

GEORGE MUNICIPALITY



CIDB DOCUMENT FOR TENDER NO: T/ING/004/2022

FRAMEWORK CONTRACT DOCUMENT (PANEL TYPE)

FOR THE

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND
ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

VOLUME 3 (RETURNABLE DOCUMENT)

Enquiries: MR LIONEL DANIELS TEL: (044) 801 9275 CELL: (+27) 082 509 5061 e-mail: rldaniels@george.gov.za	Issued by: THE CITY COUNCIL GEORGE MUNICIPALITY P O BOX 19, GEORGE, 6530 YORK STREET, GEORGE, 6530
SUMMARY FOR TENDER OPENING PURPOSES	
NAME OF TENDERER:	
CENTRAL SUPPLIER DATABASE NO.:	MAAA
TENDER (CONTRACT) PRICE (INCLUDING VAT)	R
TOTAL TIME FOR COMPLETION (WEEKS)	
PREFERENCES CLAIMED FOR:	
B-BBEE Status Level of Contributor:	
Preference Points Claimed:	
B-BBEE certificates submitted with the tender document MUST be VALID ORIGINAL B-BBEE CERTIFICATES or VALID CERTIFIED COPIES OF THE B-BBEE CERTIFICATES	
TENDER CLOSES AT 12H00 ON MONDAY, 16 MAY 2022	

For official use.
Signatures of SCM Officials at Tender Opening
1.
2.

TENDERER CONTACT DETAILS

This information shall be used for any correspondence or contact with the tenderer.

Please indicate whether you want to receive any correspondence via e-mail or send to your postal address by registered mail.

Name of Bidding Company:		Mark choice of correspondence with X
Postal Address:	..... ..... ..... ..... Postal Code:	
E-mail Address:	.....
Telephone Number:	.....
Cellular Number:	.....
Facsimile Number:	.....

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

GENERAL TENDER INFORMATION

TENDER ADVERTISED	: Thursday, 14 April 2022
ESTIMATED CIDB CONTRACTOR GRADING DESIGNATION	: 6CE or higher
COMPULSORY CLARIFICATION MEETING	: Monday, 25 April 2022 at 10:00
VENUE FOR CLARIFICATION MEETING	: Briefing session via Microsoft Teams. Registration per e-mail to Mr Marc Jacobs with e-mail address mcjacobs@george.gov.za before 10:00 on 22 April 2022 to receive an invite for the compulsory MS TEAMS meeting.
CLOSING DATE	: Monday, 16 May 2022
CLOSING TIME	: 12H00
LOCATION OF TENDER BOX	: Tender Box at the George Municipality, on the First Floor, Directorate: Financial Services, Supply Chain Management Unit, Civic Centre, York Street, George

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

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GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND
ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

THE TENDER (PART T1)

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

T1.2 TENDER DATA T1.3

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Tender Notice and Invitation to Tender (T1.1)

<p>Tenders word hiermee ingewag vir die:</p> <p>AANSTEL VAN KONTRAKTEURS VIR DIE REHABILITASIE, HERSEËL EN VERWANTE WERKE VAN DIE STRATE IN GEORGE VIR 'N TYDPERK VAN DRIE JAAR.</p> <p>Voltooide tenders in 'n verseëelde koevert, duidelik gemerk:</p> <p>Tender Nr.: T/ING/004/2022 moet voor Maandag, 16 Mei 2022 om 12:00 in die tender bus by die George Munisipaliteit, Eerste Vloer, Direkoraat: Finansiële Dienste, Voorsieningskanaaleenheid, Burgersentrum, Yorkstraat, George geplaas word. Geen tenders sal toegelaat word om na 12:00 in die tender bus geplaas te word nie. Tenders sal om 12:05 dieselfde dag in die Komiteekamer oopgemaak word. Laat of ongemerkte tenders sal nie oorweeg word nie. Geen tenders per faks of e-pos sal aanvaar word nie.</p> <p>Tenderaars moet by die CIDB geregistreer wees en dit word geraam dat tenderaars 'n CIDB kontrakteursgraderingsvlak van 6CE of hoër moet hê.</p> <p>'n Verpligte inligtingsvergadering met verteenwoordigers van die Werkgewer sal op Maandag, 25 April om 10:00 gehou word via Microsoft Teams. Tenderaars moet teen 10:00 op Vrydag, 22 April 2022 per e-pos registreer by Mnr Marc Jacobs by e-pos adres: mcjacobs@george.gov.za om 'n uitnodiging na die verpligte inligtingsessie te ontvang. Indien tenderaars nie voor 10:00 op Vrydag, 22 April 2022 vir bywoning by Mnr Marc Jacobs geregistreer het nie; sal tenderaars nie die verpligte inligting sessie kan bywoon nie en sal u tender ongeldig wees.</p> <p>Indien die verpligte inligtingsvergadering nie bygewoon word nie, sal u tender gediskwalifiseer word.</p> <p>Tender dokumente is verkrygbaar teen 'n R1 000.00 nie-terugbetaalbare deposito by die Voorsieningskanaal Bestuurseenheid op die 1ste Vloer, Burgersentrum, Yorkstraat, George. Elektroniese kopieë sal beskikbaar gestel word teen geen koste.</p> <p>Harde-kopie tender dokumente moet vooraf bespreek word by die Konsultant, Zutari (Edms) Bpk. per epos by george@zutari.com voor 12:00 op Dinsdag 19 April 2022. Tender dokumente sal vanaf Vrydag, 22 April 2022 om 12:00</p>	<p>Tenders are hereby invited for the:</p> <p>APPOINTMENT OF CONTRACTORS FOR THE ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS IN GEORGE FOR A PERIOD OF THREE YEARS.</p> <p>Completed tenders in a sealed envelope, clearly marked:</p> <p>Tender No.: T/ING/004/2022 must be placed in the tender box at the George Municipality on the First Floor, Directorate: Financial Services, Supply Chain Management Unit, Civic Centre, York Street, George by no later than 12:00 on Monday, 16 May 2022. Tenders are not allowed to be placed in the tender box after 12:00. Tenders will be opened on the same day in the Committee Room at 12:05. Late or unmarked tenders will not be considered. No tenders per fax or e-mail will be accepted.</p> <p>Tenderers must be registered with the CIDB and it is estimated that tenderers should have a CIDB contractor grading designation of 6CE or higher.</p> <p>A compulsory clarification meeting with representatives of the Employer will be held on Monday 25 April 2022 at 10h00 via Microsoft Teams. Tenderers must register per e-mail at Mr Marc Jacobs with e-mail address mcjacobs@george.gov.za before 10:00 on Friday 22 April 2022 to receive an invite for the compulsory Information session. If tenderers do not register for attendance before 10:00 on Friday 22 April 2022 with Mr Marc Jacobs; tenderers will not be able to attend the compulsory Information session which will invalidate their tender.</p> <p>Non-attendance of the compulsory briefing session will disqualify your tender.</p> <p>Tender documents are available at a non-refundable deposit of R1 000.00 each from the Supply Chain Management Unit, First Floor, Civic Centre, York Street, George. Electronic copies will be made available without cost.</p> <p>Hard-copy tender documents must be pre-ordered from the Consultant, Zutari (Pty) Ltd. per email at george@zutari.com before 12:00 on Tuesday 19 April 2022 prior to collection. Tender documents will be available from 12:00 on Friday 22 April 2022 and can be collected during business hours at Zutari (Pty) Ltd. at 65 York Street, Suite 201, Bloemhof Building, George</p>
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beskikbaar wees. Bewys van betaling aan George Munisipaliteit is nodig om die tender dokumente by Zutari (Pty) Ltd. tydens werksure by York Straat 65, Suite 201, Bloemhof Gebou, George af te haal.

Tenders sal as volg ge-evalueer word:

Fase 1 : Voorbepaalde Kriteria

Slegs tenderaars wat 'n minimum van 60 uit 100 punte behaal in fase 1, sal verder vir evaluering in fase 2 oorweeg word.

Fase 2:

Tenders sal ge-evalueer en toegeken word in terme van die Wet op die Raamwerk vir Voorkeurverkrygingsbeleid (Wet 5 van 2000) Regulasies 2017, asook George Munisipaliteit se Voorsieningskanaal Bestuursbeleid, waar 80 punte ten opsigte van die prys en 20 punte ten opsigte van B-BBEE status toegeken sal word.

Voornemende Tenderaars moet daarop let dat die plaaslike produksie- en inhoud vereistes vir aangewese sektore, soos bepaal in die Voorkeur verkrygings-regulasies wat ingevolge die Wet op Voorkeur-verkrygings raamwerk 5 van 2000 gemaak is, van toepassing sal wees op die tender, vir die volgende produkte:

- **Staalprodukte en Konstruksie komponente - 100%**
- **Kleppe - 70%**
- **Plastiek Pype - 100%**

Alle tenderaars moet die MBD6.2 vorm en Aanhangsels C, D en E in die tender vir die bogenoemde produkte voltooi. Tenders wat nie aan hierdie vereiste voldoen nie, sal nie oorweeg word vir evaluering nie.

Vir verdere inligting, kontak Mnr. L Daniels by (044) 801 9275 of rldaniels@george.gov.za.

Die Munisipaliteit behou hom die reg voor om enige versoek vir 'n tender terug te trek en/of te her-adverteer of enige tender te verwerp of gedeeltelik te aanvaar. Die Munisipaliteit is nie daartoe gebind om die laagste of enige tender te aanvaar nie.

Dit sal van die suksesvolle tenderaar verwag word om op die Sentrale Verskaffers Databasis (SVD) te registreer.

DR. M GRATZ
WAARNEMENDE MUNISIPALE BESTUURDER
GEORGE MUNISIPALITEIT
GEORGE
6530

upon presentation of proof of payment made out to George Municipality

Tenders will be evaluated as follows:

Stage 1: Pre-Qualification

Only tenders scoring a minimum of 60 out of 100 points in stage 1 will be further considered for evaluation in stage 2.

Stage 2:

Tenders will be evaluated and adjudication in terms of the Preferential Procurement Policy Framework Act (Act 5 of 2000) Regulations 2017 and the George Municipality's Supply Chain Management Policy, where 80 points will be scored for price and 20 points for B-BBEE status.

Prospective Bidders must note that the local production and content requirements for designated sectors, as stipulated in the Preferential Procurement Regulations made in terms of the Preferential Procurement Policy Framework Act 5 of 2000, will apply to this tender, for the following products:

- **Steel Products and components for construction – 100%**
- **Valve Products and Actuators – 70%**
- **Plastic Pipes – 100%**

All bidders must complete the MBD6.2 form and Annexures C, D and E in this tender for the above products. Bids that do not comply with this requirement will not be considered for evaluation.

For more information, contact Mr. L Daniels at (044) 801 9275 or rldaniels@george.gov.za.

The Municipality reserves the right to withdraw any invitation to tender and/or to readvertise or to reject any tender or to accept a part of it. The Municipality is not bound to accept the lowest or any tender.

It will be required from the successful tenderer to register on the Central Supplier Database (CSD).

DR. M GRATZ
ACTING MUNICIPAL MANAGER
GEORGE MUNICIPALITY
GEORGE
6530

GEORGE MUNICIPALITY**TENDER No. T/ING/004/2022****TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND
ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS****Tender Data (T1.2)**

Clause number The conditions of tender are the Standard Conditions of Tender as contained in Annexure C of the CIDB Standard for Uniformity in Engineering and Construction Works Contracts (August 2019) as published in Government Gazette No 42622, Board Notice 423 of 08 August 2019. (See www.cidb.org.za).

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

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

C.1 General

C1.1.1 The Employer is the **George Municipality**, represented by the Director: Civil Engineering Services.

C1.1.2 The parties agree that this tender and its acceptance shall also be subject to the terms and conditions contained in the Employer's Supply Chain Management Policy ('SCM Policy').

Abuse of the supply chain management system is not permitted and may result in actions as set out in the SCM Policy.

C.1.2 Tender Documents

The following documents form part of this tender:

VOLUME 1:

The General Conditions of Contract for Construction Works, Third Edition, 2015, prepared by the South African Institution of Civil Engineering (SAICE). This publication is available and tenderers must obtain copies at their own cost from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: civilinfo@saice.org.za

VOLUME 2:

The COLTO Standard Specifications for Road and Bridge Works for State Road Authorities prepared by the Committee of Land Transport Officials. This publication is available and tenderers must obtain copies at their own cost from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: civilinfo@saice.org.za

The Tender Documents Issued by the Employer Comprise:

VOLUME 3:

The Framework Contract Document (this document, which may also be obtained in electronic format – or parts thereof – in terms of F.4.12), in which is bound:

THE TENDER

Part T1: Tender Procedures

- T1.1 Tender notice and invitation to tender
- T1.2 Tender data

Part T2 : Returnable Documents

- T2.1 List of returnable documents
- T2.1 Returnable schedules
- T2.2 Other documents required for tender evaluation purposes
- T2.3. Returnable schedules that will be incorporated in the contract

THE CONTRACT

Part C1: Agreement and contract data

- C1.1 Form of offer and acceptance
- C1.2 Contract data
- C1.3 Form of Performance Guarantee
- C1.4 Agreement in Terms of the Occupational Health and Safety Act, 1993
(Act No. 85 of 1993)
- C1.5 Works Project Acceptance/Refusal Notice

Part C2: Pricing data

- C2.1 Pricing Instructions
- C2.2 Pricing Schedules, Bill of Quantities and Rates

Part C3: Scope of Works

- C3.1 Description of the Works
- C3.2 Engineering
- C3.3 Procurement
- C3.4 Construction
- C3.5 Management
- C3.6 Annexes

Part C4 Site Information

- C4 Site Information

VOLUME 4:

Drawings (listed in C3.2 Engineering, and, if applicable, in each Works Project)

VOLUME 5:

The Works Project contract document (this is a separate document to be issued for each Works Project – Refer to Annex 5 for example document.)

Volume 3 is deemed the “Returnable Document” which must be returned to the Employer in terms of submitting a tender offer.

Volume 5 is deemed the “Returnable Document” which must be returned to the Employer in terms of submitting an offer for each Works Project.

C1.3 Interpretation

Add the following to C1.3.3:

- C1.3.3 e) **framework contract** means the Framework Contract defined in Part C1.2 Contract Data
- f) **panel** means Panel defined in Part C1.2 Contract Data
- g) **Works Project** means Works Project defined in Part C1.2 Contract Data.

C.1.4 Communication and employer's agent:

Add the following:

Attention is drawn to the fact that verbal or any other form of communication, given by the Employer, its employees, agents or advisors during site visits/clarification meetings or at any other time prior to the award of the Contract, will not be regarded as binding on the Employer, unless issued formally by the Employer in writing to tenderers through its Director: Supply Chain Management or his nominee.

The employer's agent will be identified for each individual Works Project and will be made known to the appointed panel contractors.

C.1.6 Procurement Procedures

C.1.6.1 General

Add the following:

For the purposes of this tender, the work area is within the boundary of the George municipal area.

The Employer intends to appoint a panel of up to a maximum of ten (10) tenderers for the work area but reserves the right to appoint fewer tenderers to a panel, or not to appoint a panel at all.

Contractors, once appointed and subject to operational requirements, will be invited to execute the Works by means of Works Projects in the area.

Each Works Project shall be in the value range of not exceeding R 17 500 000.00 (including contingencies and VAT, but excluding contract price adjustment, if applicable).

The framework contract period shall be for a period of **three years** from the commencement date of the contract, as stated in Part C1.2 Contract Data.

C.1.6.2 Competitive Negotiation Procedure

A competitive negotiation procedure will **not** be followed.

C.1.6.3 Proposal procedure using the two-stage system

A two-stage system will be followed. **Option 1** shall be applied.

Add the following new clauses to Clause C1.6:

C.1.6.4 Objections, complaints, queries and disputes / appeals in terms of Section 62 of the Systems Act / Access to court

C.1.6.4.1 Disputes, objections, complaints and queries

In terms of Regulations 49 and 50 of the Local Government: Municipal Finance Management Act, 56 of 2003 – Municipal Supply Chain Management Regulations (Board Notice 868 of 2005):

- a) Persons aggrieved by decisions or actions taken by the George Municipality in the implementation of its supply chain management system, may lodge within 14 days of the decision or action, a written objection or complaint or query or dispute against the decision or action.

C.1.6.4.2 Appeals

- a) In terms of Section 62 of the Local Government: Municipal Systems Act, 32 of 2000 a person whose rights are affected by a decision taken by the George Municipality, may appeal against that decision by giving written notice of the appeal and reasons to the George Municipality within 21 days of the date of the notification of the decision.
- b) An appeal must contain the following:
 - i) Must be in writing
 - ii) It must set out the reasons for the appeal
 - iii) It must state in which way the Appellant's rights were affected by the decision
 - iv) It must state the remedy sought; and
 - v) It must be accompanied with a copy of the notification advising the person of the decision

C.1.6.4.3 Right to approach the courts and rights in terms of Promotion of Administrative Justice Act, 3 of 2000 and Promotion of Access to Information Act, 2 of 2000

The sub-clauses above do not influence any affected person's rights to approach the High Court at any time or its rights in terms of the Promotion of Administrative Justice Act and Promotion of Access to Information Act.

C.1.6.4.4 All requests referring to sub clauses C.1.6.4.1 and C.1.6.4.2 must be submitted in writing to:

The Municipal Manager: George Municipality, 3rd Floor, Civic Centre, York Street, George
Via hand delivery at: 3rd Floor, Civic Centre, 71 York Street, George, 6529

C.1.6.4.5 All requests referring to clause C.1.6.4.3 regarding access to information or reasons must be submitted in writing to:

The Municipal Manager: Legal Department, 1st Floor, George Municipality, Civic Centre, York Street, George

Via hand delivery at: 1st Floor, Civic Centre, 71 York Street, George, 6529

Add the following new clause:

C.1.7 National Treasury Web Based Central Supplier Database (CSD) Registration

Tenderers are required to be registered on the National Treasury Web Based Central Supplier Database (CSD) as a service provider. Tenderers must register as such upon being requested to do so in writing and within the period contained in such a request, failing which no orders can be raised or payments processed from the resulting contract. In the case of Joint Venture partnerships this requirement will apply individually to each party of the Joint Venture.

Tenderers who wish to register on the National Treasury Web Based Central Supplier Database (CSD) may do so via the web address <https://secure.csd.gov.za>.

It is each tenderer's responsibility to keep all the information on the National Treasury Web Based Central Supplier Database (CSD) updated."

C.2 Tenderer's obligations

C.2.1 Eligibility

Add the following to C.2.1.1:

Only those tenderers who satisfy the following criteria are eligible to have their tenders evaluated:

C.2.1.1.1 Only tenderers who satisfy the following criteria are eligible to submit tenders:

- i) Quality control practices and procedures which ensure compliance with stated employer's requirements.
- ii) Availability of resources.
- iii) Capacity to mobilize own and sub-contracting resources.
- iv) Availability of skills to manage and perform the contract (assigned personnel).
- v) Quality achievements on previous contracts of a similar nature.
- vi) Previous work of a similar nature.

C.2.1.1.2 Only those tenderers who have in their employ management and supervisory staff satisfying the requirements of the scope of work for labour intensive competencies for supervisory and management staff are eligible to submit tenders.

C.2.1.1.3 Construction Industry Development Board (CIDB) Registration

Only those tenders submitted by tenderers who are registered, or are capable of being registered, with an active status with the CIDB prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations, for a **CE** class of construction work, are eligible to have their tenders evaluated.

Joint Ventures are eligible to submit tenders provided that:

- a. Every member of the Joint Venture is registered with an active status with the CIDB;
- b. The lead partner must be registered in the relevant class of construction work; and
- c. The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a **CE** class of construction work of value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations.
- d. All companies in Joint Venture must complete the full set of Returnable Schedules individually. Failure to do this will result in the tender being declared “Non-Responsive” and not being considered further; and
- e. A copy of the Joint Venture agreement must be submitted with the tender. Failure to do this will result in the tender being declared “Non-Responsive” and not being considered further.

C.2.1.1.4 Only those tenderers who are registered on the Central Supplier Database (CSD) as a service provider prior to the evaluation of tender submissions are eligible to have their tenders evaluated (the evaluation of tenders shall be deemed to take place when the Employer’s Bid Evaluation Committee meets to make a recommendation to the Bid Adjudication Committee). The Employer will only enter into a formal contract with a tenderer who is registered on the database. In the case of joint venture partnerships this requirement will apply individually to each party of the joint venture.

Tenderers who wish to register on the Central Supplier Database may register at the website on www.csd.gov.za.

C.2.1.1.5 Minimum score for functionality

To be considered for a contract in terms of this tender, tenderers must achieve the minimum score for functionality as stated below.

The description of the functionality criteria and the maximum possible score for each is shown Clause in C.3.11.9. The score achieved for functionality will be the sum of the scores achieved, in the evaluation process, for the individual criteria.

Refer to C3.11.1 Evaluation of Tender Offers

The minimum score for functionality is **60**. Tenderers that fail to achieve the minimum score for functionality will be declared as non-responsive.

Where the entity tendering is a Joint Venture the tender must be accompanied by a statement describing exactly what aspects of the work will be undertaken by each party to the joint venture (appended Form A13, Part T2.2: Returnable Schedules).

Tenderers shall ensure that the relevant information has been submitted with the tender offer in the prescribed format to ensure optimal scoring of functionality points for each Evaluation Criteria. Failure to provide all information **IN THIS TENDER SUBMISSION** could result in the tenderer not being able to achieve the specified minimum scoring.

C.2.1.1.6 Local Content

The supplier shall study the terms and conditions as stated in the **Local Content Declaration** returnable schedule.

Only tenders with locally produced or locally manufactured raw material or input will be considered. If the raw material or input to be used for a specific item is not available locally, bidders should obtain written authorization from the Department of Trade and Industry (DTI) (Chief Director: Industrial Procurement, tel. 012 394 3927 and fax 012 394 4927) should there be a need to import such raw material or input.

A copy of the authorization letter must be submitted together with the bid document at the closing date and time of the bid.

The Employer is obliged and must ensure that contracts for **the designated sector** are awarded at prices that are market related considering, among others, benchmark prices designated by the DTI for the sector, value for money and economics of scale. Where

appropriate, prices may be negotiated with preferred bidders in accordance with provisions for Negotiation with Preferred Bidders as set out in the George Municipality's SCM Policy.

A bid will be declared non-responsive / disqualified if the **Local Content Declaration** returnable schedule as well as the authorization letter referred to above (if applicable) are not submitted as part of the bid documentation at the closing date and time of the bid.

For further information relating to the local production and content legislation, bidders may refer to website http://www.thedti.gov.za/industrial_development/ip.jsp, or may contact the Chief Director: Industrial Procurement at the DTI at telephone number (012) 394 3927 and fax (012) 394 4927, the Director: Fleet Procurement, Ms. Cathrine Matidza, at telephone number (012) 394 3927 and e-mail CMatidza@thedti.gov.za, or the DTI Contact Centre no 0861 843384.

C.2.1.1.7 **Pre-qualification criteria for preferential procurement**

As per the George Municipal Council resolution taken at meeting on 25 March 2022, the municipality apply the PPPFA 2017 act as follows:

- a) use the pre-existing points system with thresholds and associated formulas as per the PPPFR, 2017 i.e., 80/20 preference point system for procurement with a rand value equal to or above R30,000 up to R50million and the 90/10 preference point system for procurement above R50million (all applicable taxes included)
- b) use the pre-existing mechanism to address the evidence requirements as it relates to the allocation of points for preference i.e., B-BBEE certificates and affidavits.
- c) Implement sub-contracting conditions in line with the CIDB prescripts/regulations in terms of empowerments.
- d) Only tenders with locally produced or locally manufactured raw material or input will be considered. A bid will be declared non-responsive / disqualified if the **Local Content Declaration** returnable schedule as well as the authorization letter referred to above (if applicable) are not submitted as part of the bid documentation at the closing date and time of the bid.

C.2.7 **Clarification Meeting**

Add the following:

The arrangements for the **compulsory site visit/clarification meeting** are as stated on the General Tender Information page.

Tenderers should be represented at the site visit/clarification meeting by a person who is suitably qualified and experienced to comprehend the implications of the work involved.

C.2.8 **Seek Clarification**

Add the following:

The tenderer warrants that it has:

- a) inspected the Specifications and read and fully understood the Conditions of Contract.
- b) read and fully understood the whole text of the Specifications and Price Schedule and thoroughly acquainted itself with the nature of the goods proposed and generally of all matters which may influence the Contract.
- c) visited the site(s) where delivery of the proposed works will take place, carefully examined existing conditions, the means of access to the site(s), the conditions under which the delivery is to be made, and acquainted itself with any limitations or restrictions that may be imposed by the Municipal or other Authorities regarding access and transport of materials, plant and equipment to and from the site(s) and made the necessary provisions for any additional costs involved thereby.
- d) requested the Employer to clarify the requirements contained in the Specifications and Price Schedule, the exact meaning or interpretation of which is not clearly intelligible to the tenderer.
- e) received any notices to the tender documents which have been issued in accordance with the Employer's SCM Policy.

The Employer will therefore not be liable for the payment of any extra costs resulting from any claim submitted by the tenderer arising from any alleged ambiguity or uncertainty contained in the tender document.

C.2.10 Pricing the tender offer

Add the following at the end of C.2.10.2:

C.2.10.2 (only applicable in respect of Works Projects).

Add the following to C.2.10.3:

C.2.10.3 Tenderers are referred to Clause 6.8.2 in Part C1.2 Contract Data regarding contract price adjustment.

C.2.10.5 *Add the following new sub-clause after C.2.10.4:*

Provide rates for the items specified in Part C2.2 Schedules. If a nil rate (i.e. "nil" or "0.00") is entered against an item, it will be considered that there is no charge for that item.

Certain items in the Schedules of Rates may have been linked to minimum/maximum quantities to provide for differential pricing in respect of economies of scale. Where such rate categories have been provided a rate must be inserted in each category for such items.

If a rate is not provided for any item in the Schedules of Rates, such item will be regarded as having a nil rate.

The tenderer may be requested by the Employer to clarify nil rates or items regarded as having nil rates. The Employer may also perform a risk analysis in respect of such rates in accordance with C.3.11.

The rates shall also be used to evaluate tender offers in accordance with C.3.11.

C.2.12 Alternative tender offers

No alternative Tender offer will be considered.

C.2.13 Submitting a tender offer

Add the following to C.3.13:

C.2.13.1 Where the tendering entity is a joint venture it is recommended that the standard CIDB Joint Venture Agreement be used.

C.2.13.2 Return all returnable documents to the employer after completing them in their entirety in non-erasable black ink.

Printed Schedules of Rates, in the same format (that is, layout, scheduled items, units and quantities, if applicable) as those issued electronically by the Employer on request, may be submitted in terms of C.4.12 c).

C.2.13.5 The Employer's address for delivery of tender offers and identification details are:

George Municipality, First Floor, Directorate: Financial Services, Supply Chain Management Unit, Civic Centre, York Street, George (location of tender box).

The identification details are: Tender number **T/ING/004/2022: TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE YEARS.**

The tender offer shall be submitted as an ORIGINAL **plus** a full electronic scanned copy in .pdf format.

The tenderer shall seal the original tender offer in a package

The tenderer will receive one document which shall be filled in and completed.

C.2.13.6/
C3.5 A two-envelope procurement will **not** be followed.

- C.2.13.8 Accept that the employer will **not** assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.
- C.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.
- C.2.13.10 By signing the offer part of C1.1 Form of Offer and Acceptance the tenderer declares that all information provided in the tender submission is true and correct.
- C.2.15 **Closing time**
Add the following to Clause C.2.15:
- C.2.15.1 The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.
- C.2.16 **Tender offer validity**
Add the following to C.2.16:
- C.2.16.1 The Tender offer validity period is **12 weeks (84 days)**.
- C.2.18 **Provide other material**
Add the following to C.2.18:
- C.2.18.1 The Tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the Works together with satisfactory evidence that such staff members satisfy the eligibility requirements.
- C.2.18.3 **Compliance with Occupational Health and Safety Act, 85 of 1993**

Tenderers are to note the requirements of the Occupational Health and Safety Act, 85 of 1993 and the Construction Regulations, 2014 issued in terms of Section 43 of the Act. The Tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

In this regard, the Tenderer shall submit with his tender a draft Health and Safety Plan in respect of the Works in sufficient detail to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act, Regulations and Health and Safety Specification in the Scope of Work.
- C.2.19 **Inspections, tests and analysis**

Access shall be provided for the following inspections, tests and analysis:

To be arranged with the Engineer.
- C.2.20 The Tenderer is required to submit with his Tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part T2.2 of this procurement document.
- C.2.22 Return all retained Tender Documents within 28 days after the expiry of the validity period.
- C.2.23 **Certificates**
Add the following:
The tenderer is required to submit the following:
- C.2.23.1 **Tax Clearance Certificate**
Tenderers shall be registered and in good standing with the South African Revenue Service (SARS). In this regard, it is the responsibility of the Tenderer to submit documentary evidence in the form of an **original** valid Tax Clearance Certificate issued by SARS to the Employer at the George Municipality, First Floor, Directorate: Financial Services, Supply Chain Management Unit, Civic Centre, York Street, George. Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance Certificate. Tenderers are to note that the Employer will not award a contract to a Tenderer whose tax matters are not in order.

C.2.23.2 **Broad-Based Black Economic Empowerment Status Level Certificates**

In order to qualify for preference points, it is the responsibility of the Tenderer to submit the relevant certificate (either an original valid B-BBEE status level verification certificate or an Exempted Micro Enterprise certificate **in terms of the Construction Codes of Good Practice for Broad-Based Black Economic Empowerment**, or certified copies thereof) in terms of the Preferential Procurement Regulations, 2017, to the Employer at the George Municipality, First Floor, Directorate: Financial Services, Supply Chain Management Unit, Civic Centre, York Street, George.

Consortiums/Joint Ventures will qualify for preference points, provided that the entity submits the relevant certificate/scorecard in terms of the Preferential Procurement Regulations, 2017. Note that, in the case of unincorporated entities, a verified **consolidated B-BBEE scorecard must be submitted** in the form of a certificate with the tender.

The Tenderer's B-BBEE status as at the closing date for submission of framework tender offers will be used for determining preference points for the full duration of the term tender.

C.3 **The Employer's undertakings**

C.3.2 **Issue Addenda**

Notwithstanding any requests for confirmation of receipt of Addenda issued, the tenderer shall be deemed to have received such addenda if the employer can show proof of transmission thereof (or a notice in respect thereof) via electronic mail, facsimile or registered post.

C.3.4 **Opening of tender submissions**

C.3.4.1 The time and location for opening of the tender offers is: **12h00 on Monday 16 May 2022**. The Tender Box at the George Municipality is on the First Floor, Directorate: Financial Services, Supply Chain Management Unit, Civic Centre, York Street, George.

C.3.8 **Test for responsiveness**

Replace sub-clause C.3.8.1 with the following:

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

1. complies with the requirements of the Conditions of Tender,
2. has been properly and fully completed and signed, and
3. is responsive to the other requirements of the tender documents.

Replace the final sentence of C.3.8.2 with the following:

C.3.8.2 Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the material deviation.

Add the following two sub-clauses after C.3.8.2:

C.3.8.3 Tenders will be considered non-responsive if, inter alia:

- (a) the tender is not in compliance with the Scope of Work;
- (b) the tenderer is not registered on the Central Supplier Database (CSD) prior to the evaluation of submissions as stated in C.2.1.1.1 above;
- (c) the tenderer does not comply with the CIDB registration (active status) and contractor grading designation requirements specified in C.2.1.1.2 above;
- (d) the tenderer has failed to clarify or submit any supporting documentation within the time for submission stated in the employer's written request as stated in C.2.17;

Tenders may also be declared non-responsive if it is determined on reasonable grounds or evidence that the tenders are submitted by:

- (e) tenderers who, notwithstanding having submitted duly completed certificates of independent tender determination (Returnable Schedule 2), are nevertheless deemed to have knowledge of the contents of any other tenderer's offer and/or a certificate is not true and correct in every respect;

- (f) tenderers in a horizontal relationship which has the effect of substantially preventing or lessening competition in a market, subject to the exceptions as set out in section 4(1)(a) of the Competitions Act, 89 of 1998;
- (g) tenderers who are presumed to be firms engaged in a restrictive horizontal practice as contemplated in section 4(1)(b) read with section 2 of the Competitions Act, 89 of 1998;
- (h) tenderers in a vertical relationship which has the effect of substantially preventing or lessening competition in a market, subject to the exceptions as set out in section 5(1) of the Competitions Act, 89 of 1998.

C.3.8.4 The Employer reserves the right to accept a tender offer which does not, in the Employer's opinion, materially and/or substantially deviate from the terms, conditions, and specifications of the tender documents.

C.3.9 **Arithmetical errors, omissions and discrepancies**
Delete clause C.3.9 in its entirety.

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

The Employer may, after the closing date, request additional information or clarification from tenderer, in writing on any matter affecting the evaluation of the tender offer or that could give rise to ambiguity in a contract arising from the tender offer.

C.3.11 **Evaluation of tender offers**

C.3.11.1 **General**

Add the following:

General procurement procedures specific to this tender are set out in C.1.6.1.

For the purposes of this tender, the work area is within the boundary of the George municipal area. The Employer shall create, for tender evaluation purposes, simulated Evaluation Works Projects, indicative of the nature of works required, and which shall include full width mill and asphalt overlay including ancillary works, and selective mill and asphalt overlay including ancillary works, for the different types of asphalt specified in the tender, as well as road resurfacing works (excluding asphalt) including ancillary works.

The Employer shall have assigned quantities to the items in the Schedules of Rates necessary for the execution of the evaluation Works Projects. The assigned quantities shall be multiplied by the tendered rates submitted by the tenderers to obtain amounts that will be totaled to provide a financial offer for each tenderer for the evaluation Works Projects. The financial offer shall be constituted by the average of the sum of the evaluation Works Projects for each tenderer.

The value of the evaluation Works Projects will be such that at least the lowest and up to three of the financial offers will exceed R1 million and not exceed up to R17.5 million (refer to C.1.6.1).

Based on the financial offers so constituted (as stated above), up to ten tenderers with the highest ranked points scored will be considered

Up to a maximum of ten tenderers may be appointed to the panel, city wide (refer to C.1.6.1).

The procedure for the evaluation of responsive tenders are as stipulated below. **Option 1** shall be applied in accordance with C1.6.3.

Scoring Financial Offers

The financial offers for responsive tenders will be scored as follows:

$$N_{FO} = W_1 \times [1 - ((P - P_M)/P_M)]$$

Where:

- N_{FO} is the number of tender evaluation points awarded for the financial offer
- W_1 is the maximum possible number of tender evaluation points awarded for the financial offer = 80
- P_M is the offered price of the most favourable comparative offer
- P is the offered price of the tender offer under consideration

Total Score (Sub-clause 5.11.5)

The total number of tender evaluation points (T_{EV}) will be calculated in accordance with the following formula:

$$T_{EV} = N_P + N_{FO}$$

Scoring Preferences

Preference points will be allocated in terms of the Employer's Supply Chain Management Policy based on the returnable from MBD6.1 included in the Tender documents.

Up to 10 preference tender evaluation points (N_P) will be awarded to Tenderers on the basis of the data supplied in the returnable form MBD6.1.

A maximum of 100 minus W_1 tender evaluation points will be awarded for preference to tenderers who submit responsive tenders and who are found to be eligible for the preference claimed, in accordance with the criteria listed below.

Points are based on a tenderer's scorecard measured in terms of the Broad-Based Black Economic Empowerment Act (Act No 53 of 2003) (B-BBEE) and the Regulations, 2017 to the Preferential Procurement Policy Framework Act (Act No 5 of 2000)(PPPFA).

Points awarded will be according to a tenderer's B-BBEE status level of contribution and summarised in the table below:

B-BBEE Contribution Level	80:20 Preference System
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant	0

Eligibility for preference points is subject to the following:

1. A tenderer's scorecard shall be based on the Construction Sector Codes of Practice promulgated in Government Gazette No 32305 of 5 June 2009; and
2. The scorecard shall be submitted as a certificate attached to Returnable Schedule Form C7; and
3. The certificate shall have been issued by a registered verification agency accredited by the South African National Accreditation System (SANAS), as contemplated in the B-BBEE Framework for Accreditation and Verification by all Verification Agencies promulgated in Government Notice No 810 of 31 July 2009; and
4. The date of issue of the certificate must be less than 12 (twelve) months prior to the advertised Tender closing date (see Tender Data 4.15); and
5. Compliance with any other information requested to be attached to Returnable Schedule Form C7.

F.3.11.9 Pre-Qualification criteria and maximum score in respect of each of the criteria are as follows:

Schedule	Technical criteria	Weight
1 (Form A3)	Tenderer's Relevant Experience	35
2 (Form A3)	References	30
3 (Form A4) and (Form B3)	Relevant Experience of key staff to be employed on the project	35
	Total	100

Relevant experience is defined as experience in:

Civil engineering works, including earthworks, road rehabilitation and resurfacing.

Criteria scored by not less than three evaluators with the schedules listed above.

The minimum number of evaluation points for qualifying is **60**.

Schedule 1 : Tenderer's Relevant Experience

- a) A maximum of 35 points will be awarded based on the information provided and will be split as follows:

Description	Points
0 up to 5 years relevant experience.	8.75
More than 5 years up to 10 years relevant experience.	17.5
More than 10 years up to 15 years relevant experience	26.25
More than 15 years relevant experience	35

- b) In order to claim points for the above, bidders must submit the following information as well as documentary proof:

- Information of how long the business is in existence supported by Company or Business registration documents.

Detailed list of information containing:

- Names of previous clients
- Description of work performed and when it was performed.
- Duration of previous contracts.

Points will only be awarded for relevant experience.

Please provide details in Form A3: Schedule of Work carried out by Tenderer.

Schedule 2 : References

A maximum of 40 points will be awarded. 3 references will be contacted who will answer 5 questions, 2 ²/₃ points will be awarded for every "yes" or positive answer given and zero points for every "no" or negative answer given. The following questions will be asked to references:

Question	Response
1. Was the work completed within the time frame?	Yes - 2.00 points No – 0 points
2. Was the budget and cash flow managed satisfactorily?	Yes - 2.00 points No – 0 points
3. Did the Contractor comply with Quality and Contract Management requirements?	Yes - 2.00 points No – 0 points

4. Did the Contractor comply with the Health & Safety regulations	Yes - 2.00 points No – 0 points
5. Overall satisfied with the Contractor's performance?	Yes - 2.00 points No – 0 points

Schedule 3 : Relevant experience of key staff to be employed on the project

A maximum of 25 points will be awarded based on the information provided and will be allocated as follows:

Key Staff job description	Maximum points
1. Contract Manager and / or Site Agent (to be on site at least 6 hrs/day)	10 points
2. General Foreman	15 points
3. Quality Control Specialist (to do all quality control tests and ensure quality management on site in according to project specifications)	5 points
4. Health & Safety Officer (to keep the H&S file up to date and ensure H&S matters is attended to and tool box talks are held regularly)	5 points

Points may only be claimed for staff permanently employed by the Contractor.

Description	Points
0 – 3 years relevant experience to scope of works	25% of the maximum points
3 – 5 years relevant experience to scope of works	50% of the maximum points
5 – 10 years relevant experience to scope of works	75% of the maximum points
10 years or more relevant experience to scope of works	100% of the maximum points

Please provide details in Form A4: Proposed Key Personnel and Form B3: Extended Public Works Program Supervisory and Management Staff.

C.3.13

Acceptance of tender offer

Tender offers will only be accepted if:

- the Tenderer has in his or her possession an original valid Tax Clearance Certificate issued, or the PIN provided by the South African Revenue Services or has made arrangements to meet outstanding tax obligations;
- the Tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
- the Tenderer submits a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part T2.2 of the procurement document.
- the Tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation.
- the Tenderer has not abused the Employer's Supply Chain Management System.
- the tender offer is signed by a person authorized to sign on behalf of the Tenderer.
- the Tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the Tenderer's ability to perform the Contract in the best interests of the Employer or potentially compromise the tender process.
- the Tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer;
- the Employer is reasonably satisfied that the Tenderer has in terms of the Construction

Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely.

- (j) the Tenderer has not failed to perform on any previous contracts and has not been given a written notice to the effect.
- (k) the Tenderer has submitted certified copies of the directors, owners and shareholders' identity documents with the tender offer.
- (l) the Tenderer must be registered on the Central Supplier Database.
- (m) Tenderer who submitted a tender as a Joint Venture has included an acceptable Joint Venture Agreement with his/her tender or has provided a letter of intent to form a Joint Venture signed by all parties.
- (n) the Tenderer is not in arrears for more than 3 months with municipal rates and taxes and services charges.
- (o) the Tenderer complies with the specifications and conditions applicable to the product and submitted all the required documentation as stipulated in part C3: Scope of Works.

C.3.16 Registration of the award

C.3.16.1 Before accepting the tender of the successful tenderer, the Employer shall notify the successful tenderer in writing of the decision of the Employer's Bid Adjudication Committee to award the tender to the successful tenderer. No rights shall accrue to the successful tenderer in terms of this notice.

C.3.16.2 The Employer shall, at the same time as notifying the successful tenderer of the Bid Adjudication Committee's decision to award the tender to the successful tenderer, also give written notice to the other tenderers informing them that they have been unsuccessful.

C.3.17 Provide copies of the contract

The employer will provide the successful tenderer with one (1) paper copy of the signed contract as soon as possible after completion and signing of the form of offer and acceptance.

C.3.18 All requests shall be in writing.

C.4 Additional Conditions of Tender

The additional conditions of tender are:

C.4.1 Compliance with Occupational Health and Safety Act, 85 of 1993

Tenderers are to note the requirements of the Occupational Health and Safety Act, 85 of 1993 and the Construction Regulations, 2014 issued in terms of Section 43 of the Act. The Tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

In this regard, the Tenderer shall submit with his tender, appended to Schedule 13: Health and Safety Plan in T2.2: Returnable Schedules, a Health and Safety Plan in respect of the Works in sufficient detail to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act, Regulations and Health and Safety Specification in Part C3.5 Management in the Scope of Work. Such Health and Safety Plan shall cover, inter alia, the following details:

1. Personnel available for site specific and other appointments, including construction managers, construction supervisors, health and safety officers, and other competent persons, including a succession plan.
2. Contractor's induction training program for employees, sub-contractors and visitors to the Site.
3. Health and safety method statements and procedures (inclusive of PPE requirements) to be adhered to in order to ensure compliance with the Act, Regulations and the project specific Health and Safety Specification.
4. Regular monitoring procedures to be performed.
5. Regular liaison, consultation and review meetings with all parties.
6. Site security, welfare facilities and first aid.

7. Site rules and fire and emergency procedures.

The attention of Tenderers is drawn to the requirement to appoint, on each Works Project site that may be allocated to them, a full-time competent person as the construction manager, with the duty of managing construction work on a single site. In this regard, Tenderers are encouraged to list details of available construction managers and supervisors in Schedule 9 in Part T2.2 Returnable Schedules.

