether such a claim is justifiable, and in the event of the claim being accepted he will hand to the Contractor a certificate stating clearly the number of days of delay sanctioned.

The cost of repairing any damage to services, due to miscalculations or negligence on the part of the Contractor or his failure to carry out the duties set out in this Clause, shall be borne by the Contractor.

(a) Protection of overhead and underground services

The Employer has endeavoured to locate all services and sub-surface obstructions likely to be affected by the work, based on available records and surveys and have been shown on the drawings. These will be indicated to the Contractor prior to the commencement of works in the wayleaves obtained. Although every care has been exercised in the presentation of the available data, the Employer cannot and does not vouch for the accuracy or completeness of the information shown. Whenever the Contractor deems it necessary to determine the exact location of an existing service or obstruction, he shall, at his own expense, make any examination that he may consider desirable in advance of the work, and the Employer does not accept any liability for loss, damage or delay to the Contractor as a result of the non-location or inaccurate location of services or obstructions.

Where no underground services are shown on the drawings or scheduled, but the possibility of their presence can be reasonably inferred, the Contractor shall in collaboration with the Engineer, search for such services to establish their positions well in advance of the work. A full report shall then be submitted in good time to the Engineer, to enable the necessary arrangements for the protection, removal or diversion of the services before work is commenced in their vicinity.

In the event of damage to existing services, the Contractor shall take such immediate action as is necessary to prevent further damage or danger to life or property and shall immediately notify the Engineer who will issue instructions as to the necessary repairs or protective measures to be taken. The cost thereof shall be borne by the Contractor irrespective of whether the repairs or protective measures were carried out by him or by or on behalf of the service authority or department concerned.

As soon as an underground service not previously indicated by the service provider or the Engineer is discovered, it shall be deemed to be a known service and the Contractor will be held responsible for any subsequent damage to it. If such service is damaged during the course of its discovery, the Contractor will be reimbursed for the cost of making good such damage, unless it is established by the Engineer that the Contractor did not exercise reasonable diligence and care and that the damage was avoidable.

(b) Existing services

"Existing service" shall include any service which has been temporarily taken out of service to allow for the execution of the works or which has been taken out of service as a result of an event which necessitated the execution of the works.

(c) Condition of existing services

The Contractor acknowledges that he has inspected and examined all known existing services and all existing services subsequently discovered, as contemplated in (a) above and is satisfied that all such services were in an acceptable and serviceable state at the commencement of the works, alternatively, upon discovery thereof as contemplated in (a) above.

In the event of a dispute as to the acceptability and/or serviceability of an existing service at the commencement of the works or upon the discovery of such service, the Contractor shall bear the onus of proving that the service in question was not in an acceptable and/or serviceable state at the commencement of the works.

(d) Maintenance, protection and relocation of existing services

During the course of the works, all existing services including traffic signals, watermains, sewers and stormwater reticulation, electricity transmission and telephone lines, cables, poles and conduits whether in service or not shall be protected, supported and maintained to the satisfaction of the service authority or department concerned and the Engineer. The Contractor shall bear all costs in this regard.

When the Contractor details his programme of work in his Contract Programme, he shall, in consultation with the Engineer, clearly indicate when he will require the relevant service department or authority to start with the disconnection of the services and when the services can be reinstated.

Where a bank of underground ducts, cables, etc are crossed over a distance of less than 1.0m they shall be regarded as a single crossing. Hydrants under pressure, watermain valve covers and manholes shall be kept unobstructed and accessible at all times.

Where the existing stormwater system is affected by the roadworks, drainage pipes and structures will have to be upgraded, adapted or demolished and new drainage pipes and structures constructed.

The covers and frames of service manholes and catchpits will have to be adjusted where they are affected by the roadworks.

(e) Work in close proximity to existing services

The Contractor shall note that no mechanical excavators or vibratory type compactors may be used within three (3) metres of any telecommunications or electrical services. No pegs or stakes shall be driven into the ground in the vicinity of underground services unless their exact positions have been determined.

The Contractor’s attention is drawn to the following with regard to work done in the proximity of ESKOM and other electrical services:

<u>MACHINERY AND OCCUPATIONAL SAFETY ACT (Act No 6 of 1983) WITH REGULATIONS</u> D16 (7) Excavations
"The builder or excavator shall ascertain as far as practicable the location and nature of underground services likely to be affected by the excavation and take such steps as may be necessary to prevent danger to persons."

THE ELECTRICITY ACT (Act No 40 of 1958)
Section 51(3) : Offences and Penalties
"Any person who without legal right (the proof of which shall be upon him) cuts or damages or interferes with any apparatus for generating, transmitting or distributing electricity, shall be guilty of an offence and liable on conviction to a fine not exceeding R1 000,00 or to imprisonment for a period not exceeding twelve months."

The Contractor shall take the above into account in the drawing up of his construction programme and in the calculation of his tendered rates, and shall note that no additional payment or compensation will be allowed for any additional costs or delays incurred as a result of compliance with these regulations, except as measured and paid under the Items listed in the Schedule of Quantities.

The Contractor shall allow all reasonable access to the representatives of any Authority or Department for the purpose of maintaining, laying and/or relaying any services, cables or mains during the period of the Contract.

Permanent alterations to existing services ordered in writing by the Engineer, and for which no separate provision has been made in the Bill of Quantities, will be paid for under dayworks if required."

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) The majority of the work to be done on this project will be done during the day between sunrise and sunset. Lane closures must be removed after the works, except for permanent closures.

ii) All special non-working days defined in the Contract Data.

iii) The expected delays defined in B1215: Extension of time resulting from inclement weather as a terminal float.

iv) The following embargo hours and days will be applicable for this contract:

1. The contract period will not exceed 12 months Works including all preliminary obligations.
2. Allowance should be made for the SAFCEC scheduled December break and for a day before/after and during the Easter Weekend of 2024 for which no extra time will be granted.
3. All major events, e.g. etc., as instructed by the Engineer shall be considered nonworking times.

v) The following restricted working conditions:

1. During the Contractor's annual shutdown period in December and January, the Contractor shall ensure unobstructed traffic flow within the contract limits.
2. Work may only proceed behind barricaded-off working areas, where working areas are subject to specified rules.
3. The public traffic shall be disrupted as little as possible. Closure of lanes over certain time periods will not be allowed.
4. There are weather limitations during which no asphalt work may be possible. Special allowance must be made for other cold days outside this period (refer to table B1215/1)
5. Closures lengths should be limited to the length of road that can be milled and replaced in one day and re-opened to traffic that afternoon.

vi) Meeting the requirements of the Environmental Management Plan (EMPi).

vii) The time needed for preparation and approval of the various mix designs (approximately 6 weeks) specified in the relevant construction sections of the Scope of Works.

viii) Noise emission as a result of construction activity during night-time should be limited as far as possible. The construction programme should be programmed in such a way that loud construction equipment such as jackhammers, saw cutting machines etc are not used between 23:00 – 07:00 unless approved by the Engineer. Additionally, adequate time should be allowed for in the programme for obtaining relevant work permits, noise exemption permits and wayleaves.

ix) Five weeks shall be allowed for in the programme to resolve and obtain approvals as defined in Clause 5.3.1 item (j).”

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 General Conditions of Contract for Construction Works, 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) Monthly cashflow projections.
(vi) Key dates in respect of information required or due delivery.”
(vii) The Contractor’s payment weekends
(viii) 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.”

The Contractor shall base his initial / preliminary programme of work submitted with his tender on the Scope of Work as described in the project specification and the schedule of quantities. If an alternative contract period is offered, the Contractor shall submit a separate programme with the alternative tender.

Insert the following paragraphs:

e) Limitations

The Contractor shall take into account the following when drawing up his construction programme:

(1) Working time: This will be a daytime working project with most of the Scope of Work to be carried out during the day. Refer to B1201(a)(i) defining specific working hours:

(2) Construction limitations

Requirements for safety and accommodation of traffic as set out in the Project Specifications shall be strictly enforced. Traffic shall be accommodated on the existing surfaced carriageway and shoulders. No bypasses or temporary deviations shall be constructed. Accommodation of traffic will

generally be carried out by closing off a shoulder and/or one lane of traffic at a time and accommodating the traffic on the other lane(s). Details of lane closures during the various stages of work, are indicated in the Specifications and/or shown on the various traffic accommodation drawings included in Volume 4 : Drawings.

(3) Other contracts

In accordance with Clause 4.9 of the general conditions of contract, the Contractor shall note and make do allowance for reasonable access to and for the adjacent operations of these other contractors on the site of the works. The Contractor will be required to liaise with these contractors / Engineer to discuss and ensure that their adjacent operational requirements and activities will interface and are catered for in programming of the work."

B1205 WORKMANSHIP AND QUALITY CONTROL

Replace the third paragraph with the following:

"The Contractor shall determine his own frequencies at which quality or process control tests are to be undertaken. The Engineer will, however, undertake all acceptance control tests for the judgment of workmanship and quality of products."

Add the following at the end of this clause:

"The Engineer shall, for the purpose of acceptance control on products and workmanship, assess test results and measurements in accordance with the provisions of Section 8200 of the standard specifications (quality control scheme 1). Where small quantities of work are involved, a lot shall mean a full day's production for a specific item of work subject to acceptance control testing."

B1206 THE SETTING OUT OF THE WORK AND PROTECTION OF BEACONS

Add the following after the first paragraph:

"It is a specific requirement of this Contract that the Contractor will have to establish his own reference and control beacons for the setting-out and control of the works. The position of the works shall generally be as indicated on the drawings but shall be confirmed on Site by the Engineer. Survey work will not be measured and paid for directly and compensation for any work involved in staking or setting out will be deemed to be covered by the rates tendered and paid for the various items of work included in this contract."

Add the following at the end of the fourth paragraph:

"Road markings, particularly road junction / intersection lines, the divergent/convergent lines of ramp at 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 reinstatement before any work commences that will obliterate the existing markings."

Add the following to this clause:

"On award of the project, the Contractor shall establish reference beacons, and/or other reference systems for the adequate control of his work and shall carry out a survey at 10 m intervals consisting of X,Y and Z coordinates as follows:

- Pedestian sidewalk, 1.5 m from edge of surfacing
- Edge of surfacing on the LHS and RHS of the road (either kerb/channel edge and face of kerb or start of gravel shoulder),
- The LHS and RHS yellow lines, or the centre of the L and RH lanes where there is no yellow line,
- The centre line of the road
- Existing line marking shall also be referenced

All survey shall be done in accordance with COLTO: Standard Survey Methods – TMH 11: 2012 and levels (Z) shall not be measured using a GPS device. The Survey Accuracy given in the table below shall apply.

Feature	Horizontal Accuracy	Vertical Fixing Accuracy
Kerbing and edge of asphalt	50 mm	10 mm
Road surface (Seal / Asphalt)	50 mm	10 mm

The survey shall be given to the Engineer within two (2) weeks of award in order to determine new design centreline levels. It shall be the Contractor's responsibility to maintain and protect all marker posts and reference beacons.

Setting out of the final lane markings and signage must be done identically to the existing lanes and signage, unless otherwise instructed and shall be checked and agreed to by the Engineer's Representative in writing before final application.

The Contractor shall be responsible for establishing the necessary beacons and recording the precise signage and road marking detail and positions thereof laterally across the road, especially around curves and it will be the Contractor's responsibility to ensure the accuracy thereof and to derive co-ordinates etc for later setting out purposes."

No separate payment will be made for any setting-out, the providing of permanent beacons and reference pegs, staking, detail surveys, taking cross sections, checking benchmarks, referencing existing road markings or any work described in this clause."

Add the following after the eighth paragraph:

"The Contractor shall reference all road markings to allow for the reinstatement thereof after completion of the sections of road reconstruction, surfaced and/or sealed under this contract. Separate payment will be made under Section 5700 of these specifications for the referencing of the existing road marking features of the road as required."

Add the following paragraph:

"The Contractor shall take care that property beacons, trigonometrically survey beacons or settingout beacons are not displaced or destroyed without the consent of the engineer. Property beacons and trigonometrically 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.

All Town Survey Marks (TSMs) encountered on the project are to be reported to Mr George Lucas (george.lucas@capetown.gov.za) immediately upon discovery."

B1207 NOTICES, SIGNS AND ADVERTISEMENTS

Delete the final paragraph and replace with the following:

All signboards erected in accordance with the drawings or as approved advertisements for the Contractors establishment, shall be removed at the same time as the Contractors disestablishment. Payment under sub-item B13.01 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:

"No value added tax shall be included in the Contractor's tendered rates or amounts. Payment of value added tax (VAT) shall be made under a separate item in the Summary of Schedule(s) in C2.2 Bill of Quantities in C2 Pricing Data."

(c) The meanings of certain phrases in payment clauses

(i) Procuring and furnishing (material)

Add the following:

"Payment for procuring and furnishing material from commercial sources shall include for all transport costs, irrespective of distance hauled."

Add the following new subclauses:
"

(g) Work in confined areas

Except where provided for in the Specification **and** the Bill / Schedule of Quantities in the Pricing Data no extra payment shall be made nor shall any claim for additional payment be considered for construction in confined areas. The omission of standard pay items from the Bill / Schedule of Quantities shall be taken to be deliberate and any additional costs incurred shall be included in the bulk rate.

(h) Rates to remain unchanged when Scope of Work changes

Dependent on the rates and prices offered in the Bill / Schedule of Quantities in the Pricing Data, the Employer intends to increase or reduce the Scope of Work to match the budget allowed for this project. To this end the Contractor has been provided the opportunity to price separately for unit rates of work and the establishment of major plant. The value of such increase or reduction in the Scope of Works shall not give cause for the Contractor to vary the offered rates and prices, which shall remain final and binding for the duration of the contract, provided that:

(i) Notification of the change to the Scope of Work is given in writing within 28 days of the tender closing date.

(ii) The value of the increase or reduction in the Scope of Work does not alter the tendered sum by more than 15%."

(i) Trade names

Where materials are specified under trade names, tenders must be based on these materials. Equivalent materials may be submitted as alternative tender offers in the tender and the Engineer may, after receipt of tenders, approve the use of equivalent materials.

(j) Payment Certificates

With reference to Clause 6.10.1 of the General Conditions of Contract, the Contractor shall, at his own expense, submit to the Engineer three sets of A4-sized paper copies of the monthly statement for payment."

B1210 CERTIFICATE OF PRACTICAL COMPLETION OF THE WORKS

Add the following to subclause (e) before the semicolon:

"(including road studs)"

Add the following paragraphs after item (h):

"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 practical completion certificates for portions of the works. The use of any completed roadway or portions of the work, whether for unhindered use by the public or for accommodation of

traffic while other portions are being constructed, shall not constitute use or occupation by the Employer.

In addition to the listed specified items of work and regardless of the degree of beneficial occupation by the Employer, the Works shall be considered for practical completion only if the following criteria also have been met:

(i) The estimated cost to complete the 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 list of outstanding items of work can be completed within 28 days of the list having been accepted in writing by the Contractor.
(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 and Energy Affairs 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."

B1211 TRAFFIC OVER COMPLETED PAVEMENT LAYERS

Add the following:

"It is a specific requirement of this contract that traffic will have to be accommodated on completed pavement layers on certain road sections during peak hours and overnight. The final decision regarding the timing of opening of the completed pavement layers to traffic shall rest with the Engineer. Repair work required to the completed pavement layers shall be included in the rates for accommodation of traffic and no additional payment will be made for work required to repair damage.

Completed asphalt surfacing shall not be opened to traffic until the asphalt has sufficiently cooled. The Contractor shall not allow construction equipment or public traffic, which is likely to cause damage, over the completed asphalt surfacing."

B1214 CONTRACTOR'S ACTIVITIES IN RESPECT OF PROPERTY OUTSIDE THE ROAD RESERVE AND OF SERVICES MOVED, DAMAGED OR ALTERED

Under subclause (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 subclauses under subclause (e):

"(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 adhesion to the terms of the agreements.

(viii) Adherence to the principles of the environmental management plan and legal obligations.

B1215 EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL

Delete the entire clause and replace with the following:

"For the purposes of calculating an extension of time due to climatic conditions in terms of Clause 5.12.2 as amended of the General Conditions of Contract, the number of days in excess of the

number of working days anticipated to be lost due to climatic conditions shown in Table B1215/1 shall be taken into account:

Table B1215/1 Anticipated days lost due to normal climatic conditions

Month	"n" Working Days	Month	"n" Working Days
January	2	July	4
February	2	August	4
March	2	September	4
April	2	October	2
May	2	November	2
June	4	December	2

The Engineer will certify a day lost due to climatic conditions only if:

- no work on the critical path according to the latest approved programme for completion of the works could be carried out during that specific working day or if
- only 30% or less of the work force and plant planned for that specific day, could work.

The extension of time as a result of climatic conditions will be calculated monthly as being equal to the absolute value of number of days certified by the Engineer as lost due to climatic conditions, less the number of days in Table B1215/1.

The total extension for the contract will be the sum of the monthly extensions. Extension of time for six-day working weeks and parts of a month shall be calculated pro rata.

The Contractor shall submit to the Engineer claims for all time lost due to inclement weather within 1 working day of the claim day. A record of inclement weather shall be kept by the Contractor and recorded at site meetings on a regular basis. The onus is on the Contractor to prove these claims."

B1216 INFORMATION FURNISHED BY THE EMPLOYER

Add the following after the second paragraph:

"Drawings and quantities regarding the distribution and extent of repair work items were compiled and calculated to the best of the Engineer's knowledge and available information at the time of the design and could be subject to significant variations at the construction stage. Such variations shall, however, not form grounds for a claim by the Contractor in terms of Clause 6.3: Variations of the General Conditions of Contract."

B1217 PROTECTION OF THE WORKS AND REQUIREMENTS TO BE MET BEFORE CONSTRUCTION OF NEW WORK ON TOP OF COMPLETED WORK IS COMMENCED

Add the following:

"(h) Prior to the start of any excavation in the existing pavements on any part of the works, the Contractor shall submit to the Engineer for approval a method statement for the execution of that part of the work. The Contractor is responsible for the protection of the underlying pavement layers and the drying out and/or keeping dry of such excavations. The Contractor's program shall make provision for the speedy backfilling of the excavations and the drainage thereof if inundation cannot be prevented.

The Contractor shall at his own cost be responsible for the repair of pavement layers, which have been damaged due to his own works or his neglect to submit his planning to the Engineer for approval or to adhere to approved precautionary measures.

(i) Concrete elements adjoining the road, which is designated for resurfacing, shall be covered with protective material prior to any spraying operations to prevent the concrete from being stained with bituminous binder. The protection of concrete elements shall be to the Engineer's satisfaction and no additional payment will be applicable for taking the specified protection measures.

(j) Manholes and catchpits are to be adequately closed and protected immediately before milling works commence, and opened and cleaned if necessary immediately after asphalt works are complete."

B1219 WATER

Add the following:

"The Contractor shall make the necessary arrangements and connections for the provision of water required by him for the execution of the works."

B1224 THE HANDING-OVER OF THE ROAD RESERVE

Add the following:

Upon being given access to the site the Contractor shall immediately assume responsibility for the road reserve within the limits of this contract as set out in the specifications.

Prior to the commencement of work the Contractor and the Engineer shall together carry out a joint inspection of the road section. During such an inspection, notes shall be made of all damaged fences, guardrails, signs and any other notable problems or features that exist at the time of gaining access or hand-over. The following matters should be agreed at the time of handing-over:

(1) The limits, lengths, widths and areas of construction.
(2) The location of kilometre markers and reference beacons
(3) The scope of remedial / repair or preparatory work measures (patching, crack sealing, etc.) to be executed by the Contractor
(4) The location of stockpile areas and the responsibilities of the Contractor with regard to the road reserve area and the stockpile sites (fencing, re-establishment, height of stockpile, etc.).
(5) The method of accommodation of public traffic with regard to safety, sight distances, interference with existing road signs and road markings both within the work area and providing advance warning before the work area.
(6) The method of construction and supervisory control measures
(7) The protection of existing bridge joints, concrete kerbs/channels, rumble strips and road studs where necessary.

B1229 SANS CEMENT SPECIFICATIONS

Add the following to this clause:

"All cement used during construction shall comply with SANS 50197-1 specifications for cement. Where reference is made in this specification or the standard specifications to the cement specifications, e.g. SABS 471: Portland cement and rapid hardening Portland cement, it shall be replaced with the new specification:

SANS 50197-1 "Cement compositions, specifications and conformity criteria Part 1: Common cements".

On this contract CEM II B-L 32.5 MPa or CEM II B -M 32.5 MPa shall be used. All cement products on Site shall conform to the specification and shall bear the inspection seal or brand mark of the SABS (South African Bureau of Standards)."

Add the following new clauses:

B1230 SANS BITUMEN SPECIFICATIONS

Where reference is made in this specification or the standard specifications to the SABS / SANS bitumen specifications, the following new SANS specification shall apply:

SANS 4001-BT1:2014 - Penetration Grade Bitumen's
SANS 4001-BT2:2012 - Cutback Bitumen
SANS 4001-BT3:2014 - Anionic Bitumen Road Emulsion
SANS 4001-BT4:2014 - Cationic Bitumen Road Emulsion

SANS 4001-BT5:2014 - Inverted Bitumen Emulsion
Technical Guideline 1 (TG1) – The use of Modified Bituminous Binders in Road Construction – 3rd Edition, November 2020

B1231 MATERIALS

(a) SABS Compliance

All products used on this contract shall, where a SANS specification exists for such product, conform to the specification and shall bear the inspection seal or brand mark of the SABS (South African Bureau of Standards). Materials that are SABS "compliant" but have not been approved with the SABS brand mark shall not be accepted."

Where proprietary products have been specified, similar products may be used subject to the prior written approval of the Engineer.

Unless otherwise specified, all proprietary materials shall be used and placed in strict accordance with the relevant manufacturer's current published instructions.

Unless anything to the contrary is specified, all manufactured articles or materials supplied by the Contractor for the permanent works shall be unused.

Earth, stone, gravel, sand, and all other materials excavated or present on the Site or in borrow areas provided by the Employer 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. 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.

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.

No materials to be included in the works shall 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.

(a) Ordering of Materials

Immediately upon his Tender being accepted, the Contractor shall order materials which are in short supply or for which the delivery period may be long.

The quantities set out in the Schedule of Quantities have been determined from calculations based on data available at the time and should therefore be considered to be only approximate quantities. The Contractor shall therefore, before ordering materials of any kind, check with the Engineer the quantities required. No liability or responsibility whatsoever shall attach to the Employer for materials ordered by the Contractor except if they have been ordered in accordance with written confirmation issued by the Engineer.

B1232 SAFETY

The Contractor shall at all times observe adequate safety precautions on Site to ensure the safety of his own staff as well as that of the public and other persons engaged in or about the Works. In this respect he shall comply with the provisions of the Health and Safety specifications (Part G of the Works Specifications) and observe all laws, ordinances and regulations pertaining to his work.

In terms of Clause 4.5 of the General Conditions of Contract, the Contractor shall enter into an agreement (refer to C1.4 of Volume 3) to complete the work required for the construction of the works in accordance with the provisions of all pertinent legislation and in particular with the provisions of the Occupational Health and Safety Act, (Act 85 of 1993) and the regulations promulgated thereunder.

Where adequate safety precautions are not being observed, the Engineer may order the Contractor to comply with minimum safety requirements at the latter's expense. Compliance with such an order will not absolve the Contractor from any of his responsibilities and obligations under the Contract.

B1233 MIX DESIGNS

6 weeks 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).

B1234 COMMUNITY LIAISON OFFICER (CLO)

Refer to *Section C1.8 Contract of Temporary Employment as Community Liaison Officer*.

B1235 TRAINING

All task-based workers, as well as trainee SMMEs, that participate in this project shall receive a level of training for which they receive accreditation. Suitable training will be given by an accredited nominated subcontractor prior to the commencement of any construction. For this purpose, Tenderers shall allow a lead time of 2 weeks in their programme for initial training as well as consultations and negotiation with the local community representatives.

In addition, the necessary in-task training to achieve the required standard of workmanship must be provided on an ongoing basis by the Contractor during the Contract.

B1236 MEASUREMENT AND PAYMENT

Item	Unit
B12.01 Protection, removal, realignment, and replacement of services	
(a) Provisional sum for protection or relocation of existing services and detection of underground services	Prov. Sum
(b) Contractor's charge to allow for handling costs and profit in respect of	% subitem 12.01(a)

The provisional sum under pay item B12.01(a) shall be paid in accordance with the provision of subclause 6.6 of the General Conditions of Contract. The provisional sum shall include all other incidentals required and approved by the Engineer.

The tendered percentage under B12.01(b) is a percentage of the actual amount spent under subitem B12.01(a) which shall include full compensation for the handling costs of the Contractor, and the profit in connection with the provision of transportation and medical examination for local labourers as ordered by the Engineer.

Item	Unit

B12.02 Remuneration of the Community Liaison Officer and members of the Steering Committee

(a)	Community Liaison Officer (CLO)	Prov. Sum
(b)	Payment of 7 x PSC members at R200/ meeting/ month	Prov. Sum
(c)	Contractor's charge to allow for handling costs and profit in respect of subitem 12.03(a) and (b)	%

The provisional sum allowed for in item B12.02(a) shall cover the cost of temporary employment of the community liaison officer, according to Section C1.8 – Contract of Temporary Employment as Community Liaison Officer with the conditions and remuneration prescribed therein.

The rates tendered under sub-item B12.02(c) shall be deemed to cover the Contractor's handling cost, profit, record keeping, reporting and all other costs in connection with the employment of the community liaison officer.

Item		Unit
B12.03	**Training**	
(a)	Accredited Technical skills	Prov. Sum
(b)	Remuneration of workers undergoing training and other Labourers including wages during training	Prov. Sum
(c)	Training and wages of student	Lump Sum
(d)	Contractor's charge to allow for handling costs and profit in respect of subitem B12.06(a), (b), (c),	Prov. Sum

The provisional sum under sub-item B12.03(a), (b), (c), (d) shall be paid in accordance with the provision of sub-clause 6.6 of the General Conditions of Contract. The prime cost sums shall include all charges for provision and delivery of the service by accredited trainers including the cost of undertaking the required skills audits and analyses and creation of the individual training programmes. The provisional sum shall include wages of trainees during the duration of the courses, provision of meals, transport and all other incidentals required by the trainees and approved by the engineer.
The rates tendered under sub-item B12.03(a) shall be deemed to cover all costs required to organise accredited trainers, and venue and shall include the Contractor's handling cost, profit, record keeping, reporting and all other costs in connection therewith.

Item		Unit
B12.04	**Supply and erection of contract sign boards (As per drawing ROMH-042-07-00-03)**	No.

The unit of measurements shall be the number of units supplied in accordance with the specifications, drawings and the Engineer's instructions.'

The tendered rate shall include full compensation for procuring and furnishing all the materials, and for manufacturing and supplying the completed road sign board, including amongst others the supporting framework, reinforcement, cross bracing, struts, fixing brackets, angle irons, channel profiles, galvanizing (if specified), painting, retro-reflective or semi-matt black lettering, symbols. numbers, arrows, emblems and borders, for attaching the road sign board to a road sign support structure, or to an overhead road sign structure, or to an overbridge, and for all materials, equipment, labour, supervision, nuts, bolts, transport, handling, etc necessary for the manufacture, completion, delivery and installation of the road sign board complete as specified.

