



MPUMALANGA PROVINCIAL GOVERNMENT

DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT

TENDER NO. PWRT/2442/22/MP (A)

*TERM CONTRACT FOR PAVED ROADS MAINTENANCE IN VARIOUS DISTRICTS OF
MPUMALANGA RPOVINCE ON AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3)
YEARS*

CIDB GRADING 2CE-5CE

The Department of Public Works, Roads and Transport

Private Bag x 11310
NELSPRUIT
1200

Contact

Name: R Masia
Telephone: 013-766 8524
ronmasia@mpg.gov.za

or

B Mbanjwa
013 766 8524
bmbanjwa@mpg.gov.za

as per tender advert

Bidder / Company:.....

CIDB Registration Number (CRS NO):

TENDER PRICE, INCL. VAT R

MPUMALANGA PROVINCIAL GOVERNMENT
DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT

PART A

TENDER NO. PWRT/2442/22/MP(A)

*TERM CONTRACT FOR PAVED ROADS MAINTENANCE AS AND WHEN REQUIRED IN THE
EHLANZENI, BOHLABELA, GERT SIBANDE AND NKANGALA DISTRICTS OF MPUMALANGA
PROVINCE FOR A PERIOD OF 3 years*

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TENDERING PROCEDURES

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TENDER NOTICE AND INVITATION TO TENDER



TENDER NO. PWRT/2442/22/MP(A)

TERM CONTRACT FOR PAVED ROADS MAINTENANCE AS AND WHEN REQUIRED IN THE EHLANZENI, BOHLABELA, GERT SIBANDE AND NKANGALA DISTRICTS OF MPUMALANGA PROVINCE FOR A PERIOD OF 3 YEARS

The Mpumalanga Department of Public Works, Roads and Transport, invites tenders for PAVED ROADS MAINTENANCE as and when required in the Ehlanzeni, Bohlabela, Gert Sibande and Nkangala Districts of Mpumalanga Province for period of three years.

The CIDB Contractor Grading: 2CE to 5CE. The 1CE is not allowed. The 6CE and higher is also not allowed.

Preferences are offered to bidders on submission of a valid B-BBEE Status Level Certificate.

The physical address for collection of tender documents is:

1. **MBOMBELA**
Riverside Government Complex, Building no 9, Government Boulevard, Mbombela, 1200
Tel: no. Mr. VS Ngobe 013 766 6339 or Mrs NN Ndlovu 013 766 8258 Fax No. 013 766 8455
2. **MALELANE**
24 Air Street, Malelane
Contact: Ms Margaret Zitha or Mrs DM Thobela: 013 790 0719 or 082 675 8748.
Fax No. 013 790 0514
3. **MORETELE**
TLC offices in Mammethlake Satellite Office at the Mammethlake Police Station Contact Mr. Tshupo Ngwatle – (012) 721 3955
4. **MIDDELBURG**
Department of Public Works, Roads and Transport
Cnr. Lillian Ngoyi and Dr Beyers Naudé Streets – Old TPA Building, Upper ground floor, Office numbers A20, 21 and 25. Contact: Lorraine Motebu or Donald Ndala or Ms Mendy Kabini – (013) 282 8776/9151. Fax No. 013 282 8776
5. **ELUKWATINI**
Elukwatini Sub Regional Offices
Office numbers A49 and A50 (Opposite Elukwatini Community Hall) Stand number 12 Extension A, Elukwatini 1190. Contact: Mr. Z. Mkhonza or Ms B. Khathide. Tel: 017 883 1396/7
6. **PIET RETIEF**
(Cnr Wst-End and Kruger St)
Department of Public Works, Roads and Transport Building. Contact: Mr. Alex Shongwe. Tel: 017 826 1671. Fax: 017 826 0577.
7. **KWAMHLANGA**
KwaMhlanga Government Complex. Department of Finance, Building No. 12, Computer Centre.
Contact: Ms. TA Sibanyoni 013 766 4872, Ms Sophie Masanabo 013 766 4874, or Ms. Emily Mnguni 013 766 4873 or Mrs TS Mabena 013 766 4875 Fax: (013) 947 2250

8. EVANDER

10 Cornell Road (Previously occupied by Evander Home Affairs Offices), Evander, 2280. Contact: Mr. Andries Mahalangu or Mrs Martha Mahlangu or Mr. Nhlanhla Mavuso. Tel: 017 632 1607/1540/1549 Fax: 017 632 1395

9. BUSHBUCKRIDGE

Bushbuckridge Advice Centre, Department of Finance, Protea building (Old Telkom Building) Contact: Mr. Cecil Tshabangu, Mr. Peterson Sithole. Tel: 013 799 1903/2123/2068 Fax: 013 799 0535

Documents may be collected during working hours between 08:30 and 13:00 and 14:00 and 16:00 from **as per tender advert.**

A non-refundable tender deposit of **R100.00** is payable in cash or by the bank guaranteed cheque made out in favour of the Employer, payable at the above mentioned venues between 8:30 and 12:30 and 13:00 and 16:00, is required on collection of the tender documents.

Queries relating to issues in these documents may be addressed to:

Mr. Ronny Masia
Director Roads Maintenance
Mpumalanga Department of Public Works, Roads and Transport
Tel: 013 766 8524
Email: Ronmasia@mpg.gov.za

E-mail enquiries are the preferred during the tender period, so that responses can easily be distributed to all bidders who attended the bid briefing.

A compulsory bidder briefing with Employer

Not applicable

The closing time for receipt of tenders is as per tender advert

Please Note that tender closures are only administered at the following Central Supply Chain Offices, namely: **MBOMBELA, PIET RETIEF, KWAMHLANGA, EVANDER, BUSHBUCKRIDGE AND MIDDELBURG.**

Telegraphic, telephonic, telex, facsimile and late tenders will not be accepted.

T1.2. TENDER DATA**1. GENERAL**

In the Tender Data, project specific details are given against certain clauses of the Standard Conditions of Tender as contained in Annex F of SANS 294 – *Construction Procurement Processes, Methods and Procedures*.

The Tender Data shall be read with the Standard Conditions of Tender in order to expand on the Bidder's obligations and the Employer's undertakings in administering the tender process in respect of the project under consideration.

The Tender Data hereafter shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of Tender Data given below is cross-referenced to the relevant clause in the Standard Conditions of Tender.

2. TENDER DATA APPLICABLE TO THIS TENDER**F.1.1 The Employer for this Contract is:**

Mpumalanga Department of Public Works, Roads and Transport

F.1.2 Tender Documents:

The tender documentation consists of the following:

(a) This Tender Document:**TENDER****T1: Tendering Procedures**

- T1.1: Tender Notice and Invitation to Tender
- T1.2: Tender Data

T2: Returnable Documents

- T2.1: List of Returnable Documents
- T2.2: Returnable schedules and forms

CONTRACT**Part 1: Agreements and Contract Data**

- C1.1: Form of Offer and Acceptance
- C1.2: Contract Data
- C1.3: Form of Guarantee

Part 2: Pricing Data

- C2.1: Pricing Instructions
- C2.2: Bill of Quantities

Part 3: Scope of Work

- C3: Scope of Work

Part 4: Site Information

- C4: Site information

F.1.3 The Employer's agent is:

Name: The works orders and site supervision will be done departmentally or by its representative (Maintenance Consultants) as per the Department's instruction. The Projects Management Unit (PMU) will also assist as and when required.

F.1.4 The Employer's right to accept or reject any tender offer:

The Employer is not obliged to accept the lowest or any tender offer.

F.2.1 Eligibility

A Bidder will not be eligible to submit a tender if:

- (a) The Bidder submitting the tender is under restrictions or has principals who are under restrictions to participate in the Employer's procurement due to corrupt or fraudulent practices;
- (b) The Bidder does not have the legal capacity to enter into the contract;
- (c) The Bidder submitting the tender is insolvent, in receivership, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of the foregoing;
- (d) The Bidder does not comply with the legal requirements stated in the Employer's procurement policy;
- (e) The Bidder cannot demonstrate that he possesses the necessary professional and technical qualifications and competent, financial resources, equipment and other physical facilities, managerial capability, personnel, experience and reputation to perform the contract;
- (f) The Bidder cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.
- (g) The bidder cannot demonstrate proof of registration with the Construction Industry Development Board (CIDB) Grading class between 2CE and 5CE.

F.2.2 Site visit and clarification meeting

Not applicable

F.2.3 Pricing the tender offer**(a) Value Added Tax**

The Valued Added Tax (VAT) rate shall be 15%, or as otherwise provided for by legislation.

- (b) The successful Bidder shall be required to produce a VAT invoice that shall only be prepared once measurements and valuations for work done in terms of the contract offer have been agreed with the Employers agent and a certificate of payment issued.
- (c) Payment of VAT to non-VAT vendors shall be processed from the month in which the Bidders liability with the South African Revenue Services is effective.

F.2.4 A Tender offer shall not be considered if alterations have been made to the forms of tender data or contract data (unless such alterations have been duly authenticated by the Bidder) or if any particulars required therein have not been completed in all respects.

F.2.5 Alternative tenders

F.2.5.1 Alternative Tender Offers from bidders will not be considered, because the design is devised specifically to enhance labour based methods of construction, and taking account of the specific availability of materials on site.

F.2.5.2 A two-envelope procedure will not be followed.

F.2.6 Closing Time

The closing time for submission of Tender Offers is: **as per tender advert**.
Telephonic, telegraphic, telex, electronic or e-mailed tenders will not be accepted.

F.2.7 Tender validity

The Tender Offer validity period is 90 calendar days from the closing time for submission of tenders.

F.2.8 Access

Access shall be provided for inspections and testing by personnel acting on behalf of the Employer.

F.2.9 Return of Tender Documents

Not applicable.

F.2.10 Certificates

The following requirements shall be applicable to all bidders and non-adherence thereto shall result in an automatic disqualification.

- Company / CC / Trust / Partnership registration certificates;
- Form of Offer and Acceptance
- Proof of Registration with the Construction Industry Development Board (CIDB)

F.3.4 Opening of Tender Submissions

The time and location for opening of the tender offers are:

Time: **12:00** Date: **as per tender advert**

Location / Venue: See below:

MBOMBELA

Riverside Government Complex, Building no 9, Government Boulevard, Mbombela, 1200
Tel: no. Mr. VS Ngobe 013 766 6339 or Mrs NN Ndlovu 013 766 8258 Fax No. 013 766 8455

PIET RETIEF

(Cnr Wst-End and Kruger St)
Department of Public Works, Roads and Transport Building. Contact: Mr. Alex Shongwe. Tel: 017 826 1671. Fax: 017 826 0577.

KWAMHLANGA

KwaMhlanga Government Complex. Department of Finance, Building No. 12, Computer Centre.
Contact: Ms. TA Sibanyoni 013 766 4872, Ms Sophie Masanabo 013 766 4874, or Ms. Emily Mnguni 013 766 4873 or Mrs TS Mabena 013 766 4875 Fax: (013) 947 2250

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 Cnr. Lillian Ngoyi and Dr Beyers Naudé Streets – Old TPA Building, Upper ground floor, Office numbers A20, 21 and 25. Contact: Lorraine Motebu or Donald Ndala or Ms Mendy Kabini – (013) 282 8776/9151. Fax No. 013 282 8776

4. ELIGIBILITY CRITERIA

The bidder will **not be eligible** to enlist on the database if:

- 1) The bidder is under restrictions or has principals who are under restriction to participate in the Employer's procurement due to corrupt or fraudulent practices;
- 2) The bidder cannot provide proof of being registered on the Central Supplier Database, in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract;
- 3) The bidder cannot demonstrate proof of registration with the Construction Industry Development Board (CIDB) grading class between **2CE and 5CE**.

5. CONDITIONS OF CONTRACT

Pre - Qualifying Criteria

Preference will be given to tenderers who satisfy the Targeted Enterprise Participation criteria with verifiable BEE Certificates.

Tenderer / Bidder must have:

- **BBBEE Status Contributor Level 1**
- **Exempted Macro Enterprise (EME)**

6. EVALUATION REQUIREMENTS**Compulsory Returnable Documents**

	Yes	No
1) Company Registration Certificate		
2) Certificate of Authority for signature		
3) Certified copies of the ID documents of Directors / Shareholders / Partners / Sole Proprietor		
4) Active registration with the Construction Industry Development Board (CIDB) Grading Class between 2CE and 5CE		
5) Fully completed and signed SBD Forms 1, 4, 6.1, 6.2, 8 and 9		
6) Copy of the Workmen's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993). Letter for tender purpose will be allowed.		
7) Fully completed Form of Offer		
8) Fully Completed Tender Document		

NB: Failure to comply with compulsory returnable documents stated above will result in a disqualification of the bid

Returnable Schedules required only for tender evaluation purposes

- 1) Evaluation Form: Schedule of relevant plant and equipment (in the format provided)
- 2) Evaluation Form: Schedule of company's experience (in the format provided)
- 3) Curriculum vitae of key personnel

- 4) Valid BBBEE Certificate
- 5) Proof of qualifications
- 6) Financial Status (Bank Rating)
- 7) References (provide contact details)
- 8) Contractor's Health and Safety / Risk and Environmental plan

7. EVALUATION CRITERIA

The evaluation of the received tender will be based on BBBEE Level Contributor and Price. The **80/20** evaluation criteria will apply.

7.1 BBBEE Level Contributor

Twenty (20) points will be awarded to a tenderer for attaining BBBEE Status Level of Contributor in accordance with the table below:-

BBBEE Status Level Contributor	Number of Points
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

7.2 Financial Offer

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

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

- P_s = Points scored for price of bid under consideration
 P_t = Price of bid under consideration
 $P_{\min}$ = Price of lowest acceptable bid

F.3.18 Copies of Contract

The number of paper copies of the signed contract to be provided by the Employer is ONE.

Annex F: Standard Conditions of Tender

(As contained in Annexure F of the CIDB Standard for Uniformity in Construction Procurement in Board Notice 12 of 2009 in Government Gazette No 31823 of January 2009)

F.1 General**F.1.1 Actions**

The employer and each bidder submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently.

F.1.2 Tender Documents

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

F.1.3 Interpretation

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

F.1.3.2 These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.

F.1.3.3 For the purposes of these conditions for the calling for expressions of interest, the following definitions apply:

- a) **comparative offer** means the bidder's financial offer after the factors of non-firm prices, all unconditional discounts and any other tendered parameters that will affect the value of the financial offer have been taken into consideration.
- b) **corrupt practice** means the offering, giving, receiving or anything of value to influence the action of the employer or his staff or agents in the tender process; and
- c) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels.

F.1.4 Communication and employer's agent

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

F.1.5 The employer's right to accept or reject any tender offer

F.1.5.1 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 bidder for such cancellation and rejection, but will give written reasons for such action upon written request to do so.

F.1.5.2 The employer may not subsequent to the cancellation or abandonment of a tender process or the rejection of all responsive tender offers re-issue a tender covering substantially the same scope of work within a period of six months unless only one tender was received and such tender was returned unopened to the bidder.

F.2 Bidder's obligations**F.2.1 Eligibility**

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

F.2.2 Cost of tendering

Accept that the employer will not compensate the bidder 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 of documents

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

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 to the closing time stated in the tender data, in order to take the addenda into account.

F.2.7 Clarification meeting

Not applicable

F.2.8 Seek clarification

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

F.2.9 Insurance

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

F.2.10 Pricing the tender offer

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

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

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

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

F.2.11 Alterations to documents

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 bidder. All signatories to the tender offer shall initial all such alterations. Erasures and the use of masking fluid are prohibited.

F.2.12 Alternative tender offers

F.2.12.1 Submit alternative tender offers 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 bidder proposes.

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

F.2.13 Submitting a tender offer

F.2.13.1 Submit a tender offer to provide the whole of the works, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

F.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing in **black ink**.

F.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.

F.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the bidder. Signatories for bidders proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

F.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the bidder's name and contact address.

F.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.

F.2.13.8 Accept that the employer shall not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.

F.2.14 Information and data to be completed in all respects:

Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.

F.2.15 Closing time

F.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Proof of posting shall not be accepted as proof of delivery. The employer shall not accept tender offers submitted by telegraph, telex, facsimile or e-mail, unless stated otherwise in the tender data.

F.2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

F.2.16 Tender offer validity

F.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.

F.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period.

F.2.17 Clarification of tender offer after submission

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

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

F.2.18 Provide other material

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

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

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

F.2.19 Inspections, tests and analysis

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

F.2.20 Submit securities, bonds, policies, etc.

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

F.2.21 Check final draft

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

F.2.22 Return of other tender documents

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

F.2.23 Certificates

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

F.3 The employer's undertakings

F.3.1 Respond to clarification

Respond to a request for clarification received up to five working days prior to the tender closing time stated in the Tender Data and notify all bidders who drew procurement documents.

F.3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the tender documents to each bidder during the period from the date of the Tender Notice until seven days before the tender closing time stated in the Tender Data. If, as a result a bidder applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, will then notify it to all bidders who drew documents.

F.3.3 Return late tender offers

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

F.3.4 Opening of tender submissions

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

F.3.4.2 Announce at the opening held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each bidder whose tender offer is opened, the total of his prices, preferences claimed and time for completion, if any, for the main tender offer only.

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

F.3.5 Two-envelope system

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

F.3.5.2 Evaluate the quality of the technical proposals offered by bidders, then advise bidders who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of bidders, who score in the quality evaluation above the minimum number of points for quality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any preferences claimed. Return unopened financial proposals to bidders whose technical proposals failed to achieve the minimum number of points for quality.

F.3.6 Non-disclosure

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

F.3.7 Grounds for rejection and disqualification

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

F.3.8 Test for responsiveness

Determine, on opening and before detailed evaluation, whether each tender offer properly received:

- a) meets the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the tender documents.

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

- Detrimently affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- change the Employer's or the bidder's risks and responsibilities under the contract, or
- affect the competitive position of other bidders presenting responsive tenders, if it were to be rectified.

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

F.3.9 Arithmetical errors

Check responsive tender offers for arithmetical errors, correcting them in the following manner:

- Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern.
- If a bill of quantities (or schedule of rates) apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate will be corrected.
- Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the bidder's addition of prices, the total of the prices shall govern and the bidder will be asked to revise selected item prices (and their rates if a bill of quantities applies) to achieve the tendered total of the prices.

Consider the rejection of a tender offer if the bidder does not correct or accept the correction of his arithmetical errors in the manner described above.

F.3.10 Clarification of a tender offer

Not applicable

F.3.11 Evaluation of tender offers

F3.11.1 General

Appoint an evaluation panel of not less than three persons. Reduce each responsive tender offer to a comparative offer and evaluate it using the tender evaluation method that is indicated in the Tender Data and described below:

F.3.11.2 Method 1: Financial Offer	1) Rank tender offers from the most favorable to the least favorable comparative offer 2) Recommend highest ranked tendered for the award of the contract, unless there are compelling and justifiable reasons not to do so.
F.3.11.3 Method 2: Financial offer and preferences	1) Score tender evaluation points for financial offer 2) Confirm that bidders are eligible for the preferences claimed and if so, score tender evaluation points for preference. 3) Calculate total tender evaluation points. 4) Rank tender offers from the highest number of tender evaluation points to the lowest. 5) Recommend bidder with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
F.3.11.4 Method 3: Financial offer and quality	1) Score quality, rejecting all tender offers that fail to score the minimum number of points for quality stated in the Tender data. 2) Score tender evaluation points for financial offer. 3) Calculate total tender evaluation points.

	4) Rank tender offers from the highest number of tender evaluation points to the lowest. 5) Recommend bidder with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
F.3.11.5 Method 4: Financial offer, quality and preferences	1) Score quality, rejecting all tender offers that fail to score the minimum number of points for quality stated in the Tender data. 2) Score tender evaluation points for financial offer. 3) Confirm that bidders are eligible for the preferences claimed, and if so, score tender evaluation points for preference. 4) Calculate total tender evaluation points. 5) Rank tender offers from the highest number of tender evaluation points to the lowest. 6) Recommend bidder with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

F.3.11.6 Decimal places

Score financial offers, preferences and quality, as relevant, to two decimal places.

F.3.11.7 Scoring Financial Offers

Score the financial offers of remaining responsive tender offers using the following formula:

N_{FO}	=	$W_1 \times A$ where:
N_{FO}	=	the number of tender evaluation points awarded for the financial offer.
W_1	=	the maximum possible number of tender evaluation points awarded for the financial offer as stated in the Tender Data.
A	=	a number calculated using either formulas 1 or 2 below as stated in the Tender Data.

Formula	Basis for comparison	Option 1	Option 2
1	Highest price or discount	$(1 + \frac{(P - P_m)}{P_m})$	P/P_m
2	Lowest price or percentage commission/fee	$(1 - \frac{(P - P_m)}{P_m})$	P_m/P

where:	
P_m	= the comparative offer of the most favorable tender offer.
P	= the comparative offer of tender offer under consideration.

F.3.11.8 Scoring preferences

Confirm that bidders are eligible for the preferences claimed in accordance with the provisions of the tender data and reject all claims for preferences where bidders are not eligible for such preferences.

F.3.11.8 Scoring quality (functionality)

Score quality in each of the categories stated in the Tender Data and calculate total score for quality.

F.3.12 Insurance provided by the employer

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

F.3.13 Acceptance of tender offer

F.3.13.1 Accept tender offer only if the bidder satisfies the legal requirements stated in the Tender Data.

F.3.13.2 Notify the successful bidder of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period. Providing the form of offer and acceptance does not contain any qualifying statements, it will constitute the formation of a contract between the employer and the successful bidder as described in the form of offer and acceptance.

F.3.14 Notice to unsuccessful bidders

After the successful bidder has acknowledged the employer's notice of acceptance, notify other bidders that their tender offers have not been accepted.

F.3.15 Prepare contract documents

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

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents,
- c) other revisions agreed between the employer and the successful bidder, and
- d) the schedule of deviations attached to the form of offer and acceptance, if any.

F.3.16 Issue final contract

Prepare and issue the final draft of contract documents to the successful bidder for acceptance as soon as possible after the date of the employer's signing of the form of offer and acceptance (including the schedule of deviations, if any). Only those documents that the conditions of tender require the bidder to submit, after acceptance by the employer, shall be included.