C.4.2 **Claims arising after submission of tender**

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

- (a) inspected the Contract Drawings and read and fully understood the Conditions of Contract.
- (b) read and fully understood the whole text of the Scope of Work and Pricing Data and thoroughly acquainted himself with the nature of the works proposed and generally of all matters which may influence the Contract.
- (c) visited the site of the proposed works, carefully examined existing conditions, the means of access to the site, the conditions under which the work is to be done, and acquainted himself with any limitations or restrictions that may be imposed by the Municipal or other Authorities in regard to access and transport of materials, plant and equipment to and from the site and made the necessary provisions for any additional costs involved thereby.
- (d) requested the Employer or his duly authorized agent to make clear the actual requirements of anything shown on the Contract Drawings or anything contained in the Scope of Work and Pricing Data, the exact meaning or interpretation of which is not clearly intelligible to the Tenderer.
- (e) received any Addenda to the tender documents which have been issued in accordance with the Employer's Supply Chain Management Policy.

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

C.4.3 **Corrections to tendered rates**

In the event of tendered rates being declared by the Employer to be unacceptable to it because they are excessively high, the Tenderer may be required to produce evidence and advance arguments in support of the tendered rates objected to. If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates objected to, it reserves the right to negotiate such rates subject to the provisions of C.4.8.

In the event of tendered rates being declared by the Employer to be unacceptable to it because they are excessively low, such rates cannot be amended. In this regard, the Employer may then perform a risk analysis in terms of C.3.11.10.

C.4.4 **Targeted labour**

It is a requirement of the Contract that the work be executed in such a manner as to maximize the use of labour intensive construction methods in order to provide low and semi-skilled employment opportunities.

To this end, a minimum targeted labour contract participation goal (CPGL) has been specified in Part C3: Scope of Work. This minimum CPGL must be achieved by the Contractor in the performance of the contract, failing which, penalties as described will be applied. Targeted labour will be applicable to each Works Project.

C.4.5 **Targeted enterprises**

It is not a requirement of the Contract that the Contractor engage targeted enterprises in the performance of the contract.

C.4.6 Community liaison officer

It is a requirement of the Contract that a Community Liaison Officer (CLO) shall be appointed by the Contractor. The primary functions of the CLO shall be to assist the contractor with the selection and recruitment of targeted labour, to represent the local community in matters concerning the use of targeted labour (and/or enterprises) on the works, and to assist with and facilitate communication between the Contractor, the Engineer and the local communities.

The method of identifying suitable candidates for the position of CLO, as well as requirements in respect of the employment of the selected candidate, are described in Part C3: Scope of Work.

C.4.7 Invalid tenders

Tenders shall be considered invalid by the Bid Evaluation Committee if:

- (i) the tender offer (including the tendered rates, by reference) is not submitted on the Form of Offer and Acceptance (form C1.1, Part C1: Agreements and Contract Data);
- (ii) the returnable document is not completed in non-erasable handwritten, or printed, ink or toner;
- (iii) the Form of Offer and Acceptance has not been signed with an original signature;
- (iv) the Form of Offer and Acceptance is signed, but the name of the tenderer is not stated or is indecipherable;
- (v) in a two-envelope system, the tenderer fails to submit a separately sealed financial offer.

C.4.8 Negotiations with preferred tenderers

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

1. does not allow any preferred tenderer a second or unfair opportunity;
2. is not to the detriment of any other tenderer; and
3. does not lead to a higher price than the tender as submitted.

If negotiations fail to result in acceptable contract terms, the Employer may terminate the negotiations and invite the next ranked tenderer for negotiations. The original preferred tenderer will be informed of the reasons for termination of the negotiations. Once negotiations are commenced with the next ranked tenderer, the Employer will not re-open earlier negotiations.

Minutes of any such negotiations shall be kept for record purposes

C.4.9 General supply chain management conditions applicable to tenders

In terms of its Supply Chain Management Policy, the Employer may not consider a tender unless the provider who submitted the tender:

- 1 has furnished the Employer with that provider's:
 - a. full name;
 - b. identification number or company or other registration number; and
 - c. tax reference number and VAT registration number, if any.
- 2 has indicated whether:
 - a. the provider is in the service of the state, or has been in the service of the state in the previous twelve months;
 - b. if the provider is not a natural person, whether any of the directors, managers, principal shareholders or stakeholders is in the service of the state, or has been in the service of the state in the previous twelve months; or
 - c. whether a spouse, child or parent of the provider or of a director, manager, shareholder or stakeholder referred to above is in the service of the state or has been in the service of the state in the previous twelve months.
- 3 has attended a compulsory site inspection, where applicable.

Irrespective of the procurement process followed, the Employer is prohibited from making an award to:

- 4 a person who is in the service of the state;
- 5 a juristic entity of which any director, manager, principal shareholder or stakeholder is in the service of the state;
- 6 an advisor or consultant contracted with the Employer; or
- 7 a person, advisor or corporate entity involved with the bid specification committee, or a

director of such corporate entity. "Involved with the bid specification committee" includes where a person, advisor or corporate entity (or its director) was involved in the initial stages of the project which resulted in the specification; and they are therefore prohibited from tendering for resulting contracts.

In this regard, tenderers shall complete Schedule 1, Part T2.2 Returnable Schedules: Compulsory Enterprise Questionnaire. Failure to complete this schedule may result in the tender not being considered.

C.4.10 **Combating abuse of the Supply Chain Management Policy**

In terms of its Supply Chain Management Policy, the Employer may reject the tender of any tenderer if that tenderer or any of its directors has:

- a. failed to pay municipal rates and taxes or municipal service charges and such rates, taxes and charges are in arrears for more than three months;
- b. failed, during the last five years, to perform satisfactorily on a previous contract with the Employer or any other organ of state after written notice was given to that tenderer that performance was unsatisfactory;
- c. abused the supply chain management system of the Employer or has committed any improper conduct in relation to this system;
- d. been convicted of fraud or corruption during the past five years;
- e. willfully neglected, reneged on or failed to comply with any government, municipal or other public-sector contract during the past five years; or
- f. been listed with the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act, 12 of 2004 or has been listed on National Treasury's Database of Restricted Suppliers as a person or juristic entity prohibited from doing business with the public sector.

In this regard, tenderers shall complete Schedules 2 and 4, Part T2.2 Returnable Schedules: Certificate of Independent Tender Determination and Declaration of Tenderer's past Supply Chain Management Practices, respectively. Failure to complete these schedules may result in the tender not being considered.

C.4.11 **UIF payments**

The Tenderer shall submit to the Employer a letter from the Industrial Council indicating his or her good standing with regard to UIF payments upon being requested to do so.

C.4.12 **Requests for tender/contract documents, or parts thereof, in electronic format**

The Employer shall not formally issue tender documents in electronic format as contemplated in C.2.13.2 and C.2.13.3 and shall only issue tender documents in hardcopy. An electronic version of the issued tender documents may be made available to the tenderer, upon written request in terms of this clause, subject to the following:

- 1 Electronic copies of the issued tender documents, or parts thereof, will only be provided to tenderers who have been issued with the tender documents as contemplated in C.2 in hardcopy.
- 2 The electronic version shall not be regarded as a substitute for the issued tender documents.
- 3 The Employer shall not accept tenders submitted in electronic format. Only those tenders that have been completed on the issued hard copy tender document shall be considered, provided that printed Schedules of Rates, in the same format (that is, layout, scheduled items, units and quantities, if applicable) as those issued electronically by the Employer, may be submitted with the tender as stated in C.2.13.2. Where Addenda have been issued which amend the Schedules of Rates, then the printed Schedules of Rates shall take these into account. The pages of the issued Schedules of Rates should not be removed from the tender document.
- 4 The Employer accepts no responsibility or liability arising from any reliance on or use of the electronic version provided in terms of this clause. The Employer further does not guarantee that the electronic version corresponds with the issued tender documents in all respects. Tenderers are alerted to the fact that electronic versions of the tender documents may not reflect any notices or addenda that amend the tender document.
- 5 Any non-compliance with these provisions, including effecting any unauthorized alterations to the tender documents as contemplated in C.2.11, shall render the tender non-responsive. The Employer reserves the right to take any action against such tenderer allowed in law including, in circumstances where the tender had already been awarded, the right to cancel the contract.

- 6 In requesting the electronic version of the tender documents or parts thereof, the tenderer is deemed to have read, understood and accepted all the above conditions.

C.4.13 Procedures for the allocation of Works Projects

Tenderers are referred to Clause 2.6 in Part C1.2 Contract Data regarding procedures for the allocation of Works Projects.

C.4.14 Further condition of Tender are:

- (a) George Municipality may also request that the Tenderer provide written evidence that his/her financial, labour and resources are adequate for carrying out the project.
2. The George Municipality reserves the right to appoint a firm of chartered accountants and auditors and/or execute any other financial investigations on the financial resources of any Tenderer. The Tenderer shall provide all reasonable assistance in such investigations.
3. Tender documents must be completed in black ink, and prices must include VAT, only where applicable and requested in the schedule of activities.
4. Corrections may not be made by means of a correction fluid such as Tipp-Ex or a similar product. In the event of a mistake having been made it shall be crossed out in ink and be accompanied by a full signature at every alteration. The Municipality reserves the right to reject the Tender if corrections are not made in accordance with the above.
5. Evidence of Preparedness

The Tenderer, if required, must present satisfactory evidence that he is fully prepared with necessary capital, manpower and plant to begin the work promptly and to conduct it as required by the Documents.

B-BBEE certificates submitted with the tender documents MUST be a VALID ORIGINAL B-BBEE CERTIFICATE or VALID CERTIFIED COPY OF THE B-BBEE CERTIFICATE.

In the case of a Trust, Consortium or Joint Venture, they will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.

In addition, at the time of tendering, the Tenderer must:

- give satisfactory evidence of his experience in the class of work for which he has entered, and must complete the Schedule, Form A3: Schedule of Work carried out by Tenderer bound in this document.
- complete the Schedule: Plant (Form A5) available for use on Works bound in this document by giving a complete list of major items of plant and equipment which he has immediately available, and also which he will acquire or hire for use on this Contract should his tender be successful.
- complete the attached Schedule: Local and Non-Local Employees and, if he intends to employ local subcontractors, the attached Schedule: Proposed Local Subcontractors, in order to indicate the extent to which the Tenderer will be using local labour and subcontractors in the execution of this project.
- complete the Schedule: Details of Offered Training, giving details of the accredited trainer(s) or recognized organisations as well as the courses which he can offer and for which labour may receive accreditation/certification.

Failure to complete these statements may prejudice the tender as being submitted by an inexperienced or insufficiently equipped Tenderer and it may be rejected for either such cause.

If called upon, the Tenderer must provide the Employer with a copy of the most recent audited annual financial statements of his firm.

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND
ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

RETURNABLE DOCUMENTS (PART T2)

T2.1 LIST OF RETURNABLE DOCUMENTS..... T2.3

T2.2 RETURNABLE SCHEDULES..... T2.4

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND
ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

T2.1 LIST OF RETURNABLE DOCUMENTS

The Tenderer must complete the following returnable documents:

- 1 RETURNABLE SCHEDULES REQUIRED FOR TENDER EVALUATION PURPOSES
- 2 OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES
- 3 RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE CONTRACT
- 4 OTHER DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT
- 5 C1.1 OFFER AND ACCEPTANCE (INCLUDED IN PART C1: AGREEMENT AND CONTRACT DATA)
- 6 C1.2 CONTRACT DATA (PART 2) DATA PROVIDED BY THE CONTRACTOR (INCLUDED IN PART C1: AGREEMENT AND CONTRACT DATA)
- 7 C2.2 BILL OF QUANTITIES (INCLUDED IN PART C2: PRICING DATA)

GEORGE MUNICIPALITY**TENDER No. T/ING/004/2022****TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND
ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS****T2.2 RETURNABLE SCHEDULES**

The Tenderer must complete the following returnable documents:

T2.2.1 RETURNABLE SCHEDULES REQUIRED FOR TENDER EVALUATION PURPOSES

Form A1:	Authority for Signatory	T2.4
Form A2	General Information	T2.6
Form A3:	Schedule of Work carried out by Tenderer	T2.7
Form A4:	Proposed Key Personnel	T2.8
Form A5:	Schedule of Constructional Plant.....	T2.10
Form A6:	Schedule of Proposed Subcontractors	T2.12
Form A7:	Financial References	T2.13
Form A8:	Schedule of Current Commitments.....	T2.14
Form A9:	Estimated Monthly Expenditure	T2.15
Form A10:	Proposed Amendments and Qualifications by Tenderer	T2.16
Form A11:	Certificate of Insurance Cover	T2.17
Form A12:	Preliminary Construction Programme (for information purposes only).....	T2.18
Form A13:	Returnable Document Checklist	T2.19

T2.2.2 OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

Form B1:	Certificate of Tenderer's Attendance at the Site/Clarification Meeting	T2.20
Form B2:	Proof of Registration with Construction Industry Development Board	T2.21
Form B3:	Nominated References for Bidder	T2.22

T2.2.3 RETURNABLE SCHEDULES THAT WILL BE INCORPORATED IN THE CONTRACT

Form C1:	Form Concerning Fulfilment of the Construction Regulations, 2014.....	T2.24
Form C2:	Record of Addenda to Tender Documents	T2.26
Form C3:	Compulsory Enterprise Questionnaire.....	T2.27
Form C4:	George Municipality Preferencing Schedules.....	T2.30
Form C5:	Tax Clearance Certificate Requirements.....	T2.31
Form C6:	Declaration of Interest (MBD 4)	T2.32
Form C7:	Preference Points Claim Form in Terms of Preferential Procurement Regulations 2017 (MBD 6.1).....	T2.36
Form C8:	Declaration Certificate for Local Production and Content for Designated Groups (MBD 6.2).....	T2.41
Form C9:	Additional Information	T2.46
Form C10:	Declaration of Bidder's Past Supply Chain Management Practices (MBD 8).....	T2.47
Form C11:	Certificate of Independent Bid Determination (MBD 9)	T2.49
Form C12:	Certificate for Municipal Services	T2.53
Form C13:	Declaration for Procurement above R10 million (MBD 5).....	T2.54

T2.2.4 OTHER DOCUMENTS THAT WILL BE INCLUDED IN THE CONTRACT

Form D1:	Tenderer's Direct Participation of Targeted Labour.....	T2.56
Form D2:	Schedule of Approach and Methodology / Work Plan	T2.58

FORM A1 AUTHORITY FOR SIGNATORY

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

An example for a company is shown below:

"By resolution of the board of directors passed at a meeting held on *[date]*

Mr/Mrs

whose signature appears below, has been duly authorised to sign all documents in connection with the Tender for Contract No. **T/ING/004/2022: TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS** and any contract which may arise therefrom on behalf of

(BLOCK CAPITALS)

.....

.....

SIGNED ON BEHALF OF THE COMPANY :

IN HIS CAPACITY AS :

DATE :

FULL NAMES OF SIGNATORY :
NAME (PRINT)

SIGNATURE OF SIGNATORY :

AS WITNESSES 1 :
NAME (PRINT)

.....
SIGNATURE

2 :
NAME (PRINT)

.....
SIGNATURE

FORM A2 GENERAL INFORMATION

1. Name of tendering entity: _____
2. Contact details
- Address : _____

- Tel no : (_____) _____
- Fax no : (_____) _____
- E-mail address : _____
3. Legal entity: Mark with an **X**.

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

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

Joint venture member	Type of entity (as defined above)

4. Income tax reference number: _____
(in the case of a joint venture, provide for all joint venture members)
5. Regional services area where the enterprise is registered: _____
(In the case of a joint venture, provide for all joint venture members)
6. Regional services levy registration number: _____
(In the case of a joint venture, provide for all joint venture members)

SIGNED ON BEHALF OF TENDERER:

7. VAT registration number: _____
(In the case of a joint venture, provide for all joint venture members)
8. Company or closed corporation registration number: _____
(In the case of a joint venture, provide for all joint venture members)
9. Details of proprietor, partners, closed corporation members, or company directors, indicating technical qualifications where applicable (Form on the next page).
10. For joint ventures the following must be attached (**COMPULSORY**):
- I. Written power of attorney for authorised signatory.
 - II. **Pro-forma of the joint venture agreement.**
- * If the Joint Venture Agreement is not attached, the tender will not be considered!**

DETAILS OF PROPRIETOR, PARTNERS, CLOSED CORPORATION MEMBERS OR COMPANY DIRECTORS

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

Name of Tendering Entity : _____

Signature : _____

Date : _____

SIGNED ON BEHALF OF TENDERER:

FORM A3 SCHEDULE OF WORK CARRIED OUT BY TENDERER

The Tenderer shall list below the last ten civil engineering contracts of a similar nature awarded to him. This information is material to the award of the Contract.

EMPLOYER (Name, tel. no and fax no)	CONSULTING ENGINEER (Name, tel. no and fax no)	NATURE OF WORK	VALUE OF WORK	YEAR OF COMPLETION

[illegible]

[illegible]

FORM A5 **SCHEDULE OF CONSTRUCTIONAL PLANT**

The Tenderer shall state below what Constructional Plant will be available for the work should he be awarded the Contract.

DESCRIPTION, SIZE, CAPACITY & REGISTRATION DOCUMENT	PLANT / VEHICLE	NUMBER

DESCRIPTION, SIZE, CAPACITY & REGISTRATION DOCUMENT	PLANT / VEHICLE	NUMBER

FORM A6 SCHEDULE OF PROPOSED SUB-CONTRACTORS

The Tenderer shall, in accordance with the provisions of Conditions of Tender, list below the sub-contractors he/she proposes to employ for part(s) of the work.

The naming of any proposed sub-contractor hereunder shall not be deemed to constitute a qualification of the Tender, and acceptance of a tender shall not be construed as approval of any or all of the listed subcontractors, neither shall it in any way limit or detract from the powers of the Engineer and the obligations of the Contractor pertaining to subcontracting as stated in the Contract, nor shall it prevent the Tenderer from deviating in any way during the Contract from the list of proposed sub-contractors hereunder if the Tender is accepted.

If any or all of the sub-contractors listed hereunder are not approved subsequent to acceptance of the Tender, it shall in no way invalidate the Tender or the Contract, and the tendered unit rates for the respective items of work shall remain final and binding even if a subcontractor not listed below is approved by the Employer.

PART OR TYPE OF WORK	PROPOSED SUB-CONTRACTOR	WORK RECENTLY EXECUTED BY SUBCONTRACTOR

FORM A7 FINANCIAL REFERENCES**Financial Statements**

I/We agree, if required, to furnish an audited copy of the latest set of financial statements together with my/our Directors' and Auditors' report for consideration by the Employer.

Details of Company's Bank

I/We hereby authorise the Employer/Engineer to approach all or any of the following banks for the purposes of obtaining a financial reference:

DESCRIPTION OF BANK DETAIL	BANK DETAILS APPLICABLE TO TENDERER'S HEAD OFFICE
Name of bank	
Branch name	
Branch code	
Street address	
Postal address	
Name of manager	
Telephone number	
Fax number	
Account number	

Tenderer's Tax Details

Tenderer's VAT vendor registration number:

Tenderer's SARS tax reference number:

FORM A8 SCHEDULE OF CURRENT COMMITMENTS**Notes to Tenderer:**

- C2** The Tenderer shall list below all Contracts currently under construction or awarded and about to commence and tenders for which offers have been submitted but awards not yet made.
- C3** In the event of a joint venture enterprise, details of all the members of the joint venture shall similarly be attached to this form.
- C4** The lists must be restricted to not more than 20 Contracts and 20 Tenders. If a tenderer's actual commitments or potential commitments are greater than 20 each, those listed should be in descending order of expected final contract value or sum tendered.

Table 1 Contracts awarded				
Client	Project	Expected total value of contract (incl. VAT)	Duration (Months)	Expected completion date

Table 2 TENDERS NOT YET AWARDED				
Client	Project	Sum Tendered (incl. VAT)	Tendered Duration (Months)	Expected commencement

FORM A9 ESTIMATED MONTHLY EXPENDITURE

The Tenderer shall state below the estimated value of work to be completed every month, based on his preliminary programme and his tendered unit rates.

The amount for contingencies must not be included. The amounts must be VAT exclusive.

MONTH	VALUE
1	R
2	R
3	R
4	R
5	R
6	R
7	R
8	R
9	R
10	R
11	R
12	R
13	R
14	R
15	R
16	R
17	R
18	R
	COMPLETION OF CONTRACT
TOTAL	R

FORM A10 PROPOSED AMENDMENTS AND QUALIFICATIONS BY TENDERER

The Tenderer should record any **proposed** deviations or qualifications he may wish to make to the Tender Documents in this Returnable Schedule. Alternatively, a tenderer may state such proposed deviations and qualifications in a covering letter attached to his tender and reference such letter in this schedule.

The Tenderer's attention is drawn to clause F.3.8 of the Standard Conditions of Tender referenced in the Tender Data regarding the Employer's handling of material deviations and qualifications.

If no deviations or modifications are desired, the schedule hereunder is to be marked **NIL** and signed by the Tenderer.

PAGE	CLAUSE OR ITEM	DESCRIPTION

FORM A11 CERTIFICATE OF INSURANCE COVER**Note to Tenderer:**

In the event of the Tenderer being a joint venture/consortium, the details of the individual members must also be provided.

The Tenderer shall provide the following details of this insurance cover:

1Name of
Tenderer:

2Period of
Validity:

3 Value of Insurance:

- Insurance for Works and Contractor's equipment

Company:

Value:

1 Insuranc
e for Contractor's personnel

Company:

Value:

2 General
public liability

Company:

Value:

3 SASRIA

Company:

Value:

FORM A12 PRELIMINARY CONSTRUCTION PROGRAMME (FOR INFORMATION PURPOSES ONLY)

The Tenderer shall attach a preliminary programme, to this Schedule.

This programme shall:

- A: be in the form of a bar chart (Gantt chart) or similar acceptable time/activity form reflecting the proposed sequence and tempo of execution of the various activities and the quantities that will be carried out every week under each of the elements, comprising the work for this contract;
- B: also indicate the point where the Tenderer intends to commence work operations and the direction in which the work will proceed;
- C: be in accordance with the information provided in Form A5: Schedule of Constructional Plant, Form A9: Estimated monthly expenditure, and with all other aspects of the Tender; and
- D: indicate planned working hours.

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

Number of sheets, appended by the Tenderer to this Schedule :..... *[If NIL, enter NIL]*

FORM A13 RETURNABLE DOCUMENT CHECKLIST

This form has been created as an aid to ensure a tenderer's compliance with the completion of the returnable schedules.

Reference No	Document Description	Tick if completed
Form A1	Authority for signatory	
Form A2	General information	
Form A3	Schedule of work carried out by Tenderer	
Form A4	Proposed key personnel	
Form A5	Schedule of constructional plant	
Form A6	Schedule of proposed subcontractors	
Form A7	Tenderer's bank details and financial references	
Form A8	Schedule of current commitments	
Form A9	Estimated monthly expenditure	
Form A10	Proposed amendments and qualifications by Tenderer	
Form A11	Certificate of insurance cover	
Form A12	Preliminary construction programme (for information purposes only)	
Form A13	Returnable document checklist	
Form B1	Certificate of Tenderer's attendance at the Site/Clarification meeting	
Form B2	Proof of registration with Construction Industry Development Board	
Form B3	Nominated References for Bidder	
Form C1	Form concerning fulfilment of the Construction Regulations, 2014	
Form C2	Record of Addenda of Tender Documents	
Form C3	Compulsory Enterprise Questionnaire	
Form C4	George Municipality Preferencing Forms	
Form C5	Tax Clearance Certificate (MBD 2)	
Form C6	Declaration of Interest (MBD 4)	
Form C7	Preferencing Schedules: Preference points claim form in terms of Preferential Procurement Regulations, 2017 (MBD 6.1)	
Form C8	Declaration Certificate for Local Production and Content for Designated Groups (MBD6.2)	
Form C9	Additional Information	
Form C10	Declaration of Bidder's Past Supply Chain Management Practices (MBD 8)	
Form C11	Certificate of Independent Bid Determination (MBD 9)	
Form C12	Certificate for Municipal Services	
Form C13	Declaration for Procurement above R10 million (all applicable taxes included) (MBD 5)	
Form D1	Tenderer's direct participation of Targeted Labour	
Form D2	Schedule of Approach and Methodology / Work Plan	

**FORM B1 CERTIFICATE OF TENDERER'S ATTENDANCE AT THE
SITE/CLARIFICATION MEETING**

This is to certify that I,

representative of [*Tenderer*]

.....

of [*address*]

.....

.....

Telephone number

Fax number

visited and examined the Site on [*date*]

in the company of [*Engineer/Engineer's Representative*]

TENDERER'S REPRESENTATIVE:

EMPLOYER'S AGENT'S REPRESENTATIVE:

**FORM B2 PROOF OF REGISTRATION WITH CONSTRUCTION INDUSTRY
DEVELOPMENT BOARD**

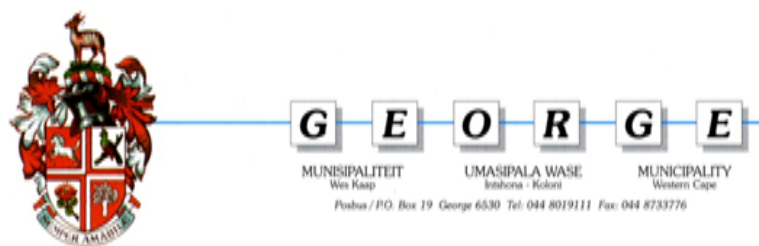
The Tenderer shall provide a printed copy of the Active Contractor's Listing off the CIDB website (www.cidb.org.za). In the case of a joint venture, a printed copy of the Active Contractor's listing must be provided for each member of the joint venture.

Name of Contractor:

Contractor Grading Designation:

CIDB Contractor Registration Number:.....

SIGNED ON BEHALF OF THE TENDERER:



FORM B3 NOMINATED REFERENCES FOR BIDDER

- (a) Bidder is to forward/send a copy of the attached form to a minimum of 3 of his nominated references for each project for which the bidder intends to tender on.
- (b) The completed form must be returned by the nominated reference directly to George Municipality, by email, to rldaniels@george.org.za within 1 week after the closing date of this tender.
- (c) No submission before the closing date will be accepted. Any submission received more than 7 calendar days after the close of the tender will not be accepted.
- (d) Any documentation submitted via the bidder in this regard will not be considered.
- (e) A copy of the letter below will be attached as part of the minutes of the Compulsory Site / Clarification Meeting.

Background information of Nominated Referees: Tender no. T/ING/004/2022

Project for this tender:	
Referee name:	
Postal address	
Contact number of referee:	
Email address:	
Name of Bidder evaluated:	
Project Name:	
Project Description:	
Project Completion date:	
Project duration:	
Final Project Cost:	

Instructions

- 1 Please select by encircling the appropriate response
- 2 A cover letter must be submitted on the official company letterhead verifying that the person indicated as the "Contact person" (the Referee) was indeed the person handling the contract administration on the listed project.
- 3 The completed form is to be returned to George Municipality by email to rldaniels@george.org.za within 7 calendar days after the closing date of this tender.
- 4 Please contact Lionel Daniels at 044 801 9275, should you have any queries regarding the completion or submission of this form

TRACK RECORD		
Completion of project according to initial program submitted by Bidder	Points awarded	
Have this Contractor successfully performed a similar Scope of Works for you in the past?	Yes	No
Was the work completed within the Contractual time frame? Excluding normal contractor delays, did the contractor finish in time without running into Penalties? Was there any delay due to non-responsiveness? Did the contractor perform as per their program and Tender specs?	Yes	No
Was the work completed within the Contract Price / Amount /Budget? Meaning did the contractor keep to his budget and Scope of Works and not overspend without provisional approval?	Yes	No
Did the Contractor comply with the Occupational Health & Safety regulations on site? Did the contractor timely correct any OHS issues within the timeframes set within the OHS Audit report? Is this contractor Safety minded and responsive to OHS instructions?	Yes	No
In general, were you satisfied with the Contractor's performance on your site, their professionalism, ethics, execution method - thus would you recommend this contractor for this Tender considering all of above?	Yes	No

Additional Remarks/Comments:

I, the undersigned, hereby certify that the above information is, to the best of my knowledge, correct and a true reflection.

Signature of Deponent

Date of declaration

FORM C1 FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2014

In terms of Regulation 5(1)(h) of the Construction Regulations, 2014 (hereinafter referred to as the Regulations), promulgated on 7 February 2014 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993), the Employer shall not appoint a Contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her Tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

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

YES	
NO	

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

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

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

.....

.....

.....

.....

.....

.....

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

.....

.....

.....

.....

.....

.....

.....

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

.....

.....

.....

.....

.....

.....

.....

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

YES	
NO	

- 7 The Tenderer shall attach to this Form evidence that he is registered and in good standing with a compensation insurer who is approved by Department of Labour in terms of section 80 of the Compensation for Injury and Disease Act, 1993 (Act No 130 of 1993)(COID).

The Tenderer is required to disclose, by also attaching documentary evidence to this form, all inspections, investigations and their outcomes conducted by the Department of Labour into the conduct of the Tenderer at any time during the 36 months preceding the date of this Tender.

SIGNATURE OF PERSON(S) AUTHORISED TO SIGN THIS TENDER:

1 ID NO:

2 ID NO:

FORM C2 RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communications issued by the Employer before the submission of this Tender offer, amending the Tender Documents, have been taken into account in this Tender offer:

	Date	Title or details
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Attach additional pages if more space is required.

Signed: Date:

Name: Position:

SIGNED ON BEHALF OF TENDERER:

FORM C3 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*

*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 in the 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:

<input type="checkbox"/> a member of any municipal council <input type="checkbox"/> a member of any provincial legislature <input type="checkbox"/> a member of the National Assembly or the National Council of Province <input type="checkbox"/> a member of the board of directors of any municipal entity <input type="checkbox"/> an official of any municipality or municipal entity	<input type="checkbox"/> 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 No 1 of 1999) <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity <input type="checkbox"/> an employee of Parliament or a provincial legislature
--	--

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 or 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, in the service of any of the following:

<input type="checkbox"/> a member of any municipal council <input type="checkbox"/> a member of any provincial legislature <input type="checkbox"/> a member of the National Assembly or the National Council of Province <input type="checkbox"/> a member of the board of directors of any municipal entity <input type="checkbox"/> an official of any municipality or municipal entity	<input type="checkbox"/> 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 No 1 of 1999) <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity <input type="checkbox"/> 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 authorised to do so on behalf of the enterprise:

- (i) authorises the Employer to obtain a tax clearance certificate from the South African Revenue Services that my/our tax matters are in order;
- (ii) confirms that 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, 2004;
- (iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise, has within the last five years been convicted of fraud or corruption;
- (iv) 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 Tenderers or those responsible for compiling the Scope of Work that could cause or be interpreted as a conflict of interest; and
- (v) 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:

FORM C4 GEORGE MUNICIPALITY PREFERENCING SCHEDULES

(To be completed by all prospective Tenderers)

NOTE:

- a) Certified copies of Identity Documents of all tenderer's company director's/ shareholders must be submitted with a tender.
- b) All tenderers must be registered on the Central Supplier Database (CSD).
- c) The contract (offer and acceptance) signed between the service provider and the George Municipality must indicate the tendered construction period.
- d) Joint Ventures: All companies in Joint Venture must complete the full set of Returnable Schedules individually. Failure to do this will result in tender being declared Non-Responsive and not considered further. A copy of the Joint-Venture agreement must be included with tender.

FORM C5 TAX CLEARANCE REQUIREMENTS**MBD 1****TAX COMPLIANCE INFORMATION****PART A**

Tax Compliance Status	TCS Pin:		or	CSD No:	
B-BBEE Status Level Verification Certificate [Tick Applicable Box]	<input type="checkbox"/> Yes <input type="checkbox"/> No			B-BBEE Status Level Sworn Affidavit	<input type="checkbox"/> Yes <input type="checkbox"/> No
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE / SWORN AFFIDAVIT (FORM EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]					
Are You The Accredited Representative In South Africa For The Goods / Services / Works Offered?	<input type="checkbox"/> Yes <input type="checkbox"/> No [If Yes, Enclose Proof]			Are You A Foreign Based Supplier For The Goods / Services / Works Offered?	<input type="checkbox"/> Yes <input type="checkbox"/> No [If Yes, Answer Part 2.]
Signature of Bidder	.....			Date	.....

PART B

TERMS AND CONDITIONS FOR BIDDING

• TAX COMPLIANCE REQUIREMENTS		
<ul style="list-style-type: none"> ○ ○ ○ ○ ○ ○ ○ 	<p>BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.</p> <p>BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.</p> <p>APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.</p> <p>FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B2.</p> <p>BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.</p> <p>IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED; EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.</p> <p>WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.</p>	
• QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS [Tick Applicable Box]		
Is the entity a resident of the Republic of South Africa (RSA)?	YES	NO
2.2 Does the entity have a branch in the RSA?	YES	NO
2.3 Does the entity have a permanent establishment in the RSA?	YES	NO
2.4 Does the entity have any source of income in the RSA?	YES	NO
2.5 Is the entity liable in the RSA for any form of taxation?	YES	NO
IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 1.3 ABOVE.		

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

Signature of Bidder:

Capacity Under Which This Bid Is Signed:

Date:

FORM C6 DECLARATION OF INTEREST**MBD 4****DECLARATION OF INTEREST**

1.	No bid will be accepted from persons in the service of the state*.	
2.	Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in the service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.	
3.	In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.	
3.1	Full Name of bidder or his / her representative:	
3.2	Identity number:	
3.3	Position occupied in the Company (director, trustee, shareholder ²):	
3.4	Company Registration Number:	
3.5	Tax Reference Number:	
3.6	VAT Registration Number:	
3.7	The names of all directors / trustees / shareholders / members, their individual identity numbers and state employee numbers (where applicable) must be indicated in paragraph 4 below.	
3.8	Are you presently in the service of the state?*	YES / NO
3.8.1	If yes, furnish the following particulars: Name of person / director / trustee / shareholder member: Name of state institution at which you or the person connected to the bidder is employed: Position occupied in the state institution: Any other particulars:	
3.9	Have you been in the service of the state for the past twelve months?	YES / NO
3.9.1	If so, furnish particulars.	

3.10	Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?	YES / NO
3.10.1	<p>If yes, furnish the following particulars:</p> <p>Name of person:</p> <p>Name of state institution at which you or the person connected to the bidder is employed:</p> <p>.....</p> <p>Position occupied in the state institution:</p> <p>.....</p> <p>Any other particulars:</p> <p>.....</p>	
3.11	<p>Are you aware of any relationship (family, friend, other) between the bidder and any person in the service of the state who may be involved with the evaluation and or adjudication of this bid?</p> <p>If yes, furnish the following particulars:</p> <p>Name of person:</p> <p>Name of state institution at which you or the person connected to the bidder is employed:</p> <p>.....</p> <p>Position occupied in the state institution:</p> <p>Any other particulars:</p> <p>.....</p>	YES / NO
3.12	<p>Are any of the company's directors, managers, principal shareholders or stakeholders in the service of the state?</p> <p>If yes, furnish the following particulars:</p> <p>Name of person / director / trustee / shareholder / member:</p> <p>.....</p> <p>Name of state institution at which you or the person connected to the bidder is employed:</p> <p>.....</p> <p>Position occupied in the state institution:</p> <p>Any other particulars:</p> <p>.....</p>	YES / NO

3.13	Is any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in the service of the state?	YES / NO	
3.13.1	If yes, furnish the following particulars: Name of person / director / trustee / shareholder / member: Name of state institution at which you or the person connected to the bidder is employed: Position occupied in the state institution: Any other particulars:		
3.14	Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract?		YES / NO
3.14.1	If yes, furnish particulars:		
4. Full details of directors / trustees / members / shareholders:			
THE FOLLOWING INFORMATION IS <u>COMPULSORY</u> TO COMPLETE:			
Full Name	Identity Number	Individual Tax Number for each Director	State Employee Number (where applicable)
5.	The contract will be automatically cancelled if there is a conflict of interest which is not disclosed by the bidder.		

Protection of Personal Information Act, 2013 (Act no.4 of 2013) (POPIA)

All parties agree that they will comply with Protection of Personal Information Act, 2013 (Act no.4 of 2013) (POPIA) and process all the information and/or personal data in respect of the goods and/or services being rendered in accordance with the said act and only for the purpose of providing the goods and/or services set out in the agreement to provide such goods and/or services.

The contract between the municipality and the service provider must ensure compliance with the Protection of Personal Information Act, 2013 (Act no.4 of 2013) (POPIA), in that the service provider

establishes and maintains security measures to safeguard personal information being processed on behalf of the municipality. The service provider must notify the municipality immediately in an event where there are reasonable grounds to believe personal information has been accessed by an unauthorised person.

The contract with a service provider must ensure confidentiality of personal information processed on behalf of the municipality. A supply contract with a service provider must include standard clauses outlining joint responsibility in terms of the protection of personal information.

.....
Signature

.....
Date

.....
Capacity

.....
Name of Bidder

¹MSCM Regulations: “in the service of the state” means to be -

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

²“Shareholder” means a person who owns shares in the company and is actively involved in the management of the company or business and exercise control over the company.

FORM C7 PREFERENCING SCHEDULES:

MBD 6.1

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017

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

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

(i) GENERAL CONDITIONS

a. The following preference point systems are applicable to all bids:

FORM A. the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and

FORM B. the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

b. a) The value of this bid is estimated not to exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable; or

c. Points for this bid shall be awarded for:

2. Price; and
3. B-BBEE Status Level of Contributor.

d. The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTOR	20
Total points for Price and B-BBEE must not exceed	100

e. Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

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

(ii) DEFINITIONS

- i) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- ii) **“B-BBEE status level of contributor”** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- iii) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- iv) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black

Economic Empowerment Act, 2003 (Act No. 53 of 2003);

- v) **“EME”** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- vi) **“functionality”** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- vii) **“prices”** includes all applicable taxes less all unconditional discounts;
- viii) **“proof of B-BBEE status level of contributor”** means:
 - i) B-BBEE Status level certificate issued by an authorized body or person;
 - ii) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
 - iii) Any other requirement prescribed in terms of the B-BBEE Act;
- ix) **“QSE”** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- x) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

(iii) POINTS AWARDED FOR PRICE

a. THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) \quad \text{or} \quad P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

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

(iv) POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

- a. In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

(v) BID DECLARATION

- a. Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

(vi) B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1

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

(vii) SUB-CONTRACTING

- a. Will any portion of the contract be sub-contracted?

(Tick applicable box)

YES		NO	
-----	--	----	--

- i. If yes, indicate:

- 13 What percentage of the contract will be subcontracted.....%
 14 The name of the sub-contractor.....
 15 The B-BBEE status level of the sub-contractor.....
 16 Whether the sub-contractor is an EME or QSE

(Tick applicable box)

YES		NO	
-----	--	----	--

- 17 Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2017:

Designated Group: An EME or QSE which is at least 51% owned by:	EME √	QSE √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

(viii) DECLARATION WITH REGARD TO COMPANY/FIRM

- a. Name of company/firm:
- b. VAT registration number:
- c. Company registration number:
- d. TYPE OF COMPANY/ FIRM
- ☐ Partnership/Joint Venture / Consortium
 - ☐ One person business/sole propriety
 - ☐ Close corporation
 - ☐ Company
 - ☐ (Pty) Limited
- [TICK APPLICABLE BOX]
- e. DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

f. **COMPANY CLASSIFICATION**

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

g. **MUNICIPAL INFORMATION**

Municipality where business is situated:

Registered Account Number:

Stand Number:

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

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

- 13 The information furnished is true and correct;
- 14 The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- 15 In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- 16 If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
 - a. disqualify the person from the bidding process;
 - b. recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - c. cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - d. recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - e. forward the matter for criminal prosecution.

WITNESSES

.....

.....

.....
 SIGNATURE(S) OF BIDDERS(S)

DATE:

ADDRESS

.....

.....

FORM C8 DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

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

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

1. General Conditions

- a. Preferential Procurement Regulations, 2017 (Regulation 8) make provision for the promotion of local production and content.
- b. Regulation 8.(2) prescribes that in the case of designated sectors, organs of state must advertise such tenders with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- c. Where necessary, for tenders referred to in paragraph 1.2 above, a two-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- d. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- e. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286:2011 as follows:

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

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 3.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on [http://www.thedti.gov.za/industrial development/ip.jsp](http://www.thedti.gov.za/industrial%20development/ip.jsp) at no cost.

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

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

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
Steel Products and Components for construction	100%
Valves Products and Actuators	70%
Plastic Pipes	100%

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

YES		NO	
-----	--	----	--

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

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

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

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

4. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

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

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

IN RESPECT OF BID NO.

ISSUED BY: (Procurement Authority / Name of Institution):

NB

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

I, the undersigned, (full names),
 do hereby declare, in my capacity as
 of(name of bidder entity), the
 following:

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

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

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above.

The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

- I accept that the Procurement Authority / Institution has the right to request that the local

content be verified in terms of the requirements of SATS 1286:2011.