B1301 GENERAL REQUIREMENTS

(a) Camps, construction plant and testing facilities

Add the following after the first paragraph of subclause 1302(a) of the Specifications:

"No specific land or existing buildings have been made available on Site by the Employer for the establishment of the Contractor's camp site.

The Contractor shall make his own arrangements concerning establishment of the camp site, supply of water, electrical power and all other services. No direct payment will be made for the provision of water, electrical and other services and the cost thereof shall be deemed to be included in the rates and amounts tendered for the various items of work for which these services are required."

(c) Legal and contractual requirements and responsibilities to the public

Add the following as a second paragraph

"There has been recent legislation promulgated by Government that improve 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.

C3.4 Construction of the Scope of Works contains:

(i) Environmental Specifications
Section E1000 : Environmental Management contains the Environmental Management Plan for this project. Its provisions regulate the Contractor's construction methods to ensure responsible conduct and treatment of the environment relevant to the project. No separate payment mechanism has been made available for the Contractor to allow for his compliance with relevant environmental legislation. Separate Pay Items are included in these provisions. Non-compliance with these provisions may lead to the imposition of penalties.

(ii) Health and Safety Specifications
Section F1000: Health and Safety Requirements which contains the specification that regulate the Contractor's construction methods so far as to ensure health and safety of his employees and of the public. Separate new pay item(s) are included in these provisions to allow the Contractor to make separate provision for the cost of health and safety measures during the construction process."

The following new subitems shall be added after subclause (c):

"(d) Housing

The Contractor shall not erect any housing or other accommodation facilities on the site of the works and shall make all the necessary arrangements for accommodation of his personnel and site staff off the site of the works.

(e) Services

The Contractor shall at his own expense, make the necessary connections to any utility services required by him for the execution of the works.

The Contractor shall note that there are no spare telephone lines available from the Employer's facilities on Site and no cell phone signal is available on the site.

(f) Sanitation

The Contractor shall provide at each work section at least one portable chemical latrine for use by personnel on Site. No separate payment will be made for any costs incurred in this regard and the Contractor shall allow for any costs in his tendered rates for establishment.

(g) Environmental protection

Construction will take place within the existing road reserve and every precaution must be taken to protect the established vegetation and roadside facilities. It is therefore essential that the Engineer be continually consulted throughout the contract period to ensure that environmental considerations are satisfied.

Failure to show adequate consideration to the environmental aspects of this contract will be sufficient for the Engineer to have the Contractor's representative or any other Contractor's employee(s) removed from the site in terms of Clause 24 of the General Conditions of Contract.

The following conditions have been imposed and shall be strictly complied with:

(a) Personnel and plant shall not enter property beyond the road reserve boundary irrespective of whether the boundaries are fenced off or not.
(b) The Contractor shall, to the satisfaction of the Engineer, take every necessary precaution to prevent the contamination of any watercourses.
(c) The Contractor shall plan his activities so that materials, in so far as is possible, can be transported direct to and placed at the point where they are to be used. However, where utilising materials in this manner is impractical, it shall be temporarily stockpiled for later loading and transportation to where it will be used.
(d) Stockpiling areas shall be indicated to and approved by the Engineer. Before any stockpiling of material may be done, the site shall be cleaned, and all loose stones or any plant or other material which may cause pollution shall be removed. After the stockpiled material has been removed, the site shall be reinstated as closely as possible to its original condition.
(e) The Contractor shall be responsible for the establishment of a refuse control system for the collection and removal of refuse from the campsite and working areas.
(f) The Contractor shall ensure that waste and surplus food, food packaging plastic and organic waste are not deposited by his employees anywhere on the site except in refuse bins for removal. If his employees are to eat elsewhere on Site than in the campsite, the Contractor shall designate restricted places for eating in his working areas, shall provide adequate refuse containers in all these places and shall remove the refuse and clean up any remaining food containers immediately after mealtimes.
(g) The Contractor has no right to the trees and shrubs on the site.
(h) No bituminous material or waste material shall be dumped within the road reserve, even if only as a temporary measure. Provision shall be made to remove such excess material directly off the site to spoil areas to be provided by the Contractor.

(h) Security

The Contractor shall take every precaution to ensure adequate safety and security on the Site of the Works and to protect the Works from theft and vandalism. The Contract shall be responsible for the safety and security of his personnel, strict control of access, materials on Site and the Works in general at all times. The Contract shall therefore acquaint himself with the current situation in the area with regard to safety and security (liaising with the local police as necessary) and shall provide all security measures (including the employment of accredited security services), as deemed necessary to comply with the requirements under this clause on the Contract.

No additional pay item is included for the provision of adequate security measures such as watching, guarding and any additional security services and the Contractor shall allow for all costs in connection with the provision of adequate security in his tendered rates for establishment on Site."

B1303 PAYMENT

Item	Unit

B13/E1000	**Contractor's obligation in respect of complying with Environmental Management Specifications**	month
B13/H1000	**Contractor's obligation in respect of complying with Health and Safety Specifications**	month

Payment of the rate per month for items B13/E1000 and B13/H1000 shall include full compensation for all the Contractor's obligations relevant to health and safety legislation and environmental compliance.

The tendered rate shall be in accordance with the provision of sub-clause 6.6 of the General Conditions of Contract. The provisional sum shall include all other incidentals required and approved by the Engineer. Fixed Obligations shall include full compensation for the fulfilment of medical examinations for labourers, PPEs, and 2 Pair EPWP overall branding.

A Contractor who tenders zero for these pay items 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.

SECTION B1400: HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL

B1402 Offices and Laboratories

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 30 AO – sized drawings hanging vertically and of a robust construction to withstand continuous use over the duration of the contract.

(xix) An electric refrigerator of specified capacity.

(xx) Floodlights which are to be controlled by a photocell for security purposes at the offices and laboratory.

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

Item		Unit
B14.03	**Office and laboratory fittings, installations and equipment:**	
	(a) Items measured by number:	
(i)	220/250 volt power points	No
(ii)	Hand wash basins complete with taps and drains	No
(iii)	Fire extinguishers, 9,0 kg all purpose dry powder type, complete mounted on wall with brackets	No
(iv)	Air-conditioning units with 2.2kw minimum capacity mounted on wall with brackets	No
(v)	Refrigerators	No
(vii)	Plan holder	No
(xi)	Supply of Computer and Printer (COMPUTER: LENOVO_MT 20YU_BU_THINK_FM_THINKPAD P17 GEN 2i; PRINTER:Epson Eco Tank L3150 Printer	No

(xiii)	Flood Lights complete with poles and 500 Watt min globes	No
(xiii)	Projector (Full HD 1080P) and Screen (Incl Tripod)	No

Item		Unit
B14.03	**Office and laboratory fittings, installations, and equipment:**	
(b)	Prime-cost items and items paid for in a lump sum:	
	Add the following subitems:	
(i)	The provision of telephone service, including the cost of calls in connection with contract administration and telephone rental and internet connection	Prime Cost Sum
(ii)	Handling costs and profit in respect off sub-item B14.03(b)(i) above	%

Payment of B14.03(b)(i) shall include for the cost of all cellular telephone calls in connection with contract administration, as well as pro rata fixed costs.

The tendered percentage for pay item B14.03(b)(i) shall be a percentage of the amount actually full compensation for the profit and handling costs incurred in managing provision of the cellular phones and monthly billings."

SECTION B1500: ACCOMMODATION OF TRAFFIC

B1501 SCOPE

Add the following:

"It is a condition of this contract that traffic is accommodated in accordance with the provisions of the latest edition of the South African Road Traffic Signs Manual (SARTSM). The latest version for use in the accommodation of traffic is Volume 2, Chapter 13 of the June 1999 edition or its successor. Copies of this publication are available from the South African National Roads Agency Limited, P.O. Box 415, Pretoria, 0001.

This section also covers the provision of additional information signs for motorists and the release of any notices to the media and public. The Engineer will order the Contractor to release approved notices to the media and public all as per the document."

B1502 GENERAL REQUIREMENTS

(a) Safety

Add the following:

"The Contractor shall ensure that all his personnel, excluding those who are permanently office bound, are equipped with reflective safety jackets and that these are worn at all times when working on or in proximity of the travelled way. The safety jackets shall be of an approved Level 2 type, bright/fluorescent orange, red-orange or yellow in colour with retro-reflective strips as indicated in Chapter 13 of Volume 2 of the South African Road Traffic Signs Manual (SARTSM), Figure 13.30 (Detail 13.30.2). When work is carried out between the hours of sunset and sunrise, the Level 2 safety jackets shall be replaced by Level 3 jackets.

Any person found not wearing a reflective safety jacket under these circumstances shall be removed from the site until such time as he/she is in possession of and wearing a reflective jacket. Reflective

safety jackets shall be kept in good condition and any jackets that are, in the opinion of the Engineer, ineffective shall be immediately replaced by the Contractor.

The Contractor shall be responsible for maintaining the existing road surface both within the works area and the advance warning and termination areas in a safe and trafficable condition for the duration of the contract."

(i) Traffic safety officer

Add the following after the second paragraph:

"The Contractor shall submit a CV of the candidate to the Engineer for approval before the candidate is appointed as the traffic safety officer."

Insert the following as the opening phrase to subsubclause (i):

"make himself available to discuss road safety and traffic accommodation matters whenever required by the Engineer and shall be responsible …."

Delete subsubclauses (ii) and (iii) and replace with the following:

"(ii) Record on neat and dimensioned sketches and submit to the Engineer the position and sign reference number, where applicable, of each sign, barricade, delineator, cone, amber flicker light, guardrail and permanent or temporary painted road marking feature. The position of each shall be adequately referenced from the marker boards or other surveyed points on the site of the works.

These records shall also show the date and time at which the recorded traffic accommodation features were certified as correct by the traffic safety officer and shall be signed by the traffic safety officer before being submitted to the Engineer.

The records shall similarly account for whatever changes were made in the field. Such changes shall record the position of flagpersons and STOP/GO control men and their associated traffic accommodation equipment wherever used.

(iii) Personally inspect the position and condition of each traffic accommodation feature on the entire site of works twice each day, before sunrise and at sunset, to record all irregularities discovered and the remedial action taken, and to sign off as correct and submit to the engineer such record sheets by midday of the next working day. The traffic safety officer/s shall keep a duplicate book for this specific purpose.

The traffic safety officer/s shall also submit with this report the daily labour returns of flag persons, STOP/GO and traffic signal control men employed."

Add the following new subsubclauses:

"(ix) The traffic safety officer/s shall be equipped with a cellular telephone and shall have a vehicle and sufficient labour at his disposal 24 hours a day including all special non-working days, and shall not be utilized for other duties. He shall be directly answerable to the Contractor's site agent. The traffic safety vehicle shall be a truck with a capacity of approximately 1 ton and shall be equipped with a high visibility rear panel in accordance with the requirements of the SARTSM. The words "TRAFFIC CONTROL" shall be written on a warning sign in highly legible letters, not less than 150mm high, and the sign shall be mounted on the vehicle at least 1,5m above ground level. The proposed sign and letter dimensions shall be submitted to the Engineer for his approval.

The vehicle shall also be equipped with an amber-coloured flashing light of the rotating parabolic reflector type with a minimum intensity of 100 W. The warning light shall be switched on and the sign shall be displayed at all times when the vehicle is used on Site.

The traffic safety officer/s and his vehicle shall not be used for the transport of flagpersons and traffic light operators during the regular daily personnel changes.

The traffic safety officer/s shall have a direct line of communication at all times with the police and traffic officers responsible for the area within limits of the contract. The provision of the road safety vehicle, driver, labourers and the cost of the cellular telephone shall be deemed to be included in the rates tendered for item B15.16.

(x) The traffic safety officer/s shall ensure that all obstructions relating to the Contractor's activities are removed from the road before nightfall where applicable and/or as instructed by the engineer and that the roads are safe for night traffic.

(xi) In addition to the duties listed in paragraph B1502(i), the traffic safety officer/s shall also be responsible for the removal of broken down vehicles from the roadway and implementing actions requested by the traffic authorities with regard to the work to be carried out. He shall also be responsible for the erection and maintenance of all traffic signs necessary for the accommodation of traffic.

(xii) In the event of an accident, the road traffic safety officer/s shall record details of the accident in a written report, to a format which shall be agreed with the engineer accompanied by photographs and a neat sketch plan on which is shown identifiable permanent features, relevant dimensions and the position of all temporary road signs, barricades, delineators, flagpersons and any other devices used for traffic accommodation."

Add the following new subclauses:

"(j) Traffic diversions

The Contractor's attention is drawn to the heavy volume and speed of traffic carried on the affected roads and shall make due allowance therefore in his construction programme.

Traffic accommodation shall be carried out in strict accordance with the requirements of the South African Road Traffic Signs Manual (SARTSM) – Volume 2 – Chapter 13 : Roadworks Signing (June 1999). The method of accommodating traffic shall be in accordance with the layouts of the trafficcontrol facilities for the traffic diversions on the respective roads as shown in the South African Road Traffic Signs Manual (SARTSM) - Volume 2 Chapter 13, on the drawings or as directed by the Engineer.

The Contractor shall submit a drawing showing details concerning each traffic diversion to the Engineer for approval at least 7 days prior to the scheduled commissioning of such diversions to allow him sufficient time to inform and obtain the approval of the traffic officials of the relevant authorities concerned for such diversions.

(k) Parking of construction vehicles and plant

Where there is no working space off the road, construction vehicles may be parked on the shoulder only during working hours in which case flagpersons and traffic cones shall be utilised to warn public traffic of the hazard. During non-working hours all obstructions to traffic shall be removed from the road.

The parking of construction plant within the road reserve outside working hours will be permitted. The minimum clearance between the parked vehicles / plant and the edge of any carriageway shoulder shall be 5 metres.

(l) Staging of construction

The majority of the work to be done on this project will require working during day times, and staging of construction should therefore be planned accordingly within working times as stipulated below. The work in this Contract will necessitate traffic having to be deviated onto a reduced -width carriageway and channelized into traffic lanes routed past / through the construction work areas.

Amber flashing warning lights shall be placed on traffic lane deviations at night and when instructed by the Engineer to warn motorists of lane closures and occupation of lanes for work operation areas.

It is a condition of this contract that the Contractor shall programme and arrange for adequate accommodation of traffic within the following operational limitations:

(i) Individual work areas shall be clearly demarcated with traffic signs and delineators / cones as specified. No individual working area shall exceed 1 000 metres in length.

(ii) Only one traffic lane per direction may be closed to traffic at a time. Closure of a traffic lane or partial lane will only be permitted once the traffic control facilities and temporary traffic diversions / deviations have been approved.
(iii) A minimum single trafficable lane width of 3.1m on all roads shall be maintained.
(iv) Crossing of the median of dual carriageway roads by Contractor's plant and equipment shall not be permitted.
(iv) Signage which does not apply during construction shall be removed or effectively covered.
(v) Signage erected for traffic accommodation purposes which is not applicable (e.g. speed limits at weekends etc) shall be effectively covered.
(vi) Signs and traffic accommodation devices for closures shall always be placed furthest away from the work area first and then by working inwards in the direction of traffic.
(vii) On completion of the work remove delineators/cones/signs by starting at the work area and work outwards against the flow of traffic.
(viii) Before re-opening a lane to traffic after milling/surfacing operations have been completed, temporary road marking as specified shall be applied.

Any costs related to these construction limitations and restrictions will be deemed to be covered in scheduled rates.

If the road or carriageway is not in a safe trafficable condition over the full width at the end of each day's/night's work, the Contractor shall provide adequate flagpersons, signs, barriers, lights and necessary personnel / staff to ensure a reasonable free flow of traffic on the specified traffic lanes throughout the night and the whole period that the roadway is open to traffic.

(m) Failure to comply with the provisions

Failure or refusal on the part of the Contractor to take the necessary steps to ensure the safety and convenience of the public traffic, accommodation of traffic, plant and personnel in accordance with these specifications or as required by statutory authorities or ordered by the Engineer, shall be sufficient cause for the Engineer to deduct penalties as follows:

A fixed penalty of R5 000.00 per occurrence, including not adhering to the stipulated working times above, shall be deducted for each and every occurrence of non-compliance with any of the requirements of Section 1500 of the standard specifications and Section B1500 of the Project Specifications.

In addition a time-related penalty of R500.00 per day or part thereof over and above the fixed penalty shall be deducted for non-compliance to rectify any defects in the accommodation of traffic within the allowable time after an instruction to this effect has been given by the Engineer. The Engineer's instruction shall state the allowable time, which shall be the time in hours for reinstatement of the defects. Should the Contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

The failure of or refusal by the Contractor to construct and/or maintain diversions, barricades, traffic signs or road markings at the proper time, or to take the necessary precautions for the safety and convenience of public traffic as specified or instructed by the Engineer, shall be sufficient cause to suspend the Works until the required construction or maintenance has been completed to the satisfaction of the Engineer.

(n) Media releases and public relations

Where ordered by the Engineer, the Contractor shall inform the general public on matters relating to the intended road works, construction period and accommodation of traffic through media and press

releases in local and regional newspapers, magazines, radio services and/or other forms of publicity. Costs incurred for such publicity releases by the Contractor will be reimbursed through item B15.03(p)."

B1503 TEMPORARY TRAFFIC CONTROL FACILITIES

Replace the first sentence of the first paragraph with the following:

"The Contractor shall provide, erect and maintain the necessary traffic-control devices, road signs, channelization devices, barricades, warning devices and road markings (hereinafter referred to as traffic-control devices) in accordance with the Project Specifications, the SARTSM and as shown on the drawings and remove them when no longer required. It shall be incumbent upon the Contractor to ensure that the abovementioned traffic-control devices are present where required at all times and are functioning properly."

Replace the third paragraph with the following:

"The type of construction, spacing and placement of traffic-control devices shall be in accordance with the SARTSM. The recommended arrangements of the traffic control devices illustrated and/or drawings issued by the Engineer shall not be departed from without prior approval of the Engineer. The arrangements expected to be most commonly used in the contract are given on the tender drawings. In areas of high traffic density, the assistance of the relevant traffic authorities officials shall be solicited.

The details shown for spacing and placement of traffic-control facilities may however, be revised at the discretion of the Engineer where deemed necessary to accommodate local site geometry and traffic conditions."

(a) Traffic-control devices

Add the following at the end of the last paragraph:

"At each traffic control point, an all-weather shelter of at least three (3) square metres capable of accommodating two operators, with a clear window, a stable door, two chairs and a portable chemical toilet that shall be regularly maintained, shall be provided. Each control point shall have a generator (with back-up power supply) and a 2x400w metal halide floodlight mounted onto a 9m winched fiberglass pole bolted to a 1,5m buried galvanized stem to light up the traffic control point at night time. Another floodlight/pole shall be placed some 20 metres apart from the traffic control point to extend the lighting along the road as a measure of safety for motorists in stacking / queuing vehicles at night."

(b) Road signs and barricades

Add the following:

"The Contractor shall be responsible for the protection and maintenance of all signs and shall at his own cost replace any that have been damaged, lost, or stolen.

All temporary road signs required to remain in position for some time shall be pole mounted as shown on the drawings. All temporary road signs required to be moved more often shall be mounted on portable supports for the easy moving of signs to temporary positions. The only permitted method of ballasting the sign supports shall consist of durable sandbags filled with sand of adequate mass to prevent signs from being blown over by wind. Sandbags shall be placed as ballast on the supports in front of and behind the sign so as not to obstruct the traffic path past the sign. The cost of the sandbags shall be included in the tendered rates for the various types of temporary road signs.

The covering of permanent road signs, if applicable, shall be by utilizing a hessian bag that shall be pulled over the sign in the form of a hood and fastened to the signposts. Plastic bags or other materials and fastened by means of adhesive tape shall not be permitted. The cost of covering of permanent road signs shall be included in the tendered rates of items 15.01 and 15.10."

(c) Channelisation devices and barricades

Add the following:

“The use of drums as channelisation devices shall not be permitted. Drums may however be used to set up barriers as provided for in sub clause 1503(d).

Traffic channelisation shall be carried out by means of plastic type delineators (Sign TW401 / TW402) in accordance with SABS 1555. The sign face shall be 200mm x 800mm in size and shall be mounted on suitable non-metal bases. Each base shall be suitably ballasted with sandbags.

Delineators shall:

(i) comply with the manufacturing and reflective requirements of the SARTSM and the blades shall be reversible with dimensions as indicated on the drawings;
(ii) have smooth and round edges and be mounted on a post and base. All components shall be of durable plastic material;
(iii) have the lower edge of the reflective part of the delineator mounted not lower than 250mm above the road surface;
(iv) be capable of withstanding the movement of passing vehicles and gusting winds up to 60km/h in typical working conditions without falling over. To achieve this, the base shall be at least 0,18m^2 and ballasted by sandbags filled with sand;
(v) together with its mounting be designed such that it will collapse in a safe manner under traffic impact.

Traffic cones manufactured in a fluorescent red-orange or red plastic material may be used only for roadmarking operations and other short-term lane deviations during daylight. Cones used on deviations shall be 750mm high on Trunk Roads and 450mm high on other roads with suitable heavy bases to prevent the cones from being blown over by wind or turbulence from moving traffic.

Lane closures or traffic diversions that continue into night-time shall be demarcated by delineators.”

(e) Warning devices

Add the following after the first paragraph:

“At night and when directed by the Engineer, amber flashing warning lights shall be placed at strategic places such as barricades, obstructions, etc. The warning lights shall be "Vama SA" amber flashing lights or an equivalent type.

All construction vehicles and plant used on the works shall be equipped with rotating amber flashing lights in working condition and warning boards as specified. All vehicles and plant before being allowed on the site shall obtain a clearance permit from the Engineer.

(i) Vehicle mounted flashing lights

Rotating lights shall have an amber lens of minimum height of 200mm of the revolving parabolic reflector mountable type and shall be mounted in such a way as to be highly visible from all directions. The lights on construction vehicles shall not be switched on while vehicles are being operated on unrestricted sections of a public road, but shall be switched on while construction vehicles are operating within the accommodation of traffic area, as the vehicles decelerate to enter a construction area, and as the vehicles accelerate to the general speed when entering the road from a construction area. Lights on plant shall operate continuously while the plant is working alongside sections of road open to public traffic.

All LDV’s and cars operating on Site shall also be equipped with rotating amber flashing lights which shall be placed so as to be highly visible and operated continuously while the vehicles are manoeuvring in or out of traffic or are travelling or parked alongside roads open to public traffic.

Rotating lights and the "CONSTRUCTION VEHICLE" signs on the Contractor’s vehicles and plant shall not be paid for separately but shall be included in the rates covering the use of the vehicles.

The Contractor shall apply and maintain lights together with temporary mounting brackets, to the approval of the Engineer. Vehicles and plant that do not comply with these requirements shall be removed from the site.

(ii) Sign mounted flashing lights

Two amber flashing lights shall be vertically mounted on top of the traffic signs at each end of each traffic accommodation section as shown on the drawings. The lights shall be operated during the hours of darkness."

(iii) Amber flashing lights for the Engineer

The Contractor shall supply and maintain similar rotating amber flashing lights with a magnetic base, flexible cable and connection suitable for insertion into a standard 12V automobile cigarette lighter socket for the Engineer and his staff.

The provision and maintenance of rotating amber flashing lights for the use of the Engineer and his staff shall be paid under Item B15.15."

Add the following new subclauses:

"(g) Other traffic control measures ordered by the Engineer

The Engineer may instruct the Contractor to provide any other road sign, reflective tape, etc not measured in standard pay items. Such road signs shall conform to the requirements of the SARTSM, or specification provided by the Engineer. Similarly, in order to ensure that the travelling public is kept fully informed and warned on matters relating to the accommodation of traffic, construction sign posting and the effect of the construction on the free flow of traffic through the site, the Engineer may arrange for advertising in the press and/or for other forms of publicity.

(h) Flagpersons

Flagpersons shall be provided where shown on the drawings or required by the specification. At least two flagpersons shall be provided at each traffic control point in addition to the STOP/GO sign operator, one flagperson at the 40km/h sign and a second roving flagperson to indicate to the traffic at the end of the queue to stop. At night time closures flagpersons will be equipped with a Stromberg Lightman xenon strobe, or equivalent approved, and a torch is required at each traffic control point as well as the traffic light operator. Where the shoulder of the road is closed to traffic, a flagperson shall be provided at the leading end of the closure. This flagperson shall be provided at the 60km/h sign to warn the traffic about the closure. No flagperson shall be on duty for a period of more than 10 hours per shift.

Flagpersons shall be adequately trained in the standard flagging techniques as described in the SARTSM (refer to figure 13.23 of detail 13.23.1) and be provided with conspicuous clothing such as safety jackets utilizing retro-reflective and / or fluorescent panels in red, yellow and / or white.

Flagpersons shall have in their possession, at all times, certification that they have attended and passed an accredited course in flagging techniques before being allowed onto the construction site.

Flags shall be made from bright red or red-orange material and shall be square with a minimum side length of 600mm. The flag shall be attached to a staff at least 1.0m in length.

In terms of lateral clearance and safety, flagpersons shall stand on the shoulder of the lane of traffic that is being controlled and under no circumstances shall flagpersons be permitted to stand within the traffic lane. In order to obtain maximum visual impact for the travelling public, flagpersons shall stand-alone.

(i) Temporary traffic-control signal systems

A complete traffic control signal system shall consist of four traffic control signals each with three aspects, and shall include the control devices, power supplies and mountings.

Temporary traffic-control signals shall be erected where directed by the Engineer and shall comply with the following requirements:

(i) The provisions of SARTSM, Volume 4, Chapter 10.
(ii) The signals shall be capable of operating under manual control and if required linked manual control. Amber times shall be a minimum of 3 seconds.
(iii) The signals and the power supply shall be capable of operating under all weather conditions for uninterrupted periods of at least 15 hours.
(iv) Standard signal faces with 210mm diameter red, amber and green aspects shall be provided.
(v) The traffic-control signal lights shall comply with SABS 1459-1988. Aspects shall be fitted with 50 W tungsten halogen lamps.
(vi) Two standard signal faces, both erected on the centreline of the road, shall be provided to control each direction of traffic.

Traffic-control signal systems shall be used during the period of half an hour before sunset to half an hour after sunrise every day and shall be operated manually. Sufficient staff, equipped with two-way radios, shall be provided to operate the traffic-control signal system, in shifts of not more than ten (10) hours. The same personnel shall not be on duty throughout an entire night.

The Contractor shall provide a backup power supply such that the traffic control signals can be operated continuously at night time. In addition the Contractor shall have available on Site adequate spares to effect immediate repairs to a traffic control signal unit in the event of breakdown.

(j) Maintenance

All temporary traffic control facilities shall be kept clean and maintained in good order at all times.

If the coefficient of retro-reflection of any of the Contractor's signs falls below 80% of the value given in Table 1 of CKS 191 - 1987 (observation angle 0.33, entrance angle 5.0) for the grade and colour of the material used the sign shall be considered defective and shall either be rectified or removed and replaced.