F.3.17 Complete adjudicator's contract

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

F.3.18 Provide copies of the contracts

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

MPUMALANGA PROVINCIAL GOVERNMENT

DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT

TENDER NO. PWRT/2442/22/MP(A)

**TERM CONTRACT FOR PAVED ROADS MAINTENANCE AS AND WHEN REQUIRED IN THE
EHLANZENI, BOHLABELA, GERT SIBANDE AND NKANGALA DISTRICTS OF MPUMALANGA
PROVINCE FOR A PERIOD OF 3 years**

CIDB GRADING 2CE-5CEPE

T2.1 List of Returnable Documents

The bidder must complete the following returnable documents:

1.	Returnable Schedules required for tender purposes
A.	Record of Addenda to Tender Documents
B.	Certificate of Authority for Joint Ventures / Close Corporation/ Partnership/ Company/ Sole Proprietor (Certified copies of Identity Documents in the case of Sole Proprietor)
C.	Registration Certificates of entities – Joint Ventures / Close Corporation/ Partnership/ Company/ Sole Proprietor
D.	Compulsory Enterprise Questionnaire
E.	Proposed Amendments, Qualifications and Alternatives
F.	Proof of registration with the Construction Industry Development Board (CIDB)
G.	Copy of the Workmen's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993)
H.	Curriculum Vitae format of key personnel
I.	Form of Offer
J.	SBD Tender Documents (SBD 2, SBD 4, SBD 6.1, SBD 6.2, SBD 8, SBD 9,
K.	Fully completed bill of quantities
L.	Copy of COIDA (Compensation for Occupational Injuries and Diseases) registration certificates, e.g. Letter of Good Standing. (Letter for Tender Purposes is also allowed)
M.	An original valid Tax Clearance Certificate issued by the South African Revenue Services.
N.	B-BBEE Status Level Verification Certificates (Original or certified copies)

Other documents that will be incorporated into the contract after award

- | |
|--|
| <ul style="list-style-type: none">A. Execution ProgrammeB. Contractors's Health and Safety DeclarationC. Contractor's Safety PlanD. Pro-forma Notification form in terms of the Occupational Health and Safety Act 1993, Construction Regulations, 2003 |
|--|

B. RECORD OF ADDENDA TO TENDER DOCUMENTS

I / We confirm that the following communications received from the Employer or his representative before the date of submission of this tender offer, amending the tender documents, have been taken into account in this tender offer.

ADD. No.	DATE	TITLE OR DETAILS
1		
2		
3		
4		
5		

SIGNATURE:
(of person authorised to sign on behalf of the Bidder)

DATE:

C- CERTIFICATE OF AUTHORITY OF AN ENTITY

Indicate the status of the bidder by ticking the appropriate box hereunder. The bidder must complete the certificate set out below for the relevant category.

(I) Company	(II) Close Corporation	(III) Partnership	(IV) Joint Venture	(V) Sole Proprietor

(I) CERTIFICATE FOR COMPANY

I, chairperson of the Board of Directors of
....., hereby confirm that by resolution of the Board (copy
attached) taken on 20.....,

Mr/Ms, acting in the capacity of
....., was authorised to sign all documents in
connection with this tender and any contract resulting from it on behalf of the company.

Signature of Chairman:

Signature of Signatory:

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters

Date:

(II) CERTIFICATE FOR CLOSE CORPORATION

We, the undersigned, being the key members in the business trading as.....

.....
hereby authorises Mr/Ms. ,
acting in the capacity of ,
to sign all documents in connection with the tender for Contract No
and any contract resulting from it on our behalf.

Signature of Signatory:

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date:

NAME	ADDRESS	SIGNATURE	DATE

Note: *This certificate is to be completed and signed by all of the key members upon whom rests the direction of the affairs of the Close Corporation as a whole.*

(III). CERTIFICATE FOR PARTNERSHIP

We, the undersigned, being the key members in the business trading as,
.....
hereby authorises Mr/Ms,
acting in the capacity of,
to sign all documents in connection with the tender for Contract No
and any contract resulting from it on our behalf.

Signature of Signatory:

As Witnesses:

1..... Name in Block Letters

2..... Name in Block Letters

Date:

NAME	ADDRESS	SIGNATURE	DATE

Note: *This certificate is to be completed and signed by all of the key partners upon who rests the direction of the affairs of the Partnership as a whole.*

(IV) CERTIFICATE FOR JOINT VENTURE

We, the undersigned, being the key members in the business trading as

.....
.....

hereby authorises Mr/Ms

.....
,

acting in the capacity of

.....
,

to sign all documents in connection with the tender for Contract No
and any contract resulting from it on our behalf.

This authorization is evidenced by the attached power of attorney signed by legally authorized signatories of all the partners to the Joint Venture.

Signature of Signatory:

As Witnesses:

1..... Name in Block Letters

2..... Name in Block Letters

Date:

NAME OF FIRM	ADDRESS	AUTHORISING SIGNATURE, NAME AND CAPACITY
Lead partner		
		
		
		
		
		

Note: *This certificate is to be completed and signed by all of the key partners upon who rests the direction of the affairs of the Partnership as a whole.*

V) CERTIFICATE FOR SOLE PROPRIETOR

I....., hereby confirm that I am the sole owner of the
business trading as:

Signature of Sole owner:

As Witnesses:

1..... Name in Block Letters

2..... Name in Block Letters

Date:

D. REGISTRATION CERTIFICATE OF AN ENTITY

[Important note to Bidder: Registration Certificates for Companies, Close Corporations and Partnerships, ID documents for Sole Proprietors, must be inserted here. In the case of a Joint Venture, a copy of a duly signed Joint Venture Agreement must be included]

E. COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture, **separate** enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 6: Record of service of the state

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

- | | |
|--|---|
| ☐ a member of any municipal council | ☐ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| ☐ a member of any provincial legislature | ☐ a member of an accounting authority of any national or provincial public entity |
| ☐ a member of the National Assembly or the National Council of Province | ☐ an employee of Parliament or a provincial legislature |
| ☐ a member of the board of directors of any municipal entity | |
| ☐ an official of any municipality or municipal entity | |

If any of the above boxes are marked, disclose the following:

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		current	Within last 12 months

*insert separate page if necessary

Section 7: Record of spouses, children and parents in the service of the state

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months been in the service of any of the following:

a member of any municipal council
a member of any provincial legislature
a member of the National Assembly
or the National Council of Province
a member of the board of directors of
any municipal entity
an official of any municipality or
municipal entity

an employee of any provincial department,
national or provincial public entity or
constitutional institution within the meaning of the
Public Finance Management Act, 1999 (Act 1 of
1999)
a member of an accounting authority of any
national or provincial public entity
an employee of Parliament or a provincial
legislature

Name of spouse, child or parent	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		current	Within last 12 months

*insert separate page if necessary

The undersigned, who warrants that he/she is duly authorized to do so on behalf of the enterprise:

- authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the bidders or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed

Date

Name

Position

Enterprise
name

F. PROPOSED AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

(This is not an invitation for amendments, qualifications or alternatives but should the Bidder desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder. The Employer will not consider any amendment, alternative offers or discounts unless forms (a), (b) and (c) have been completed to the satisfaction of the Employer).

I / We herewith propose the amendments, alternatives and discounts as set out in the tables below:

(a) AMENDMENTS & QUALIFICATIONS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT OR QUALIFICATION

Notes: (1) Amendments to the General and Special Conditions of Contract are not acceptable;
(2) The Bidder must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.]

(b) ALTERNATIVES

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

[Notes: (1) Individual alternative items that do not justify an alternative tender, and an alternative offer for time for completion are acceptable and should be listed here.
(2) In this tender, alternative designs offered by the bidder are not acceptable and will not be considered.

(c) DISCOUNTS

ITEM ON WHICH DISCOUNT IS OFFERED	DESCRIPTION OF DISCOUNT OFFERED

[Note: The bidder must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer will be prejudiced]

SIGNATURE:
(of person authorised to sign on behalf of the Bidder)

DATE:

**G. PROOF OF REGISTRATION WITH THE CONSTRUCTION INDUSTRY DEVELOPOMENT BOARD
(CIDB)**

***[Certified copy of a valid Construction Industry Development Board (CIDB) certificate should be
inserted here]***

H. COPY OF WORKMENS' COMPENSATION REGISTRATION CERTIFICATE (OR PROOF OF
PAYMENT OF CONTRIBUTIONS IN TERMS OF THE COMPENSATION FOR OCCUPATIONAL
INJURIES AND DISEASES ACT NO. 130 OF 1993)

*[Certified Copy of the Certificate or Proof of Payment thereof obtained from the Workmen's
Compensation Commissioner to be inserted here]*

I. SCHEDULE OF THE TENDERER'S EXPERIENCE

The following is a statement of work of similar nature recently successfully executed by myself / ourselves

[illegible]

SIGNATURE:
(of person authorised to sign on behalf of the Bidder)

DATE:

J. SCHEDULE OF KEY PERSONNEL

In terms of the Project Specification and the Conditions of Tender, unskilled workers may only be brought in from outside the local community if such personnel are not available locally.

The Bidder shall list below the personnel which he intends to utilize on the Works, including key personnel which may have to be brought in from outside if not available locally.

Category of Employee	Number of Persons					
	Key Personnel, Part of the Contractor's Organisation		Key Personnel to be imported if not available locally		Unskilled Personnel to be recruited from local community	
	HDI	NON-HDI	HDI	NON-HDI	HDI	NON-HDI
Site Agent, Project Managers						
Foremen, Quality Control and Safety Personnel						
Technicians, Surveyors, etc						
Artisans and other Skilled workers						
Plant Operators						
Unskilled Workers						
Others:						
.....						
.....						
.....						
.....						
.....						
.....						

SIGNATURE:
(of person authorised to sign on behalf of the Bidder)

DATE:

K. CURRICULUM VITAE FORMAT OF KEY PERSONNEL

[illegible]

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

.....
Signature of person named in the schedule

.....
Date

L. SCHEDULE OF TOOLS AND EQUIPMENT

The following are lists of major items of relevant tools and equipment that I/we presently own or lease and will have available for this contract or will acquire or hire for this contract if my/our tender is accepted.

The relevant major tools expected for this project may include the following, diamond cutters, compressors, jack hammers, saw cutters, wheel borrows, pick and shovel, broom, transport etc.

(a) Details of major tools and equipment that is *owned* and immediately available for this contract.

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

(b) Details of major equipment that will be *hired*, or acquired for this contract if my/our tender is acceptable.

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

Signed

Date

Name

Position

Bidder

M. TAX CLEARANCE CERTIFICATE

IMPORTANT NOTES:

1. The following is an abstract from the Preferential Procurement Regulations 2001 promulgated with the Preferential Policy Framework Act No 5 of 2000:

"Tax clearance certificate

16. No contract may be awarded to a person who has failed to submit an original Tax Clearance Certificate from the South African Revenue Service ("SARS") certifying the taxes of that person to be in order or that suitable arrangement have been made with SARS."

2. The ST 5.1 form, Application for Tax Clearance Certificate (in respect of tenders), must be **completed by the bidder in every detail and submitted to the Receiver of Revenue** where the bidder is registered for income tax purposes. The Receiver of Revenue will then furnish the bidder with a Tax Clearance Certificate that will be valid for 6 months from date of issue. **This Tax Clearance Certificate must be submitted in the original with the tender that is before the closing time and date of the tender.**

Each party to a Consortium/Joint Venture/Sub-contractors must complete a separate Tax Clearance Certificate.

Failure to submit an original and valid Tax Clearance Certificate, or certified copy thereof, will invalidate the tender.

3. An **example** of the Application for Tax Clearance Certificate which Bidders may use to apply for the Tax Clearance Certificate is included hereafter and is available at any Receiver's Office.

APPLICATION FORM FOR TAX CLEARANCE CERTIFICATE/
(IN RESPECT OF TENDER) [EXAMPLE]

1. NAME OF TAXPAYER/TENDERER:																					
2. TRADE NAME:																					
3. IDENTIFICATION No. (if applicable)	<table border="1" style="width: 100%; height: 20px;"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																				
4. COMPANY/CLOSE CORPORATION REG No.	<table border="1" style="width: 100%; height: 20px;"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																				
5. INCOME TAX REFERENCE No.	<table border="1" style="width: 100%; height: 20px;"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																				
6. VAT REGISTRATION No.	<table border="1" style="width: 100%; height: 20px;"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																				
7. PAYE EMPLOYERS REG No. (if applicable) :	<table border="1" style="width: 100%; height: 20px;"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																				

NB: Copy of the tender request must be attached to this application.

CONTACT PERSON REQUIRING TAX CLEARANCE CERTIFICATE:

SIGNATURE:

NAME :

TELEPHONE NUMBER : CODE: NUMBER:

ADDRESS :
.....
.....

DATE : 20...../...../.....

Please note that the Commissioner for the South African Revenue Service (SARS) will not exercise his discretionary powers in favour of any person with regard to any interest, penalties and/or additional tax leviable due to the late or underpayment of taxes, duties or levies or the rendition of returns by any person.

NAME OF PERSON RESPONSIBLE FOR CONTRACT:

(ST 5.1) March 1999

NB: *This is a pro forma application form that has to be submitted to SARS to enable them to issue the required Tax Clearance Certificate. The original and valid Tax Clearance Certificate furnished by the Receiver of Revenue must be submitted with the tender (to be attached to the next page).*

TAX CLEARANCE CERTIFICATE

[Tax Clearance Certificate obtained from SARS to be inserted here]

N. B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE

[Attach proof by inserting original or certified copy of B-BBEE status level contributor certificate]

O. EXECUTION PROGRAMME

The bidder is not required to provide an execution programme.

The contractor will however, be required to submit an execution programme for each order placed by the client.

Furthermore, the contractor will be required to provide such a programme within 7 days after receipt of an order, and establishment must occur within 7 days after receipt of an order (patchwork order) and 14 days for other major works. Failure to comply will result in the payment of penalties or withdrawal of the order.

P. CONTRACTOR'S HEALTH AND SAFETY DECLARATION

In terms of Clause 4(4) of the OHSA 1993 Construction Regulations 2003 (referred to as "the Regulations" hereafter), a Contractor may only be appointed to perform construction work if the Employer is satisfied that the Contractor has the necessary competencies and resources to carry out the work safely in accordance with the Occupational Health and Safety Act No 85 of 1993 and the OHSA 1993 Construction Regulations 2003.

To that effect a person duly authorised by the bidder must complete and sign the declaration hereafter in detail.

Declaration by Bidder

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHSA 1993 Construction Regulations 2003.
2. I hereby declare that my company has the competence and the necessary resources to safely carry out the construction work under this contract in compliance with the Construction Regulations and the Employer's Health and Safety Specifications.
3. I propose to achieve compliance with the Regulations by one of the following:
 - (a) From my own competent resources as detailed in 4(a) hereafter: ***Yes / No**
 - (b) From my own resources still to be appointed or trained until competency is achieved, as detailed in 4(b) hereafter: ***Yes / No**
 - (c) From outside sources by appointment of competent specialist subcontractors as detailed in 4(c) hereafter: ***Yes /**

No

(* = delete whatever is not applicable)

4. Details of resources I propose:

(Note: Competent resources shall include safety personnel such as a construction supervisor and construction safety officer as defined in Regulation 6, and competent persons as defined in Regulations 7, 8, 10, 11, 12, 14, 15, 18, 21(1), 22, 26 and 27, as applicable to this contract)

- (a) Details of the competent and qualified key persons from my company's own resources, who will form part of the contract team:

NAMES OF COMPETENT PERSONS	POSITIONS TO BE FILLED BY COMPETENT PERSONS

(a) Details of training of persons from my company's own resources (or to be hired) who still have to be trained to achieve the necessary competency:

(i) By whom will training be provided?

(ii) When will training be undertaken?

(iii) List the positions to be filled by persons to be trained or hired:

.....

.....

.....

(c) Details of competent resources to be appointed as subcontractors if competent persons cannot be supplied from own company:

Name of proposed subcontractor:

Qualifications or details of competency of the subcontractor:

.....

.....

.....

5. I hereby undertake, if my tender is accepted, to provide, before commencement of the works under the contract, a suitable and sufficiently documented Health and Safety Plan in accordance with Regulation 5(1) of the Construction Regulations, which plan shall be subject to approval by the Employer.

6. I confirm that copies of my company's approved Health and Safety Plan, the Employer's Safety Specifications as well as the OHSA 1993 Construction Regulations 2003 will be provided on site and will at all times be available for inspection by the Contractor's personnel, the Employer's personnel, the Engineer, visitors, and officials and inspectors of the Department of Labour.

7. I hereby confirm that adequate provision has been made in my tendered rates and prices in the schedule of quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHSA 1993 Construction Regulations 2003, and that I will be liable for any penalties that may be applied by the Employer in terms of the said Regulations (Regulation 30) for failure on the Contractor's part to comply with the provisions of the Act and the Regulations.

8. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer will mean that I am unable to comply with the requirements of the OHSA 1993 Construction Regulations 2003, and accept that my tender will be prejudiced and may be rejected at the discretion of the Employer.

SIGNATURE:

(of person authorised to sign on behalf of the Bidder)

DATE:

Q. CONTRACTOR'S SAFETY PLAN

[The Bidder shall submit separately before commencement of the works, his Health and Safety Plan as required in terms of Regulation 5 of the Occupational Health and Safety Act 1993 Construction Regulations 2003, in compliance with the Employer's current Occupational Health and Safety Specifications as revised from time to time, and referred to in T2.1]

**R. PRO FORMA NOTIFICATION FORM IN TERMS OF THE OCCUPATIONAL HEALTH AND
SAFETY ACT 1993, CONSTRUCTION REGULATIONS 2003**

*[This form must be completed and forwarded, prior to commencement of work on site, by all
Contractors that qualify in terms of Regulation 3 of the Construction Regulations 2003, to the
office of the Department of Labour]*

1. (a) Name and postal address of Contractor:
- (b) Name of Contractor's contact person:
Telephone number:
2. Contractor's workman's compensation registration number:
3. (a) Name and postal address of client:
- (b) Name of client's contact person or agent:
Telephone number:
4. (a) Name and postal address of designer(s) for the project:
- (b) Name of designer's contact person:
Telephone number:
5. Name of Contractor's construction supervisor on site appointed in terms of
Regulation 6(1): Telephone number:
6. Name/s of Contractor's sub-ordinate supervisors on site appointed in terms of regulation 6(2).
.....
7. Exact physical address of the construction site or site office:
8. Nature of the construction work:
9. Expected commencement date:
10. Expected completion date:
11. Estimated maximum number of persons on the construction site:
12. Planned number of subcontractors on the construction site accountable to Contractor:
13. Name(s) of subcontractors already chosen:

SIGNED BY:

CONTRACTOR: DATE:

CLIENT: DATE:

PART B

CONTRACT

C1: AGREEMENTS AND CONTRACT DATA

C2: PRICING DATA

C3: SCOPE OF WORK

C4: SITE INFORMATION

MPUMALANGA PROVINCIAL GOVERNMENT DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT

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**MPUMALANGA PROVINCIAL GOVERNMENT
DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT**

C1.1.1 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:

TENDER NO. PWRT/2442/22/MP(A)

**TERM CONTRACT FOR PAVED ROADS MAINTENANCE AS AND WHEN REQUIRED IN THE
EHLANZENI, BOHLABELA, GERT SIBANDE AND NKANGALA DISTRICTS OF MPUMALANGA
PROVINCE FOR A PERIOD OF 36 MONTHS**

**Tick in the box provided to select district tendered for (Select ONE district ONLY,
selection of more than one will result in a disqualification of the bid)**

EHLANZENI	BOHLABELA	GERT SIBANDE	NKANGALA
-----------	-----------	--------------	----------

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

By the representative of the bidder, deemed to be duly authorized, signing this part of this form of offer and acceptance, the bidder 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 OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS:

.....

.....Rand (in words);

R(in figures)

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the bidder before the end of the period of validity stated in the tender data, whereupon the bidder becomes the party named as the contractor in the conditions of contract identified in the contract data. This tender is a rates only tender and the total price offered above is only an indication of possible orders that may be placed by the client. The bidder will be ordered to execute works as per the schedule of quantities and rates offered by the bidder based on separate orders placed by the client.

For the bidder

Name of the Organization:

.....

Address:

.....

.....

Signature: Date

Capacity:

Witness

Name: Signature:

Acceptance

By signing this part of this form of offer and acceptance, the employer identified below accepts the bidder'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 bidder's offer shall form an agreement between the employer and the bidder upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- Part C1: Agreements and contract data, (which includes this agreement)
- Part C2: Pricing data
- Part C3: Scope of work.
- Part C4: Site information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 above.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the tender schedules as well as any changes to the terms of the offer agreed by the bidder 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 bidder shall within two weeks after 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 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 bidder receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the bidder (now contractor) within five working days of the date of such receipt notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

For the Bidder (To be signed only after award)

Signature: Date:

Name: Capacity:

FOR THE EMPLOYER: Mpumalanga Department of Public Works, Roads and Transport
Riverside Government Complex, Building No. 7, Mbombela, 1200

Name: Signature:

Date:

Witness

Name: Signature:

Date:

SCHEDULE OF DEVIATIONS

1 Subject

Details

2 Subject

Details

3 Subject

Details

4 Subject

Details

5 Subject

Details

By the duly authorised representatives signing this agreement, the employer and the bidder 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 bidder 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 bidder of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

**MPUMALANGA PROVINCIAL GOVERNMENT
DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT**

TENDER NO. PWRT/2442/22/MP(A)

**TERM CONTRACT FOR PAVED ROADS MAINTENANCE AS AND WHEN REQUIRED IN THE
EHLANZENI, BOHLABELA, GERT SIBANDE AND NKANGALA DISTRICTS OF MPUMALANGA
PROVINCE FOR A PERIOD OF 36 MONTHS**

C1.2 CONTRACT DATA

The General Conditions of Contract for Construction Works (2015) published by the South African Institution of Civil Engineering, is applicable to this contract. Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineering (Tel: 011-805 5947).

The General Conditions of Contract for Construction Works make several 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 Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the general conditions of contract.

Each item of data given below is cross-referenced to the clause in the General Conditions of Contract for Construction Works to which it mainly applies.

**MPUMALANGA PROVINCIAL GOVERNMENT
DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT**

TENDER NO. PWRT/2442/22/MP(A)

***TERM CONTRACT FOR PAVED ROADS MAINTENANCE AS AND WHEN REQUIRED IN THE
EHLANZENI, BOHLABELA, GERT SIBANDE AND NKANGALA DISTRICTS OF MPUMALANGA
PROVINCE FOR A PERIOD OF 36 MONTHS***

C1.2.1: CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

SPECIAL CONDITIONS OF CONTRACT

- 1. GENERAL**
- 2. AMENDMENTS TO THE GENERAL CONDITIONS OF CONTRACT**

APPENDIX A: TRANSFER OF RIGHTS

C1.2.1 CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

This Contract will be based on the "General Conditions of Contract for Construction Works - 1st Edition 2015", issued by the South African Institution of Civil Engineering. (Short title: "**General Conditions of Contract**") and can be obtained from:

SAICE

Waterfall Park
Howick Gardens
Vorna Valley Half way House
Becker Street
MIDRAND
1685
Gauteng Province
Tel: (011) 805-5947/8
Fax: (011) 805-5971.

It is agreed that the only variations from the General Conditions of Contract 2015 are those set out hereafter under "Special Conditions of Contract".

SPECIAL CONDITIONS OF CONTRACT

1. GENERAL

These Special Conditions of Contract (SCC) form an integral part of the Contract. The Special Conditions shall amplify, modify or supersede, as the case may be, the General Conditions of Contract 2015 to the extent specified below, and shall take precedence and shall govern.

The clauses of the Special Conditions hereafter are numbered "SCC" followed in each case by the number of the applicable clause or sub clause in the General Conditions of Conditions 2015, and the applicable heading, or (where a new special condition that has no relation to the existing clauses is introduced) by a number that follows after the last clause number in the General Conditions, and an appropriate heading.