- I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____

DATE: _____

WITNESS No. 1 _____

DATE: _____

WITNESS No. 2 _____

DATE: _____

ANNEXURE C				SATS 1286.2011
Local Content Declaration – Summary Schedule				

(C1) Tender No.	T/ING/004/2022			
(C2) Tender Description	TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS			
(C3) Designated product(s)	Steel Products and Components for construction			
(C4) Tender Authority				
(C5) Name of Tendering Entity				
(C6) Tender Exchange Rate	Currency		Rate	
(C7) Specified local content %	100%			

NOTE: VAT to be excluded from all calculations

		Calculation of local content						Tender summary			
Tender Item No's	List of Items	Tender Price – each	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Quantity	Total tender value	Total exempted imported content	Total imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
B22.20	Steel reinforcement										
	(a) Mild steel bars							1 t			
	(b) High-tensile steel bars							1 t			
	(c) Welded steel fabric										
	(i) Mesh Ref 311							1 kg			
23.12	(b) High-tensile steel bars							1 ton			
	(c) Welded steel fabric							1 kg			

(C20) Total tender value

(C21) Total Exempt imported content

(C22) Total Tender value net of exempt imported content

(C23) Total Imported content

(C24) Total local content

(C25) Average local content % of tender

SIGNATURE OF TENDERER AS PER LOCAL CONTENT DECLARATION

DATE

ANNEXURE C						SATS 1286.2011
Local Content Declaration – Summary Schedule						

(C1) Tender No.	T/ING/004/2022					
(C2) Tender Description	TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS					
(C3) Designated product(s)	Steel Products and Components for construction					
(C4) Tender Authority						
(C5) Name of Tendering Entity						
(C6) Tender Exchange Rate	Currency				Rate	
(C7) Specified local content %	100%					

NOTE: VAT to be excluded from all calculations

		Calculation of local content						Tender summary			
Tender Item No's	List of Items	Tender Price – each	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Quantity	Total tender value	Total exempted imported content	Total imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
52.03	Gabions:										
	(b) PVC-coated galvanised wire mesh with total nominal thickness of 3.7mm diameter and mesh openings of 80x100mm (Maccaferri mesh type 80 or similar)										
	(i) 2m x 0,5m x 0,5m gabion box							1 m³			
	(ii) 3m x 1m x 0,5m gabion box							1 m³			
	(iii) 2m x 1m x 1m gabion box							1 m³			
								(C20) Total tender value			
								(C21) Total Exempt imported content			
								(C22) Total Tender value net of exempt imported content			
SIGNATURE OF TENDERER AS PER LOCAL CONTENT DECLARATION								(C23) Total Imported content			
DATE								(C24) Total local content			
								(C25) Average local content % of tender			

ANNEXURE C

SATS 1286.2011

Local Content Declaration – Summary Schedule

(C1) Tender No.	T/ING/004/2022		
(C2) Tender Description	TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS		
(C3) Designated product(s)	Steel Products and Components for construction		
(C4) Tender Authority			
(C5) Name of Tendering Entity			
(C6) Tender Exchange Rate	Currency		Rate
(C7)Specified local content %	100%		

NOTE: VAT to be excluded from all calculations

		Calculation of local content						Tender summary			
Tender Item No's	List of Items	Tender Price – each	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Quantity	Total tender value	Total exempted imported content	Total imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
52.03	(c) Galvanised wire mesh with total nominal thickness of 3.7mm diameter and mesh openings of 80x100mm (Maccaferri mesh type 80 or similar)										
	(i) 1m x 1m x 0,3m Reno mattress							1 m ³			
	(ii) 2m x 1m x 0,3m Reno mattress							1 m ³			
	(iii) 3m x 1m x 0,3m Reno mattress							1 m ³			
	(iii) 3m x 1m x 0,3m Reno mattress							1 m ³			
(C20) Total tender value											
(C21) Total Exempt imported content											
(C22) Total Tender value net of exempt imported content											
SIGNATURE OF TENDERER AS PER LOCAL CONTENT DECLARATION									(C23) Total Imported content		
DATE									(C24) Total local content		
									(C25) Average local content % of tender		

ANNEXURE C						SATS 1286.2011
Local Content Declaration – Summary Schedule						

(C1) Tender No.	T/ING/004/2022				
(C2) Tender Description	TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS				
(C3) Designated product(s)	Steel Products and Components for construction				
(C4) Tender Authority					
(C5) Name of Tendering Entity					
(C6) Tender Exchange Rate	Currency			Rate	
(C7) Specified local content %	100%				

NOTE: VAT to be excluded from all calculations

		Calculation of local content						Tender summary			
Tender Item No's	List of Items	Tender Price – each	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Quantity	Total tender value	Total exempted imported content	Total imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
B54.01	Guardrails on timber posts:										
	(a) Galvanised							1 m			
54.03	Extra over item 54.01 for horizontally curved guardrails factory bent to a radius of less than 45m							1 m			
B54.04	End treatments:										
	(b) Bull noses							1 No.			
56.03	(a) Steel Tubing										
	(i) 100 mm dia, 3mm thickness							1 m			

(C20) Total tender value

(C21) Total Exempt imported content

(C22) Total Tender value net of exempt imported content

SIGNATURE OF TENDERER AS PER LOCAL CONTENT DECLARATION

DATE

(C23) Total Imported content

(C24) Total local content

(C25) Average local content % of tender

ANNEXURE C						SATS 1286.2011
Local Content Declaration – Summary Schedule						

(C1) Tender No.	T/ING/004/2022					
(C2) Tender Description	TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS					
(C3) Designated product(s)	Valves and Actuators					
(C4) Tender Authority						
(C5) Name of Tendering Entity						
(C6) Tender Exchange Rate	Currency				Rate	
(C7) Specified local content %	70%					

NOTE: VAT to be excluded from all calculations

		Calculation of local content						Tender summary			
Tender Item No's	List of Items	Tender Price – each	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Quantity	Total tender value	Total exempted imported content	Total imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
2200	(c) Fire hydrants, belltobies, etc.										
	(i) Exceeding 40mm and up to 80mm							1 No.			
	(ii) Exceeding 80mm and up to 120mm							1 No.			
	(iii) Exceeding 120mm							1 No.			
	(iv) Using Zubri Ring (30-40mm) : Heavy Duty							1 No.			

(C20) Total tender value

(C21) Total Exempt imported content

(C22) Total Tender value net of exempt imported content

SIGNATURE OF TENDERER AS PER LOCAL CONTENT DECLARATION

DATE

(C23) Total Imported content

(C24) Total local content

(C25) Average local content % of tender

ANNEXURE C						SATS 1286.2011
Local Content Declaration – Summary Schedule						

(C1) Tender No.	T/ING/004/2022				
(C2) Tender Description	TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS				
(C3) Designated product(s)	Plastic Pipes				
(C4) Tender Authority					
(C5) Name of Tendering Entity					
(C6) Tender Exchange Rate	Currency		Rate		
(C7) Specified local content %	100%				

NOTE: VAT to be excluded from all calculations

		Calculation of local content						Tender summary			
Tender Item No's	List of Items	Tender Price – each	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Quantity	Total tender value	Total exempted imported content	Total imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
21.08	Pipes in subsoil drainage systems:										
	(b) Unplasticized PVC pipes and fittings, normal duty, complete with couplings (100mm inside diameter, perforated/slotted)							1 m			
	(c) High-density type polyethylene drainage pipes and fittings, complete with couplings (100mm inside diameter, perforated)							1 m			

(C20) Total tender value

(C21) Total Exempt imported content

(C22) Total Tender value net of exempt imported content

SIGNATURE OF TENDERER AS PER LOCAL CONTENT DECLARATION

DATE

(C23) Total Imported content

(C24) Total local content

(C25) Average local content % of tender

ANNEXURE C						SATS 1286.2011
Local Content Declaration – Summary Schedule						

(C1) Tender No.	T/ING/004/2022				
(C2) Tender Description	TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS				
(C3) Designated product(s)	Plastic Pipes				
(C4) Tender Authority					
(C5) Name of Tendering Entity					
(C6) Tender Exchange Rate	Currency			Rate	
(C7) Specified local content %	100%				

NOTE: VAT to be excluded from all calculations

		Calculation of local content						Tender summary			
Tender Item No's	List of Items	Tender Price – each	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Quantity	Total tender value	Total exempted imported content	Total imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
22.23	Service and service ducts:										
	(a) Ordinary pipes (150 mm dia. uPVC; thrustbored < 20m length)							1 m			
	(b) Ordinary pipes (150 mm dia. uPVC; thrustbored > 20m length)							1 m			
	(c) Ordinary pipes (110 mm dia., HDPE)							1 m			
	(d) Ordinary pipes (160 mm dia., HDPE)							1 m			
	(e) Ordinary pipes (110 mm dia., heavy duty uPVC)							1 m			
	(f) Ordinary pipes (160 mm dia.							1 m			
(C20) Total tender value											
(C21) Total Exempt imported content											
(C22) Total Tender value net of exempt imported content											
(C23) Total Imported content											
(C24) Total local content											
(C25) Average local content % of tender											

SIGNATURE OF TENDERER AS PER LOCAL CONTENT DECLARATION

DATE

1001903

1001903

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

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

D. Other foreign currency payments

D. Other foreign currency payments			Calculation of foreign currency payments		Summary
Type of payment	Local supplier making the payment	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange	
(D46)	(D47)	(D48)	(D49)	(D50)	
(D52) Total of foreign currency payments declared by tenderer and/or 3rd party					
(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above					
<u>Signature of tenderer from Annex B</u>					
Date:					
					This total must correspond with Annex C - C 23

Annex E

Local Content Declaration - Supporting Schedule to Annex C

(E1)	Tender No.		Note: VAT to be excluded from all calculations
(E2)	Tender description:		
(E3)	Designated products:		
(E4)	Tender Authority:		
(E5)	Tendering Entity name:		

Local Products (Goods, Services and Works)	Description of items purchased	Local suppliers	Value
	(E6)	(E7)	(E8)
(E9) Total local products (Goods, Services and Works)			

(E10)	Manpower costs	(Tenderer's manpower cost)	
(E11)	Factory overheads	(Rental, depreciation & amortisation, utility costs, consumables etc.)	
(E12)	Administration overheads and mark-up	(Marketing, insurance, financing, interest etc.)	

(E13) Total local content

This total must correspond with Annex C - C24

Signature of tenderer from Annex B

Date: _____

FORM C9

ADDITIONAL INFORMATION

B-BBEE certificates submitted with the tender documents MUST be a VALID ORIGINAL B-BBEE CERTIFICATE or VALID CERTIFIED COPY OF THE B-BBEE CERTIFICATE.

All B-BBEE certificates issued after 1 March 2012 must contain the SANAS logo.

In the case of a Trust, Consortium or Joint Venture, they will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.

**FORM C10 DECLARATION OF BIDDER'S PAST SUPPLY CHAIN
MANAGEMENT PRACTICES**

MBD 8

**DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT
PRACTICES**

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

Item	Question	Yes	No
4.1	<p>Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).</p> <p>The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		

Item	Question	Yes	No
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.7.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME)
CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM TRUE AND CORRECT.

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

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

Js367bW

FORM C11 CERTIFICATE OF INDEPENDENT BID DETERMINATION**MBD 9****CERTIFICATE OF INDEPENDENT BID DETERMINATION**

- 1 This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
 - 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a pe se prohibition meaning that it cannot be justified under any grounds.
 - 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- a) This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
 - b) In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

¹ Includes price quotations, advertised competitive bids, limited bids and proposals.

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

**T/ING/004/2022 - TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND
ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

in response to the invitation for the bid made by:

George Municipality

(Name of Municipality / Municipal Entity)

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

I certify, on behalf of: _____ that:

(Name of Bidder)

- I have read and I understand the contents of this Certificate;
- I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
- I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
- Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
- For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder

MBD 9

- The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
- In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - a) prices;
 - b) geographical area where product or service will be rendered (market allocation);
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a bid;
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
 - (f) bidding with the intention not to win the bid.
- In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
- The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

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

FORM C12 CERTIFICATE FOR MUNICIPAL SERVICES
(COMPULSORY TO COMPLETE)

Information required in terms of the George Municipality's Supply Chain Management Regulations, Regulation 28 (i) (c).

Tender Number: T/ING/004/2022

Name of the Bidder: _____

DETAILS OF THE BIDDER/S: Owner / Proprietor / Director(s) / Partner(s), etc:

Physical Business address of the Bidder	Municipal Account Number(s)

If there is not enough space for all the names, please attach the additional details to the Tender document.

Name of Director / Member / Partner	Identity Number	Physical residential address of Director / Member / Partner	Municipal Account number(s)

I, _____, the undersigned,
 (full name in block letters)

certify that the information furnished on this declaration form is correct and that I/we have no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days.

 Signature

THUS DONE AND SIGNED for and on behalf of the Bidder / Contractor

at _____ on the _____ day of _____ 2022

PLEASE NOTE:

MUNICIPAL ACCOUNTS FOR ALL PROPERTIES OWNED BY BIDDER/S MUST BE ATTACHED TO THE TENDER DOCUMENT!

Even if the requested information is not applicable to the Bidder, the table above should be endorsed **NOT APPLICABLE** with a reason and **THIS DECLARATION MUST STILL BE COMPLETED AND SIGNED**. In the event of leasing, a lease agreement **MUST** be attached to the tender document.

FORM C13 DECLARATION FOR PROCUREMENT ABOVE R10 MILLION
(ALL APPLICABLE TAXES INCLUDED)

For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire:

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

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

.....

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

2.1 If no, this serves to certify that the bidder has no undisputed commitments for municipal services toward any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.

2.2 If yes, provide particulars.

.....

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

3.1 If yes, provide particulars.

.....

4 Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion ***YES / NO**

of payment from the municipality / municipal entity is expected to be transferred out of the Republic?

4.1 If yes, furnish particulars.

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

CERTIFICATION

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION
FORM IS CORRECT. I ACCEPT THAT THE STATE MAY ACT AGAINST ME
SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

FORM D1 TENDERER'S DIRECT PARTICIPATION OF TARGETED LABOUR

1. Definitions

1.1 Targeted Labour

Individuals, employed by the contractor in the performance of the contract, who are defined as the target group in the contract and who permanently reside in the target area or who are recognized as being residents of the target area on the basis of identification and association with and recognition by the residents of the target area

1.2 Target Group

All temporary and unskilled labour must be rendered by local labourers, preferably unemployed and from George Municipal area.

If these appointments were to be made without the participation of the municipal EPWP unit, the Service Provider must provide evidence of the identity and physical residential addresses of these labourers within 14 days after appointment of such workers.

In the event that local labourers from George and local suppliers in George cannot be used, prior approval must be obtained from the Municipal Project Manager for the use of labour and suppliers outside of the George Municipal area.

1.3 Target Area

For this project, the target area is defined as the George Municipal area.

1.4 Labour Intensive Construction

Labour Intensive Construction shall contribute a minimum of 10% as specified in clause 3(a) of Appendix C.

2. Conditions associated with the granting of preferences

The tenderer, undertakes to:

- i) engage one or more targeted labour in accordance with the provisions of the SANS 1914-4 as varied in section 3 hereunder;
- ii) accept the sanctions set out in Section 2 below, should such conditions be breached;
- iii) complete the Targeted Labour (CPG) calculation form contained in Section 4 below; and
- iv) complete the Supporting Contract Participation Goal Calculation contained in Section 6 below.

a) Variation to the targeted construction procurement specification SANS 1914-4

The variations to SANS 1914-4 are set out below. Should any requirements of the variations conflict with requirements of SANS 1914-4 the requirements of the variations shall prevail

Calculations shall be based as a % of targeted labour costs of the Tender Sum (excluding VAT) and not calculated in accordance with methods 1 or 2 in Annexure A of SANS 1914-4.

b) Sanctions

In the event that the Tenderer fails to substantiate that any failure to achieve the Contract Participation Goal was due to quantitative under runs, the elimination of items, or any other reasons beyond the Contractor's control which may be acceptable to the Employer, it shall be liable to pay to the Employer a financial penalty calculated in the following manner:

$$P = 0,50 \times \frac{(D-D_0)}{(100)} \times N_A$$

Where D = tendered Contract Participation Goal percentage.

D₀ = the Contract Participation Goal which the Employer's representative based on the credits passed, certifies as being achieved upon completion of the contract.

N_A = Net Amount (Actual contract expenditure, excluding VAT)

P = Rand value of penalty payable

c) Tender Contract Participation Goal in respect of targeted labour

I/We hereby tender a Contract Participation Goal of 10% in compliance with the Employer's Socio-Economic Requirements.

The undersigned, who warrants that he/she is duly authorized to do so on behalf of the firm or sole proprietor confirms that he/she understands the conditions under which such preferences are granted.

Signature:

Name:

Duly authorized to sign on behalf of:

Telephone:

Fax:

d) Supporting Targeted Labour (CPG) calculation

TYPE OF TARGETED LABOUR	WORKING HOURS	RATE	TOTAL WAGE COST
Permanent labour*			
Temporary labour			
SMME labour			
		Total	

*Note: A tenderer may only claim permanent staff as eligible for preference points if said staff are also from the Target Area. Permanent staff are considered to be those who have been continuously employed by the tenderer for at least three months prior to the commencement of this project.

SIGNED ON BEHALF OF THE TENDERER:

FORM D2 SCHEDULE OF APPROACH AND METHODOLOGY/ WORK PLAN**Understanding the terms of reference / brief**

- a) Do you as the contractor understand what is required in terms of the project stated above?

Yes		No	
------------	--	-----------	--

(Tick Appropriate Block)

- b) If you answered Yes to question 1 above, please explain briefly your understanding of the project in no more than 50 words.

- c) Considering questions 1 and 2 above, please provide in summary, details of your proposed approach and work plan to the successful completion of the above project.

- d) Briefly state if you have any innovative approach for this particular project mentioned above, that you feel will be unique but also economically superior to the normal workable approach at presently undertaken as the norm.

Name of Tendering Entity: _____

Signature: _____

Date: _____

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING
AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

THE CONTRACT (PART C)

PART C1	AGREEMENT AND CONTRACT DATA.....	C1.1 – C1.30
PART C2	PRICING DATA.....(BOQ 50 pages)	C2.1 – C2.6
PART C3	SCOPE OF WORKS	C3.1 – C3.182
PART C4	SITE INFORMATION	C4.1
PART C5	DRAWINGS	C5.1

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING
AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

AGREEMENT AND CONTRACT DATA (PART C1)

C1.1	FORM OF OFFER AND ACCEPTANCE	C1.2
C1.2	CONTRACT DATA.....	C1.8
C1.3	PERFORMANCE GUARANTEE	C1.24
C1.4	AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)	C1.26
C1.5	WORKS PROJECT ACCEPTANCE/REFUSAL NOTICE.....	C1.30

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING
AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

Form of Offer and Acceptance (Part C1.1)

(AGREEMENT) OFFER

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

**TENDER No. T/ING/004/2022: TERM TENDER FOR ROAD REHABILITATION,
RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

The Tenderer, identified in the Offer signature block below, has examined the documents listed in the Tender Data and addenda thereto as listed in the Tender schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Tenderer, deemed to be duly authorised, signing this apart of this Form of Offer and Acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Service Provider 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 Tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Service Provider in the Conditions of Contract identified in the Contract Data.

Signature(s) _____

Name(s) _____

Capacity _____

(Name and address of organisation)

ACCEPTANCE

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

The terms of the contract are contained in

- Part C1 Agreements and Contract Data
 (which includes this Form of Offer and Acceptance)
- Part C2 Pricing Data
- Part C3 Scope of Work

in Volumes 3 and 5, together with any drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C3 above.

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

The Tenderer shall within two weeks after receiving a completed copy of this Agreement, contact the Employer's representative (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the, Conditions of Contract identified in the Contract Data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) within five 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.

This agreement constitutes a framework contract for the purposes of developing individual Works Projects to be allocated in terms of the procedures described in the contract.

Signature: _____

Name _____

Capacity **ACTING DIRECTOR: CIVIL ENGINEERING SERVICES**

Signature: _____

Name **DR M GRATZ**
Capacity **ACTING MUNICIPAL MANAGER**
 GEORGE MUNICIPALITY
 CIVIC CENTRE
 YORK STREET
 GEORGE

C1 . 4

By the duly authorized representatives signing this agreement, the Employer and the tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the tender schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance.

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

FOR THE TENDERER:

Signature(s)

Name(s)

Capacity

(Name and address of organisation)

FOR THE EMPLOYER:

Signature:

Name

Capacity

ACTING DIRECTOR: CIVIL ENGINEERING SERVICES

Signature:

Name

Capacity

DR M GRATZ

ACTING MUNICIPAL MANAGER

**GEORGE MUNICIPALITY
CIVIC CENTRE
YORK STREET
GEORGE**

SCHEDULE OF DEVIATIONS

Notes:

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

1 Subject

Details

2 Subject

Details

3 Subject

Details

4 Subject

Details

5 Subject

Details

6 Subject

Details

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

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

FOR THE TENDERER:

Signature(s)

Name(s)

Capacity

.....
[Name and address of organisation]

Name and
signature of
witness

Date.....

FOR THE EMPLOYER:

Signature(s)

Name(s)

Capacity

.....
[Name and address of organisation]

Name and
signature of
witness

Date

CONFIRMATION OF RECEIPT

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

the.....(day)

of(month)

20.....(year)

at(place)

For the Contractor:

.....
Signature

.....
Name

.....
Capacity

Signature and name of witness:

.....
Signature

.....
Name

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Contract Data (Part C1.2)

PART 1: DATA PROVIDED BY THE EMPLOYER

CONDITIONS OF CONTRACT

The *General Conditions of Contract for Construction Works*, Third Edition (2015), "GCC 2015", published by the South African Institution of Civil Engineering, is applicable to this Contract and is obtainable from www.saice.org.za.

Copies of these Conditions of Contract may be obtained from the South African Institution of Civil Engineering, tel. 011 805 5947.

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence.

- a) the Form of Offer and Acceptance,
- b) the Contract Specific Data within the Contract Data,
- c) the General Conditions of Contract for Construction Works, Third Edition, 2015,
- d) the Drawings,
- e) the Scope of Work, and
- f) the Pricing Data.

If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

CONTRACT SPECIFIC DATA

The following contract specific data are applicable to this Contract:

Clause 1.1.1.2:

Add the following after "Bill of Quantities":

, also referred to as Bills of Quantities,

Clause 1.1.1.7:

Add the following after "Contract" and before "means":

, also referred to as Framework Contract or term tender contract,

Add the following after “Acceptance,”:

including, if applicable, the Form of Offer and Acceptance in a Works Project contract document, in which case “Contract” includes the Works Project contract,

Clause 1.1.1.11:

Add the following after “Acceptance”:

... of a Works Project.

The Contract Sum for each Works Project shall not exceed R17.5 million (including contingencies and VAT).

Clause 1.1.1.13:

The Defects Liability Period is **12** months per Works Project.

Clause 1.1.1.14:

Delete “Commencement Date” and replace with:

date specified in the Works Project contract for commencement with Works execution,

The time for achieving Practical Completion, inclusive of non-working days referred to in Clause 5.8.1 below, but exclusive of special non-working days (Clause 5.8.1), will be determined for each Works Project as specified in the Works Project contract document.

Clause 1.1.1.16:

Add the following after “Contract Data”:

in the Works Project contract document,

The name of the Engineer will be stated in the Works Project contract document(s) and who may be an employee of the Employer or, alternatively, may be an independent agent appointed by the Employer.

Clause 1.1.1.20

Add the following after “Contract”:

and also includes the Form of Offer and Acceptance applicable in each Works Project contract document.

Clause 1.1.1.26:

The Pricing Strategy is a Re-measurement Contract.

Clause 1.1.1.28:

The Scope of Work in this Framework Contract document is applicable, as relevant, together with the project specific Scope of Work in each Works Project contract document.

Clause 1.1.1.33:

The “Works” applies to the Works Projects individually or as a whole, as the context provides.

Add the following Clauses after Clause 1.1.1.34:

1.1.1.35 **“Drawings”** means all drawings, calculations and technical information forming part of the Contract documents and any modifications thereof or additions thereto from time to time approved in writing by the Engineer or delivered to the Contractor by the Engineer.

1.1.1.36 **“Framework Contract”** means the Contract as defined in Clause 1.1.1.7; and **“Framework Contract Period”** means the period stated in the Contract Data, during which Works Projects may be allocated to the Contractor and for which Purchase Orders may be raised (issued) up until the expiry of the period; provided that the Framework Contract shall continue to remain in force after the expiration of the Framework Contract Period until the Final Approval Certificate has been issued by the Engineer for the last outstanding Works Project at the expiration of the Defects Liability Period of that Works Project.

1.1.1.37 **“Framework Contract Manager”** means the person named as the Framework Contract Manager in the Contract Data or any other person appointed from time to time by the Employer and of whom the Contractor is notified, in writing, to act as Framework Contract Manager for the purposes of the Contract as substitute for the Framework Contractor Manager so named.

The function of the Framework Contract Manager is to administer the Framework Contract, and such functions as would normally fall to the Engineer in accordance with the provisions of the Framework Contract, shall be undertaken by the Framework Contract Manager in this regard.

The Framework Contract Manager shall be an employee of the Employer, authorised as its representative to administer the Framework Contract, and all references to “Engineer” in the Contract shall apply to the Framework Contract Manager in respect of his/her administering the Framework Contract.

The Framework Contract Manager is:

Name: **Mr. Lionel Daniels**
Address: George Municipality
 York Street
 George, 6530
Tel: 044 801 9275
E-mail: rldaniels@george.gov.za

1.1.1.38 **“Letter of Notification”** means the letters of formal notification, signed by the Employer, of the decision of the Supply Chain Management Bid Adjudication Committee sent to all tenderers. The notification of the decision does not form part of the Employer’s Acceptance of a successful tenderer’s Offer and no rights shall accrue.

- 1.1.1.39 **“Panel”** means a number of contractors, of which the Contractor is one, appointed by the Employer under the Framework Contract to be available to execute Works Projects as and when they arise.
- 1.1.1.40 **“Purchase Order”** means the official purchase order created on the George Municipality's Supplier Database.
- 1.1.1.41 **“Schedules of Rates”** means, in this Framework Contract document, the document so designated in the Pricing Data, and which will be used to compile Bills of Quantities in the Works Project contract document(s).
- 1.1.1.42 **“Works Project”** means a part of the Works to be performed (task) by a Contractor under the Contract, the specific terms, conditions and scope of the Works Project contract being specified in a Works Project contract document.
- 1.1.1.43 **“Works Project Acceptance/Refusal Notice”** means the formal notification, signed by the successful tenderer/prospective Contractor and sent to the Employer, of his decision to accept/ refuse the opportunity afforded to participate further in the Contractor appointment procedure for a Works Project as specified in the Contract.

Clause 1.2.1.2:

The Employer's address for receipt of communications is:

Physical Address
George Municipality
York Street
GEORGE
6529

Postal Address:
PO Box 19
GEORGE
6530

Telephone: 044 801 9275

Email: rlDaniels@george.org.za

The address of the Engineer will be stated in the Works Project contract document(s).

Clause 2:

Add the following Clause after Clause 2.5.1:

2.6 Procedures for the allocation of Works Projects

The Employer reserves the right to plan and effect individual Works Projects at its sole discretion.

The Employer will only order those quantities of work items which it actually requires for execution in a Works Project from time to time. The Employer reserves the right not to order any quantities at all depending on circumstances and subject to operational requirements.

The Works Projects shall be executed in areas identified within the George municipal area and outlined in clause F.1.6.1 in Part T1.2 Tender Data.

The Works Projects shall be identified subject to availability of funding.

The procedures for the allocation of Works Projects are described in detail at the end of this Part 1: Contract Data provided by the Employer.

Clause 3:

3.2.3 The Employer's Agent shall obtain the specific approval of the Employer before executing any of his functions or duties according to the following Clauses of the General Conditions of Contract:

- | | | |
|---|----------------|---|
| 1 | Clause 6.3: | Variations |
| 2 | Clause 5.11.2: | Suspension of the Works |
| 3 | Clause 5.12: | Extension of Time for Practical Completion |
| 4 | Clause 3.3.1 | Nomination of Employer's Agent's Representative |
| 5 | Clause 3.3.4 | Employer's Agent's authority to delegate |
| 6 | Clause 5.8.1 | Non-working times |
| 7 | Clause 5.12.4 | Acceleration instead of Extension of time |
| 8 | Clause 10.1.5 | Contractor's claim |

Clause 4.3:

Add the following Clause after Clause 4.3.2:

4.3.3 The Employer and the Contractor shall enter into an agreement to complete the work required for the construction of the Works in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act, 85 of 1993 and the Construction Regulations, 2014 promulgated thereunder.

An agreement is included in the Contract Document (Part C1.5 in Agreements and Contract Data) and shall be completed and submitted to the Employer together with a letter of good standing from the Compensation Commissioner (if not insured with a licenced compensation insurer) within fourteen (14) days after the Commencement Date. The Contractor shall ensure that any letter of good standing shall be timeously renewed in order that it remains in full force for the duration of the Contract.

Clause 4:

Add the following Clause after Clause 4.12.3:

4.12.4 Protection of the Environment

The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

The Contractor's attention is also drawn to the Environmental Management Specification in the Scope of Work.

Clause 5:

Add the following Clause after Clause 5.1.1.2:

5.1.2 Framework Contract Period

The Framework Contract Period is for a period of **three years** calculated from the Commencement Date.

Clause 5.3:

Delete Clauses 5.3.1 to 5.3.3 in their entirety and replace with the following:

- 5.3.1 Upon appointment to the Panel or Panels the Contractor shall submit the required documentation, for approval by the Framework Contract Manager, as set out below. If the documentation is not submitted with 14 days from the Commencement Date, or is found to be unacceptable, the Employer may terminate the Framework Contract in terms of Clause 9.2.

The documentation required is:

- a) A framework Health and Safety Plan (Refer to Clause H8.3 in the Health and Safety Specification in Part C3.5 in the Scope of Work)
- b) Security (Refer to Clause 6.2)
- c) Insurance (Refer to Clause 8.6)
- d) Occupational Health and Safety Agreement (Part C1.4 in Agreements and contract Data)
- e) Letter of Good Standing from the Compensation Commissioner (if not insured with a Licensed Compensation Insurer) (Refer to Clause 4.3)
- f) Proof of Registration / Letter of Good Standing with the Bargaining Council for the Civil Engineering Industry (BCCEI).

- 5.3.2 The Contractor shall, save as may be otherwise provided in the Contract or be legally or physically impossible, commence executing the Works on the date specified in the Works Project contract; subject to the submission by the Contractor, and approval by the Engineer, of any documentation required before commencement with Works execution, as set out in the Works Project contract.

The following documentation shall be submitted for **each Works Project** by the highest ranked contractor on a Panel as part of the Works Project submission:

- a) A site specific Health and Safety plan (Refer to Health and Safety Specification in Part C3.5 Management and any other specific requirements stated in the Works Project contract document)
- b) Initial Programme (Refer to Clause 5.6)
- c) Insurance (Refer to Clause 8.6)

The time to submit any documentation required before commencement with Works execution of each Works Project shall be within the number of days from the Commencement Date of the Works Project as specified in the Works Project contract. Such documentation may include:

- d) Method Statement (Refer to Environmental Management Specification in Part C3.5 Management).

Clause 5.4.2:

Access to and possession of the Site shall not be exclusive to the Contractor insofar as the provisions of Clause 4.8 apply, and where ongoing use by the general public is required.

Add the following Clause after Clause 5.4.3:

- 5.4.4 The Contractor shall bear all costs and charges for special and temporary rights of way required by him in connection with access to the Site.

Clause 5.8.1:

The non-working days are Sundays.

The special non-working days are:

- a) All gazetted public holidays falling outside the year end break.
- b) The year end break commencing on mid December and ending on early January, and similar applicable dates in subsequent years.

Clause 5.12.1:

Add the following:

The Contractor may not claim a delay on another Works Project as causing delay on the particular Works Project contract in question.

Clause 5.12.2.2:

No extension of time will be granted in respect of any delays attributed to normal climatic conditions. Normal climatic conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, in the event that delays to critical activities exceed the number of working days listed below for each month, then abnormal climatic conditions shall be deemed to exist, and an extension of time may be claimed in accordance with the provisions of Clause 5.12.

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

January	2 days
February	2 days
March	2 days
April	2 days
May	2 days
June	3 days
July	3 days
August	3 days
September	2 days
October	2 days
November	2 days
December	1 days

Claims for delays for abnormal climatic conditions shall be accompanied by substantiating facts and evidence, which shall be submitted timeously as each day or half-day delay is experienced.

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

Clause 5.13.1:

The penalty for failing to complete the Works of each Works Project within the time referred to in Clause 1.1.1.14 is **R5 000** per day.

Insert the following after “actual date of Practical Completion”:

... or, in the case of termination by the Employer in terms of Clause 9.2.1, the actual date of termination,

Clause 5.16.3:

The latent defects period is **10** years.

Clause 6.2.1:

The performance guarantee is to contain the wording of Form C1.3 in Part C1 of the Tender Document. The performance guarantee value is to be 10% of the Work Project Price. A retention guarantee is not permitted.

Clause 6.2.2:

Delete Clause 6.2.2 in its entirety.

Clause 6.2.3:

Delete Clause 6.2.3 in its entirety and replace with the following:

The Contractor shall ensure that the performance guarantee remains valid and enforceable until the last Certificate of Completion of the Works for the Works Projects is issued.

Clause 6.5.1.2.3:

The percentage allowance to cover overhead charges is **10%**.

Clause 6.8.2:

Contract Price Adjustment is not applicable.

6.8.3 Price adjustments for variations in the cost of special materials are allowed.

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

6.10.3 Percentage retention is 10%.

The limit of retention money is 5% of the Works Project Sum.

Clause 8.6.1:

The insurances to be effected and maintained by the Contractor shall be in the form of a blanket/umbrella policy for this term tender contract. This policy shall be endorsed as and when required to reflect each Works Project that may be allocated to the Contractor.

8.6.1.3 The limit of indemnity for liability insurance is **R10 000 000** for any single claim, the number of claims to be unlimited during construction and Defects Liability Period.

10.5.2 Disputes shall be referred to ad-hoc adjudication.

10.5.3 The number of Adjudication Board Members to be appointed is one.

10.7.1 The determination of disputes shall be by arbitration.

Clause 8.6.6:

The evidence that the insurances have been effected in terms of Clause 8.6.1, shall be in the form of an insurance broker's warranty worded precisely as given in Part C1.7 Insurance Broker's Warranty.

In addition, an insurance broker's warranty will be required for every Works Project as and when the contractor submits an offer for a Works Project contract. This warranty shall, *inter alia*, confirm that the applicable blanket/umbrella policy for the term tender contract has been endorsed to reflect the Works Project contract and that all premiums have been paid.

Clause 8.6.7:

Add the following to the end of this Clause:

; and/or the Employer shall be entitled to exclude the Contractor from participating in any future Works Project processes until such time as satisfactory evidence has been provided.

ADDITIONAL CONDITIONS OF CONTRACT

Add the following Clause after Clause 10:

Clause 11 Details to be confidential

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

PROCEDURES FOR THE ALLOCATION OF WORKS PROJECTS

<p>The procedures for the allocation of Works Projects, given below, are to be read in conjunction with clause F.1.6.1 in Part T1.2 Tender Data and Clause 2.6 in the Contract Data. These procedures include the development of Works Project contract documents, applying the tendered rates in order to arrive at financial offers, calculating works project evaluation points, ranking the panel of contractors, and allocating the Works Project to the highest ranked contractor.</p>
--

<p>The procedures are summarised under the stages below, wherein the Employer (acting through his agent) shall</p>
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<p>Stage 1: Employer prepares Works Project contract document, prices bills of quantities using each contractor's rates and prepares a works project evaluation ranking for all contractors</p>
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- | |
|--|
| <ul style="list-style-type: none"> a) select a Work Area for the execution of the Works Project; b) prepare a Works Project contract document, including Bills of Quantities and Scope Work therein; c) compute financial offers for all contractors appointed to the panel, using their respective Contract rates; and d) award works project evaluation points for each contractor, based on the financial offer and B-BBEE preference, and prepare a works project evaluation ranking of all contractors; |
|--|

<p>Stage 2: Contractors collect copy of Works Project contract document and works project evaluation ranking, attend compulsory Works Project meeting and submit acceptance/refusal notices</p>
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- | |
|---|
| <ul style="list-style-type: none"> e) make available to the contractors a copy of the Works Project contract document with the Bills of Quantities priced by the Employer (as in b) and c) above), together with the works project evaluation ranking of all contractors (as in d) above); f) simultaneously, invite the contractors to attend a compulsory Works Project meeting; g) conduct the Works Project meeting, including discussing any issues the contractors may have (this may result in changes being made to the Works Project contract document and its being re-issued after steps c) to e) have been repeated); and h) receive acceptance/refusal notices from contractors timeously after the meeting; |
|---|

<p>Stage 3: Highest ranked contractor submits completed Works Project contract document and Employer allocates Works Project</p>

- | |
|---|
| <ul style="list-style-type: none"> i) request the highest ranked contractor, who attended the Works Project meeting and accepted the work opportunity, to complete the Returnable Schedules, Form of Offer, Works Project Acceptance/Refusal Notice, etc. in the Works Project contract document and submit the completed document to the Employer; and j) test submission for completeness and allocate the Works Project to the contractor or, if his offer is non-responsive/invalid, repeat the processes in i) and j) with the contractor with the next highest evaluation points. |
|---|

Further details of the procedures under the above stages are given below.

Stage 1

As and when the Employer requires work to be executed in a Works Project under the Contract, the Employer shall specify, *inter alia*, the nature, location(s), extent, scope of work, proposed programme and contract period for the work required, in a **Works Project contract document** comprising, as relevant, Work Allocation Procedures, Returnable Schedules, Agreements and Contract Data, Bills of Quantities and Scope of Work.

In the Bills of Quantities the Employer shall assign quantities to the work items relating to the specific Scope of Work in the Works Project. The assigned quantities shall be multiplied by the Contract rates to constitute amounts that will be totalled to provide a **financial offer** for each contractor for this specific Works Project.

The Employer shall evaluate the financial offers so constituted, together with the contractor's **B-BBEE status** as at the time of the tender closing date, in accordance with clause P.3.4 in Part A1.2 Work Allocation Procedures in the Works Project contract document, and prepare a **works project evaluation ranking** for the Works Project.

Stage 2

The Employer shall invite the contractors to attend a compulsory **Works Project meeting** at a time and venue disclosed in writing by the Employer.

The Employer shall issue the invitation **seven (7)** days prior to the meeting date, and simultaneously make available to the contractors their individually priced Works Project contract documents, together with the works project evaluation ranking of all the contractors for the Works Project.

The Employer shall conduct the compulsory Works Project meeting on the date specified. The purpose of this meeting is to inform the contractors of the Scope of Work required in the Works Project. The meeting shall furthermore serve to answer any queries the contractors may have in respect of the required work, billed items and quantities, etc. (this may result in changes being made to the Works Project contract document and its being re-issued as in g) above). A contractor who fails to attend the compulsory Works Project meeting will be **excluded** from further participation in the Works Project allocation process.

Included in the Works Project contract document is a Works Project **Acceptance/Refusal Notice** (Form C1.8) requesting the contractor to state in writing whether he accepts/refuses the opportunity afforded to participate further in the work allocation procedure (i.e. that he is willing/not willing to undertake the work specified in the Scope of Work and Bills of Quantities and has/has not the necessary resources, including a site specific construction manager, available to complete the work within the required Works Project contract period should he be allocated the work).

Contractors will be required to complete and return the Works Project Acceptance/Refusal Notice, either by fax or email, to the Employer prior to the closing date for receipt of Works Project Acceptance/Refusal Notices (non-submission will be regarded as a refusal), including, for those who accept, declaring whether their declarations in respect of sub-contractors made in the Preferencing Schedule in the Contract document stand for the Works Project, or not - refer to Form C1.5 in this regard. The Employer will finalise the ranking of the contractors who accept, after taking their declarations into account.

Stage 3

Upon request of the Employer, the Works Project contract document shall be completed, signed and

returned by the highest ranked contractor who has accepted to the Employer's agent's offices no later than the date stated in such request.

The Employer will specify the proposed Works Project construction time period (time from the date specified for commencement with Works execution to Due Completion Date) for completing the specified Works in the Scope of Work in the Works Project contract document. The contractor shall submit a realistic **preliminary construction programme** reflecting his proposed sequence and tempo of execution of the Works Project contract for completing the Works within the prescribed construction time period, and shall append the preliminary (initial) programme to the applicable schedule in Part A2.2 Returnable Schedules in the Works Project contract document.

The submission of a fully completed and signed Works Project contract document is mandatory for the contractor who has been requested by the Employer to submit his offer, and the contractor may be requested by the Employer to complete and/or sign his submission, if necessary, should he have not already done so. A submission will be **rejected** as being non-responsive/invalid if the document is not fully completed and/or signed after the contractor has been requested by the Employer to complete and/or sign his submission.

The returned Works Project contract document will be **tested for completeness** in accordance with these procedures. The contractor whose returned Works Project contract document is fully completed and signed will be appointed as Contractor to execute the Works for the specific Works Project in terms of the Contract.

A contractor whose offer is non-responsive/invalid, or who failed to return the completed, signed Works Project contract document (the offer) by the date stated in the Employer's request, will be **excluded** from further participation in the Works Project allocation process, and the next highest ranked contractor who has accepted will be requested to submit his offer (in such a circumstance the construction time period may have to be amended by the Employer and agreed to by the contractor).

Acceptance of the successful contractor's offer takes place on the date the contractor (now Contractor in terms of the Contract) receives the George Municipality's official **purchase order**, such date being the Commencement Date of the Works Project contract.

Each Works Project shall not exceed **R17 500 000 (including contingencies and VAT, but excluding contract price adjustment, if applicable)**.

Working days for these procedures are Mondays to Fridays.

PART 2: DATA PROVIDED BY THE CONTRACTOR**Clause**

- 1.1.1.9 The Contractor is
- 1.1.14 The Time for achieving Practical Completion (To be confirmed per Works Project) is working days plus special non-working days.
- 1.2.1.2 The Contractor's address for receipt of communications is:
- Physical address: Postal address:
-
-
-
-
- Telephone:
- Fax:
- Email:

6.2.1 The Security to be provided by the Contractor shall be as stated in 6.2.1 and 6.10.3 of Part 1.

- a. The percentage allowance to cover overhead charges is 10%.

6.8.3 of the GCC, and 4.1 of the Contract Price Adjustment Schedule

SPECIAL MATERIALS		
Each material dealt with as a special material in terms of Clause 4.1 of the Contract Price Adjustment Schedule of the General Conditions of Contract is stated in the list below. The provisions of Clause 6.8.3 of the General Conditions of Contract shall apply to such special materials. The rates and prices for the special materials shall, unless otherwise specified, be furnished by the tenderer, which rates and prices shall not include VAT but shall include all other obligatory taxes and levies. Only those materials listed by the employer below shall be considered as special materials.		
Special Material	Unit	State source (if refinery*) of special material Current Rate or Price

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* Indicate whether the material will be delivered in bulk or in containers.

When called upon to do so, the tenderer shall substantiate the above rates or prices with acceptable documentary evidence.

The tenderer shall state in the schedule the source of bitumen upon which the tendered rates are based.

VARIATIONS TO THE CONDITIONS OF CONTRACT ARE:

Clause

4.4.3 Liability for subcontractors

Insert at the beginning of Clause 4.4.3:

"The Contractor shall not subcontract any part of the Contract without the prior written consent of the Employer's Agent."

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING
AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

Form of Performance Guarantee (Part C1.3)

Form of Guarantee

To:

GEORGE MUNICIPALITY
PO Box 19
GEORGE
6530

Sir,

**CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF
General Conditions of Contract for Construction Works Third Edition 2015**

With reference to the contract between _____
(hereinafter referred to as the “contractor”) and the **GEORGE Municipality**, (hereinafter
referred to as the “employer”), **Tender No: T/ING/004/2022, TERM TENDER FOR ROAD
REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF
THREE YEARS**

(hereinafter referred to as the “contract”) in the amount of

R _____,

(in words _____) (hereinafter

referred to as the **contract sum**),

I / We, _____ in my/our capacity as _____ and hereby

representing _____

(hereinafter referred to as the “**guarantor**”) advise that the **guarantor** holds at the

employer’s disposal the sum of R _____,

(in words _____) being ten (10) %

of the **contract sum** (excluding VAT), for the due fulfilment of the contract.

- 1) The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis*; and all other exceptions which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed, during the period when the claim is received by the **guarantor**, on receipt of a written demand from the **employer** to do so, and which demand the **employer** may make if the **employer** has a right of recovery against the **contractor**.
- 2) Subject to the above, but without in any way detracting from the **employer's** rights to adopt any of the procedures provided for in the contract, the said demand can be made by the **employer**, at any stage prior to the expiry of this guarantee.
- 3) The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon the issue of the last final **payment certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.
- 4) The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner, which the employer deems, fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from a foregoing, any compromise, extension of the **construction period**, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.
- 5) This undertaking is neither negotiable nor transferable, and
 - a. must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 4 above, or
 - b. shall lapse on the date of the last **certificate of works completion**; and
 - c. shall not be interpreted as extending the **guarantor's** liability to anything more than payment of the amount guaranteed

SIGNED AT _____ ON THIS _____ DAY
OF _____ 20____

AS WITNESSES

By and on behalf of

1. _____
2. _____

(insert the name and physical address of the guarantor)

NAME: _____

CAPACITY: _____

(duly authorized thereto by resolution attached marked Annexure A)

DATE: _____

- A.** No alterations and/or additions of the wording of this form will be accepted.
- B.** The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.
- C.** This GUARANTEE must be returned

to: _____

Guarantor's seal or stamp

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY (Part C1.4)

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

THIS AGREEMENT made at on this the
..... day of in the year..... between
The George Municipality (hereinafter called "the Employer") on the one part, herein represented
by..... in his capacity as
..... and delegate of the Employer and
..... (hereinafter called "the Principal
Contractor") of the other part, herein represented byin his capacity
as.....