(k) Sufficiency

The Contractor shall determine, from his proposed programme, the number of temporary trafficcontrol facilities required and shall not commence with any accommodation of traffic before sufficient traffic-control facilities have been delivered to the site.

The Contractor shall keep sufficient surplus barricades, signs and delineators on or around the site to allow for the replacement of damaged or missing items within a period of two (2) hours of the deficiency being discovered.

The Contractor shall allow in his tendered rates for the replacement of five (5) percent of the trafficcontrol facilities scheduled. This percentage is to allow for the replacement of traffic-control facilities which become unserviceable or damaged by public traffic or stolen and is beyond the Contractor's control and not the result of his actions or omissions during the period of accommodation of traffic on the site. The replacement of traffic control facilities over and above these five (5) percent of the scheduled items damaged by public traffic or stolen shall be payable at tendered rates."

B1504 WIDTH AND LENGTH OF TEMPORARY DEVIATIONS

Replace the second paragraph with the following:

"Where the existing road is repaired, resurfaced or reconstructed in half widths, the roadway width for accommodating one-way traffic shall be at least 3.1m wide. The length of the half-width construction shall not exceed the length of road that can be milled and replaced in one day so that traffic will be able to use the section of road under consideration before the pm peak of the same day.

The half-width traffic accommodation shall be single direction controlled by STOP and GO/RY signs during the daytime and temporary traffic-controlled signal systems at night."

B1517 MEASUREMENT AND PAYMENT

Item		Unit
B15.03	**Temporary traffic-control facilities**	
(a)	Flagmen	man-day
(b)	Portable STOP and GO-RY signs	No

Replace the first paragraph of the payment clause with the following:

"The unit of measurement shall be a 9-hour (minimum) shift worked by a flag person. A man-day shall be deemed to comprise one shift. The rate shall be deemed to cover day and night work, including work on Saturdays and Sundays."
Replace subitems (g) and (h) with the following:

Item		Unit
B15.03	**Temporary traffic-control facilities**	
(g)	Road signs, STW-, DTG-, TGS-, TG- and TIN-series ((excluding delineators and barricades)	m^2
(h)	Delineators (W401 or W402) (200 mm x 800 mm sides) complete with stand and ballast:	
	(i) Single sided	No
	(ii) Double sided	No

Add the following to the payment clause of item 15.03(h):

"In the case of subitem (h) it shall also include for the sign stand, for the provision of two sandbags per delineator to hold it in position and for their replacement when necessary."

Add the following new pay subitem:

Item		Unit
B15.03	**Temporary traffic-control facilities**	
(n)	Other traffic control measures ordered by the Engineer:	m^2
	(i) Provision of other traffic control measures	No
(ii)	Contractor's handling costs, profit and all other charges in respect of subitem B15.03(n)(i)	%

Expenditure under this item shall be made in accordance with the general conditions of contract, Subclause 6.6 (GCC 2015), for the supply and installation of any additional signs, all other traffic control measures ordered by the Engineer in accordance with Clause B1503(g) and for expenditure regarding media releases and public relations.

The tendered percentage is a percentage of the actual amount spent under subitem B15.03(n)(i), which shall include full compensation for the handling costs of the Contractor, and the profit in connection with providing other signs, all traffic control measures ordered by the Engineer, and expenditure regarding media releases and public relations.

Amend the paragraph headed "General" to read:

"The tendered rates for the respective traffic-control facilities shall include full compensation for the supply and initial erection complete with posts, stakes, portable stands and sandbags as may be required, for clearing, for their maintenance and the replacement of items which have become unserviceable due to normal wear and tear, and their removal when no longer required. As stated in subclause B15.03(k), the Contractor shall allow in his tendered rates for the replacement of at least five (5) percent of the traffic-control facilities scheduled. This percentage is to allow for the replacement of traffic-control facilities which become unserviceable or damaged by public traffic or stolen and is beyond the Contractor's control and not the result of his actions or omissions during the period of accommodation of traffic on Site. The replacement of traffic control facilities over and above this five (5) percent of the scheduled items damaged by public traffic or stolen shall be payable at tendered rates. 75% of the tariff will be payable when the items have been provided and erected in position for their first use on Site and 25% when finally removed from the site.

The tendered rate for sub-item (h), delineators, shall also include full compensation for moving these signs laterally (as required or instructed by the Engineer) as specified in Subclause B1503(c) so as to widen the travelled way when work is not in progress on that part of the section that is closed, or vice versa."

Add the following new pay items:

Item		Unit
B15.14	**Amber flashing lights mounted on signs (rotating)**	No

The unit of measurement shall be the number of each item provided as specified and approved by the Engineer.

The tendered rate shall include full compensation to provide, erect, operate and maintain two amber flashing lights per sign at each end of the traffic accommodation sections as shown on the drawings. It shall also include the provision of power to operate the lights, replacing bulbs as required and keeping the lenses clean and visible.

Item		Unit
B15.15	**Provision of traffic safety equipment for use by the Engineer**	
	(a) Safety jackets	No
	(b) Amber rotating flashing lights for mobile use	No

The unit of measurement shall be the number of each item provided as specified and approved by the Engineer.

Item		
B15.16	**Penalty to be deducted for non-compliance with the requirements for accommodation of traffic and/or traffic management plan**	Day
		Unit

The rate for penalty shall be applied when the Contractor does not comply with the requirements of traffic accommodation and management plan three (3) days after the issue of notice to correct the non-compliance by the Engineer.

B15.17	**Traffic Safety Officer**	**Month**

Add the following new subpayitem:

The tendered rate for item B15.07 shall include full compensation for Traffic Safety officer salary on a monthly basis for the duration of the contract.

NOTE:
Tenderers must note that the quantities of temporary traffic-control facilities, traffic safety officers and high visibility trailers shown in the schedule of quantities are based on the Engineer's preliminary construction programme. If a Tenderer intends working at more work sections than indicated in the above programme, additional quantities of temporary traffic-control facilities, traffic safety officers and high visibility trailers will be required. The Tenderer must submit a cost of the additional traffic accommodation measures with his tender. This additional cost will be added to the tender sum when evaluating the tender.

SECTION B1600: OVERHAUL

B1601 SCOPE

Replace this clause with the following:

"This section covers the haulage of material to the dedicated stockpile or spoil sites as instructed by the engineer. It also covers the cost of tipping at these spoil sites. "

B1602 DEFINITIONS

(a) Overhaul material

Add the following:

"Overhaul shall not apply in the case of:
(i) Material obtained from commercial sources or sources provided by the Contractor.
(ii) Material to be disposed of to commercial spoil dump sites or approved spoil dump sites provided by the Contractor off the site of the Works.

The Contractor's tendered rates for all materials from commercial sources or other Contractor sources of supply shall be deemed to include full compensation for hauling the materials to its point of use on the site of Works. The Contractor shall make his own arrangements for the procurement of materials and shall pay all royalties and other costs in this connection.

Where material is required to be spoiled, the Contractor shall pay any dumping charges which may become payable."

(b) Overhaul

Delete the sub clause and replace with:

"Payment shall only be made for material hauled in excess of 1 kilometre. Overhaul shall be measured as the product of the compacted in-situ volume of material hauled and the overhauled distance."

(c) Haul distance

Add the following:

"The haul distance of any material shall be measured along the shortest route from the place of excavation (origin, source) to the point of use (should the material be used / re-used directly) or to the approved stockpile, and the shortest distance from the approved stockpile to the point of use."

(d) Free-haul distance

Replace this clause with the following:

"The free-haul distance shall be the distance up to which overhaul material may be hauled before overhaul becomes payable. The free-haul distance on any and all materials taken to spoil or stockpile on or off the site shall be 5.0km. In the case of material hauled to a stockpile and then hauled again for re-use, the free-haul distance shall apply only once."

B1603 MEASUREMENT AND PAYMENT

Note to tender:
Wherever this pay section has been used for measurement and payment purposes it has been included as part of the payment section of the relevant pavement layer which is to be constructed and/or from which material is generated for removal to spoil. For example, material procured from borrow that is hauled beyond the free-haul limit for use in a gravel layer shall be measured for payment under section 3400: PAVEMENT LAYERS OF GRAVEL MATERIAL as 16.02/34.01, 16/34.02 etc., whichever is the relevant pay item under section 3400.

SECTION B1700: CLEARING AND GRUBBING

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."

SECTION B1800: DAY WORKS

B1801 SCOPE

This section covers the evaluation and method of measurement and payment for work, ordered by the Engineer in writing, carried out on a daywork basis, all in accordance with subclause 6.5 (GCC 2015) of the General and/or Special Conditions of Contract.

B1802 GENERAL REQUIREMENTS

Work will be classified as daywork only if the Engineer considers no other rate in the schedule of quantities appropriate for payment purposes.

Only work ordered in writing by the Engineer to be executed as daywork shall be measured and paid for at the rates tendered in the schedule of quantities.

The Contractor shall keep and submit records of the work performed in accordance with the requirements of 6.5.4 (GCC 2015) of the General and/or Special Conditions of Contract.

B1803 LABOUR

The tendered rates for labour to be included as daywork charges shall include the salaries and wages of gangers or charge hands working with their gangs but shall exclude the costs of the time of the foremen or supervisors which will be deemed to have been included in the sums tendered for the relevant items in Section 1300 of the schedule of quantities.

Gross remuneration, as specified in subclause 6.5.1.2.1 (GCC 2015) of the general and/or special conditions of contract, will be deemed to include the following:

(a) Basic salary/wage

(a) Overhead charges such as fringe benefits not reflected in basic salary and wages which may include:

normal annual bonus
Employer's contribution to medical aid
group life assurance premiums
Employer's contribution to pension/provident fund
all other costs as per letter of appointment

and costs payable due to statutory requirements, which may include:
Workmen's Compensation Fund contribution
Unemployment Insurance Fund contributions
District Council levies or the equivalent thereof

The rates tendered for labour shall include for the actual cost of salaries and wages, all overhead charges, profit, liabilities, obligations, risks and incidentals for all workmen to execute work by dayworks.

B1804 MATERIALS

The nett cost price of materials (exclusive of VAT) actually delivered to the site to be included as daywork charges shall include the costs of delivery to the usual points at which materials are received on the site.

Before ordering any material, the Contractor shall submit quotations to the Engineer for his approval, and shall submit such receipts or vouchers to the Engineer as may be necessary for proving the amount claimed.

The percentage tendered as an on-cost on the net cost price of materials shall include for all handling, overheads, profit, liabilities, obligations, risks, incidentals and other on-costs for the supply, delivery and distribution of material for daywork to the individual site(s) where daywork is in progress.

B1805 PLANT

The full inclusive hourly cost of operational plant which is available on Site or which has been removed without written authorization of the Engineer, to be included as daywork charges will be taken to be the tendered rate which, in the opinion of the Contractor, will be applicable in all respects to the situation and terms of the contract.

The hourly rate tendered or agreed shall constitute the daywork rate for the plant and will be deemed to include all costs for plant operators, consumable stores, fuel, maintenance, depreciation, ground-engaging tools and all other incidentals necessary to operate the plant for the purposes for which it was designed.

Failure on the part of the Contractor to state in the schedule of quantities the plant on which his tender is based, shall be considered as a firm agreement on the part of the Contractor that he waives all rights to distinguish between the different types and capacities of plant falling within the description and/or category given, and the Engineer shall have the right to call upon the Contractor to supply any such plant to the site and perform the work as directed by him at the particular tendered rate.

Sixty percent (60 %) of the hourly rate tendered or agreed will be paid in respect of plant which is being employed for daywork, but standing idle on the specific instructions of the Engineer, as full compensation for idle costs of daywork plant.

For plant not on Site, the costs of establishing items of plant on the site for daywork on specific instruction of the Engineer will be negotiated with the Contractor at the time that such daywork is contemplated.

B1806 MEASUREMENT AND PAYMENT

Item		Unit
B18.01	**Personnel:**	
	(a) Personnel during normal working hours:	
	(i) Unskilled labour	Hour
	(ii) Semi-skilled labour	Hour
	(iii) Skilled labour	Hour
	(iv) Ganger	Hour
	(v) Flagperson	Hour
	(b) Extra over B18.01(a) for night works	
	(i) Unskilled labour	Hour
	(ii) Semi-skilled labour	Hour
	(iii) Skilled labour	Hour
	(iv) Ganger	Hour
	(v) Flagperson	Hour
	(c) Extra over B18.01(a) for Sundays and other special non-working days:	
	(i) Unskilled labour	Hour
	(ii) Semi-skilled labour	Hour
	(iii) Skilled labour	Hour
	(iv) Ganger	Hour
	(v) Flagperson	Hour

The unit of measurement shall be the hour of time worked by the employee on the designated work on instruction by the Engineer.

The daywork rates submitted for labour in the schedule of quantities shall be the cost of labour for each skill level and shall apply only to the number of workers approved in writing by the Engineer.

The rates shall be for normal working hours and shall be increased pro rata for overtime at the standard rate applicable if the work performed outside working hours is approved in writing by the Engineer.

The tendered rates shall include full compensation for all costs for salaries and wages, use and maintenance of tools and equipment, sick pay, leave pay, holidays with pay and financial charges of any description incurred by the Contractor and his subcontractors as well as for all insurance, accommodation, travelling, travelling time, supervision, overheads, profit, obligations, risks and any other emoluments and incidentals necessary for labour to execute work as daywork.

Payment for expenditure under this item will be made in full as and when the money is expended subject to written proof by the Contractor of payment of invoiced amounts.

Item	Unit
B18.02 Contractor's Equipment	
(a) Backhoe loader, 55-70 kW 0,5 m3 bucket	hour
(b) Compressor, 7,0 m3 per min	hour
(c) Self-propelled vibratory roller, 9-12 tons	hour
(d) Hand propelled vibratory roller, 0,5 ton mass	hour
(e) Vibrating plate compactor minimum power 2 kW	hour
(f) Jack hammer (including compressor and ancillary equipment)	hour
(g) Tip truck minimum load capacity 10 tons	hour
(h) Water tank truck minimum capacity 10 kl	hour
(i) Flat steel wheeled roller, 9-12 tons mass	hour
(j) Grid Roller, 9-12 tons mass	hour
(k) Whacker compacter	hour
(l) Grader	hour
(m) Excavator	hour

The unit of measurement shall be the hour actually worked by each item of plant (vehicle, machine or equipment) on the designated work on instruction by the Engineer.

The Contractor and the Engineer will agree on the method of recording the working hours prior to the commencement of work. Any long period of idling at any one time which in the opinion of the Engineer or his representative is beyond that required for normal operating conditions will not be paid for as working time. Non-working hours for any reason shall not be measured for payment.

The tendered rates include full compensation for furnishing and using the plant, including the cost of plant operators, consumable stores, fuel, ground-engaging tools, maintenance and for all other incidentals necessary to execute the authorised daywork as specified.

Where there is ambiguity between the power developed at the flywheel and mass of machine, the power shall govern the measurement category.

Item	Unit
B18.03 Transport	
(a) LDV	km
(b) Flatbed truck	km
(c) 10m3 tip truck	km

The unit of measurement shall be the kilometre distance that the vehicle travelled for transporting personnel and/or plant/equipment. All travelling shall be approved by the engineer.

The tendered rate 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.

SECTION B2100: DRAINS

B2101 SCOPE

Amend the first paragraph to read:

"This section covers all work both rehabilitative and new work in connection with the excavation and construction of open drains, subsoil drainage and banks and dykes at the locations and to the sizes, shapes, grades and dimensions as shown on the drawings or as directed by the engineers, and the test flushing of subsoil drains."

B2104 SUBSOIL DRAINAGE

a) Materials

(i) Pipes

Amend this sub-clause by adding the following to the end of the third paragraph:

"(category-heavy duty) or SABS 1601 (stiffness class 350)

The pipes to be used shall be either slotted u PVC pipes or perforated HDP pressure pipes, 100mm ID."

Pipes must be stored in a shaded area without exposure to direct sunlight.

(ii) Natural permeable material

Add the following to the 3rd paragraph:

"The crushed stone shall be fine (14mm nominal) or coarse (20mm nominal) and shall be washed clean of all fines"

(iii) Synthetic-fibre filter fabric

Under item (4) Selection, of this sub-clause, replace the 1st paragraph with the following:

"The filter-fabric used for subsoil drains shall be grade ..... and shall satisfy the criteria for this grade of geotextile as given in Table 2104/2."

Add the following item:

"(5) Testing

General:

The tests to be carried out on geo-textiles relate to the material and the method of manufacture and are mainly to ascertain that the correct grade of geo-textile is supplied, and that the material is equivalent in quality to that selected and specified for use in the works. The contractor will be required, on the request of the engineer, to submit a certificate by an approved laboratory to prove compliance with specified tests as stated in B8114 without additional cost to the employer.

b) Construction of subsoil drainage systems

Add the following sub-clause:

"(v) Proving of pipes in subsoil drainage systems

On completion of the pipe laying and prior to backfilling, all pipe joints shall be surveyed as proof of their installation to line and level. After backfilling the pipes shall be proved by pulling through a cylindrical cleaning brush followed by a wooden mandrill – 400mm long and 5mm in diameter less than the bore of the pipe. Proving of pipes shall not be paid for separately and the cost thereof shall be deemed to be included in the rate tendered for laying the pipe."

B2106 MANHOLES, OUTLET STRUCTURES AND CLEANING EYES

Insert the following paragraph after the last paragraph:

"The end of each subsoil outlet shall be marked with a 300mm x 300mm perspex plate fixed to the top portion of the fence line opposite each subsoil outlet structure in accordance with the details on the Drawings."

B2107 MEASUREMENT AND PAYMENT

Item **Unit**

B21.01 Excavation for open drains

Add the following to the penultimate paragraph:

"The tendered rate shall covers the haulage of material to the dedicated stockpile or spoil sites as instructed by the engineer. It also covers the cost of tipping at these spoil sites. "

Item **Unit**

B21.04 Impermeable backfilling to subsoil drainage systems

Add the following sub-items:

"(a) Unstabilised natural gravel ..... cubic metre (m^3)

(b) Unstabilised G5 material..... cubic metre (m^3)"

Amend pay items B21.12 to read as follows:

B21.12 Concrete outlet structures, manhole boxes, Junction boxes, and cleaning eyes for subsoil drainage systems .... number (No)"

Add the following:

"The tendered rate shall also include full compensation for procuring and finishing the galvanised woven wire mesh, cutting, waste, installing the wire mesh at outlets and keeping the wire mesh in the pipe openings clean for the duration of the contract period."

Add the following payment items:

"Item **Unit**

21/B16.01 Overhaul for material hauled in excess of 1,0 km free-haul (normal overhaul) cubic metre cubic metre (m^3)

"The tendered rate shall include full compensation for all labour and tools required for removing the material. Payment shall only be made for material hauled in excess of 1 kilometre. Overhaul shall be measured as the product of the material excavated hauled and the overhauled distance."

Item **Unit**

B21.20 Subsoil outlet marker board ..... number (no.)

The unit of measurement is the number of 300 mm x 300 mm perspex plate subsoil outlet marker boards fixed to the top portion of the fence line opposite each subsoil outlet structure in accordance with the details on the Drawings.

The tendered rate shall include full compensation for procuring and furnishing the subsoil outlet marker board, galvanizing and fixing the board to the fence.

Item **Unit**

B21.21 Class 20/20 cast in situ concrete for the encasing of subsoil drainage systems, including formwork ..... cubic metre (m^3)

The unit of measurement is the cubic metre of class 20/20 concrete provided and placed for the encasing of pipes in subsoil drainage systems, in accordance with the details on the drawings or as instructed by the Engineer.

The tendered rates shall include full compensation for all excavation, backfilling, compacting to 90% of MDD, disposing of surplus excavated material (including all haul), keeping the excavations safe, dealing with surface or subsurface water, procuring and furnishing all materials, mixing, transporting, placing and curing the concrete, and all labour and constructional plant required to construct the encasing of pipes, complete.

Item **Unit**

B21.22 Galvanized wire mesh at outlets of subsoil drainage systems
..... number (No)

The unit of measurement is the number of 250 mm x 250 mm squares of galvanized woven wire mesh built into the outlets of subsoil drainage systems in accordance with the details on the drawings.

The tendered rate shall include full compensation for procuring, furnishing and cutting the galvanized woven wire mesh, inclusive of any waste, as well as installing the mesh in the pipe openings. Also included in the rate shall be all associated costs necessary to keep the wire mesh in the pipe openings clean for the duration of the contract period."

Item **Unit**

SECTION B2200: PREFABRICATED CULVERTS

B2201: SCOPE

Add the following:

"This section also covers the replacing and/or lengthening of existing culverts, modification of and repairs to existing catch pits."

B2202 TYPES OF CULVERTS

B2203 MATERIALS

b) Portal and rectangular prefabricated concrete culvert units

Replace this sub-clause with the following:

"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 before delivery of any units to site. 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 as well as to check covers before delivery to site. Any substandard cover shall result in the batch 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 pre-cast culverts all durability testing shall be done in accordance to Clause B6404(h) shall fall within the severe category. For units within the 5km zone from the coast the very severe category shall be used and increased cover shall be as specified by the engineer."

B2204: CONSTRUCTION METHODS

Replace the 2nd paragraph with the following:

"Culverts shall generally be lengthened according to the "embankment method". The contractor shall at all times ensure that the existing drainage is at all times maintained and any damage caused as a result of blocked culverts during construction shall be repaired at the contractor's expense.

New culverts shall generally be constructed according to the "trench method" unless otherwise indicated on the drawings.

The bottom of the excavation for culverts that are to be replaced or lengthened shall be inspected by the engineer prior to the placing of the bedding material. If the material is found to be suitable, it shall be ripped to a depth of 150mm below the bottom of bedding level and re-compacted to at least 93% Mod. AASHTO density.

Where the material is found to be unsuitable, it shall be removed to a depth specified by the engineer and then replaced with selected material compacted to at least 93% Mod. AASHTO density in layers not exceeding 150mm thickness."

B2215 SERVICE DUCTS

Insert the following at the end of the 1st paragraph:

"(v) **HDPE Sleeve Pipes**

HDPE sleeve pipes shall be:

1. Corrugated cable ducts complying with the requirements of SANS IEC 61386-24: 2005 for sleeves to be laid in trenches.
2. HDPE pipes for drilling shall be manufactured from PE63 – PN4 and shall comply with the requirements of SANS 427."

Insert the following as a new 4th paragraph

"Where drilling is required for installation of service ducts, a drilling pit shall be excavated on the one side of the road from where drilling is to be conducted. The pit shall be of adequate size to permit free standing of the operator and drilling equipment. On the other side of the road, a receiving pit is to be excavated. Both pits shall be backfilled after completion of the drilling, using

the excavated material compacted in 150mm layers to a minimum density of 93% of modified AASHTO. Drilling shall be carried out from the one side of the road in positions and to levels as shown on the drawings and/or as instructed by the engineer. The hole shall be of adequate size to accommodate the required service duct. The permissible deviation in level of the hole between the two sides of the road shall not exceed 500mm. The service duct shall be installed through the drilled hole and shall be extended to above ground."

Add the following at the end of the penultimate paragraph

"Before closing, all sleeves or ducts shall be proved as specified in sub-sub-clause B2104(b)(v)."

B2218 MEASUREMENT AND PAYMENT

Item **Unit**

B22.01 Excavation

.....

Add the following sub-item:

"Item **Unit**

(b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth m‡

(c) Extra over sub-item 21.01(a) for additional excavation required by the engineer after the excavation has been completed. m‡

The unit of measurement for B22.01 (b) shall be the cubic metre of material excavated by means of labour using hand tools only. This item shall only apply where the dimensions of the area to be excavated are such as to render excavation by machinery impractical and where the engineer has specifically ordered or authorised excavation by hand. This item shall not apply where machine excavation would have been possible, but the contractor chooses to use hand excavation instead.

The tendered extra-over rate shall include full compensation for all additional costs in excavating the material using hand held tools.

The unit of measurement for B22.01 (c) shall be the cubic metre of materials as ordered by the Engineer. The rate shall include all incidentals required for the execution of works.

Item **Unit**

B22.02 Backfilling .....

Replace the description of subitem B22.02(c) with the following:

(c)
Extra over subitems B22.02(a) for soil cement (soilcrete) backfilling containing 5% cement m‡

Item **Unit**

B22.12 Removing existing concrete.

"The tendered rate shall include full compensation of all demolition and loading, transporting and disposing of products of demolition, including a free haul of 1,0 km. "

Item **Unit**

B22.14 Removing and stacking existing prefabricated culverts (all sizes)

"The tendered rate shall include full compensation for lifting, loading, transporting to stack, offloading and stacking the prefabricated culverts and disposing of products of demolition, including a free haul of 1,0 km. "

Item **Unit**

B22.23 Service ducts

Add the following sub payment item:

"(c) Installation by drilling (type and diameter indicated) ..... metre (m)

The tendered rate for (c) shall be as for (a) or (b) and shall also include full compensation for all labour and equipment for the complete drilling process. Any requirement for shoring shall be paid under payment item B61.51."

Item **Unit**

B22.24 Utility Maker

Change the description of item 22.24 to read as follows:

B22.24 Utility marker, class 30/19 concrete, complete as shown on the drawings Number ROMH-042-07-04-09

Item **Unit**

B22.28 Prefabricated reinforced concrete skew end units for concrete culvers constructed at a skew angle.

Add the following sub payment item:

Extra over payment items B22.03 and 22.05 for supplying end units for culverts with a skew angle: @60 Degrees

(b) Portal and rectangular culverts:

(i) 1500 mm x 1200 mm, Class 100S Number

"The unit measurement shall be the number of each type and size of prefabricated reinforced concrete skew end unit provided and installed, irrespective of the angle of skew". The tendered rate shall include full compensation for providing, testing, loading and uploading the units, constructing the prescribed class of bedding, and for installing, laying and joining the units, complete as specified and in accordance with the details shown on the drawings.

Item **Unit**

Add the following pay item after 22.28

B22.29 Waterproofing of prefabricated culvert joints with a 500 mm wide composite membrane strip consisting of rubberized asphalt and cross-laminated high-density polyethylene film m

The unit of measurements is the metre of 300mm wide galvanised mild steel cover plate placed over joints as shown on drawings. The value shall include the provision of concrete nails at 300mm c/c to secure the steel plate in place.

The tendered rate shall include full compensation for procuring, furnishing, installing and placing the steel cover plate.

Item **Unit**

22/B61.03 Access and drainage

Add the following sub payment item:

(a) Access: Lump Sum

Add the following to the end of the first paragraph of item 61.03(a):

"The tendered lump sum shall also include full compensation for as many removals and reconstructions of the pioneer access roads as may be required to suit the plant used to excavate for and construct the foundation fill for the floor slab of the precast culvert."

Item **Unit**

Add the following sub payment item:

Change the description of item 61.05 to read as follows:

22/B61.05 Fill within a restricted area (extra over item B33.01) .....
..... cubic metre (m^3)"

"Item
.....**Unit**
Add the following sub payment item:

22/B66.27 Drainage strips 300 mm wide (Kaytech WickDrain GPA 330 or equivalent as approved by the engineer), including wrapping the strips in stitched grade 2 filter fabric sleeves ..... metre (m)

The unit of measurement shall be the linear metre of drainage strips installed on the earth faces of the precast box culvert walls and wing walls.