1.1 Special Condition of this Contract

The works must be 100% executed by the Contractor unless subcontracted to boost labour content in the project.

The works referred to hereafter, must be executed with full compliance with labour adsorptive principles and methodologies.

2. AMENDMENTS TO THE GENERAL CONDITIONS OF CONTRACT

The variations to the General Conditions of Contract are:

4.5.2 Replace the term "Safety" with "Occupational Health and Safety"

49.6.1 to 4.9.6.3 Replace the term "Bank" with "Bank or Insurance Company"

55.1.8 Replace sub-clause with:
The Contractor or anyone on his behalf or in his employ would pay, offer or offer as payment to any person in the employ of the Employer, or in the employ of the Engineer, a gratuity or reward or commission.

49.6 A Retention Guarantee is not required.

The additional clauses to the General Conditions of Contract are:

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.

Contractor Development Programme

The Contractor as part of the Department's Contractor Development Programme shall avail itself, participate and attend training, capacity building and working sessions as per terms and conditions set out by SETA and the Department.

Applicable labour laws

The Ministerial Determination, 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 work which are undertaken by unskilled or semi-skilled Targeted Labour.

1. Introduction

1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). In this contract it shall apply to the targeted labour employed by the Contractor. These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.

1.2 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.

2 Terms of Work

- 2.1 Workers on a SPWP are employed on a temporary basis.
- 2.2 A worker may NOT be employed for longer than 24 months in any five-year cycle on a SPWP.
- 2.3 Employment on a SPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.

3 Normal Hours of Work

- 3.1 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.
- 3.2 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.
- 3.3 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.

4 Meal Breaks

- 4.1 A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.
- 4.2 An employer and worker may agree on longer meal breaks.
- 4.3 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.
- 4.4 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.

5 Special Conditions for Security Guards

- 5.1 A security guard may work up to 55 hours per week and up to eleven hours per day.
- 5.2 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.

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.

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").

8 Work on Sundays and Public Holidays

- 8.1 A worker may only work on a Sunday or public holiday to perform emergency or security work.
- 8.2 Work on Sundays is paid at the ordinary rate of pay.
- 8.3 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.
- 8.4 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.

9 Sick Leave

- 9.1 Only workers who work four or more days per week have the right to claim sick pay in terms of this clause.
- 9.2 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.
- 9.3 A worker may accumulate a maximum of twelve days' sick leave in a year.
- 9.4 Accumulated sick leave may not be transferred from one contract to another contract.
- 9.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.
- 9.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.
- 9.7 An employer must pay a worker sick pay on the worker's usual payday.
- 9.8 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

- (b) Absent from work on more than two occasions in any eight-week period.
- 9.9 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.
- 9.10 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.

10 Maternity Leave

- 10.1 A worker may take up to four consecutive months' unpaid maternity leave.
- 10.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.
- 10.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.
- 10.4 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.
- 10.5 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.
- 10.6 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.
- 10.7 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.

11 Family responsibility leave

- 11.1 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.

12 Statement of Conditions

- 12.1 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.
- 12.2 An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.
- 12.3 An employer must supply each worker with a copy of these conditions of employment.

13 Keeping Records

- 13.1 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.
- 13.2 The employer must keep this record for a period of at least three years after the completion of the SPWP.

14 Payment

- 14.1 An employer must pay all wages at least monthly in cash or by cheque or into a bank account.
- 14.2 A task-rated worker will only be paid for tasks that have been completed.
- 14.3 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.
- 14.4 A time-rated worker will be paid at the end of each month.
- 14.5 Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.
- 14.6 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.
- 14.7 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.
- 14.8 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
- 14.9 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.

15 Deductions

- 15.1 An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.
- 15.2 An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.
- 15.3 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.
- 15.4 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
 - (f) pay the employer or any other person for having been employed.

16 Health and Safety

- 16.1 Employers must take all reasonable steps to ensure that the working environment is healthy and safe.
- 16.2 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.

17 Compensation for Injuries and Diseases

- 17.1 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.
- 17.2 A worker must report any work-related injury or occupational disease to their employer or manager.
- 17.3 The employer must report the accident or disease to the Compensation Commissioner.
- 17.4 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.

18 Termination

- 18.1 The employer may terminate the employment of a worker for good cause after following a fair procedure.
- 18.2 A worker will not receive severance pay on termination.
- 18.3 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.
- 18.4 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.
- 18.5 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.

19 Certificate of Service

- 19.1 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.

APPENDIX A: TRANSFER OF RIGHTS**TRANSFER OF RIGHTS AND INDEMNITY (To be completed during construction by successful Bidder only)**

Claim for materials on site, Payment Certificate No. Date:

Contract No: For (contract title)

I, the undersigned (name of signatory) in my capacity
as

..... of (name of Contractor)

duly authorised hereto on behalf of the Contractor hereby transfer, cede and assign all the Contractor's rights, title and interest in and to the materials and goods, for which evidence of bona fide ownership is attached hereto, unto and in favour of (name of Employer) Insofar as the Contractor retains actual control of the materials and goods, the right of ownership thereof passes to the Employer by *constitutum possessorium*.

I herewith indemnify the Employer against any claim to and in respect of said materials by reason of the Contractor's sequestration or liquidation or of any defect in the Contractor's title to the materials and agree that no payment for materials on site will be made by the Employer until such time as I have submitted documentary proof of bona fide ownership of the said materials and goods.

This transfer shall become effective upon conclusion of the Contractor receiving payment from the Employer or from any other person on behalf of the Employer for the materials and goods as Materials on Site, payment of retention money thereon excluded.

I further confirm that I am fully responsible for all materials and goods listed under this Transfer of Rights and that they have been insured adequately against all risks and will remain insured until they are built into or used in the permanent works and taken over by the Employer.

This certificate of Transfer of Rights applies only to the materials and goods as listed in the following table.

Description of Item	Unit	Quantity	Rate	Amount	Supplier
Total Value of Materials and goods					

Signed by: Date:
for and on behalf of the Contractor.

Witnessed by: Date:

NOTE: This form, together with the documentary proof of ownership or proof of payment by the Contractor to the supplier, shall accompany the Contractor's claim for payment for materials on site in terms of Clause 49.1.5 of the General Conditions of Contract 2015.

C1.2.2: PART A: DATA PROVIDED BY THE EMPLOYER

The following contract specific data are applicable to this contract.

REFERENCE	CONTRACT SPECIFIC DATA BY THE EMPLOYER
Clause 1.1.14:	Name of Employer: Head of Department: Mpumalanga Department of Public Works, Roads and Transport
Clause 1.2.2:	Address of Employer: <u>Physical:</u> Building No. 7 Riverside Government Complex RIVERSIDE, MBOMBELA <u>Postal:</u> Private Bag x 11310 MBOMBELA 1200 E-Mail: Ronmasia@mpg.gov.za Telephone No: (013) 766 8524
Clause 1.1.15:	Name of Engineer: The duties of the engineer may be fulfilled by designated officials from the Department or his appointed representative (Road Maintenance Consultants).
Clause 1.6 & 38.1:	Special non-working days are Sundays and the following statutory public holidays as declared by National or Regional Government: New Year's Day, Human Rights Day, Good Friday, Family Day, Freedom Day, Workers day, Youth Day, National Women's Day, Heritage Day, Day of Reconciliation, Christmas Day and the Day of Goodwill including the construction industry year end break.
Clause 1.6:	The year-end break commences on the first working day after 15 December and ends on the first working day after 5 January of the following year.
Clause 2.3:	Nil contingencies is allowed under this contract. The client will approve additional spending if required.
Clause 7.1:	A deed of Guarantee is not applicable to this contract.
Clause 10.1:	The contractor shall commence executing the work within 14 days of each individual order placed.
Clause 12.2:	The Contractor shall deliver his programme of work within 7 days of the receipt of each individual order (patchwork) placed by the client and 14 days for major works.
Clause 35.1.1.2.2:	none
Clause 35.1.1.2.3:	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R 100 000-00.
Clause 35.1.2:	Special risk insurance issued by SASRIA is required.
Clause 37.2.2.3:	The percentage allowance to cover overhead charges is 15%
Clause 42.1:	The works for each order shall be completed within the period allowed for in the

approved programme for each order. The term contract period is 36 months.

Clause 43.1: A penalty of R 2500-00 per calendar day shall apply for late commencement for each order. The penalty for late completion is 0.05% of the total order value as per individual order

Clause 46.2: The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values:

$$\text{Contract Price Adjustment Factor} = (1 - x) \left[\frac{aLt}{Lo} + \frac{bPt}{Po} + \frac{cMt}{Mo} + \frac{dFt}{Fo} - 1 \right]$$

rounded off to the fourth decimal place.

Coefficients for calculating Contract price Adjustment Factor shall be:

Coefficients for calculating Contract price Adjustment Factor shall be:

Value of x is 0.10

a = 0.20 b = 0.35 c = 0.35 d = 0.10

L is the "Labour Index" and shall be the "Consumer Price Index – for Mbombela Area" In Release P 0141.1 Table 21

The base month is: March 2022

Clause 46.3: Price adjustments for variations in the costs of special materials are allowed

Clause 49.1.5: The percentage advance on materials not yet built into the Permanent Works is: 80%

Clause 49.6: A Retention money guarantee not permitted

Clause 53.1: The Defects Liability Period is 3 months measured from the date of the Certificate of Completion for each individual order successfully completed

Clause 58.2: Dispute Resolution shall be by Adjudication, Mediation and Arbitration.

Clause 58.3: 1. The Adjudicator shall be reimbursed at the hourly rate of R700.00 in respect of all time spent upon or in connection with the adjudication including time spent travelling.

2. The Adjudicator shall be reimbursed in respect of all disbursements properly made including, but not restricted to:

- (a) Printing, reproduction and purchase of documents, drawings, maps, records and photographs.
- (b) Telegrams, telex, faxes and telephone calls.
- (c) Postage and similar delivery charges.
- (d) Travelling, hotel expenses and other similar disbursements.
- (e) Room charges.
- (f) Charges for legal advice or technical advice obtained in accordance with the Procedure

3. The Adjudicator shall be paid an appointment fee of R 7 500.00. This fee shall become payable in equal amounts by each Party within 14 days of the appointment of the Adjudicator, subject to an Invoice being provided. This fee will be deducted from the final statement of any sums which shall become payable under item 1 and / or item 2 of the Contract Data. If the final statement is less than the appointment fee the balance shall be refunded to the Parties.

4. The Adjudicator is currently registered for Value Added Tax (VAT).

5. Where the Adjudicator is registered for VAT it shall be charged additionally in accordance with the rates current at the date of invoice.
6. All payments other than the appointment fee (item 3) shall become due 7 days after receipt of invoice thereafter interest shall be payable at 5% per annum above the Reserve Bank base rate for every day the amount remains outstanding.

C1.2.2: PART B: DATA PROVIDED BY THE CONTRACTOR

The following contract specific data are applicable to this contract.

REFERENCE CONTRACT SPECIFIC DATA BY THE CONTRACTOR

Clause 1.8: **Name of Contractor:**

Clause 1.2.2: **Address of the Contractor:**

Physical:

Postal:

.....

.....

.....

Postal Code:

E-Mail:

Cell No. Tel:..... Fax:.....

Clause 46.3: The variation in cost of all special materials is to be provided in the table SM 1 for special materials.

The rates and prices for the special materials shall be furnished by the Bidder, which rates and prices shall not include VAT but shall include all other obligatory taxes and levies. The quoted price is the ruling price on the 01 March 2012.

TABLE: SM1

Special Materials	Unit*	Rate or Price for the base month
Cement		
Nett Bitumen		

* Indicate whether the material shall be delivered in bulk or in containers. When called upon to do so, the Contractor shall substantiate the above rates or prices with acceptable documentary evidence.

Signed on behalf of Bidder:

Clause 6.3: **Selection of Sub-Contractors**

Not applicable

C1.2.4: AGREEMENT WITH ADJUDICATOR

This agreement is made on the.....day of 20.....between: the Employer
 (name of company / organisation).....
 of (address).....
and the Contractor
 (name of company / organisation)
 of (address).....
 (hereinafter
 called **the Parties**)

and

(name).....
 of (address)

 (hereinafter called **the Adjudicator**)

Disputes or differences may arise/have arisen* between the Parties under a Contract dated.....
 and known as Contract No.....
 (Contract title).....

and these disputes or differences shall be/have been* referred to adjudication in accordance with the
 CIDB Adjudication Procedure, (hereinafter called "**the Procedure**") and the Adjudicator may be or has
 been requested to act.

(* Delete as necessary)

IT IS NOW AGREED as follows:

1. The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.
2. The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.
3. The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses in accordance with the Procedure as set out in the Contract Data.
4. The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.
5. The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Part

SIGNED by:

(Signature): (Signature): (Signature):

Name: **Name:** **Name:**

who warrants that he/ she is
duly authorised to sign for and
on behalf of the **First Party** in
the presence of

who warrants that he/ she is
duly authorised to sign for
and on behalf of the **Second
Party** in the presence of

the **Adjudicator** in the
presence of

Witness: **Witness:** **Witness:**
(Signature)..... (Signature)..... (Signature).....

Name: **Name:** **Name:**

Address: Address: Address:

.....
.....

Date: Date: Date:

C1.2.5: AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 1993

THIS AGREEMENT is made between The Province of Mpumalanga represented by Head of Department: Department of Public Works, Roads and Transport.

(hereinafter called the EMPLOYER of the one part, herein represented by:

.....
.....

in his capacity as:

;

AND:

(hereinafter called the CONTRACTOR) of the other part, herein represented by

.....
.....

in his capacity as:

duly authorised to sign on behalf of the Contractor.

WHEREAS the CONTRACTOR is the Mandatory of the EMPLOYER in consequence of an agreement between the CONTRACTOR and the EMPLOYER in respect of

CONTRACT No.

.....

.....

AND WHEREAS the EMPLOYER and the CONTRACTOR have agreed to enter into an agreement in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993, as amended by OHSA Amendment Act No 181/1993 (hereinafter referred to as the ACT);

NOW THEREFORE the parties agree as follows:

1. The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.
2. The CONTRACTOR undertakes to fully comply with all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations: Provided that should the EMPLOYER have prescribed certain arrangements and procedures that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
3. The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures, if any, imposed by the ACT and Regulations, and the CONTRACTOR expressly absolves the EMPLOYER and the Employer's CONSULTING ENGINEERS from being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedures in respect of the work included in the contract.
4. The CONTRACTOR agrees that any duly authorised officials of the EMPLOYER shall be

entitled, although not obliged, to take such steps as may be necessary to ensure that the CONTRACTOR has complied with his undertakings as more fully set out in paragraphs 1 and 2 above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONTRACTOR, or to take such steps it may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.

5. The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

Thus signed at for and on behalf of the **CONTRACTOR**

on this the day of 20.....

SIGNATURE:

.....

NAME

AND

SURNAME:

.....

CAPACITY:

.....

WITNESSES: 1.

2.

Thus signed at for and on behalf of the **EMPLOYER** on this

the day of 20.....,

SIGNATURE:

.....

NAME

AND

SURNAME:

.....

CAPACITY:

.....

WITNESSES: 1.

2.

**MPUMALANGA PROVINCIAL GOVERNMENT
DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT**

TENDER NO. PWRT/2442/22/MP(A)

**TERM CONTRACT FOR PAVED ROADS MAINTENANCE AS AND WHEN REQUIRED IN THE
EHLANZENI, BOHLABELA, GERT SIBANDE AND NKANGALA DISTRICTS OF MPUMALANGA
PROVINCE FOR A PERIOD OF 36 MONTHS**

C2.1 Pricing Instructions

1. Measurement and payment shall be in accordance with the relevant provisions of SANRAL, Annexure 6: Standard Specifications for Routine Road maintenance (October 2001), or as per COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 edition) as amended in the Scope of Works.
2. The units of measurement described in these Bills of Quantities are metric units. Abbreviations used in the Bills of Quantities are as follows:

%	=	percent
h	=	hour
ha	=	hectare
kg	=	kilogram
kl	=	kilolitre
km	=	kilometre
km-pass	=	kilometre-pass
kPa	=	kilopascal
kW	=	kilowatt
l	=	litre
m	=	metre
mm	=	millimetre
m ²	=	square metre
m ² -pass	=	square metre-pass
m ³	=	cubic metre
m ³ -km	=	cubic metre-kilometre
MN	=	meganewton
MN.m	=	meganewton-metre
MPa	=	megapascal
No.	=	number
Prov sum	=	Provisional sum
PC sum	=	Prime Cost sum
R/only	=	Rate only
sum	=	lump sum
t	=	ton (1000 kg)
W/day	=	Work day
3. For the purpose of these Bills 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 Sanral, Annexure 6, or COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 edition).
Quantity:	The number of units of work for each item.
Rate:	The agreed payment per unit of measurement.
Amount:	The product of the quantity and the agreed rate for an item.
Lump sum:	An agreed amount for an item, the extent of which is described in the Bills of Quantities but the quantity of work of which is not measured in any units.
4. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

5. It will be assumed that prices included in the bills of quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org.za or www.iso.org for information on standards)
6. The prices and rates in these Bills of Quantities are fully inclusive prices for the work described under the items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices will be used as a basis for assessment of payment for additional work that may have to be carried out.
7. Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sums tendered for such items
8. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bills of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.
9. **The quantities set out in these Bills of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in these Bills of Quantities. This is a 'RATES – ONLY' contract. The bidder will be required to conduct work as per individual orders placed by the client at the rates tendered. The quantities in this bill are intended for tender evaluation purposes only.**
10. Reasonable compensation will be received where no pay item appears in the Bills of Quantities in respect of work required in terms of the Contract and which is not covered in any other pay item.
11. The short descriptions of the items of payment given in these Bills of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.
12. The item numbers appearing in the Bills of Quantities refer to the corresponding item numbers in the COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 edition).
13. Those items in the Bills of Quantities to be constructed using labour-intensive methods have been marked in the Bills of Quantities with the prefix "L". The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The items marked with the letters L are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour intensive specification in the Scope of Works.
14. Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.
15. Bidders shall take care so as not to imbalance their tender rates, since the eventual quantities may differ substantially from the scheduled quantities. Tender rates shall stand irrespective of the deviation between scheduled and certified quantities, and no amount of deviation shall constitute grounds for motivating for revised rates.

MPUMALANGA PROVINCIAL GOVERNMENT
DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT
TENDER NO. PWRT/2442/20/MP(A)
TERM CONTRACT FOR PAVED ROADS MAINTENANCE AS AND WHEN REQUIRED IN THE
EHLANZENI, BOHLABELA, GERT SIBANDE AND NKANGALA DISTRICTS OF MPUMALANGA
PROVINCE FOR A PERIOD OF 36 MONTHS

C2.2 Bill of Quantities

ROAD MAINTENANCE

SUMMARY

SECTION NO	DESCRIPTION	AMOUNTS
1300	CONTRACTORS ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
1500	ACCOMMODATION OF TRAFFIC	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE KERBING, CONCRETE	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
3500	STABILIZATION	
3800	BREAKING UP EXISTING PAVEMENT LAYERS	
3900	PATCHING AND REPAIRNG EDGE BREAKS	
4100	PRIME COAT	
4200	ASPHALT BASE AND SURFACING	
4800	TREATMENT OF AN EXISTING SURFACE EXHIBITING CERTAIN DEFECTS	
5100	PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION	
5600	ROAD SIGNS	
5700	ROAD MARKINGS	
5900	FINISHING THE ROAD AND ROAD RESERVE	
7300	TESTING MATERIALS AND WORKMANSHIP	
8100	CONCRETE BLOCK PAVING	
	SUBTOTAL	
	15 % VAT	
	GRAND TOTAL	

SECTION 1300

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
B13.01	<u>CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS</u>				
	The Contractor's general obligations:				
	(a) Fixed obligations	%	Order Value	Prov 3%	
	(b) Value-related obligations	%	Order Value	7%	
	(c) Time-related obligations	%	Order Value	5%	
	<u>NB</u> The combined total tendered for subitems (a), (b) and (c) shall not exceed 15% of the Order Amount.				
TOTAL CARRIED TO SUMMARY					

SECTION 1500

Item	Description	Unit	Qty	Rate	Amount R
1500	Accommodation of traffic The contractors' general obligations				
15.01	Accommodating traffic and maintaining temporary deviations	km	2		
15.02	Earthworks for temporary deviations				
	a) Shaping of temporary deviations	km	2		
	b) Cut and borrow to fill	m ³	10		
	c) Cut to spoil	m ³	10		
15.03	Temporary traffic-control facilities				
	a) Flagmen	man-day	10		
	b) Portable STOP and GO-RY sign	No	2		
	c) Temporary traffic-control signals as specified or as shown in the drawings	No	2		
	d) Amber flicker lights	No	2		
	e) Road signs R- and TR-series (size indicated)	No	2		
	f) Road signs TW-series (size indicated)	No	2		
	g) Road signs , STW, DTG, TGS and TG-series (including delineators and barricades)	m ²	2		
	h) Delineators DTG50J (size indicated)				
	i) Single	No	2		
	ii) Mounted back to back	No	2		
Total Carried Forward					

SECTION 1500

Item	Description	Unit	Qty	Rate	Amount R
Total Brought Forward					
1500	Accommodation of traffic				
	i) Movable barricades/road sign combination (size indicated)	No	2		
	j) Traffic cones (size indicated)	No	10		
	k) Single guardrails attached to posts	m	20		
	l) Movable barriers (type indicated)	m	10		
	m) Two-way communication devices	No	2		
15.04	Relocation of traffic control facilities	lump sum			
Total Carried Forward To Summary					

PWRT/2442/22/MP (A)

SECTION 2200

ROADS MAINTENANCE

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	<u>PREFABRICATED CULVERTS</u>				
22.01	Excavation:				
	(a) Excavating soft material situated within the following depth ranges below the surface level:				
	(i) 0 m up to 1,5 m	m ³	10		
	(ii) Exceeding 1,5 m and up to 3,0 m	m ³	10		
	(b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m ³	10		
22.02	Backfilling:				
	(a) Using the excavated material	m ³	10		
	(b) Using imported selected material	m ³	10		
	(c) Extra over subitems 22.02(a) and (b) for soil cement backfilling containing . . . % cement*	m ³	10		
22.03	Concrete pipe culverts:				
	(a) On class A bedding:600mm dia	m	10		
	(b) On class B bedding:600mm diameter	m	10		
	(c) On class C bedding:600mm dia	m	10		
	(d) On class D bedding: 600mm dia	m	10		
*	(Type and diameter indicated)				
22.05	Portal and rectangular culverts:				
	(a) Complete with prefabricated floor slabs (size and type indicated)				
	(i) 1200 mm x 1200 mm	m	10		
	(ii) 1500 mm x 1500 mm	m	10		
Total Carried Forward To Summary					