WHEREAS the Employer is desirous that certain works be constructed and has accepted a tender by the Principal Contractor for the construction, completion & maintenance of such works and whereas the Employer and the Principal Contractor have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Principal Contractor with the provisions of the Occupational Health and Safety Act 1993, Act 85 of 1993 and the Construction Regulation 2014;

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:

C.1.1 The Principal Contractor shall execute the work in accordance with the contract documents pertaining to this contract.

C.1.2 This Agreement shall hold good from its commencement date, which shall be the date of a written notice from the Employer or Engineer requiring him to commence the execution of the Works, to either:

- a) the date of the final certificate issued in terms of clause 6.10 of the General Conditions of Contract for Construction Works 2015 3rd edition as issued by the South African Institution of Civil Engineering
- b) referred to as "the GCC 2015"), as contained in the contract documents pertaining to this contract, or
- c) the date of termination of the contract in terms of clauses 9.1, 9.2 or 9.3 of the GCC 2015.

C.1.3 The Principal Contractor declares himself to be conversant with the following: -

- a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1993), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act.
 - i) Section 8: General duties of Employers to their employees.
 - ii) Section 9: General duties of Employers and self-employed persons to persons other than employees.
 - iii) Section 37: Acts or omissions by employees or mandatories and
 - iv) Sub-section 37(2) relating to the purpose and meaning of this Agreement.
 - v) Construction Regulations 2014, and other safety regulations, as applicable.
- b) The procedures and safety rules of the Employer as pertaining to the Principal Contractor and to all his sub-Contractors.

C.1.4 The Principal Contractor is responsible for the compliance with the Act by all his sub-Contractors, whether or not selected and/or approved by the Employer.

C.1.5 The Principal Contractor warrants that all his and his sub-Contractors' employees are covered in terms of the Compensation for Occupational Injuries and Diseases Act 1993 which cover shall remain in force whilst any such employees are present on site. A letter of good standing from the Compensation Commissioner to this effect must be produced to the Employer upon signature of the agreement.

C.1.6 The Principal Contractor undertakes to ensure that he and/or his sub-Contractors and/or their respective employees will at all times comply with the following conditions:

- a) The Principal Contractor shall assume the responsibility in terms of Section 16.1 of the Occupational Health and Safety Act. The Principal Contractor shall not delegate any duty in terms of Section 16.2 of this Act without the prior written approval of the Employer. If the Principal Contractor obtains such approval and delegates any duty in terms of section 16.2 a copy of such written delegation shall immediately be forwarded to the Employer.

b) All incidents referred to in the Occupational Health and Safety Act shall be reported by the Principal Contractor to the Department of Labour as well as to the Employer. The Employer will further be provided with copies of all written documentation relating to any incident.

c) The Employer hereby obtains an interest in the issue of any formal enquiry conducted in terms of section 32 of the Occupational Health and Safety Act into any incident involving the Principal Contractor and/or his employees and/or his sub-Contractors.

In witness thereof, the parties hereto have set their signatures hereon in the presence of the subscribing witnesses:

SIGNED FOR AND ON BEHALF OF THE EMPLOYER:

WITNESS:

1.....
2

NAME (IN CAPITALS)

1.....
2

SIGNED FOR AND ON BEHALF OF THE PRINCIPAL CONTRACTOR:

WITNESS:

1.....
2

NAME (IN CAPITALS)

1.....
2

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GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING
AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

**Works Project Acceptance/Refusal Notice
(Part C1.5)**

To be provided

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GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING
AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

Pricing Data (Part C2)

C2.1 Pricing Instructions

C2.2 Pricing Schedules, Bill of Quantities and Rates

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Pricing Instructions (Part C2.1)

C2.1 Pricing Assumptions

Pricing Assumptions mean the criteria as set out below, read together with all Parts of this framework contract document, which it will be assumed in the contract, that the tenderer has taken into account when developing his prices (rates).

These Pricing Assumptions are applicable to the Schedules of Rates in this document. Pricing Assumptions applicable to the Bills of Quantities in Works Project contract documents are provided in such documents.

1. The method of measurement prepared by the Committee of Land Transport Officials in clause 8 of the COLTO Standard Specifications for Road and Bridge Works for State Road Authorities (1998 edition) is applicable, subject to the variations and amendments in the respective "Measurement and Payment" clauses in the particular specifications contained in Part C3.4 Construction in the Scope of Work.
2. Descriptions in the Schedules of Rates are abbreviated and comply generally with those in the Standardized Specifications. The measurement and payment clauses of each Standardized Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standardized Specification, or the Scope of Work, conflict with the terms of the Schedules of Rates, the requirements of the Standardized Specification or Scope of Work, as applicable, shall prevail.
3. The measurement and payment clauses in a specification in which further information regarding the scheduled items is given, are referenced under "Item" (pay items) in the Schedules of Rates. The referenced clauses are not necessarily the only sources of information in respect of scheduled items. Further information and specifications may be found elsewhere in the Contract Documents. Standardized Specifications are identified by the first two digits of the specifications, e.g. 13 for COLTO Section – 1300.
4. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.
5. No quantities are set out in the Schedules of Rates and the Contractor will be required to undertake whatever quantities may be directed by the Engineer from time to time in the relevant Works Project. The final Contract Price for each completed Works Project shall be computed from the actual quantities of work done, valued at the relevant rates (refer to Clause 10 in these Pricing Assumptions in this regard).
6. Rates inserted in the Schedules of Rates are deemed to be based on Acts, Ordinances, Regulations, By- laws, International Standards and National Standards that

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were published 28 days before the closing date for tenders. (Refer to www.stanza.org.za or www.iso.org for information on standards).

7. The rates (excluding VAT) inserted in the Schedules of Rates shall be the full inclusive rates for the work described under the several items. Such rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable rates shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith shall be provided for and included in the rates tendered for such items.

8. A rate is to be entered against each item in the Schedules of Rates. If a nil rate (i.e. "nil" or "0.00") is entered against an item, it will be considered that there is no charge for that item. **An item against which no rate (or rates, in the case of rate categories if provided) is/are entered, or if anything other than a rate or a nil rate (for example, a zero, a dash or the word "included" or abbreviations thereof) is entered against an item, it will also be regarded as a nil rate having been entered against that item, i.e. that there is no charge for that item.**

The Tenderer may be requested to clarify nil rates, or items regarded as having nil rates; and the Employer may also perform a risk analysis with regard to the reasonable of such rates.

9. The Tenderer may not group a number of items together and tender one lump sum for such group of items.
10. The tendered rates shall remain valid and binding, subject to contract price adjustment, if applicable, for the full duration of the framework contract.
11. **No unauthorized amendment shall be made to the Schedules of Rates or any part of the Pricing Data. If such amendment is made, or if the Schedules of Rates are not properly completed, the tender may be rendered non-responsive.**
12. The Employer reserves the right to negotiate with the Tenderer if a rate or rates is/are excessively high, and to perform a risk analysis if a rate or rates is/are excessively low (refer to clause F.4.3 in Part T1.2 Tender Data).
13. The units of measurement described in the Schedules of Rates are metric units. Abbreviations which may be used in these Schedules of Rates are as follows:

mm	=	Millimeter	h	=	hour
m	=	Meter	kg	=	kilogram
km	=	Kilometer	t	=	ton (1000 kg)
km-pass	=	kilometer-pass	No.	=	number
m ²	=	square meter	sum	=	lump sum
m ² -pass	=	square meter-pass	MN	=	meganewton
ha	=	Hectare	MN.m	=	meganewton-meter
m ³	=	cubic meter	P C sum	=	Prime Cost sum
m ³ .km	=	cubic meter-kilometer	Prov sum	=	Provisional sum
l	=	Liter	%	=	per cent
kl	=	Kiloliter	kW	=	kilowatt
MPa	=	Megapascal	day	=	Working day
kPa	=	Kilopascal			

14. Tenderers shall provide rates for the execution of items as specified in the Schedules of Rates. Unless otherwise described in the items in the Schedules of Rates, all rates (sums in particular) apply to individual Works Project contracts. Framework Contract pay items shall be initial one-off payments in the Framework Contract.

The rates provided in the Schedules of Rates shall be used in representative Works Projects for tender evaluation purposes in accordance with clause F.3.11.1 in Part T1.2 Tender Data, as well as in the allocation of individual Works Projects in accordance with Clause 2.6 in Part C1.2 Contract Data and the Procedures for the allocation of Works Projects referred to therein.

15. Tenderers shall provide rates (excluding VAT) for each required rate category (if provided) for each item specified in every schedule in the Schedules of Rates (refer to clause F.2.10.5 in Part T1.2 Tender Data). Prime Cost and Provisional Sums will be multiplied by a factor (quantity) to be provided by the Employer at Works Project stage only.

16. Tenderers are referred to clause F.1.6.1 in Part T1.2 Tender Data with regard to working within the George Municipal Area, as shown on the drawings and as tabled therein.

Rates submitted in the respective Schedules of Rates shall apply to Works Projects executed anywhere within the George Municipal Area.

17. The Employer will only order those quantities of work items, which it actually requires for execution in a Works Project from time to time. The Employer reserves the right not to order any quantities at all depending on circumstances and subject to operational requirements.

18. The procedures for allocation of Works Projects are specified in Part C1.2 Contract Data (refer to Clause 2.6).

19. Clause F.4.12 c) in Part T1.2 Tender Data shall be applicable to the submission of Schedules of Rates which have been priced electronically, and which the Tenderer wishes to submit as a printed version with his tender in the place of handwritten priced Schedules of Rates.

If there is found to be any variance between the printed version and the original issued document, the original shall stand. However, where Addenda have been issued which amend the Schedules of Rates, then the printed Schedules of Rates shall take these into account.

The pages of the issued Schedules of Rates should not be removed from the tender document.

20. Tenderers are referred to Clause E8 Measurement and Payment in the Environmental Management (EM) Specification in Part C3.5 in the Scope of Work for the basic principles of measurement and pricing of the EM Specification.
21. Tenderers are referred to Clause 6.8.2 in Part C1.2 Contract Data regarding contract price adjustment.
22. Where brand names or trade names are mentioned in description, it shall be deemed that 'or equivalent' be included in such descriptions.

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Pricing Schedules, Bill of Quantities and Rates (C2.2)

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SUMMARY OF SCHEDULES

DECLARATION (In respect of completeness of Tender)

George Municipality
P.O. Box 19
GEORGE
6530

I/we, the undersigned, do hereby declare that these are the properly priced Schedule of Rates forming Part C2.2 of this Contract Document containing 50 pages in consecutive order, upon which my/our tender for **TENDER NO. T/ING/004/2022: TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLARY WORKS FOR A PERIOD OF THREE YEARS** has been based. If I/we have submitted a printed version of the Schedules of Rates, I/we warrant that no amendments have been made to it from the original, other than amendments issued in any Addenda in terms of Clause F.3.2 in Part T1.2 Tender Data.

SIGNATURE OF TENDERER/S

DATE

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE A: GENERAL

SECTION 1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS				
B13.01	Contractor's General Obligations				
B13.01.1	General civil works (Series 1000, 2000, 3000)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.2	Ancillary Roadworks (Drainage - series 2000)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.3	Ancillary Roadworks (Deep patching - section 3900)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.4	Ancillary roadworks (Road markings - section 5700)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.5	Ancillary roadworks (Road markings (Thermoplastic) - section 5700)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.6	Asphaltic plug type joints (Thormajoint ® or similar approved - Section 6600)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
	Carried forward				

SCHEDULE A: GENERAL

SECTION 1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
	Brought Forward				
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS (continued)				
B13.01.7	Cracksealing				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.8	Machine applied slurry				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.9	Hand applied slurry and asphalt				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.10	Milling of pavement layers (urban street constructed in half-widths)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.11	Milling of pavement layers (freeway / dual carriageway road)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.12	Asphalt surfacing (urban street constructed in half-widths)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.13	Asphalt surfacing (freeway / dual carriageway road)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
	Carried forward				

SCHEDULE A: GENERAL

SECTION 1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
	Brought Forward				
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS (continued)				
B13.01.14	Asphalt surfacing (full road closure)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.15	Surfacing seal (urban street constructed in half-widths)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.16	Surfacing seal (full road closure)				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.01.17	Cold in-situ recycling equipment for stabilization inclusive of distributor equipment				
	(a) Fixed obligations	L/Sum			
	(c) Time-related obligations	day			
	(d) E. O. for working on Sundays and other special non-working days	day			
	(e) E. O. for working at night	day			
B13.02	Contractors Security and Insurance Obligations				
B13.02.01	Security (Provision of Performance Guarantee)	PC sum	100,000.00	100,000.00	100,000.00
B13.02.02	Insurance (Blanket Policy)	PC sum	15,000.00	15,000.00	15,000.00
B13.03	Additional Security Measures				
	(a) Two Grade C Protection Officers per 12-hour Day Shift equipped with hand held radio + charger and non-lethal self defence equipment.	Sum			
	(b) Two Official Night Shift officers from 18h00 – 6h00	Sum			
	(c) Two Official Day Shift officers 14h00 – 18h00 Saturdays	Sum			
	(d) Two Official Day Shift officers from 06h00 – 18h00 Sundays	Sum			
B13.04	Provisional Sums				
	(a) Protection, relocation or reinstatement of existing services	Prov sum	25,000.00	25,000.00	25,000.00
	(b) Handling cost and profit in respect of subitem B13.04 (a)	%			
B13.05	Exposing of existing services	m ³			
B13.06	Subcontracting specialist contractors	Prov sum	100,000.00	100,000.00	100,000.00
	Attendance on subcontractors	%			
B13.07	Protection of existing services during construction.	Prov sum	50,000.00	50,000.00	50,000.00
	Carried forward				

SECTION 1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

Contract
Part C2: Pricing Data
Reference No. T/ING/004/2022

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE A: GENERAL

SECTION 8100 : TESTING MATERIALS AND WORKMANSHIP

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
8100	TESTING MATERIALS AND WORKMANSHIP				
81.02	Other special tests requested by the Engineer	Prov Sum	20000	20,000.00	20,000.00
B81.03	Providing testing equipment:				
	(a) Rolling straight-edge	No			
	(c) Straight edge, 3m long	No			
B81.04	Provision for commercial laboratory testing				
	(a) Actual cost of testing	Prov sum	10,000.00	10,000.00	10,000.00
	(b) Contractor's charges in respect of subitem B81.04(a) above	%			
TOTAL SCHEDULE A: SECTION 8100 CARRIED TO SUMMARY					R

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE A: GENERAL

SECTION C1000 : ENVIRONMENTAL MANAGEMENT

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
C1000	ENVIRONMENTAL				
C10.01	Contractor's obligations in respect of environmental management				
	(a) Environmental control officer (ECO)	Month			
	(b) Environmental aspects and impacts	Month			
	(c) Provision of environmental emergency measures	Prov sum	10,000.00	10,000.00	10,000.00
	(d) Contractor's charge to allow for handling costs and profit in respect of subitem C10.01(a-c)	%			
TOTAL SCHEDULE A: SECTION C1000 CARRIED TO SUMMARY					
					R

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE A: GENERAL

SECTION D1000 : LABOUR-BASED WORK AND TRAINING REQUIREMENTS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
D1000	LABOUR-BASED WORK AND TRAINING REQUIREMENTS				
D10.01	In-task training of Local Labour	PC sum	30,000.00	30,000.00	30,000.00
D10.02	Accredited training of Local Labour by an approved Services Provider	PC sum	100,000.00	100,000.00	100,000.00
D10.03	Training allowance paid to labour in terms of formal training	Prov sum	40,000.00	40,000.00	40,000.00
D10.04	Extra-over item D10.03 for the administration of payment allowances to targeted labour	%			
D10.05	Transport and accommodation cost of workers for training where it is not possible to undertake the training in close proximity of the site	PC sum	30,000.00	30,000.00	30,000.00
D10.06	Management of Labour-based Work	PC sum	30,000.00	30,000.00	30,000.00
D10.07	Workman's Compensation Act	PC sum	3,000.00	3,000.00	3,000.00
D10.08	a) Community Liaison Officer (CLO)	Prov sum	25,000.00	25,000.00	25,000.00
	b) Contractor's charge to allow for handling costs and profit in respect of sub-item D10.08a	%			
D10.09	a) Stakeholder Engagement Facilitator	Prov sum	25,000.00	25,000.00	25,000.00
	b) Contractor's charge to allow for handling costs and profit in respect of sub-item D10.09a	%			
TOTAL SCHEDULE A: SECTION D1000 CARRIED TO SUMMARY					R

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 1500: ACCOMMODATION OF TRAFFIC

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
1500	ACCOMMODATION OF TRAFFIC				
B15.01	Accommodation of traffic and maintaining temporary deviations				
	(a) Two-way traffic accommodated				
	(ii) During milling, repair of pre-treatment of the road	km			
	(iii) During resurfacing of the road	km			
	(iv) During road marking	km			
	(v) During ancillary minor works	km			
	(b) One-way traffic accommodated				
	(ii) During milling, repair of pre-treatment of the road	km			
	(iii) During resurfacing of the road	km			
	(iv) During road marking	km			
	(v) Ancillary minor works	km			
	(c) Road closures/road junctions				
	(ii) During milling, repair of pre-treatment of the road	km			
	(iii) During resurfacing of the road	km			
	(iv) During road marking	km			
	(v) During ancillary minor works	km			
B15.03	Temporary traffic control facilities				
	(a) Flagmen	man-day			
	(b) Portable STOP and GO_RY signs	No			
	(d) Amber flicker lights	No			
	(e) Road signs, R-and TR -series, 900mm diameter	No			
	(f) Roads signs, TW-series, 900mm sides	No			
	(g) Road signs, STW-DTG,-TGS-, TG- and TIN-series (excluding delineators and barricades)	m ²			
	(h) Delineators (DTG50J) (200 x 800mm):				
	(i) Single	No			
	(ii) Mounted back to back	No			
	(i) Movable barricades/road sign combination	No			
	(j) Traffic cones (450 mm)	No			
	(k) Single guardrails attached to posts	m			
	(l) Movable barriers (concrete new jersey type)	m			
	(m) Two-way communication devices	No			
	(n) Temporary traffic-control signs as specified	m ²			
	Carried forward				

SCHEDULE B: ROADWORKS

SECTION 1500: ACCOMMODATION OF TRAFFIC

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
	Brought Forward				
1500	ACCOMMODATION OF TRAFFIC (continued)				
	(p) Other traffic control measures ordered by the Engineer				
	(i) Provision of other traffic control measures	Prov sum	10000	10,000.00	10,000.00
	(ii) Handling costs and profit in respect of sub-item B15.03 (p)(i)	%			
	(q) Traffic guidance system				
	(i) Quick marker base with tornado 75-flex double sided temporary delineator blades complete or similar approved	No			
	(ii) Reuse on site	No			
	(r) Traffic Signals: Provision and operation of traffic control signals/huts (1 set=2huts) complete with skilled labour, devices, etc. to operate on 24hour basis	set-day			
15.04	Relocation of traffic control facilities	Lump sum			
15.13	In situ preparation and compaction of existing gravel shoulders to 93% of modified AASHTO density	m³			
B15.14	Provision of Traffic Safety Officer				
	(a) Traffic Safety Officer	day			
	(b) Traffic Safety Vehicle(s)	day			
B15.15	Accommodation of Traffic and the provision of equipment for the purpose of assisting the Employer's Agent/Engineer in measuring up the Works prior to project implementation:				
	(a) Establishment / de-establishment of traffic control facilities on Site	Lump sum			
	(b) Traffic accommodation (Type 1)	km.hr			
	(c) Traffic accommodation (Type 2)	km.hr			
	(d) Traffic accommodation (Type 3)	km.hr			
	(e) Emergency rotating amber flashing lights for mobile use	No			
	(f) "Construction vehicle" sticker for vehicles with 250mm high lettering	No			
	(g) Safety jackets	No			
B15.16	Penalty to be deducted for non-compliance with requirements for accommodation of traffic				
	(a) Fixed penalty per occurrence	Sum	-5,000.00	-5,000.00	-5,000.00
B15.17	Media releases and public relations				
	(a) Media releases and public relations	Prov sum	10,000.00	10,000.00	10,000.00
	(b) Handling costs and profit in respect of subitem B15.17(a)	%			
	TOTAL SCHEDULE B: SECTION 1500 CARRIED TO SUMMARY			R	

SECTION 1700: CLEARING AND GRUBBING

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TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 1800: DAYWORKS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
B1800	DAYWORKS				
B18.01	Labour charges				
B18.01.01	During working hours				
	(a) Unskilled Labourer	hr			
	(b) Charge hand / Ganger	hr			
	(c) Junior foreman	hr			
	(d) Senior or general foreman	hr			
	(e) Foreman	hr			
	(f) Flagman	hr			
	(g) Surveyor	hr			
	(h) Security guard, minimum PSIRA Grade C qualification	hr			
	(i) Sem-skilled Labourer	hr			
	(j) Skilled Labourer	hr			
B18.01.02	Outside working hours				
	(a) Unskilled Labourer	hr			
	(b) Charge hand / Ganger	hr			
	(c) Junior foreman	hr			
	(d) Senior or general foreman	hr			
	(e) Foreman	hr			
	(f) Flagman	hr			
	(g) Surveyor	hr			
	(h) Security guard, minimum PSIRA Grade C qualification	hr			
	(i) Sem-skilled Labourer	hr			
	(j) Skilled Labourer	hr			
B18.01.02	During special non-working hours				
	(a) Unskilled Labourer	hr			
	(b) Charge hand / Ganger	hr			
	(c) Junior foreman	hr			
	(d) Senior or general foreman	hr			
	(e) Foreman	hr			
	(f) Flagman	hr			
	(g) Surveyor	hr			
	(h) Security guard, minimum PSIRA Grade C qualification	hr			
	(i) Sem-skilled Labourer	hr			
	(j) Skilled Labourer	hr			
	Carried forward				

SCHEDULE B: ROADWORKS

SECTION 1800: DAYWORKS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
	Brought Forward				
B1800	DAYWORKS continued				
B18.02	Material charges				
	a) Procurement of materials - Actual cost of material not already specified in the tender by the Employer	Prov sum	50,000.00	50,000.00	50,000.00
	b) Contractor's handling costs, profit and all other charges in respect of sub item B18.02(a)	%			
B18.03	Plant charges				
	(a) Wheel loader (60 kW)	hr			
	(b) Backhoe/loader (55 kW)	hr			
	(c) Tracked excavator (120 kW)	hr			
	(d) Motor grader (110 kW)	hr			
	(e) Tip truck:				
	(i) Capacity of 6 m ³	hr			
	(ii) Capacity of 10 m ³	hr			
	(f) Self-propelled smooth vibrating roller (9 t)	hr			
	(g) Walk-behind vibrating roller (1 t)	hr			
	(h) Plate compactor	hr			
	(i) Water cart (9000 litre)	hr			
	(j) Compressor	hr			
	(k) Generator	hr			
	(l) LDV (1 Ton)	hr			
	(m) Flat-bed with crane (capable of transporting and placing/removing concrete new jersey type barriers)	hr			
B18.04	Other Plant not specified above				
	a) Procurement of plant / equipment - Actual cost of plant / equipment not already specified in the tender by the Employer	Prov sum	50,000.00	50,000.00	50,000.00
	b) Contractor's handling costs, profit and all other charges in respect of sub item B18.04(a)	%			
B18.05	Transport				
	(a) LDV (1 ton)	km			
	(b) Tipper (6m ³)	km			
	(c) Tipper (10m ³)	km			
	(d) Flatbed truck (with crane)	km			
TOTAL SCHEDULE B: SECTION 1800 CARRIED TO SUMMARY			R		

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

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

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS.				
23.01	Concrete kerbing:				
	(a) Type BK1				
	(i) 1000mm units	m			
	(ii) 300/330mm units	m			
	(c) Type C1				
	(i) 1000mm units	m			
	(ii) 300/330mm units	m			
	(e) Type MK10 (see Drawing No. R1B)				
	(i) 1000mm units	m			
	(ii) 300/330mm units	m			
	(g) Type Edging E2	m			
	(h) Type Footway Edging E1	m			
23.02	Concrete kerbing-channelling combination:				
	(a) Type BK1 kerb & C1 channel (see Drawing No. R1A)				
	(i) 1000mm units	m			
	(ii) 300/330mm units	m			
	(f) Type CK5 (see Drawing No. R1B)				
	(i) 1000mm units	m			
	(ii) 300/330mm units	m			
23.03	Concrete chutes:				
	(a) CAPE CONCRETE type or equally approved embankment chute (trapezoidal in plan) or similar approved (1,0m unit length)	m			
B23.07	Trimming of excavations for concrete-lined open drains				
	(a) In soft material	m ²			
	(b) In hard material	m ²			
B23.08	Concrete lining for open drains				
	(a) Cast in situ concrete lining				
	(i) Trapezoidal drain (grade 35/19 concrete)	m ³			
	(ii) V-drain (grade 35/19 concrete)	m ³			
	(b) Class U2 surface finish to cast in situ concrete				
	(i) Trapezoidal drain (grade 35/19 concrete)	m ²			
	(iii) V-drain (grade 35/19 concrete)	m ²			
23.09	Formwork to cast in situ concrete lining for open drains (Class F2 surface finish)				
	(a) To sides with formwork on the internal face only	m ²			
	(c) To ends of slabs	m ²			
	Carried forward				

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

Contract
Part C2: Pricing Data
Reference No. T/ING/004/2022

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

Contract
Part C2: Pricing Data
Reference No. T/ING/004/2022

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 2100: DRAINS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
2100	DRAINS				
21.01	Excavation for open drains:				
	(a) Excavating soft material situated within the following depth ranges below the surface level:				
	(i) 0 m up to 1,5 m	m ³			
	(ii) Exceeding 1,5 m and up to 3,0 m	m ³			
	(b) Extra over sub item 21.01(a) for excavation in hard material, irrespective of depth	m ³			
21.02	Clearing and shaping existing open drains	m ³			
21.03	Excavation for subsoil drainage systems:				
	(a) Excavating soft material situated within the following depth ranges below the surface level:				
	(i) 0 m up to 1,5 m	m ³			
	(ii) Exceeding 1,5 m and up to 3,0 m	m ³			
	(b) Extra over sub item 21.03(a) for excavation in hard material, irrespective of depth	m ³			
	(d) Extra over sub item 21.03(a) for hand excavation	m ³			
21.04	Impermeable backfilling to subsoil drainage system	m ³			
21.06	Natural permeable material in subsoil drainage systems (crushed stone):				
	(b) Crushed stone obtained from commercial sources (+3mm - 27mm)	m ³			
21.07	Natural permeable material in subsoil drainage systems (sand):				
	(a) Sand obtained from approved sources on the site	m ³			
	(b) Sand obtained from commercial sources	m ³			
21.08	Pipes in subsoil drainage systems:				
	(b) Unplasticized PVC pipes and fittings, normal duty, complete with couplings (100mm inside diameter, perforated/slotted)	m			
	(c) High-density type polyethylene drainage pipes and fittings, complete with couplings (100mm inside diameter, perforated)	m			
21.10.1	Synthetic-fibre filter fabric (woven polypropylene, grade S120)	m ²			
21.10.2	Synthetic-fibre filter fabric (non-woven polyester, grade A1)	m ²			
21.10.3	Synthetic-fibre filter fabric (non-woven polyester, grade A2)	m ²			
21.12	Concrete outlet structures, manhole boxes, junction boxes and cleaning eyes for subsoil drainage systems:				
	(a) Outlet Structures	No			
	(b) Manhole Boxes (1000mm x 1000mm)	No			
	(c) Junction Boxes	No			
	(d) Cleaning eyes	No			
B21.16	Backfilling existing eroded side drains using stockpiled material	m ³			
21.17	Test flushing of pipe subsoil drains	No			
B21.20	Extra over item 21.16 for cement-treated soil backfill	m ³			
B21.21	Impermeable backfilling of eroded side fills	m ³			
	TOTAL SCHEDULE B: SECTION 2100 CARRIED TO SUMMARY			R	

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 2200: PREFABRICATED CULVERTS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
2200	PREFABRICATED CULVERTS				
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			
	(ii) 1,5 m to 3,0 m	m ³			
	(iii) Exceeding 3,0m and up to 4,5m	m ³			
	(b) Extra over sub item 22.01(a) for excavation in hard material, irrespective of depth	m ³			
22.02	Backfilling				
	(a) Using the excavated material	m ³			
	(b) Using imported selected material obtained from commercial sources (unlimited free-haul)	m ³			
22.03	Concrete pipe culverts:				
	(a) (1) On class 'A' bedding (300mm diam., Spigot/Socket, Class 100D)	m			
	(2) On class 'A' bedding (375mm diam., Spigot/Socket, Class 100D)	m			
	(3) On class 'A' bedding (450mm diam., Spigot/Socket, Class 100D)	m			
	(4) On class 'A' bedding (525mm diam., Spigot/Socket, Class 100D)	m			
	(5) On class 'A' bedding (600mm diam., Spigot/Socket, Class 100D)	m			
	(b) (1) On class 'B' bedding (300mm diam., Spigot/Socket, Class 100D)	m			
	(2) On class 'B' bedding (375mm diam., Spigot/Socket, Class 100D)	m			
	(3) On class 'B' bedding (450mm diam., Spigot/Socket, Class 100D)	m			
	(4) On class 'B' bedding (525mm diam., Spigot/Socket, Class 100D)	m			
	(5) On class 'B' bedding (600mm diam., Spigot/Socket, Class 100D)	m			
	(d) (1) On class 'C' bedding (300mm diam., Spigot/Socket, Class 100D)	m			
	(2) On class 'C' bedding (375mm diam., Spigot/Socket, Class 100D)	m			
	(3) On class 'C' bedding (450mm diam., Spigot/Socket, Class 100D)	m			
	(4) On class 'C' bedding (525mm diam., Spigot/Socket, Class 100D)	m			
	(5) On class 'C' bedding (600mm diam., Spigot/Socket, Class 100D)	m			
22.05	Portal and rectangular culverts				
	(b) Without prefabricated floor slabs				
	(i) 450mm x 300mm (class 175 S)	m			
B22.06	Extra over items B22.03 and 22.05 for constructing inclined culverts	m			
	Carried forward				

SCHEDULE B: ROADWORKS

SECTION 2200: PREFABRICATED CULVERTS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
	Brought Forward				
2200	PREFABRICATED CULVERTS (continued)				
22.07	Cast in situ concrete and formwork				
	(a) In class A bedding, screeds and the encasing for pipes, including formwork				
	(1) Class 20/20	m³			
	(b) In floor slabs for portal or rectangular culverts, including formwork and class U2 surface finish (class of concrete indicated)				
	(1) Class 30/20	m³			
	(c) In inlet and outlet structures, skewed ends, catchpits, manholes, thrust and anchor blocks, excluding formwork but including class U2 surface finish (class 35/20)	m³			
	(d) Formwork of concrete under subitem B22.07(c) above				
	(ii) Vertical formwork for F2 Surface Finish	m²			
	(i) Vertical formwork for F1 Surface Finish	m²			
	(iii) Horizontal formwork for F1 Surface Finish	m²			
B22.10	Steel reinforcement				
	(a) Mild steel bars	t			
	(b) High-tensile steel bars	t			
	(c) Welded steel fabric				
	(i) Mesh Ref 311	kg			
22.12	Removing existing concrete				
	(a) Plain concrete	m³			
	(b) Reinforced concrete	m³			
22.14	Removing and stacking existing prefabricated culverts (Type and size indicated)				
	(a) Concrete pipes				
	(i) Up to dia 600mm diameter	m			
	(ii) Larger than 600mm dia	m			
22.17	Manholes, catchpits, precast inlet and outlet structure complete:				
	(a) Stormwater Manholes for pipe diameters up to 600mm	No			
	(b) Stormwater Manholes for subsurface drainage	No			
	(c) Catchpits (double gully & kerb inlet type in-situ cast as per GM:CES detail)	No			
	(d) Precast inlet structures	No			
	(e) Extra over or less than sub item 22.17(a) for variations in the depths of manholes from the standard depth designated for tendering purposes (1,65m standard depth)	m			
	(f) Extra over or less than sub item 22.17(b) for variations in the depths of catchpits from the standard depth designated for tendering purposes (0,85m standard depth from top of kerb)	m			
22.18	Brickwork				
	(b) 230 mm thick	m²			
22.19	Plaster	m²			
22.20	Benching	m²			
	Carried forward				

SCHEDULE B: ROADWORKS

SECTION 2200: PREFABRICATED CULVERTS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
	Brought Forward				
2200	PREFABRICATED CULVERTS (continued)				
22.21	Accessories:				
	(a) Manhole covers including frames (heavy duty cast iron type)	No			
	(b) Inlet grids including frames (heavy duty precast concrete type)	No			
	(c) Step irons (cast iron type)	No			
	(d) Sterling type gulley grid and frame or similar approved	No			
22.23	Service and service ducts:				
	(a) Ordinary pipes (150 mm dia. uPVC; thrustbored < 20m length)	m			
	(b) Ordinary pipes (150 mm dia. uPVC; thrustbored > 20m length)	m			
	(c) Ordinary pipes (110 mm dia., HDPE)	m			
	(d) Ordinary pipes (160 mm dia., HDPE)	m			
	(e) Ordinary pipes (110 mm dia., heavy duty uPVC)	m			
	(f) Ordinary pipes (160 mm dia., heavy duty uPVC)	m			
22.24	Duct marker blocks (precast concrete type)	No			
22.26	Hand excavation to determine the positions of existing services	m ³			
B22.29	Locating existing services	Prov sum	20,000.00	20,000.00	20,000.00
B22.30	Relocation and/or reinstatement of existing services				
	(a) Installation of unducted traffic counting loops into the completed continuous graded asphalt	m			
	(b) Installation of unducted traffic signal loops into the completed continuous graded asphalt	m			
	(c) Installation of unducted traffic camera loops into the completed continuous graded asphalt	m			
	(d) Provisional sum allowed for the relocation and/or reinstatement of other existing services by the service owners (state service) or selected subcontractors	Prov sum	30,000.00	30,000.00	30,000.00
	(e) Administration costs and handling charges in respect of sub-item B22.30(d) above	%			
B22.31	Raising or lowering of existing manholes, frames and chambers:				
	(a) Manholes				
	(i) Up to 40 mm	No			
	(ii) Exceeding 40mm and up to 80mm	No			
	(iii) Exceeding 80mm and up to 120mm	No			
	(iv) Exceeding 120mm	No			
	(b) Telkom manholes				
	(i) Up to 40 mm	No			
	(ii) Exceeding 40mm and up to 80mm	No			
	(iii) Exceeding 80mm and up to 120mm	No			
	(iv) Exceeding 120mm	No			
	Carried forward				

SECTION 2200: PREFABRICATED CULVERTS

Contract
Part C2: Pricing Data
Reference No. T/ING/004/2022

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 3300: MASS EARTHWORKS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
3300	MASS EARTHWORKS				
B33.01	Cut and borrow to fill (including unlimited free-haul)				
	(a) Material in compacted layer thicknesses of 200mm and less:				
	(i) Compacted to 90% of modified AASHTO density	m ³			
	(ii) Compacted to 93% of modified AASHTO density	m ³			
	(iii) Eight roller passes compaction	m ³			
	(b) Material in compacted layer thicknesses exceeding 200mm:				
	(i) Compacted to 90% of modified AASHTO density	m ³			
	(ii) Compacted to 93% of modified AASHTO density	m ³			
	(iii) Eight roller passes compaction	m ³			
	(c) Rock fill (as specified in subclause 3209 (c))	m ³			
	(d) Pioneer layer (as specified in subclause 3307 (c))	m ³			
B33.02	Sand fills (as obtained in clause 3302, obtained from commercial sources, unlimited free-haul):				
	(a) Non-Plastic sand with up to 20% passing through the 0,075mm sieve, compacted to 100% of modified AASHTO density.	m ³			
B33.03	Extra over item 33.01 for excavation and breaking down material in:				
	(a) Intermediate excavation	m ³			
	(b) Hard excavation	m ³			
B33.04	Cut to spoil, including inlimited free-haul, material obtained from:				
	(a) Soft excavation	m ³			
	(b) Intermediate excavation	m ³			
	(c) Hard excavation	m ³			
B33.07	Removal of unsuitable material (including unlimited free-haul)				
	(a) In layer thicknesses of 200mm or less				
	(i) Stable material	m ³			
	(ii) Unstable material	m ³			
33.10	Roadbed preparation and the compaction of material:				
	(a) Compaction to 90% of modified AASHTO density	m ³			
	(b) Compaction to 93% of modified AASHTO density	m ³			
	(c) Compaction to 95% of modified AASHTO density	m ³			
	(d) Compaction of sand roadbed to 100% of modified AASHTO density	m ³			
33.11	Three-roller-passes compaction:				
	(a) Vibratory roller	m ²			
	(f) Pneumatic-tyred roller	m ²			
33.12	In situ treatment of roadbed:				
	(a) In situ treatment by ripping	m ³			
	Carried forward				

SCHEDULE B: ROADWORKS

SCHEDULE B: ROADWORKS

SECTION 3300: MASS EARTHWORKS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
	Brought Forward				
3300	MASS EARTHWORKS				
33.13	Finishing-off cut and fill slopes, medians and interchange areas				
	(a) Cut slopes	m ²			
	(b) Fill slopes	m ²			
B33.14	Extra over item B33.01 for excavating material from the pavements and fills of existing roads:				
	(a) Non-cemented material	m ³			
33.18	Extra over items 33.10, 33.11 and 33.12 for preparing and/or treating of roadbed and compating material in restricted areas				
	(a) Item 33.10 for roadbed preparation and the compation of material	m ³			
	(c) Item 33.12 for in situ treatment of roadbed	m ³			
33.20.01	Supply and install Bidim A7 or similar approved for pioneer rockfill layer (bottom and sides of excavation) (PROVISIONAL)	m ²			
33.20.02	Supply and install Bidim A3 or similar approved for pioneer rockfill layer (bottom and sides of excavation) (PROVISIONAL)	m ²			
33/B32.06	Stockpiling of material	m ³			
TOTAL SCHEDULE B: SECTION 3300 CARRIED TO SUMMARY			R		

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 3400: PAVEMENT LAYERS OF GRAVEL MATERIALS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
3400	PAVEMENT LAYERS OF GRAVEL MATERIALS				
B34.01	Pavement layers constructed from gravel taken from commercial sources (unlimited free-haul):				
	(a) Gravel selected layer (unstabilized G7) compacted to:				
	(i) 93% of modified AASHTO density (150mm layer thickness)	m ³			
	(ii) 95% of modified AASHTO density (150mm layer thickness)	m ³			
	(c) Gravel subbase (unstabilized G5) compacted to:				
	(ii) 97% of modified AASHTO density				
	1) 150mm layer thickness	m ³			
	2) 200mm layer thickness	m ³			
	(e) Gravel base (unstabilized G4) compacted to:				
	(i) 98% of modified AASHTO density				
	1) 150mm layer thickness	m ³			
	2) 200mm layer thickness	m ³			
	(ii) 100% of modified AASHTO density				
	1) 150mm layer thickness	m ³			
	2) 200mm layer thickness	m ³			
	(g) Gravel shoulders (G5) compacted to:				
	(ii) 95% of modified AASHTO density				
	1) 100mm layer thickness	m ³			
	2) 150mm layer thickness	m ³			
	(h) Gravel wearing course (Type 2) compacted to:				
	(ii) 95% of modified AASHTO density				
	1) 100mm layer thickness	m ³			
	2) 150mm layer thickness	m ³			
B34.04	In situ reconstruction of existing pavement layers as:				
	(a) Gravel selected layer compacted to 93% modified AASHTO density, using:				
	(i) Non-cemented material (150 mm layer thickness)	m ³			
	(ii) Cemented material (150mm layer thickness)	m ³			
	(b) Gravel selected layer compacted to 95% modified AASHTO density, using:				
	(i) Non-cemented material (150 mm layer thickness)	m ³			
	(ii) Cemented material (150mm layer thickness)	m ³			
	(g) Gravel base compacted to 98% modified AASHTO density (unstabilized gravel) using:				
	(i) Non-cemented material (150 mm layer thickness)	m ³			
	(ii) Non-cemented material (200mm layer thickness)	m ³			
	Carried forward				

SCHEDULE B: ROADWORKS

[illegible]

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 3500: STABILIZATION

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
3500	STABILIZATION				
B35.01	Extra over Item B34.01, B34.04 and B34.06 for chemical stabilizing	m ³			
B35.02	Chemical stabilizing agent:				
	(a) Ordinary portland cement (CEM II 32.5)	ton (t)			
	(c) Road Lime	ton (t)			
B35.07.01	Bituminous stabilization (extra over the untreated subbase layer - BSM2, as per TG2) via Cold insitu recycling machine	m ³			
B35.07.02	Bituminous stabilization (extra over the untreated subbase layer - BSM2, as per TG2) mixing of BSM of site and import BSM to site (Unlimited free haul in George)	m ³			
B35.08	Bituminous stabilizing agent:				
	(b) Anionic stable grade bituminous emulsion (60% net bitumen)	ℓ			
B35.09	Additive for bituminous stabilization:				
	(a) Ordinary portland cement (CEM II 32.5)	ton (t)			
B35.13	Extra over items 35.01, 35.07.01 and 35.07.02 for trial sections	m ³			
TOTAL SCHEDULE B: SECTION 3500 CARRIED TO SUMMARY				R	

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 3600: CRUSHED-STONE BASE

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
3600	CRUSHED-STONE BASE				
36.01	Crushed-stone base:				
	(c) Constructed from type G2 natural material obtained from commercial sources 38mm nom. max. stone size) and compacted to:				
	(i) 85% of bulk relative density (150 mm layer thickness)	m ³			
	(e) Constructed from type G3 natural material obtained from commercial sources 38mm nom. max. stone size) and compacted to:				
	(i) 98% of modified AASHTO density				
	1) 150mm layer thickness	m ³			
	2) 200mm layer thickness	m ³			
	(ii) 100% of modified AASHTO density				
	1) 150mm layer thickness	m ³			
	2) 200mm layer thickness	m ³			
	(g) Constructed from type G3 natural material obtained from commercial sources (28mm nom. max. stone size) and compacted to:				
	(i) 98% of modified AASHTO density				
	1) 150mm layer thickness	m ³			
	2) 200mm layer thickness	m ³			
	(ii) 100% of modified AASHTO density				
	1) 150mm layer thickness	m ³			
	2) 200mm layer thickness	m ³			
36.05	In situ reconstructed uncemented crushed stone base				
	(b) G2 material, compacted to 85% of bulk relative density				
	(i) 150 mm layer thickness	m ³			
	(ii) 200 mm layer thickness	m ³			
	(c) G3 material compacted to 98% of modified AASHTO density				
	(i) 150 mm layer thickness	m ³			
	(ii) 200 mm layer thickness	m ³			
	(d) G3 material compacted to 100% of modified AASHTO density				
	(i) 150 mm layer thickness	m ³			
	(ii) 200 mm layer thickness	m ³			
36.08	Extra over item 36.05 for using crushed stone base				
	(b) Material from commercial sources				
	(ii) G2 material	m ³			
	(iii) G3 material	m ³			
B36.10	Extra over payment for placing and compacting or for in situ reconstruction of crushed-stone base in restricted areas				
	(b) Extra over item 35.01, 36.05 for in situ reconstructing uncemented crushed stone base	m ³			
	TOTAL SCHEDULE B: SECTION 3600 CARRIED TO SUMMARY			R	