The tendered rate shall include full compensation for procuring and furnishing all the materials, transporting, handling and storing, and for all labour, equipment and incidentals required for installing the drainage strips wrapped in stitched grade 2 filter fabric sleeves, complete as detailed on the drawings, including attachment to the precast culvert barrel and earwing walls.

Item
.....**Unit**
Add the following sub payment item:

22/B66.28 Perforated drainage pipes (Kaytech M65 geopipe or equivalent as approved by the engineer), including wrapping the pipes in grade 2 filter fabric and constructing the 200 mm x 100 mm concrete bedding strips (class 15/19) ..... metre (m)

The unit of measurement shall be the linear metre of perforated drainage pipe installed on the earth faces of the precast box culvert barrel and wing walls.

The tendered rate shall include full compensation for procuring and furnishing all the materials, transporting, handling and storing, and for all labour, equipment and incidentals required for installing the drainage pipes wrapped in grade 2 filter fabric complete as detailed on the drawings, including for the construction of the 200 mm x 100 mm concrete bedding strip (class 15/19) below the pipes.

Item
.....Unit
Add the following sub payment item:

22/B66.29 300 mm wide x 1,6 mm thick galvanised mild steel sheet to seal the earth faces of the joint between the box culvert floor slabs ..... kilo gram (kg)

The unit of measurement shall be the linear metre of galvanised mild steel sheet installed on the earth faces of the box culvert floor slabs.

The tendered rate shall include full compensation for supplying all the materials, including galvanising of the mild steel sheet, and for transporting, handling and storing, and for all labour, equipment and incidentals required for installing the galvanised mild steel sheet complete as detailed on the drawings.

SECTION B2300: CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES AND CONCRETE LINING FOR OPEN DRAINS

B2301 SCOPE

Add the following to this clause:

"This section also covers the replacement of damaged concrete kerbing, channelling and lining."

B2304 CONSTRUCTION

b) Prefabricated concrete kerbing and channelling

Amend the end of the 2nd paragraph to read as follows:

"... road junctions, where the kerb units shall be 0,5 m in length for curve radii between 5,0 m and 20,0 m and 0,3 m in length for curve radii between 1,0 m and 5,0 m. For curves with a radius less than one metre the kerbs shall be cast in situ. Any associated prefabricated concrete channelling units shall also comply with the above requirements."

g) Concrete-lined open drains

Add the following to the last paragraph:

"Alternatively, the surface could be sprayed with invert bituminous emulsion as soon as possible after the excavations have been trimmed and compacted. The sprayed surfaces shall be maintained until the concrete lining is cast. The nominal rate of application of the emulsion shall be 0.5 litre/m^2 unless otherwise instructed by the engineer."

Add the following sub-clause:

"**l) Demolition of existing kerb and channel and concrete lined drains**

Where shown on the drawings and/or indicated by the engineer, the existing kerb and channel and concrete lined drains shall be demolished to a specified maximum size, removed and transported to an approved spoil site as provided by the contractor..."

B2307 MEASUREMENT AND PAYMENT

Replace the description of items 23.07 with the following:

"Item		Unit
B23.07	**Trimming of excavations for concrete lined open drains:**	***cubic metre (m†)***

In the second paragraph, commencing with "The tendered rates shall …." delete in the fifth, sixth and seventh lines the following words "including the removal of unsuitable ground and backfilling with suitable material."

Add the following item as follows:

"Item		Unit
B23.08	**Concrete lining for open drains:**	*cubic metre (m^3)*

(a) Cast in situ concrete lining

(i) Class 30/20 concrete

(1) 1.0m wide Type-E drain

(2) 2.0m wide Type-F drain

(3) 0.8m wide drain at guardrails

(4) Concrete Drifts as per drawing no. ROMH-042-07-04-08

The tendered rate shall include full compensation for procuring and furnishing all the materials, storing the materials, providing all plant, mixing, transporting, placing and compacting the concrete, forming the inserts, construction joints(except mandatory construction joints), and contraction joints, curing and protecting the concrete surfaces as specified. Payment shall distinguish between the different classes of concrete.

Add the following payment items:

"Item **Unit**

B23.16 Spraying trimmed surfaces of excavations for concrete-lined open drains with invert bituminous emulsion (MSP 1 or approved equivalent……. ..... litre

The unit of measurement is the litre of approved emulsion applied to the trimmed surfaces of excavations, calculated in accordance with the required application rate and the net area to be sprayed as instructed by the Engineer.

The tendered rate shall include full compensation for procuring, furnishing and spraying the emulsion and maintaining the sprayed surface until the concrete is placed. No payment will be made for emulsion applied in excess of the rate of application ordered plus the tolerance allowed."

Item **Unit**

B23.17 Removal of unsuitable material and replacement with selected G7 quality material in excavations for concrete lined open drains and also alongside concrete drains cubic metre (m3)

The unit of measurement shall be the cubic metre of material in place after compaction. The quantity shall be calculated from the leading dimensions of the backfilling as specified or as authorized by the Engineer.

If excavations were carried out in excess of the dimensions authorized by the Engineer, the quantity of backfilling will nevertheless be based on the authorized dimensions.

The tendered rates shall include full compensation for the excavation and removal of the unsuitable material including a free haul distance of 1,0 km and replaced with selected G7 quality material including full compensation for the supply and compaction of the material from approved sources including a free haul of 1 km.

Add the following payment items:

COLTO SERIES 3000: EARTHWORKS AND PAVEMENT LAYERS OF GRAVEL OR CRUSHED STONE

SECTION B3100: BORROW MATERIALS

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

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."

Add the following payment items:

B31.04	**(a) Allowance for Rehabilitation of the Borrow Pit area**	PC Sum
	(i) Handling costs and profit in respect of subitem B31.04(a) above	%

"The tendered rate shall include full compensation for all monies payable the rehabilitation of the borrow pits."

SECTION B3200: SELECTION, STOCKPILING AND BREAKING DOWN THE MATERIALS FROM BORROW PITS, CUTTINGS AND EXISTING PAVEMENT LAYERS AND PLACING AND COMPACTING THE GRAVEL LAYERS

B3201 SCOPE

Add the following after the first paragraph:

"For safety reasons, all material for the construction of layerworks dumped in heaps next to the road surface where traffic is accommodated, shall be flattened on the same day. Payment for this activity shall be deemed to be included in the relevant tendered rates under Sections 3300, 3400 and 3600."

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, reinstatement 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 0F 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

Add the following as a second 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 subbase layers shall be measured for payment under Section 3400: Pavement Layers of Gravel Material as:

Subitems 34/32.01(d) and 34/32.03(d) etc., whichever is the relevant pairing of payment items under Sections 3200/3400."

SECTION B3300: MASS EARTHWORKS

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."

B3312 MEASUREMENT AND PAYMENT

Add the following items:

"Item **Unit**

B33.20 Fill constructed with material obtained from commercial sources or sources provided by the contractor, including all haul

(a) Gravel material in compacted layer thicknesses of 200 mm and less:

(i) Compacted to 93% of Maximum Dry Density m‡

(b) Rock fill (as specified in subclause 3209(c)) m‡

The unit of measurement is the cubic metre of material measured in the compacted fill. The quantity measured shall be calculated by the method of average end areas from levelled cross-sections prepared from the ground line after clearing and grubbing and the removal of topsoil and the completion of any preparatory roadbed treatment which may have been ordered by the engineer, but prior to the construction of the fill, and the final specified or authorised fill cross-section superimposed at 20 m intervals along the centre line of the road. All measurement shall be neat and no payment will be made for that part of the fill placed in excess of the authorised cross-section shown on the drawings or instructed by the engineer, irrespective of the tolerances in workmanship allowed under the contract. Where the roadbed has subsided under the fills, the quantities shall be adjusted to make allowance for such subsidence, as set out in the note at the beginning of clause 3312. Measurement of fill shall distinguish between the alternative methods of processing and compacting.

Where measurement by cross-sections is considered by the engineer to be impractical, the compacted volume of the material may be taken as equal to 70% of the loose volume of material in the hauling vehicles as an alternative method of measurement.

The tendered rates shall include full compensation for the costs of negotiations and payment of royalties, for procuring, furnishing and transporting the materials over an unlimited free-haul distance from the sources to the site, for placing, preparing, processing, shaping, watering, mixing and compacting the materials to the densities or in the manner specified, and for removing and disposing of all oversize material from the road after processing, including transport for the haul distance to approved dumping sites provided by the contractor.

Payment shall distinguish between the various methods of processing and compacting specified, as itemised above."

B3402 MATERIALS

a) General

Add the following at the end of the second paragraph:

"For chemically stabilised layers the material shall conform to the requirements in table B3402/5.

For bitumen stabilised layers the material shall conform to the requirements in table B3402/6.

For cold in situ recycled layers the target grading shall be as indicated in table B3402/7"

Add the following after the second paragraph:

“Distinction shall be made between crushed and natural G4, G5 and G6 materials. Where the crushing and/or screening of these materials has been specified, the combined grading shall conform to the grading limits specified for G4 class material in Table B3402/1.

The same shall apply for all materials obtained from commercial sources.”

Replace the grading and grading modulus sections in Table 3402/1 with:

	Nominal aperture size of sieve (mm)	Percentage passing through sieve by mass			
		Crushed material produced by multistage crushing and screening	Uncrushed material or material produced by single stage crushing		
GRADING	53		None specified	The percentage by mass passing the 2,00mm sieve shall not be less than 20% nor more than 70%	None specified
	50	100			
	37,5	100			
	28				
	20	61 – 91			
	14	48 - 82			
	5	31 - 66			
	2	20 - 50			
	0,425	10 - 30			
	0,075	5 - 15			
GRADING MODULUS (GM)		-	2,4 ≥ GM ≥ 1.,5	2,4 ≥ GM ≥ 1,5	2,6 ≥ GM ≥ 1,2

Note:
Refer to standard COLTO table for COLTO grading if required

Replace Table 3402/5 with:

"TABLE B3402/5: REQUIREMENTS FOR CHEMICALLY STABILISED LAYERS

Classification	C1	C2	C3	C4
Material before treatment	At least G2 quality	At least G4 quality	At least G5 quality	At least G6 quality
PI after treatment	Non-plastic	Non-plastic	6 max. *(1)	6 max. *(1)
UCS (MPa) *(2)	6 min.	4 min.	1,5 min	0,75 min.

ITS (kPa) *(3)	-	-	250 min.	200 min.
WDD (% loss) *(4)	5 max.	10 max.	20 max.	30 max.

Note:
* (1) For materials derived from the basic crystalline rock group, the Plasticity Index after stabilisation shall be non-plastic.
* (2) Unconfined Compressive Strength @ 100% Mod. AASHTO density
* (3) Indirect tensile Strength @ 100% Mod. AASHTO density (Rapid Curing) * (4) Wet/Dry Durability according to Method B 8110"

b) Compaction requirements

Change the compaction requirements for stabilized subbases to read as follows:

"96% and 97% as required for lower subbase and upper subbase respectively, for chemically stabilized material."

Add the following after the last paragraph:

"The compaction requirements for this Contract shall be as specified below:

“Lower selected layer:	in-situ material to 93% of MDD
Upper selected layer:	type G7 to 93% of MDD
Subbase:	type C4 to 100% of MDD
Base:	type G3 to 100% of MDD
Shoulder and wearing course:	type G7 to 95% of MDD”

B3405 CONSTRUCTION TOLERANCES

(a) Level

Replace the table in the sub-sub-clause with the following:

“	H_{90}	H_{max}
Selected layers	*25 mm*	*33 mm*
Sub-base layers	*15 mm*	*20 mm*
Base layers	*12 mm*	*15 mm*
Shoulders		*25 mm"*

Add the following:

"Level control for the various pavement layers shall be done at least at the following intervals in the longitudinal direction:

Layer	**Interval**
Selected layer, sub-base, shoulders and wearing course	20 m
Base	10 m

(b) Layer thicknesses

Replace the table in the sub-sub-clause with the following:

“	D_{90}	D_{max}	D_{ave}
Selected layers	*25 mm*	*35 mm*	*8 mm*
Sub-base layers	*18 mm*	*24 mm*	*5 mm*
Base layers	*15 mm*	*22 mm*	*5 mm*

Shoulders *30 mm* *0 mm"*

B3406 QUALITY OF MATERIALS AND WORKMANSHIP

Replace the second paragraph with the following:

"Test results and measurements will be assessed in accordance with the provisions of Section 8200."

3407 MEASUREMENT AND PAYMENT

Amend the following pay item as follows:

Item	Unit
B34.01 Pavement layers constructed from gravel taken from Borrow pit, including haulage	
(c) Gravel subbase using G6 material (unstabilized gravel) compacted to:	
(i) 100% of Maximum Dry Density (MDD) (150mm layer thickness)	m‡

The unit of measurement shall be the cubic metre of compacted pavement layer, and the quantity shall be calculated from the authorized dimensions of the completed layer. The tendered rates shall include full compensation for procuring, as if from soft excavation or pits, breaking down, placing and compacting the material, including unlimited haulage and its removal, disposal and transporting for an unlimited distance of up to 5% by volume of oversize material, and the protection and maintenance of the layer and the conducting of control tests, all as specified.

SECTION B3500: STABILIZATION

B3501 SCOPE

Add the following as a 3rd paragraph:

“The use of recyclers for cold in situ recycling purposes is also covered in this section, which includes cement, lime, emulsion and foam stabilisation of base and subbase layers consisting of gravel and/or crushed stone material as described in sections 3400 and 3600.”

B3502 MATERIALS

a) Chemical stabilizing agents

Delete sub-clauses (ii) Ordinary Portland cement *and* (iii) Portland blast-furnace cement *and replace with the following*:

"Cement shall comply with the relevant requirements of SANS 50197-1:2000. The use of strength classes greater than 32,5 shall not be permitted.

On this contract CEM II shall be used for stabilization purposes.”

B3503 CHEMICAL STABILIZATION

a) Preparing the layer

Insert the following before the first paragraph:

“Moisture content tests shall not be undertaken more than one day in advance of in situ stabilization operations. Care shall be taken to ensure that samples are representative of

the in-situ material. Checks shall be conducted when wet weather occurs between initial testing and work commencing on any section."

Add the following:

"The material to be stabilized shall be spread and pre-shaped, so that a true cross fall is obtained. The upper level of the spread material shall be such that any indentations and depressions caused by construction equipment shall be above or at final cutting level. Enough extra material must be allowed for, so that no filling whatsoever is carried out. The final operation on the base prior to final compaction will be cutting and never making up of levels."

b) Applying the stabilizing agent

Add the following to the first paragraph:

"The Contractor's spreading method must be submitted to and approved by the Engineer before any spreading can take place."

Replace the second sentence of the second paragraph with the following:

"Spreading shall only commence when the engineer is satisfied that the correct quantity of stabilizing agent has been placed on the layer and has given permission that the stabilizing agent may be spread uniformly over the entire surface to be treated."

h) Curing the stabilized work

Add the following to method (ii):

"The covering material shall be placed by end-tipping, spread, and not compacted until the underlaying layer has cured for at least 7 days."

Add the following to paragraph:

"Method (iii) and (iv) shall not be applicable."

i) Construction limitations

Replace the fourth paragraph starting with "No stabilization ..." *with the following:*

"No stabilization shall be done during windy conditions, wet weather or with falling air temperatures (7 C and dropping), or during rising air temperatures (when the air temperature is below 3 C).

Moisture content tests shall not be undertaken more than one (1) day in advance of in situ stabilization operations. Care shall be taken to ensure that samples are representative of the in-situ material. When wet weather occurs, checks shall be conducted between initial testing and work commencing on any section.

The surface temperature of a compacted stabilized layer shall not be allowed to fall below 1 C during the first three (3) days after stabilization. The contractor shall be responsible for taking the necessary precautions to prevent the layer from freezing.

When a sudden unforeseen temperature drop to a level below this limit occurs, the stabilized layer shall be covered with the material required for the next layer to be constructed.

All stabilized layers damaged by rain, frost or by the formation of ice in the layer shall be removed and replaced by the contractor at his own expense.

The contractor shall make allowance for these requirements in his construction programme and no claims in this connection will be considered.

No traffic or plant not actually used for processing of curing the layer shall be allowed to pass over the treated layers for a period of at least 48 hours after compaction is completed. Thereafter construction of the overlying layer may proceed."

In Table 3503/1, delete "8 hours" for Ordinary portland cements and cement blends *and replace with* "6 hours".

B3506 TOLERANCES

b) Uniformity of mix (chemical stabilisation)

Replace the full stop at the end of subclause B3506(i) with the following:

"using the formula: $(\underline{S_n} / X_n)$

where:

S_n *is the standard deviation of stabilizer*
X_n *is the average stabilizer content."*

B3507 CONSTRUCTION OF TRIAL SECTION

Insert the following before the second paragraph:

"Prior to carrying out the trial section for cold in situ recycling, the contractor shall assemble all items of plant and equipment that he proposes to use for the recycling operation. Only those machines he intends using for production work shall be used to construct the trial section and under no circumstances shall he be permitted to use any substitutes. The first section of pavement to be recycled shall be regarded as a trial section with the objective of:

- demonstrating that the equipment and processes he proposes to employ are capable of constructing the recycled layer in accordance with the specified requirements;
- determining the effect on the grading of the recycled material by varying the forward speed of the recycling machine and the rate of rotation of the milling drum; and
- determining the amount of rolling necessary to achieve the compaction requirements.

The trial section shall be at least 100m in length and shall cover the full lane-width or half-road width in accordance with the geometry of the road and the accepted work plan.

To allow the engineer sufficient time to assess all aspects of quality of the completed trial section and contingent on the results being satisfactory, the contractor shall programme to start production recycling work no sooner than one week after constructing the trial section.

Should the contractor make any alterations in the methods, processes, equipment or materials used, or if he is unable to comply consistently with the specifications due to variations in the insitu material, or for any other reason, he may be required to undertake further trial sections before continuing with the permanent work."

Insert the following new paragraph after the third paragraph:

"For cold in situ recycling provision is made for payment for the first approved trial section. Such payment will be made as an extra-over to the various payment items for recycling work together with all additives that will be measured and paid as normal production work. Any further trial sections ordered by the engineer shall likewise be paid provided they are approved."

B3510 MEASUREMENT AND PAYMENT

Item	Unit

B35.02 Chemical stabilizing agent

Replace the full stop at the end of the third paragraph with the following:

" and layer dimensions."

Add the following new payment items:

“Item	Unit
B35.13 Extra over item for B35.01 the construction of a trial section	cubic metre

The tendered rate shall include full compensation for all costs to make available, operate and to transport the recycling machine and other equipment to the sampling position. To provide the required traffic accommodation in terms of section B1500. The tendered rate shall further include full compensation for breaking up the pavement for sampling and temporary patching the disturbed roadway by adding make-up material, watering, compacting and surfacing with a cold asphalt material. The tendered rate shall also include full compensation for all transport, labour and other incidentals required for the construction of the trial section.”

B3602 MATERIALS

a) Requirements for crushed aggregate

After the first sentence delete the remainder of the paragraph and replace with the following:

"The aggregate shall not contain more than 0,1% by mass of unwanted material such as wood, coal or similar organic material.

Aggregates containing mica, such as granite, gneiss, mica schist, pegmatite, sandstone shall not contain more than 2% by mass of free mica, especially muscovite, when assessed by visually separating the particles, or more than 4% by volume when assessed by means of microscopic slides. Aggregate containing easily detectable quantities (more than 1%) of olivine, serpentine and sulphide minerals such as pyrites and marcasite, must be considered with caution, and may warrant additional evaluation to the satisfaction of the engineer. Argillaceous rocks may only be used if specified in the project specifications, or with the engineer's written approval.

Soft or weathered particles shall be controlled by the Durability Mill Index values specified in B3602(e) Durability.

Provision has been made in clause B8108(b)(iii), calculation, for the determination and calculation of the Apparent Density for aggregates with a total water absorption greater than 1,5%, when total water absorption is determined according to SANS 3001-AG20 (replacing TMH1 method B14) and SANS 3001-AG21 (replacing TMH1 method B15)."

c) Grading requirements

Replace entire clause with the following:

"The target grading, after compaction, shall be as near as possible to the mean of the specified grading envelope listed in table B3602/1 and shall be continuous with no marked gaps or excessive quantities of any particular size. The mean grading of each lot (minimum of 4 but preferably 6 test points per lot) shall conform to the approved target grading plus or minus the tolerances specified in table B3602/4. However, no target grading plus tolerance can be set outside the original grading envelope in table B3602/1."

Table 3602/1 – COMPACTION REQUIREMENTS

In table 3602/1 delete "85% of bulk relative density" *and replace with*:

"88% of Apparent Relative Density".

Replace the grading section in Table 3602/1 with:

"TABLE B3602/1

Grading	**Nominal aperture size of sieve (mm)**	**Percentage passing through sieve by mass**			
		Nominal max size			
		G1	**G2**	**G3**	
		37.5mm	**37.5mm**	**37,5 mm**	**28 mm**
	37,5	**100**	**100**	**100**	
	28	**86 - 95**	**86 - 95**	**86 - 95**	
	20	**73 - 86**	**73 - 86**	**73 - 86**	**87 - 96**
	14	**61 - 76**	**61 - 76**	**61 - 76**	**73 – 86**

	5	**37 - 54**	**37 - 54**	**37 - 54**	**43 - 61**
	2	**23 – 40**	**23 – 40**	**23 – 40**	**27 – 45**
	0,425	**11 – 24**	**11 – 24**	**11 – 24**	**13 – 27**
	0,075	**6 - 10**	**6 - 10**	**6 - 10**	**5 - 12**

Note:
Refer to standard COLTO table for COLTO grading if required

Replace Table 3602/4 with:

"TABLE B3602/4

Sieve size (mm)	**Permissible deviations by mean values (% by mass)**		**Permissible deviations by individual values (% by mass)**	
	Nominal maximum size (mm)			
	37,5	**28**	**37,5**	**28**
28	**– 5**		**– 5**	
20	**– 5**	**– 5**	**– 7**	**– 7**
14	**– 5**	**– 5**	**– 7**	**– 7**
5	**– 5**	**– 5**	**– 7**	**– 7**
2	**– 4**	**– 4**	**– 5**	**– 5**
0,425	**– 3**	**– 3**	**– 5**	**– 5**
0,075	**– 2**	**– 2**	**– 3**	**– 3**

Note:
Refer to standard COLTO table for COLTO grading if required

Add the following new sub-clause:

"**e) Durability**

The durability property of aggregates derived from the basic crystalline group shall be assessed by means of the Ethylene Glycol Durability Index. When tested in accordance with the method prescribed in B 8105(g) the Durability Index shall not exceed four. In addition, the 10% FACT value obtained after soaking in ethylene glycol for four days shall not be less than 50% of that obtained on the unsoaked sample. Where any values are obtained that fall outside the above requirements, a detailed assessment of the quarry shall be undertaken together with a specialist mineralogical evaluation of both the coarse as well as fine fractions in order to assess the long-term durability properties of the material.

For Basic crystalline rocks, Arenaceous rocks, Argillaceous rocks and Diamictites the Durability Mill Index (DMI) shall be less than 125. For all other rock types the Durability Mill Index (DMI) shall not be more than 420, subject to the % passing the 0,425mm sieve not increasing by more than 8 percentage points during the Durability Mill test."

B3604 CONSTRUCTION

b) Compaction

Replace that last sentence of the first paragraph with:

"The density of the layer shall be tested at each third of the layer thickness."

c) Surfacing preparation of the base

Replace the final paragraph in subclause 3604(c)(i) with:

"Slushing of the base, is compulsory and shall be carried out within 48 hours after completion of the compaction. Even if the specified density is achieved without slushing or before completion of the slushing process, the full slushing process must still be completed."

Delete sub-sub-clause (ii) Multi-stage process (water or slurry rolling).

B3605 PROTECTION AND MAINTENANCE

Replace "moisture content of the layer" *in the first paragraph with* "moisture content of the upper 50mm of the layer."

Add the following to the end of the second sentence:

"as determined according to SANS 3001-GR30 (replacing TMH 1 method A7)."

B3607 QUALITY AND WORKMANSHIP

Delete "or 8300" *in the second paragraph*.

B3608 MEASUREMENT AND PAYMENT

Delete the first paragraph and replace it with the following:

"Note: No additional or extra over payment shall be made for work in restricted or confined areas."

"Item **Unit**

B36.01 Crushed-stone base

Add the following subitem:

e. Constructed from type G3 material obtained from commercial sources, and compacted to 100% of MDD
(150mm thickness 37mm nominal maximum stone size) cubic metre (m^3)"

B36.03 Crushed-stone base trial section (thickness indicated) constructed in accordance with the provisions of clause 3603

Add the following after the last sentence:

"If the trial section is constructed at the final base level and it is approved by the Engineer, then this rate shall cover all the costs for the section of base and no further payment will be made under item 36.01.".

B36.16 Finishing off base layer by slushing using water

The tendered rate shall also include full compensation for all transport, labour and other incidentals required for the construction of the trial section."

COLTO SERIES 4000: ASPHALT PAVEMENTS AND SEALS

SECTION B4100: PRIME COAT

B4102 MATERIALS

(a) Priming material

Add the following:

"The Contractor shall note that no tar-based products shall be permitted on this Contract.

The prime coat shall be MC30 or ECO Environmentally friendly bitumen based prime."

b) Aggregate for blinding

Add the following sentence:

"Blinding of the primed surface with aggregate shall only be permitted to facilitate vehicular access to adjoining properties".

B4104 WEATHER AND OTHER LIMITATIONS

Replace paragraph (g) with the following:

"(g) When at any position within the layer the moisture content of a granular base layer is more than 50% of the optimum moisture content determined according to SANS 3001-GR30 (replacing TMH 1, Method A7). In the event of rain after priming, the base shall be allowed to dry out to meet the above moisture content requirement prior to surfacing."

B4106 APPLICATION OF THE PRIME COAT

Replace paragraph (c) with the following:

"The type of prime and application rate best suited for the base shall be determined during construction. The Contractor shall provide about 20ℓ of each prime and apply it at different application rates with a brush on the base. Then engineer will then instruct the type of prime and application rate to be used. No payment shall be made for tests to determine the type of prime.

Unless directed otherwise by the engineer or indicated on the drawings, the edges of the primed surface shall be 150mm wider than the edges of the surfacing."

Add the following sub-clause:

"(j) Application in areas treated by reworking and construction of a new base shall be primed using a mechanical distributor complying with sub-clause 4103(a). The edges of the previously constructed or existing surfacing shall be adequately protected by approved means to ensure that an overlap of prime not exceeding 50mm is sprayed onto the previously constructed or existing surfacing."

B4108 TOLERANCES

Replace the first paragraph with the following:

"The actual spray rates measured at spraying temperature shall not deviate by more than 8.0% from that ordered by the engineer. The engineer may, at his discretion, conditionally accept application rates falling outside this tolerance at reduced payment in accordance with Table B4108/1.