SECTION 2300

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	<u>CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS</u>				
23.01	Concrete kerbing:				
	(a) Prefabricated mountable kerb, SABS 927 fig 8, as shown on the Drawings	m	10		
	(b) 300 mm x 200 mm cast in situ class 20/19 concrete edge beam, as shown on the Drawings*	m	10		
23.03	Concrete chutes (typical designs):				
	(a) Prefabricated class 20/19 concrete chutes down side slopes, complete as shown on the Drawings*	m	10		
Total Carried Forward To Summary					

SECTION 3300

Item	LIC	Description	Unit	Qty	Rate	Amount R
3300		EARTHWORKS AND PAVEMENT LAYERS OF GRAVEL OR CRUSHED STONES				
		Mass Earthworks				
33.01		Cut and borrow to fill including free-haul up to 0,5 km				
		a) Material in compacted layer thickness of 200 mm and less				
		i) Compacted to 90% of modified AASHTO density	m³	10		
		ii) Compacted to 93% of modified AASHTO density	m³	10		
		b) Material in compacted layers thickness exceeding 200 mm				
		i) Compacted to 90% of modified AASHTO density	m³	10		
		ii) Compacted to 93% of modified AASHTO density	m³	10		
		c) Rock fill (as specified in subclause 3209(c))	m³	10		
		d) Toes for rock fill embankments (as specified in subclause 3307(h))	m³	10		
		e) Pioneer layer (as specified in subclause 3307(c))	m³			
33.03		Extra over item 33,01 for excavating and breaking down material in:				
		a) Intermediate excavation	m³	10		
		b) Hard excavation	m³	10		
		c) Boulder excavation class A	m³	10		
		d) Boulder excavation class B	m³	10		
Total Carried Forward						

SECTION 3300

Item	LIC	Description	Unit	Qty	Rate	Amount R
Total Brought Forward						
3300		EARTHWORKS AND PAVEMENT LAYERS OF GRAVEL OR CRUSHED STONES				
33.07		Removal of unsuitable material (including free-haul of 0,5 km)				
		a) In layer thickness of 200 mm and less:				
		i) Stable material	m ³	10		
		ii) Unstable material	m ³	10		
33.10		Roadbed preparation and the compaction of material				
		a) Compaction to 90% of modified AASHTO density	m ³	10		
		b) Compaction to 93% of modified AASHTO density	m ³	10		
		c) Compaction of sand roadbed to 95% of modified AASHTO density	m ³	10		
		d) Compaction of sand roadbed to 100% of modified AASHTO density	m ³	10		
33.12		In situ treatment of roadbed				
		a) In situ treatment by ripping	m ³	10		
		b) Insitu treatment by blasting	m ³	10		
33.13		Finishing-off cut and fill slopes, medians and interchange areas				
		a) Cut slopas	m ²	10		
		b) Fill slopes	m ²	10		
		c) Median and interchange areas	m ²	10		
33.15		Extra over item 33,04 for excavating in pavements and fills of existing roads in restricted areas				
		a) Non-cemented material	m ³	10		
		b) Cemented material	m ³	10		
Total Carried Forward To Summary						

SECTION 3400

Item	LIC	Description	Unit	Qty	Rate	Amount R
3400		PAVEMENT LAYERS				
34.03		Pavement layers constructed from gravel obtained from existing pavement layers.				
		(a) Gravel selected layer compacted to 93% of modified AASHTO density, using				
		(i) Non - cemented material (specify compacted layer thickness)	m³	10		
		(ii) Cemented material (specify compacted layer thickness)	m³	10		
		(b) Gravel selected layer compacted to 95% of modified AASHTO density, using				
		(i) Non-cemented material (specify compacted layer thickness)	m³	10		
		(ii) Cemented material (specify compacted layer thickness)	m³	10		
		(c) Sand selected layer compacted to 100% of modified AASHTO density, (specify compacted layer thickness)	m³	10		
		(d) Gravel subbase (unstabilized gravel) compacted to 95% of modified AASHTO density, using				
		(i) Non-cemented material (specify compacted layer thickness)	m³	10		
		(ii) Cemented material (specify compacted layer thickness)	m³	10		
		(e) Gravel subbase (unstabilized gravel) compacted to 97% of modified AASHTO density, using				
		(i) Non-cemented material (specify compacted layer thickness)	m³	10		
Total Carried Forward To Summary						

SECTION 3400

Item	LIC	Description	Unit	Qty	Rate	Amount R
Total brought Forward To Summary						
3400		PAVEMENT LAYERS				
		(ii) Cemented material (specify compacted layer thickness)	m ³	10		
		(f) Gravel subbase (chemically stabilized material) compacted to 95% of modified AASHTO density, using				
		(i) Non-cemented material (specify compacted layer thickness)	m ³	10		
		(ii) Cemented material (specify compacted layer thickness)	m ³	10		
		(g) Gravel subbase (chemically stabilized material) compacted to 96% of modified AASHTO density, using				
		(i) Non-cemented material (specify compacted layer thickness)	m ³	10		
		(ii) Cemented material (specify compacted layer thickness)	m ³	10		
		(h) Gravel base (unstabilized gravel) compacted to 98% of modified AASHTO density (unstabilized gravel), using	m ³			
		(i) Non-cemented material (specify compacted layer thickness)	m ³	10		
		(ii) Cemented material (specify compacted layer thickness)	m ³	10		
		(i) Non-cemented material (specify compacted layer thickness)	m ³	10		
		(ii) Cemented material (specify compacted layer thickness)	m ³	10		
Total Carried Forward To Summary						

SECTION 3400

Item	LIC	Description	Unit	Qty	Rate	Amount R
Total brought Forward To Summary						
3400		PAVEMENT LAYERS				
		(j) Gravel base compacted to 97% of modified AASHTO density (chemically stabilized material), using	m³	10		
		(i) Non-cemented material (specify compacted layer thickness)	m³	10		
		(ii) Cemented material (specify compacted layer thickness)	m³	10		
		(k) Gravel base compacted to 98% of modified AASHTO density (chemically stabilized material), using	m³	10		
		(i) Non-cemented material (specify compacted layer thickness)	m³	10		
		(ii) Cemented material (specify compacted layer thickness)	m³	10		
		(l) Gravel shoulder wearing course compacted to 93% of modified AASHTO density, using	m³	10		
		(i) Non-cemented material (specify compacted layer thickness)	m³	10		
		(ii) Cemented material (specify compacted layer thickness)	m³	10		
		(m) Gravel shoulder wering course compacted to 95% of modified AASHTO density, using				
		(i) Non-cemented material (specify compacted layer thickness)	m³	10		
		(ii) Cemented material (specify compacted layer thickness)	m³	10		
Total Carried Forward To Summary						

SECTION 3500

Item	LIC	Description	Unit	Qty	Rate	Amount R
3500		EARTHWORKS AND PAVEMENT LAYERS OF GRAVEL OR CRUSHED STONES				
		Stabilization				
35.01		Chemical stabilization (layer thickness indicated) Extra over unstabilized compacted layers (layer to be stabilized indicated)	m ³	10		
35.02		Chemical stabilizing agent				
		a) Ordinary portland cement	t	10		
		b) Portland blast-furnace cement	t	10		
		c) Road lime (type indicated)	t	10		
		d) Ground granulated blast-furnace slag	t	10		
		e) Unslaked lime (dry)	t	10		
		f) Portland fly ash cement	t	10		
		g) Other stabilizing agents (type specified)	t	10		
35.03		Mechanical modification (extra over untreated layer)				
		a) By adding a soil binder	m ³	10		
		b) By mixing material from different sources	m ³	10		
35.04		Provision and application of water for curing	kl	10		
35.05		Curring by covering with the subsequent layer	m ²	10		
35.06		Curring with a bituminous membrane				
		a) MC 30 cut-back bitumen	litre	10		
		b) MC 70 cut-back bitumen	litre	10		
Total Carried Forward						

SECTION 3500

Item	LIC	Description	Unit	Qty	Rate	Amount R
Total Brought Forward						
35.07		c) Invert bitumen emulsion	litre	10		
		d) 60% spray-grade anionic bitumen emulsion	litre	10		
		e) 65% cationic bitumen emulsion	litre	10		
		Bituminous stabilization (extra over the untreated layers)	m ³	10		
35.08		Bituminous stabilizing agent				
35.09		a) Anionic stable grade bituminous emulsion (60% net bitumen)	litre	10		
		b) Cationic stable grade bituminous emulsion (60% net bitumen)	litre	10		
		c) Other (specify)	litre	10		
		Additive for bituminous stabilization				
35.10		a) Ordinary portland cement	t	10		
		b) Ground granulated blast-	t	10		
		c) Road lime	t	10		
		Extra over item 35,01 for chemical stabilization in restricted areas				
35.11		a) Mixing in mechanical mixers	m ³	10		
		b) In situ mixing	m ³	10		
		c) Mixing as for in situ mixing but on adjacent surfaces	m ³	10		
		Extra over item 35,03 for mechanical modification in restricted areas				
		a) Mixing in mechanical mixers	m ³			
Total Carried Forward						

SECTION 3500

Item	LIC	Description	Unit	Qty	Rate	Amount R
Total Brought Forward						
35.12		b) In situ mixing	m ³	10		
		c) Mixing as for In situ mixing but on adjacent surfaces	m ³	10		
		Extra over item 35,07 for bituminous stabilization in restricted areas				
35.13		a) Mixing in mechanical mixers	m ³	10		
		b) In situ mixing	m ³	10		
		c) Mixing as for in situ mixing but on adjacent surfaces	m ³	10		
		Extra over item 35,01 and 35,07 for trial sections	m ³	10		
Total Carried Forward To Summary						

SECTION 3900

Item	LIC	Description	Unit	Qty	Rate	Amount (R)
3900		PATCHING AND REPAIRING EDGE BREAKS				
39.01		Sawing asphalt or cemented pavement layers for patching:				
		(a) Sawing asphalt to an average depth:				
		(i) Not exceeding 50mm	m ²	10		
		(ii) Exceeding 50mm but not exceeding 100mm	m ²	10		
		(iii) Exceeding 100mm	m ²	10		
		(b) Sawing cemented pavement layers to an average:				
		(i) Not exceeding 50mm	m ²	10		
		(ii) Exceeding 50mm but not exceeding 100mm	m ²	10		
		(iii) Exceeding 100mm	m ²	10		
39.02		Excavating in existing pavements for patching				
		(a) Asphalt layers	m ³	10		
		(b) Cemented layers	m ³	10		
		(c) Other layers	m ³	10.00		
39.03		Backfilling of excavation for patching with				
		(a) Chemically stabilized pavement material (specify the pavement material and stabilizing agent) for a patch with a surface area:				
		(i) Not exceeding 5m ²	m ³	10		
		(ii) Exceeding 5m ² but not exceeding 100m ²	m ³	10		
		(iii) Exceeding 100m ²	m ³	10		
		(b) Base material stabilized with bituminous emulsion(specify the emulsion) for a patch with a surface area:				
		(i) Not exceeding 5m ²	m ³	10		
		(ii) Exceeding 5m ² but not exceeding 100m ²	m ³	10		
		(iii) Exceeding 100m ²	m ³	10		
39.04		Compacting the floor of excavations for patching	m ²	10		
39.05		Cutting back the edges of the existingsurfacing for the repairing of the edge breaks	m	10		
Total Carried Forward To Summary						

SECTION 4100

Item	LIC	Description	Unit	Qty	Rate	Amount R
4100		ASPHALT PAVEMENT AND SEALS				
41.01		Prime coat				
		a) RTH 3/12 or RTH 3/12P tar prime	litre	10		
		b) Quick drying RTH 1/4P tar prime	litre	10		
		c) MC-30 cut-back bitumen	litre	10		
		d) MC-70 cut-back bitumen	litre	10		
		e) Invert bitumen emulsion	litre	10		
41.02		Aggregate for blinding	m ²	10		
41.03		Extra over item 41,01 for applying the prime coat in areas accessible only to hand held equipment	litre	10		
Total Carried Forward To Summary						

SECTION 4200

Item	LIC	Description	Unit	Qty	Rate	Amount R
4200		ASPHALT BASE AND SURFACING				
42.01		Asphalt base (state specified thickness, type of bitumen and maximum size of aggregate)				
		a) Continuously graded	m ²	10		
		b) Semi-gap-graded	m ²	10		
42.02		Asphalt surfacing (state specified thickness and type of bitumen)				
		a) Continuously graded (state grade)	m ²	10		
		b) Gap-graded (stone content indicated)	m ²	10		
		c) Open-graded (grade indicated)	m ²	10		
		d) Semi-gap-graded (state maximum size of aggregate)	m ²	10		
		e) Semi-open-graded	m ²	10		
		f) Stone-mastic asphalt (state maximum size of aggregate)	m ²	10		
42.03		Rolled-in chippings (nominal size indicated) in surfacing	t	10		
42.04		Tack coat of 30% stable-grade emulsion	litre	10		
42.05		Binder variations: (state type)	t	10		
42.06		Variation in active filler content:				
		a) Cement	t	10		
		b) Lime	t	10		
		c) Milled granulated blast-furnace slag	t	10		
		d) Fly-ash	t	10		
42.07		Trial sections (nominal thickness indicated)	m ²	10		
42.08		100 mm cores in asphalt paving	No	10		
Total Carried Forward						

SECTION 4200

Item	LIC	Description	Unit	Qty	Rate	Amount R
Total Brought Forward						
4200		ASPHALT BASE AND SURFACING				
42.09		Asphalt surfacing in bridge decks (state nominal thickness and type of bitumen)				
		a) Continuously graded (state grade)	t	10		
		b) Gap-graded (stone content indicated)	t	10		
		c) Open-graded (grade indicated)	t	10		
		d) Semi-gap-graded (state maximum size of aggregate)	t	10		
		e) Semi-open-graded	t	10		
		f) Stone-mastic asphalt (state maximum size of aggregate)	t	10		
42.10		Asphalt layer constructed for rehabilitation purposes in accordance with the provision of subclause 4213(f)(i):				
		a) Base constructed with new asphalt (state specified thickness, type bitumen and maximum size of aggregate)				
		i) Continuously graded	m ²	10		
		ii) Semi-gap-graded	m ²	10		
		b) Surfacing or overlay constructed with new asphalt (state specified thickness, type of bitumen and maximum size of aggregate)				
		i) Continuously graded	m ²	10		
		ii) Semi-gap-graded	m ²	10		
		c) Base constructed with recycled asphalt (state specified thickness)	m ²	10		
		d) Surfacing or overlay constructed with recycled asphalt (state specified thickness)	m ²	10		
Total Carried Forward						

SECTION 4200

Item	LIC	Description	Unit	Qty	Rate	Amount R
Total Brought Forward						
4200		ASPHALT BASE AND SURFACING				
42.11		Asphalt layer constructed for rehabilitation purposes in accordance with the provisions of subsubclauses 4213(f)(ii) of 4213(f)(iii)				
		a) Base constructed with new asphalt (state type of bitumen and maximum size of aggregate)	t	10		
		i) Continuously graded	t	10		
		ii) Semi-gap-graded				
		b) Surfacing or overlay constructed with new asphalt (state type of bitumen and maximum size of aggregate)	t	10		
		i) Continuously graded	t	10		
		ii) Semi-gap-graded				
		c) Base constructed with recycled asphalt	t	10		
		d) Surfacing or overlay constructed with recycled asphalt	t	10		
42.12		Extra over items 42.01, 42.02, 42.10, and 42.11 for placing small quantities of asphalt of less than 10 tons specially produced as specified in subclause 4206(d)	t	10		
42.13		Placing and compacting asphalt in restricted areas				
		a) Extra over items 42.01, 42.02 and 42.10	m ²	10		
		b) Extra over item 42.11	t	10		
42.14		Extra over item 42,04 for applying tack coat in restricted areas	litre	10		
42.15		Application of prime coat to the edges of a layer	litre	10		
42.16		Extra over item 42,03 for applying rolled-in chippings in restricted areas	t	10		
Total Carried Forward						

SECTION 4200

Item	LIC	Description	Unit	Qty	Rate	Amount R
Total Brought Forward						
4200		ASPHALT BASE AND SURFACING				
42.18		Variations from nominal mix ratios in recycled asphalt mixes:				
		a) New binder (penetration grade bitumen)	t	10		
		b) New aggregate	t	10		
		c) New active mineral filler	t	10		
42.19		Variations in cellulose fibre content of stone-mastic asphalt	t	10		
42.20		Backfilling of excavations for patching with:				
		a) Asphalt base	t	10		
		b) Asphalt surfacing	t	10		
Total Carried Forward To Summary						

SECTION 4800

Item	LIC	Description	Unit	Qty	Rate	Amount R
4800		TREATMENT OF AN EXISTING SURFACE EXHIBITING CERTAIN -----				
48.01		Treatment with diluted bituminous emulsion (fog spray)				
		a) 30% bitumen emulsion	litre	10		
		b) 40% bitumen emulsion	litre	10		
		c) 50% bitumen emulsion	litre	10		
		d) 60% bitumen emulsion	litre	10		
48.02		Texturing				
		a) Tack coat (specify dinder)	litre	10		
		b) Application of slurry seal with double-washed aggregate	m³	10		
48.03		Slurry seal				
		a) Tack coat using 30% bitumen emulsion (specify and rate of application)	litre			
		b) Slurry applied by hand	m³	10		
		c) Slurry applied by spreader box	m³	10		
		d) Slurry applied by hand	t	10		
		e) Slurry applied by spreader box	t	10		
48.04		Screed of asphalt or coarse slurry				
		a) Tack coat using 30% stable-grade bitumen emulsion	litre	10		
		b) Continuously-graded asphalt (specify grade)	t	10		
		c) Coarse grade slurry	m³	10		
Total Carried Forward						

SECTION 5100

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5100	PITCHING, STONework AND PROTECTION AGAINST EROSION				
51.02	Stone Pitching (b) grouted stone pitching	m ²	10		
51.04	Concrete pitching and block paving (a) cast in situ concrete pitching class 30/19,100mm thick (b) segmental block paving	m ²	10		
	(i) 60mm thick interlocking paving blocks	m ²	10		
	(e) sand fill for paving placed on bridge sidewalks	m ³	10		
51.05	Concrete edge beams	m ³	10		
51.06	Provision of approved herbicide and ant poison	Prov	0		
Total Carried Forward To Summary					

SECTION 5600

Item	LIC	Description	Unit	Qty	Rate	Amount R
5600		ROAD SIGNS				
56.01		Road sign boards with painted or coloured semi-matt background, symbols lettering and borders in semi-matt block or in class I retro-reflective material where the sign board is constructed from				
		a) Aluminium sheet (2,0 mm thick)	t	10		
		i) Area not exceeding 2 m ²	m ²	10		
		ii) Area exceeding 2 m ² but not 10 m ²	m ²	10		
		iii) Area exceeding 10 m ²	m ²	10		
		b) Aluminium sections (type indicated) all sizes				
		c) Prepainted galvanized steel plates (Chromadeck or approved equivalent)				
		i) Area not exceeding 2 m ²	m ²	10		
		ii) Area exceeding 2 m ² but not 10 m ²	m ²	10		
		iii) Area exceeding 10 m ²	m ²	10		
		d) Prepainted galvanized steel profiles (200 mm high chromadek or approved equivalent)				
		i) Area not exceeding 2 m ²	m ²	10		
		ii) Area exceeding 2 m ² but not 10 m ²	m ²	10		
		iii) Area exceeding 10 m ²	m ²	10		
		e) Other material (details indicated)				
Total Carried Forward						

SECTION 5600

Item	LIC	Description	Unit	Qty	Rate	Amount R
Total Brought Forward						
5600		ROAD SIGNS				
		i) Area not exceeding 2 m ²	m ²	10		
		ii) Area exceeding 2 m ² but not 10 m ²	m ²	10		
56.02		Extra over item 56,01 for using				
		a) Background of retro-reflective material				
		i) Class I	m ²	10		
		ii) Class II	m ²	10		
		iii) Class III	m ²	10		
		b) Lettering, symbols, numbers, arrows, emblems and borders of retro-reflective material				
		i) Class I	m ²	10		
		ii) Class II	m ²	10		
56.03		Road sign supports (over-heard road signs structures excluded)				
		a) Steel tubing (diameter and wall thickness indicated)	t	10		
		b) Timber (diameter and type indicated)	m	10		
56.04		Kilometre posts (type indicated)	No	10		
56.05		Excavation and back fill for road sign supports (not applicable to kilometre posts)	m ³	10		
56.06		Extra over item 56,05 for cement-treated soil backfill	m ³	10		
56.07		Extra over item 56,05 for rock excavation	m ³	10		
Total Carried Forward						

Item	LIC	Description	Unit	Qty	Rate	Amount R
Total Brought Forward						
5600		ROAD SIGNS				
56.08		Dismantling, storing and re-erecting road signs with a surface area of:				
		a) Up to 2 m ²	No	10		
		b) Exceeding 2 m ² but not 10 m ²	No	10		
		c) Exceeding 10 m ²	No	10		
56.09		Dismantling and storing road signs with a surface area of:				
		a) Up to 2 m ²	No	10		
		b) Exceeding 2 m ² but not 10 m ²	No	10		
		c) Exceeding 10 m ²	No	10		
Total Carried Forward To Summary						

SECTION 5700

Item	LIC	Description	Unit	Qty	Rate	Amount R
5700		ROAD MARKINGS				
57.01		Road marking paint				
		a) White lines (broken or unbroken) for the following thickness:				
		i) 100mm	km	10		
		ii) 150mm	km	10		
		b) Yellow lines (broken or unbroken) for the following thickness:				
		i) 100mm	km	10		
		ii) 150mm	km	10		
		c) Red lines (broken or unbroken) for the following thickness:				
		i) 100mm	km	10		
		ii) 150mm	km	10		
		d) White lettering and symbols	m ²	10		
		e) Yellow lettering and symbols	m ²	10		
		f) Transverse lines, painted island and arrestor bed markings (any colour)	m ²	10		
		g) Kerb markings (any colour)	m ²	10		
57.02		Retro-reflective road marking paint				
		a) White lines (broken or unbroken) for the following thickness:				
		i) 100mm	km	10		
		ii) 150mm	km	10		

Total Carried Forward	
PWRT/2442/20/MP (A)	ROADS MAINTENANCE

SECTION 5700

Item	LIC	Description	Unit	Qty	Rate	Amount R
Total Brought Forward						
5700		ROAD MARKINGS				
		b) Yellow lines (broken or unbroken) for the following thickness:				
		i) 100mm	km	10		
		ii) 150mm	km	10		
		c) Red lines (broken or unbroken) for the following thickness:				
		i) 100mm	km	10		
		ii) 150mm	km	10		
		d) White lettering and symbols	m ²	10		
		e) Yellow lettering and symbols	m ²	10		
		f) Transverse lines, painted island and arrestor bed markings (any colour)	m ²	10		
57.03		Hot-melt plastic road-marking material (particulars stated)				
		a) White lines (broken or unbroken) for the following thickness:				
		i) 100mm	km	10		
		ii) 150mm	km	10		
		b) Yellow lines (broken or unbroken) for the following thickness:				
		i) 100mm	km	10		
		ii) 150mm	km	10		
		c) Red lines (broken or unbroken) for the following thickness:				
		i) 100mm	km	10		
		ii) 150mm	km	10		