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 3700: PLANT-MIXED PAVER-LAID PAVEMENT LAYERS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
3700	PLANT-MIXED PAVER-LAID PAVEMENT LAYERS				
37.01	Pavement layers and Crushed stone mixed in a plant and placed by paver				
37.01.01	Extra over items 34.01 and 34.04 for placing and compacting gravel pavement layers in restricted areas				
	(i) Non-cemented material	m ³			
	(ii) Cemented material	m ³			
37.01.02	Extra over payment for placing and compacting or for in situ reconstruction of crushed-stone base in restricted areas				
	(b) Extra over item 35.01, 36.05 for in situ reconstructing uncemented crushed stone base	m ³			
TOTAL SCHEDULE B: SECTION 3700 CARRIED TO SUMMARY					R

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 3800: BREAKING UP EXISTING PAVEMENT LAYERS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
3800	BREAKING UP EXISTING PAVEMENT LAYERS				
38.01	Excavating and removing existing bituminous material (except milled material)				
	(b) Material to be disposed off with the average depth of excavation				
	(i) Not exceeding 30 mm				
	1. Area up to and including 500m ²	m ²			
	2. Area exceeding 500m ²	m ²			
	(ii) Exceeding 30 mm but not exceeding 60 mm				
	1. Area up to and including 500m ²	m ²			
	2. Area exceeding 500m ²	m ²			
	(iii) Exceeding 60 mm but not exceeding 100 mm				
	1. Area up to and including 500m ²	m ²			
	2. Area exceeding 500m ²	m ²			
	(iv) Exceeding 100 mm				
	1. Area up to and including 500m ²	m ²			
	2. Area exceeding 500m ²	m ²			
B38.02.01	Milling out existing bituminous and granular material with an average milling depth:				
	(a) Not exceeding 30 mm	m ³			
	(b) Exceeding 30 mm but not exceeding 60 mm	m ³			
	(c) Exceeding 60 mm but not exceeding 100 mm	m ³			
	(d) Exceeding 100 mm but not exceeding 150 mm	m ³			
	(e) Exceeding 150 mm	m ³			
	FOR LAYER DECONSTRUCTION				
B38.02.02	Milling out existing bituminous and granular material with an average milling depth per layer:				
	(a) Bituminous Material not exceeding 50 mm	m ³			
	(b) Bituminous Material exceeding 50 mm but not exceeding 100 mm	m ³			
	(c) Bituminous material exceeding 100mm	m ³			
	(d) Granular Material not exceeding 150 mm	m ³			
	(e) Granular Material exceeding 150 mm but not exceeding 300 mm	m ³			
	(f) Granular Material exceeding 300 mm	m ³			
	FOR PATCHING				
B38.02.03	Milling out existing bituminous and pavement layers for patching with an average milling depth:				
	(a) Not exceeding 30 mm				
	1. For patches up to and including 100m ²	m ³			
	2. For patches Exceeding 100m ²	m ³			
	Carried forward				

SCHEDULE B: ROADWORKS

SECTION 3800: BREAKING UP EXISTING PAVEMENT LAYERS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
	Brought Forward				
38.00	BREAKING UP EXISTING PAVEMENT LAYERS (continued)				
	(b) Exceeding 30 mm but not exceeding 60 mm				
	1. For patches up to and including 100m ²	m ³			
	2. For patches Exceeding 100m ²	m ³			
	(c) Exceeding 60 mm but not exceeding 100 mm				
	1. For patches up to and including 100m ²	m ³			
	2. For patches Exceeding 100m ²	m ³			
	(d) Exceeding 100 mm but not exceeding 150 mm				
	1. For patches up to and including 100m ²	m ³			
	2. For patches Exceeding 100m ²	m ³			
	(e) Exceeding 150 mm				
	1. For patches up to and including 100m ²	m ³			
	2. For patches Exceeding 100m ²	m ³			
38.03	Milling out cemented crushed stone:				
	(a) Average milling depth not exceeding 50 mm:				
	(i) Compressive strength of 10 MPa and less	m ³			
	(ii) Compressive strength of 10 MPa up to and including 20 MPa	m ³			
	(iii) Compressive strength exceeding 20 MPa	m ³			
	(b) Average milling depth exceeding 50 mm but not exceeding 100 mm:				
	(i) Compressive strength of 10 MPa and less	m ³			
	(ii) Compressive strength of 10 MPa up to and including 20 MPa	m ³			
	(iii) Compressive strength exceeding 20 MPa	m ³			
	(c) Average milling depth exceeding 100 mm:				
	(i) Compressive strength of 10 MPa and less	m ³			
	(ii) Compressive strength of 10 MPa up to and including 20 MPa	m ³			
	(iii) Compressive strength exceeding 20 MPa	m ³			
B38.04	Excavating and spoiling material from an existing pavement and/or the underlying fill:				
	(a) Non-cemented material	m ³			
	(b) Cemented material	m ³			
	(c) Cemented crushed stone	m ³			
B38.16	Cleaning and preparation of milled areas	m ²			
B38.17	Cutting of wedge-shaped longitudinal and/or transverse key(s) irrespective of length and surface area	m ³			
	TOTAL SCHEDULE B: SECTION 3800 CARRIED TO SUMMARY			R	

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 4100: PRIME COAT

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
4100	PRIME COAT				
B41.01	Prime coat				
	(e) Invert bitumen emulsion	litre			
	(f) Emulsion Prime	litre			
TOTAL SCHEDULE B: SECTION 4100 CARRIED TO SUMMARY					
					R

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TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 4200: ASPHALT BASE AND SURFACING

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
4200	ASPHALT BASE AND SURFACING				
B42.01.01	Asphalt base - hand applied to roads and sidewalks (50/70 bitumen, 28mm max. stone)				
	(ii) Continuously graded - COLTO Type				
	(1) 50mm minimum thickness	ton			
	(2) 75mm minimum thickness	ton			
	(3) 100mm minimum thickness	ton			
	(4) 150mm minimum thickness	ton			
B42.01.03	Asphalt base machine applied (50/70 bitumen; 28mm max. aggregate)				
	(ii) Continuously graded - COLTO Type				
	(1) 50mm minimum thickness	ton			
	(2) 75mm minimum thickness	ton			
	(3) 100mm minimum thickness	ton			
	(4) 150mm minimum thickness	ton			
B42.02.01	Asphalt surfacing - hand applied to roads and sidewalks (50/70 bitumen)				
	(ii) Continuously graded - COLTO Type Medium				
	(1) 30mm minimum thickness	ton			
	(2) 40mm minimum thickness	ton			
	(3) 50mm minimum thickness	ton			
	(4) 60mm minimum thickness	ton			
B42.02.03	Asphalt surfacing machine applied (50/70 bitumen)				
	(ii) Continuously graded (COLTO Type Medium)				
	(1) 30mm minimum thickness	ton			
	(2) 40mm minimum thickness	ton			
	(3) 50mm minimum thickness	ton			
	(4) 60mm minimum thickness	ton			
B42.02.04	Asphalt surfacing machine applied (A-E2 modified bitumen) Base bitumen to be locally refined				
	(ii) Continuously graded - COLTO Type				
	(1) 40mm minimum thickness	ton			
	(2) 50mm minimum thickness	ton			
	(3) 60mm minimum thickness	ton			
42.04	Tack coat of 30% stable grade emulsion (anionic/cationic)	litre			
42.05	Binder variations:				
	(2) 50/70 penetration grade bitumen	ton			
	Binder modifier variations:				
	(4) A-E2 (Styrene-butadiene-styrene (SBS)) modified bitumen	ton			
	Carried forward				

SCHEDULE B: ROADWORKS

SECTION 4200: ASPHALT BASE AND SURFACING

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
	Brought Forward				
4200	ASPHALT BASE AND SURFACING (continued)				
42.06	Variations in active filler content				
	(a) cement	ton			
	(b) lime	ton			
B42.08	Cores in asphalt paving				
	(a) 100mm diameter	No			
B42.20	Extra Over for backfilling of excavations for patching:				
	(a) Extra over Items 42.01 for asphalt base - irrespective of type or binder				
	(i) 50mm minimum thickness				
	1. For patches up to and including 100m2	ton			
	2. Exceeding 100m2	ton			
	(ii) 75mm minimum thickness				
	1. For patches up to and including 100m2	ton			
	2. Exceeding 100m2	ton			
	(iii) 100mm minimum thickness				
	1. For patches up to and including 100m2	ton			
	2. Exceeding 100m2	ton			
	(iv) 150mm minimum thickness				
	1. For patches up to and including 100m2	ton			
	2. Exceeding 100m2	ton			
	(b) Extra over Items 42.02 for asphalt surfacing - irrespective of type or binder				
	(i) 30mm minimum thickness				
	1. For patches up to and including 100m2	ton			
	2. Exceeding 100m2	ton			
	(ii) 40mm minimum thickness				
	1. For patches up to and including 100m2	ton			
	2. Exceeding 100m2	ton			
	(iii) 50mm minimum thickness				
	1. For patches up to and including 100m2	ton			
	2. Exceeding 100m2	ton			
	(iv) 60mm minimum thickness				
	1. For patches up to and including 100m2	ton			
	2. Exceeding 100m2	ton			
	Carried forward				

SCHEDULE B: ROADWORKS

SECTION 4200: ASPHALT BASE AND SURFACING

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
	Brought Forward				
4200	ASPHALT BASE AND SURFACING (continued)				
B42.23	Transportation of bitumen binder supplied by a refinery outside the Western Cape Province				
	(a) Kwa-Zulu Natal	ton			
	(b) Free State	ton			
B42.24	Extra over items 42.01 and 42.02 for static rolling	m ²			
TOTAL SCHEDULE B: SECTION 4200 CARRIED TO SUMMARY					
					R

SECTION 4400: SINGLE SEALS

Contract
Part C2: Pricing Data
Reference No. T/ING/004/2022

SECTION 4500: DOUBLE SEALS

Contract
Part C2: Pricing Data
Reference No. T/ING/004/2022

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 4600: BITUMINOUS SINGLE SEAL WITH SLURRY (CAPE SEAL)

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
4600	BITUMINOUS SINGLE SEAL WITH SLURRY (CAPE SEAL)				
46.02	Bituminous single seal with 14 mm aggregate and slurry type 1 (Grade 2 aggregate; SC-E2 modified bitumen emulsion)	m ²			
46.03	Bituminous binder variations:				
	(m) SC-E2 modified bitumen	litre			
46.04	Aggregate variations (Grade 2):				
	(a) 14mm nominal sized aggregate	m ³			
46.05	Variation in the rate of application of the slurry	m ³			
46.07	Variation in active filler content (OPC)	ton			
TOTAL SCHEDULE B: SECTION 4600 CARRIED TO SUMMARY					R

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 4800: TREATMENT OF AN EXISTING SURFACE EXHIBITING CERTAIN DEFECTS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
4800	TREATMENT OF AN EXISTING SURFACE EXHIBITING CERTAIN DEFECTS				
48.01	Treatment with diluted bituminous emulsion (fog spray):				
	(aa) 30% bitumen emulsion (anionic)	litre			
	(ab) 30% bitumen emulsion (cationic)	litre			
	(ba) 60% bitumen emulsion (anionic)	litre			
	(bb) 60% bitumen emulsion (cationic)	litre			
48.03	Slurry seal:				
	(aa) Tack coat using 30% bitumen emulsion (anionic)	litre			
	(ab) Tack coat using 30% bitumen emulsion (cationic)	litre			
	(b) Slurry applied by hand	m ³			
	(c) Slurry applied by spreader box	m ³			
B48.04	Screed of asphalt or coarse slurry:				
	(a) Tack coat using 30% stable-grade bitumen emulsion	litre			
	(b) Continuously-graded asphalt (fine)	ton			
	(c) Coarse grade slurry	m ³			
	(d) Rapid-setting polymer modified coarse slurry	m ³			
48.05	Repairing edge breaks in surfacing:				
	(a) Tack coat (30% anionic stable-grade emulsion)	litre			
	(b) Reconstructing edges using medium continuously-graded asphalt	ton			
B48.06	Cleaning the cracks with compressed air	m			
48.07	Applying bituminous binders and herbicides for sealing cracks:				
	(a) Herbicide	litre			
	(b) MSP 1 or similar primer	litre			
	(c) Anionic stable-grade emulsion mixed with synthetic modifiers	litre			
	(d) Hot bitumen rubber	litre			
	(e) MSP 3 or similar approved rejuvenator	litre			
	(f) Weedkiller (Round or similar approved)	litre			
48.08	Cold rubber-slurry mix for sealing cracks	m ³			
48.09	Rolling the cracks	m			
B48.14	Sawing of asphalt layers	m ²			
B48.15	Applying bituminous binders for sealing cracks (concrete slabs):				
	(a) Expansion joint sealing and wide crack sealing (cracks > 20mm)	m			
	(b) Narrow crack sealing (3mm < cracks < 20mm) and saw-cut sealing	m			
B48.16	Provision and installation of an expansion joint filler	m			
B48.17	Provision and application of Sealmac seal bandage or similar approved	m ²			
	TOTAL SCHEDULE B: SECTION 4800 CARRIED TO SUMMARY			R	

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 5100: PITCHING, STONEWORK AND PROTECTION AGAINST EROSION

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
5100	PITCHING, STONEWORK AND PROTECTION AGAINST EROSION				
51.01	Stone Pitching:				
	(b) Grouted stone pitching	m ²			
	(c) Grouted stone pitching on a concrete bed (total thickness 250mm)	m ²			
51.04	Concrete Pitching and block paving:				
	(b) Segmental block paving				
	(1) 60mm thick clay paver (any colour) on 20mm stabilised sand bedding (-5mm "Fine Grit"), in stretcher bond pattern to sidewalk/road furniture zone	m ²			
	(2) 80mm thick type SA interlocking paver (any colour) on 20mm stabilised sand bedding (-5mm "Fine Grit"), Class 40/2.6 with chamfers in stretcher bond pattern	m ²			
	(e) Segmental block paving supplied by the Employer				
	(1) 60mm thick clay paver (any colour) on 20mm stabilised sand bedding (-5mm "Fine Grit"), in stretcher bond pattern to sidewalk/road furniture zone	m ²			
	(2) 80mm thick type SA interlocking paver (any colour) on 20mm stabilised sand bedding (-5mm "Fine Grit"), Class 40/2.6 with chamfers in stretcher bond pattern	m ²			
51.05	Cast in situ concrete edge and intermediate beams (Class 35/20)	m ³			
B51.08	Extra work for landscaping	Prov Sum	20,000.00	20,000.00	20,000.00
TOTAL SCHEDULE B: SECTION 5100 CARRIED TO SUMMARY					R

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 5200: GABIONS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
5200	GABIONS				
52.01	Foundation trench excavation and backfilling:				
	(a) In solid rock (material which requires blasting)	m ³			
	(b) In all other classes of materials	m ³			
52.02	Surface preparation for bedding the gabions	m ²			
52.03	Gabions:				
	(b) PVC-coated galvanised wire mesh with total nominal thickness of 3.7mm diameter and mesh openings of 80x100mm (Maccaferri mesh type 80 or similar)				
	(i) 2m x 0,5m x 0,5m gabion box	m ³			
	(ii) 3m x 1m x 0,5m gabion box	m ³			
	(iii) 2m x 1m x 1m gabion box	m ³			
	(c) Galvanised wire mesh with total nominal thickness of 3.7mm diameter and mesh openings of 80x100mm (Maccaferri mesh type 80 or similar)				
	(i) 1m x 1m x 0,3m Reno mattress	m ³			
	(ii) 2m x 1m x 0,3m Reno mattress	m ³			
	(iii) 3m x 1m x 0,3m Reno mattress	m ³			
	(iv) 6m x 2m x 0,3m Reno mattress	m ³			
52.04	Filter fabric (Geotextile, Grade 1, non-woven, Kaytech A6 or similar approved)				
	(b) Grade A6	m ²			
B52.05	Mortar grouting of gabion mattresses	m ³			
52/B72.02	3.9m Wide 90/90 bidirectional woven polyester geogrid	m ²			
TOTAL SCHEDULE B: SECTION 5200 CARRIED TO SUMMARY					R

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 5400: GUARDRAILS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
5400	GUARDRAILS				
B54.01	Guardrails on timber posts:				
	(a) Galvanised	m			
54.03	Extra over item 54.01 for horizontally curved guardrails factory bent to a radius of less than 45m	m			
B54.04	End treatments:				
	(b) Bull noses	No			
54.05	Additional guardrail posts:				
	(a) Timber	No			
54.06	Reflective plates	No			
TOTAL SCHEDULE B: SECTION 5400 CARRIED TO SUMMARY				R	

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 5700: ROAD MARKINGS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
5700	ROAD MARKINGS				
57.01	Road marking paint:				
	(a) White lines (broken or unbroken)				
	(1) 100 mm wide	m			
	(2) 200 mm wide	m			
	(3) 300 mm wide	m			
	(b) Yellow lines (broken or unbroken)				
	(1) 100 mm wide	m			
	(2) 200 mm wide	m			
	(3) 300 mm wide	m			
	(c) Red lines (broken or unbroken)				
	(1) 100 mm wide	m			
	(2) 200 mm wide	m			
	(3) 300 mm wide	m			
	(d) White lettering and symbols	m ²			
	(e) Yellow lettering and symbols	m ²			
	(f) Transverse lines, painted island and arrestor bed markings (any colour)	m ²			
	(g) Kerb markings (any colour)	m ²			
57.02	Retro-reflective road marking paint:				
	(a) White lines (broken or unbroken)				
	(1) 100 mm wide	m			
	(2) 200 mm wide	m			
	(3) 300 mm wide	m			
	(b) Yellow lines (broken or unbroken)				
	(1) 100 mm wide	m			
	(2) 200 mm wide	m			
	(3) 300 mm wide	m			
	(b) Red lines (broken or unbroken)				
	(1) 100 mm wide	m			
	(2) 200 mm wide	m			
	(3) 300 mm wide	m			
	(d) White lettering and symbols	m ²			
	(e) Yellow lettering and symbols	m ²			
	(f) Transverse lines, painted island and arrestor bed markings (any colour)	m ²			
	Carried forward				

SCHEDULE B: ROADWORKS

SECTION 5700: ROAD MARKINGS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
	Brought Forward				
5700	ROAD MARKINGS (continued)				
B57.03	Plastic road-marking paint (thermoplastic)				
	(a) White lines (broken or unbroken)				
	(1) 100 mm wide	m			
	(2) 200 mm wide	m			
	(3) 300 mm wide	m			
	(b) Yellow lines (broken or unbroken)				
	(1) 100 mm wide	m			
	(2) 200 mm wide	m			
	(3) 300 mm wide	m			
	(b) Red lines (broken or unbroken)				
	(1) 100 mm wide	m			
	(2) 200 mm wide	m			
	(3) 300 mm wide	m			
	(d) White lettering and symbols	m ²			
	(e) Yellow lettering and symbols	m ²			
	(f) Transverse lines, painted island and arrestor bed markings (any colour)	m ²			
57.04	Variations in rate of application:				
	(a) White paint	litre			
	(b) Yellow paint	litre			
	(c) Red paint	litre			
	(d) Retro-reflective beads	kg			
	(e) Plastic road-marking paint (thermoplastic)	litre			
	(f) Cold plastic road-marking material	litre			
B57.05	Roadstuds				
	(a) Installation of roadstuds				
	(i) With shank				
	(1) Category A	No			
	(2) Category B	No			
	(3) Category C	No			
	(ii) Without shank				
	(1) Category A	No			
	(2) Category B	No			
	(3) Category C	No			
	(b) Material costs in respect of B57.05(a)	Prov sum	10,000.00	10,000.00	10,000.00
	(c) Handling costs in respect of B57.05(b)	%			
B57.06	Setting out and premarking the lines (excluding traffic-island markings, lettering and symbols)	m			
B57.07	Re-establishing the painting unit at the end of the defects liability period	Lump Sum			
	Carried forward				

SECTION 5700: ROAD MARKINGS

Contract
Part C2: Pricing Data
Reference No. T/ING/004/2022

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 5900: FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
59.01	Finishing the road and road reserve:				
	(a) Single carriageway road	km			
TOTAL SCHEDULE B: SECTION 5900 CARRIED TO SUMMARY					
					R

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 6400: CONCRETE FOR STRUCTURES

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
6400	CONCRETE FOR STRUCTURES				
64.01	Cast in situ concrete				
	(i) 20MPa, 19mm stone, OPC concrete placed on site to be wood float finished	m³			
	(ii) 30MPa, 19mm stone, OPC concrete placed on site to be wood float finished	m³			
	(iii) 20MPa, 19mm stone, OPC concrete placed on site to be steel float finished	m³			
	(iv) 30MPa, 19mm stone, OPC concrete placed on site to be steel float finished	m³			
TOTAL SCHEDULE B: SECTION 6400 CARRIED TO SUMMARY					R

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SCHEDULE B: ROADWORKS

SECTION 6600: NO-FINES CONCRETE, JOINTS, BEARINGS, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURES

ITEM	DESCRIPTION	UNIT	RATE 1 Jul 22-Jun 23	RATE 2 Jul 23-Jun 24	RATE 3 Jul 24-Jun 25
6600	NO-FINES CONCRETE, JOINTS, BEARINGS, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURES				
B66.05	Expansion Joints				
	(a) Asphaltic plug in roadway				
	(i) Thormajoint ® (or similar approved) - Type 1	m			
	(ii) Thormajoint ® (or similar approved) - Type 2	m			
	(iii) Thormajoint ® (or similar approved) - Type 3	m			
	(iv) Thormajoint ® (or similar approved) - Type 4	m			
B66.27	Preparation of joint recess for the installation of asphaltic plug in roadway	m			
B66.28	Testing for water-tightness	No			
B66.29	Additional elastic asphaltic plug expansion joint material to build up in recesses and/or existing seal leaking joints	litre			
B66.30	Patching material to build up concrete in expansion joint recess - Speedcrete or similar approved	litre			
B66.31	Temporary bridging of expansion joint recess				
	(a) Temporary infill (asphaltic plug joints)	m			
	(b) Bridging (concrete nosing joints)	m			
TOTAL SCHEDULE B: SECTION 6600 CARRIED TO SUMMARY				R	

TENDER NUMBER: T/ING/004/2022

TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLARY WORKS FOR A PERIOD OF THREE (3) YEARS

Framework Contract Period: Three Years from Commencement Date

Works Projects: Up to R17 500 000

SUMMARY OF SCHEDULE(S) OF RATES AND QUANTITIES

SCHEDULE A: GENERAL (from Page 1 to 8)

SECTION 1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	R
SECTION 8100: TESTING MATERIALS AND WORKMANSHIP	R	.....
SECTION C1000: ENVIRONMENTAL MANAGEMENT	R	.....
SECTION D1000: LABOUR-BASED WORK AND TRAINING REQUIREMENTS	R	.....
SECTION F1000: HEALTH AND SAFETY REQUIREMENTS	R	.....

SCHEDULE B: ROADWORKS (from Page 9 to 50)

SECTION 1500: ACCOMMODATION OF TRAFFIC	R	.....
SECTION 1700: CLEARING AND GRUBBING	R	.....
SECTION 1800: DAYWORKS	R	.....
SECTION 2100 : DRAINS	R	.....
SECTION 2200: PREFABRICATED CULVERTS	R	.....
SECTION 2300: CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS	R	.....
SECTION 3300: MASS EARTHWORKS	R	.....
SECTION 3400: PAVEMENT LAYERS OF GRAVEL MATERIALS	R	.....
SECTION 3500: STABILIZATION	R	.....
SECTION 3600: CRUSHED-STONE BASE	R	.....
SECTION 3700: PLANT-MIXED PAVER-LAID PAVEMENT LAYERS	R	.....
SECTION 3800: BREAKING UP EXISTING PAVEMENT LAYERS	R	.....
SECTION 3900: PATCHING AND REPAIRING OF EDGE BREAKS	R	.....
SECTION 4100: PRIME COAT	R	.....
SECTION 4200: ASPHALT BASE AND SURFACING	R	.....
SECTION 4400: SINGLE SEALS	R	.....
SECTION 4500: DOUBLE SEALS	R	.....
SECTION 4600: BITUMINOUS SINGLE SEAL WITH SLURRY (CAPE SEAL)	R	.....
SECTION 4800: TREATMENT OF AN EXISTING SURFACE EXHIBITING CERTAIN DEFECTS	R	.....
SECTION 5100: PITCHING, STONEMASONRY AND PROTECTION AGAINST EROSION	R	.....
SECTION 5200: GABIONS	R	.....
SECTION 5400: GUARDRAILS	R	.....
SECTION 5600: ROAD SIGNS	R	.....
SECTION 5700: ROAD MARKINGS	R	.....
SECTION 5900: FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	R	.....
SECTION 6400: CONCRETE FOR STRUCTURES	R	.....
SECTION 6600: NO-FINES CONCRETE, JOINTS, BEARINGS, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURES	R	.....

CALCULATION OF CONTRACT PRICE

C: TOTAL OF SCHEDULE(S) A + B	R
D: CONTINGENCIES (The sum provided is under the direct control of the Employer's Agent and may be partially or totally excluded) (10% of TOTAL C above)	R	.....
E: TOTAL (C+D)	R	.....
F: TOTAL VALUE ADDED TAX (15%) ON E ABOVE	R	.....
G: CONTRACT PRICE CARRIED FORWARD TO C1.1 FORM OF OFFER (E+F)	R	.....

I/We, the undersigned, do hereby declare that these are the properly priced Bill / Schedule of Rates and Quantities forming part of this Contract Document containing Pages in consecutive order upon which my/our tender for **CONTRACT NO. T/ING/004/2022: TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND ANCILLARY WORKS FOR A PERIOD OF THREE YEARS** has been based.

.....
SIGNED ON BEHALF OF TENDERER

C3 . 1
GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND
ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

Scope of Work (Part C3)

	Page
C3.1 Description of the Works	C3.2
C3.2 Engineering.....	C3.8
C3.3 Procurement.....	C3.9
C3.4 Construction	C3.11
C3.5 Management	C3.137
C3.6 Annexes	C3.172

Status

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

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

C3.1 DESCRIPTION OF THE WORKS

CONTENTS

1. INTRODUCTION
2. DESCRIPTION OF THE WORKS
3. CONSTRUCTION TIME PERIOD
4. CONTRACTOR'S CAMP SITE, SERVICES AND SITE FACILITIES
5. SITE FACILITIES REQUIRED
6. FEATURES REQUIRING SPECIAL ATTENTION
7. ACCOMMODATION OF TRAFFIC
8. ENVIRONMENTAL REQUIREMENTS

1. INTRODUCTION

The description of the project contained in this Part C3.1 is merely an outline of the Contract Works and shall not limit the work to be carried out by the Contractor under this Contract.

The Employer's objective is to rehabilitate and resurface existing roads in the George municipal area.

2. DESCRIPTION OF THE WORKS

2.1 General Scope of Work

This project comprises the provision of road rehabilitation and resurfacing services as and when required by the George Municipality for the period duration of three years throughout the entire George Municipal area.

The scope of work to be carried out comprises a range of different disciplines as described below.

2.1.1 General

The work to be executed under this contract consists of the following:

- ☐ Establishment on site by the Contractor;
- ☐ The supply of labour, tools, equipment, materials and supervision to complete the work;
- ☐ Setting out of the Works;
- ☐ Accommodation of vehicular traffic and pedestrians during all construction work; and
- ☐ Maintenance of the works during and after construction.

2.1.2 Roadworks

The work to be undertaken includes:

- ☐ Installation of subsurface drains;
- ☐ Construction of kerbs and channels, storm water catchpits, pipes and manholes;
- ☐ Deep insitu stabilization of existing pavement layers;
- ☐ Construction of new pavement layers where required;
- ☐ Milling and removal of existing bituminous surfacing layers;
- ☐ Placing of new bituminous surfacing layers;
- ☐ Application of road markings; and
- ☐ Ancillary works.

2.2 General Description (Works Project)

A general description for each individual Works Project will be provided under this heading. The road length, width, number of carriageways, details of lanes and shoulders and road junctions to be rehabilitated and /or resurfaced will be provided. The work area is anywhere within the boundaries of the George Municipal area.

All works included in the Works Project will be described. The limits of the Works Project will be indicated.

The location of the works envisaged for the Works Project will be shown on a Site Plan bound into C5 of the Works Project document.

2.3 Detailed Extent of Work (Work Project)

2.3.1 General

The work to be executed under each Works Project consists of the following:

- ☐ Establishment on site by the Contractor;
- ☐ The supply of labour, tools, equipment, materials and supervision to complete the work;
- ☐ Setting out of the Works;
- ☐ Accommodation of vehicular traffic and pedestrians during all construction work; and
- ☐ Maintenance of the works during and after construction.

2.3.2 Roadworks

The work to be undertaken under each Works Project includes:

- ☐ Details of the rehabilitation / resurfacing works included in the Works Project will be provided.

2.3.3 Quantities

The work that is to be carried out under each Works Project is as provided for in the Bill(s) / Schedule(s) of quantities. However, if during the course of construction conditions are found to differ from those anticipated, the Employer reserves the right to modify the scope of the work to suit the prevailing conditions and circumstances. Variations introduced in this manner will be measured and paid for at the rates tendered for appropriate items listed elsewhere in the schedule of quantities or in the absence of such rates, as extra work.

2.4 Boundaries of the site

The site of the works shall consist of the entire road reserve and interchanges, construction camp, any storage area on the site which the Contractor may require in addition to the area required for construction of the roadworks and special works as defined by the limits of construction shown on the drawings, plus such additional length of road that is necessary for the erection of the road signs on the approaches to the works. The work area is anywhere within the boundaries of the George Municipal area.

2.5 Occupation of the site

Access to the site of the works will be given to the Contractor on the Engineer's instruction to commence executing the Works.

The site of the works is on public roads, which will remain in use during the course of the work. No road may be closed and traffic shall be accommodated as far as is practically possible.

Where the site of the works is on public roads, which will remain in use during the course of the work, every effort shall be made by the Contractor to minimise the disruption to existing pedestrian and traffic flows during construction. No road may be closed without the express permission of the Engineer and traffic shall be accommodated as specified or shown on the drawings.

Where existing roads are used, they shall be protected from damage by extraordinary traffic. The Contractor shall immediately repair any damage arising out of his acts or omissions by him to fences, gateways, drains or to any other structure during the execution of the Contract and shall leave everything in the same state as it was found by him.

The Contractor shall afford all reasonable pedestrian and/or vehicular access to all owners or occupiers of properties abutting the works to the satisfaction of the Engineer.

Workmen employed by the Contractor will not be permitted on private property abutting the works during its progress unless such presence is required to successfully complete the work and permission from the owner/occupier has been granted.

2.6 Work in confined areas

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

Regardless, measurement and payment will be in accordance with the specified cross-sections and dimensions only, irrespective of the method used for achieving these cross-sections and dimensions. It is deemed that the rates tendered in the Pricing Schedule / Priced Bill / Schedule of Quantities include full compensation for all special equipment and construction methods and for all difficulties encountered when working in confined areas and narrow widths, and at or around obstructions. **No additional payment will be made nor will any claim for payment be considered for work done in such confined areas, despite indications to the contrary in the Standard Specifications.**

3 CONSTRUCTION TIME PERIOD

The time-span period specified for completion by the Engineer, as stated in the Contract Data in terms of Clause 5.1 of the Conditions of Contract, is **the time specified by the Employer in each individual Works Project (.... Months.... weeksdays)** exclusive of all special non-working days and year-end break (builder's holidays). The Contractor shall plan and program his construction sequence for completion within the time period specified.

3.1 Construction work program

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

4. CONTRACTOR'S CAMP SITE, SERVICES AND SITE FACILITIES

The Contractor will be permitted to use the area on or near the site for the establishment of a camp site and office accommodation for his construction personnel. The choice of sites for the establishment of camps is subject to the approval of the Employer.

The Contractor must make adequate provision in his tender for all negotiations and procurement of water for construction site activities and all related costs will be deemed to be included in his tendered rates.

The Contractor shall, however, make his own arrangements concerning the provision of water, electricity and other services for the campsite and office facilities.

No direct payment will 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.

5. SITE FACILITIES REQUIRED

No specific facilities are required on the site for the Engineer or his representative.

6. FEATURES REQUIRING SPECIAL ATTENTION

6.1 Wayleaves, permissions and permits

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

The Contractor shall abide by any conditions imposed by such wayleaves, permissions or permits. Further details on wayleaves are specified in Clause 1202 of the Project Specifications.

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

6.2 Health and Safety Plan

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

6.3 Standard of Materials, Workmanship, Testing and Performance

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

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

6.4 Weatherproof Protection for Workers

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

6.5 Night Work and Work on Public Holidays

Where the Contractor requires staff to work overtime, he shall make the necessary arrangements with the Engineer and obtain written approval from the Engineer. The Contractor shall bear the cost of his overtime work.

6.6 Other Contractors

The Contractor's attention is drawn to the fact that there will be other contractors working on the Site of the Works. In accordance with Clause 4.8 of the General Conditions of Contract, the Contractor shall note and make due allowance for reasonable access to and for the adjacent operations of these other contractors on the site of the works.

6.7 Maintenance

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

7. ACCOMMODATION OF TRAFFIC

Closure of traffic lane(s) adjacent to the construction work area will only be permitted during specified off-peak periods. The Contractor shall plan his operations to ensure that the closing and opening of lanes conform to the time periods specified below, or as instructed or approved by the Engineer.

- (a) The safety and convenience of the travelling public is to be considered of utmost importance and every effort must be made to ensure that all temporary road signs, cones, flagmen and speed controls are maintained and effective, and that courtesy is extended to the public at all times.
- (b) It is important that the traffic accommodation requirements described in these specifications are adhered to and that all installations meet with the approval of the Traffic Manager of the George Municipality. Liaison has been set up with the traffic authorities by the Engineer and the traffic accommodation described below has been approved by them in principle.
- (c) Only one traffic lane per direction may be closed to traffic at a time. Where two lanes are required to be closed on a three-lane multilane directional roadway to create a work area, one lane shall be dropped at a time with a suitable stabilizing area between the two-lane drop as shown on the drawings. Closure of a traffic lane or partial lane will only be permitted once the traffic control facilities and temporary traffic diversions / deviations have been approved.

Closure of traffic lanes for work areas will only be permitted during non-peak time periods, which is Monday to Friday inclusive 09:00 to 15:30. All lanes must be open to traffic at the following times:

- (a) AM Peak: Monday to Friday inclusive: 06:00 to 09:00.
- (b) PM Peak: Monday to Friday inclusive: 15:30 to 18:30.

There are no lane closure time restrictions over weekends.

Requirements for safety and accommodation of traffic as set out in the Project Specifications shall be strictly enforced.

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.

- (d) Wherever practicable, the Contractor shall maintain pedestrian access across the existing roads and at-grade pedestrian crossing(s) on existing roads. The Contractor shall erect temporary pedestrian fencing to re-route pedestrians to cross the existing roads at suitable locations during the rehabilitation / resurfacing operations.

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- (e) The travelling public 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.
- (f) Failure to maintain road signs, warning signs or flicker lights, etc., in good condition shall constitute ample reason for the Engineer to bring the works to a stop until the road signs, etc., have been repaired to his satisfaction.
- (g) The Contractor may not commence constructional activities before adequate provision has been made to accommodate traffic in accordance with the requirements of this document, the South African Road Traffic Signs Manual (SARTSM) and the CSRA/CUTA Road Signs Note No. 13, Roadworks.
- (h) The Contractor shall submit proposals in connection with all signs and accommodation of traffic to the Engineer for approval.

10. ENVIRONMENTAL REQUIREMENTS

In accordance with the provisions of Clause 8.1 of the General Conditions of Contract, the Contractor shall use every reasonable means to ensure that all operations necessary for the execution of the Works shall be carried out in such a manner as not to cause unnecessary noise or pollution, to interfere unnecessarily or improperly with, or encroach upon the use of public services, or access to, use and occupation of public or private roads and footpaths or properties.

Storage of or stockpiling of materials within the road reserve except at the designated camp site will not be permitted without the written consent of the Engineer. Excess material from demolition or excavation shall only be spoiled at sites that have been approved by the Engineer.

The Contractor shall observe all pertinent legislation with regard to safety on the site of the works. In particular the Contractor shall erect sufficient effective screening around his work area to protect pedestrians, vehicles, property and other facilities from damage during the upgrading / cleaning / rehabilitation process, The Contractor shall ensure that the extent of the screening is adequate as he shall be solely responsible for all claims for damage or injury caused by his upgrading / cleaning / rehabilitation work.

The Contractor is required to carry out work adjacent to the residential neighborhoods and working environment of existing businesses in the area. The Contractor's operations shall be organized in such a manner as to avoid (whenever possible) or minimize disruption to these neighborhoods and businesses.

Details of the environmental requirements for the Works project will be provided.

C3.2 ENGINEERING

CONTENTS

1. DRAWINGS

1. DRAWINGS

The drawings, if any, issued with this tender document are attached in order to give an overview of the term tender project.

Construction drawings will, in terms of the Conditions of Contract, be issued to the Contractor by the Engineer, as appropriate, prior to the date for commencement with Works execution, and from time to time as required.

The Works shall be constructed in accordance with the issued design drawings, if any.

The Contractor shall be responsible for the preparation of “as built” drawings and shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract.

C3.3 PROCUREMENT

CONTENTS

1. PREFERENTIAL PROCUREMENT
2. SUB-CONTRACTING PROCEDURES

1. PREFERENTIAL PROCUREMENT

The Works shall be executed in accordance with the conditions associated with the granting of preferences detailed in the returnable schedule, Form C7: Preferencing Schedule where preferences are granted in respect of B-BBEE contribution. However, where, in a Works Project offer, the Contractor has declared in the Works Project Acceptance/Refusal Notice (Form C1.5) to the effect that “I/we **DO NOT** intend sub-contracting more than 25% of the value of the Works Project contract to sub-contractors that do not qualify for at least the points that I/we as prime contractor qualified for in my/our framework contract”, then the Contractor may not sub-contract more than 25% of the value of the **Works Project** contract (as defined in Returnable Schedule 19) to sub-contractors that do not have an equal or higher B-BBEE status level than the Contractor, unless the sub-contractors are exempted micro enterprises that have the capability and ability to execute the sub-contract works.

The declarations made in Form C7 of the framework contract will be used in the evaluation of tender offers as described in clause C.3.11 in Part T1.2 Tender Data. Once appointed to a panel, Contractors will be required, as applicable, to complete the declaration in respect of sub- contractors in the Works Project Acceptance/Refusal Notice for the particular Works Project, in accordance with clauses P.2.1.4 and P.3.4 in Part A1.2 Work Allocation Procedures in the Works Project contract document.

A financial penalty, as described in Form C7, shall be applied in the event that the Contractor sub-contracts more than 25% of the value of the **Works Project** contract to sub-contractors that do not qualify for at least the preference points that the Contractor qualified for (unless proven to be beyond the control of the Contractor, or the sub-contractors are exempted micro enterprises).

Notwithstanding the application of penalties, the Contractor's attention is drawn to other sanctions that may be applied by the Employer (listed in Returnable Form C7) with due consideration to the circumstances.

2. SUB-CONTRACTING PROCEDURES

2.1 Monitoring the use of sub-contractors

Notwithstanding the restriction (in the circumstances described in Clause 1 above) on sub-contracting more than 25% of the value of the **Works Project** contract to sub-contractors that do not qualify for at least the preference points that the Contractor qualified for, it is recognized that sub-contracting is an integral part of construction, which the General Conditions of Contract (Clause 4.4) make provision for.

In order, however, to ensure that more than 25% of the value of the **Works Project** contract is not sub-contracted to sub-contractors that do not qualify for at least the preference points that the Contractor qualified for, the Contractor shall submit to the Engineer, on a monthly basis, a B-BBEE Sub-contract Expenditure Report. The format of this report is provided in Annex 2 attached.

The Contractor shall submit to the Engineer documentary evidence (either an original valid B-BBEE status level verification certificate or an Exempted Micro Enterprise certificate issued by a registered auditor, accounting officer (as contemplated in section 60(4) of the Close Corporation Act, 69 of 1984) or an accredited verification agency in terms of the Construction Codes of Good Practice for Broad-Based Black Economic Empowerment, or certified copies thereof) in terms of the Preferential Procurement Regulations, 2017) of the B-BBEE status level of every sub-contractor employed by the Contractor. Until such time as documentary evidence as described above has been submitted to the Engineer, a sub-contractor shall be deemed to be a non-compliant contributor.

The Contractor shall furthermore, on the written request of the Engineer, provide documentary evidence showing the value of work sub-contracted to any or all of the sub-contractors employed by the Contractor.

2.2 Procedure for the selection of sub-contractors/suppliers

Where monetary allowances for provisional sums or prime cost items have been provided in the Bills of Quantities in the Works Project contract document, and where the work or items to which the allowances relate are to be executed/supplied by sub-contractors/suppliers, then the following selection process shall be followed in respect of the required sub-contractors/suppliers:

Where the monetary allowance is less than or equal to R200 000, the Contractor shall invite three quotations from suitably qualified sub-contractors/suppliers for the required work or items. The selection of the three sub-contractors/suppliers shall be in consultation with, and to the approval of the Engineer. The evaluation of the quotations received must include a preference points system as described in C.3.11 of the Tender Data.

Where the monetary allowance is in excess of R200 000, an open competitive tender process shall be followed in respect of the selection of a sub-contractor/supplier for the required work or items. In such circumstances, tender documentation will be prepared by the Engineer in consultation with and to the approval of the Contractor, invitations to tender will be advertised in the media by the Engineer on behalf of the Contractor, and a sub-contractor/supplier will be selected from the responses received, by the Contractor and Engineer in consultation. The evaluation of the offers received must include a preference points system as described in C.3.11 of the Tender Data. The Contractor must satisfy him/herself that the selected sub-contractor/supplier can meet the requirements of the sub-contract /supply agreement and may, on reasonable grounds, elect not to employ a particular sub-contractor/supplier.

In both instances above (less than or equal to R200 000 or in excess of R200 000), the contractual relationship between the Contractor and sub-contractor/supplier shall be as described in Clause 4.4.3 of the General Conditions of Contract.