TABLE B4108/1: PAYMENT REDUCTION FACTORS FOR CONDITIONALLY ACCEPTED PRIME COAT

Deviation specified spray rate at spraying temperature. (%)	Payment reduction factor of tendered rate.
–8,0	1.00
–9,0	0.97
–10,0	0.95
–11,0	0.90
–12,0	0.85
–13,0	0.80

Any deviation outside these limits shall not be paid for, however, the engineer shall have the right to instruct the contractor to make up any deficiency, or blind excessive prime without additional payment. Where so instructed, the material for blinding shall consist of approved, but shall consist of screened 5mm nominal single size aggregate. The use of crusher dust for blinding shall not be permitted. If under-spraying occurs, and it is accepted by the engineer, only the actual quantities applied shall be paid for."

B4109 TESTING

Add the following:

"No payment will be made if this condition is not adhered to. The contractor shall provide, at his cost, representative samples of every batch of prime delivered onto site."

B4202 MATERIALS

a) Bituminous binders

(i) Conventional binders

Add the following:

"The binders to be used shall be as follows:

(a) Continuously graded surfacing course: 50/70 penetration grade bitumen (b) Continuously graded base: 30/50 penetration grade bitumen".

(iii) Homogeneous modified binders

Replace the last sentence with:

"The modified binder to be used on this project shall be A-E[1]

The homogeneous modified binder shall be manufactured according to the guidelines contained in "Technical Guideline: The use of Modified Bituminous Binders in Road Construction (TG 1-2020): Asphalt Academy". The base bitumen shall conform to SANS 4001-BT1:2012, or a blend of SANS 4001-BT1:2012 grades. The type as well as percentage of modifier is not prescribed, however the contractor shall indicate in the Pricing Schedule what polymer he shall be using. The properties of the homogeneous modified binder shall comply with the relevant requirements for binder class A-E1/A-E2/ A-P1* as listed in table B4202/12 and A-H1/A-H2* as listed in table B4202/13.

TABLE B4202/12: PROPERTIES OF POLYMER-MODIFIED BINDER FOR HOT-MIX ASPHALT

		Test Method	**Class**
Before ageing			**A-E2**
Softening point [2]	C	MB-17	65-85
Elastic recovery @ 15 C	%	MB-4	> 60
Dynamic viscosity @ 165 C	Pa.s	MB–18	≤0,6
Storage stability @ 180 C [2]	C	MB-6	≤ 5
Flash point	C	ASTM D92	≥ 230
After ageing (RTFOT)			
Mass change	%	MB-3	≤ 1,0
Softening point (min)	C	MB–17	63
Elastic recovery @ 15 C	%	MB-4	> 50

TABLE B4202/15: TEMPERATURE/TIME LIMITS FOR POLYMER MODIFIED BINDERS

Binder Class	**Short Term Handling/**	**Storage [1]**	**Spraying/Asphalt Mixing/Application**

[1] *The prescribed test method is based on not using stirrers although it has been reported that the use of stirrers has shown no difference in test results. For referencing purposes no stirrers should be used.*

[2] *Certain base bitumens, when used in the production of modified binders, are prone to cause segregation of the modified binder. The Storage Stability test result should be interpreted as an indicator of the compatibility of the base bitumen and the modifier used. In cases where compliance limits are not met, proposals of site agitation procedures of the binder to prevent segregation shall be submitted to the client for consideration. In all cases, whenever there is any reason to believe that the composition of the base bitumen has changed, the test shall be repeated to ensure compliance or to determine the need for measures to prevent segregation.*

	Transportation						
	Max Temp (C)	Max Holding Time (hrs)	Max Temp (C)	Max Holding Time [2] (hrs)	Max Temp (C)	Min Temp (C)	Max Holding Time (hrs)
A-E2 [3]	180	24	160	240	180	170	12

[1] *When storing product for 48 – 240 hours, it is recommended that the tank has agitation circulation.*
[2] *If the recommended maximum holding time has been exceeded, the binder should be resampled and tested to ensure compliance with the specification.*
[3] *A-E2 temperature to be confirmed by practitioners and historical data.*

b) Aggregates

Add the following paragraph to the introductory description:

"Asphalt mixes shall be manufactured using different individual single size coarse aggregates fractions and crushed fine aggregates blended to conform to the specified grading requirements. The use of natural sands shall only be permitted if approved by the engineer and shall be limited to a maximum of 5% for continuously graded mixes. All aggregate in excess of 5mm shall consist of individual nominal single sized aggregate. For stone mastic asphalt mixes all aggregate fractions in excess of 2mm shall consist of individual single size fractions. The Contractor shall note that commercial suppliers may not be able to supply all the required single size aggregates, in which instance arrangements will have to be made for additional on site screening. No additional payment shall be made for screening aggregate. The use of run of crusher type materials shall not be permitted."

(v) Absorption

Add the following sentence:

"In addition, the total binder absorption of the combined coarse and fine aggregate blend shall not exceed 0,5%"

(viii) Grading

Delete the second paragraph commencing with "The target grading…" *and add the following paragraphs* *

The grading limits for the combined aggregate grading for the asphalt surfacing shall be as specified in table 4202/7: Continuously graded medium grade.

The grading limits for the combined aggregate grading for the stone mastic asphalt shall be as specified in table B4202/10. In addition to the specified grading limits, the percentage by mass of aggregate smaller than 0,005mm, when determined in accordance with SANS 3001: Method GR3, shall be less than 1,0 of the combined aggregates excluding the active filler added in the approved mix. The engineer may request a reconsideration of blends to achieve any grading within the relevant envelope in order to improve certain mix properties.

(x) Rolled-in chippings

Replace Table 4202/11 with:

TABLE B4202/11: GRADING LIMITS FOR ROLLED-IN CHIPPINGS

Sieve size (mm)	Chip size - Percentage passing by mass	
	20 mm	**14 mm**
20,0	100	
14,0	0 – 20	100
Sieve size (mm)	**Chip size - Percentage passing by mass**	
	20 mm	**14 mm**

10,0	0 – 5	0 – 20
7	0 – 1	0 – 5
0,425	0,5 max	0,5 max

Note:
Refer to standard COLTO table for COLTO grading if required

Add the following new sub-item:

"(xi) Moisture content

The moisture content of aggregates, sampled from the cold feed belt, shall not exceed the following limits at the time that it is introduced into the mix:

- Coarse aggregate 2%
- Fine aggregate ..... 4%"

c) Fillers

Delete the second last sentence of the first paragraph and replace with:

"With the exception of stone mastic asphalt, in no instance shall more than 2% by mass of active filler be used in the mixes."

Add the following after the last paragraph:

"For tender purposes the active filler shall be hydrated lime"

f) Asphalt for hot plant mix recycling

Add the following:

"Reclaimed asphalt (RA) shall be asphalt that has been recovered using a milling machine or by crushing slabs ripped up from asphalt pavements, lumps from slabs, or asphalt from reject and surplus production. RA shall be free of foreign material such as unbound granular base, broken concrete, remnants of geosynthetic grids or cloths, or other contaminants. The maximum percentage of Reclaimed Asphalt (RA) that is to be added to the mix shall be 40%."

h) General

Add the following after the second paragraph:

"Sufficient aggregate for a minimum of 3 days production shall be separately stockpiled and tested for conformance and uniformity prior to use. The test results shall be presented to the engineer"

B4203 COMPOSITION OF ASPHALT BASE AND SURFACING MIXTURES

In the first paragraph, third last line, after "or active filler content" *add*:

"or aggregate content"

Replace the fifth paragraph with the following:

"The design of the asphalt mixes shall be in accordance with "Interim Guidelines For The Design Of Hot-Mix Asphalt In South Africa (June 2001)", and appropriate research results. The mix properties and requirements shall be as specified in the project specifications"

The relevant asphalt mixes for the base and surfacing layers shall comply with the requirements in table B4203/1.

Replace Table 4202/7 with:

TABLE B4202/7 PART 2: GRADING LIMITS FOR COMBINED AGGREGATE FOR ASPHALT SURFACING

	Sieve size (mm)	Medium Continuously graded
PERCENTAGE THROUGH SIEVE BY MASS	28	
	20	
	14	100
	10	85 – 100
	5	56 – 77
	2	33 – 48
	1	25 - 40
	0,600	18 – 32
	0,300	11 – 23
	0,150	7 – 16
	0,075	4 - 10
NOMINAL PROPORTIONS BY MASS	**AGGREGATE**	93,5%
	BITUMEN (GRADE ACCORDING TO PROJECT SPECIFICATIONS)	5,5%
	ACTIVE FILLER	1,0%

Replace Table 4203/1 with:

TABLE B4203/1: ASPHALT MIX REQUIREMENTS: BASE AND SURFACING

Property	Continuously graded surfacing mixes
Marshall Stability (kn)	8 – 18
Marshall Flow (mm)	2 – 6
Stability /Flow (kN/mm)	> 2,5
VMA (%)	> 15
VFB (%)	65 – 75
Air voids (%)	4 – 6
Indirect tensile strength @ 25 C (kPa)	> 1000
Dynamic Creep Modulus @ 40 C (MPa)	> 20
Modified Lottmann @ 7% voids (TSR)	> 0, 8
Air permeability @ 7% voids (cm^2)	$< 1 \times 10^{-8}$
Binder film thickness (microns)	5,5 – 8,0
Filler bitumen ratio	1 – 1,5
Immersion index (%)	-

B4204 PLANT AND EQUIPMENT

(f) Vehicles

Replace the second paragraph with the following:

"To minimize temperature loss all vehicles used for transporting asphalt to the site shall be fitted with thermal asphalt covers (canvas covers not acceptable) irrespective of the prevailing climatic conditions or distance of transport."

B4205 GENERAL LIMITATIONS AND REQUIREMENTS AND THE STOCKPILING OF MIXED MATERIAL

b) Moisture

Amend the last paragraph as follows:

Insert "and/or primed base" *after* "surfacing" *in the third line of the first sentence.*

Replace the last sentence with "In such case the base shall be allowed to dry out to meet the above moisture content requirement prior to placing the surface layer."

c) Surface Requirements

(iii) Tack Coat

Add the following paragraph:

"Hand spraying shall only be permitted on areas approved by the engineer. The binder distributor shall be capable to apply the binder evenly over the full area. The equipment shall comply with clause 4103. Tack coat shall be applied to all transverse and longitudinal joints by hand utilizing a paint brush."

B4206 PRODUCING AND TRANSPORTING THE MIXTURE

b) Production of the mixture

(ii) Using drum-type mixer plants

Add the following:

"Pre-blending of aggregate fractions shall not be permitted and the contractor shall ensure that sufficient cold-feed bins are installed to accommodate each individual aggregate fraction, including the filler."

c) Transporting the mixture

Delete the second sentence in this paragraph.

Add the following sub-clause:

"**f) Approval of asphalt mixture**

Before any asphalt is placed on the road, the engineer shall approve the mix design. The approval process shall be as follows:

The contractor shall prepare and submit a laboratory design mix with test results at four different bitumen contents. The design mix shall be submitted on the prescribed form D3 of TMH 10: "Instruction for the Completion of As-Built Materials Data Sheets" with all the necessary test results completed. In addition, the proposed asphalt mixture shall be subjected to gyratory testing. All the expenses in preparing and submitting the laboratory design mix shall be to the contractor's cost.

Samples of all aggregate and bitumen shall be submitted with the laboratory design mix to enable the engineer to carry out check design testing as necessary. The above design and aggregate shall be submitted to the engineer at least six weeks before it is intended to commence with any asphalt production.

After approval is obtained for the laboratory design mix, a plant mix at varying binder contents of approximately 5 to 10 tons each shall be produced. The purpose of the plant mix is for the contractor to prove that the laboratory design mix can be produced successfully. The engineer shall conduct the necessary testing on the plant mix. The plant mix shall not be placed on the road. During the production of the plant mix, the engineer shall be afforded the opportunity to inspect the asphalt plant.

After the plant mix is approved, permission shall be given for laying a trial section at varying binder contents in accordance with the requirements of section 4211 of the specifications. The engineer may require that the mix be further assessed by means of CSIR Wheel Tracking or MMLS testing, the cost of which will be borne by the Employer. Mass production of asphalt shall only commence after approval of the trial section, which should be given within a maximum of ten days.

The engineer may instruct the contractor at any time to halt his paving process and to review the whole or part of the above process should a change of aggregate properties occur, the specified asphalt requirements not being met and/or a consistent asphalt mixture not be produced."

B4208 JOINTS

Add the following to this clause:

"Where the difference in level between the new work and the existing road surface exceeds 25mm, joints shall be treated as follows:

Transverse steps at the end of a day's work shall be tapered off at a slope of 1 vertical to 20 horizontal (1:20) to tie in with the existing surface. The tapered section shall be removed before surfacing is recommenced and a joint formed in accordance with clause 4208 of the specification.

Longitudinal joints exposed to traffic shall be provided with a taper of compacted asphalt material over the full length of the exposed joint. The width of the taper shall be at least 5 times the difference in level between the old and new work.

All costs involved in the provision and removal of these temporary ramps shall be deemed to have been included in the rates tendered for the relevant asphalt payitem."

B4211 LAYING OF TRIAL SECTION

Add the following to the end of the first paragraph:

"As the purpose is not to calibrate any equipment, etc., the contractor shall calibrate the equipment and refine the mix design at his own cost."

B4213 CONSTRUCTION TOLERANCES AND FINISH REQUIREMENTS

(c) Gradings

Replace Table 4213/1 with:

TABLE B4213/1: AGGREGATE GRADING TOLERANCES

Size of aggregate passing Sieve size (mm)	Permissible deviation from target grading (%)
28	– 5
20	– 5
14	– 5
10	– 5
7	– 5

5	**– 4**
2	**– 4**
1	**– 4**
0,600	**– 4**
0,300	**– 3**
0,150	**– 2**
0,075	**– 1***

* When statistical methods are applied the permissible deviation for the 0,075 fraction is – 2%.

B4214 QUALITY OF MATERIAL AND WORKMANSHIP

b) Coring of asphalt layers

Add the following:

"A suitable coring machine shall be available on a daily basis when asphalt paving is taking place. Cores shall only be drilled, when the road temperature is 20 C or less. Core holes shall be filled with hot mix asphalt and compacted, all within 24 hours of the core being drilled. Coring shall be carried out within 48 hours after the paving has been completed and supplied to the engineer. The test results of cores shall be submitted to the engineer within 24 hours after coring."

c) Routine inspection and tests

Add the following paragraphs:

"The contractor shall keep accurate records of:

(i) The position where every truckload of asphalt is paved (chainage, lane, time and date).
(ii) The temperatures of the asphalt in the trucks both at the mixing plant and at the paving equipment immediately prior to discharging the load.
(iii) The truck and load number from which control samples are taken. All samples taken shall be appropriately numbered.

Test results and measurements will be assessed in accordance with the provisions of section 8200."

Add the following sub-clause:

d) Special tests

n-Heptane-Xylene Equivalent (Spot test) (AASHTO-T102)

If the engineer suspects that bitumen or asphalt has been overheated, he may order that the bitumen, or the bitumen recovered from the asphalt, be subjected to the Spot Test. Recovery of binder for use in the Spot Test shall be carried out according to an approved method.

Any bitumen having an n-Heptane-Xylene equivalent in excess of 36, or in excess of the manufacturers test result on the dispatched stock, shall be considered to have been overheated and shall be deemed to be rejected unless proven otherwise."

B4215 MEASUREMENT AND PAYMENT

Amend the following payment item:

Item		**Unit**
B42.08	**100mm cores in asphalt paving**	number (no)

Amend the 1st sentence by adding the following after the word "drilled….":

"irrespective of depth of core."

Add the following payment items:

"Item **Unit**

B42.21 Installation of speedhumps using continuously graded asphalt (using Class A-P1 modified binder and 30 mm maximum aggregate size), complete including saw cutting, tack coat and shaping but excluding signs and markings. Refer detail on Drawing No. ROMH-045-07-05-06 Number

The unit of measurement shall be number of speedhumps constructed as per the project drawing.

The tendered rate must include all the incidentals such as procuring material, labour, unlimited haulage, placing, compacting and finishing the speedhump.

B42.22 Aggregate variations ..... ton (t)

The unit of measurement with respect to increases or decreases in the aggregate content from that specified in the nominal mix shall be the ton.

Payment for variations shall be made as specified for clause 1213."

COLTO SERIES 5000: ANCILLARY ROADWORKS

SECTION B5100: PITCHING, STONEWORK AND PROTECTION AGAINST EROSION

B5102 MATERIALS

a) Stone

Replace the 2nd paragraph with the following:

"Unless suitable stone can be located on site, the stone for pitching shall come from commercial sources but, from whatever source, its use shall be subject to the prior approval of the engineer."

c) Sand

(ii) Sand for bedding

Replace this sub-sub-clause with the following:

Sand for bedding used for paving blocks shall not contain any deleterious impurities and shall comply with the requirements given in table B5102/1.

TABLE B5102/1

Sieve size (mm)	Percentage passing
10	100
5	95 – 100
2	73 – 86
1	43 - 78
0,600	25 – 60
0,300	10 - 30
0,150	5 – 15
0,075	5 - 10

Note:
Refer to standard COLTO table for COLTO grading if required

B5106 SEGMENTAL BLOCK PAVING

d) Edge beams

Add the following paragraph:

"Where concrete edge beams are constructed the relevant specifications under section 2300 shall apply."

SECTION B5400: GUARDRAILS

B5402 MATERIALS

a) Guardrails

*At the end of the 1st sentence delete the full stop and add "*or SANS 51317 and carry the SABS mark or a mark by any other SANAS approved certification body for the applicable SANS specification*."*

b) Guardrail posts

(ii) Steel posts

Replace the paragraph with the following:

*"*Where offered or instructed to be used, steel posts shall be part of an approved guardrail system as tested and complying with SANS 51317, and galvanized in compliance with the requirements of SABS 763 for type A1 articles, shall be used.

Where guardrails are placed on concrete retaining walls or concrete structures, the steel posts shall be of the type and size shown on the drawings or described in the project specifications*."*

B5403 CONSTRUCTION

a) Erection

Replace the 7th paragraph with the following:

*"*Steel posts placed on concrete retaining walls or concrete structures shall be erected and fixed as shown on the drawings. For all other applications, steel posts shall be erected and fixed in compliance with the approved guardrail system as tested and approved in terms of SANS 51317*."*

B5405 REMOVING, RENOVATING AND RE-ERECTING GUARDRAILS

a) Removing the guardrails

In the 3rd line of the 1st paragraph, after "150mm layers," *delete the full stop and add* "of suitable material (than less than G7 quality material)."

B5406 MEASUREMENT AND PAYMENT

Replace item 54.01 with the following:

"**Item** **Unit**

B54.01 Guardrails on 3.81m spaced posts

Note to Tenderer: Select and price either the timber post or steel post system – not both

(a) Complete galvanised system on:
(i) Timber posts ..... metre (m)
(ii) Steel posts ..... metre (m)

(b) Extra over 54.01(a) for the following
(i) Flared ends (including end wing) ..... number (No)
(ii) End treatments where single guardrail sections
are used (including additional posts) ..... number (No) (iii)
End treatments where double guardrail sections
are used (including additional posts) ..... number (No) (iv)
Bridge adaptors (including extra rail and posts) ..... number (No)
(v) Horizontally curved guardrails factory bent to a
radius of less than 45m ..... metre (m)

The unit of measurement for (a) and (b)(v) shall be the metre of guardrail as erected, (including length of end treatments and curved guardrails).
The unit of measurement for (b)(i) to (b)(iv) shall be the number of end treatments of each type installed.

The tendered rates shall include full compensation for furnishing all materials and labour for erecting and galvanizing the guardrails, complete with posts, spacer blocks, bolts, nuts, washers and reinforcing plates, and excavating holes in all classes of material, concrete, backfilling and removing any surplus material. It shall also include full compensation for incidentals in respect of supplying and erecting curved guardrails, end treatments, and turned down sections.

Reflective plates and drilling and blasting will be paid for separately under items 54.06 and 54.12 respectively."

Replace item 54.02 with the following:

"**Item** **Unit**

B54.02 Guardrails on 4.0m spaced posts

Note to Tenderer: Select and price either the timber post or steel post system – not both.

(a) Complete galvanised system on:
(i) Timber posts ..... metre (m)
(ii) Steel posts ..... metre (m)
(b) Extra over 54.02(a) for the following
(i) Flared ends (including end wing) ..... number (No)
(ii) End treatments where single guardrail sections
are used (including additional posts) ..... number (No)
(iii) End treatments where double guardrail sections
are used (including additional posts) ..... number (No) (iv)
Bridge adaptors (including extra rail and posts) ..... number (No)
(v) Horizontally curved guardrails factory bent to a
radius of less than 45m ..... metre (m)

The unit of measurement for (a) and (b)(v) shall be the metre of guardrail system (complying with SANS 51317) as erected (including length of end treatments and curved guardrails).

The unit of measurement for (b)(i) to (b)(iv) shall be the number of end treatments of each type installed.

The tendered rates shall include full compensation for furnishing all materials and labour for erecting and galvanizing the guardrails, complete with posts, spacer blocks, bolts, nuts, washers and reinforcing plates, and excavating holes in all classes of material, concrete, backfilling and removing any surplus material. It shall also include full compensation for incidentals in respect of supplying and erecting curved guardrails, end treatments, and turned down sections.

Reflective plates and drilling and blasting will be paid for separately under items 54.06 and 54.12 respectively."

Delete items 54.03, 54.04 and 54.05 without replacement

Item		**Unit**
B54.07	**Removing existing guardrails**	metre (m)

Add the following:

"The tendered rate shall also include for the backfill of the holes with suitable G7 quality material."

Add the following payitem:

"**Item**		**Unit**
B54.14	**Nailing of gang nail plates on top of timber guardrail posts**	number (No)

The unit of measurement shall be the number of gang-nail plates supplied and fixed as specified.

The tendered rate shall include full compensation for supplying all materials and labour and for fixing to the top of the sealed guardrail post."

SECTION B5600: ROAD SIGNS

B5601 SCOPE

Replace "South African Road Traffic Signs Manual" *in the second paragraph with*:

"SADC Road Traffic Signs Manual"

B5603 MANUFACTURING OF ROAD SIGN BOARDS AND SUPPORTS

a) Road signboards

Add the following:

"The contractor shall make every effort to ensure that signboards are correct in all respect and before dispatching the boards from the manufacturer's factory shall provide the engineer with a 100mm x 150mm colour photograph of each sign face for approval of the correctness of the legend. Such approval will not imply final acceptance of the board. If the contractor is in any doubt as to the correctness of the sign detail, the sign designer shall be contacted for verification."

(ii) Steel profile road signboards

Add the following:

"Chromadek section shall be assembled in accordance with the details of Typical Drawings TD-R-RS-1100 and TD-R-RS-1100.

Where the letter or legends cross the horizontal joints of the sign panels, the letter shall be cut on the joint and both ends folded around the radius.

Retro-reflective material to adjoining Chromadek panels on a sign shall be practical visual match of the specified colour."

B5604 ROAD SIGN FACES AND PAINTING

Add the following sub-clause:

"**e) Application of retro-reflective material**

All sign faces shall be faced with retro-reflective material. Painted front sign faces shall not be used.

Where applied to Chromadek sections, retro-reflective material shall be applied as specified for aluminium section in Clause 5603(d) of the Standard Specification, and of Clause B5603(a)(ii) of this Project Specification."

B5605 STORAGE AND HANDLING

Add the following:

"The following shall not be allowed on the sign face:

- Drilling of holes, except for the fastening of overlays
- Application of any form of adhesive
- Cleaning with any chemicals that are not specifically approved by the manufacturer of the retro-reflective material.
- Covering the sign face with an impermeable material that does not allow free circulation of air."

B5606 ERECTING ROAD SIGNS

c) Erection

Add the following:

"After erection the signboard shall be thoroughly cleaned with a cleaning agent approved by the retro-reflective material's manufacturer.

All vegetation obstructing the new or replaced sign board shall be removed and disposed of as instructed by the engineer."

B5608 DISMANTLING, STORING AND RE-ERECTING EXISTING ROAD SIGNS

Add the following:

"Existing overhead and ground mounted road signs that are being replaced by new signs shall be dismantled and disposed of by the Contractor. Where possible the dismantling of the signs shall not be before the replacement sign is erected and displayed. Where dismantling of the sign is required before erection of the replacement sign, the dismantling shall not take place until immediately before work is to commence on the replacement, and the replacement shall be completed and the new sign displayed as soon as possible thereafter (within 72 hours).

Dismantling shall include sign panels and ground mounted sign supports.

Ground mounted sign supports shall be cut off just below ground level. Material excavated for removal of buried poles shall be replaced, and any depression made good using excess material from excavation for new signs.

Payitems are provided in the Pricing Schedule. Payment will differentiate between different types of sign panels."

B5609 MEASUREMENT AND PAYMENT

Item		**Unit**
B56.01	**Road sign boards with painted or coloured semi-matt background. Symbols, lettering, and borders in semi-matt black or in Class I retroreflective material, where the sign board is constructed from**	

Amend the last two lines of the second paragraph to read:

"completion, delivery, installation of the road sign board complete as specified, and the removal and disposal of all vegetation obstructing the motorists' view of the new or replaced sign board."

Add the following payment items:

"**Item**		**Unit**
B56.10	**Danger plates at culverts/structures** ***(W401 - 800 x 200mm)***	number (No)

The unit of measurement shall be the number of danger plates provided and erected in accordance with the drawings.

The tendered rate shall include full compensation for all labour and material, painting, posts, excavation, backfilling with soil etc., as may be necessary for completing the work in accordance with the details shown on the drawings.

Item		**Unit**
B56.11	**Replace marker boards on existing kilometre posts**	number (No)

The unit of measurement shall be the number of reference marker boards provided and attached to existing kilometre posts in accordance with the drawings.

The tendered rate shall include full compensation for the manufacturing and supplying of the completed marker boards, for attaching the marker board to existing posts along the route and for all materials equipment, labour, nuts and bolts necessary for attaching the marker board as specified.”

SECTION B5700: ROAD MARKINGS

B5701 SCOPE

Replace "South African Road Traffic Signs Manual" *in the second paragraph with*:

"SADC Road Traffic Signs Manual"

Replace the words "ordinary road marking paint" *with* "solvent borne road marking paint".

Replace "BS 3262" *with* "EN 1436".

Replace "Hot melt plastic road marking" *with* "thermoplastic road marking".

B5702 MATERIALS

Insert the following before subclause (a) Paint:

"The selection of the appropriate road marking paint and materials for permanent road markings to ensure conformance with the requirements of this specification rests with the contractor. Such paint and material shall have technical characteristics (brightness, luminance, skid resistance, durability) equal to or greater than road marking paint and materials specified in subclauses 5702(a), (b) and B5702(c).

Where plastic road-marking material (hot-melt plastic (also known as thermoplastic) and twocomponent (also known as cold plastic)) is used, the contractor shall obtain an approved guarantee from the manufacturer that the paint complies with the specification. This shall be submitted to the Engineer on request."

Replace sub-subclause B5702(a)(i) with the following:

"(i) Road marking paint

Road marking paint shall be Type 1 as specified in SANS 731-1. Only paint, manufactured in a SANS approved and accredited facility shall be accepted. The no-pick-up time of roadmarking paint shall comply with the Class 1 requirement in accordance with SANS 731-1.

The paint shall be delivered at the site in sealed containers marked in accordance with SANS 731-1.

The viscosity of the paint shall be such that it can be applied without being thinned down."