Total Carried Forward	
PWRT/2442/20/MP (A)	ROADS MAINTENANCE

SECTION 5700

Item	LIC	Description	Unit	Qty	Rate	Amount R
Total Brought Forward						
5700		ROAD MARKINGS				
		d) White lettering and symbols	m ²	10		
		e) Yellow lettering and symbols	m ²	10		
		f) Transverse lines, painted island and arrestor bed markings (any colour)	m ²	10		
57.04		Variation in rate of application				
		a) White paint	litre	10		
		b) Yellow paint	litre	10		
		c) Red paint	litre	10		
		d) Retro-reflective beads	kg	10		
		e) Plastic road-marking paints (specify)	litre	10		
57.05		Roadstuds	No	10		
57.06		Setting out and pre-marking the lines (excluding traffic-island markings, lettering and symbols)	km	10		
57.07		Re-establishing the painting unit at the end of the maintenance period	lump sum			
57.08		Removal of existing, temporary or permanent road markings by:				
		a) Sandblasting	m ²	10		
		b) Overpainting as temporary measure	m ²	10		
57.09		Removal of existing roadstuds	No	10		

Total Carried Forward To Summary	
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SECTION 5900

Item	LIC	Description	Unit	Qty	Rate	Amount R
5900		FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
59.01		Finishing the road and road reserve				
		a) Dual carriageway road	km	10		
		b) Single carriageway	km	10		
59.02		Treatment of old roads and temporary deviations	km	10		
Total Carried Forward To Summary						

SECTION 7300

Item	LIC	Description	Unit	Qty	Rate	Amount R
7300		CONCRETE BLOCK PAVING FOR ROADS				
73.01		Concrete block paving (class, type and thickness indicated)				
		a) 60mm intelorcking pavement blocks (grey)	m ²	10		
		b) 80mm intelorcking pavement blocks (grey)	m ²	10		
73.02		Casting in situ concrete edges and intermediate beams				
		a) Class 25/19 concrete	m ³	10		
73.03		Provision of approved herbicides and ant poison				
		a) Provision of materials	prime cost sum			
		b) Contractor's charges and profit added to the prime cost sum	%			
Total Carried Forward To Summary						

SECTION 8100

Item	LIC	Description	Unit	Qty	Rate	Amount R
8100		TESTING MATERIALS AND WORKMANSHIP				
81.01		Special tests on elastomeric bearings (150% vertical load and 150% shear distortion) as described in subclause 6604(d)	No			
81.02		Other special tests requested by the engineer	Prov. Sum	1	20000	20000
81.02		Providing testing equipment				
		a) Rolling straight-edge	No			
		b) Core drill	No			
Total Carried Forward To Summary						

MPUMALANGA PROVINCIAL GOVERNMENT

DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT

TENDER NO. PWRT/2442/20/MP(A)

*TERM CONTRACT FOR PAVED ROADS MAINTENANCE AS AND WHEN REQUIRED IN THE
EHLANZENI, BOHLABELA, GERT SIBANDE AND NKANGALA DISTRICTS OF MPUMALANGA
PROVINCE FOR A PERIOD OF 36 MONTHS*

C3: SCOPE OF WORK

C3.1 STANDARD SPECIFICATIONS

C3.2 PROJECT SPECIFICATIONS

PART A: GENERAL

- PS-1 Project Description
- PS-2 Description of the Site and Access
- PS-3 Details of the Works
- PS-4 Construction Management Requirements

PART B: AMENDMENTS TO THE STANDARD SPECIFICATIONS

- B1 Project Specifications Relating to the Standard Specifications and
 - Other Additional Specifications

C3.3 PARTICULAR SPECIFICATIONS

MPUMALANGA PROVINCIAL GOVERNMENT

DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT

TENDER NO. PWRT/2442/20/MP(A)

***TERM CONTRACT FOR PAVED ROADS MAINTENANCE AS AND WHEN REQUIRED IN THE
EHLANZENI, BOHLABELA, GERT SIBANDE AND NKANGALA DISTRICTS OF MPUMALANGA
PROVINCE FOR A PERIOD OF 36 MONTHS***

C3.1 STANDARD SPECIFICATIONS

The standard specifications on which this contract is based are:

C3.1.1 In addition, the following specifications are referred to:

- A. COLTO Standard Specifications for Road and Bridge Works for State Road Authorities 1998 edition, and can be obtained from:

SAICE
Waterfall park
Howick Gardens
Vorna Valley
Bekker Street
Midrand
0685
Tel: (011) 805 5947
Fax: (011) 805 5971
- B. Part E: Series 12000: Draft Specifications for the Rehabilitation of Bridges that Supplement to the COLTO Standard Specifications for Road and Bridge Works for State Road Authorities.

C 3.1.2 Further to the above, bidders are referred to the following specifications:

- Sabita Manual 2: Bituminous products for road construction.
- Sabita Manual 5: Manufacture and construction of hot-mix asphalt
- Sabita Manual 8: Guidelines for the safe and responsible handling of bituminous products.
- Sabita Manual 23: Bitumen Hauliers Code: Guidelines for Loading Bitumen at Refineries.
- Sabita manual 24: User guide for the design of hot-mix asphalt
- Sabita Manual 25: Quality management in the handling and transport of bituminous binders

C3.1.3 The following SANS specifications are also referred to in this document and the Contractor is advised to obtain them from Standards South Africa (a division of SABS) in Pretoria.

- SANS 10396: 2003: Implementing Preferential Construction Procurement Policies using Targeted Procurement Procedures
- SANS 1914-4 (2002) : Targeted Construction Procurement (local resources)
- SANS 1921 – 1 (2015): Construction and Management Requirements for Works Contracts Part 1: General Engineering and Construction Works and where accommodation of traffic is involved:
- SANS 1921-2 (2015): Construction and Management Requirements for Works Contracts; and Part 2: Accommodation of Traffic on Public Roads Occupied by the Contractor.
- SANS 307: 2005 Penetration Grade Bitumen

MPUMALANGA PROVINCIAL GOVERNMENT

DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT

TENDER NO. PWRT/2442/22/MP(A)

***TERM CONTRACT FOR PAVED ROADS MAINTENANCE AS AND WHEN REQUIRED IN THE
EHLANZENI, BOHLABELA, GERT SIBANDE AND NKANGALA DISTRICTS OF MPUMALANGA
PROVINCE FOR A PERIOD OF 36 MONTHS***

C3.2: PROJECT SPECIFICATIONS

STATUS

The Project Specifications, consisting of two parts, forms an integral part of the contract and supplements the Standard Specifications.

Part A contains a general description of the works, the site and the requirements to be met.

Part B contains variations, amendments and additions to the Standard Specifications, and if applicable, the Particular Specifications.

In the event of any discrepancy between a part or parts of the Standard or Particular Specifications and the Project Specification, the Project Specification shall take precedence. In the event of a discrepancy between the Specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Engineer before the execution of the work under the relevant item.

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.

PART A: GENERAL

PS-1 PROJECT DESCRIPTION

1.1 Employer's objectives

The employer's objectives are to appoint a contractor for a term project to conduct road repair and reseal work, as identified from the Roads Asset Management System and works, as per routine maintenance.

The client also makes use of supply contracts for the following:

- Hot and Cold Mix Asphalt
- Bitumen Supply

1.2 Overview and location of the works

The description of the project contained in this section is merely an outline of the contract works and shall not limit the work to be carried out by the Contractor under this contract. Approximate estimated quantities of each type of work to be carried out are listed in the bill of quantities bound in this document.

This contract is in essence a **Three-Year (36 Months)** period contract for pothole patching and edge breaks repair of various roads that include, inter alia, the following:

- DPWRT (Client) will identify routes in the network from the Roads Asset Management System (RAMS) that are suitable for the treatment as given above,
- The client will appoint an Engineer (Albeit Internal or External Consultant) to do a visual survey, mark out areas to be patched, crack-sealed and repaired

- The contractor will provide a programme for the execution of the works for such an order within 7 days from receiving the order.
- The contractor will be required to establish within 7 days after receiving an order.

The basis of the contract is that it will supplement works executed by the employer as and when required, subject to the availability of funds and the placement of individual orders for specific tasks to be executed by the successful bidder.

The quantities are merely provided to obtain rates for anticipated work requirements. The actual quantities may vary substantially from the quantities provided in the schedule of quantities. The successful bidder will however be required to execute works as per his tendered rates.

1.3 Extent of the works

The main expected work items (but not limited to) that may be undertaken in terms of the contract are:

- Patching
- Edge Break Repairs
- Re-graveling

1.4 Procurement

1.4.1 Preferential procurement procedures

Preference is given on the basis of the Targeted Enterprise status of the bidder, as well as for the Contract Participation Goal offered in terms of the engagement of ABEs.

1.4.2 Scope of mandatory subcontract work

There is no mandatory subcontracted work, other than that the Contractor must subcontract to, or engage local people to comply with EPWP requirements.

1.5 Construction

1.5.1 Applicable SANS 2001 standards for construction works

There are no SANS 2001 standards applicable.

1.5.2 Applicable national and international standards

The relevant provisions of COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 Edition) shall apply to the contract.

PS-2 DESCRIPTION OF THE SITE AND ACCESS

2.1 Location of site

Per request, per order.

Location shall mean any area as indicated in the specified region of the Mpumalanga Province.

2.2 Access to site

Access to the site will be indicated with each single order placed by the client.

PS-3 DETAILS OF THE WORKS

The details of the works shall be determined as per individual orders placed by the client.

PS-4 CONSTRUCTION AND MANAGEMENT REQUIREMENTS**4.1 General**

The Contractor is referred to SANS 1921: 2015 parts 1, 2 and 3: Construction and Management Requirements for Works Contracts. These specifications shall be applicable to the contract under consideration and the Contractor shall comply with all requirements relevant to the project.

Certain aspects however require further attention as described hereafter.

4.1.7 Drawings (Read with SANS 1921 – 1: 2015 clauses 4.1.7; 4.1.11 and 4.1.12)

The reduced drawings which form part of the tender documents shall be used for tendering purposes only (Not applicable in this case).

4.2 Responsibilities for design and construction

The duties of the engineer will be undertaken by appointed Internal Chief Engineers or External Engineers. The Engineer shall be responsible for producing the scope of works, design specifications, schedule of quantities, and supervision.

4.3 Planning and Programme (Read with SANS 1921-1:2015 clause 4.3)

Preliminary programme

The bidder is not required to submit a programme for execution of the works with his tender. The successful bidder will however be expected to furnish the client with a programme for each individual order placed.

This contract is anticipated / estimated to commence in April 2022, for a duration of 3 years (36 months).

4.4 Quality Assurance (QA) (Read with SANS 1921 – 1: 2015 clause 4.4)

The Contractor will be solely responsible for the production of work that complies with the Specifications to the satisfaction of the Engineer. To this end it will be the full responsibility of the Contractor to institute an appropriate Quality Assurance (QA) system on site. The Engineer will audit the Contractor's Quality Assurance (QA) system on a regular basis to verify that adequate independent checks and tests are being carried out and to ensure that the Contractor's own control is sufficient to identify any possible quality problems which could cause a delay or failure.

The Contractor shall ensure that efficient supervisory staff, the required transport, instruments, equipment and tools are available to control the quality of his own workmanship in accordance with his QA system. His attention is drawn to the fact that it is not the duty of the Engineer or the Engineer's representative to act as foreman or surveyor.

See B1205 below for the arrangement regarding the site laboratory.

4.5 Management and disposal of water *(Read with SANS 1921 - 1: 2015 clause 4.6)*

The Contractor shall pay special attention to the management and disposal of water and stormwater on the site. It is essential that all completed works or parts thereof are kept dry and properly drained.

Claims for delay and for repair of damage caused to the works as a result of the Contractor's failure to properly manage rain and surface water, will not be considered.

4.6 Testing *(Read with SANS 1921 - 1: 2015 clause 4.11)***Process control**

The Contractor shall arrange for all tests required for process control to be done. The cost of process control is deemed to be included in the rates, and no special pay item is provided for such.

Acceptance control

The process control test results submitted by the Contractor for approval of materials and workmanship will be taken into account by the Engineer in his appraisal for acceptance. However, the Engineer shall commission further acceptance control testing by a commercial on-site laboratory of his choice. The cost of such acceptance control testing is carried by the Employer.

4.7 Site Establishment *(Read with SANS 1921 - 1: 2015 clause 4.14)***Contractor's camp site and depot**

A full time site camp is not required, but temporary site camps may be required for establishment of each individual order.

However, the Contractor shall make his own arrangements concerning the supply of electrical power and all other services. No direct payment shall be made for the provision of electrical and other services. 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.

The Contractor shall provide security watchmen for the contract as he deems fit at no extra cost for the Employer. The Contractor must ensure that all his employees as well as the employees of his subcontractors are able to identify themselves as members of the construction team.

Accommodation of Employees

The Contractor shall make his own arrangements to house his permanent employees and to transport them to site. The contractor shall also make arrangements regarding transport of local temporary labour to and from site. No additional payment shall be made for transport of labour to and from site, and the rates shall be deemed to include the cost of transportation.

No informal housing or squatting will be allowed on the site.

The Contractor shall provide the necessary ablution facilities at his camp site and the site of the works for the use of his employees. Chemical toilets only will be allowed where temporary facilities have to be provided.

4.8 Survey Beacons *(Read with SANS 1921 - 1: 2015 clause 4.15)*

The Contractor shall take special precautions to protect all permanent survey beacons or

pegs such as bench-marks, stand boundary pegs and trigonometrical beacons, regardless whether such beacons or pegs were placed before or during the execution of the Contract. If any such beacons or pegs have been disturbed by the Contractor or his employees, the Contractor shall have them replaced by a registered land surveyor at his own cost.

4.9 Existing Services (Read with SANS 1921 - 1: 2015 clause 4.17)

Not applicable. The client will provide such details only if and when it is required.

4.10 Health and Safety (Read with SANS 1921 - 1: 2015 clause 4.18)

4.10.1 General Statement

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the OHSA 1993 Construction Regulations 2003 issued on 18 July 2003 by the Department of Labour.

For the purpose of this contract, the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act in the form as included in section C1.2.4

Health and Safety Specifications and Plans

(a) Employer's Health and Safety Specification

The Employer's Health and Safety Specification is included in Part E of the Project Specifications.

(b) Bidder's Health and Safety Plan

The Bidder shall submit before commencement of his works his own documented Health and Safety Plan for the execution of the works under the contract. His Health and Safety Plan must comply with the employer's specification, at least cover the following:

- (i) a proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 7 to 28;
- (ii) pro-active identification of potential hazards and unsafe working conditions;
- (iii) provision of a safe working environment and equipment;
- (iv) statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (*Regulation 5*);
- (v) monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided for in the Construction Regulations;
- (vi) details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 6 and other applicable regulations; and
- (vii) details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2003.

The Contractor's Health and Safety Plan will be subject to approval by the Employer, or amendment if necessary, before commencement of construction work. The Contractor will not be allowed to commence work, or his work will be suspended if he had already commenced work, before he has obtained the Employer's written approval of his Health and Safety Plan.

Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to obtain approval for his safety plan, shall not be used as a reason to claim for extension of time or standing time and related costs

Cost of compliance with the OHSA Construction Regulations

The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract.

Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

4.10.2 Requirements for Accommodation of Traffic (Read with SANS 1921 - 2: 2015)

General

The Contractor will be responsible for the safe and easy passage of public traffic past and on sections of roads of which he has occupation or where work has to be done near traffic. The travelling public shall have the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.

Accommodation of traffic, where applicable shall comply with SANS 1921-2: 2015: Construction and Management Requirements for Works Contracts, Part 2: Accommodation of Traffic on Public Roads occupied by the Contractor. The Contractor shall obtain this specification from Standards South Africa if accommodation of traffic will be involved on any part of the construction works.

Basic Requirements

The travelling public shall have the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.

The Contractor shall ensure that all road signs, barricades, delineators, flagmen and speed controls are effective and that courtesy is extended to the public at all times.

Failure to maintain road signs, warning signs or flicker lights, etc, in a good condition shall constitute ample reason for the Engineer to suspend the work until the road signs, etc, have been repaired to his satisfaction.

The Contractor may not commence constructional activities affecting existing roads before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual.

The Contractor shall construct and maintain all temporary drainage works necessary for temporary deviations.

The Contractor shall provide and grant access to persons whose properties fall within or adjoin the area in which he is working.

Bidders are to note that over significant portions of the road, it will be physically impossible to accommodate traffic on by-passes, so that half-width construction will be prevalent. At some places even, the road formation is too narrow to construct in half widths, so that road closures for part of the day, and accommodation of traffic amongst construction vehicles on layers being processed, will be the only way of accommodating traffic. The Bidder is to allow for such delays in his rates.

Payment

The Contractor's tendered or negotiated rates for the relevant items in the Bill of Quantities shall include full compensation for all possible additional costs which may arise from this, and no claims for extra payment due to inconvenience as a result of the modus operandi will be considered.

4.11 Management of the Environment *(Read with SANS 1921 - 1: 2015 clause 4.19)*

Respect for the environment is an important aspect of this contract and the Contractor shall pay special attention to the following:

(a) Natural Vegetation

The Contractor shall confine his operation to the limits of the road reserve for the purpose of constructing the works and where applicable detours, shall be sited in consultation with the Engineer and the local communities.

Only those trees and shrubs directly affected by the works and such others as the Engineer may direct in writing shall be cut down and stumped. The natural vegetation, grassing and other plants shall not be disturbed other than in areas where it is essential for the execution of the work or where directed by the Engineer.

(b) Fires

The Contractor shall comply with the statutory and local fire regulations. He shall also take all necessary precautions to prevent any fires. In the event of fire the Contractor shall take active steps to limit and extinguish the fire and shall accept full responsibility for damages and claims resulting from such fires which may have been caused by him or his employees.

The contractor shall engage actively in the local fire protection and disaster management structures.

(c) Environmental Management Plan

In addition to the above, all requirements according to the Environmental Management Plan as detailed in C3.3, Particular Specifications Part C Section 2, shall be adhered to. To be highlighted is that it is a requirement of the Record of Decision regarding the Environmental Management Plan that the Employer shall appoint a full time Environmental Control Officer whose duty it shall be to independently monitor compliance with the environmental requirements of the contract and to report to the Employer. The ECO shall be given full access to the site, and shall be invited to all

Community Forum and technical project meetings and shall receive all minutes. The ECO shall be skilled in the specific environmental mitigation measures provided for in the scope of works, and shall provide the project technical team

with technical guidance. However, the work instructions shall be issued by the Engineer.

PART B: AMENDMENTS TO THE STANDARD AND PARTICULAR SPECIFICATIONS**B1 PROJECT SPECIFICATIONS RELATING TO THE STANDARD SPECIFICATIONS AND OTHER ADDITIONAL SPECIFICATIONS**

In certain clauses in the standard, standardised and particular specifications, allowance is made for 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 alternative or additional requirements applicable to this contract are contained in this part of the project specifications. It also contains the necessary 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 relevant clause or payment item in the standard specification.

The number of a new clause or 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, but followed by a new number which follows on the last clause or item number used in the relevant section of the standard specifications.

SECTION B1500: ACCOMMODATION OF TRAFFIC**B1501: SCOPE**

Add the following:

"It is a condition of this contract that traffic is accommodated taking into account 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. Copies of this publication are available from Government Printers: Arma Steyn Tel: (012) 334 4500 e-mail asteyn@print.pwv.gov.za.

This section also covers the provision of additional information signs for motorists and the release of any notices to the media and public."

B1502: GENERAL REQUIREMENTS**(a) Safety**

Add the following:

"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.

Traffic shall be accommodated with the least delay and discomfort to the public in accordance with the South African Road Traffic Signs Manual (SARTSM) and with the National Road Traffic Regulations, 2000.

When instructed, the Contractor shall prepare the necessary press releases and/or public notification and the placement of advertisements in regional and local newspapers advising the public of imminent road construction.

Copies prepared for press releases shall be submitted timeously to the Employer for consideration and approval.

The following additional measures will apply to the accommodation of traffic:

- A maximum of 2 lane closures (work areas) will be permitted on the site at any one time, at the discretion of the engineer
- The maximum length of work area in a lane closure shall be 2 km. The minimum

- distance between two closures shall be 4km measured from last trailing sign to first leading sign, whether it is in the same or opposite carriageways;
- Leading tapers causing vehicles to change lanes shall be set out on straight sections of road only;
- Minimum lane width required is 3,2m.

Where due to circumstances beyond the contractors control, work cannot be completed within normal working hours, the Contractor shall ensure that at least one lane is open to traffic in each direction making use of lane of conventional direction of flow. The Engineer shall apply a penalty as detailed in Clause B1502(r) (lane rental) in instances where the Contractor does not comply with this provision.

The Contractor's tendered rates for the relevant items in the schedule of quantities shall include full compensation for all possible additional costs which may arise from this, and no claims for extra payment due to inconvenience as a result of the *modus operandi* will be considered."

(f) Approval of temporary deviations

Add the following:

"If, after any temporary deviation has been constructed, any changes are considered necessary or desirable, the proposal shall be submitted to the engineer for his approval."

(i) Traffic Safety Officer

Add the following to the end of the second paragraph:

"The Contractor shall submit a CV of the candidate nominated safety officer to the Engineer for approval prior to his appointment as traffic safety officer. The traffic safety officer shall at all times be available to discuss road safety and traffic accommodation matters with the Engineer. The traffic safety officer shall be a dedicated official and shall not have production related responsibilities."

Insert the following as the opening phrase to sub-clause (i)

"make himself available to discuss road safety and traffic accommodation matters whenever required by the engineer and shall be responsible..."

Delete sub-clauses (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 are certified 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 are made in the field. Such changes shall record the position of flagmen and stop/go control men and their associated traffic accommodation equipment wherever they are used.

- (iii) Personally inspect the position and condition of each traffic accommodation feature on the whole site of works twice each day by 9h30 and by 16h30, 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 shall keep a duplicate book for this specific purpose.

The traffic safety officer shall also submit with this report the daily labour returns of flagmen, stop/go and traffic signal control men employed."

Add the following sub-clauses:

- “(ix) The traffic safety officer shall be equipped with a cellular telephone and shall have a vehicle and sufficient labour at his disposal 24 hours a day, including all prescribed non-working days, and shall not be utilised 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 3 tons 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 150 mm high, and the sign shall be mounted on the vehicle at least 1,5 m 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 at all times and the sign shall be displayed when the vehicle is used on site.

The traffic safety officer 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 the contractor's establishment on site

- (x) Ensure that all obstructions related to the contractor's activities be removed before nightfall where applicable as instructed by the engineer and that the roads are safe for night traffic.
- (xi) The traffic safety officer shall, in addition to the duties listed in paragraph 1502 (i), also be responsible for the removal of broken down vehicles off the roadway and implementing actions requested by the traffic authorities with regard to the work to be carried out, be responsible for the erection and maintenance of all traffic signs necessary for the accommodation of traffic.
- (xii) In the advent of an accident the traffic officer shall record in a written report the details of the accident, record the position of all temporary road signs, barricades, delineators, flagmen and any other devices used for traffic accommodation. In addition the report shall include a neat dimensional sketch, photographs, identifiable permanent features, and any other relevant information.”