C3.4 CONSTRUCTION

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PART A
STANDARD SPECIFICATIONS

PART A: STANDARD SPECIFICATIONS

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

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

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

STANDARD SPECIFICATIONS

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

PART B
PROJECT SPECIFICATIONS
REFERRING TO COLTO STANDARD SPECIFICATIONS

PART B: PROJECT SPECIFICATIONS REFERRING TO COLTO STANDARD SPECIFICATIONS

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

- (i) The project specifications form an integral part of the contract documents and supplement the standard specifications.
- (ii) In the event of any discrepancy between the project specifications and a part of the standard specifications, the schedule of quantities, or the drawings, the project specifications shall take precedence.
- (iii) The standard specifications, which form part of this contract, have been written to cover all phases of work normally required for road contracts, and they may therefore cover items not applicable to this particular contract.

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

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

SECTION 1100 : DEFINITIONS AND TERMS**B 1115 GENERAL CONDITIONS OF CONTRACT**

Replace Clause 1115 with the following:

“The General Conditions of Contract for Construction Works (3rd Edition) 2015 (GCC 2015) published by the South African Institute of Civil Engineering, together with the special conditions of contract forming part of the contract.

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

Whereas every effort has been made to include all of the affected clauses in the table, there may be some omissions. In every case, however, the SAICE General Conditions of Contract for Construction Works, as amended by the special conditions of contract in the contract data, shall apply and the contractor shall be responsible for interpretation of the equivalent clause.

TABLE 1115/1: REFERENCES IN COLTO STANDARD SPECIFICATIONS TO THE COLTO GENERAL CONDITIONS OF CONTRACT AND RELEVANT SAICE GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS 2015

COLTO Standard Specification		COLTO General Conditions of Contract 1998 (GCC)		SAICE General Conditions of Contract for Construction Works: 3rd Edition 2015	
Clause No	Page No	Clause No	Description or Reference	Clause No	Description or Reference
1115	1100-2		Definition of GCC		Definition of SAICE
1202	1200-2	15	Construction programme	5.6	Programme
1115	1100-2		Definition of GCC		Definition of SAICE
1202	1200-2	15	Construction programme	5.6	Programme
1206	1200-3	14	Setting out of works and beacons		Omitted
1209(e)	1200-5	52(2)	Valuation of material brought onto site	6.10.2	Valuation of material brought onto site
1210	1200-5	54	Certificate of practical completion	5.14	Completion
1212(l)	1200-7	49(2)	CPA on alternative designs	6.8.2	CPA on alternative designs
1215	1200-9	45	Extension of time for completion due to abnormal rainfall.	5.12	Extension of time for completion due to abnormal rainfall.
1217	1200-10	35	Care of the works	8.2	Care of the works
1303(iii)	1300-1	49	Price adjustment Item 13.01 (a)	6.8	Price adjustment Item 13.01 (a)
1303(iii)	1300-2	49	Price adjustment Item 13.01 (b)	6.8	Price adjustment Item 13.01 (b)
1303(iii)	1300-1	53	Variations exceeding 20%	6.11	Variations exceeding 15%
1303(iii)	1300-2	53	Variations exceeding 20%		Variations exceeding 15%
1303	1300-2	12	Payment Item 13.01 (c)	5.2	Commencement of the Works
1303	1300-2	45	Payment Item 13.01 (c)	5.12	Payment Item 13.01 (c)
1403(c)(ii)	1400-4	40(1)	Variation for rented accommodation	6.4	Variation for rented accommodation
1505	1500-3	40(1)	Variation for temporary drainage	6.4	Variation for temporary drainage
Item 15.08	1500-8	48	Payment of Provisional Sum	6.6	Payment of Provisional Sum
Item 15.09	1500/8	48	Payment of Provisional Sum	6.6	Payment of Provisional Sum

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COLTO Standard Specification		COLTO General Conditions of Contract 1998 (GCC)		SAICE General Conditions of Contract for Construction Works: 3rd Edition 2015	
Clause No	Page No	Clause No	Description or Reference	Clause No	Description or Reference
Item 15.11	1500-8	48	Payment of Provisional Sum	6.6	Payment of Provisional Sum
Note (2)	3100-4	40	Payment for prospecting for materials	6.5.2	Payment for prospecting for materials
3204(b)(iii)	3200-2	40	Payment for oversize material	6.5.2	Payment for oversize material
3303(b)	3300-2	2	Employer's Agent's decisions, with reference to materials classification	3.2	Employer's Agent's decisions, with reference to materials classification
5803(c)	5800-3	40	Variation, for landscaping	6.4	Variation, for landscaping
5805(d)	5800-4	40	Variation, for grassing	6.4	Variation, for grassing
Item 58.10	5800-10	48	Payment for Extra Work	6.4	Payment for Extra Work
8103(c)	8100-1	40	Variation, for testing material	6.4	Variation, for testing material
Item 81.03	8100-26	22	Clearance of site on completion, with reference to core drilling	5.15	Clearance of site on completion, with reference to core drilling

The relevant definitions of the SAICE General Conditions of Contract (Third Edition) 2015 shall apply to the contract with the following reference to the terms used in the COLTO Standard Specifications:

SAICE General Conditions of Contract (3rd Edition) 2015: Sub-clause 1.1 Definitions

Replace Sub-clause 1.1.1.2 with the following:

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

Replace Sub-clause 1.1.1.4 with the following:

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

Replace Sub-clause 1.1.1.25 with the following:

“1.1.1.25 **“Pricing Data”** means the document that contains the Schedule of Quantities and provides the criteria and assumptions which it will be assumed in the Contract that were taken into account by the Contractor when developing his prices.”

Replace Sub-clause 1.1.1.28 with the following:

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

Add the following new Definitions:

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

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

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

B1158 SABS SPECIFICATIONS

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

[https://www.sabs.co.za/content/uploads/files/SABS%20Catalogue%20February%202012%20\(abridged\).pdf](https://www.sabs.co.za/content/uploads/files/SABS%20Catalogue%20February%202012%20(abridged).pdf)

for the most up-to-date versions of the various standards.

B1159 AGGREGATE SIZE

Where reference is made in this specification or the standard specifications to aggregate size, nominal aggregate size or maximum aggregate size, the aggregate size as listed shall be replaced with the new corresponding aggregate size as indicated in the following table:

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

SECTION 1200: GENERAL REQUIREMENTS AND PROVISIONS**B 1202 SERVICES**

Add the following after the first paragraph of Clause 1202 of the Specifications:

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

Add the following after the sixth paragraph of Clause 1202 of the Specifications:

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

Add the following after the eighth paragraph of Clause 1202 of the Specifications:

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

Add the following after the ninth paragraph of Clause 1202 of the Specifications:

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

Add the following:

WAYLEAVES, PERMISSIONS AND PERMITS

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

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

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

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

EXISTING SERVICES

Prior to commencing work, the Contractor shall confer with all Authorities and Departments concerned and obtain the necessary wayleaves for both overhead and underground services affected by the Works and shall satisfy himself that he has obtained all the relevant information required to complete the Contract. The Contractor shall carry out the works with the minimum interference to existing services. He shall co-operate with all Authorities and Departments concerned and he shall be solely responsible for carrying out the following operations and checks:

- He shall inform all Authorities and Departments in good time before the correct stage of the construction is reached for the laying and/or relaying of any particular services.
- He shall set out the lines and levels of kerbs, pipes, culverts and any other necessary features of the Contract in order that Authorities and Departments are able to lay and/or relay services correctly.

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

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

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

(a) Protection of Overhead and Underground Services

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

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

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

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

(b) Existing Services

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

(c) Condition of Existing Services

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

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

(d) Maintenance, Protection and Relocation of Existing Services

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

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

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

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

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

(e) Work in Close Proximity to Existing Services

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

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

MACHINERY AND OCCUPATIONAL SAFETY ACT (Act No 6 of 1983) WITH REGULATIONS**D16 (7) Excavations**

"The builder or excavator shall ascertain as far as practicable the location and nature of underground services likely to be affected by the excavation and take such steps as may be necessary to prevent danger to persons."

THE ELECTRICITY ACT (Act No 40 of 1958)**Section 51(3): Offences and Penalties**

"Any person who without legal right (the proof of which shall be upon him) cuts or damages or interferes with any apparatus for generating, transmitting or distributing electricity, shall be guilty of an offence and liable on conviction to a fine not exceeding R1 000.00 or to imprisonment for a period not exceeding twelve months."

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

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

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

B 1204 PROGRAMME OF WORK

Add the following sub-clauses to the end of Clause 1204

(e) Contract Programme

In terms of Clause 5.3 of the General Conditions of Contract, within the time period stated in the Contract Data, the Contractor shall prepare and submit to the Engineer a detailed programme of the work. The programme shall be in the form of a progress chart, bar chart or other time/activity form acceptable to the Engineer.

This programme shall show at least the information given below:

- (i) Sequence of work activities on the various road sections
- (ii) A description of each of the various work items to be carried out on the separate work sections
- (iii) The programmed time for carrying out each item
- (iv) Dependencies of each item including constraints (resource or time-related constraints)
- (v) Time required for establishment on the various work sites.

When drawing up his programme, the Contractor shall, inter alia, take into consideration and make allowance for:

- (4) Expected weather conditions and their effects.
- (5) Known physical conditions and artificial obstructions.
- (6) The accommodation and safeguarding of public traffic.
- (7) Dealing with, altering and installing services.
- (v) All other actions required in terms of this contract.

The following details shall be submitted together with the programme:

- (i) The number of working hours per day, working days per week, assumed holiday or shut down periods on which the programme is based.
- (ii) The overall labour and major plant resource levels on which the programme is based.

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

The contract work programme shall be reviewed on a regular basis by the Contractor in accordance with changing circumstances, delays and amendments to the work ordered by the Engineer. The programme will be reviewed at the monthly site meetings at which the Contractor shall provide sufficient detail that will allow the comparison of completed work per activity against the original approved programme. The Contractor shall indicate what resources and programme changes he intends to implement in order to remedy any activity that has fallen behind.

Minor revisions to the approved programme may be introduced from time to time by mutual agreement between the Contractor and the Engineer. Should the Engineer believe that a major revision of the programme is required, the Contractor will be notified in writing and a revised programme shall be submitted within 14 days of receipt of such notification.

It should be noted that it is in the Contractor's best interest to provide a comprehensive programme giving as much information as possible about the times allowed for the various activities as well as resource or other limitations affecting the programme, since the approved programme may be used to evaluate any claims in terms of the General Conditions of Contract for extensions of time.

- **Limitations**

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

(a) Working Time

Work, including the erection and removal of traffic control facilities, shall be executed between sunrise and sunset on Monday to Saturday, inclusive. The closure and occupation of existing traffic lanes will only be allowed subject to the written approval of the Engineer. The existing number of lanes for each traffic movement affected by construction shall not be reduced without the written authorization of the Engineer. Closure of traffic lanes for work areas will only be permitted during non-peak time periods, which is

Monday to Friday inclusive 09:00 to 15:30. All lanes must be open to traffic at the following times:

- (c) AM Peak: Monday to Friday inclusive: 06:00 to 09:00.
- PM Peak: Monday to Friday inclusive: 15:30 to 18:30.

There are no lane closure time restrictions over weekends.

For construction activities such as removing or erecting large structural panels or overhead bridge / sign structures which extend over all lanes of the carriageway, work area occupation of the entire carriageway will be permitted for maximum periods of five (5) hours each under very low traffic flow conditions on week day or Sunday mornings between midnight and 06:00. In terms of Clause 5.7.2 of the General Conditions of Contract the Engineer's permission shall be obtained for work to be carried out at night and on other special non-working days, for which permission shall be applied for at least 14 days prior to the day.

(b) Construction limitations

Requirements for safety and accommodation of traffic as set out in the Project Specifications shall be strictly enforced. Traffic shall be accommodated on the existing surfaced carriageway and shoulders. No bypasses or temporary deviations shall be constructed. Accommodation of traffic will generally be carried out by closing off a shoulder and/or one lane of traffic at a time and accommodating the traffic on the other lane(s). Details of lane closures during the various stages of work, are indicated in the Specifications and/or shown on the various traffic accommodation drawings included in Volume 4: Drawings.

(c) Other contracts

In accordance with Clause 4.8 of the general conditions of contract, the Contractor shall note and make due allowance for reasonable access to and for the adjacent operations of these other contractors on the site of the works. The Contractor will be required to liaise with these contractors / Engineer to discuss and ensure that their adjacent operational requirements and activities will interface and are catered for in programming of the work.

B 1205 WORKMANSHIP AND QUALITY CONTROL

Replace the third paragraph with the following:

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

Add the following at the end of this clause:

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

B 1206 THE SETTING OUT OF THE WORK AND PROTECTION OF BEACONS

Add the following after the first paragraph of Clause 1206 of the Specifications:

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

Add the following at the end of the fourth paragraph:

Road markings, particularly road junction / intersection lines, the divergent/convergent lines of ramp at interchanges and no overtaking barriers are also elements of the road that require proper setting out. The Contractor shall prove to the Engineer that critical reference points have been satisfactorily recorded for later reinstatement before any work commences that will obliterate the existing markings.

Add the following after the eighth paragraph of Clause 1206 of the Specifications

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

Add the following paragraph:

"The Contractor shall take care that property beacons, trigonometrical survey beacons or setting-out beacons are not displaced or destroyed without the consent of the engineer. Property beacons and trigonometrical survey beacons that have been displaced or destroyed shall be replaced by a registered land surveyor, who shall certify such replacement.

The cost of replacing all beacons displaced or destroyed during the course of the contract without the consent of the Engineer shall be the Contractor's responsibility and included in the tender rates".

B1207 NOTICES, SIGNS AND ADVERTISEMENTS

Delete the final paragraph and replace with the following:

All signboards erected in accordance with the drawings or as approved advertisements for the Contractors establishment, shall be removed at the same time as the Contractors disestablishment. Payment under sub-item 13.01 for the final installment of 15% of the tendered lump sum shall not be made unless all the advertisements, notices and temporary signs have been removed.

B 1209 PAYMENT

(b) Rates to be inclusive

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

(c) The meanings of certain phrases in payment clauses

(1) Procuring and furnishing (material)

Add the following:

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

Add the following new sub-clauses:

• Work in confined areas

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

• Rates to remain unchanged when Scope of Work changes

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

- (i) Notification of the change to the scope of work is given in writing within 28 days of the tender closing date.
- (ii) The value of the increase or reduction in the scope of work does not alter the tendered sum by more than 15%."

- **Trade names**

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

- **Payment Certificates**

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

B1210 CERTIFICATE OF PRACTICAL COMPLETION OF THE WORKS

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

“(including road studs)”

Add the following paragraphs after item (h):

“Notwithstanding that there might be natural or programmed sections of the works that will result in them being completed in their entirety before other sections, no consideration shall be given to the issuing of practical completion certificates for portions of the works. The use of any completed roadway or portions of the work, whether for unhindered use by the public or for accommodation of traffic while other portions are being constructed, shall not constitute use or occupation by the Employer.

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

- (2) The estimated cost to complete the outstanding work is less than 2% of the tendered value of work plus the cost of any variation or extra work orders, but excluding CPA and VAT.
- (3) The written list of outstanding items of work can be completed within 28 days of the list having been accepted in writing by the Contractor.
- (4) Any information in the contractor's possession, which is required by the engineer and has been requested in writing, has been supplied.
- (5) The Regional Manager of the Department of Mineral and Energy Affairs has issued written confirmation to the Contractor that they are satisfied with the final shaping to all quarries, borrow pits, stockpile areas, and spoil sites used or intended to be used under this contract.

B1211 TRAFFIC OVER COMPLETED PAVEMENT LAYERS

Add the following:

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

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

B 1214 CONTRACTOR'S ACTIVITIES IN RESPECT OF PROPERTY OUTSIDE THE ROAD RESERVE AND OF SERVICES MOVED, DAMAGED OR ALTERED

Under sub-clause (e) replace the opening paragraph with:

Should the Contractor use land not provided by the Employer for the purpose of his own establishment, engineer's offices and laboratory, or storing of equipment or materials required for construction or disposal, it shall be subject to the following:”

and add the following sub-subclauses:

- (vi) That lease agreements are concluded with the owner or owners of such land for the full period that such areas are required. The leases shall provide for possible extensions to match the duration of the contract. The lease agreements shall also provide for the contract being terminated by contractor's default or liquidation and the resulting possibility for them to be taken over by a succeeding contractor.
- (vii) That copies of lease agreements shall be submitted to the engineer prior to signature by the signing parties, and copies lodged with the engineer after signing. Notwithstanding the engineer's approval of the conditions of a lease the contractor shall be solely responsible for adhesion to the terms of the agreements."
- (viii) Adherence to the principles of the environmental management plan and legal obligations.

B 1215 EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL

Delete the entire clause and replace with the following:

For the purposes of calculating an extension of time due to climatic conditions in terms of Clause 5.12.2 as amended of the General Conditions of Contract, the number of days in excess of the number of working days anticipated to be lost due to climatic conditions shown in Table B1215/1 shall be taken into account:

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

Month	"n" Working Days	Month	"n" Working Days
January	2	July	3
February	2	August	3
March	2	September	2
April	2	October	2
May	2	November	2
June	3	December	1

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

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

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

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

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

B1216 INFORMATION FURNISHED BY THE EMPLOYER

Add the following after the second paragraph:

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

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

Add the following:

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

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

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

B1219 WATER

Add the following:

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

B1224 THE HANDING-OVER OF THE ROAD RESERVE

Add the following:

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

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

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

B 1229 SABS CEMENT SPECIFICATIONS

Add the following:

All cement used during construction shall comply with SABS EN 197-1 for common cements and SABS EN 413-1 for masonry cement. Any reference to SABS 471 in the standard specifications shall be replaced with the new specification SABS EN 197-1: Cement compositions, specifications and conformity criteria: Part 1: Common cements.

Where the old SABS 471 product nomenclature has been used in the standard specifications, the Contractor shall supply and use the relevant new product, in compliance with SABS EN 197-1.

<i>Cement Grade</i>	<i>Cement Type</i>	<i>Approximate old product name</i>	<i>New Alpha</i>	<i>New Blue Circle</i>	<i>New NPC</i>	<i>New PPC</i>	<i>New Slagment</i>
52.5	CEM I	Rapid hardening	Rapid Hard	Duracast	Eagle Super	-	-
42.5R	CEM I	Rapid hardening	-	-	-	Rapo	-
<i>Cement Grade</i>	<i>Cement Type</i>	<i>Approximate old product name</i>	<i>New Alpha</i>	<i>New Blue Circle</i>	<i>New NPC</i>	<i>New PPC</i>	<i>New Slagment</i>
42.5	CEM I	OPC*	Portland cement	Duratech	-	OPC	-
	CEM I	LASRC	-	-	-	LASRC	-
	CEM II A-S	PC 15SL	-	-	Eagle Plus	-	-
	CEM II B-S	RH30SL	-	-	Eagle Plus	-	-
32.5R	-	-	-	-	-	-	-
32.5	CEM II A-V	PC 15FA	All Purpose Cement	-	-	Surebuild	-
	CEM II A-W	PC15FA	-	-	-	Surebuild	-
	CEM II A-L	-	All purpose Cement	-	-	Surebuild	-
	CEM II B-V or W	PC25FA/PF AC**	-	Structrete	-	Surecrete	-
	CEM IIIA	PBFC	-	BFC	Eagle Pro	-	PBFC
	CEM IIIA	RHSL	-	-	-	-	RHSL
22.5	MC 22.5X	PFAC***	Multi Purpose Cement	Durabuild	-	-	-
	MC22.5X	PFAC***	-	Buildcrete	-	-	-
12.5	MC 12.5	Walcrete	Mortar Cement	Wallcrete	-	Masonry	-
	MC 12.5	Mortacem	-	-	-	-	-

Notes: * OPC cements previously performed approximately as CEM 1 32,5R products
 ** PC25FA cements under the old standards achieved lower compressive strengths than the OPC's of the time
 *** Some PFAC cements meet the new standard for MC 22,5X. Others required modification before meeting the requirements for MC 22,5X

The following new clauses shall be added after Clause 1229 of the Specifications:

B 1230 MATERIALS

The Contractor, when using materials that are required to comply with any standard specification, shall, if so ordered, furnish the Engineer with certificates showing that the materials do so comply. Where so specified, materials shall bear the official mark of the appropriate authority. Samples ordered or specified shall be delivered to the Engineer's office on the Site free of charge.

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

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

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

Earth, stone, gravel, sand, and all other materials excavated or present on the Site or in borrow areas provided by the Employer shall not become the property of the Contractor, but will be at his disposal only in so far as they are approved for use on the Contract. Existing structures on the Site shall remain the property of the Employer and except as and to the extent required elsewhere in the Contract, shall not be interfered with by the Contractor in any way.

Existing structures on the site shall remain the property of the Employer and except as and to the extent required elsewhere in the contract, shall not be interfered with by the contractor in any way.

No materials to be included in the works shall be damaged in any way and, should they be damaged on delivery or by the Contractor during handling, transportation, storage, installation or testing they shall be replaced by the Contractor at his own expense.

All places where materials are being manufactured or obtained for use in the Works, and all the processes in their entirety connected therewith shall be open to inspection by the Engineer (or other persons authorized by the Engineer) at all reasonable times, and the Engineer shall be at liberty to suspend any portion of work which is not being executed in conformity with these specifications.

The Contractor shall satisfy himself that any quarry selected for use provides the necessary mined material in accordance with the specification.

1.5

Ordering of Materials

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

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

B 1231 SAFETY

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

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

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

SECTION 1300: CONTRACTOR'S ESTABLISHMENT ON SITE**B 1302 GENERAL REQUIREMENTS****1. Camps, construction plant and testing facilities**

Add the following after the first paragraph of sub-clause 1302(a) of the Specifications:

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

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

(c) Legal and Contractual Requirements and responsibilities to the public

Add the following as a second paragraph

There has been recent legislation promulgated by Government that improves mutual obligations on the Employer and Contractor in the performance of their duties to society and to the built and natural environment. To assist the Contractor in understanding and assessing his obligations, and thus to make allowances for the cost of compliance with this legislation, the following additional specifications are included in the project specifications.

C3.4 Construction of the Scope of Works contains:**(i) Part C : Environmental Specifications**

Section C1000 ; Environmental Management contains the Environmental Management Plan for this project. Its provisions regulate the contractor's construction methods to ensure responsible conduct and treatment of the environment relevant to the project. No separate payment mechanism has been made available for the contractor to allow for his compliance with relevant environmental legislation. Separate Pay Items are included in these provisions. Non-compliance with these provisions may lead to the imposition of penalties.

(ii) Part D : Labour Specifications

Section D1000 : Labour-based Work and Training Requirements which contains provisions that regulate the contractor's construction methods for compliance with Government's initiatives towards the use of local labour in construction, black economic empowerment and the use of targeted enterprises and labour (local resources). Separate Pay Items for labour obligations and training are included in these provisions. Non-compliance with these provisions may lead to the imposition of penalties.

(iii) Part H : Health and Safety Specifications

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

The following new sub-items shall be added after sub-clause 1302(c) of the Specifications:

(d) Housing

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

(e) Services

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

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

(f) Sanitation

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

(g) Environmental Protection

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

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

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

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

(h) Security

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

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

B 1303 PAYMENT**Item B 13.01 The Contractor's general obligations**

Add the following to the 10th paragraph

After the word "section" remove the full stop and add the following " , including completing and providing the necessary as-built materials forms and any as-built information required by the Engineer."

Replace the 17th paragraph under Pay Item 13.01 with the following:-

“The tendered rate per day for sub-item 13.01(c) represents full compensation for that part of the contractor’s obligation which are mainly a function of construction time. The tendered rate will be paid monthly, measured daily from the Commencement Date of the works project in terms of Clause 5.2 of the General Conditions of Contract, until the end of the period for completion of the works, plus any extension thereof as provided for in Clause 5.12 of the General Conditions of Contract, provided that –“

For the purposes of this tender, payment item 13.01 shall be subdivided into the following work types which are applicable per Works Project:

- 13.01.1 General civil works (Series 1000, 2000, 3000)
- 13.01.2 Ancillary roadworks (Drainage - Series 2000)
- 13.01.3 Ancillary roadworks (Deep patching - Section 3900)
- 13.01.4 Ancillary roadworks (Road markings – Section 5700)
- 13.01.5 Ancillary roadworks (Road markings (Thermoplastic) – Section 5700)
- 13.01.6 Ancillary roadworks (Asphaltic type joints (Thormajoint ® or similar approved - Section 6600)
- 13.01.7 Crack sealing
- 13.01.8 Machine applied slurry
- 13.01.9 Hand applied slurry and asphalt
- 13.01.10 Milling of pavement layers (urban street constructed in half-widths)
- 13.01.11 Milling of pavement layers (freeway / dual carriageway road)
- 13.01.12 Asphalt surfacing (urban street constructed in half-widths)
- 13.01.13 Asphalt surfacing (freeway / dual carriageway road)
- 13.01.14 Asphalt surfacing (full road closure)
- 13.01.15 Surfacing seal (urban street constructed in half-widths)
- 13.01.16 Surfacing seal (full road closure)

B 13.01 (c) Time-related obligations

Amend pay item 13.01(c) as follows:

Item	Unit
B 13.01 (c) Time-related obligations	day
Replace “rate per month” with “rate per day” in all instances.	
Remove sixth paragraph (i.e. “Should the final value of the work”).	
Add the following:	
The unit of measurement for sub-item 13.01(c) shall be the working day.	

Add the following pay sub-items:

Item	Unit
B 13.01 (d) Extra over for working on Sundays and other special non-working day	day
The unit of measurement shall be the working day, which shall be considered to be 10 hours between sunrise and sunset and parts of a working day shall be calculated pro rata.	

The tendered rate per working day shall be paid extra over the applicable time-related pay item(s) and shall include full compensation for additional costs associated with working on Sundays, other special non-working days on the written instruction of the Engineer.

Item	Unit
B 13.01 (e) Extra over for working at night	day

The unit of measurement shall be the working day, which is effectively during the night, and shall be considered to be 10 hours between sunset and sunrise and parts of a working night shall be calculated pro rata. Measurement shall be determined in working hours expended on additional night work (at the written instruction of the Engineer) measured to the nearest half hour, over and above the amount of night work programmed by the Contractor. The quantity shall be calculated from the actual duration of the activity performed during the night and converted to parts of a working day as agreed with the Engineer.

The tendered rates shall include full compensation for all additional costs and other incidentals (including the provision of additional traffic accommodation and lighting of the work area if deemed necessary) incurred by the Contractor for having to perform work at night instead of normal working hours at the written instruction of the Engineer.

The tendered rates shall apply to all items of work, irrespective of the nature thereof, and shall be paid over and above the normal rates applicable to the work being done.

No payment shall be made for any additional night work unless a written instruction to perform such night work was issued by the Engineer.

Item	Unit
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B 13.02 Contractors Security and Insurance Obligations

B13.02.01 Security (Provision of Performance Guarantee)pc sum

The unit of measurement shall be for the entire contract period and payment thereof will be made after commencement of the contract.

The tendered rate shall include for all costs involved to comply with the requirements as stipulated.

B13.02.02 Insurance (Blanket Policy) pc sum

The unit of measurement shall be one year, and payment thereof will be made at the beginning of each year of the contract respectively.

The tendered rate shall include for all costs involved to comply with the requirements as stipulated.

SECTION 1500: ACCOMMODATION OF TRAFFIC**B1501 SCOPE**

Add the following:

It is a condition of this contract that traffic is accommodated in accordance with the provisions of the latest edition of the South African Road Traffic Signs Manual (SARTSM). The latest version for use in the accommodation of traffic is Volume 2, Chapter 13 of the June 1999 edition or its successor. Copies of this publication are available from the South African National Roads Agency Limited, P.O. Box 415, Pretoria, 0001.

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

B 1502 GENERAL REQUIREMENTS**(a) Safety**

The following shall be added to Clause 1502(a) of the Specifications:

The Contractor shall ensure that all his personnel, excluding those who are permanently office bound, are equipped with reflective safety jackets and that these are worn at all times when working on or in proximity of the travelled way. The safety jackets shall be of an approved Level 2 type, bright/fluorescent orange, red-orange or yellow in color with retro-reflective strips as indicated in Chapter 13 of Volume 2 of the South African Road Traffic Signs Manual (SARTSM), Figure 13.30 (Detail 13.30.2). When work is carried out between the hours of sunset and sunrise, the Level 2 safety jackets shall be replaced by Level 3 jackets.

Any person found not wearing a reflective safety jacket under these circumstances shall be removed from the site until such time as he/she is in possession of and wearing a reflective jacket. Reflective safety jackets shall be kept in good condition and any jackets that are, in the opinion of the Engineer, ineffective shall be immediately replaced by the contractor.

The Contractor shall be responsible for maintaining the existing road surface both within the works area and the advance warning and termination areas in a safe and trafficable condition for the duration of the contract.

1. Traffic safety officer

Add the following after the second paragraph:

The Contractor shall submit a CV of the candidate to the Engineer for approval before the candidate is appointed as the traffic safety officer.

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

“make himself available to discuss road safety and traffic accommodation matters whenever required by the Engineer and shall be responsible”

Delete sub-subclauses (ii) and (iii) and replace with the following

- (ii) Record on neat and dimensioned sketches and submit to the Engineer the position and sign reference number, where applicable, of each sign, barricade, delineator, cone, amber flicker light, guardrail and permanent or temporary painted road marking feature. The position of each shall be adequately referenced from the marker boards or other surveyed points on the site of the works.

These records shall also show the date and time at which the recorded traffic accommodation features were certified as correct by the traffic safety officer, and shall be signed by the traffic safety officer before being submitted to the Engineer.

The records shall similarly account for whatever changes were made in the field. Such changes shall record the position of flagmen and STOP/GO control men and their associated traffic accommodation equipment wherever used.

- (iii) Personally inspect the position and condition of each traffic accommodation feature on the entire site of works twice each day, before 09h30 and at 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/s shall keep a duplicate book for this specific purpose.

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

Add the following new sub-sub-clauses:

- (ix) The traffic safety officer/s shall be equipped with a cellular telephone and shall have a vehicle and sufficient labour at his disposal 24 hours a day including all special non-working days, and shall not be utilized for other duties. He shall be directly answerable to the contractor's site agent. The traffic safety vehicle shall be a truck with a capacity of approximately 1 ton and shall be equipped with a high visibility rear panel in accordance with the requirements of the SARTSM. The words "TRAFFIC CONTROL" shall be written on a warning sign in highly legible letters, not less than 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-colored flashing light of the rotating parabolic reflector type with a minimum intensity of 100 W. The warning light shall be switched on and the sign shall be displayed at all times when the vehicle is used on site.

The traffic safety officer/s and his vehicle shall not be used for the transport of flagmen and traffic light operators during the regular daily personnel changes.

The traffic safety officer/s shall have a direct line of communication at all times with the police and traffic officers responsible for the area within limits of the contract. The provision of the road safety vehicle, driver, labourers and the cost of the cellular telephone shall be deemed to be included in the rates tendered for item B15.16.

- (x) The traffic safety officer/s shall ensure that all obstructions relating to the contractor's activities are removed from the road before nightfall where applicable and/or as instructed by the engineer and that the roads are safe for night traffic.
- (xi) In addition to the duties listed in paragraph B1502(i), the traffic safety officer/s shall also be responsible for the removal of broken down vehicles from the roadway and implementing actions requested by the traffic authorities with regard to the work to be carried out. He shall also be responsible for the erection and maintenance of all traffic signs necessary for the accommodation of traffic.
- (xii) In the event of an accident, the road traffic safety officer/s shall record details of the accident in a written report, to a format which shall be agreed with the engineer accompanied by photographs and a neat sketch plan on which is shown identifiable permanent features, relevant dimensions and the position of all temporary road signs, barricades, delineators, flagmen and any other devices used for traffic accommodation.

Add the following new sub-clauses to Clause 1502 of the Specifications:

(j) Traffic diversions

Add the following:

The Contractor's attention is drawn to the heavy volume and speed of traffic carried on the affected roads and shall make due allowance therefore in his construction programme.

Traffic accommodation shall be carried out in strict accordance with the requirements of the South African Road Traffic Signs Manual (SARTSM) – Volume 2 – Chapter 13 : Roadworks Signing (June 1999). The method of accommodating traffic shall be in accordance with the layouts of the traffic-control facilities for the traffic diversions on the respective roads as shown in the South African Road Traffic Signs Manual (SARTSM) - Volume 2 Chapter 13, on the drawings or as directed by the Engineer.

The Contractor shall submit a drawing showing details concerning each traffic diversion to the Engineer for approval at least 7 days prior to the scheduled commissioning of such diversions to allow him sufficient time to inform and obtain the approval of the traffic officials of the relevant authorities concerned for such diversions.

(k) Parking of construction vehicles and plant

Where there is no working space off the road, construction vehicles may be parked on the shoulder only during working hours in which case flagmen and traffic cones shall be utilized to warn public traffic of the hazard. During non-working hours all obstructions to traffic shall be removed from the road.

The parking of construction plant within the road reserve outside working hours will be permitted. The minimum clearance between the parked vehicles / plant and the edge of any carriageway shoulder shall be 5 meters.

(l) Staging of construction

The work in this Contract will necessitate traffic having to be deviated onto a reduced -width carriageway and channelized into traffic lanes routed past / through the construction work areas.

Traffic shall be accommodated on the existing surfaced carriageway and shoulders. Temporary deviations may be required at certain road junctions / intersections under this contract. Accommodation of traffic will generally be carried out by closing off one lane of traffic at a time and accommodating the traffic on the other lane(s), or in the case of the two-lane carriageway sections, partly onto the temporary-surfaced shoulder.

Temporary closure or occupation of traffic lanes will only be permitted as specified and the Contractor shall ensure that all traffic control facilities no longer applicable to the situation are removed or effectively covered.

Amber flashing warning lights shall be placed on traffic lane deviations at night and when instructed by the Engineer to warn motorists of lane closures and occupation of lanes for work operation areas.

It is a condition of this contract that the Contractor shall programme and arrange for adequate accommodation of traffic within the following operational limitations:

- (i) Individual work areas shall be clearly demarcated with traffic signs and delineators / cones as specified. No individual working area shall exceed 1 000 meters in length.
- (ii) Only one traffic lane per direction may be closed to traffic at a time. Where two lanes are required to be closed on a three-lane multilane directional roadway to create a work area, one lane shall be dropped at a time with a suitable stabilizing area between the two lane drop as shown on the drawings. Closure of a traffic lane or partial lane will only be permitted once the traffic control facilities and temporary traffic diversions / deviations have been approved.

Closure of traffic lanes for work areas will only be permitted during non-peak time periods, which is Monday to Friday inclusive 09:00 to 15:30. All lanes must be open to traffic at the following times:

- AM Peak : Monday to Friday inclusive: 06:00 to 09:00.
- PM Peak : Monday to Friday inclusive: 15:30 to 18:30. There are no lane closure time restrictions over weekends.

- (iii) A minimum single trafficable lane width of 3.1 m on all roads shall be maintained.
- (iv) Crossing of the median of dual carriageway roads by Contractor's plant and equipment shall not be permitted.
- (iv) Signage which does not apply during construction shall be removed or effectively covered.
- (v) Signage erected for traffic accommodation purposes which are not applicable (e.g. speed limits at weekends etc.) shall be effectively covered.
- (vi) Signs and traffic accommodation devices for closures shall always be placed furthest away from the work area first and then by working inwards in the direction of traffic.

- (vii) On completion of the work remove delineators/cones/signs by starting at the work area and work outwards against the flow of traffic.
- (viii) Before re-opening a lane to traffic after milling/surfacing operations, temporary road marking as specified shall be applied.

Any costs related to these construction limitations and restrictions will be deemed to be covered in scheduled rates.

Whenever possible, the Contractor shall ensure that the full road width or carriageway shall be open at night and all signs no longer applicable to the situation removed or effectively covered. If the road or carriageway is not in a safe trafficable condition over the full width at the end of each day's work, the Contractor shall provide adequate flagmen, signs, barriers, lights and necessary personnel / staff to ensure a reasonable free flow of traffic on the specified traffic lanes throughout the night and the whole period that the roadway is open to traffic.

(m) Failure to Comply with the Provisions

Failure or refusal on the part of the Contractor to take the necessary steps to ensure the safety and convenience of the public traffic, accommodation of traffic, plant and personnel in accordance with these specifications or as required by statutory authorities or ordered by the Engineer, shall be sufficient cause for the Engineer to deduct penalties as follows:

A fixed penalty of R1 500.00 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 day or part thereof over and above the fixed penalty shall be deducted for non-compliance to rectify any defects in the accommodation of traffic within the allowable time after an instruction to this effect has been given by the Engineer. The Engineer's instruction shall state the allowable time, which shall be the time in hours for reinstatement of the defects. Should the Contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

The failure of or refusal by the Contractor to construct and/or maintain diversions, barricades, traffic signs or road markings at the proper time, or to take the necessary precautions for the safety and convenience of public traffic as specified or instructed by the Engineer, shall be sufficient cause to suspend the Works until the required construction or maintenance has been completed to the satisfaction of the Engineer.

(n) Media Releases and Public Relations

Where ordered by the Engineer, the Contractor shall inform the general public on matters relating to the intended road works, construction period and accommodation of traffic through media and press releases in local and regional newspapers, magazines, radio services and/or other forms of publicity. Costs incurred for such publicity releases by the Contractor will be reimbursed through item B15.03(p).

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, channelization devices, barricades, warning devices and road markings (hereinafter referred to as traffic-control devices) in accordance with the project specifications, the SARTSM and as shown on the drawings and remove them when no longer required. It shall be incumbent upon the contractor to ensure that the abovementioned traffic-control devices are present where required at all times and are functioning properly.

Replace the third paragraph with the following:

The type of construction, spacing and placement of traffic-control devices shall be in accordance with the SARTSM. The recommended arrangements of the traffic control devices illustrated and/or drawings issued by the Engineer shall not be departed from without prior approval of the Engineer. The arrangements expected to be most commonly used in the contract are given on the tender drawings. In areas of high traffic density, the assistance of the relevant traffic authorities' officials shall be solicited.

The details shown for spacing and placement of traffic-control facilities may however, be revised at the discretion of the Engineer where deemed necessary to accommodate local site geometry and traffic conditions."

(a) Traffic-control devices

Add the following at the end of the last paragraph:

At each traffic control point, an all-weather shelter of at least three (3) square meters capable of accommodating two operators, with a clear window, a stable door, two chairs and a portable chemical toilet that shall be regularly maintained shall be provided. Each control point shall have a generator (with back-up power supply) and a 2x400w metal halide floodlight mounted onto a 9m winched fiberglass pole bolted to a 1,5m buried galvanized stem to light up the traffic control point at night time. Another floodlight/pole shall be placed some 20 meters apart from the traffic control point to extend the lighting along the road as a measure of safety for motorists in stacking / queuing vehicles at night.

(b) Road signs and barricades

Add the following:

The Contractor shall be responsible for the protection and maintenance of all signs, and shall at his own cost replace any that have been damaged, lost, or stolen.

All temporary road signs required to remain in position for some time shall be pole mounted as shown on the drawings. All temporary road signs required to be moved more often shall be mounted on portable supports for the easy moving of signs to temporary positions. The only permitted method of ballasting the sign supports shall consist of durable sandbags filled with sand of adequate mass to prevent signs from being blown over by wind. Sandbags shall be placed as ballast on the supports in front of and behind the sign so as not to obstruct the traffic path past the sign. The cost of the sandbags shall be included in the tendered rates for the various types of temporary road signs.

The covering of permanent road signs, if applicable, shall be by utilizing a hessian bag that shall be pulled over the sign in the form of a hood and fastened to the signposts. Plastic bags or other materials and fastened by means of adhesive tape shall not be permitted. The cost of covering of permanent road signs shall be included in the tendered rates of items B15.01 and B15.10."

(c) Channelization devices and barricades

Add the following:

The use of drums as channelization devices shall not be permitted. Drums may however be used to set up barriers as provided for in sub clause 1503(d).

Traffic channelization shall be carried out by means of plastic type delineators (Sign TW401 / TW402) in accordance with SABS 1555. The sign face shall be 200 mm x 800 mm in size and shall be mounted on suitable non-metal bases. Each base shall be suitably ballasted with sandbags.

Delineators shall:

- (i) comply with the manufacturing and reflective requirements of the SARTSM and the blades shall be reversible with dimensions as indicated on the drawings;
- (ii) have smooth and round edges and be mounted on a post and base. All components shall be of durable plastic material;
- (iii) have the lower edge of the reflective part of the delineator mounted not lower than 250mm above the road surface;
- (iv) be capable of withstanding the movement of passing vehicles and gusting winds up to 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 filled with sand;
- (v) together with its mounting be designed such that it will collapse in a safe manner under traffic impact.

Traffic cones manufactured in a fluorescent red-orange or red plastic material may be used only for road marking operations and other short-term lane deviations during daylight. Cones used on deviations shall be 750 mm high on Trunk Roads and 450 mm high on other roads with suitable heavy bases to prevent the cones from being blown over by wind or turbulence from moving traffic.

Lane closures or traffic diversions that continue into night-time shall be demarcated by delineators.

(e) Warning devices

Add the following after the first paragraph:

At night and when directed by the Engineer, amber flashing warning lights shall be placed at strategic places such as barricades, obstructions, etc. The warning lights shall be "Vama SA" amber flashing lights or a similar approved type.

All construction vehicles and plant used on the works shall be equipped with rotating amber flashing lights in working condition and warning boards as specified. All vehicles and plant before being allowed on the site shall obtain a clearance permit from the Engineer.

(i) Vehicle mounted flashing lights

Rotating lights shall have an amber lens of minimum height of 200 mm of the revolving parabolic reflector mountable type and shall be mounted in such a way as to be highly visible from all directions. The lights on construction vehicles shall not be switched on while vehicles are being operated on unrestricted sections of a public road but shall be switched on while construction vehicles are operating within the accommodation of traffic area, as the vehicles decelerate to enter a construction area, and as the vehicles accelerate to the general speed when entering the road from a construction area. Lights on plant shall operate continuously while the plant is working alongside sections of road open to public traffic

All LDV's and cars operating on site shall also be equipped with rotating amber flashing lights which shall be placed so as to be highly visible and operated continuously while the vehicles are maneuvering in or out of traffic or are travelling or parked alongside roads open to public traffic.

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

The Contractor shall apply and maintain lights together with temporary mounting brackets, to the approval of the Engineer. Vehicles and plant that do not comply with these requirements shall be removed from the site.

(ii) Sign mounted flashing lights

Two amber flashing lights shall be vertically mounted on top of the traffic signs at each end of each traffic accommodation section as shown on the drawings. The lights shall be operated during the hours of darkness."

(iii) Amber flashing lights for the Engineer

The Contractor shall supply and maintain similar rotating amber flashing lights with a magnetic base, flexible cable and connection suitable for insertion into a standard 12V automobile cigarette lighter socket for the Engineer and his staff.

The provision and maintenance of rotating amber flashing lights for the use of the Engineer and his staff shall be paid under Item B15.15.

Add the following new 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 40 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 60-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.

(i) Temporary traffic-control signal systems

A complete traffic control signal system shall consist of four traffic control signals each with three aspects, and shall include the control devices, power supplies and mountings.