Replace sub-subclause B5702(a)(iii) with the following:

"(iii) Thermoplastic road marking material

Thermoplastic road marking material shall comply with the requirements of EN 1436, and EN 1423: 1998 for drop-on glass beads for road marking and anti-skid aggregates and mixtures thereof. Blending of thermoplastic road marking material and glass beads shall comply with EN 1424: 1998.

The binder shall be an elasticized synthetic resin and the material shall be reflectorized by mixing in 25% by mass Class A glass beads in accordance with EN 1424: 1998. An additional topping of glass beads shall be applied to the hot surface of the material for instant retro-reflectivity.

The white road marking material shall contain 6% by mass minimum titanium dioxide content and shall have a skid resistance of 45 S.R.T. – units or higher. SABS Method 1248: 1995 shall be used for determination of traffic wear index; indication of durability.

The following minimum lumination values are required for the completed product:

- 250 mcd/m^2.lux & 120 mcd/m^2.lux for white & yellow lines respectively, at 30 days after application.
- 200 mcd/m^2.lux & 100 mcd/m^2.lux for white & yellow lines respectively, at 6 months after application.

Determination of coefficient of retro-reflected luminance by means of portable retroreflectometer shall be carried out using SANS 6261: 2008. Application of the permanent roadmarking will thus have to be performed within the first 6 months of the 12 month defects liability period to allow for the second measurement to fall within the contract dates. Should the application of the permanent road-marking fall outside the first half of the defects liability period for whatever reason, the settlement of the retention money will be delayed until the second measurement of luminance can be performed at the stipulated time and the required adjustment can be made to the tendered rate (if required).

Two-component cold plastic road marking material shall be used for symbols, arrows and letters (hand painted markings) unless otherwise instructed by the Engineer."

Add the following sub-subclause:

"(v) Cold plastic road marking material

Cold plastic road marking material shall be used for symbols, arrows and letters (hand painted markings) and shall consist of a solvent-free reactive acrylic resin, stuffing, beads and pigment to which a hardener shall be added. Application is carried out using a trowel. Material applied by paint brush shall not be used.

Cold plastic road marking material shall be reflectorized by mixing in 25% by mass (or 400g/m^2) Class A glass beads in accordance with EN 1424: 1998. An additional topping of glass beads is applied to the wet surface of the material after application and will comply with EN 1423: 1997."

b) Roadstuds

Replace the clause with the following:

"Permanent and temporary road studs shall comply with the requirements of the European Standard for road studs IS EN 1463.

Road studs for the areas of application shall be supplied and installed in accordance with the requirements set out in Table B5702/1 with reference to IS EN 1463.

TABLE B5702/1

Classification	Area of Application			
	RSA-1	**RSA-2**	**RSA-3**	**RSA-T**
Description	Bi-directional	Bi-directional	Circular Cats-Eye	Bi-directional
Material	Galvanized Cast Iron	Plastic	Glass	Plastic
Design	Type A	Type A	Type A	Type A
Use	Type P	Type P	Type P	Type T
Reflector	Type 1	Type 1	Type 1	Type 2
Reflectivity	R1	R1	R1	Not Specified

Installation System	Anchored	Bonded	Embedded	Self Adhesive or Bonded
Height above Road	H3	H3	H3	H1
Dimensions (min-footprint)	100mmx80mm	100mmx100mm	100mm dia	100mmx100mm
Colours	W – R - Y	W – R -Y	W	W – R - Y
Road Trials	S1	S1	S1	Not Applicable

Add the following sub-item:

"c) Retro-reflective beads

Retro-reflective glass beads shall be applied to the wet paint, thermoplastic and cold plastic.

The beads shall comply with Class A beads in accordance with EN 1424: 1998, with the following requirements or as approved by the Engineer:

- colour : crystal clear
- roundness : > 80%
- size range of : 14 – 200 US Mesh (75 – 1400 Microns)
- refractive index : > 1.5
- specific gravity : – 2.5
- granulometry :

CUMULATIVE RETAINED MASS		
SIEVE	**MINIMUM**	**MAXIMUM**
1700	0	2
1400	0	10
1180	5	30
850	40	80
600	70	100
425	80	100
355	90	100
212	95	100
PAN	100	100

The beads shall be delivered to the site in sealed bags, marked with the name of the manufacturer, the batch number and an inspection seal of SANS, confirming that the beads form part of a lot tested by SANS and comply with the requirements of EN 1424: 1998. Alternatively, the Contractor shall at all times have a SANS certificate on the site, identifying the batches to which the inspection seals apply and certifying that they have been tested by SANS, and comply with the requirement of EN 1424: 1998."

B5704 MECHANICAL EQUIPMENT FOR PAINTING

Add the following sentence at the end of the first paragraph:

"The road-marking machine shall be fitted with a device to guide the operator to the centre of the line to be painted. This device shall be used at all times of operation."

B5705 SURFACE PREPARATION

4. *Add the following at the end of the second paragraph:*

5.

"The onus is on the contractor to ensure that the surface on which the road markings are to be applied is sufficiently clean and dry to ensure that the quality of the road markings will not be adversely affected. The contractor is also responsible for protecting road studs from being painted over, and the subsequent cleaning thereof if such over-painting did occur."

B5706 SETTING OUT THE ROAD MARKINGS

Insert the following before the first paragraph:

"Where road markings are to be replaced after any construction activity, it is essential that all existing road marking be accurately surveyed and referenced before commencement of such construction activities which will obliterate the existing road markings. The position of barrier lines shall be re-assessed on site by the engineer before the contractor commences with the road marking."

B5707 APPLYING THE PAINT

Insert the following before the first paragraph:

"The Contractor's establishment on site and general obligation shall be deemed to fully include the establishment of the road-marking team, irrespective of the number of times the road-marking team is required to be on site or is required to move within the site.

Provision is also made under item B57.07 for de-establishment and re-establishment in the contract or defects notification period if such action is required by delays not attributable to the contractor and/or ordered by the Engineer."

Replace the sixth paragraph with the following:

"Solvent borne road marking paint shall be applied at a nominal rate of 0,42ℓ/m^2 or as directed by the Engineer. Thermoplastic road marking shall be applied at a nominal rate of 2,5 kg/m^2 to achieve a minimum thickness of 1,25mm to 1,5mm or as directed by the Engineer. The twocomponent road marking material shall be applied by hand by means of a trowel. The desired symbol or line shall be marked with a tape or a template on the road surface. Thereafter apply the required volume of material and spread uniformly over the entire area. When dry/set, remove the tape or template. A spreading rate of 4,5kg/m^2 is estimated to achieve a 2,0mm material thickness.

In order to ensure proper coverage on all types of surfaces the Engineer may order an increase in the above nominal application rates. Payment for these variations in application rates shall be made under item 57.04.

A daily log-sheet, provided by the Employer, shall be completed and signed by the Contractor and the Engineer's representative, recording the quantities of paint and glass beads used on that day and shall be available for inspection at all times. The completed and signed log-sheet for the period covered by a payment certificate shall be attached to the payment certificate."

Replace the last paragraph with the following:

"Solvent-based road marking as specified by the Engineer shall be carried out within 14 days of opening the road full width to traffic after the completion of the surfacing.

If in the in the opinion of the Engineer, conditions are unsafe, the centre-line shall be painted immediately after 2,0 km of continuous road has received a new asphalt layer, or 4,0 km of continuous road has received a new seal surfacing."

B5708 APPLYING THE RETRO-REFLECTIVE BEADS

In the first paragraph, replace the nominal application rate of 0,8kg/litre with "400gm/m2*".*

Replace the second paragraph with the following:

"The thermoplastic road marking material and two-component road marking material shall contain insitu glass beads of minimum content of 25% in order to obtain night visibility (reflectivity). The contractor shall immediately apply additional glass beads at 400g/m^2 to obtain immediate reflectivity. The beads shall be sprayed onto the road marking layer by means of a pressure sprayer. Where letter, symbol, traverse line and island road marking is undertaken by hand, the glass beads may be applied by hand if approved by the Engineer. Prior to any hand application work, the contractor shall first request approval from the Engineer."

Add the following:

"Beads shall be applied in accordance with EN 1424."

B5710 TOLERANCES

Add the following paragraphs to subclause (c) Alignment of markings*:*

"When an unbroken line and a broken line are painted alongside each other, the beginning and the end of the unbroken line shall coincide with the beginning of one broken line and the end of another broken line. When existing lines are repainted, the new markings shall not deviate more than 100mm in the longitudinal direction nor 10 mm in the transverse direction from the existing marking.

The alignment of the road studs shall not deviate from the true alignment by more than 10mm and shall be positioned so that the reflective faces are within 5 of a right angle to the centre line of the road."

Add the following subclause:

"e) Testing

(1) Plant

Before painting any permanent road markings, the Contractor shall satisfy himself and the Engineer, by painting test lines on a section of pavement other than the section required to be marked:

(i) that the painting machine is in good working order and properly adjusted;
(ii) that the operator is fully experienced; and
(iii) that the machine sprays at the specified rate of paint application.

The Contractor shall bear the cost of all materials and workmanship required for the above plant tests.

In addition, the Contractor shall conduct random paint thickness tests and dip/spread tests as required by the Engineer."

B5711 GENERAL

Insert the following into the last sentence of the last paragraph between "black paint" *and* "or chemical paint remover":

", bituminous emulsion, slurry"

Add the following to the last paragraph:

"Where black paint is used, it shall be matt."

Add the following clause:

"The Contractor shall provide temporary traffic control facilities in accordance with Section 1500 of the COLTO's standard specifications for road and bridge works to ensure traffic safety where work is being executed.

Property and/or road signs damaged by the Contractor, his personnel, his agents or subcontractors shall be repaired or restored to their condition prior to the damage at his own cost."

B5712 FAULTY WORKMANSHIP OR MATERIAL

Add the following paragraphs to this item:

"The Contractor shall rectify in an acceptable manner and at his own costs; all marking that do not comply with the specified requirements.

While work is in progress, tests shall be carried out on materials and/or the quality of work to ensure compliance with the specified requirements. The sampling methods are specified in SANS 731-1. The sampling methods described in TMH5 shall be followed where applicable."

B5713 PROTECTION

Add the following paragraph

"Traffic cones shall not be smaller than 750mm in height and shall be placed on the road not further than 48m apart. Cones shall not be removed before the paint on the road has hardened to such an extent that it will not be damaged by traffic and the adhesive of the road studs has hardened to such an extent that the studs will not turn or become loose. All marks on the road caused by traffic driving over wet paint shall be removed by the Contractor at his own cost."

B5714 MEASUREMENT AND PAYMENT

Amend the heading for payitem B57.03 as follows:

"

Item		Unit
B57.03	**Thermo-plastic road-marking paint**	kilometre (km)"

Add the following after the third paragraph:

"Full payment of the tendered rate will be applicable upon completion of the application of the road-marking paint. However, should the coefficient of retro-reflected luminance fall below the required minimum levels as specified in paragraph B5702 above, payment will be reduced on the following sliding scale :

White lines:
- Below 250 mcd/m2.lux at 30 days : minus 10 % of the tendered rate
- Below 200 down to 180 mcd/m2.lux at 6 months : minus 10% of the reduced rate
- Below 180 down to 160 mcd/m2.lux at 6 months : minus 20% of the reduced rate
- Below 160 down to 140 mcd/m2.lux at 6 months : minus 30% of the reduced rate

Yellow lines:
- Below 120 down at 30 days: minus 20 % of the tendered rate
- Below 100 down to 80 mcd/m2.lux at 6 months: minus 20% of the reduced rate

The reduction in the tendered rate applicable for failing to meet the specified minimum luminance level at the 30 days and 6 months measurement dates shall be applied accumulative in the certificate immediately following the date of measurement."

SECTION B5900: FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS

B5901 SCOPE

In the first line of the second paragraph, insert the following after 'this section'

"…distinguishes between new construction and renewal construction. When construction is new, as in the case of new alignments for example, then this section "

B5902 FINISHING THE ROAD AND ROAD RESERVE

Retain the existing paragraphs as sub-clause:

"**a) New construction**"

Replace the sixth paragraph with:

"All materials resulting from the finishing operations shall be disposed of at approved spoil sites."

Add the following:

"**b) Renewal construction**

After completing construction work within the site, the contractor shall ensure that all construction generated or related material that may have been swept, windrowed, stockpiled, stored or spread beyond the road surface is removed. This shall be done before any other rehabilitation work is undertaken, including shaping, topsoiling and grassing. Should, during the removal of construction generated or related material, existing vegetation or topsoil be disturbed or destroyed, the contractor shall, at his own cost, reinstate the road reserve to its original state. This shall include ripping, should the construction material have compacted the existing surface.

Culvert in lets and outlets, culvert barrels, and open drains shall be cleared of debris, soil, silt and other material generated from the construction activities.

The surfacing shall be cleared of all dirt, mud and foreign objects. Dragging, pushing or scraping material across the finished surfacing shall not be permitted.

All junctions, intersections, islands, kerbing and other elements making up the completed works shall be neatly finished off.

The contractor shall ensure that all undesirable plants have been removed from the road reserve and borrow pit areas.

All materials resulting from the finishing operations shall be disposed of at approved spoil sites."

COLTO SERIES 6000: STRUCTURES

SECTION 6100: FOUNDATIONS FOR STRUCTURES

B6102 MATERIALS

(c) Crushed stone

Add the following new paragraphs to the end of subclause 6102(c):

"The foundation fill to be constructed below each of the new box culverts shall include a crushed stone foundation fill blinded with crusher dust:

(i) Crushed stone

The crushed stone shall be material with a maximum size of 250 mm as obtained from first stage crushing operations, procured from commercial sources.

(ii) Crusher dust

The grading of the crusher dust shall be as specified in clause 4302(b)(ii) Table 4302/11 of the COLTO standard specifications for a Type 1 coarse slurry (maximum size 9,5 mm). The crusher dust shall be procured from commercial sources."

Add the following new subclause to the end of clause 6102:

"(j) Concrete blinding screed

The concrete blinding screed to the top of each foundation fill immediately below the box culvert barrel shall be constructed from class 15/19 concrete."

B6103 GENERAL

(a) Subsurface data

Add the following new paragraphs to the end of subclause 6103(a):

"The existing box culverts have been in place for many years, and are all founded below the water table level within natural drainage courses. The nature of the foundation fill constructed below each of these box culverts is not known. The box culverts are to be demolished entirely then replaced.

Owing to the unstable ground conditions prevailing, test pits could only be excavated at box culvert nos. 3 and 4, several metres from the respective water courses. The collapse of these test pits due to seepage at shallow depth indicates that the saturated conditions are not confined to the stream beds. In addition, a dynamic probe light (DPL) investigation was carried out at the inlet and outlet ends of each of the four box culverts.

These geotechnical investigations indicate that the in situ soils comprise saturated and submerged very loose fine silty to clayey sandy soils with very low bearing capacity of the order of only approximately 70 kPa maximum at 3,0 m depth below the culvert invert level.

The new construction cannot be supported at shallow depth on these fine saturated sands. The extent, low strength and high deformability of the very loose fine grained slightly clayey sands with a surface water table are factors which adversely impact on the design and construction of the culvert foundation and its subsequent behaviour. These materials are weak as characterised by low DPL blows.

Since acceptable bearing strengths are only obtainable at considerable depths, some strength reinforcement in the form of a crushed stone foundation fill will be required in the upper sand horizon.

Additional foundation investigations and/or tests shall be required by the engineer once the existing box culverts or box culvert components have been demolished, in order to ascertain the nature and depths of the existing underlying foundation fills. These additional foundation investigations and/or tests shall be completed at each box culvert site prior to the commencement of the excavations for the proposed crushed stone foundation fill at that box culvert.

Only once these additional foundation investigations and/or tests have been completed at each of the three box culverts that were demolished in their entirety, will a final decision be taken by the engineer as to whether the entirety or any part of the existing foundation fill at those three box culverts should be preserved. It is noted that, for tender purposes, the scheduled quantities have been calculated on the basis of the entire existing foundation fill at these three box culverts being removed and replaced."

B6104 ACCESS AND DRAINAGE

(b) Access

Add the following new paragraphs to the end of subclause 6104(b):

"The contractor shall take particular note of the saturated stream banks, the submerged stream beds, and the unstable ground conditions prevailing at each box culvert location, which will require the construction of pioneer access roads on the unstable ground in order to allow access to the heavy plant required for the various construction operations, and which will also require extensive dewatering infrastructure and dewatering operations to control the flow throughout the period of construction of each foundation fill and box culvert.

Moreover, the placing of the crushed stone foundation fill shall require that the excavations are fully dewatered, in order to ensure that the excavation is the correct width, length and depth when the crushed stone is placed and in order to allow visual monitoring of the initial penetration of the crushed stone into the underlying soils."

B6105 EXCAVATION

(c) Excavation

Add the following new paragraphs to the end of subclause 6105(c):

"The contractor, in choosing his excavation plant, shall need to take into account the saturated stream banks, the submerged stream beds, and the unstable ground conditions prevailing at each box culvert location, and the need to carry out the excavation operations using pioneer access roads.

The excavation plant chosen shall therefore require adequate bucket capacity and reach in order to excavate the saturated materials while positioned outside of the excavation profile on the flanking pioneer access roads.

Should the plant provided have insufficient bucket capacity and/or reach to complete the excavations while positioned outside of the excavation profile on the flanking pioneer access roads, then the contractor shall have to operate from pioneer access roads initially located within the excavation profile, and these access roads will then have to be removed then reconstructed outside of the excavation profile as the work proceeds."

(g) The safety of excavations

Add the following to the end of subclause 6105(g):

"The contractor shall also comply with his obligations for ensuring the safety of excavations in terms of Part E: OHSA 1993 Health and Safety Specification in section C3.3 Particular Specifications.

The contractor shall note that the box culverts are founded below the water table level within natural drainage courses. The necessary precautions taken by the contractor to safeguard the stability and safety of the excavations and adjacent structures shall therefore take particular account of the partial and fully saturated and submerged soil conditions prevailing and the effects of fluctuations in the stream level and velocity."

B6108 BACKFILL AND FILL NEAR STRUCTURES

i) **(a) General** ii) *iii) Add the following at the end of the first sentence of subclause 6108(a)(i):* iv)
v) "Throughout the backfilling operation at each box culvert, the elevations of this placed material behind the opposite outer barrel walls shall not differ by more than 0,3m."

B6109 FOUNDATION FILL

Add the following at the end of the second last paragraph of clause 6109:

"Concrete blinding shall extend 100 mm beyond the horizontal dimensions of all formed box culvert floor slabs in order to facilitate the placing of the formwork, unless otherwise directed by the engineer. The concrete blinding shall be constructed accurately to the final levels of the underside of each box culvert floor slab."

Add the following to the end of clause 6109:

"Concrete blinding and mass concrete fill shall be given a wood float finish."

Add the following new subclause to the end of clause 6109:

"(a) Crushed stone foundation fill below the box culverts

(i) Extent of the foundation fill

In order to assist with stress distribution through the depth and width of the foundation fill, the excavations shall be such that the completed foundation fill, measured at a depth of 1,5 m below the level of the underside of the box culvert barrel, extends a distance of 3 m measured in plan beyond the boundaries of the box culvert barrel's outer perimeter, as detailed on the drawings.

(ii) Construction of the foundation fill

The crushed stone foundation fill material shall be stockpiled adjacent to the excavations so that it is readily available for placement within the excavation.

Unless otherwise instructed by the engineer prior to the commencement of the excavation, the excavation shall be carried out so as to provide a minimum depth of excavation of 1,5 m below the level of the underside of the box culvert barrel, to accommodate the foundation fill of plan dimensions as described in subsubclause B6109(a)(i) above.

After inspecting this initial 1,5 m minimum depth of dewatered excavation, the engineer may then instruct that the depth be increased in terms of clause 6106 of the COLTO standard specifications in order to achieve suitable founding conditions.

Once the final dewatered excavation is ready to receive the foundation fill, the crushed stone shall be placed inside the excavation. This shall be carried out either by end tipping then dozing the material into the excavation, or, if this proves unsafe or impractical given the unstable ground conditions, by using an excavator to dump the rock into the excavation and spread it.

It is expected that the crushed stone will initially penetrate the underlying very loose fine silty to clayey sandy soils, settling downwards to displace the sands and also consolidating the sands at lower depth with an associated increase in strength.

The crushed stone shall initially be brought up to such a level that heavy compaction plant can operate safely on the surface. This initial layer and every subsequent layer from this level to the final surface shall be compacted using a 12 tonne flat wheel vibratory roller, operating statically initially to lock the crushed stone particles together, following which the crushed stone surface must be subjected to continuous vibratory passes until such time as all settlement appears to have been attained.
Notwithstanding any earlier such visual confirmation with respect to attaining all the settlement, each such layer shall nonetheless be compacted with at least eight roller passes over the entire surface.

Care must be exercised during these operations to guard against possible collapse, due to dilation of the soils as a result of a silt or clay content within the sands leading to a reduction in the effective stresses being developed. This may be observed in the initial rolling, exhibited by heave as the rolling proceeds. Should this be the case then compaction must be postponed for a period to allow for pore pressure dissipation.

Once a sound final platform has been achieved, the top layer must be blinded, initially with crusher dust followed by a 75 mm thick concrete screed. The crusher dust shall be placed, spread and then subjected to at least eight passes of the 12 tonne flat wheel vibratory roller to induce it to fill the voids in the rock layer, after which the concrete screed may be placed. Excess crusher dust shall be removed from the surface in order to prevent a situation arising in which the crusher dust forms a

distinct erodible layer (subject to subsequent possible wash away and accompanying settlement of the structure) on which the blinding, and hence the culvert barrel, bears. The blinding shall instead bear directly onto the crushed stone, the purpose of the crusher dust being to help lock the crushed stone in position by filling the upper voids, which will also help prevent excessive concrete losses when the blinding screed is placed."

SECTION 6200: FALSEWORK, FORMWORK AND CONCRETE FINISH

B6203 GENERAL

Add the following to the end of the first paragraph of clause 6203:

"The contractor shall also comply with his obligations for ensuring the safety of all falsework and formwork in terms of Part E: OHSA 1993 Health and Safety Specification in section C3.3 Particular Specifications.

The contractor shall note that the box culverts are founded below the water table within natural drainage courses. The design of all falsework and formwork shall therefore take particular account of the partially and fully saturated and submerged soil conditions prevailing, the effects of fluctuations in the stream level and velocity, and the effects of the obstruction to the stream channel caused by such falsework and formwork.

The design of the entire falsework and formwork infrastructure used to access and temporarily support the box culvert structures shall be carried out by a professional engineer (registered as such by the Engineering Council of South Africa (ECSA)) who specialises in the design of falsework and formwork. The same professional engineer specialist shall inspect and approve the falsework and formwork as erected."

B6204 DESIGN

(a) General

Add the following to the end of the final paragraph of subclause 6204(a):

"All such design criteria, calculations and detail drawings shall be signed by a professional engineer (registered as such by the Engineering Council of South Africa (ECSA)).

The contractor shall respond within 72 hours to any queries the engineer may have with respect to the design and drawings and calculations for the falsework and formwork."

B6205 CONSTRUCTION

(a) Falsework

Add the following to the end of the first paragraph of subclause 6205(a):

"Before the falsework is loaded with the permanent works, all the falsework, including any access falsework, shall be inspected by the registered professional engineer referred to in clause B6203 above, who shall sign off the falsework erection, confirming in writing that it has been erected in accordance with the approved drawings and that it is capable of safely resisting the loads that will be imposed during the construction of the permanent works."

B6206 REMOVING THE FALSEWORK AND FORMWORK

Add the following to the end of the last paragraph of clause 6206:

"No portion of the box culvert support falsework and formwork shall be removed before the contractor has obtained authorisation from the engineer to effect such removal."

SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES

B6303 STORING THE MATERIALS

Add the following at the end of the first paragraph of clause 6303:

"The contractor shall set aside areas cleared of vegetation for storing reinforcing steel. The reinforcement shall be kept at least 300 mm above ground level at all times."

B6305 SURFACE CONDITION

Add the following new paragraph to the end of clause 6305:

"Within 24 hours after placing concrete, the contractor shall have cleaned off all concrete splatter from the protruding starter bars and clips and any other affected reinforcement, and shall present the resulting product to the engineer for approval before he will be permitted to commence fixing the shuttering and reinforcement to the next section. The contractor's attention is drawn to the fact that, for the concrete mixes used on this contract, this splatter is extremely hard to remove if not done within 24 hours of placing the concrete."

B6307 COVER AND SUPPORTS

Replace the sixth paragraph of clause 6307 with the following:

"Prior to fixing the reinforcing steel, samples of the proposed cover and spacer blocks shall be submitted to the engineer for approval. Only concrete cover and spacer blocks shall be used, and they shall be made with 6,7 mm maximum sized aggregate. They shall be of the same strength and material source as those of the surrounding concrete and shall have the same water : cement ratio to minimise differences in shrinkage, thermal movements and strain. The blocks shall be formed in specially manufactured moulds and the concrete compacted on a vibratory table and cured under water for a period of at least 14 days, all to the satisfaction of the engineer."

Concrete cover block support and spacers shall be provided at all corners and along all edge reinforcement of a structural element at even spacing intervals not exceeding those specified below. Between edges, concrete cover block support and spacers shall be provided to the sides and soffits of structural elements so as to form an evenly spaced orthogonal grid at spacing intervals not exceeding those specified below. Where smaller bars effectively support larger bars between support points, the maximum spacing interval between support points shall be determined by the diameter of the smaller bar.

Nominal diameter of vi) bar supported (mm)	**Maximum spacing interval (mm)**	
	High tensile steel	Mild steel
8	500	400
10 and 12	600	500
16 and 20	1200	1000
25 and 32	1800	1500

Notwithstanding the maximum spacing intervals specified above, these spacing intervals shall be reduced where necessary to ensure that the tolerances specified in subclause 6803(f) are met, or where particular circumstances require a closer cover block spacing to be used."

SECTION 6400: CONCRETE FOR STRUCTURES

B6402 MATERIALS

Replace subclause 6402(a) with the following:

(a) Cement

"Refer to clause B1229 with regard to the new SABS cement specifications."

Only the following cements may be used in the construction work for the box culverts:

Plain and reinforced concrete members and units	
Cement Type	Cement Grade
CEM II A-S	42,5
CEM II A-V	32,5
CEM II B-S	42,5
CEM II B-V (or W)	32,5
CEM III A	32,5

(b) Aggregates

Add the following new subclause to the end of subclause 6402(b):

"(vi) The maximum chloride ion content of the fine aggregate for all reinforced concrete shall be 0,01% by mass of aggregate as measured by SANS 1083:2002."

B6404 CONCRETE QUALITY

(b) Strength concrete

Add the following new paragraph after the end of the first paragraph of subclause 6404(b):

"The water : cement ratio for all strength concrete shall not exceed 0,48."

B6407 PLACING AND COMPACTING

(a) General

Add the following paragraph at the start of subclause 6407(a):

"The contractor shall also comply with his obligations for ensuring safety during the placing and compacting of concrete in terms of Part E: OHSA 1993 Health and Safety Specification in section C3.3 Particular Specifications."