Add the following sub-clauses:

- (k) Site Personnel

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 near to the travelled way. Any person found not wearing a reflective jacket under these circumstances shall be removed from the site until such time as he 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.

- (l) Failure to comply with provisions

Failure or refusal on the part of the contractor to take the necessary steps to ensure the safety and convenience of the travelling public, 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 apply penalties as follows:

A fixed penalty of R5 000,00 per occurrence 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 hour 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 the engineer has given an instruction to this effect. 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."

m) Hours of work

"Normal working hours" (referred to in Clause A6.5 of the general conditions of contract) will, because of heavy peak hour traffic volumes, be restricted to between 30 minutes after sunrise and 30 minutes before sunset.

Programming for accommodation of traffic shall allow for the above restrictions.

(n) Access to working areas

Entrance and exit points to and from the barricaded working areas onto the public road shall be kept to an absolute minimum and shall be provided in agreement with the Engineer.

Only approved drivers of trucks and equipment will be allowed to operate equipment / trucks on the road. The approval process will include an induction and a card of approval. Contraventions will be recorded and after any contravention, the driver will be required to redo the induction. After 3 contraventions, the driver will be deemed negligent and dealt with under Clause 6.9 of the GCC.

The induction training will include:

Knowledge of Section 1500

- i) Fitting and checking of safety devices. (amber lights; CONSTRUCTION VEHICLE signs, tail gate locks; oil leaks, vehicle lights)
- ii) Instruction on the movement into and out of closures, with particular reference to not feeding directly into public lanes without due regard.

Entry and exit points must be defined by the closure manager and only those points must be used. These points should be identified by truck warning signs and a trained flagman. Suitably identified points will serve as an aid to drivers as to where to enter and exit. The flagman should assist the driver with the exit manoeuvre.

(o) Moving and display of signs

The Contractor shall adhere strictly to the sign layout and spacing shown on the drawings or directed by the Engineer.

Any sign not required, or which is in contradiction with a prevailing situation, shall be removed or covered with non-transparent material without delay. Where permanent signs are to be covered it shall be done with non-plastic material. Traffic-control facilities no longer required at the site of a deviation or a lane closure shall be moved for re-use.

No deviation from the specified layouts will be allowed without the specific permission in writing from the Engineer.

(p) Extension of time for completion

Accommodation of public traffic on the works or any delays caused thereby, as well as any suspensions due to failure by the Contractor to comply with the provisions for the accommodation of traffic, will not be regarded as special circumstances for the extension of time. The penalty for the late opening of a traffic lane will be R5 000,00 per hour or any portion thereof.

(q) Lane rental

A lane rental of R5 000.00 per lane per hour or portion thereof will apply for the occupation of traffic lanes, without the approval of the Engineer, outside the stipulated working hours."

(r) Parking of Equipment on the Site

The contractor shall ensure that the presence of his equipment on site does not affect the safety of the travelling public. On completion of a day's work, all plant that can travel unaided on public roads must be removed from the work area to the contractor's camp site, other plant difficult to move may be left on site with the following provisos:

- (i) When the work area is the slow lane and shoulder closed to traffic, the plant must be parked at least 6m away from the roadway used as a deviation.
- (ii) In other cases applicable normally to surfacing equipment, equipment shall preferably be parked at least 6m beyond the edge of the slow lane. If that is not possible, the equipment shall be protected by plastic New Jersey barriers filled to capacity with water. A leading taper of 1:15 shall apply. Under no circumstances may the equipment be parked beyond the centre of the median, failing which barriers will be provided on both sides of the equipment.

Notwithstanding the above, equipment not required to work on site the following day must be removed to the contractors camp site.

No additional payment for the provision of protection of equipment will be measured.

B 1503: 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, channelisation devices, barricades, warning devices and road markings (hereinafter referred to as traffic-control devices) in accordance with these special provisions and as shown on the drawings and in the SARTSM and remove them when no longer required. It shall be incumbent upon the contractor to see to it 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.

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 and a 2x400w metal halide floodlight mounted onto a 9m winched fibreglass pole bolted to a 1,5m buried galvanized stem to light up the traffic control point at night time." *(Note to compiler: consideration should be given to extending the lighting along the road, equivalent to the expected stacking length of vehicles at night, in order to provide a measure of safety to the motorist at the traffic control points.)*

(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. 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 B15.01 and B15.10."

(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).

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 60 km/h in typical working conditions without falling over. To achieve this, the base shall be at least 0,18 m² and ballasted by sandbags 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 at short term lane deviations during daylight. Cones shall not be used on their own, but shall be interspersed with delineators at a ratio not exceeding 3:1. Cones used on all deviations shall be 750 mm high. Lane closures which continue into the night time shall be demarcated by delineators only."

(e) Warning devices

Add the following:

"All construction vehicles and equipment used on the works shall be equipped with amber rotating lights and warning boards as specified. All Contractor's equipment shall, before being allowed onto the site, obtain a clearance permit from the Engineer. If the Engineer withdraws the clearance certificate for reasons of non-conformance, that equipment shall be removed from site immediately.

(i) Vehicle mounted flashing lights

Rotating lights (min 55 W) shall have an amber lens of minimum height of 200 mm 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 equipment shall operate continuously while the equipment is working alongside sections of road open to public traffic

Rotating lights and the "CONSTRUCTION VEHICLE" signs on the Contractor's equipment shall not be paid for separately but shall be included in the rates covering the use of the vehicles.

The Contractor shall provide the Resident Engineer with at least a further eight amber rotating flashing lights. The flashing lights shall have a magnetic base, flexible cable and a connection suitable for insertion into a standard 12 volt automobile cigarette lighter socket. Rotating flashing lights provided to the Engineer will be paid for separately.

The "CONSTRUCTION" stickers for the Engineer shall be of the magnetic type in order to be fitted to the rear of a vehicle. The word "CONSTRUCTION" shall be written with black letters, 100mm high on a yellow background.

The Engineer, his personnel and visitors shall wear safety jackets at all times when they move about the site. The Contractor shall provide the Engineer with 5 safety jackets. The safety jackets shall be fluorescent Day-Glo (porous net weave material) with 50mm wide reflective strips and shall be submitted for the Engineer's approval before they are purchased. No separate payment will be made for the safety jackets and full compensation therefore will be deemed to be included in the rates tendered for in Section 1500."

(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."

(f) Road Markings

Add the following:

"Where a section of road marking has been removed / covered, and before opening the section of road to traffic, the Contractor shall comply with the following:

- (i) Install pre-marking to indicate the position of the lane lines
- (ii) Install temporary road studs

Should the time constraints not allow the Contractor to comply with (ii) above, the Contractor shall erect temporary delineators at 48m spacing on the yellow line to indicate the edge of the slow lane. These delineators shall be provided, installed and maintained at the Contractor's cost.

Permanent road markings to be installed within 7 calendar days of completing a section of rehabilitation or seal."

Add the following sub clauses:

"(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) Flagmen

Flagmen shall be provided where shown on the drawings or required by the specification. During the daytime, at least two flagmen shall be provided at each traffic control point in addition to the STOP/GO

sign operator, one flagman at the 80 km/h sign and a second roving flagman to indicate to the traffic at the end of the queue to stop. At night time only one roving flagman equipped with a Stromberg Lightman xenon strobe, or similar 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 flagman shall be provided at the leading end of the closure during daytime. This flagman shall be provided at the 80-km/h sign to warn the traffic about the closure. No flagman shall be on duty for a period of more than 10 hours per day.

Flagmen 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.

Flagmen 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 600 mm. The flag shall be attached to a staff at least 1,0 m in length.

In terms of lateral clearance and safety, flagmen shall stand on the shoulder of the lane of traffic that is being controlled and under no circumstances shall flagmen be permitted to stand within the traffic lane. In order to obtain maximum visual impact for the travelling public, flagmen shall stand-alone."

B1504 WIDTH AND LENGTH OF TEMPORARY DEVIATIONS

- A maximum of 4 lane closures (work areas) will be permitted on the site at any one time, at the discretion of the engineer
- The maximum length of work area in a lane closure shall be 2 km. The minimum distance between two closures shall be 4km measured from last trailing sign to first leading sign, whether it is in the same or opposite directions;
- Leading tapers causing vehicles to change lanes shall be set out on straight sections of road only;
- Minimum lane width required is 3,2m.

B1517: MEASUREMENT AND PAYMENT

Amend item 15.01 to read as follows:

"Item	Unit
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B15.01 Accommodating traffic and maintaining temporary deviations:

(a) Where the road is constructed in half width.....km

Replace the first paragraph with the following:

"The unit of measurement shall be the kilometre, measured along the centre lines of the road, the ramps from the noses and the cross roads where work is carried out. Accommodation of traffic shall be measured once only, that is no separate payments shall be made for lane and shoulder rehabilitation, slurry, reseal, asphalt overlay, side drains, etc. The bypass for abnormal vehicles and gravel service roads shall not be measured. Only the net distance of the road shall be measured and overlapping distances during staged rehabilitation shall not be measured. A distinction shall be made between accommodation of traffic on the through road and accommodation of traffic on the ramps and cross roads of interchanges."

In the second paragraph, replace the comma after "deviations" at the start of the third line with a full stop and delete the remainder of this first sentence. Also delete the whole of the second sentence, which refers to compensation for the traffic safety officer.

In the third paragraph second sentence, insert a full stop after "use" and delete the remainder of the sentence."

Item		Unit
Contract	C.45	C3.3
Part C3: Scope of Work		Part C Particular Specifications
TENDER No. PWRT/2442/22/MP (A)		

B15.03 Temporary traffic control facilities

Add the following sub item:

- "(n) Other traffic control measures ordered by the engineer:
- (i) Provision of other traffic control measures Provisional Sum
- (ii) Handling costs and profit in Respect of sub item B15.03 (n) (i).....Percentage (%)

Expenditure under this item shall be made in accordance with the general conditions of contract, Sub clause 13.5, for the supply and installation of any additional signs or other traffic control measure ordered by the engineer in accordance with clause B1503(g).

The tendered percentage is a percentage of the actual amount spent under sub item 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 and traffic control measures ordered by the engineer."

B15.03 Temporary traffic control facilities

Add the following sub item:

- "(m) Area lighting.....Number (No)
- (o) Traffic Signals.....Number (No)

The unit of measurement shall include all cost for area lighting and traffic signalling to be provided at day-night closures, including generators, lights, as well operating costs.

Item	Unit
B15.10 Accommodation of traffic where the road is constructed in half-widths	Kilometre (km)

In the second paragraph delete from the third line the expressions "flagmen", "guards", and "lights". Add the following new paragraphs:

"Half-width construction is defined as rehabilitation of the layers on the shoulder and one lane and only where 2-way traffic cannot be accommodated. Also, no slurry, seal and asphalt overlay works shall in any circumstances be measured under this item and shall be included in item B15.01 for the payment thereof. Cognisance should be taken that for the maximum 4km sections controlled by temporary traffic signals for half-width construction, payment shall be made once only and payment for the change over of the trafficked lanes shall not be made.

Where payment is made for a section of road in item B15.10, payment shall not be made under item B15.01."

B15.15 Provision of traffic safety equipment for use by the engineer

- (a) Safety jackets.....number (No)

The unit of measurement shall be the number of each item provided as specified, and approved by the engineer.

The tendered rates for the various safety items shall include full compensation for provision thereof and maintenance in good working order.

Item	Unit
B15.16 Traffic safety officer.....	Month

The unit of measurement shall be the period in months that the approved traffic safety office is employed.

The tendered rate per month shall include full compensation for the cost of the traffic safety officer to conduct his duties as specified in subclauses B1502 (i)

B15.17 Penalties

(a) Fixed penalty per occurrencenumber (No)

(b) Time related penaltyhour (h)

In sub item B15.17(a) a fixed penalty of R5 000.00 per occurrence 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 in sub item B15.17 (b), a time-related penalty of R500.00 per hour over and above the fixed penalty in sub-item B15.17 (a) shall be deducted for non-compliance to rectify any defects in the accommodation of traffic within reasonable time after the engineer has given an instruction to this effect. The engineer's instruction shall state the time in hours for re-instatement of the defects. Should the contractor fail to adhere to the instruction, the time-related penalty will be applied from the time the instruction was given."

SECTION B3800: BREAKING UP EXISTING PAVEMENT LAYERS

(vi) General

Add the following:

"Where milling is to be done at existing structures, care shall be exercised to avoid damage to concrete elements, expansion joints, nosings to expansion joints, manholes, catch pits etc. Damage caused to any element forming part of the permanent works shall be repaired at the Contractor's cost.

The floor of the milled excavation shall be cleaned out of all loose material by brooming. The exposed floor of the excavation shall be lightly sprayed with water to identify cracks. The engineer shall be given the opportunity to inspect the milled surface for cracks and loose patches and any cracks or loose patches shall be repaired in accordance with the relevant sections of the specification."

B3807 MEASUREMENT AND PAYMENT

(b) Overhaul

Replace with the following:

"No overhaul shall be paid on material originating from the milling of the existing asphalt layers, irrespective of whether the contractor intends to utilise the material for recycling or reworking or whether the material is transported to a dump site. The contractor shall include for overhaul in the rates tendered.

Item	Unit
B38.02 Milling out existing bituminous material with an	cubic metre"

Average milling depth:

- (a) Not exceeding 50mm (3.7m wide)
- (b) Exceeding 50mm but not exceeding 100mm (3.7m wide)
- (c) Not exceeding 50mm (2.4m wide)
- (d) Exceeding 50mm, but not exceeding 100mm (2.4m side)

Delete the third paragraph in the description of payment and replace with the following:

"The tendered rate shall also include full compensation for loading, transporting and disposing of the material at an approved dump site, irrespective of the distance of haul or the method of loading and unloading.

The rates shall also include for transverse saw-cutting at the start and end of sections prior to the commencement of the milling operations. "

SECTION B3900: PATCHING AND REPAIRING EDGE BREAKS**3901 SCOPE**

In addition to the requirements of Section 3900, the following shall apply and take precedence,

B3901 SCOPE

The work covered under this section includes the excavation of the failed layer and replacing the excavated material with medium graded asphalt with a modified SE-2 type binder, as instructed by the Engineer. The size of the repair area shall vary depending on the extent of the failure and the minimum dimension shall be 0.9m measured along one edge. This section shall also cover the specification and method of measurement for the repair of road failures (patching) and potholes for maintenance. For the purposes of this contract the size of the patch covering this section will be any width <2m and any length < 10m. Patches larger than this size will be covered under section 3800

B3902 MATERIALS

All material used to carry out these repairs shall comply with the requirements in the relevant sections of the Specifications.

B3903 PLANT AND EQUIPMENT

In addition to normal transport and hand tools used, the Contractor shall have available for use on the repair work the following equipment:

- (i) milling machine with max drum of 0,6m;
- (ii) Rollers. A "Bomag BW 90" or similar shall be used on all repair work
- (iii) Hand operated Bitumen Emulsion Sprayer capable of spraying an even application of 0,40 litres/m³ of bitumen emulsion.

B3904 PATCHING

- (e) Restrictions

- (i) Weather limitations

Clause 4205 of the Standard Specifications shall apply. No area to be repaired shall be exposed if rain is imminent.

- (ii) Production limitations

No exposed patches shall be left open overnight. All repair work undertaken for the day must be completed by the end of the day's work. The surface course material shall be placed in layers not exceeding 40mm measured in the loose condition.

All material arising from the excavation is to be removed to spoil within 48 hours of it being excavated. If the excavated material is not removed to spoil within 48 hours, the Engineer will not allow work to proceed on additional repair areas.

- (f) Construction methods

All asphalt laid in accordance with the following sections shall be compacted so as to meet the density requirements of Clause B4210.

REPAIR WORK

The repair work shall consist of excavating the surface, base and where necessary, the subbase layers and replacing this material with either asphalt base-course or crushed stone pre-treated with diluted emulsion and finished off with continuously graded medium asphalt.

The Resident Engineer will demarcate the areas of existing road failure.

- (1) Wearing Course repairs and surfacing of base/subbase repairs.

The existing surface shall be removed in rectangular patterns by means of a milling machine. The thickness of the existing surface normally varies between 20mm and 70mm, but can exceed 100mm in places. The area exposed is to be cleaned to ensure a firm flat base, tacked evenly using a hand-sprayer with 30% anionic stable grade emulsion at a rate of 0,40 litres per square metre. Continuously graded medium asphalt is to be placed and compacted to the level of the existing surrounding surface.

- (2) Finishing

All the above work shall be completed in geometric patterns of squares or rectangles and finished off neatly to the specified depth below the surrounding sound road surface, or flush

with the surrounding sound road surface as the case may be.

Patches designated by the Engineer, are to be "painted" around the perimeter with a 45mm to 55mm wide strip of 60/70 pen. Bitumen with an overlap on either side of the patch edge of approximately 25mm. This strip is to be an average of 0,45mm to 0,55mm thick.

B3906 QUALITY OF MATERIALS AND WORKMANSHIP

(a) General

- (i) Excavation of the patches is to be done in straight lines.
- (ii) No payment shall be made for any extra work performed or material used as a result of excavations in excess of the following tolerances:
 - surface patching:
 - thickness of existing surfacing plus 5mm
- (iii) When tested with a 3m straight-edge, the final surface shall not deviate from the bottom of the straight-edge by more than 5 mm at any individual spot.

(b) Testing

Clauses 3406, 3607, 4213 and 4214 shall apply.

SECTION B4800: TREATMENT OF AN EXISTING SURFACE EXHIBITING CERTAIN DEFECTS**B4802 MATERIALS**

(a) Bituminous binders

Add the following to the first paragraph:

"The classification of modified binders for crack sealing shall be as shown in Table B4801

TABLE B 4801

Classification of Modified Binders for Crack Sealing	
Modified Binder Class (C)	Application
CH-E1	Crack Sealant - Hot applied
CC-E1	Crack Sealant - Cold applied
CH-R1	Crack Sealant - Hot applied

The letter codes used in the classification are defined as follows:

CH – crack seal applications (hot applied)

CC – crack seal applications (cold applied)

E – a polymer of the elastomer type (e.g. SBR, SBS, etc)

R – crumbed rubber

The binders to be used on this contract for the sealing of cracks shall be C-E1, CC-E1 or C-R1 modified binder crack sealants as listed in the Pricing Schedule. The minimum required properties of crack sealants are shown in Table B4802."

TABLE B4802

Properties for modified binder crack sealants					
Property	Unit	Test Method	Binder Type		
			C-E1	CC-E1	C-R1
Softening point (R&B)	°C	MB-17	≥80 (min)	≥80 ² (min)	55-65 (min)
Elastic recovery @ 15°C	%	MB-4	≥80 (min)	≥60 ² (min)	report ³
Flow	mm	MB-12	Nil	Nil	15-70
Resilience @ 25°C	%	MB-10	N/A	N/A	13 (min) 40 (max)
Torsional recovery @ 15°C	%	MB-5	Report	Report	Report
Binder content (m/m)	%	MB-22	N/A	≥55	N/A
Dynamic Viscosity @ 165°C	Pa.s	MB-18	0,55 (max)	N/A	N/A
Dynamic viscosity @ 190°C	DPa.s	MB-13	N/A	N/A	20 (min) 40 (max)
Dynamic Viscosity @ 25°C	Pa.s	MB-18	N/A	≥0,8 (max)	N/A

Notes

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.
2. Value to be determined on the residue after recovery of the binder by evaporation method MB-20.
3. No limits are given and the values should be recorded for reporting purposes only as they may be used in future specifications.

* Note: determined on binder residue

B4803 PLANT AND EQUIPMENT

(b) Equipment for crack sealing

Replace this entire sub clause with the following:

"The contractor shall *inter alia* provide the following equipment for crack sealing:

(i) Blowing out cracks

A mobile compressor capable of discharging at least 3 m³/min compressed air at 650 kPa pressure. The compressed air shall be free of water, oil and other deleterious matter that may adversely affect the bond between the sealant and the cracks. The compressor shall be free of oil and diesel leaks.

A lance shall be used to direct the force of the air into the cracks and must be manoeuvrable enough to follow the path of the crack accurately.

If hot air is specified, the compressed air must be heated by a hot air lance capable of achieving a temperature of 300°C in the combustion chamber.

(ii) Sealant applicator

The sealant shall be applied through an applicator manufactured specifically for this purpose. Essentially the equipment for the hot sealant shall consist of a mobile vessel capable of heating the sealant to the required application temperature by indirect heat, controlled by a thermostat to prevent overheating. A calibrated thermometer shall be fitted in an accessible position to accurately measure the sealant temperature in the tank. Only pumps which can deliver the sealant to the crack in a controlled fashion shall be used.

The sealant shall only be applied with pressure type application equipment to ensure that the cracks are filled rather than covered.

The contractor shall ensure that all equipment is kept clean so as to prevent blockages and resultant poor workmanship."

B4804 CONSTRUCTION

(a) Treatment with diluted bituminous emulsion (fog spray)

Add the following:

"A 40% anionic spray grade emulsion shall be applied to designated sections of the road at a rate of 0,6ℓ/m². (*Note to compiler – Amend as applicable*)

A water tanker with a pressure distributor shall be available on standby for pre-wetting or post-wetting the areas scheduled for fog spray."

(c) Slurry seal

Replace the last sentence with the following:

"A nominal rate of application of 0,0020 m³ /m² shall apply for tender purposes."

(f) Sealing cracks

(ii) Preparation

Add the following:

"The cracks shall be blown out with heated ("hot air lance") or cold compressed air according to the method specified by the engineer. All dirt, grit and other base or foreign matter shall be blown out and be removed from the cracks and road surface."

- (iii) Cracks smaller than 3mm

Add the following:

"No cracks smaller than 3 mm width shall be sealed unless so ordered by the engineer."

- (iv) Cracks of 3mm and wider

Replace this clause as follows:

"Cracks shall first be cleaned before the crack is sealed. The sealant shall be forced into the cracks by means of the specified sealant applicator. The contractor shall ensure that the sealant mixture actually penetrates the crack and does not merely cover the crack in the form of a bandage. All excess sealant on the road surface wider than 30mm on each side of the crack and 1mm thick shall be removed, and will not be paid for."

- (3) Other sealants

Add the following:

- "(i) Geotextile

Cracks designated by the engineer shall be sealed using a geotextile-based crack sealing method. The geotextile shall be Sealmac (150) or similar.

The crack and surrounding surface shall be cleaned using compressed air and sweeping the area with hand brooms. A tack coat of cationic 65% bitumen emulsion shall be applied at a spray rate of 0,8l/m² by means of a hand applicator. The geotextile shall then be applied to the wet tack coat by hand and rolled with a suitable roller to ensure satisfactory bonding between the geotextile and the road surface. All wrinkles shall be smoothed out. The geotextile is then saturated by applying a final coat of cationic 65% bitumen emulsion by hand at 1,2l/m² which is spread out with a squeegee. The second application of the emulsion may be diluted with water) to aid the saturation of the geotextile. A layer of washed sand as specified in Table 4903/1, not more than 5mm thick, with a nominal stone size of 4,75mm shall then be applied using shovels and the area should be opened to traffic."