Temporary traffic-control signals shall be erected where directed by the Engineer and shall comply with the following requirements:

- (i) The provisions of SARTSM, Volume 4, Chapter 10.
- (ii) The signals shall be capable of operating under manual control and if required linked manual control. Amber times shall be a minimum of 3 seconds.
- (iii) The signals and the power supply shall be capable of operating under all weather conditions for uninterrupted periods of at least 15 hours.
- (iv) Standard signal faces with 210 mm diameter red, amber and green aspects shall be provided.
- (v) The traffic-control signal lights shall comply with SABS 1459-1988. Aspects shall be fitted with 50 W tungsten halogen lamps.
- (vi) Two standard signal faces, both erected on the centerline of the road, shall be provided to control each direction of traffic.

Traffic-control signal systems shall be used during the period of half an hour before sunset to half an hour after sunrise every day and shall be operated manually. Sufficient staff, equipped with two-way radios, shall be provided to operate the traffic-control signal system, in shifts of not more than ten (10) hours. The same personnel shall not be on duty throughout an entire night.

The Contractor shall provide a backup power supply such that the traffic control signals can be operated continuously at night time. In addition, the contractor shall have available on site adequate spares to effect immediate repairs to a traffic control signal unit in the event of breakdown.

(j) Maintenance

All temporary traffic control facilities shall be kept clean and maintained in good order at all times.

If the coefficient of retro-reflection of any of the Contractor's signs falls below 80% of the value given in Table 1 of CKS 191 - 1987 (observation angle 0,33 , entrance angle 5,0) for the grade and color of the material used the sign shall be considered defective and shall either be rectified or removed and replaced.

(k) Sufficiency

The Contractor shall determine, from his proposed programme, the number of temporary traffic-control facilities required and shall not commence with any accommodation of traffic before sufficient traffic-control facilities have been delivered to the site.

The Contractor shall keep sufficient surplus barricades, signs and delineators on or around the site to allow for the replacement of damaged or missing items within a period of two (2) hours of the deficiency being discovered.

The Contractor shall allow in his tendered rates for the replacement of five (5) percent of the traffic- control facilities scheduled. This percentage is to allow for the replacement of traffic-control facilities which become unserviceable or damaged by public traffic or stolen and is beyond the Contractor's control and not the result of his actions or omissions during the period of accommodation of traffic on the site. The replacement of traffic control facilities over and above this five (5) percent of the scheduled items damaged by public traffic or stolen shall be payable at tendered rates."

B1504 WIDTH AND LENGTH OF TEMPORARY DEVIATIONS

Replace the second paragraph with the following:

Where the existing road is repaired, resurfaced or reconstructed in half widths, the roadway width for accommodating one-way traffic shall be at least 3,1 m wide. The length of the half-width construction shall not exceed 1 000 m.

The half-width traffic accommodation shall be single direction controlled by STOP and GO/RV signs during the daytime and temporary traffic controlled signal systems at night."

B 1517 MEASUREMENT AND PAYMENT

Delete Item 15.01 and replace with the following:

Item	Unit
B 15.01 Accommodation of traffic and maintaining temporary deviations	
(a) Two-way traffic accommodated	
(i) During deep insitu recycling of the road	kilometer (km)
(ii) During milling, repair or pre-treatment of the road	kilometer (km)
(iii) During resurfacing of the road	kilometer (km)
(iv) During road marking	kilometer (km)
(v) During ancillary road works	kilometer (km)
(b) One-way traffic accommodated	
(i) During deep insitu recycling of the road	kilometer (km)
(ii) During milling, repair or pre-treatment of the road	kilometer (km)
(iii) During resurfacing of the road	kilometer (km)
(iv) During road marking	kilometer (km)
(v) During ancillary road works	kilometer (km)
(c) Road closures/road junctions	
(i) During deep insitu recycling of the road	kilometer (km)
(ii) During milling, repair or pre-treatment of the road	kilometer (km)
(iii) During resurfacing of the road	kilometer (km)
(iv) During road marking	kilometer (km)
(v) During ancillary road works	kilometer (km)

Delete the first sentence of the first paragraph and replace with:

"The unit of measurement shall be the kilometer, measured once along the centre-line of the road carriageway, of temporary deviations, existing roads used as temporary deviations and roads constructed, rehabilitated and/or resurfaced in half-widths. The kilometer length shall include the roadway along which traffic delineators / cones are placed for traffic accommodation (includes the transition area, the buffer zone, work area and termination area, but excludes the advance warning area). In the case of a dual carriageway, each separate road carriageway shall be measured."

Delete the second paragraph and replace with the following:

The tendered rate shall include full compensation for accommodating traffic during the different specific construction operation(s) or work phases included in the contract. The tendered rate shall also include full compensation for the provision of communications equipment required for regulating the traffic, arranging for the moving of services and facilities, solving traffic problems, complying with the legal requirements of all authorities concerned, for providing temporary access to private property, and for the provision and maintenance of temporary drainage.

Payment sub-item (e) shall only be applicable if the works are confined to a junction or a number of individual junctions, including accommodation of traffic for the approach to the junctions. Where works are to be covered under sub-items (a) – (c) and these works including junctions within their lengths then the additional traffic accommodation required for these junctions shall be deemed to be included in the rates for sub-items (a) – (c).

The tendered rates sum shall include full compensation for the relocation of traffic-control facilities including dismantling, storing if necessary, transporting, re-erecting and inspecting the traffic-control facilities, and for all labour, equipment, constructional plant and incidentals as specified or shown on the drawings.

The tendered rate shall also include full compensation for the specified general requirements and all incidental items of cost which are required under the provisions of Section 1500 and are not specifically paid for under the other pay items provided in Section 1500.

Item 15.03 Temporary traffic-control facilities

Add the following:

Item	Unit
(a) Flagmen	Man-day

The unit of measurement shall be a full day and night worked by flagmen. A man-day shall be deemed to comprise three eight hour shifts in a twenty four hour period. Three shifts of eight hours per flagman equates to one man-day. Shorter single portion shifts (6 to 10 hours) shall be measured as a half man-day.

Replace sub-items (g) and (h) with the following:

Item	Unit
(g) Road signs, STW-, DTG-, TGS-, TG- and TIN-series.....	square meter (m ²) (excluding delineators and barricades)
(h) Delineators, TW-series (size and type indicated).....	number (No)

Add the following to the payment clause of item 15.03(h):

In the case of subitem (h) it shall also include for the sign stand, for the provision of two sand bags per delineator to hold it in position and for their replacement when necessary.

Add the following new sub-items:

Item	Unit
(n) Temporary traffic-control signs as specified	square meter (m ²)

The unit of measurement shall be the square meter of sign face, measured on the face of each item provided. The tendered rate shall include full compensation for providing and erecting each sign complete with posts.

Item	Unit
(p) 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 (p)(i)	percentage (%)

Item	Unit
(q) Traffic guidance system:	
(i) Quick marker base with tornado 75-flex double sided temporary delineator blades complete or similar approved.....	Number (No)
(ii) Reuse on site.....	Number (No)

The unit of measurement shall be the number of Quick marker bases with Tornado 75-flex double sided temporary delineator blades complete or similar approved units placed on site as instructed. The tendered rate shall include full compensation for providing and erecting each unit complete and the removal thereof upon completion.

Expenditure under this item shall be made in accordance with the general conditions of contract, Sub-clause 6.6 (GCC 2015), for the supply and installation of any additional signs, all other traffic control measure ordered by the Engineer in accordance with clause B1503(g) and for expenditure regarding media releases and public relations.

The tendered percentage is a percentage of the actual amount spent under subitem B15.03(p)(i), which shall include full compensation for the handling costs of the contractor, and the profit in connection with providing of other signs, all traffic control measures ordered by the engineer, and expenditure regarding media releases and public relations.

The unit of measurement under B15.03(q) shall be the meter measured once along the centre-line of the road carriageway. The tendered rate shall include full compensation for providing and erecting each delineator with base. The meter length shall include the roadway along which the delineators are placed for traffic accommodation.

Amend the paragraph headed "General" to read:

The tendered rates for the respective traffic-control facilities shall include full compensation for the supply and initial erection complete with posts, stakes, portable stands and sandbags as may be required, for clearing, for their maintenance and the replacement of items which have become unserviceable due to normal wear and tear, and their removal when no longer required. As stated in subclause B15.03(k), the Contractor shall allow in his tendered rates for the replacement of at least five (5) percent of the traffic-control facilities scheduled. This percentage is to allow for the replacement of traffic-control facilities which become unserviceable or damaged by public traffic or stolen and is beyond the Contractor's control and not the result of his actions or omissions during the period of accommodation of traffic on site. The replacement of traffic control facilities over and above this five (5) percent of the scheduled items damaged by public traffic or stolen shall be payable at tendered rates. 75% of the tariff will be payable when the items have been provided and erected in position for their first use on site and 25% when finally removed from the site.

The tendered rate for sub-item (h), delineators, shall also include full compensation for moving these signs laterally (as required or instructed by the Engineer) as specified in Sub-clause B1503 (c) so as to widen the travelled way when work is not in progress on that part of the section that is closed, or vice versa.

Delete Item 15.04

Item	Unit
15.04 Relocation of traffic-control facilities	kilometer (km)

For the purposes of this Contract payment for the relocation of traffic-control facilities is included in Item B15.01.

Amend item 15.10 to read as follows:

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

Delete Item 15.10

For the purposes of this contract, payment for accommodating traffic, whether in half widths or by any other means, is deemed to be included in item B15.01.

In the second paragraph delete from the third line the expressions "flagmen", "guards", and "lights".

Add the following new paragraph:

Half-width construction is defined as construction / rehabilitation of the layers on the shoulder and one lane and only where two-way traffic cannot be accommodated. Also, no slurry, seal and asphalt overlay works shall under any circumstances be measured under this item and shall be included in item B15.01 for the payment thereof. Cognizance should be taken that for the 4 000 meter maximum construction work sections controlled by temporary traffic signals for half-width construction, payment shall be made only once and payment for the changeover of the trafficked lanes shall not be made."

Where payment is made for a section of road in Item 15.10, payment shall not be made under Item 15.01.

Amend item 15.11 to read as follows:

Item	Unit
B15.11 Traffic signals	
(a) Supply of traffic signals	number (No)
(b) Operation of signals	set-month

The unit of measurement for sub-item (a) shall be the number of traffic signal sets (one set consists of two traffic signals) provided and erected in position on site complete as specified.

The tendered lump sum shall include full compensation to provide equipment for construction areas, namely traffic signal lights on 2,5 m high steel poles complete with all electrical wiring, 3 m² all weather shelter complete with lighting, portable chemical latrines, generators and standby generators to provide electricity to traffic signals and floodlights, 2x400w metal halide floodlights mounted onto a 9m winched fiberglass pole bolted to a 1,5m buried galvanized stem complete with electrical wiring, and the necessary personnel and flagmen approved by the Engineer to operate these traffic signals in accordance with the SARTSM. The two-way communication devices are measured separately in item 15.03 (m).

The unit of measurement for sub-item (b) shall be the set-month, for the time each traffic signal system set is operational complete as specified.

The tendered rate per month shall include full compensation for the operation of the traffic signals, equipment, signs, lights, etc. as specified. It shall also include the provision of power to operate the lights, replacing bulbs as required and keeping the lenses clean and visible."

Add the following new pay items:

Item	Unit
B15.14 Traffic safety officer	day

The unit of measurement shall be the period in calendar days that the approved traffic safety officer(s), including their vehicles, equipment and personnel, are operative on accommodation of traffic and on which satisfactory duties and reports are completed as specified.

The tendered rate per day shall include full compensation for the cost of the traffic safety officer(s), their vehicles, equipment and personnel, to conduct their duties as specified in sub-clauses B1502(i).

Item	Unit
B15.15 Accommodation of traffic for the purpose of assisting the Engineer in measuring up the works prior to project implementation	
(a) Establishment / De-establishment of traffic control facilities on Site	No
(b) Traffic accommodation (Type 1)	km.hr
(c) Traffic accommodation (Type 2).....	km.hr
(d) Traffic accommodation (Type 3).....	km.hr

The unit of measurement for sub-item (a) shall be the number of times the traffic control facilities have to be established / de-established on Site in respect of sub-items (b), (c) and (d).

The tendered rate shall include full compensation for the supply, initial erection and final removal of all signage required as specified. Payment for maintaining the traffic control facilities during measuring up operations shall be made under sub-items (b), (c) and (d).

The unit of measurement for sub-items (b), (c) and (d) shall be the kilometer of road measured up, multiplied by the time taken, in hours, by the Engineer for the measuring up operation.

The different types of traffic accommodation mentioned above shall be defined by the following details as specified in the South African Road Signs Manual, Volume. 2, Chapter 13: (June 1999):

Type 1 : Detail 13.37.1 (Partial lane closure)

Type 2 : Detail 13.37.2 (Lane closure)

Type 3 : Detail 13.38.2 (Work in 2-lane section)

The tendered rate shall include full compensation for providing all plant, equipment, tools, transport, labour, supervision, flagmen, guards, road signs, lights, barricades and all other incidentals necessary for the safe handling of traffic as specified. Traffic control facilities which become unserviceable or are damaged by vehicles or stolen, in particular delineators, shall be replaced promptly at no additional cost.

NOTE:

Tenderers must note that the quantities of temporary traffic-control facilities, traffic safety officers and high visibility trailers shown in the schedule of quantities are based on the Engineer's preliminary construction programme. If a tenderer intends working at more work sections than indicated in the above programme, additional quantities of temporary traffic-control facilities, traffic safety officers and high visibility trailers will be required. The tenderer must submit a cost of the additional traffic accommodation measures with his tender. This additional cost will be added to the tender sum when evaluating the tender.

SECTION 1600: OVERHAUL**B 1602 DEFINITIONS****(a) Overhaul Material**

Add the following:

Overhaul shall not apply in the case of:

- (i) Material (including asphalt) obtained from commercial sources or sources provided by the Contractor.
- (ii) Items salvaged on the site of the works such as existing pipes, culverts, manhole covers, grates, guardrails and signs.

The Contractor's tendered rates for all materials from commercial sources or other Contractor sources of supply shall be deemed to include full compensation for hauling the materials to its point of use on the site of Works. The Contractor shall make his own arrangements for the procurement of materials and shall pay all royalties and other costs in this connection.

Where material is required to be spoiled, the Contractor shall pay any dumping charges which may become payable.

(b) Overhaul

Delete the sub clause and replace with:

No overhaul shall be measured as all haul regarding this project will be considered as free-haul

(c) Haul distance

Add the following:

The haul distance of any material shall be measured along the shortest route from the place of excavation (origin, source) to the point of use (should the material be used / re-used directly) or to the approved stockpile, and the shortest distance from the approved stockpile to the point of use.

SECTION B1700: SITE CLEARANCE**B1702 DESCRIPTION OF WORK****(c) Conservation of topsoil**

Add to the end of the 1st paragraph:

"The contractor will not be required to remove topsoil to more than an average depth of 400mm, from any particular area. The depth of topsoil removed shall be reliant on the terrain, suitability of material and topsoil requirements of the work."

Replace the second paragraph of this clause with the following:

"After clearing and grubbing, all topsoil shall be removed to either windrows alongside the construction area or to stockpile. Where ordered by the engineer, any topsoil that shall be required for the top soiling of verges and landscaped areas, but which cannot be accommodated within the construction site, shall be loaded and hauled to the designated stockpile area where it shall be placed in temporary stockpiles for later use.

Refer also to clause B5802(g) of this project specification."

B1703 EXECUTION OF WORK**(a) Areas to be cleared and grubbed**

Replace the contents of 1703 (c) with the following:

C3 . 47

"Only areas as directed by the Engineer shall be cleared and grubbed where necessary. The Contractor may proceed with clearing and grubbing after handing over of the site only in areas as approved by the Engineer. Measurement and payment for clearing and grubbing shall only occur for areas as required in writing by the Engineer."

(c) Disposal of Material

Replace the contents of 1703 (c) with the following:

"Material obtained from clearing and grubbing, demolition of concrete structures and brickwork, dismantling of pipes and removal of any items shall be disposed of off-site at a registered spoil site to be identified and procured by the Contractor. Materials qualifying for disposal on site will be spoiled where indicated by the Engineer. All transport costs shall be included in the rates tendered for site clearance."

"The Contractor shall programme his work in such a way that re-clearing will not be necessary. The cost of re-clearing shall be borne by the Contractor."

"Trees outside street, channel and pipeline routes must be left standing and undamaged, except where otherwise ordered in writing by the Engineer."

B1704 MEASUREMENT AND PAYMENT

Replace Item 17.01 with the following:

Item	Unit
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B17.01 Site Clearance

(a) Clear and strip site	square meter (m ²)
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(b) Remove topsoil to nominal depth of 150mm stockpile and maintain	cubic meter (m ³)
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The unit of measurement for Item B17.01 (a) clearing and stripping the site is the square meter. The rate shall cover the cost of clearing the surface of the area designated by the Engineer, removing boulders of size up to 0.15m³, grubbing of trees and tree stumps, cutting of trunks and branches exceeding 0.5m in girth into transportable lengths, backfilling of cavities, demolishing structures and removing, transporting, and disposing of material thus cleared, grubbed, cut and demolished.

The unit of measurement for item B17.01 (b), removal of topsoil shall be the cubic meter. The rate shall cover the cost of removing topsoil, together with such vegetation and small roots as occur with the specified depth, and of topsoil on designated sites.

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

B17.07 Remove from site and dispose of rubble	Cubic meter : (m ³)
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The rate shall cover the cost of dismantling, demolishing of all structures and foundations, the additional costs for precautions required during the demolition and loading operations, all excavations and backfilling as required and the cost of loading, transporting and dumping of the material at a registered dump site to be identified by the Contractor. The free haul distance of 5km applies.

Add the following new section to Series 1000: General of the Standard Specifications:

SERIES 1000: GENERAL

SECTION B 1800: DAY WORK

CONTENTS

B 1801	SCOPE
B 1802	GENERAL REQUIREMENTS
B 1803	LABOUR
B 1804	MATERIALS
B 1805	PLANT
B 1806	MEASUREMENT AND PAYMENT

B 1801 SCOPE

This section covers the evaluation and method of measurement and payment for work, ordered by the Engineer in writing, carried out on a daywork basis, all in accordance with sub-clause 6.5 (GCC 2015) of the General and/or Special Conditions of Contract.

B 1802 GENERAL REQUIREMENTS

Work will be classified as daywork only if the Engineer considers no other rate in the schedule of quantities appropriate for payment purposes.

Only work ordered in writing by the Engineer to be executed as daywork shall be measured and paid for at the rates tendered in the schedule of quantities.

The Contractor shall keep and submit records of the work performed in accordance with the requirements of 6.5.4 (GCC 2015) of the General and/or Special Conditions of Contract.

B 1803 LABOUR

The tendered rates for labour to be included as daywork charges shall include the salaries and wages of gangers or charge hands working with their gangs but shall exclude the costs of the time of the foremen or supervisors which will be deemed to have been included in the sums tendered for the relevant items in Section 1300 of the schedule of quantities.

Gross remuneration, as specified in sub-clause 6.5.1.2.1 (GCC 2015) of the general and/or special conditions of contract, will be deemed to include the following:

- (a) Basic salary/wage
- (b) Overhead charges such as fringe benefits not reflected in basic salary and wages which may include:
 - normal annual bonus
 - employer's contribution to medical aid
 - group life assurance premiums
 - employer's contribution to pension/provident fund
 - all other costs as per letter of appointment

and costs payable due to statutory requirements, which may include:

- Workmen's Compensation Fund contribution
- Unemployment Insurance Fund contributions
- District Council levies or the equivalent thereof

The rates tendered for labour shall include for the actual cost of salaries and wages, all overhead charges, profit, liabilities, obligations, risks and incidentals for all workmen to execute work by dayworks.

B 1804 MATERIALS

The net cost price of materials (exclusive of VAT) actually delivered to the site to be included as daywork charges shall include the costs of delivery to the usual points at which materials are received on the site.

Before ordering any material, the Contractor shall submit quotations to the Engineer for his approval, and shall submit such receipts or vouchers to the Engineer as may be necessary for proving the amount claimed.

The percentage tendered as an on-cost on the net cost price of materials shall include for all handling, overheads, profit, liabilities, obligations, risks, incidentals and other on-costs for the supply, delivery and distribution of material for daywork to the individual site(s) where daywork is in progress.

B 1805 PLANT

The full inclusive hourly cost of operational plant which is available on site or which has been removed without written authorization of the Engineer, to be included as daywork charges will be taken to be the tendered rate which, in the opinion of the Contractor, will be applicable in all respects to the situation and terms of the contract.

The hourly rate tendered or agreed shall constitute the daywork rate for the plant and will be deemed to include all costs for plant operators, consumable stores, fuel, maintenance, depreciation, ground-engaging tools and all other incidentals necessary to operate the plant for the purposes for which it was designed.

Failure on the part of the Contractor to state in the schedule of quantities the plant on which his tender is based, shall be considered as a firm agreement on the part of the Contractor that he waives all rights to distinguish between the different types and capacities of plant falling within the description and/or category given, and the Engineer shall have the right to call upon the Contractor to supply any such plant to the site and perform the work as directed by him at the particular tendered rate.

Sixty percent (60 %) of the hourly rate tendered or agreed will be paid in respect of plant which is being employed for daywork, but standing idle on the specific instructions of the Engineer, as full compensation for idle costs of daywork plant.

For plant not on site, the costs of establishing items of plant on the site for daywork on specific instruction of the Engineer will be negotiated with the Contractor at the time that such daywork is contemplated.

B 1806 MEASUREMENT AND PAYMENT

Item	Unit
B 18.01 Labour charges	
for items (a) – (h)	
description of employee/designation/skill indicated)	hour (h)

The unit of measurement shall be the hour of time worked by the particular employee on the designated work on instruction by the Engineer.

The daywork rates submitted for labour in the schedule of quantities shall be the cost of labour for each skill level and shall apply only to the number of workers approved in writing by the Engineer.

The rates shall be for normal working hours and shall be increased pro rata for overtime at the standard rate applicable if the work performed outside working hours is approved in writing by the Engineer.

The tendered rates shall include full compensation for all costs for salaries and wages, use and maintenance of tools and equipment, sick pay, leave pay, holidays with pay and financial charges of any description incurred by the Contractor and his subcontractors as well as for all insurance, accommodation, travelling, travelling time, supervision, overheads, profit, obligations, risks and any other emoluments and incidentals necessary for labour to execute work as daywork.

Item	Unit
B 18.02 Material charges	
(a) Procurement of materials Actual cost of material not already specified in the tender by the Employer.....	Provisional Sum
(b) Contractor's handling costs, profit and all other charges in respect of sub item B18.02(a)	Percentage (%)

Expenditure under this item shall be made in accordance with clause 6.6 (GCC 2015) of the General Conditions of Contract. The provisional sum allowed shall include for the actual cost incurred for materials used in authorized daywork. The actual costs for materials shall not be subject to contract price adjustment.

The tendered percentage is a percentage of the amount actually spent under subitem B18.02(a) and shall include full compensation for the handling costs of the Contractor, profit, overheads and incidentals in connection with materials used for daywork on the instructions of the Engineer.

Payment for expenditure under this item will be made in full as and when the money is expended subject to written proof by the Contractor of payment of invoiced amounts.

Item	Unit
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B 18.03 Plant charges

For items (a) – (m)

description of plant indicated) hour (h)

The unit of measurement shall be the hour actually worked by each item of plant (vehicle, machine or equipment) on the designated work on instruction by the Engineer.

The Contractor and the Engineer will agree on the method of recording the working hours prior to the commencement of work. Any long period of idling at any one time which in the opinion of the Engineer or his representative is beyond that required for normal operating conditions will not be paid for as working time. Non-working hours for any reason shall not be measured for payment.

The tendered rates include full compensation for furnishing and using the plant, including the cost of plant operators, consumable stores, fuel, ground-engaging tools, maintenance and for all other incidentals necessary to execute the authorized daywork as specified.

Where there is ambiguity between the power developed at the flywheel and mass of machine, the power shall govern the measurement category.

Item	Unit
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B 18.04 Other plant / equipment not specified above

(a) Procurement of plant / equipment - Actual cost of plant /
Equipment not already specified in the tender by the Employer Provisional Sum

(b) Contractor's handling costs, profit and all other charges in
respect of sub item B18.04(a) Percentage (%)

The provisional sum provided to cover the cost of other plant / equipment shall be expended in accordance with clause 6.6 (GCC 2015) of the General Conditions of Contract.

Item	Unit
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B18.05 Transport

(a) LDV (1 ton) kilometer (km)

(b) Tipper (6m³) kilometer (km)

(c) Tipper (10m³) kilometer (km)

(d) Flatbed truck (with crane) kilometer (km)

The unit of measurement shall be the kilometer distance that the vehicle travelled for transporting personnel and/or plant/equipment. All travelling shall be approved by the engineer.

The tendered rate shall include full compensation for the cost of the vehicle including fuel, maintenance, depreciation and running costs.

The above mentioned tendered rates shall be full compensation for the various items as specified and no further profit shall be paid.

SECTION 2100: DRAINS**B2101 SCOPE**

Amend the first paragraph to read:

This section covers all work both rehabilitative and new work in connection with the excavation and construction of open drains, subsoil drainage and banks and dykes at the locations and to the sizes, shapes, grades and dimensions as shown on the drawings or as directed by the Engineer, and the test flushing of subsoil drains.

B2103 BANKS AND DYKES

Add the following after "dykes" in the first line of the first and second paragraphs:

"and eroded side fills."

B2104 SUBSOIL DRAINAGE**(a) Materials**

Add the following before sub-clause (i) Pipes:

Details of the various subsoil / subsurface drainage items required in the Works are shown on Drawing No. RO-2272/5. Subsurface drains shall be of Type "C" shall be used unless otherwise ordered by the Engineer.

(i) Pipes

Amend this sub-clause by adding the following to the end of the third paragraph:

(category-heavy duty) or SABS 1601 (stiffness class 350),

The pipes to be used shall be either slotted uPVC pipes or perforated HDPE pressure pipes, 100 mm ID.

(ii) Natural permeable material

Add the following to the third paragraph:

The crushed stone shall be fine (14mm nominal size) and shall be washed clean of all fines.

(iii) Synthetic-fibre filter fabric

Under item (4) Selection, of this sub-clause, delete the first paragraph and replace with the following:

The filter-fabric used for subsoil drains shall be grade 2 (non-woven, needle-punched) and shall satisfy the criteria for a grade 2 geotextile as given in Table 2104/2.

(b) Construction of subsoil drainage systems

Add the following sub-clause:

(v) Proving of pipes in sub-soil drainage systems

On completion of the pipe laying and backfilling, the pipes shall be proved by pulling through a cylindrical cleaning brush followed by a wooden mandrill \pm 400mm long and 5mm in diameter less than the bore of the pipe. Proving of pipes shall not be paid for separately and the cost thereof shall be deemed to be included in the rate tendered for laying the pipe.

B2107 MEASUREMENT AND PAYMENT**Item B21.01 Excavation for open side drains**

Add the following to the penultimate paragraph:

The tendered rate shall also include full compensation for trimming the open drains.

Add the following pay items:

Item	Unit
B21.16 Backfilling existing eroded side drains using stockpiled material	cubic meter (m³)

The unit of measurement shall be the cubic meter of completed backfill, measured in place, using the stockpile of material on site.

The tendered rate shall include full compensation for procuring, furnishing, placing and compacting the backfilling to a density of 93% of modified AASHTO density, and a free-haul of 5,0km.

Item	Unit
B21.20 Extra over item 21.16 for cement-treated soil backfill	cubic meter (m³)

The unit of measurement shall be the cubic meter of excavation backfilled with cement –treated soil, measured as specified for item 21.16.

The tendered rate shall include full compensation for the additional cost of providing and mixing in cement in the backfill material.

Item	Unit
B21.21 Impermeable backfilling of eroded side fills	cubic meter (m³)

The unit of measurement shall be the cubic meter of completed backfill, measured in place on the fill. The tendered rate shall include full compensation for procuring from commercial sources, furnishing, placing and compacting the backfilling. Unlimited free-haul applies.

SECTION 2200: PREFABRICATED CULVERTS**B2201 SCOPE**

Add the following:

This section also covers the protection and alterations to existing service facilities and installation of new services.

B2203 MATERIALS**(a) Prefabricated concrete pipe culvert units**

Delete the second sentence and replace with the following:

Pipes of Class D loading with spigot and socket joints shall be used on this Contract.

B2212 INLET AND OUTLET STRUCTURES, CATCHPITS AND MANHOLES**(a) Excavation and Backfilling**

Add the following:

Excavation of the pavement layers to expose and recover the covers and frames shall be done by hand. No heavy excavation equipment will be allowed for this operation.

(e) Manhole Covers, Grid Inlets, etc.

Add the following:

The following shall apply to that portion of the works where the road is to be cold insitu recycled.

The exact position of manhole(s) or service chamber(s) shall be determined before rehabilitation, resurfacing or recycling of the pavement layers commences. The utmost care shall be taken when working around existing service frames and covers and the Contractor shall ensure that manholes and service chambers remain free of debris. Any damage done shall be repaired at the Contractor's expense.

After recycling and compaction of the pavement layers, temporary asphalt skirting shall be placed around manholes before the road is opened to traffic.

Add the following new sub-clause:

(j) Raising or lowering of existing manholes and chambers

Where shown on the drawings or ordered by the Engineer, existing manhole chambers, chimneys, covers and frames shall be adjusted in level to suit the new surroundings. Demolition and breaking out shall be executed with care and only the minimum consistent with the requirements shall be removed. The Contractor shall exercise due care to ensure that debris does not fall into manholes and block them.

The Contractor shall make good, careless or excessive demolition at his own expense. New construction shall be in accordance with the drawings and the Specifications. The Contractor will be held responsible for the timely adjustment of all covers and frames in advance of surrounding construction whether they are indicated on the drawings or by the Engineer or not. No claims for delays arising from the failure of the Contractor to effect the necessary adjustments in good time will be allowed.

B 2215 SERVICE DUCTS

Amend the heading of this clause to "SERVICES AND SERVICE DUCTS".

(i) Amend "normal-duty uPVC pipes" to "heavy duty uPVC pipes".

Add the following new sub-clause::

(a) Protection of Existing Services

The Contractor shall exercise the necessary care to prevent damage to known services during construction operations. Major excavating equipment and other plant shall not be operated in dangerously close proximity to these services. Where necessary, and where authorized by the Engineer, excavation in close proximity to these services shall be carefully carried out by means of suitable hand tools, excluding picks wherever their use could cause damage to the services. Services left exposed shall be suitably protected from damage and theft.

B 2218 MEASUREMENT AND PAYMENT

NOTE:

Change free-haul distance from "1,0 km" to "5,0" km in all pay items except for pay item 22.02(b) where an unlimited free-haul distance shall apply.

Amend pay item 22.02(b) to read:

- (b) Using imported selected material obtained from commercial sources (unlimited free-haul)

Add the following new payment items :

Item	Unit
B 22.29 Locating existing services	Provisional Sum

The provisional sum shall be expended in terms of the General Conditions of Contract to cover the costs incurred for the supply or hiring of specialized detecting equipment, for the use of such equipment and for drawing up plans of the located services as specified. Alternatively an approved specialist firm may be employed to carry out the work.

Item	Unit
B 22.30 Relocation and/or reinstatement of existing services	

- (a) Installation of unducted traffic counting loops into the completed continuous graded asphaltlinear meter (m)
- (b) Installation of unducted traffic signal loops into the completed continuous graded asphaltlinear meter (m)

The unit of measurement for sub-items (a) and (b) shall be the meter of loop installed.

The price tendered and paid shall include full compensation for all costs incurred in arranging for, procuring and installing the loops using approved selected subcontractors, as well as for traffic accommodation required during the installation process.

- (c) Installation of unducted traffic camera loops into the completed continuous graded asphalt Provisional Sum
- (d) Administration costs and handling charges in respect of sub-item B22.30(c) above Percentage (%)
- (e) Provisional sum allowed for the relocation and/or reinstatement of other existing services (including specialized traffic loops and cameras) by the service owners (state service) or selected subcontractors..... Provisional Sum
- (f) Administration costs and handling charges in respect of sub-item B22.30(e) above Percentage (%)

The provisional sum shall be expended to cover the costs of the relocation and/or reinstatement of existing services (including specialized traffic loops and cameras) by the service owners in accordance with the Conditions of Contract.

The tendered percentages in respect of administration costs and handling charges shall include full compensation for all costs incurred by the Contractor in arranging for the relocation and/or reinstatement of services including traffic accommodation, effecting payment for such work to the service owners and claiming compensation from the Employer, and the Contractor shall have no further claims for compensation in respect of work executed by service owners.

Item	Unit
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B22.31 Raising or lowering of existing manholes, frames and chambers

(Types and depth ranges to be indicated) number (No)

The unit of measurement shall be the number of adjustments made.

The tendered rate shall include full compensation for the removal, cleaning, painting and reinstallation of the existing cover and frame, the demolition of the brickwork supporting the frame where necessary, the construction of new works to support the frame and the disposal of the productions of the demolition.

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

B 2301 SCOPE

Add the following to Clause 2301 of the Specifications:

This section also covers the replacement of damaged kerbing.

B2302 MATERIALS

b) Kerbing, channeling and edging

Delete first paragraph and replace with the following:

All prefabricated kerbs, channels, edgings and inlet kerbs shall be of precast concrete units complying with the relevant requirements of SABS 927. Cross-sections of the various approved precast sections are shown on the drawings and tendered rates shall be based on these details.

B 2307 MEASUREMENT AND PAYMENT

Add the following new pay items:

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

B23.16 Demolish and remove existing kerbing, channeling and edging off site

- | | |
|------------------------------------|------------------|
| (a) Precast kerb | linear meter (m) |
| (b) Precast channel | linear meter (m) |
| (c) Precast kerb and channel | linear meter (m) |
| (d) Precast edging | linear meter (m) |

The unit of measurement shall be the linear meter of kerbing, channeling or edging demolished and removed from the site to spoil.

The tendered rate shall include full compensation for all labour, plant, equipment and transport and associated costs for removing the kerbing, channeling and edging as well as the concrete backing and bedding material to a spoil dump off site. The free haul distance of 5 km applies.

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

B23.17 Remove existing kerbing, channeling and edging and set aside for reuse

- | | |
|------------------------------------|------------------|
| (a) Precast kerb | linear meter (m) |
| (b) Precast Channel..... | linear meter (m) |
| (c) Precast kerb and channel | linear meter (m) |
| (d) Precast edging | linear meter (m) |

The unit of measurement shall be the linear meter for the removal of concrete kerbing, channeling and edging complete.

The tendered rates shall include full compensation for all labour, plant, material, storage and transport for the removal of kerbing, channeling and edging.

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

B23.18 Concrete channeling

- | | |
|--|------------------|
| (a) Precast half round channel Type W3 | linear meter (m) |
| (b) V-Channel / Double flat channel (2 No x C1 Channels) | linear meter (m) |

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- (c) V-Channel / Double flat channel with concrete infill up to 100mmlinear meter (m)
- (d) Triple flat channel (2 No x C1 Channels plus 1 No C2 channel)linear meter (m)
- (e) Single channel Type C1linear meter (m)
- (f) Single channel Type C2linear meter (m)

The unit of measurement shall be the linear meter of channeling complete as constructed.
The tendered rates shall include full compensation for all labour, plant and material for the construction of channeling.

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

B23.19 Concrete infill for V Channel / Double flat

- (a) Cast in-situ 50mm widthlinear meter (m)
- (b) Cast in-situ 75mm widthlinear meter (m)
- (c) Cast in-situ 100mm widthlinear meter (m)

The unit of measurement shall be the linear meter of concrete complete as constructed, as per standard detail.

The tendered rates shall include full compensation for all labour, plant and material for the construction of channeling.

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

B23.20 Relay existing concrete kerbing and/or channeling and edging

- (a) Precast kerb onlylinear meter (m)
- (b) Precast Channel onlylinear meter (m)
- (c) Precast kerb and channellinear meter (m)
- (d) Precast edging – Type E3linear meter (m)
- (e) Precast edging – Type E1linear meter (m)

The unit of measurement shall be the linear meter for the relaying of concrete kerbing and/or, channeling and edging complete.

The tendered rates shall include full compensation for all labour, plant, material, storage and transport for the relaying of kerbing and/or channeling and edging.

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

B23.21 Extra over item B23.01, B23.02, B23.20 for drop kerbs at entrances and bellmouths linear meter (m)

The unit of measurement shall be the linear meter. The length of the drop kerbs shall be taken from the start of the transition to the end of the transition, where the kerb returns to the normal kerb height above the road-edge level.

The tendered rates shall include full compensation for all labour, plant, material and transport for the construction of the drop kerbs. The payment for the drop kerbs shall be made as an "extra-over" to payment Items 23.01 and 23.02 and B23.20, the rate tendered shall be full compensation for all additional expense involved in the dropping of the kerbs and the adjustment of the sidewalk or driveway entrance levels.

SECTION 3300: MASS EARTHWORKS**B 3301 SCOPE**

Replace the words "..... cut material from the road prism or borrow material from approved borrow pits"

in the first sentence with the words ".... cut material from the road prism or existing pavement layers or borrow material from approved borrow pits or material from approved commercial sources....".

B 3312 MEASUREMENT AND PAYMENT

Amend the description of Item 33.01 as follows:

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

B 33.01 Cut and borrow to fill, including unlimited free-haul:

Replace the fifth paragraph of the payment clause of Item 33.01 with the following:

The tendered rates shall include full compensation for the procurement, furnishing and placing the material, including excavating as if in soft excavation, the cutting of benches, for transporting the material for an unlimited free-haul distance, for preparing, processing, shaping, watering, mixing and compacting the material to the densities or in the manner specified herein and for removing and disposing of up to 5% oversized material from the road after processing, including transport for an unlimited free-haul distance.

Amend the description of Item 33.02 as follows:

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

B 33.02 Sand fills (as described in clause 3302, Including unlimited free-haul):

Replace the second paragraph of the payment clause of Item 33.02 with the following:

The tendered rates shall include full compensation for procuring, placing and compacting the sand fills, including transport for an unlimited free-haul distance.

Amend the description of Item 33.04 as follows:

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

B 33.04 Cut to spoil, including free-haul up to 5.0 km.**Material obtained from:**

Replace the fourth paragraph of the payment clause of Item 33.04 with the following:

The tendered rates for cut to spoil shall include full compensation for excavating from the road prism and roadbed in the various classes of excavation, for loading, transporting the material over a free-haul distance of 5.0 km to an approved spoil site of the Contractor's choice, off the site of works, off-loading and disposing of the material as specified, including shaping and levelling-off any piles of spoil material.

Amend the description of Item 33.07 as follows:

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

B 33.07 Removal of unsuitable material including free-haul):

Replace the fourth paragraph of the payment clause of Item 33.04 with the following:

The tendered rates shall include full compensation for the removal of all classes of unsuitable material and shall distinguish only between stable and unstable material and layer thicknesses of less than and exceeding 200mm. It will also include compensation for free-haul.

Add the following to Note at the end of the Payment Clause:

Amend the free-haul distance, wherever it may occur in the Specifications or Project Specifications – See Clause B 1601 of Section 1600 of these Project Specifications.

SECTION 3400: PAVEMENT LAYERS OF GRAVEL MATERIAL**B3402 MATERIALS****(a) General**

Delete the first paragraph and replace with the following:

Gravel materials shall be obtained from approved commercial sources.

Add the following after the first paragraph:

Where gravel material from commercial sources is used, Item 34.01 below shall be applicable, except that the tendered rates shall also include full compensation for all transport costs, and no overhaul shall be measured and paid for.

Replace the grading section in Table 3402/1 with:

Grading	Nominal aperture size of sieve (mm)	Percentage passing through sieve by mass			The percentage by mass passing the 2,00mm sieve shall not be less than 20% not more than 70%
		Crushed material Nominal max size		Uncrushed material	
		37,5 mm	28 mm		
	53			100	
	50			95 - 100	
	37,5	100		85 – 100	
	28	86 - 95			
	20	73 - 86	87 - 96	61 - 91	
	14	61 - 76	73 – 86		
	5	37 - 54	43 - 61	31 - 66	
2	23 – 40	27 – 45	20 – 50		
0,425	11 – 24	13 – 27	10 – 30		
0,075	4 - 12	5 - 12	5 - 15		

(b) Compaction requirements

Revise the compaction requirements as follows:

The minimum in-situ dry density of sand and gravel material on this project shall be as specified hereinafter for the respective layers in terms of a percentage of modified AASHTO density.

Sand	100%
Lower selected layer	93%
Upper selected layer	95%
Subbase	97% for material not chemically stabilized 96% for chemically stabilized (C3/ C4) material
Shoulder & Wearing Course	95%
Gravel Base	98%

Revise the relevant portion of Table 3402/2 as follows:

Table B3402/2 Requirements for types G7 to G9 materials

PROPERTY	TYPE OF MATERIAL		
	G7	G8	G9
STRENGTH (CBR)	CBR at 93% of modified AASHTO density, 100% for sand, shall be at least 15%.	CBR at 93% of modified AASHTO density, 100% for sand, shall be at least 10%.	CBR at 93% of modified AASHTO density, 100% for sand, shall be at least 7%.

Revise the relevant portion of Table 3402./5 as follows :

Table B 3402/5 Requirements for Chemically Stabilized Pavement Layers

CRITERIA	C1	C2	C3	C4
Material before treatment	At least G2 quality	At least G4 quality	At least G5 quality	
Durability : Fines lost Wet-dry	All characteristics, including amongst others the carbonated values with regard to durability, shall comply with the requirements in the project specifications.		20% maximum	30% maximum

Add the following new sub-clause:

(d) Selection of material

Material from the existing pavement structure shall only be used as directed by the Engineer.

Should the tenderer wish to use Pedogenic material (ferricrete or calcrete) for cement-treated subbase, he shall submit with his tender the name of the source together with a mix design based on cement contents of 2%, 4% and 6% by mass of cement per mass of untreated subbase material.

The shoulder wearing course gravel shall be Type 2 as described in Table 3402/4, with the exception that the CBR shall be 25% and not 15%.

B 3403 CONSTRUCTION

(a) Requirements applying prior to the construction of the layer

Add the following:

The Contractor shall programme the work outlined in clause B3402(d) in such a manner to afford the Engineer sufficient time to test the mixed material and to establish an applicable stabilizer content for the material. The Engineer will provide the required design stabilizer content within 10 working days and the cost of standing time during this period will be deemed to be included in the tendered rates.

(b) Placing and compacting

Add the following to the first paragraph:

The Contractor shall make provision during placing, processing and compaction of layers during half width construction to construct layers wider than theoretically required in order to achieve the required compaction and level control. Provision shall also be made for cutting back and benching at least 150mm into the existing road layers to sound material when the road widening is constructed. Rates tendered under section 3400 shall include for all additional costs to provide longitudinal joints as specified.

Add the following sub-clauses:

(iii) Spreading of additional material prior to recycling

Where the existing pavement level is too low and where specified or instructed by the Engineer, suitable material shall be added to the layer to make up the shortfall prior to recycling the layer.

The additional material shall be spread uniformly over the full width of the section to be recycled by means of a mechanical spreader to the thickness as specified. Compaction of the additional material will not be required.

(iv) Temporary stockpiling of material

The contractor shall plan his activities so that materials imported from commercial sources can be directly transported to and placed at the designated points.