Add the following paragraphs to the end of subclause 6407(a):

"The concreting operations for all box culvert elements shall require careful planning, and sufficient concrete product and concreting resources such as labour, tools, equipment and plant shall be made available on each day of concreting to ensure that the concrete construction planned for that day is successfully achieved.

One month before the programmed date for the first element of box culvert concreting, the contractor shall be required to submit to the engineer for his approval a detailed method statement fully covering the proposed concreting operations required to construct the box culvert. The method statement shall, inter alia, include details of labour and supervision, tools and equipment (wheel barrows, spades, poker vibrators, hoists, chutes, etc.), plant (batching plant, concrete dumpers, cranes, pumps, etc.), ready mix supplier details and proposed schedule of concrete delivery times (if ready mixed concrete is to be used), sequence of construction, curing method to be used, contingency plans and health and safety obligations. Box culvert concrete shall only be placed once the engineer is satisfied that every reasonable effort has been made by the contractor to ensure the success of the concrete placing operation. The approved method statement shall then apply to all other box culvert concreting operations, and any amendments required to the approved method statement shall also be approved by the engineer prior to implementation."

(b) Placing

Add the following paragraph at the start of subclause 6407(b):

"Immediately prior to placing concrete, the concrete surfaces against which the concrete is to be placed shall be cleaned off of all foreign material using high pressure water jetting and / or compressed air and / or such other methods as may prove necessary under the circumstances. Pooled water shall be blown off using compressed air."

B6408 CONSTRUCTION JOINTS

(a) General

Add the following at the start of subclause 6408(a):

"No construction joints other than those indicated on the drawings shall 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 prior to placing the concrete."

B6415 DEMOLITION AND REMOVAL OF EXISTING STRUCTURAL CONCRETE

Add the following to the end of clause 6415:

"Demolition by explosive means shall not be carried out under this contract. The demolition work shall be carried out using non-explosive means only, such as pneumatic plant or equipment."

SECTION 6600: NO-FINES CONCRETE, JOINTS, BEARINGS, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURES

B6606 DRAINAGE FOR STRUCTURES

(c) Synthetic-fibre filter fabric

Add the following at the end of subclause 6606(c):

"The filter fabric wrapping the geopipe and the drainage strips behind the box culvert barrel and earwing walls shall comply with grade 2 in accordance with the COLTO standard specifications subsubclause 2104(a)(iii) Table 2104/2."

Add the following new clause at the end of Section 6600:

"B6609 LOCATING EXISTING REINFORCEMENT, DRILLING HOLES AND INSTALLING DOWELS IN THE EXISTING CONCRETE AT BOX CULVERT NO. 3

(a) Scope

The contractor shall supply and install dowels at the existing box culvert no. 3 as detailed on the drawings.

(b) Materials

The dowel grouting mortar shall be Hilti HIT-HY 150 fast curing mortar (or equivalent as approved by the engineer).

(c) Locating existing reinforcement and drilling the holes

Steel reinforcement shall not be cut or damaged during the drilling process. After setting out the hole positions and prior to drilling the holes, the contractor shall use a cover meter to locate the position of any existing reinforcement in the vicinity of the holes. Should any existing reinforcement be detected that may obstruct the drilling path, or should any existing unsound concrete be visible in the vicinity of

the drilling path, the contractor shall notify the engineer and seek further instruction prior to drilling the holes.

The contractor shall drill the holes to the required dimensions as detailed on the drawings. Core drilling of the dowel holes shall not be permitted.

The drilling operation shall not cause spalling, cracking, or other damage to the surrounding concrete, and any concrete spalled or otherwise damaged by the contractor's drilling operations shall be repaired at the contractor's cost in a manner acceptable to the engineer.

(d) Installation of the dowels

The contractor shall clean the holes using compressed air to remove all deleterious material, including dust and debris, and shall ensure that the holes are dry prior to placing the dowel grouting mortar. Holes that are started but not completed, or not provided with a dowel, shall be cleaned and filled with an approved proprietary patching material at the contractor's cost in a manner acceptable to the engineer.

The handling and placement of the dowel grouting mortar shall conform to the manufacturer's written instructions. All excess dowel grouting mortar shall be struck-off flush with the concrete surface and removed from the surrounding concrete surface area.

The dowels shall be clean, dry and free of deleterious material immediately prior to installation in the holes.

The contractor shall maintain the dowels centrally within the holes and at the required embedment depth during the setting of the dowel grouting mortar, and shall take such measures as may be required to prevent the loss of the dowel grouting mortar from the holes."

SECTION 6700: STRUCTURAL STEELWORK

B6701 SCOPE

Add the following to the end of clause 6701:

"All drainage inlet grids and frames, manhole step-irons, mild steel plate, the high yield stress steel reinforcement bars fixing the gabion mattresses to the apron slabs, and any other manufactured articles requiring galvanising in terms of this contract, shall be hot-dip galvanised in accordance with the specifications in this section."

B6705 FABRICATION AND ASSEMBLY

(m) Corrosion prevention

(iii) Galvanising

Delete the second sentence of the first paragraph of subclause 6705(m)(iii) and replace it with the following:

"All manufactured articles which are to be hot-dip galvanised shall be fabricated for galvanising in accordance with the guidelines given in the following specifications, as applicable:

SANS 14713-1:2011 (ISO 14713-1:2009) Zinc coatings - Guidelines and recommendations for the protection against corrosion of iron and steel in structures Part 1: General principles of design and corrosion resistance

SANS 14713-2:2011 (ISO 14713-2:2009) Zinc coatings - Guidelines and recommendations for the protection against corrosion of iron and steel in structures Part 2: Hot dip galvanising

SANS 14713-3:2011 (ISO 14713-3:2009) Zinc coatings - Guidelines and recommendations for the protection against corrosion of iron and steel in structures Part 3: Sheradizing

SANS 32:1997 (EN 10240:1997) Internal and / or external protective coatings for steel tubes – Specification for hot dip galvanised coatings applied in automatic plants

The manufactured articles shall be hot-dip galvanised in accordance with the following specification:

SANS 121:2011 (ISO 1461:2009) Hot dip galvanised coatings on fabricated iron and steel articles – Specifications and test methods

The coating thickness for these articles shall comply with Table 3 of the SANS 121 (ISO 1461) specification."

Delete the second paragraph of subclause 6705(m)(iii) and replace it with the following:

"All nuts, bolts, screws and threaded articles shall be hot-dip galvanised in accordance with the SANS 121 (ISO 1461) specification, and the coating thickness shall comply with Table 4 of the SANS 121 (ISO 1461) specification."

Add the following new paragraph to the end of subclause 6705(m)(iii):

"No zinc drips or webbing of the zinc coating will be permitted on any hot-dip galvanised articles."

COLTO SERIES 8000: SUNDRIES

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."

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."

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 handbrush 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 cementtreated 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^2):
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^2):
Testing shall be carried out in accordance with Code of Practice SABS 0221."

B8117 MEASUREMENT AND PAYMENT

Amend payitem 81.02 as follows:

Item	**Unit**
B81.02 Other special tests requested by the engineer	
"(a) Cost of Testing…….	(Provisional sum)
(i) Charge on Provisional cost sum	(Provisional sum)

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 GCC 2015 Conditions of Contract. Payment will not be made for any special tests should the result indicate that the specifications have not been complied with."

SECTION 8200: QUALITY CONTROL (SCHEME 1)

B8201 SCOPE

Add the following paragraph:

"Quality Control Scheme 1 as specified in section 8200 shall apply to this contract."

B8206 JUDGEMENT PLAN B

Notes (Table 8206/3)

Replace note 1(a) with the following:

(a) Density L_s = 93% of theoretical maximumdensity for the surfacing (Rice's density, see also clause B4210). The maximum density for the surfacing is 96.5% of theorectical maximum density."

Replace note 1(c) with the following:

"Voids in Mix (Srufacing):
L_s = specified values – 1 percentage point
L'_s = specified values + 1 percentage point

C3.5 MANAGEMENT

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3.5.1. FORMS FOR CONTRACT ADMINISTRATION

The Contractor shall complete, sign and submit with each monthly statement for payment, the following updated returns (the format as amended from time to time):

a) Monthly Project Labour Report
b) B-BBEE Sub-contract Expenditure Report
c) Joint Venture Expenditure Report
d) Targeted Labour Contract Participation Expenditure Report
e) Targeted Enterprises Contract Participation Expenditure Report

The Monthly Project Labour Report must include details of all labour (including that of sub-contractors) that are South African citizens earning less than R350.00 per day, as adjusted from time to time (excluding any benefits), who are employed on a temporary or contract basis on this contract in the month in question.

In addition to the Monthly Project Labour Report the Contractor shall simultaneously furnish the Employer's Agent with copies of the signed employment contracts entered into with such labour, together with certified copies of identification documents as well as evidence of payments to such labour in the form of copies of payslips or payroll runs. If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it and proof of such acknowledgement shall be furnished to the Employer's Agent.

The Monthly Project Labour Reports shall be completed and submitted in accordance with the instructions therein and copies of all submitted documents must be kept on site be made available to the Employer's agent upon request.

The **B-BBEE Sub-contract Expenditure Report** is required for monitoring the prime contactor's compliance with the sub-contracting conditions of the **Preference Schedule**.

The Joint Venture Expenditure Report is required for monitoring the joint venture's compliance with the percentage contributions of the JV partners as tendered, where the joint venture has been awarded preference points in respect of its consolidated B-BBEE scorecard.

The Targeted Labour Contract Participation Expenditure Report (if applicable) is required for monitoring the Contractor's compliance for achieving the specified minimum targeted labour contract participation goal (CPG_L) and, if applicable, for calculating any penalty in terms thereof.

The Targeted Enterprises Contract Participation Expenditure Report (if applicable) is required for monitoring the Contractor's compliance for achieving the specified minimum targeted enterprises contract participation goal (CPG_E) and, if applicable, for calculating any penalty in terms thereof.

The Expenditure Reports shall be verified by the Employer's Agent/Employer's Agent's Representative.

The Employer shall, in addition to any other sanctions available to it , apply the financial penalties applicable to breach of preferencing conditions in the **Preference Schedule** Preference Schedule in Part T2.2 Returnable Schedules. In the case of joint ventures, the Contractor shall prove his compliance with item 6) in Section 2 of the Preference Schedule by providing a consolidated scorecard at his own cost on instruction from the Employer's Agent.

3.5.2. COMMUNITY LIAISON OFFICER

It is a requirement of this Contract that a Community Liaison Officer (CLO) shall be appointed by the Contractor. The primary functions of the CLO shall be to assist the Contractor with the selection and recruitment of targeted labour, to represent the local community in matters concerning the use of targeted labour (and/or enterprises) on the works, and to assist with and facilitate communication between the Contractor, the Employer's Agent and the local communities.

The identification of suitable candidates (maximum 5; minimum 3) for the CLO position shall be resolved by the relevant Ward Councillor/s. Should suitable candidates not be identified within two weeks of the date of request, the Contractor shall be allowed to seek candidates from the relevant

Sub-Council Job-Seekers Database. The final selection and appointment of the CLO in terms of the contract shall be the responsibility of the Contractor.

The period of appointment of the CLO shall be as stated in the Contract for Temporary Employment as a Community Liaison Officer referred to below. The date of commencement of temporary employment of the CLO shall be as agreed with the Employer's Agent.

It is required, therefore, that the Contractor enter into a contract of temporary employment with the selected CLO, the contracting parties being the Contractor and the CLO. To this end, a specimen Form of Contract of Temporary Employment as Community Liaison Officer is included in this document (Part C1.7: Agreement and Contract Data). This Form of Contract sets out, inter alia, the agreement between the parties, the duties and conditions of employment of the CLO (including the rate of remuneration to be paid). As said contract will be between the Contractor and the CLO, all costs involved shall be borne by the Contractor and the tender shall be deemed to include for this.

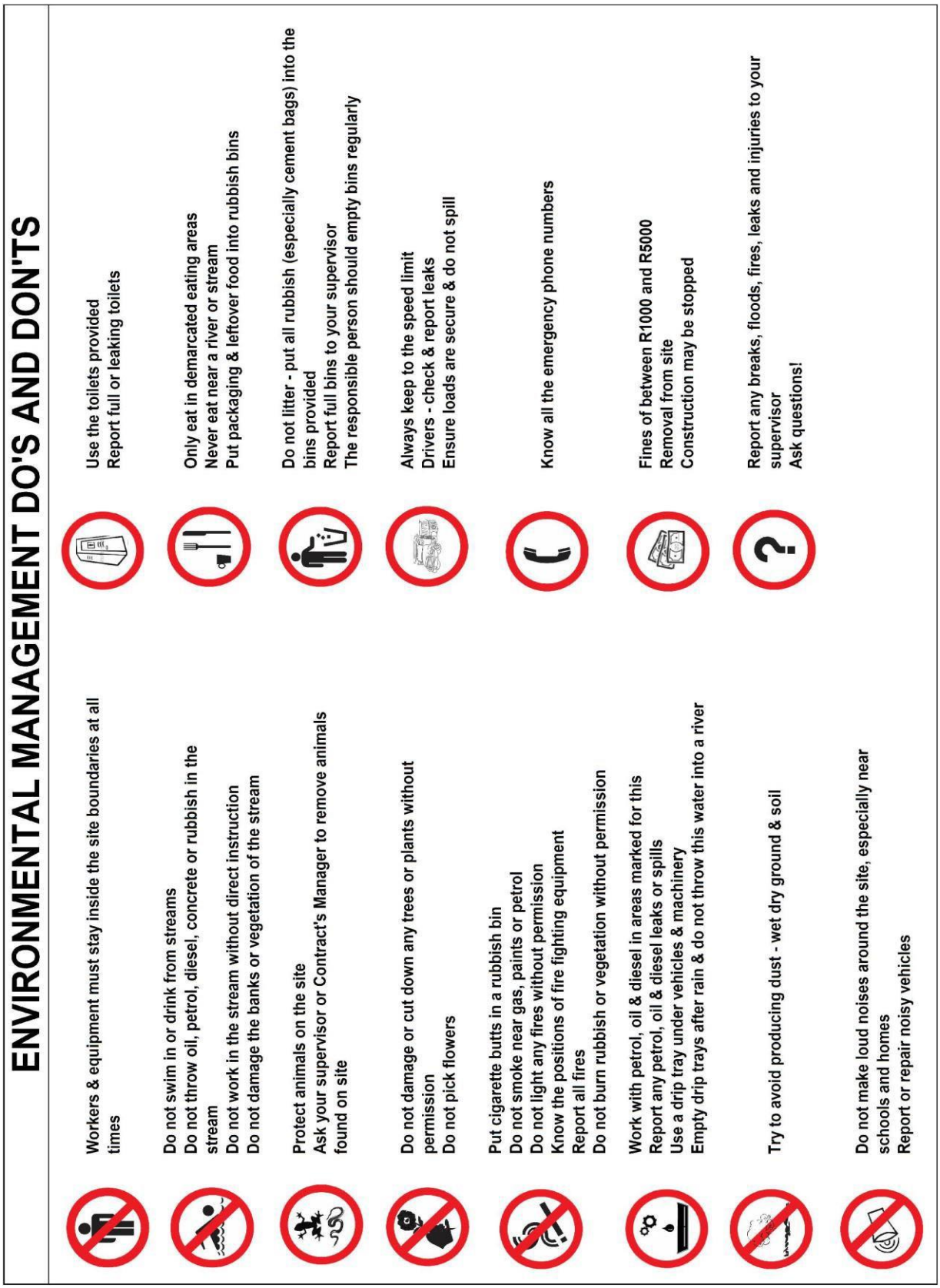
3.5.3. ENVIRONMENTAL MANAGEMENT PROGRAMME

Particular Specification E: Environmental Management Specification and its Annexures are attached hereto.

3.5.4. HEALTH AND SAFETY

Particular Specification H: Health and Safety Specification is attached hereto.

ANNEXURE A: CONSTRUCTION PERSONNEL INFORMATION POSTER



ANNEXURE B: ADDITIONAL ENVIRONMENTAL ISSUES DEEMED TO FORM PART OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME

Listed below are issues pertaining to the environment that form part of the Contract Document. The clause references relate to the **General Conditions of Contract for Construction Works, Third Edition, (GCC 2015)**. They are listed here to emphasise that they form part of the environmental considerations and requirements for this project. They must be read together with any Contract Specific Data referring thereto in Part C1.2 Contract Data. The comments made below on the

various issues are to be taken as explanatory, in so far as environmental matters are concerned, and do not modify the clauses in any way.

1. **Monitoring**

Clause 3.1.1 makes provision for the Employer's Agent to administer the Contract in accordance with the provisions of the Contract, including the monitoring of any environmental variables.

2. **Health and safety**

Clauses 3.1.4, 4.3.1, 4.3.2 and 4.10.1 remind the Contractor of his obligations in terms of the Occupational Health and Safety Act (No. 85 of 1993) and Construction Regulations 2003.

Clause 5.7 of SANS 1200A reinforces these requirements through the observation of proper and adequate safety arrangements.

3. **Employer's Agent's authority to delegate**

Clause 3.2.4 gives the Employer's Agent the authority to appoint a representative to act as the Environmental Officer (EO) for the Contract. The EO, who shall be responsible for monitoring compliance with the EMP, may be the Employer's Agent's Representative or any other person accountable to the Employer's Agent.

4. **Employer's Agent's instructions**

Clause 4.2.1 requires that the Contractor comply with the Employer's Agent's instructions on any matter relating to the Works. Moreover, Clause 4.2.2 ensures that the Contractor only takes instructions from the Employer's Agent, the Employer's Agent's Representative or a person authorised by the Employer's Agent in terms of Clause 3.2.4.

5. **Compliance with applicable laws**

Clause 4.3.1 requires that the Contractor comply with all applicable laws, regulations, etc. in fulfilling the Contract.

6. **Protection of fossils, etc.**

Clause 4.7.1 requires the Contractor to take reasonable precautions to prevent any person from damaging, *inter alia* anything of geological or archaeological interest, and requires that he inform the Employer's Agent and follows any instructions issued in this regard.

7. **Housing, food and transport**

Clause 4.10.1 requires the Contractor to make his own arrangements for payment, housing, feeding and transport for his employees, provided that if he uses any part of the Site for such purposes he shall obtain the Employer's Agent's prior approval.

Clause 4.2 of SANS 1200A further requires that facilities provided comply with local authority regulations and are maintained in a clean and sanitary condition.

8. **Competent employees**

Clause 4.11.1 requires that all persons employed on Site are careful, competent, and efficient. These attributes embrace knowledge of the environmental matters and issues dealt with in the EMP.

9. **Removal from Site**

Clause 4.11.2 makes provision for the Employer's Agent to instruct the removal from the Works and Site of any person who is guilty of misconduct, or is incompetent or negligent, or is an undesirable presence on Site.
Clause 7.1.1 requires that all Construction Equipment be in good working order. Accordingly, the Employer's Agent may order that any Construction Equipment not complying with the environmental specifications be removed from Site.

10. **Unacceptable documentation**

Clauses 5.3.1 and 5.3.2 require the Contractor to provide documentation required before commencement with Works execution, failing which the Employer may terminate the Contract. Such documentation includes the Protection of the Environment Declaration provided for in the Contract Document.

11. **Programme and Method Statements**

Clause 5.6.1 makes provision for the Employer's Agent to request the programmes for carrying out the Works.

Clause 5.6.2 makes provision for the Employer's Agent to request statements from the Contractor for the entire scope of the work. In the case of the environmental specifications, these would be submitted as Method Statements.

12. **Hours of operation**

Clause 5.8.1 restricts the Contractors hours of operation to between sunrise and sunset on working days (usually from Monday to Saturday), unless, *inter alia,* permitted by the Employer's Agent in writing.

Clause 5.7.2 further requires that in the event that permission is granted for night work, then such work shall be carried out without excessive noise and disturbance.

13. **Suspension of Works**

Clause 5.11.1 enables the Employer's Agent to suspend the progress of the Works or any part thereof, which may be as a result of some default or breach of the Contract on the part of the Contractor.

14. **Site clean-up**

Clause 5.15.1 requires that, on completion of the Works, the Contractor shall clear away and remove from the Site all Construction Equipment, surplus materials, rubbish and Temporary Works of every kind and leave the whole of the Site and Works clean and in a safe condition. All streams and watercourses shall be restored to the condition as at the commencement of the Works. Should the Contractor fail to do the work upon notice from the Employer's Agent, the Employer may in terms of Clause 7.8.3, employ others to carry out the work and recover the cost of doing so from the Contractor.

15. **Access to the Works**

Clause 7.3.1 makes provision for the Employer's Agent to authorise the Environmental Officer (EO) to have access to the Works and Site.

16. **Pollution prevention and interferences**

Clause 8.1.2 requires that all operations necessary for the execution of the Works be carried out so as not to cause unnecessary noise or pollution, or to interfere unnecessarily or improperly with public services, or the access to, use and occupation of public or private roads and footpaths or properties.

Clause 5.6 of SANS 1200A further requires the Contractor to minimise dust nuisance and pollution of streams and inconvenience to or interference with the public.

17. **Dust**

Clause 8.1.2 requires that all operations necessary for the execution of the Works be carried out so as not to cause unnecessary pollution.

Clause 5.6 of SANS 1200A requires that the Contractor take all reasonable measures to minimise any dust nuisance.

18. **Noise**

Clause 8.1.2 requires that all operations necessary for the execution of the Works be carried out so as not to cause unnecessary noise.
Clause 4.1 of SANS 1200A requires that when working in built-up areas, the Contractor shall provide and use suitable and effective silencing devices for pneumatic tools and other plant that would otherwise cause a noise level exceeding 85dB.

19. **Protection of existing environment**

Clause 8.1.3 requires that the Contractor uses every reasonable means to prevent any roads or bridges to or in the vicinity of the Site being subjected to damage by excessive loads, or disruption due to excessive traffic, occasioned by his transport arrangements.

20. **Reinstatement**

Clauses 8.2 and 8.4 make provision for the Contractor to repair and make good any damage to the Works in his care (other than “excepted risks”), and bear any costs associated with such reinstatement.

21. **Reporting accidents**

Clause 8.5.1 requires the Contractor to report to the Employer’s Agent every occurrence on the Site which causes environmental damage.

H: HEALTH AND SAFETY SPECIFICATION

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H: HEALTH AND SAFETY SPECIFICATION

For use with the General Conditions of Contract for Construction Works, Third Edition, 2015.

H1 DEFINITIONS

For the purposes of this Specification, the definitions given in the Occupational Health and Safety Act, 85 of 1993 and the Construction Regulations, 2014, and the following definitions, shall apply:

a) "Construction Regulations, 2014" means the Construction Regulations (GNR. 84 of 7 February 2014) published in terms of the OHS Act.
b) "Contractor" means the Principal Contractor as defined in the Construction Regulations, 2014.
c) "Employer" means the Client or his agent as defined in the Construction Regulations, 2014.
d) "Employer's Agent" means the person/firm so named in the Contract Data whose function is to administer the Contract as agent of the Employer, acting through, if appointed, a Health and Safety Agent.
e) "OHS Act" means the Occupational Health and Safety Act, 85 of 1993.
f) "subcontractor" means any Contractor employed by the Contractor to perform construction work.

H2 SCOPE

In terms of the OHS Act and the Construction Regulations, 2014 the Employer must provide the Contractor with a Health and Safety Specification, to which the Contractor must respond with a Health and Safety Plan for approval by the Employer.

The purpose of this Specification is to ensure that a Contractor entering into a contract with the Employer maintains an acceptable level of compliance with regard to health and safety issues during the performance of the Contract. In this regard the Health and Safety Specification forms an integral part of the Contract and the Contractor shall ensure that his subcontractors and/or suppliers comply with the requirements of this Specification.

H3 INTERPRETATION

The OHS Act and its associated regulations shall have precedence in the interpretation of any ambiguity or inconsistency between it and this Specification.

Responsibility for health and safety relating to the Works lies with the Contractor as described in this Specification. Nothing stated in or omitted from this Specification shall in any way limit the Contractor's obligations and liabilities in terms of the OHS Act.

H4 GENERAL REQUIREMENTS

The Contractor shall:

a) create and maintain a safe and healthy work environment;
b) execute the Works in a manner that complies with all the requirements of the OHS Act and all its associated regulations, and in so doing, minimize the risk of incidents occurring; and
c) respond to the instructions issued by the Employer's Agent through the Employer's Agent's Representative, except in the case of a health and safety issue which requires the Contractor's immediate attention, in which case the Employer's Health and Safety Agent can issue an instruction directly to the Contractor.

H5 ADMINISTRATION

H5.1 Application for construction work permit

Not applicable until 7 August 2015.

H5.2 Notification of intention to commence construction work

The Contractor shall notify the Provincial Director of the Department of Labour in writing using the pro forma contained in Annexure 2 of the Construction Regulations, 2014 before construction work commences, and retain a copy of such notification in the health and safety file, if such work will:

a) include excavation work;
b) include working at a height where there is a risk of falling;

c) include the demolition of a structure; or
d) include the use of explosives to perform construction work.

The Contractor shall ensure that no work commences on an electrical installation which requires a new supply or an increase in electricity supply before the person who supplies or contracts or agrees to supply electricity to that electrical installation has been notified of such work.

The Contractor shall ensure that no asbestos work is carried out before the Provincial Director of the Department of Labour has been notified in writing.

H5.3 Occupational Health and Safety Agreement

The Contractor shall enter into an Agreement with the Employer before the commencement of the Works on Site.

H5.4 Good standing with the Compensation Fund or a licensed compensation insurer

The Contractor shall provide the Employer's Agent with a letter of good standing from the Compensation Commissioner or a licensed compensation insurer before the commencement of the Works on Site.

H5.5 Emergency procedures

The Contractor shall submit for acceptance to the Employer's Agent a health and safety emergency procedure, which includes but is not limited to fire, spills, accidents and exposure to hazardous substances, which:

a) identifies the key personnel who are to be notified of any emergency;
b) sets out details of available emergency services, including contact particulars; and
c) the actions or steps which are to be taken during an emergency.

The Contractor shall within 24 hours of an emergency taking place notify the Employer's Agent in writing of the emergency and briefly outline what happened and how it was dealt with.

H5.6 Health and safety file

The Contractor shall ensure that a Health and Safety file, which shall include all documentation required in terms of the provisions of the OHS Act, the Construction Regulations, 2014 and this Health and Safety Specification, is open and kept on Site at all times.

The Health and Safety file shall be made available for inspection by any inspector, subcontractor, the Employer, the Employer's Agent, the Employer's Health and Safety Agent, or employee of the Contractor, upon the request of such persons.

The Contractor shall hand over the Health and Safety file to the Employer's Agent upon Works completion of the Contract and, if applicable, a certificate of compliance accompanied by a test report for the electrical installation in accordance with the provisions of the Electrical Installation Regulations, 1992.

H5.7 Health and safety committee

Where applicable, the Contractor shall establish a health and safety committee, and shall convene health and safety meetings as provided for in the OHS Act.

The Employer's Agent or the Employer's Health and Safety Agent shall be invited to attend such meetings as an observer.

The Contractor shall ensure that minutes of the health and safety committee meetings are kept.