- (v) Restrictions

Add the following at the end of the second paragraph:

"This re-application forms part of the measured metre of crack completed and will not be measured separately."

Add the following:

"Crack sealing shall not take place when the conditions are excessively windy or dusty as determined by the engineer."

Add the following sub clause:

- (h) Application and rolling in of heated, precoated aggregate with or without softening of the existing surfacing with an approved heating apparatus.

The work shall only commence when the road temperatures exceeds 30°C.

The Engineer will determine the size of the aggregate to be applied to the designated areas. The aggregate shall comply with the requirements of clause 4302, with the minimum ALD of 5,9mm for the 9,5mm aggregate and 4,2 mm for the 6,7mm aggregate.

The road shall be treated either by brushing in power paraffin to soften the surface of the binder,

or the surface shall be softened by heating apparatus, if so ordered by the Engineer.

The precoated aggregate, heated to 60°C at the time of application shall be applied to the surface at the rate determined by the Engineer and rolled immediately with a flat wheeled (steel) roller as well as a pneumatic-tyred roller having a mass of at least 2t per wheel, until the aggregate is firmly embedded. All loose aggregate not embedded shall be broomed off the road before it is opened to traffic. The road shall only be opened to traffic if the road surface temperature has cooled off sufficiently in the opinion of the Engineer, usually in the late afternoon. When opening the road to traffic the treated areas shall be demarcated with traffic cones and speed limit and "loose stone" signs for at least the first two days. All loose aggregate shall be removed at least twice per day.

Areas where whip-off is excessive after the treatment has been completed shall be retreated in accordance with the Engineer's instructions.

If only one lane shoulder or half the road width is to be treated the application of aggregate shall be finished in a neat line as specified.

B4807 MEASUREMENT AND PAYMENT

Item	Unit
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B48.03 Slurry Seal

Add the following sub item:

"(b) Application of slurry for texture improvement with natural or crusher sand, applied by hand"	cubic metre (m ³)
(i) 20 – 50 m ³	
(ii) 51 – 200 m ³	
(iii) > 201 m ³	

Add the following items:

Item	Unit
------	------

"B48.14 Sealing cracks

(b) Cleaning crack with cold compressed air, priming, and sealing using Class CH-E1 modified binder crack sealant	metre (m)
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The unit of measurement for sealing of cracks shall be the metre of crack sealed as specified.

The tendered rates shall include full compensation for providing, mixing, heating (where required) and applying all the materials as specified, and for all equipment, labour, supervision and incidentals for completing the work. No additional payment will be made for multiple applications of material, and payment will not distinguish between the various types, widths or lengths of cracks.

B48.15 Sealing cracks with 200 mm wide geotextile	metre (m)
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The unit of measurement shall be the linear metre crack sealed with the geotextile as specified.

The tendered rate shall include full compensation for procuring and supplying all materials, labour, transport and other incidentals required to complete the work in accordance with the specifications."

SECTION B5700: ROAD MARKINGS**5701 SCOPE**

Replace South African Road Traffic Signs Manual in the second paragraph with:

“SADC Road Traffic Signs Manual”

5702 MATERIALS

Road studs

Replace the second sentence with the following:

“All square road studs shall have a footprint of 100mm x 100mm and a height of 20mm. Round road studs shall be 100mm in diameter and 20mm in height. Only non-metallic products with glass as reflective material shall be used. Shank road studs shall be used on the outside slow lane shoulders.

B5706 Setting out the road markings

Add the following:

“Where road markings are to be replaced after milling/overlay seal, it is essential that all existing barrier lines and other road marking lines be accurately referenced before commencement of milling or other operations which will obliterate the existing road markings. The position of barrier lines shall be reassessed on site by the engineer before the contractor commences with the road marking.”

B5707 Applying the paint

Replace the last paragraph with the following:

“The centre-line shall be painted immediately after 2.0 km of continuous road has received a new asphalt layer, or 4km of continuous road has received a new seal surfacing or where, in the opinion of the engineer, conditions are unsafe.

Add the following to the 6th paragraph:

“Water based road marking paint shall be applied at a nominal application rate of:

- on aggregate seals: 0,6ℓ/m²
- on other surfaces: 0,5ℓ/m²

Replace the last paragraph with the following new paragraphs:

“The permanent marking shall be painted within 7 calendar days of a section of seal being completed.

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.”

B5709 ROADSTUDS

Add the following to the second paragraph:

“The “approved” epoxy resin shall be according to the manufacturers specification and recommendations. Where road studs are to be replaced after seal work, it is essential to ensure that there is sufficient bonding adhesive so that the road stud is well supported and bonded.”

B5710 TOLERANCES

Alignment of markings

Add the following paragraphs:

"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 or 10mm 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 centreline of the road."

Add the following sub-clause: "(e) Testing**(i) Plant**

Before painting any permanent roadmarkings, 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:

- (1) that the painting machine is in good working order and properly adjusted;
- (2) that the operator is fully experienced; and
- (3) 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."

SECTION 8100: TESTING MATERIALS AND WORKMANSHIP**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:

- 1) Apparatus
Suitable pans or basins
Ethylene Glycol solution
Stirring rod
- 2) 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.

- 3) 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 |

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.”

B8117 FIELD BINDER TRANSVERSE DISTRIBUTION ("BAKKIE") TEST

1. SCOPE

This method sets out the procedure for the simple field determination of the transverse distribution of a binder distributor. Certain statistical criteria are applied to the results to determine conformance with requirements.

2. DEFINITION

The purpose of the test is to determine conformance of the transverse distribution of the spray bar, as measured by direct discharge from sets of 3 nozzles, using the project binder.

3. APPARATUS

3.1 Steel troughs

Steel troughs fitted with handles and manufactured from 3 mm mild steel plate, conforming to the following or similar dimensions:

Width	-	265 mm
Depth	-	405 mm
Height	-	300 mm

A total of 14 troughs are required for a 4,2 m wide spray bar. Each trough must be clearly numbered on its side.

3.2 Balance

A balance capable of weighing up to 50 kg to an accuracy of 20 g.

3.3 Personal protective clothing

The appropriate safety gear must be worn when performing this test and should include a pair of asbestos gloves, face shield and approved overalls.

3.4 Cleaning fluid

Diesel or other suitable fluid.

4. PREPARATION OF THE BINDER DISTRIBUTOR

Ensure that all the binder strainers on the sprayer have been cleaned.

Preheat the binder in the distributor tank to within $\pm 5^\circ\text{C}$ of the required spray temperature.

Circulate the binder through the spray bar for at least 15 minutes.

4.1 Position the spray bar over a full-length drip tray. A short preliminary spray is made to ensure that all the nozzles are functioning and that the machine is in normal working condition. Suck back the binder from the drip tray into the distributor tank on completion of test spray.

4.2 If necessary, correct any malfunctioning of the spray bar.

5. METHOD

5.1 Ensure that all troughs are clean and free of any water or other materials.

5.2 Place the pre-weighed steel troughs described in 3.1 under the spray bar in such a manner that the discharge of each set of three nozzles are collected in one trough. Ensure that the troughs

are placed in numerical order.

- 5.3 Adjust the spray bar height to ensure that the nozzles are below the sides of the trough.
- 5.4 Increase the bitumen pump speed to yield the desired triple spray overlap in accordance to the type of nozzles and type of binder being used. Typically this could vary between 12 and 20 litres per minute for conventional binders.
- 5.5 Open the nozzles and spray sufficient binder to fill the troughs without risking spillage during handling.
- 5.6 Weigh the troughs to determine the mass of binder sprayed.
- 5.7 On completion of the weighing and before the binder cools suck back the binder into the distributor tank.
- 5.8 Only clean the troughs with a suitable cleaning fluid once they have cooled down to room temperature.
- 5.9 Store used cleaning fluid in a suitable container for re-use.

6. CALCULATION AND REPORT

- 6.1 Determine the net mass of binder in each trough to the nearest 20 grams.

$$\text{Net mass binder} = (M_1, M_2, M_3 \dots M_n).$$

- 6.2 Calculate the average mass of the binder collected in all the troughs.

$$M_{ave} = \sum (M_1 \dots M_n) / n$$

where n = number of troughs

- 6.3 Calculate the deviation from the average mass for every trough and express the value as a percentage.

$$\% \text{ Deviation} = (M_{ave} - M_i) / M_{ave} \times 100$$

- 6.4 If the transverse distribution is out of specification, make the necessary adjustments to the spray bar and repeat the test.
- 6.5 Report results on a suitable report sheet.
- 6.6 Update the 'bakkie' test record with the relevant information for the distributor.

7. ACCURACY

Due to the varying nature of the different types of binders, cognisance must be taken of the respective binder's viscosity at spray temperature when establishing achievable tolerances, namely:

Conventional binders	40 – 100 CPs
Polymer modified binders	120 – 200 CPs
Bitumen rubber	2,000 – 3,000 CPs

B8117 MEASUREMENT AND PAYMENT

Add the following pay item :

- 81.02 Other special tests requested by engineer

(o) Cost of special testing	Prov. Sum
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C3.3 PARTICULAR SPECIFICATIONS

In addition to the Standardised and Project Specifications the following Particular Specifications shall apply to this contract and are bound in hereafter.

PART C ENVIRONMENTAL MANAGEMENT SPECIFICATION & PLAN

PART D DAYWORKS

PART E OHSA 1993 SAFETY SPECIFICATION

PART C. ENVIRONMENTAL MANAGEMENT SPECIFICATION & PLAN

SCOPE AND STATUS

Part C of the Particular Specifications comprises two sections:

- Section 1 is the generic Environmental Management Specification of the Employer that applies to all road construction projects undertaken by the Employer.
- Section 2 is the Environmental Management Plan for the project that was compiled following a comprehensive Environmental Impact Scoping Study, Environmental Impact Study, and specialist studies. The Environmental Management Plan addresses the impacts and mitigation measures relevant to the specific project.

A further specification document is being compiled at present, being the Environmental Management Programme for the borrow pits. This will be issued to the successful contractor.

In the event of a discrepancy between the above documents and the project specifications, the precedence shall be in the following order:

- Any approved specialist studies, including the Environmental Management Programme for the borrow pits
- The Environmental Management Plan for the project
- Any other requirements as set out elsewhere in the contract document that has a bearing on the environment
- The generic Environmental Management Specification.

PART C Section 1: ENVIRONMENTAL MANAGEMENT SPECIFICATION
C.1 General

In order to ensure that the construction works is carried out in an environmentally sensitive matter, strict compliance to the Environmental Management Plan and specifications is required. The purpose of the EMP&S is to:

- Encourage good management practices through planning and commitment to environmental issues,
- Provide rational and practical environmental guidelines to:
 - i. Minimise disturbance of the natural environment,
 - ii. Prevent pollution of land, air and water,
 - iii. Prevent soil erosion and facilitate re-vegetation.
- Adopt the best practicable means available to prevent or minimise adverse environmental impact,
- Develop waste management practices based on prevention, minimisation, recycling, treatment or disposal of wastes,
- Train employees and contractors with regard to environmental obligations.

C.2 Training and Induction of Employees

- The Contractor has a responsibility to ensure that all those people involved in the project are aware of and familiar with the environmental requirements for the project (this includes sub-contractors, casual labour, etc.). The CMP shall be part of the terms of reference for all contractors, sub-contractors and suppliers.

C.3 Complaints Register and Environmental Incident Book

Any complaints received by the project team from the public will be recorded. The complaint should be brought to the attention of the site manager, who will respond.

The following information must be recorded:

- Time, date and nature of the complaint,
- Type of communication (telephone, letter etc),
- Name, contact address and telephone number of the complainant,
- Response and investigation undertaken and
- Actions taken and by whom.

All complaints received will be investigated and a response given to the complainant within 14 days.

All environmental incidents occurring on the site will be recorded. The following information will be provided:

- Time, date, location and nature of the incident,
- Actions taken and by whom.

C.4 Site Cleanliness and Neatness

- Location of a construction camp is to be approved by the Engineer and is to be restored to its previous condition after completion of construction.
- The construction camp should preferably be fenced with a 1.8m bonnox fence or similar approved.
- All materials, equipment, plant and vehicles must be stored within the construction camp.
- A dedicated area must be made available for construction staff to change and store their personal belongings.

C.5 Access

- Access to existing roads, schools, buildings, shops and residential properties must not be impeded during construction.
- Access roads utilised by the Contractor must be maintained in good condition.

C.6 Borrow Pits

- Mining authorisations (permits) for borrow pits must be obtained from the Department of Minerals and Energy (DME) in consultation with the Department of Water Affairs and Forestry (DWAF).
- Spoil dumps resulting from borrow pits must not interfere with any natural surface drainage.
- Borrow pits must be rehabilitated after use in accordance with the requirements of DME and DWAF.

C.7 Dust Control / Air Quality

- Dust suppression measures must be implemented during construction by ensuring that all surfaces prone to dust generation are kept damp (e.g. use of water tanker).
- Ensure that vehicles and equipment are in good working conditions and that emissions are not excessive.
- Special care must be taken in areas where the route passes close to schools and residential areas.
- The speed of construction vehicles must be reduced.

C.8 Fauna

- Contractor staff may not chase, catch or kill animals encountered during construction.

C.9 Fire Prevention and Control

- Smoking is prohibited in the vicinity of flammable substances.
- The contractor must ensure that fire-fighting equipment is available on site, particularly where flammable substances are being stored or used, and that construction staff are aware of where it is kept and how it is operated.
- Fires started for comfort (warmth) are prohibited, due to the risk of veld fires and risk to adjacent property owner's lands.

C.10 Grave Sites

- Gravesites in close proximity to the road must not be disturbed during construction.

C.11 Materials Handling and Spills Management

- Any hazardous materials to be used during construction (e.g. lime, fuel, paint, etc) are to be stored in a designated area at the campsite.
- The storage containers/facilities (including any diesel/petrol tanks) must be placed on an impermeable surface and surrounded by a bund wall, in order to ensure that accidental spillage does not pollute the environment.
- Workers must at all times be made aware of the health and safety risks associated with any hazardous substances used (e.g. smoking near fuel tanks), and must be provided with appropriate protective clothing/equipment in case of spillages or accidents.
- Ensure all staff and contractors undergo relevant training in the maintenance of equipment to prevent the accidental discharge or spill of fuel, oil, lubricants and other chemicals.
- Any spill of potentially hazardous materials must be cleaned up immediately

(Potentially hazardous materials on site include paint, oil, grease, fuel, turpentine, etc).

- The area of contaminated soil or spill must be deposited into the hazardous waste container(s).
- The contractor should keep Peat Sorb or a similar absorbent on site to clean up any spills. The absorbent must be stored in a designated area and be available for inspection.
- All spills are to be recorded in the environmental incident book.

C.12 Noise

- Noise generating activities must be restricted to between 07h00 and 17h00 Monday to Friday, unless otherwise approved by the appropriate competent person in consultation with adjacent landowners/affected persons.
- All equipment, vehicles and machinery must be in good working condition and be equipped with sound mufflers if necessary.
- Construction staff must be trained and made aware of not creating unnecessary noise such as hooting and shouting.

C.13 Pollution Control

- Soil and water pollution through usage of fuel, oil, paint, bitumen or other hazardous substances must be avoided.
- All construction vehicles are to be maintained in good working order so as to prevent soil or water pollution from oil, fuel or other leaks, and to reduce noise pollution.

C.14 Rivers and Streams

- During construction of bridge structures, there must be no obstruction of the water flow of rivers and streams.
- Excavated material must not be stockpiled on or near riverbanks, in order to prevent sedimentation occurring.
- Erosion control measures must be employed both during and after construction.
- No impediments to natural surface water flow, other than approved erosion control measures, must occur.

C.15 Safety

- Safety measures, such as detour signs, must be implemented during construction to ensure the safety of workers, pedestrians and drivers/passengers in vehicles in the vicinity of construction work.
- Special care must be taken in the vicinity of schools to ensure the safety of children wishing to cross the road under construction.
- The relevant signage (e.g. speed control signs) must be erected alongside the road during the operation phase in order to control traffic.
- Accommodation must be made for pedestrian pathways alongside the road during the construction and operation phases.

C.16 Soil Management

- Stormwater drainage pipes must be installed alongside the road in all areas susceptible to soil erosion.
- Erosion should be minimised by the construction of meadow drains and the planting of indigenous vegetation on the side slopes and drains to reduce flow velocity of stormwater.
- Spoil from cuts may be used in existing erosion galleys.
- Stone pitching and gabions should be constructed at pipe culvert outlets.
- Accidental spills of contaminants onto the ground e.g. oil, concrete, fuel and chemicals should be removed together with the contaminated soil.

- If necessary an absorbent such as Peat Sorb should be used the aid in cleaning up the spill. The contaminated soil should be disposed of in an appropriate container, depending on its classification.
- Servicing and re-fuelling of vehicles must only be carried out at construction camp.

C.17 Worker Conduct

Code of Conduct for Construction Personnel:

- Do not leave the construction site untidy and strewn with rubbish which will attract animal pests.
- Do not set fires.
- Do not cause any unnecessary, disturbing noise at the construction camp/site or at any designated worker collection/drop off points.
- Do not drive a construction-related vehicle under the influence of alcohol.
- Do not exceed the national speed limits on public roads or exceed the recommended speed limits on the site.
- Do not drive a vehicle which is generating excessive noise or gaseous pollution (noisy vehicles must be reported and repaired as soon as possible).
- Do not litter along the roadsides, including both the public and private roads.
- Do not pollute any water bodies (whether flowing or not).
- No member of the construction team is allowed to enter the areas outside the construction site.

C.18 Traffic Disturbances and Diversions

- Any traffic diversions must be undertaken with the approval of all relevant authorities and in accordance with all relevant legislation.
- Wherever possible, traffic diversion must only take place on existing disturbed areas and remain within the existing road reserve.
- Traffic diversion routes must be rehabilitated after use.

C.19 Vegetation

- Only vegetation falling directly on the route must be removed where necessary.
- Alien vegetation within the road reserve must be eradicated, and management measures must be implemented for future control of these species.
- Vegetation that has been removed from large areas (e.g. on traffic diversion routes) during construction must be replaced with indigenous vegetation after construction has been completed.

C.20 Waste Management

- All general, non-hazardous waste must be placed in a skip container and disposed of at a registered waste disposal site.
- The contractor is to ensure that the portable toilet facilities at the campsite are properly maintained and in working order.
- No disposal, or leakage, of sewage must occur on or near the site.
- All hazardous waste (e.g. oil, paint, empty lime bags, contaminated wash water, etc) must be stored in leakproof containers and disposed of at a registered hazardous waste disposal site.
- The contents of waste storage containers must, under no circumstances, be emptied to the surrounding area. In general, littering, discarding or burying of any materials is not allowed on site or along the route.
- Adequate waste receptacles must be available at strategic points around the construction camp and site for all domestic refuse and to minimise the occurrence of littering.
- Concrete rubble must be collected and disposed of as directed by the Project Manager.
- Each working area must be cleared of litter and building waste (e.g. rubble, wood,

- concrete packets etc) on completion of the day's work.
- Any spill around the container(s) should be treated as per Section C11 and C16.

PART C Section 2 : ENVIRONMENTAL MANAGEMENT PLAN

In this document, where Barberton Chamber of Business is mentioned, it shall mean Department of Public Works, Roads and Transport, Mpumalanga Province.

The Environmental Management Plan refers to the scoping report that can be obtained from Mr Butch Rossouw at tel 082-3399627.

The Record of Decision is also attached herewith. Highlighted form the ROD is that the Employer shall appoint an Environmental Compliance Officer. His duties and responsibilities are set out in the ROD and as further described elsewhere in this document.

The contract makes provision for penalties for non-compliance. This penalty system shall be under the control of the ECO, in liaison with the Engineer. The ECO's ruling shall be final and binding. Any warnings shall be only on the discretion of the ECO.

Payment

Schedule E of the Bill of quantities contain the penalties that shall apply to non-compliance. The penalties shall be subtracted from the monthly payment in this schedule.

A provisional amount is allowed in Item C10.04 for covering the cost of the services and services of the ECO. Even though the payment regarding the costs of the ECO is administered by the Contractor under this contract, the ECO is an independent advisor and auditor in the Employ of the Employer. Certification of the payment to the ECO shall be solely under the Engineer.

A provisional sum is allowed under Item 10.05 to cover any specific mitigation measures that might be ordered by the ECO that are not measured elsewhere in the Bill of Quantities. As specialist advisor regarding the environment during the implementation phase, the ECO shall advise not only on the utilization of the civil engineering activities aimed at mitigating environmental impact such as grassing, top-soiling, erosion protection, but shall be responsible to design more detailed mitigating measures of an aesthetic or scientific nature. The ECO shall discretionally allocate this provisional sum for this category of mitigating measures, in liaison with the Engineer and the Community Forum. Out of this sum, the contractor's expenses and costs plus a 10% handling fee shall be paid.

PART D: DAYWORKS

This part of the Project Specifications deals with the provision for Dayworks in the Schedule of Quantities. Rates for Dayworks shall be entered in Section 1800 of the Schedule of Quantities in accordance with the following specifications.

D. 1 SCOPE

According to clause 37.2 of the general conditions of contract for construction works (GCC) 2015 edition, certain work may be carried out using rates tendered in the daywork schedule. A schedule of personnel, plant and equipment which may be necessary to perform work on a daywork basis is included in the schedule of quantities. The quantities used in the schedule are for tender evaluation purposes only and the use or not of these items shall not constitute a variation in terms of Clause 37 of the General Conditions of Contract 2015 edition.

No work will be paid for as Dayworks without the written instruction or approval of the Engineer.

D. 2 TYPE OF WORK

The Engineer may order daywork in certain cases where it is necessary to vary or to extend the works due to new or unforeseen circumstances to such an extent that the tendered rates for specific items of work are no longer applicable, or where no suitable combination of tendered rates can be used to pay for such work.

As a general rule, applicable rates for additional work items will be agreed between the Contractor and the Engineer. Dayworks will only be used in exceptional circumstances.

D. 3 MATERIALS

Materials for use in works carried out under Daywork shall be purchased by the Contractor who shall also arrange for delivery to site, and shall be responsible for any other requirements associated with specific materials. A Provisional Sum has been allowed in Schedule D for Daywork materials. The Contractor shall enter a tendered percentage in the schedule to cover his handling costs and profit, as per other provisional and prime cost sums in this Contract.

Materials shall be paid for using the method described in the Pricing Data. No contract price adjustment will be applicable to materials.

The Contractor shall submit proof of ownership for any materials used in Dayworks with his dayworks claim to the Engineer. Further, if specific materials are required for Dayworks, quotations will be called for as per Clause 37.2.4 of the General Conditions of Contract 2015 edition.