H5.8 Inspections, formal enquires and incidents

The Contractor shall inform the Employer's Agent:

a) beforehand of inspections, investigations or formal inquiries of which he has been notified by an inspector; and
b) as soon as reasonably practicable of the occurrence of an incident (as defined in the OHS Act) on the Site.

The Contractor shall record all incidents and notify the Employer's Agent of any incident, except in the case of a traffic accident on a public road, as soon as possible after it has occurred and report such incident to an inspector as designated in terms of the OHS Act.

The Contractor shall investigate all incidents and issue the Employer's Agent with copies of such investigations.

H5.8 Personal protective equipment and clothing

The Contractor shall ensure that all workers are issued with the necessary personal protective clothing.

H6 APPOINTMENTS

E1.1 Appointment of construction manager

The Contractor shall, prior to commencing the Works on Site, appoint a full-time competent person as the construction manager, with the duty of managing all construction work on a single site, including the duty of ensuring occupational health and safety compliance. In the absence of the construction manager an alternative must be appointed by the Contractor.

The Contractor may, having considered the size of the project, appoint, in writing, one or more assistant construction managers for different sections thereof.

No construction manager may manage any construction work on or in any construction site other than the Site in respect of which he or she has been appointed.

E1.2 Appointment of construction supervisor, and health and safety officers

The construction manager shall appoint a competent employee(s) in writing as the construction supervisor(s) for the Site, who will be responsible for construction activities and ensuring occupational health and safety compliance on the construction site. The Contractor may, having considered the size of the project, appoint, in writing, one or more competent employees to assist the appointed construction supervisor(s).

The Contractor may, having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the Site, appoint a full-time or part-time construction health and safety officer in writing, who has in the Contractor's opinion the necessary competencies and resources, to assist the Contractor in the control of all health and safety related aspects on the Site.

The Contractor shall compile an maintain an organogram which outlines the roles and responsibilities of the construction supervisor's assistants, and health and safety officers.

E1.3 **Other competent persons**

The Contractor shall appoint in writing competent persons to supervise or inspect, as relevant, any of the following:

E1.3.1 temporary works operations;
E1.3.2 excavation work;
E1.3.3 demolition work;
E1.3.4 scaffolding work operations;
E1.3.5 suspended platform work operations;
E1.3.6 rope access work;
E1.3.7 material hoists;
E1.3.8 operation of bulk mixing plant;
E1.3.9 explosive activated fastening device;
E1.3.10 cranes;
E1.3.11 construction vehicles and mobile plant (equipment);
E1.3.12 the stacking and storage of articles on the Site; and
E1.3.13 fire equipment.

The Contractor shall appoint in writing competent persons to:

E1.3.14 induct employees in health and safety; and **E1.3.15**
prepare a fall protection plan.

H6.4 Health and safety representative(s)

The Contractor shall appoint in writing, if necessary in terms of the OHS Act, a health and safety employee representative(s), whose duties shall be as described in the OHS Act.

H7 EMPLOYER'S HEALTH AND SAFETY AGENT

The Employer's Health and Safety Agent shall:

a) audit the Contractor's compliance with the requirements of this Specification prior to the commencement of any physical construction activities on the Site;
b) accept or reject all safety plans, giving reasons for rejecting such plans;
c) monitor the effective implementation of all safety plans;
d) conduct periodic and random audits on the health and safety file to establish compliance with the requirements of this Specification and the Contractor's health and safety plan; and
e) visit the site at regular intervals to conduct site inspections, and based upon such visits issue, wherever necessary, any notices and/or instructions to the Contractor or any of the Contractor's subcontractors with a copy to the Employer's Agent and, where relevant, to the Contractor.

The Contractor shall invite the Employer's Health and Safety Agent to audit compliance with the requirements of this Specification before commencing with any new construction activity on the Site.

The Contractor shall permit the Employer's Health and Safety Agent to audit the Contractor's compliance with the approved Health and Safety Plan and shall provide any assistance and/or documentation as may be required in this regard.

H8 CREATING AND MAINTAINING A SAFE AND HEALTHY WORK ENVIRONMENT

H8.1 General

The Contractor shall with respect to the Site and the construction works that are contemplated:

a) cause a preliminary hazard identification to be performed by a competent person before commencing any physical construction activity;
b) evaluate the risks associated with such work constituting a hazard to the health and safety of such employees and the steps that need to be taken to comply with the OHS Act; and
c) as far as is reasonably practicable, prevent the exposure of such employees to the hazards concerned or, where prevention is not reasonably practicable, minimize such exposure.

The Contractor shall ensure that:

a) all reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work;
b) no structure or part of a structure is loaded in a manner which would render it unsafe;
c) relevant information, if any, provided by the designer of the structure is taken into account in the risk assessment; and
d) the designer of any temporary works complies with the requirements of regulation 6(2) of Construction Regulations, 2014.

The Contractor shall carry out regular inspections and audits to ensure that the Works are being performed in accordance with the requirements of this Specification and the Contractor's health and safety plan.

H8.2 Risk assessment

The Contractor shall before the commencement of any construction work on Site and during such construction work, cause risk assessment(s) to be performed by a competent person appointed in writing. Such assessment(s) shall as a minimum:

a) identify the risks and hazards to which persons may be exposed to;
b) analyse and evaluate the identified risks and hazards based on a documented method;
c) document a plan of safe work procedures, including the use of any personal protective equipment or clothing and the undertaking of periodic "toolbox talks" or inductions before undertaking hazardous work, in order to mitigate, reduce or control the risks and hazards that have been identified; d) provide a monitoring plan; and
e) provide a review plan.

The Contractor shall ensure that as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in the risk assessment.

The Contractor must review the relevant risk assessment –

a) where changes are effected to the design and or construction that result in a change to the risk profile; or
b) when an incident has occurred.

H8.2 Health and safety plans

The Contractor shall prior to commencing the Works to which this Specification applies, submit to the Employer's Health and Safety Agent for approval a suitable and sufficiently documented health and safety plan, based on this Specification and the risk assessment that is conducted.

The health and safety plan shall include, but not be limited to, the following:

a) The safety management structure, including the names of all designated persons such as the construction supervisor and any other competent persons;
b) Safety method statements and procedures to be adopted to ensure compliance with the OHS Act; Construction Regulations, 2014 and this Health and Safety Specification;
c) The provision and use of temporary services;
d) Personal protective equipment, devices and clothing required;
e) Emergency procedures;
f) Provision of workers' welfare facilities;
g) Induction and training;
h) Arrangements for monitoring and control to ensure compliance with the safety plan; and
i) Provision and maintenance of the health and safety file and all other relevant documentation.

The Contractor shall provide each subcontractor with the sections of this Health and Safety Specification pertaining to the construction work to be performed by that subcontractor. The subcontractor shall provide the Contractor with a health and safety plan pertaining to his work, for incorporation into the Contractor's health and safety plan.

The Contractor shall discuss the submitted health and safety plan with the Employer's Health and Safety Agent, modify such plan in the light of the discussions and resubmit the modified plan for approval.

The Contractor shall apply the approved health and safety plan from the date of its approval and for the duration of the Works to which this Specification applies.

The Contractor shall conduct periodic audits for compliance with the approved health and safety plan at intervals agreed upon with the Employer's Health and Safety Agent, but at least once every month.

The Contractor shall update the health and safety plan whenever changes to the Works are brought about.

H8.4 Responsibilities towards employees and visitors

The Contractor shall, as far as is reasonably practicable, cause every employee to be made conversant with the hazards to his health and safety attached to any work which he has to perform, any article or substance which he has to produce, process, use, handle, store or transport and any plant or machinery which he is required or permitted to use, as well as with the precautionary measures which should be taken and observed with respect to those hazards or safe work procedures.

The Contractor shall ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment.

The Contractor shall cause a record of all induction training to be kept, which indicates the names, identity numbers and job description of all those who attended such training.

The Contractor shall not allow or permit any employee to enter the Site, unless such person has undergone health and safety induction training pertaining to the hazards prevalent on the Site at the time of entry.

The Contractor shall ensure that all of his employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner on the prescribed form.

The Contractor shall ensure that each visitor to the Site, save where such visitor only visits the site office and is not in direct contact with the construction work activities:

E5.1.1 undergoes health and safety instruction pertaining to the hazards prevalent on the Site; and E5.1.2 is in possession of and using the necessary personal protective equipment.

The Contractor shall cause a record of all induction training to be kept in the Health and Safety file.

The Contractor shall provide suitable on-site signage to alert workers and visitors to health and safety hazards and requirements. Such signage shall include but not be limited to:

a) prohibited unauthorized entrance;
b) signage to indicate what personal protective equipment is to be worn; and
c) activity related signs.

The Contractor shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a workplace.

H8.5 Subcontractors

The Contractor may only subcontract work in terms of a written subcontract and shall only appoint a subcontractor should he be reasonably satisfied that such a subcontractor has the necessary competencies and resources to safely perform the work falling within the scope of the subcontract.

The Contractor shall ensure that all of his obligations in respect of subcontractors in terms of the Construction Regulations, 2014 are adhered to.

H8.6 Work permits and wayleaves

The Contractor shall be responsible for obtaining all the wayleaves, permissions or permits applicable to working near any existing services or other infrastructure on Site, and shall abide by the safety conditions imposed by such wayleaves, permissions or permits.

H8.7 Access to the Site

The Contractor shall ensure that access to the Site is strictly controlled and that, where possible, only authorised persons are permitted onto the Site.

The Contractor shall control the access to Site of his own personnel and equipment, and that of his subcontractors and suppliers, in such a way so as to ensure that the safety of all public pedestrian and vehicular traffic is not compromised.

H8.8 First aid and emergency procedures

The Contractor shall, where more than five employees are employed at a workplace, provide a first aid box or boxes at or near the workplace, which shall be available and accessible for the treatment of injured persons at that workplace. Such first aid boxes shall contain suitable first aid equipment.

The Contractor shall ensure, where there are more than 10 employees employed on the Site, that for every group of up to 50 employees at that workplace at least one person is readily available during normal working hours who is in possession of a valid certificate of competency in first aid.

The following information shall be conspicuously posted in the offices of the Contractor for the duration of the Contract:

a) Telephone numbers of emergency services;
b) The names of all safety representatives and safety officers; and
c) The name(s) of the competent first aider(s).

The Contractor shall post, in prominent places, notices indicating where the first aid box(es) is/are kept, as well as the name of the person in charge of the first aid box.

H8.9 Housekeeping

The Contractor shall ensure, *inter alia*, that suitable housekeeping is continuously implemented on the Site, including provision for the:

a) removal of scrap, waste and debris, and materials which are no longer required for use, at appropriate intervals (in accordance with Construction Regulation 27); and
b) proper stacking and storage of materials and equipment (in accordance with Construction Regulations 27 and 28).

H8.10 Fire precautions

The Contractor shall ensure that all appropriate measures are taken to minimise the risk of fire and that appropriate procedures and equipment are in place to deal with the event of a fire, all in accordance with Construction Regulation 29 and the Environmental Management Specification in Part C3.5 of the Scope of Work.

H8.11 Facilities for workers

The Contractor shall provide ablution facilities and eating areas all as specified in the Environmental Management Specification in Part C3.5 of the Scope of Work.

H9 GENERAL HAZARDS AND RISKS APPLICABLE TO WORK REQUIRED IN TERMS OF THIS TERM TENDER

H9.1 Existing Site conditions

H9.2 Information provided by the designer (CR 6(1))

H9.3 Environmental hazards

H9.4 Traffic hazards

H9.5 Construction materials (hazardous substances)

H9.6 Fall protection (working at heights) (CR 10)

H9.7 Structures (CR 11)

H9.8 Temporary works (CR 12)

H9.9 Excavation work (CR 13)

H9.10 Demolition work (CR 14)

H9.11 Tunneling (CR 15)

H9.12 Scaffolding (CR 16)

H9.13 Suspended platforms (CR 17)

H9.14 Rope access work (CR 18)

H9.15 Material hoists (CR 19)

H9.16 Bulk mixing plant (CR 20)

H9.17 Explosive actuated fastening device (CR 21)

H9.18 Cranes (CR 22)

H9.19 Construction vehicles and mobile plant (equipment) (CR 23)

H9.20 Electrical installations and machinery (CR 24)

H9.21 Flammable liquids (CR 25)

H9.22 Water environments (CR 26)

H9.23 Overhead Work (CR 27(g))

H9.24 Confined spaces

H9.25 Other hazards

PART C4: SITE INFORMATION

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C4.1 SITE INFORMATION

Information Only:
All data and descriptions contained in this section of the contract documents are given for information purposes only and cannot be interpreted as prescriptive or as an instruction despite the fact that the text may give the opposite perspective. If any conflict arises between the content of this section and other sections of the contract documents, the latter take precedence.

C4.2 DESCRIPTION OF THE WORKS

The description of the works shall inter alia contain the following regarding the work to be constructed and maintained under the contract.

C4.3 ROADWORKS

C4.3.1 Project Location and Limits

The project is situated in the Limpopo within the borders of Mogalakwena Local Municipality. The roads to be upgraded in this project fall within Ga-Mabusela and Ga-Masoge village in Moordkoppie. The locality plan is included in Appendix A, and it shows the location and extent of the project.

C4.3.2 Existing Section

The existing road sections are gravel roads, which tie in to surfaced roads at some locations. Photographs from the visual assessment that was done on the road are shown in Figure 287-1 below.

Figure 287-1: Existing Road cross section

C4.3.3 Extent of Works

The extent of works for this project entails upgrading Ga-Mabusela ang Ga-Masoge roads and stormwater for 2.50 km long gravel to surface standards inclusive of the associated stormwater network, and to improve structures where necessary in the Moordkoppie Cluster within the Mogalakwena Local Municipality.

The detailed layout drawings are included in Appendix B.

C4.4 PAVEMENT DESIGN FOR ALL PARTS OF THE VARIOUS ROADS

C4.4.1 Existing Pavement

The existing road is an unpaved gravel road overlain with imported gravel as fill material. Materials investigations showed that there are two predominant layers on the road: an in-situ layer and imported gravel layer.

C4.4.2 Pavement Design for the New Pavement

The following pavement structure is to be constructed:

Surfacing - 30 mm continuously graded medium grade asphalt
Base - 150 mm G3 crushed stone material
Subbase – G6 imported material stabilized to 150 mm C4
layer Selected layer – G7 fill layer In-situ – rip and recompact.

C4.5 STRUCTURAL WORKS

C4.5.1 Culverts

The under consideration has one stormwater crossing one for Mabusela and one for Masoge.

Figure 288-2: Existing culvert structures

C4.6 DRAWINGS

The contractor will be supplied with one set of paper prints plus a CD containing all the construction documentation.

Only figured dimensions may be used and drawings may not be scaled unless so instructed by the engineer. The engineer will supply all figured dimensions omitted from the drawings.

C4.7 CAMP ESTABLISHMENT, POWER SUPPLY AND OTHER SERVICES

The contractor is to make his own arrangements concerning the supply of electrical power and all other services. No direct payment will be made for the provision of electrical and other services. The cost thereof is deemed to be included in the rates and amounts tendered for the various items of work for which these services are required.

C4.8 CONSTRUCTION IN CONFINED AREAS

It will be necessary for the contractor to work within confined areas. In certain places the width of the fill material and pavement layers may decrease to zero and the working space may be confined. The method of construction in these confined areas largely depends on the contractor's constructional plant. Regardless, measurement and payment will be in accordance with the specified cross-sections and dimensions only, irrespective of the method used for achieving these cross-sections and dimensions. It is deemed that the rates tendered in the Pricing Schedule include full compensation for all special equipment and construction methods and for all difficulties encountered when working in confined areas and narrow widths, and at or around obstructions. No extra payment will be made nor will any claim for additional payment be considered in such cases. (Refer to project specification sub-clause B1209(g)).

C4.9 MANAGEMENT OF THE ENVIRONMENT

The contractor will be responsible for construction according to an environmental management plan in terms of THE Scope of Works. The contractor must take the utmost care to minimise the impact of his establishment and other construction activities on the environment and must adhere to the requirements as set out in the Scope of Works. Where the contractor fails to adhere to these requirements the specifications in Section C of the Scope of Works provide the methodology and cost liability of remedy.

C4.10 SMALL CONTRACTOR DEVELOPMENT, TRAINING AND COMMUNITY LIAISON

Mogalakwena Local Municipality is committed to the implementation of Government's policies and in turn expects the same from its contractors. Accordingly, it is a requirement of this project that tenderers are familiar with the specifications that relate to the transformation of the construction industry through the following:

i. adherence to the policies of the Reconstruction and Development Programme and other similar Government initiatives, ii. employment and/or creation of Targeted Enterprises,
iii. arrangement of generic skills, engineering skills and entrepreneurial skills training programmes for which provision has been made in the Pricing Schedule,
iv. construction using labour maximisation principles, and
v. active participation with community-based structures.

Tenderers should note that liaison with adjacent communities via active participation with their leaders and constituted organisations and forums, as well as employment of their people, are essential parts of the project. A provisional sum to cover costs incurred by members of the community in the liaison process has also been included in the Pricing Schedule.

the Scope of Works covers the contractor's requirements in detail, as well as defining the targets that comprise the Contract Participation Goal (CPG).

"Although it is not a requirement on this contract that the contractor actively pursues participation within local communities adjacent to the project, awareness of the need to bring work opportunities to the nearest indigent populations remains a priority."

C4.11 CLIMATE

The climate data for the project area is provided in terms of the Weinert N-value and the Thornthwaite's moisture index. Climatic data derived from historical trends is also summarised under heading 0.

C4.11.1 Weinert N-Value

The Weinert N-value classification of regions in Southern Africa is shown in Figure 290-3. This classification shows that the project area lies within the region where N is greater than 5, indicating that it is a dry region.

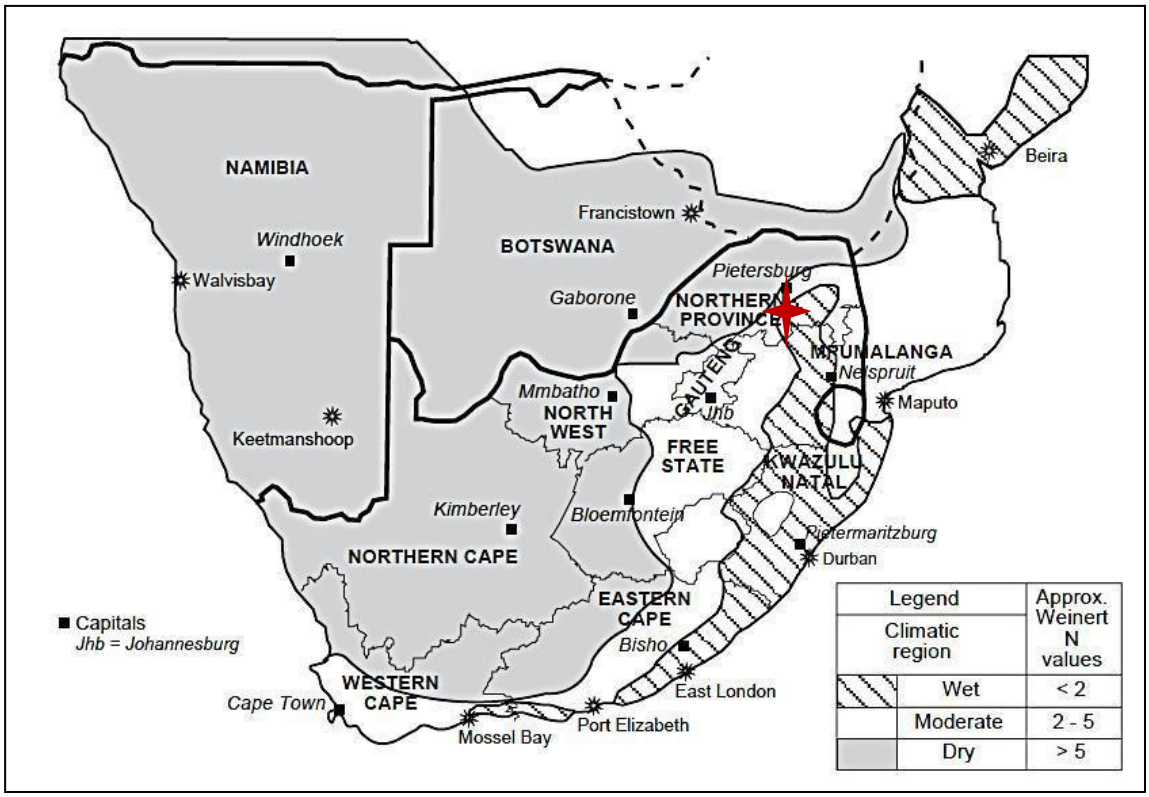

Figure 290-3: Weinert N-Value classification for Southern Africa

C4.11.2 Thornthwaite's Moisture Index

The location of the project area with respect to the Thornthwaite's moisture index is shown in Figure 291-4.

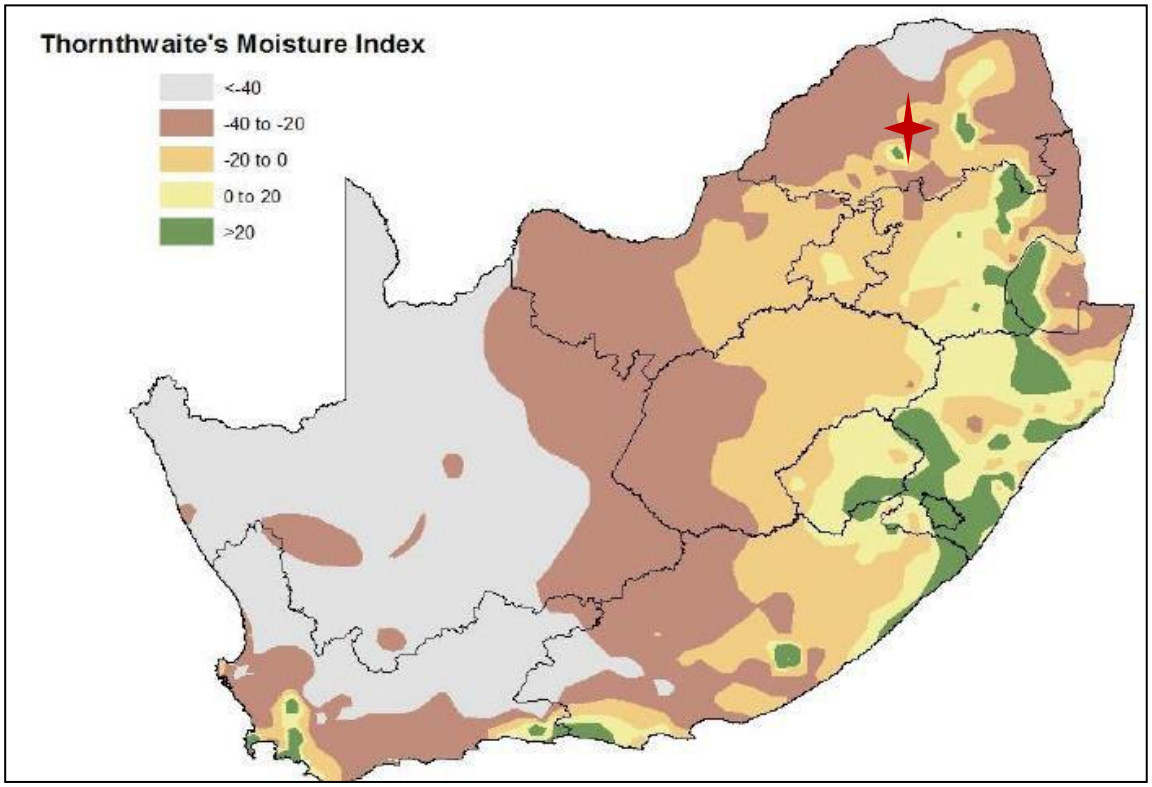

Figure 291-4: Southern Africa macro-climatic regions based on Thornthwaite's moisture index

The index range definitions are shown in Table 291-1. This also indicates that the project area lies within the zone between -40 to 0, which indicates a combination of semi-arid and dry sub-humid climatic conditions.

Table 291-1: Thornthwaite's moisture index range

INDEX RANGE	CLIMATIC REGION	
<-40	Arid	Dry
-40 to -20	Semi-arid	
-20 to 0	Dry Sub-humid	Moderate
0 to 20	Moist Sub-humid	
>20	Humid	Wet

C4.11.3 Historical Climate Data

Average minimum and maximum temperature over the year:

- On average, the warmest month is January.
- On average, the coolest month is July.
- The average annual maximum temperature is: 24.0 Celsius.
- The average annual minimum temperature is: 11.0 Celsius.

Average monthly hours of sunshine over the year:

- On average, August is the sunniest (~280 sun hours).
- On average, February has the lowest amount of sunshine (~220 sun hours).

Average monthly precipitation over the year:

- Polokwane has dry periods in May, June, July, August, and September (<20mm rainfall).
- On average, November is the wettest month (85mm).
- On average, July is the driest month (5mm).
- The average amount of annual precipitation is: 478.0 mm.

Average monthly rainy days over the year:

- Mokopane has dry periods in May, June, July and August.
- On average, November is the most rainy (9 rainy days).
- On average, July has the least rainy days (1 rainy day).

C4.12 REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS 2014

Refer to the Scope of Works for general requirements in terms of the OH&S requirements.

PART C5: ANNEXURES

APPENDIX A LOCALITY MAP

APPENDIX B MATERIALS INVESTIGATION

Location	Test Pit Reference	Position	Test Pit Sample No	Layer	Description	Thickness (mm)	P0,075	GM	Plasticity Index	Maximum Dry Density	OMC (%)	CBR @ 90%	CBR @ 93%	CBR @ 95%	CBR @ 98%	CBR @ 100%	Material Classification	
																	COLTO	DEMAC
Mabusela - Masoge	1	S 23º 57' 07.7" E 28º 49' 13.0"	RB. 20907	Imported Gravel	Light brown Silty Gravel - Imported	65	18	1.84	9	1981	10.9	5.40	8.10	11.00	16.00	21.00	G9	DE-G8
			RB. 20908	In-situ	Dark Brown Stiff Clay - Insitu	890	46	0.91	18	1661	19.3	4.50	4.90	5.20	5.70	6.10	<G9	DE-G9
	2	S 23º 56' 21.5" E 28º 50' 43.2"	RB. 20909	Imported Gravel	Light brown Silty Gravel - Imported	510	15	1.91	10	2136	8.8	11.00	15.00	19.00	28.00	35.00	G7	DE-G8
			RB. 20910	In-situ	Dark Brown Silty Gravel - In-situ	1. 475	25	1.66	14	1991	11.8	6.50	8.90	11.00	15.00	19.00	<G9	DE-G9
	3	S 23º 56' 09.3" E 28º 51' 05.8"	RB. 20911	Imported Gravel	Light brown Silty Gravel - Imported	340	13	1.78	SP	2059	8.2	6.60	9.00	11.00	15.00	19.00	G9	DE-G8
			RB. 20912	In-situ	Dark Brown Stiff Clay - Insitu	640	32	1.43	15	1819	16.5	7.60	10.00	13.00	18.00	22.00	<G9	DE-G9

Part C5 – Appendix/Annexures

Contract Number: 29-2023/2024

APPENDIX C BORROW PIT INVESTIGATION REPORT