D. 4 CONSTRUCTION PLANT HIRE

Where daywork is ordered, the tendered rates for plant hire in Schedule D shall be used in calculating the payment due for any plant required to execute the daywork.

If no rate is included in the schedule for a particular piece of equipment, and where no other rate or combination of rates would provide suitable compensation, then the daywork method of payment described in Clause 37.2.3 of the General Conditions of Contract 2015 edition will be used.

The tendered rates for each item of constructional plant shall include for all operating costs associated with the said item of plant. Such costs are deemed to include fuel, re-fuelling costs, lubrication and routine servicing / maintenance, breakdowns and spares, all overhead costs, site management costs and administration costs. The tendered rates shall also include the plant operator and the general supervision of the plant while it is engaged in the dayworks.

D. 5 SALARIES AND WAGES OF WORKERS

The salaries and wages of workmen executing daywork shall be paid for using the tendered rates in Schedule D. The tendered rates shall include for all costs associated with the employment of personnel, including salaries, wages, allowances, workmen's compensation, medical aid and pension contributions, government levies and taxes, training costs and any costs associated with living on the site. The tendered rates shall also include for the transportation of the workmen to the site of the dayworks.

All overhead costs, administration costs, site management costs and the Contractor's profit are deemed to be covered by the Dayworks rates and no additions or mark ups will be made to the tendered rates.

The tendered rates shall also include any hand tools normally associated with the workmen's job description e.g. picks, shovels, hammers, saws, spirit levels, etc. The tendered rate for labourers shall also include for the casual supervision by a gang boss or foreman. Only when specifically called for by the Engineer, will payment be made for the use of a gang boss or foreman supervising on a continuous basis.

D. 6 MEASUREMENT AND PAYMENT

The following principles shall also apply to the measurement and payment of Dayworks.

The unit of measurement for plant shall be the number of vibroclock hours worked and each item of plant shall be fitted with a vibroclock, the cost of which shall be included in the rates. Excessive non-productive time when the engine is idling will not be paid for. Where there is ambiguity between the flywheel horsepower and mass of the machine, the flywheel horsepower shall govern the measurement category. Where width and mass are specified, mass shall govern the measurement category.

The Contractor's attention is drawn to the requirements of Sub-clauses 37.2.5 and 37.2.6 of the General Condition of Contract 2015 edition with regard to the submission of Dayworks claims.

PART E: OHS 1993 HEALTH AND SAFETY SPECIFICATION

E1. SCOPE

This specification covers the health and safety requirements to be met by the Contractor to ensure a continued safe and healthy environment for all workers, employees and subcontractors under his control and for all other persons entering the site of works.

This specification shall be read with the Occupational Health and Safety Act (Act No 85 and amendment Act No 181) 1993, and the corresponding Construction Regulations 2003, and all other safety codes and specifications referred to in the said Construction Regulations.

In terms of the OHS 1993 Agreement in Section C1.2.4 of the Contract document, the status of the Contractor as mandatory to the Employer (client) is that of an employer in his own right, responsible to comply with all provisions of OHS 1993 and the Construction Regulations 2003.

This safety specification and the Contractor's own Safety Plan as well as the Construction Regulations 2003, shall be displayed on site or made available for inspection by all workers, employees, inspectors and any other persons entering the site of works.

The following are possible risk:

- Working high above the ground on top and below the bridge, most of the time in a restricted environment with limited landings (working platforms)
- Working above a continuously flowing river and in an flood plain environment subject to flooding
- Lifting and lowering of materials and equipment from the ground to the bridge and vice versa, exposed to cross winds
- Steep and restricted access to the lower flood plain below the bridge
- Potentially dangerous existing services, i.e. gas lines, water and sewerage mains, electrical high voltage cables, on the bridge, buried and overhead
- Deep excavations in soils requiring shoring or reducing of slopes
- Blasting of hard rock or demolition of concrete
- High pressure during testing of the new rising main, which could result in potentially dangerous situations in the event of the pipeline or fittings failing
- Potentially harmful gasses when tying into the existing sewer mains
- Movement of construction vehicles on site, taking into consideration steep slopes, other traffic and existing services
- Exposure to possible injuries due to mishandling or failure of power and hand tools
- Falling debris, tools and materials from bridge
- Non-conformance to specifications with regards to fasteners and materials
- Risks related to general safety and security on site

Additional risks may arise from specific methods of construction selected by the Contractor which are not necessary covered in the above.

E2. DEFINITIONS

For the purpose of this contract the following shall apply:

- (a) **Employer** where used in the contract documents and in this specification, means the Employer as defined in the General Conditions of Contract and it shall have the exact same meaning as **client** as defined in the Construction Regulations 2003. **Employer** and **client** is therefore interchangeable and shall be read in the context of the relevant document.
- (b) **Contractor** wherever used in the contract documents and in this specification, shall have the same meaning as **Contractor** as defined in the General Conditions of Contract.

In this specification the terms **principal contractor** and **contractor** are replaced with **Contractor** and **subcontractor** respectively.

For the purpose of this contract the **Contractor** will, in terms of OHS Act 1993, be the mandatory, without derogating from his status as an employer in his own right.

- (c) **Engineer** where used in this specification, means the Engineer as defined in the General Conditions of Contract. In terms of the Construction Regulations the Engineer may act as agent on behalf of the Employer (the client as defined in the Construction Regulations).

E3. TENDERS

The Contractor shall submit the following with his tender:

- (a) a documented Health and Safety Plan as stipulated in Regulation 5 of the Construction Regulations. The Safety Plan must be based on the Construction Regulations 2003 and will be subject to approval by the Employer;
- (b) a declaration to the effect that he has the competence and necessary resources to carry out the work safely in compliance with the Construction Regulations 2003;
- (c) a declaration to the effect that he made provision in his tender for the cost of the health and safety measures envisaged in the Construction Regulations.
- (d) Failure to submit the foregoing with his tender, will lead to the conclusion that the Contractor will not be able to carry out the work under the contract safely in accordance with the Construction Regulations.

E4. NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION WORK

After award of the contract; but before commencement of construction work, the Contractor shall, in terms of Regulation 3, notify the Provincial Director of the Department of Labour in writing if the following work is involved:

- (a) the demolition of structures and dismantling of fixed plant of height of 3,0m or more;
- (b) the use of explosives;
- (c) construction work that will exceed 30 days or 300 person-days;
- (d) excavation work deeper than 1,0m; or
- (e) working at a height greater than 3,0m above ground or landings.

The notification must be done in the form that will be provided.

A copy of the notification form must be kept on site, available for inspection by inspectors, Employer, Engineer, employees and persons on site.

E5. RISK ASSESSMENT

Before commencement of any construction work during the construction period, the Contractor shall have a risk assessment performed and recorded in writing by a competent person. (Refer Regulation 7 of the Construction Regulations 2003).

The risk assessment shall identify and evaluate the risks and hazards that may be expected during the execution of the work under the contract, and it shall include a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards identified.

The risk assessment shall be available on site for inspection by inspectors, Employer, Engineer, subcontractors, employees, trade unions and health and safety committee members, and must be monitored and reviewed periodically by the Contractor.

E6. APPOINTMENT OF EMPLOYEES AND SUBCONTRACTORS**6.1 Health and Safety plan**

The Contractor shall appoint his employees and any subcontractors to be employed on the contract, in writing, and he shall provide them with a copy of his documented Health and Safety Plan, or relevant sections thereof. The Contractor shall ensure that all subcontractors and employees are committed to the implementation of his Safety Plan.

6.2 Health and safety induction training

The Contractor shall ensure that all employees under his control, including subcontractors and their employees, undergo a health and safety induction training course by a competent person before commencement of construction work. No visitor or other person shall be allowed or permitted to enter the site of the works unless such person has undergone health and safety training pertaining to hazards prevalent on site.

The Contractor shall ensure that every employee on site shall at all times be in possession of proof of the health and safety induction training issued by a competent person prior to commencement of construction work.

E7. APPOINTMENT OF SAFETY PERSONNEL**7.1 Construction Supervisor**

The Contractor shall appoint a full-time **Construction Supervisor** with the duty of supervising the performance of the construction work.

He may also have to appoint one or more competent employees to assist the construction supervisor where justified by the scope and complexity of the works.

7.2 Construction safety officer

Taking into consideration the size of the project and the hazards or dangers that can be expected, the Contractor shall appoint in writing a full-time or part-time **Construction Safety Officer** if so decided by the Inspector of the Department of Labour. The Safety Officer shall have the necessary competence and resources to perform his duties diligently.

Provision shall be made by the Contractor in his rates, to cover the cost of this dedicated construction safety officer appointed after award of the contract.

7.3 Health and safety representatives

In terms of **Section 17 and 18 of the Act (OHSA 1993)** the Contractor, being the employer in terms of the Act for the execution of the contract, shall appoint a **health and safety representative** whenever he has more than 20 employees in his employment on the site of the works.

The health and safety representative must be selected from employees who are employed in a full-time capacity at a specific workplace.

The number of health and safety representatives for a workplace shall be at least one for every 100 employees.

The function of health and safety representative(s) will be to review the effectiveness of health and safety measures, to identify potential hazards and major incidents, to examine causes of incidents (in collaboration with his employer, the Contractor), to investigate complaints by employees relating to health and safety at work, to make representations to the employer (Contractor) or inspector on general matters affecting the health and safety of employees, to inspect the workplace, plant, machinery etc. on a regular base, to participate in consultations with inspectors and to attend meetings of the health and safety committee.

7.4 Health and safety committee

In terms of **Sections 17 and 18 of the Act (OHSA 1993)** the Contractor (as employer), shall establish one or more **health and safety committee(s)** where there are two or more health and safety representatives at a workplace. The persons selected by the Contractor to serve on the committee shall be designated in writing.

The function of the health and safety committee shall be to hold meetings at regular intervals, but at least once every three months, to review the health and safety measures on the contract, to discuss incidents related to health and safety with the Contractor and the inspector, and to make recommendations regarding health and safety to the Contractor and to keep record of recommendations and reports made by the committee.

7.5 Competent persons

In accordance with the Construction Regulations the Contractor has to appoint in writing **competent persons** responsible for supervising construction work on each of the following work situations that may be expected on the site of the works.

- (a) Risk assessment and induction training as described in Regulation 7 of the Construction Regulations;
- (b) Fall protection as described in Regulation 8;
- (c) Formwork and support work as described in Regulation 10;
- (d) Excavation work as described in Regulation 11;
- (e) Demolition work as described in Regulation 12;
- (f) Scaffolding work as described in Regulation 14;
- (g) Suspended platform operations as described in Regulation 15;
- (h) Material hoists as described in Regulation 17;
- (i) Batch plant operations as described in Regulation 18;
- (j) Explosive powered tools as described in Regulation 19;
- (k) Cranes as described in Regulation 20;
- (l) Construction vehicle and mobile plant inspections on a daily basis by a
- (m) competent person as described in Regulation 21(1);
- (n) Control of all temporary electrical installation on the construction site as described in Regulation 22;
- (o) Stacking and storage on construction sites as described in Regulation 26; and
- (p) Inspections of fire equipment as described in Regulation 27.

A competent person may be appointed for more than one part of the construction work with the understanding that the person must be suitably qualified and able to supervise at the same time the construction work on all the work situations for which he has been appointed.

The appointment of competent persons to supervise parts of the construction work does not relieve the Contractor from any of his responsibilities to comply with all requirements of the Construction Regulations.

E8. RECORDS AND REGISTERS

In accordance with the Construction Regulations the Contractor is bound to keep records and registers related to health and safety on site for periodic inspection by inspectors, the Engineer, the Employer, trade union officials and subcontractors and employees. The following records and registers must be kept on site and shall be available for inspection at all times.

- (a) A copy of the OHS 1993 Construction Regulations 2003;
- (b) A copy of this Health and Safety Specification;
- (c) A copy of the Contractor's Health and Safety Plan (Regulation 4);
- (d) A copy of the Notification of Construction Work (Regulation 3);
- (e) A health and safety file in terms of Regulation 5(7) with inputs by the Construction Safety Officer (Regulation 6(7));
- (f) A copy of the risk assessment described in Regulation 7;
- (g) A full protection plan and the corresponding records of evaluation and training of employees working from elevated positions as described in Regulation 8;
- (h) Drawings pertaining to the design of structures (Regulation 9(3)) and formwork and support work structures (Regulation 10(d)) must be kept on site;
- (i) Pronouncement of the safety of excavations must be recorded in a register to be kept on site (Regulation 11(3)(h));
- (j) A copy of the certificate of the system design for suspended platforms (Regulation 15(3));
- (k) A notice must be affixed around the base towers of material hoists to indicate the maximum mass load, which may be carried at any one time by material hoists (Regulation 7(5));
- (l) Maintenance records of material hoists and inspection results must be kept in a record book to be kept on site (Regulation 17(8));
- (m) A record of any repairs to or maintenance of a batch plant must be kept on site (Regulations 18(9));
- (n) A warning notice must be displayed in a conspicuous manner when and wherever an explosive powered tool is used (Regulation 19(2));
- (o) A register for recording of findings by the competent person appointed to inspect construction vehicles and mobile plant (Regulation 21(1)(j)).

E9. CONTRACTORS RESPONSIBILITIES

For this contract the Contractor will be the mandatory of the Employer (Client), as defined in the Act (OHS 1993), which means that the Contractor has the status of employer in his own right in respect of the contract. The Contractor is therefore responsible for all the duties and obligations of an employer as set out in the Act (OHS 1993) and the Construction Regulations 2003.

Before commencement of work under the contract, the Contractor shall enter into an agreement with the Employer (Client) to confirm his status as mandatory (employer) for the contract under consideration.

The Contractor's duties and responsibilities are clearly set out in the Construction Regulations 2003, and are not repeated in detail but some important aspects are highlighted hereafter, without relieving the Contractor of any of his duties and

responsibilities in terms of the Construction Regulations.

(a) Contractor's position in relation to the Employer (Client) (Regulation 4)

In accordance with Section 4 of the Regulations, the Contractor shall liaise closely with the Employer or the Engineer on behalf of the Employer, to ensure that all requirements of the Act and the Regulations are met and complied with.

(b) The Principal Contractor and Contractor (Regulation 5)

The Contractor is in terms of the definition in Regulation 2(b) the equivalent of Principle Contractor as defined in the Construction Regulations, and he shall comply with all the provisions of Regulation 5.

Any subcontractors employed by the Contractor must be appointed in writing, setting out the terms of the appointment in respect of health and safety. An independent subcontractor shall however provide and demonstrate to the Contractor a suitable, acceptable and sufficiently documented health and safety plan before commencement of the subcontract. In the absence of such a health and safety plan the subcontractor shall undertake in writing that he will comply with the Contractor's safety plan, the health and safety specifications of the Employer and the Construction Regulations 2003.

(c) Supervision of construction work (Regulation 6)

The Contractor shall appoint the safety and other personnel and employees as required in terms of Regulation 6 and as set out in paragraph 7 above. Appointment of those personnel and employees does not relieve the Contractor from any of the obligations under Regulation 6.

(d) Risk assessment (Regulation 7)

The Contractor shall have the risk assessment made as set out in paragraph 7 above before commencement of the work and it must be available on site for inspection at all times. The Contractor shall consult with the health and safety committee or health and safety representative(s) etc. on a regular basis to ensure that all employees, including subcontractors under his control, are informed and trained by a competent person regarding health hazards and related work procedures.

No subcontractor, employee or visitor shall be allowed to enter the site of works without prior health and safety induction training, all as specified in Regulation 7.

(e) Fall protection (Regulation 8)

Fall protection, if applicable to this contract shall comply in all respects with Regulation 8 of the Construction Regulations.

(f) Structures (Regulation 9)

The Contractor will be liable for all claims arising from collapse or failure of structures if he failed to comply with all the specifications, project specifications and drawings related to the structures, unless it can be proved

that such collapse or failure can be attributed to faulty design or insufficient design standards on which the specifications and the drawings are based.

In addition the Contractor shall comply with all aspects of Regulation 9 of the

Construction Regulations

(g) Formwork and support work (Regulation 10)

The Contractor will be responsible for the adequate design of all formwork and support structures by a competent person.

All drawings pertaining to formwork shall be kept on site and all equipment and materials used in formwork, shall be carefully examined and checked for suitability by a competent person.

The provisions of Regulation 10 of the Construction Regulations shall be followed in every detail.

(h) Excavation work (Regulation 11)

It is essential that the Contractor shall follow the instructions and precautions in the Standard Specifications and Project Specifications as well as the provisions of the Construction Regulations to the letter as unsafe excavations can be a major hazard on any construction site. The Contractor shall therefore ensure that all excavation work is carried out under the supervision of a competent person, that inspections are carried out by a Professional Engineer or Technologist, and that all work is done in such a manner that no hazards are created by unsafe excavations and working conditions.

Supervision by a competent person will not relieve the Contractor from any of his duties and responsibilities under Regulation 11 of the Construction Regulations.

(i) Demolition work (Regulation 12)

Whenever demolition work is included in a contract, the Contractor shall comply with all the requirements of Regulation 12 of the Construction Regulations. The fact that a competent person has to be appointed by the Contractor does not relieve the Contractor from any of his responsibilities in respect of safety of demolition work.

(j) Tunnelling (Regulation 13)

The Contractor shall comply with Regulation 13 wherever tunnelling of any kind is involved.

(k) Scaffolding (Regulation 14)

The Contractor shall ensure that all the provisions of Regulation 14 of the Construction Regulations are complied with. [Note: Reference in the Regulations to "Section 44 of the Act" should read "Section 43 of the Act"].

(l) Suspended platforms (Regulation 15)

Wherever suspended platforms will be necessary on any contract, the Contractor shall ensure that copies of the system design issued by a Professional Engineer are submitted to the Engineer for inspection and approval. The Contractor shall appoint competent persons as supervisors and competent scaffold erectors, operators and inspectors and ensure that all

work related to suspended platforms are done in accordance with Regulation 15 of the Construction Regulations.

(m) Boatswain's chains (Regulation 16)

Where boatswain's chains are required on the construction site, the Contractor shall comply with Regulation 16.

(n) Material Hoists (Regulation 17)

Wherever applicable, the Contractor shall comply with the provisions of Regulation 17 to the letter.

(o) Batch plants (Regulation 18)

Wherever applicable, the Contractor shall ensure that all lifting machines, lifting tackle, conveyors, etc. used in the operation of a batch plant shall comply with, and that all operators, supervisors and employees are strictly held to the provisions of Regulation 18.

The Contractor shall ensure that the General Safety Regulations (Government Notice R1031 of 30 May 1986), the Driven Machinery Regulations (Government Notice R295 of 26/2/1988) and the Electrical Installation Regulations (Government Notice R2271 of 11/10/1995) are adhered to by all involved.

In terms of the Regulations, records of repairs and maintenance shall be kept on site.

(p) Explosive powered tools (Regulation 19)

The Contractor shall ensure that, wherever explosive-powered tools are required to be used, all safety provisions of Regulation 19 are complied with.

It is especially important that warning notices are displayed and that the issue and return of cartridges and spent cartridges be recorded in a register to be kept on site.

(q) Cranes (Regulation 20)

Wherever the use of tower cranes becomes necessary, the provisions of Regulation 20 shall be complied with.

(r) Construction vehicles And mobile plant (Regulation 21)

The Contractor shall ensure that all construction vehicles and plant are in good working condition and safe for use, and that they are used in accordance with their design and intended use.

The vehicles and plant shall only be operated by workers or operators who have received appropriate training, all in accordance with all the requirements of Regulation 21.

All vehicles and plant must be inspected on a daily basis, prior to use, by a competent person and the findings must be recorded in a register to be kept on site.

(s) Electrical installation and machinery on construction sites (Regulation 22)

The Contractor shall comply with the Electrical Installation Regulations (Government Notice R2920 of 23 October 1992) and the Electrical Machinery Regulations (Government Notice R1953 of 12 August 1993). Before commencement of construction, the Contractor shall take adequate steps to ascertain the presence of, and guard against dangers and hazards due to electrical cables and apparatus under, over or on the site.

All temporary electrical installations on the site shall be under the control of a

competent person, without relieving the Contractor of his responsibility for the health and safety of all workers and persons on site in terms of Regulation 22.

- (t) Use of temporary storage of flammable liquids on construction sites (Regulation 23)

The Contractor shall comply with the provisions of the General Safety Regulations (Government Notice R1031 of 30 May 1986) and all the provisions of Regulation 23 of the Construction Regulations to ensure a safe and hazard-free environment to all workers and other persons on site.

- (u) Water environments (Regulation 24)

Where construction work is done over or in close proximity to water, the provisions of Regulation 24 shall apply.

- (v) Housekeeping on Construction sites (Regulation 25)

Housekeeping on all construction sites shall be in accordance with the provisions of the environment Regulations for workplaces (Government Notice R2281 of 16 October 1987) and all the provisions of Regulation 25 of the Construction Regulations.

- (w) Stacking and storage on construction sites (Regulation 26)

The provisions for the stacking of articles contained in the General Safety Regulations (Government Notice R1031 of 30 May 1986) as well as all the provisions Regulation 26 of the Construction Regulations shall apply.

- (x) Fire precautions on construction sites (Regulation 27)

The provisions of the Environmental Regulations for Workplaces (Government Notice R2281 of 16 October 1987) shall apply.

In addition the necessary precautions shall be taken to prevent the incidence of fires, to provide adequate and sufficient fire protection equipment, sirens, escape routes etc. all in accordance with Regulation 27 of the Construction Regulations.

- (y) Construction welfare facilities (Regulation 28)

The Contractor shall comply with the construction site provisions as in the Facilities Regulations (Government Notice R1593 of 12 August 1988) and the provisions of Regulation 28 of the Construction Regulations.

- (z) Non-compliance with the Construction Regulations 2003

The foregoing is a summary of parts of the Construction Regulations applicable to all construction projects.

The Contractor, as employer for the execution of the contract, shall ensure that all provisions of the Construction Regulations applicable to the contract under consideration are complied with to the letter.

Should the Contractor fail to comply with the provisions of the Regulations 3 to 28 as listed in Regulation 30, he will be guilty of an offence and will be liable, upon conviction, to the fines or imprisonment as set out in Regulation 30.

The Contractor is advised in his own interest to make a careful study of the Act and the Construction Regulations as ignorance of the Act and the Regulations will not be accepted in any proceedings related to non-conformance to the Act and the Regulations.

E10. MEASUREMENT AND PAYMENT

10.1 Principles

It is a condition of this contract that Contractors, who submit tenders for this contract, shall make provision in their tenders for the cost of all health and safety measures during the construction process. All associated activities and expenditure are deemed to be included in the Contractor's tendered rates and prices.

(a) Safety personnel

The Construction Supervisor, the Construction Safety Officer, Health and Safety Representatives, Health and Safety Committee and Competent Persons referred to in clauses 7.1 to 7.5 shall be members of the Contractor's personnel, and no additional payment will be made for the appointment of such safety personnel.

(b) Records and Registers

The keeping of health and safety-related records and registers as described in 8 is regarded as a normal duty of the Contractor for which no additional payment will be considered, and which is deemed to be included in the Contractor's tendered rates and prices.