The temporary stockpiling of material will not be paid for separately unless instructed by the engineer, and full compensation will be deemed to have been included in the rates tendered for the various payment items for work for which the material is to be used.

This sub-clause does not apply to the excavation and temporary stockpiling of existing pavement layers as instructed by the engineer, in terms of sub-clause B3403(i), as these will be measured and paid for separately.

(v) Storing recovered pavement material

Excavated pavement material intended for reprocessing but which cannot be reprocessed in place or cannot, in the opinion of the engineer, be placed in a windrow next to the excavation, nor directly placed in position anywhere else, shall be transported to approved stockpile or dumping sites with written permission from the engineer.

Stockpile sites for material to be recycled or reprocessed shall be located as approved by the engineer. The stockpile site shall be cleaned, and all stones, vegetation and other materials which may cause contamination shall be removed. The site shall be graded smooth with an adequate slope to ensure proper drainage of water. If instructed by the engineer, the surface shall be watered and compacted to a depth of at least 150mm and to a density of 90% of modified AASHTO density. The compacted surface shall be firm. Upon completion, the surface shall be swept clean.

Stockpile sites shall be large enough to allow the different types of material to be stockpiled without overlapping or exceeding the limits of the prepared site. Enlargement of the stockpile sites after the stockpiles have been placed will not be permitted without the engineer's approval.

Upon completion of the work, the stockpile sites shall be rehabilitated in accordance with the engineer's instructions.

Pay Item 32.06 shall be used for the payment for cleaning and preparing the stockpiling sites, and also for leveling and reinstating of the site after completion of the work.

Add the following new sub-clause:

(f) Tie-in to existing construction

At the tie-ins to the existing bituminous surfaced roads, the Contractor shall cut the existing pavement layers back to form 150 mm minimum stepped joints, or the width as indicated on the drawings. Measurement and payment will be made as specified under Pay Item B34.14 in this Section 3400 of the Specifications. Payment for cutting back will be made only once, after construction and acceptance of the base layer.

B3404 PROTECTION AND MAINTENANCE

Add the following new sub-clauses:

(a) Protection of Existing Services

The Contractor shall exercise the necessary care to prevent damage to known services during construction operations. Major excavating equipment and other plant shall not be operated in dangerously close proximity to these services. Where necessary, and where authorised by the Engineer, excavation in close proximity to these services shall be carefully carried out by means of suitable hand tools, excluding picks wherever their use could cause damage to the services. Services left exposed shall be suitably protected from damage and theft.

The exact position of manhole(s) or service chamber(s) shall be determined before reconstruction, rehabilitation, resurfacing or recycling of the pavement layers commences. The utmost care shall be taken when working around existing service frames and covers and the Contractor shall ensure that manholes and service chambers remain free of debris. Any damage done shall be repaired at the Contractor's expense.

(b) Raising or lowering of existing manholes and chambers

Where shown on the drawings or ordered by the Engineer, existing manhole chambers, chimneys, covers and frames shall be adjusted in level to suit the new surroundings. Demolition and breaking out shall be executed with care and only the minimum consistent with the requirements shall be removed. The Contractor shall exercise due care to ensure that debris does not fall into manholes and block them.

The Contractor shall make good, careless or excessive demolition at his own expense. New construction shall be in accordance with the drawings and the Specifications. The Contractor will be held responsible for the timely adjustment of all covers and frames in advance of surrounding construction whether they are indicated on the drawings or by the Engineer or not. No claims for delays arising from the failure of the Contractor to effect the necessary adjustments in good time will be allowed.

B 3406 QUALITY OF MATERIALS AND WORKMANSHIP

Replace the second paragraph with the following:

Test results and measurements shall be assessed in accordance with the provisions of section 8200.

B 3407 MEASUREMENT AND PAYMENT

Add the following to the first paragraph:

Rates tendered under section 3400 shall provide for all costs involved in furnishing, placing and compacting the different layers in restricted widths and cutting back into the existing road layers when the road widening is constructed. Measurement of the layers for payment shall be based on the authorized dimensions of the completed layers as shown on the drawings or ordered by the Engineer. Measurement and payment for cutting back into the existing road layers to form a stepped joint will be made as specified in B3403 (f) of these Specifications. Payment for cutting back will be made only once, after construction and acceptance of the base layer.

Amend the description to pay item 34.01 as follows :

Item	Unit
B 34.01 Pavement layers constructed from gravel from commercial sources (unlimited free-haul) (layer/type indicated).....	cubic meter (m ³)

The tendered rate for material obtained from commercial sources shall include full compensation for procuring, placing and compacting the material, including transporting the material over an unlimited free-haul distance and the protection and maintenance of the layer and conducting of control tests, all as specified.

Amend pay item 34.06 as follows:

Item	Unit
B34.06 Adding extra material as specified in subclause B3403(b)	
(b) Gravel subbase (G5 quality)	cubic meter (m ³)
(c) Gravel base (G4 quality)	cubic meter (m ³)
(f) Crusher Dust	cubic meter (m ³)

The unit of measurement shall be the cubic meter of material added (loose bulk volume) on the instruction of the Engineer.

The tendered rate shall include full compensation for procuring, transporting (unlimited free-haul) and spreading of the material.

Add the following new pay item:

Item	Unit
B 34.14 Formation of stepped joint between new and existing pavements	meter (m)

The unit of measurement shall be the linear meter length of full width joint provided for each carriageway or roadway measured along the surface of the base.

The rate tendered shall include full compensation for providing all tools, equipment, plant, labour and supervision to provide a stepped joint as specified, except that sawing of asphalt, trimming back and removal of existing surfacing shall be paid separately. The tendered rate shall also include full compensation for any handwork that might be necessary to form a neat joint in each of the layers such that the face of the joints in each layer is in the vertical plan, and for the protection of the trimmed joint during construction.

SECTION 3500: STABILISATION**B 3502 MATERIALS****(a) Chemical stabilizing agents**

Delete sub-clauses (ii) Ordinary Portland cement and (iii) Portland blast furnace cement and replace with the following :

Cement shall comply with the relevant requirements of SANS 50197-1 : Cement Part 1 : Compositions, specifications and conformity criteria for common cements.

The use of strength classes greater than 32.5 will not be permitted.

The actual application rate of the stabilizing agent used in any specific material or layer shall be determined by the Engineer.

On this contract CEM II 32.5 N cement shall be used for stabilization purposes.

B 3503 CHEMICAL STABILISATION**(a) Preparing the layer**

Add "and clause B3403 (a)" after "section 3200" in the first sentence.

(b) Applying the stabilizing agent

Add the following to the first paragraph:

Spreading of the chemical additive by means of a mechanical spreader will not be permitted.

(d) Mixing in the stabilizing agent

Add the following:

Where pavement layers are to be widened, no stabilizing agent may be spread or mixed beyond the required width. The Contractor will not be permitted to mix material for stabilization on adjacent asphalt surfacing unless he has obtained prior permission from the Engineer, in writing. Where the existing surfaces of the road may not be used for this purpose, the Contractor shall apply other approved methods of mixing.

Payment over and above payment for work in restricted areas will not be considered for additional overhaul or other costs arising from this manner of mixing or working.

(e) Watering

The Contractor's attention is drawn to the provisions of the third paragraph of this standard clause, especially the second sentence, which states:

"The moisture content of the material during compaction shall never exceed 75% of the saturation moisture content of the natural material without stabilizing agent"

This requirement will be rigorously enforced on site to reduce the occurrence and magnitude of shrinkage cracks.

(g) Finishing at junctions

Add the following:

Where existing and new work are joined (longitudinal joints and others), material shall be satisfactorily mixed and compacted without any permeable or loose patches.

(h) Curing the stabilized work

Add the following:

A tack coat shall be applied not earlier than 36 hours of completing the emulsion treated layer. The surface of the treated layer shall be kept moist until the application of the tack coat. No separate payment for curing shall be made and all costs involved in the above procedures (except for the tack coat) shall be included in the individual items. Traffic will be allowed onto the treated layer during the curing period."

(i) Construction limitations

Add the following:

No stabilization shall be done with falling air temperatures, when the air temperature falls to beneath 7°C, or during rising air temperatures, when the air temperature is beneath 3°C.

B 3508 STABILISATION WORK IN RESTRICTED AREAS

Add the following

No work in connection with the chemical stabilization of the pavement layers shall be classified as being work in restricted areas.

B 3509 QUALITY OF MATERIALS AND WORKMANSHIP

Replace the second paragraph with the following:

Test results and measurements shall be assessed in accordance with the provisions of section 8200.

Delete "(alternately clauses 8305 and 8307)" in the third paragraph:

SERIES 3000 : EARTHWORKS AND PAVEMENT LAYERS OF GRAVEL OR CRUSHED STONE

SECTION 3600: CRUSHED-STONE BASE

Add the following sub clause:

3602 MATERIALS

(e) Durability

The durability property of aggregates derived from the basic crystalline group shall be assessed by means of the Ethylene Glycol Durability Index. When tested in accordance with the method prescribed in B 8105(g) the Durability Index shall not exceed four. In addition, the 10% FACT value obtained after soaking in ethylene glycol for four days shall not be less than 50% of that obtained on the unsoaked sample.

Where any values are obtained that fall outside the above requirements, a detailed assessment of the quarry shall be undertaken together with a specialist mineralogical evaluation of both the coarse as well as fine fractions in order to assess the long-term durability properties of the material.

For Basic crystalline rocks, Arenaceous rocks, Argillaceous rocks and Diamictites the Durability Mill Index (DMI) shall be less than 125. For all other rock types the Durability Mill Index (DMI) shall not be more than 420, subject to the % passing the 0,425mm sieve not increasing by more than 8 percentage points during the Durability Mill test."

SECTION 3800 : BREAKING UP EXISTING PAVEMENT LAYERS**B3803 CLASSIFYING THE MATERIAL****(a) Existing bituminous material**

Amend second sentence as follows:

Where underlying unstabilised granular material is broken down or excavated together with bituminous material, the mixture will be classified as bituminous material for payment purposes.

B3805 CONSTRUCTION**(a) General**

Add the following:

The following procedure shall be followed where traffic has to be accommodated though the works:

If the material is to be milled out to a level exposing the underlying layer, the size of area milled out per shift shall be of such volume that it can be completely backfilled with material within that shift. All milled out sections shall be backfilled with asphalt material before the end of that shift, i.e. no excavated and milled-out sections shall be left open to the public traffic at the end of that shift unless agreed to by the engineer, in which case sufficiently safety measures shall be applied to enhance the safety of the travelling public.

Where the milling machine enters or exits the milled area, a vertical face shall be cut by sawing the in situ pavement layers. The cost shall be included in the rate for milling. The milling shall be carried out by a self-loading machine and shall proceed in a direction so that the hauling vehicle will enter and leave the work area in the same direction as the public traffic. No contra flow will be allowed.

The cost of all the necessary accommodation of traffic for pre-marking of the milled areas shall be included in the tendered rates under 15.01 and 15.10 of the Schedule of Quantities.

(c) Treatment of pavement excavation floor

Add the following:

Where applicable, the floor of the excavation shall be thoroughly cleaned for inspection by the engineer by means of a compressor prior to the application of the tack coat.

Add the following new sub-clauses after sub-clause 3805(c):

(d) Setting out and Control of Work

The Contractor shall establish his own reference and level beacons for the setting out and control of the works.

Where a layer or layers require to be excavated from the existing pavement over full or partial width, the limit of the work shall be clearly demarcated. The limit of work shall not be exceeded by the Contractor by more than 100 mm. Pavement layers broken down outside the specified limits shall be repaired by the Contractor at his own cost, to the satisfaction of the Engineer.

Prior to commencement of any milling or reconstruction work on the existing road, the Contractor shall prepare and deliver to the Engineer reference drawings showing the position of all road lane, edge and gore markings, service covers/frames and survey beacons/marks relative to reference markers placed on both sides of the carriageway. The maximum longitudinal spacing of reference markers shall be 100 meters on straights and 20 meters on curves.

Upon completion of this referencing work, the Contractor shall, at his own cost, take cross-sections at 20 meter intervals over the length of road to be reconstructed and submit the resulting grid of lane and edge levels and/or kerb/channel levels to the Engineer for his approval. The setting-out of the grid shall be agreed with the Engineer prior to the taking of the levels. The Contractor shall supply these levels at least 7 days before the reconstruction work is programmed to commence. The Engineer will take control measurements to determine the accuracy and adequacy of the cross-sections, and may instruct the Contractor to correct any faulty work and to take such additional measurements and cross-sections as may be deemed necessary by him. The Engineer will then determine and finalize the design levels for the section of roadway to be reconstructed and instruct the Contractor accordingly.

At least 48 hours before reconstruction work is programmed to commence on any inner lane of the carriageway, the Contractor shall, at his own cost, take levels at 20 meter intervals over the length of road to be reconstructed and submit the resulting lane edge levels and lane levels to the Engineer for his approval. The Engineer will check these levels against the previously accepted shoulder lane and edge levels determine and finalize the design levels for the inner lane and instruct the Contractor accordingly.

All survey work will not be measured and paid for directly and compensation for all work involved in survey associated with reference and level control of the works will be deemed to be covered by the rates tendered and paid for the various items of work included in the Contract.

(e) Operational Limitations

The Contractor shall arrange his milling, excavating and reconstruction of existing pavement layer operations to minimize the disruption of public traffic. Every effort shall be made to ensure the safety of the travelling public on existing roads through the site of the works at all times. Milling, excavating and reconstruction operations shall be carefully planned and executed in accordance with the following limitations:

- (a) Individual work areas shall be clearly demarcated with traffic signs, delineators and traffic control facilities as specified.
- (b) Within individual working areas, the Contractor shall make adequate provision for drainage of milled, excavated and/or asphalt overlay areas where water can pond or be contained against a difference in depth on the roadway. No separate payment will be made for the provision and use of standby pumps and dewatering equipment or cutting of drainage slots and/or channels to effectively drain the roadway surface where instructed by the Engineer in the interests of safety for the travelling public. The Contractor shall make due allowance for this drainage in this tendered rates.
- (c) Delineators shall be placed along each longitudinal step exceeding 20 mm between adjacent lanes of the roadway.
- (d) The maximum allowable step within a lane open to traffic shall be restricted to 20 mm. If, due to plant breakdown or other unforeseen circumstances, a longitudinal or transverse step higher than 20 mm occurs within a lane, the strip shall be feathered off, by means of a compacted wedge over a distance of 7,5 times the height of the step.
- (e) Milling over the full width of a road work section ahead of the asphalt surfacing replacement operation will be permitted. However it is a specific requirement of this Contract that the Contractor shall complete the asphalt surfacing replacement operation on the next working day following the completion of the milling operation for an entire road work section.
- (f) The maximum length of longitudinal step left open to traffic shall be limited to 500 meters.
- (g) Prior to opening a lane of the roadway to traffic at the end of the shift, the longitudinal taper between the section being worked and the surface at the ends of the work area section shall not exceed a gradient of 1:100 relative to the general grade of the road.
- (h) Temporary road marking shall be placed on milled, excavated or reconstructed surface areas as specified or directed by the Engineer prior to opening to traffic.
- (i) After completion of the work all equipment tools and unused material shall be removed from work area. All waste materials and rubbish shall be collected and disposed of to the satisfaction of the Engineer.

(g) Protection and Maintenance

Clause 4212 and sub-clause 2304(j) of the Specifications shall apply.

Where shown on the drawings or ordered by the Engineer, existing covers and frames shall be removed and the opening lowered and protected by covering with steel plates and patch mix during the milling of asphalt surfacing. The frames and covers shall be replaced and adjusted in level to suit the new surroundings. Demolition and breaking out shall be executed with care and only the minimum consistent with the requirements shall be removed. The Contractor shall exercise due care to ensure that debris does not fall into manholes and block them.

The Contractor shall make good, careless or excessive demolition at his own expense. New construction shall be in accordance with the drawings and the Specifications. The Contractor will be held responsible for the timely adjustment of all covers and frames in advance of surrounding construction whether they are indicated on the drawings or by the Engineer or not. No claims for delays arising from the failure of the Contractor to effect the necessary adjustments in good time will be allowed.

Bridge nosings, bridge joints and neoprene seals shall be protected by covering with steel plates during the breaking up or milling of asphalt layers adjacent to bridge joints.

The steel plates shall be held firmly in place during these operations and shall only be removed when construction has been completed.

(h) Weather Limitations

Clause 4205 of the Specifications shall apply.

Milling operations shall not commence if any of the weather limitations pertaining to asphalt (see Clause 4205 of the Specifications) is present or likely to be present before the asphalt can be laid.

B3807 MEASUREMENT AND PAYMENT

(d) Items of payment

Amend pay item 38.01 as follows:

Item	Unit
B 38.01 Excavating and removing existing bituminous material (except milled material)	
(i) Not exceeding 30 mm	square meter (m ²)
(ii) Exceeding 30 mm but not exceeding 60 mm	square meter (m ²)
(iii) Exceeding 60 mm but not exceeding 100 mm	square meter (m ²)
(iv) Exceeding 100 mm	square meter (m ²)

Replace 'free-haul distance of 1.0 km' with 'free-haul distance of 5.0 km'

Amend pay item 38.02 as follows:

Item	Unit
B 38.02.01 Milling out existing bituminous and granular material with an average milling depth:	
(a) Not exceeding 30 mm.....	cubic meter (m ³)
(b) Exceeding 30 mm but not exceeding 60 mm.....	cubic meter (m ³)
(c) Exceeding 60 mm but not exceeding 100 mm	cubic meter (m ³)
(d) Exceeding 100 mm but not exceeding 150 mm	cubic meter (m ³)
(e) Exceeding 150 mm	cubic meter (m ³)
B 38.02.02 Milling out existing bituminous and granular material with an average milling depth (for layer deconstruction):	
(a) Bituminous Material not exceeding 50 mm.....	cubic meter (m ³)
(b) Bituminous Material exceeding 50 mm, not exceeding 100 mm....	cubic meter (m ³)
(c) Bituminous material exceeding 100 mm	cubic meter (m ³)
(d) Granular Material not exceeding 150 mm	cubic meter (m ³)

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- (e) Granular Material exceeding 150 mm, not exceeding 300 mm..... cubic meter (m³)
- (f) Granular Material exceeding 300 mm..... cubic meter (m³)
- (g) Macadam Material not exceeding 150 mm..... cubic meter (m³)
- (h) Macadam Material exceeding 150 mm, not exceeding 300 mm.... cubic meter (m³)
- (i) Macadam Material exceeding 300 mm..... cubic meter (m³)

B 38.02.03 Milling out existing bituminous and pavement layers with an average milling depth (for patching):

- (a) Not exceeding 30 mm cubic meter (m³)
- (b) Exceeding 30 mm but not exceeding 60 mm cubic meter (m³)
- (c) Exceeding 60 mm but not exceeding 100mm cubic meter (m³)
- (d) Exceeding 100 mm but not exceeding 150mm cubic meter (m³)
- (e) Exceeding 150 mm cubic meter (m³)

A patch will be defined as in B3901

A patch shall be any milled area having the lesser of a length not exceeding 150 meters or an area not exceeding 500m². Therefore, any milled area that has a length exceeding 150m or an area exceeding 500m² shall not be measured under patching.

All associated handwork as well as cutting and squaring of joints (including around service covers) must be included.

The volume for each patch will be measured individually and the total volume of patches with an area of 100m² or less will be summed or accumulated and measured under item 1 and volumes for patches with an area exceeding 100m² will be summed or accumulated and measured under item 2.

Replace the first paragraph of the measurement and payment description by the following:

The unit of measurement shall be the cubic meter of milled material removed off the site either to designated Council sites or to spoil, calculated in accordance with the authorized dimensions of the excavation.

Replace the third paragraph of the measurement and payment description by the following

The tendered rate shall also include full compensation for milling out the required overlaps between adjacent lanes as shown on the drawings, as well as loading, transporting and unloading the milled out material to approved commercial spoil dump sites provided by the Contractor off the site of the Works or Council stockpile sites within a free-haul distance of 5 km. The rate shall include all haul to the dump sites.

Amend pay Item 38.04 as follows:

Item	Unit
B38.04 Excavating and spoiling material from an existing pavement and/or the underlying fill:	

Replace 'free-haul distance of 1.0 km' with 'free-haul distance of 5.0 km'

Item	Unit
B38.14 Providing the milling machine on the site	

Replace Item 38.14 with the following:

Payment for the establishment of milling machines on the site is included in Section 1300 and hence this item will not be duplicated in this Section 3800.

However with regard to the establishment of milling machines on the site, the following aspects should be noted:

The tendered lump sum shall include full compensation for the provision of any number of milling machine(s) on the site, any movements on site during construction and the subsequent removal thereof from site, including any additional plant for carrying out milling operations.

This work will be paid for by way of a lump sum, 75% of which will become payable when all the equipment is on site and the first section of roadway has been milled. The remaining 25% will become payable after all the milling work has been completed and the equipment has been removed from the site.

Payment will not distinguish between the number or capacity of milling machines provided on the site simultaneously or the number of internal movements on site during construction or the number of times a milling machine is brought onto and/or removed from the site or as a replacement for defective plant. *Add the following pay items:*

Item	Unit
B38.16 Cleaning and preparation of milled areas	square meter (m ²)

The unit of measurement shall be the square meter of milled area satisfactorily cleaned and treated to the satisfaction of the Engineer. The quantity will be calculated in accordance with the authorized dimensions of milled area cleaned and treated.

The tendered rate shall include full compensation for provision of all equipment, hand tools, labour, loading, transport and disposal of material and everything necessary to clean the surface to the satisfaction of the Engineer.

Item	Unit
B38.17 Cutting of wedge-shaped longitudinal and/or transverse key(s) irrespective of length and surface	cubic meter (m ³)

The unit of measurement shall be the cubic meter of asphalt milled out.

The tendered rate shall include full compensation for providing milling equipment and milling out the material to the specified cross-sectional profile and in accordance with the requirements for evenness and for all measurements, labour, supervision and incidentals for executing the work.

SECTION 3900: PATCHING AND REPAIRING EDGE BREAKS**B3901 SCOPE**

Delete the first and second paragraphs and replace with the following:

This section covers the patching of existing pavement layers as well as patching of the existing bituminous surfacing. Patching shall be any work to existing pavement layers and surfacing with the purpose of repairing local failures. It also covers the saw cutting of the existing pavement layers for the purposes of patching.

A patch shall be any milled area having the lesser of a length not exceeding 150 meters or an area not exceeding 500m². Therefore any milled area that has a length exceeding 150m or an area exceeding 500m² shall not be measured under patching.

All associated handwork as well as cutting and squaring of joints (including around service covers) must be included.

B3902 MATERIALS

Add the following sub-clause:

(a) Excavations for patching

Excavations shall be backfilled with cement stabilized gravel base or asphalt base or surfacing as instructed by the Engineer.

All the requirements of Section 4200: Asphalt Base and Surfacing, shall apply to the asphalt material. The asphalt surfacing shall be a medium continuously graded mixture where the thickness is 40mm and less and a coarse continuously graded mixture where the thickness is more than 40mm.

The stabilized recycled material shall be compacted to 98% of modified AASHTO density and shall achieve a minimum unconfined compressive strength of 1200 kPa at 97% of modified AASHTO density.

B3903 PLANT AND EQUIPMENT

Add the following:

A sawing machine shall be provided on site before any excavation of patches shall commence. It shall be power driven and able to cut accurately to the required depths and alignment. Skilled operators are required for operating the sawing machines. Operators shall be equipped with suitable safety equipment, e.g. safety goggles, etc. for operating the sawing machines. No payment shall be made for standing time of the sawing machine.

B3904 PATCHING**(a) Demarcation**

Add the following:

Before saw cutting may commence, the cut line shall be accurately pre-marked to the specified dimensions.

(c) Excavating pavement material

Add the following:

Saw cutting shall be undertaken within the following dimension tolerances:

Horizontally: The maximum deviation from the specified line shall not be more than 10mm. Vertically: The cut depth shall never be less than the specified depth.

In the event of the edge of a surfacing layer which was mechanically sawn being damaged by constructive activities, the contractor shall at his own cost make good such damaged edges until the specified tolerances are met.

B3906 QUALITY OF MATERIALS AND WORKMANSHIP

Add the following:

The surface regularity of completed asphalt patches shall be measured with a 3.0m straight-end in accordance with sub-clause 8111(b) and no irregularity may exceed a value of 6mm.

B3907 MEASUREMENT AND PAYMENT**B39.02 Excavation in existing pavements for patching in:**

Amend paragraph two as follows:

"spoiling of material in the stockpiles where ordered by the Engineer, including haul over a free-haul distance of 5 km,"

B39.03 Backfilling of excavations for patching with:

Amend the following pay item as follows:

- (b) Base material (G3 quality) compacted to 98% of modified AASHTO density (300mm layer) for a patch with surface area:

Add the following:

Item	Unit
(c) Existing subgrade (specify layer thickness and required compaction)	cubic meter (m ³)

Add the following pay items:

Item	Unit
B39.06 Spoiling excavated pavement material not required for backfilling ...	cubic meter (m ³)

The unit of measurement shall be the cubic meter of material excavated from the existing pavement and removed to spoil dumps.

The tendered rate shall include full compensation for loading, transporting for a free-haul distance of 5 km, off-loading and placing the material in approved spoil dumps.

Item	Unit
B39.07 Application of waterproofing sealant to asphalt patches ('Colaseal' or similar approved)	liter (l)

The unit of measurement shall be the liter of waterproofing sealant ('Colaseal' or similar approved) applied as specified.

The tendered rate shall include full compensation for cleaning and preparing the surface, for furnishing the material, applying the sealant and for all other incidentals necessary for completing the work as specified.

SECTION 4100 : ASPHALT PAVEMENTS AND SEALS**B41.01 MEASUREMENT AND PAYMENT***Add the following pay item:*

Item	Unit
41.01 (f) Emulsion Prime	liter (l)

SECTION 4200 : ASPHALT BASE AND SURFACING**B 4201 SCOPE**

Amend the words "asphalt bases and surfacing" in the first sentence of sub-clause (a) to read "asphalt bases, surfacing, overlays and levelling courses".

B 4202 MATERIALS**(a) Bituminous binders****(i) Conventional binders**

Add the following to sub-clause 4202(a)(i) of the Specifications :

The grade of bitumen binder to be used on this contract for asphalt surfacing and asphalt base shall be 50/70 penetration grade bitumen, unless otherwise specified.

The tack coat shall consist of a 30% spray grade emulsion (anionic / cationic).

(ii) Non-homogeneous (heterogeneous) modified binders

Replace the last sentence with the following:

The bitumen-rubber binder shall be manufactured according to the guidelines contained in "Technical Guideline: The use of Modified Bituminous Binders in Road Construction (TG 1-2007): Asphalt Academy"

(2) Rubber

Delete "Table 4202/1" in the last sentence and replace with "Table B4202/1".

TABLE B4202/1: REQUIREMENTS FOR RUBBER CRUMBS

Sieve Analysis		Test Method
Sieve size (mm)	% Passing by mass	
1,18 0,600 0,075	100 40-70 0-5	MB-4(*1)
Other requirements	Limits	Test Method
Natural rubber hydrocarbon content (%)	30 min	BS 903 Parts B11 & B12
Fibre length (mm)	6 max	
Bulk Density (gm/cm ³)	1,10 – 1,25	MB 16

(3) Extender oil

Delete "Table 4202/2" in the first sentence and replace with "Table B4202/2"

TABLE B4202/2: REQUIREMENTS FOR EXTENDER OIL

Property	Limits
Flash Point	180°C (min)
Percentage by mass of saturated hydrocarbons	25% (max)
Percentage by mass of aromatic unsaturated hydrocarbons	55% (min)

(4) Bitumen rubber blend

Delete "Table 4202/3" in the second paragraph and replace with "Table B4202/3"

TABLE B4202/3: BITUMEN-RUBBER COMPOSITIONAL AND BLENDING LIMITS

Property	Limits
Percentage of rubber by mass of total blend	20-24
Percentage of extender oil by mass of total blend	4(max)
Percentage of diluent/cutter by mass of total blend	5 (max) (*1)
Blending/reaction temperature	170°C – 210°C
Reaction time (reaction time commences when all the rubber crumbs have been added to the	0,5 – 4,0 hours (*2)

Delete "Table 4202/4" in the second last paragraph and replace with "Table B4202/4":

TABLE B4202/4: PROPERTIES OF BITUMEN-RUBBER FOR USE IN ASPHALT

Property	Unit	Test Method	Binder Class A-R1
Compression Recovery: 5 minutes	%	MB-11	>80
Compression recovery: 1 hour	%	MB-11	>70
Softening point (R&B) ¹	°C	MB-17	55 - 65
Resilience @ 25°C	%	MB-10	13-40
Flow	Mm	MB-12	10 -50
Dynamic Visc. (Haake @ 190°C)	DPa.s	MB-13	20 - 50

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. For referencing purposes no stirrers should be used.

(iii) Homogeneous modified binders

Replace the last sentence with:

The modified binder to be used on this project shall be:

Polymer modified binders:

- (1) A-E1 modified bitumen (SBS modified binder)
- (2) A-E2 modified bitumen (SBS modified binder)
- (3) A-P1 modified bitumen (EVA modified binder)

Hydrocarbon modified binders

- (4) A-H1 modified bitumen
- (5) A-H2 modified bitumen (FT-Wax modified binder)

The homogeneous modified binder shall be manufactured according to the guidelines contained in "Technical Guideline: The use of Modified Bituminous Binders in Road Construction (TG 1-2007): Asphalt Academy". The base bitumen shall conform to SABS 307, or a blend of SABS 307 grades. The type as well as percentage of modifier is not prescribed, however the contractor shall indicate in the Pricing Schedule what polymer he shall be using. The properties of the homogeneous modified binder shall comply with the relevant requirements for binder classes as listed in Table B4202/12 and Table B4202/13 below.

TABLE B4202/12: PROPERTIES OF POLYMER-MODIFIED BINDER FOR HOT-MIX ASPHALT

Property	Unit	Test Method	Binder Class		
			A-E1	A-E2	A-P1
Softening Point ¹	°C	MB-17	55-65	65-85	63-73
Dynamic Viscosity@165°C	Pa.s	MB-18	≤0.6	≤0.6	≤0.55
Force Ductility @ 5°C	N	EN 13703	Report ³	Report ³	Report ³
Elastic Recovery @ 15°C	%	MB-4	>50	>60	>30

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Property	Unit	Test Method	Binder Class		
			A-E1	A-E2	A-P1
Torsional Recovery @ 25°C	%	MB-5	Report	Report	Report
Storage Stab @ 160°C)	°C	MB-6	≤5	≤5	≤5
Flash Point	°C	ASTM: D93	≥230	≥230	≥230
Complex shear modulus: G*Sin δ @10 rad/s	°C	AASHTO:TP5	Report	Report	Report
Creep Stiffness	MPa	AASHTO:TP1	Report	Report	Report
Properties after ageing (RTFOT)			MB-3		
Diff in Softening Point	°C	MB-17	-2 to +8	-2 to +8	-2 to +8
Elastic Recovery @ 15°C	%	MB-4	>40	>50	Report ²
Mass change	%	MB-3	≤1.0	≤1.0	≤1.0
Torsional Recovery @ 25°C	%	MB-5	Report	Report	Report
Dynamic Viscosity @ 165°C	Pa.s	MB-18	Report ²	Report ²	Report ²

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. For referencing purposes no stirrers should be used.
2. No limits are given, and the values should be recorded for reporting purposes only as they may be used in future specifications.
3. No values given but the test can be used to rank various binders according to their low temperature cohesion properties

TABLE B4202/13: PROPERTIES OF HYDROCARBON MODIFIED BINDER FOR HOT MIX ASPHALT

ASTM D5

Property	Unit	Test Method	Class	
Before Ageing			A-H1	A-H2
Softening Point ¹	°C	MB-17	55-70	70-90
Penetration @25°C	dmm	ASTM D5	20-35	Report ²
Force ductility @ 5°C	N	EN 13703	Report ³	Report ³
Dynamic viscosity @165°C	Pa.s	MB-18	≤ 0.80	≤0.30
Storage stability @160°C	°C	MB-6	≤ 5	≤ 5
Flash Point	°C	ASTM D93	≥ 230	≥ 230
After Ageing (RTFOT)				
Mass change	%	MB-3	≤ 1.0	≤1.0
Difference in Softening point	°C	MB-17	-2 to +8	-2 to +8
Retained penetration (% of original)	%	ASTM D5	>60	Report ²
Dynamic viscosity @165°C	%	MB-18	Report ²	Report ² t

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. For referencing purposes no stirrers should be used.
2. No limits are given and the values should be recorded for reporting purposes only as they may be used in future specifications
3. No values given but the test can be used to rank various binders according to their low temperature cohesion properties

(b) Aggregates

Add the following:

Asphalt mixes shall be manufactured using different individual single size coarse aggregates fractions and crushed fine aggregates blended to conform to the specified grading requirements.

The use of crushed stone base (crusher-run) material shall not be permitted. The use of natural sand will not be permitted.

The Engineer may request reconsideration of a blend to achieve any grading within the given envelope to improve certain properties.

(v) Absorption

Add the following sentence:

In addition, the total binder absorption of the combined coarse and fine aggregate blend shall not exceed 0,5%.

(viii) Grading

*Delete the second paragraph commencing with "The target grading..." and add the following paragraphs **

The grading limits for the combined aggregate grading for the asphalt base shall be as specified in table 4202/6: Continuously graded -28mm maximum.

The grading limits for the combined aggregate grading for the asphalt surfacing shall be as specified in table 4202/7: Continuously graded - medium grade.

Amend Table 4202/6 to read:

TABLE B4202/6: GRADING LIMITS FOR COMBINED AGGREGATE AND MIX PROPORTIONS FOR ASPHALT BASE.

	Sieve size (mm)	Continuously Graded	
		28mm Max (COLTO TYPE)	28mm Max (CCC TYPE)
% passing through sieve by mass	28	100	100
	20	87 - 96	85 - 100
	14	73 - 85	73 - 91
	10	64 - 79	
	7		
	5	43 - 61	43 - 64
	2	28 - 44	27 - 45
	1	20 - 35	
	0,6	15 - 30	16 - 31
	0,3	11 - 24	
	0,15	8 - 19	8 - 21
	0,075	5 - 12	5 - 16
Mix proportions by mass	Aggregate	94,5%	94,75%
	Bitumen	4,5%	4,25%

The nominal mix proportion (by mass) of the asphalt surfacing mixtures shall conform to the continuously graded medium mix as set out in Table B4202/7.

Amend the following in Table 4202/7 :

TABLE B4202: GRADING LIMITS FOR COMBINED AGGREGATE AND MIX PROPORTIONS FOR ASPHALT SURFACING.

CONTINUOUSLY GRADED		
	MEDIUM (CCC TYPE)	MEDIUM (COLTO TYPE)
Sieve	Percentage Passing	Percentage Passing
Size (mm)	(by mass)	(by mass)
14	100	100
10	83 - 91	84 - 100
7	71 - 79	
5	60 - 68	56 - 77
2	37 - 43	33 - 48
1	28 - 34	25 - 40
0,60	21 - 27	18 - 32
0,30	13 - 17	11 - 23
0,15	7 - 11	7 - 16
0,075	5,8 - 7,8	4 - 10
NOMINAL MIX PROPORTIONS BY MASS		
Aggregate	94,2%	93,5
Binder	4,8%	5,5
Active Filler (hydrated lime)	1,0%	1,0

TABLE B4202/7A: GRADING LIMITS FOR COMBINED AGGREGATE AND MIX PROPORTIONS FOR 10mm RESIDENTIAL TYPE ASPHALT SURFACING.

10mm RESIDENTIAL TYPE		
14 mm Max.		
Percentage passing through sieve by mass	Sieve Size (mm)	Percentage Passing (by mass)
	14	100
	10	84 - 100
	7	67 - 88
	5	55 - 76
	2	35 - 52
	1	24 - 39
	0,60	18 - 32
	0,30	11 - 23
	0,15	7 - 16
	0,075	4 - 10
Nominal by mass	Aggregate	93,4%
	Binder	5,6%
	Active Filler (hydrated lime)	1,0%

Amend table 4202/8 to read.

TABLE B4202/8: GRADING LIMITS FOR COMBINED AGGREGATE AND MIX PROPORTIONS FOR NON-HOMOGENEOUS MODIFIED BINDERS (BITUMEN –RUBBER) CONTINUOUSLY GRADED ASPHALT SURFACING

CONTINUOUSLY GRADED		
14 mm Max.		
Percentage passing through sieve by mass	Sieve Size (mm)	Percentage Passing (by mass)
	14	100
	10	83 - 100
	5	53 - 72
	2	30 - 47
	1	-
	0,60	13 - 25
	0,30	8 - 18
	0,15	-
	0,075	4 - 8
Nominal mix	Aggregate	92,0%
	Modified binder (A-R1)	7,0%
	Active Filler (Cement)	1,0%

(c) Fillers

Add the following:

All asphalt surfacing mixes specified for use in the works, shall contain at least 1% by mass of hydrated lime filler except for A-R1 (bitumen rubber) modified asphalt surfacing which shall contain 1% cement filler. Asphalt base mixes shall not contain active filler.”

(e) Asphalt reinforcing

Delete entire sub-clause and replace with the following:

(i) Description

The work shall consist of supplying and placing an approved glass fibre grid for the purpose of reinforcing the asphalt surfacing layer.

(ii) Materials

Glass fibre grid

The glass fibre grid used with this specification shall be constructed of fiberglass reinforcement coated with an elastomeric polymer and a pressure sensitive adhesive backing. The material shall furthermore be resistant to chemical attack (from flux oils, paraffins or any other solvents used in bituminous binders), UV attack, mildews, and rot; and shall meet the physical requirements listed in the table below:

TYPE CHARACTERISTICS	UNIT	GLASGRID VALUES		SEALGRID VALUES
Tensile Strength (across width)	kN/m	50	100	50
Tensile Strength (across length)	kN/m	50	100	50
Elongation at break (maximum)	%	< 5%	< 5%	< 3%
Minimum melting point	°C	218	218	265
Mass per unit area	g/m ²	185	370	185
Roll width	m	1.5	1.5	2.45
Grid size	mm x	25 x 25	12.5 x 12.5	50 x 50

(iii) Installation procedure

Surface preparation

The prepared base on which the glass fibre grid is to be placed shall be free of loose soil, dust, water, organic material or other deleterious substances. Sweeping shall be carried out with a mechanical broom.

Product preparation

In order to preserve its adhesive properties, the material must be stored inside a dust-free environment and kept dry at the job site.

Test for proper adhesion

- 5 Cut 1m² of glass fibre grid.
- 6 Place on area to be paved (after application of tack coat).
- 7 Activate self-adhesive glue by rolling with a rubber tired roller or by walking on the sample.
- 8 Insert hook of spring balance under centre of glass fibre grid.
- 9 Pull upwards until grid starts to pull away from the surface.
- 10 Record results in kilogram.
- 11 If the pull-away force is greater than 2 kg paving can commence.
 - If the pull-away force is between 1 - 2 kg paving can commence but any movement or rippling of the grid shall result in the immediate abortion of the paving operation.
- 12 If the pull-away force is less than 1 kg no paving shall commence.

(iv) Placement of grid

Placement of the glass fibre grid shall be done in strict accordance with the manufacturer's specifications and to the satisfaction of the Engineer. The following points should be noted:

- 13 The grid shall only be placed after the tack coat has been applied to the recycled base.
- 14 Workers must wear gloves while handling the material.
- 15 The grid must be applied without ripples. Sufficient tension during application will eliminate this problem.
- 16 Activate self-adhesive glue by rolling with a rubber tired roller.
- 17 All transverse joints shall overlap by 300 mm. Overlaps must be shingled in the direction of paving.
- 18 All longitudinal joints shall overlap by 300 mm.
- 19 Prior to paving only construction vehicles shall be allowed to drive on the installed grid.
- 20 The glass fibre shall be placed a minimum of 30 minutes prior to the paving operation.

v) Weather limitations

The glass fibre grid shall not be placed when weather conditions, in the opinion of the Engineer, are unsuitable.

(h) General

Add the following after the second paragraph:

Aggregates used in the approved production mix shall only be taken from stockpiles that are sufficient in size for the production of a minimum of three days' work and shall have been tested for conformance and uniformity. The test results shall be presented to the Engineer."

Add the following new sub-clause:

(i) Importation of penetration grade bitumen

The Contractor shall inform the Engineer at least two (2) weeks before any shortage of bitumen develops of the circumstances surrounding the impending shortage; shall indicate the expected tonnage to be imported; shall demonstrate that every local source and facility has been or will be exhausted and shall obtain the Engineer's written permission to import SABS standard penetration grade bitumen.

A pay item (B 42.21) has been included in the Schedule of Quantities for the importation of bitumen on the written instruction of the Engineer to cover shortfalls of SABS standard penetration grade bitumen arising at the local refinery, local sources and facilities during this Contract.

B4203 COMPOSITION OF ASPHALT BASE AND SURFACING MIXTURES *In the first paragraph, third last line, after "or active filler content" add: "or aggregate content"*

Replace the fifth paragraph with the following:

The design of the asphalt mixes shall be in accordance with "Interim Guidelines for the Design of Hot- Mix Asphalt In South Africa (June 2001)", and appropriate research results. The mix properties and requirements shall be as specified in the project specifications"

The design of the asphalt surfacing mix shall be in accordance with the design criteria at 100% Marshall density (2 X 75 blows) given in the table below.

Mix design criteria which are given below will apply and the Contractor will be required to make special provision in his tender prices for ensuring that the asphalt will comply with this criteria and also for fine-tuning of the mix based on performance testing to be done by the commercial laboratories, on trial mixes Mix design proposals shall be finalized between the Contractor and the Engineer before commencement of rehabilitation and surfacing work;

The relevant asphalt mixes for the base and surfacing layers shall comply with the requirements in Table B4203/1

Replace Table 4203/1 with the following:

TABLE B4203/1: ASPHALT MIX REQUIREMENTS: BASE AND SURFACING

Property	Continuously graded base mixes	Continuously graded surfacing mixes	Residential / COLTO Fine surfacing mixes
Marshall Stability (kN)	8 – 18	8 – 18	8-18
Marshall Flow (mm)	2 – 6	2 – 6	2 - 6
Stability /Flow (kN/mm)	>2,5	> 2,5	>2,5
VMA (%)	> 14	> 15	>15
VFB (%)	65 – 75	65 – 75	65-75
Air voids (%)	4 – 6	4 – 6	3 - 5
Indirect tensile strength @ 25°C (kPa)	> 1000	> 1000	>800
Dynamic Creep Modules @ 40°C (MPa)	> 20	> 20	>15
Modified Lottmann @ 7% voids (TSR)	> 0,7	> 0, 8	>0,8
Air permeability @ 7% voids (cm ²)	< 1 x 10 –8	< 1 x 10 –8	<1x10 -8
Binder film thickness (microns)	5,5 – 8,0	5,5 – 8,0	5.5 – 8,0
Filler bitumen ratio	1 – 1,5	1 – 1,5	1-1,5
Immersion index (%)	>75	>75	>75
MMLS Rutting (100k repetitions, 93% Rice briquette, 50°C, 7200rep/hr.) (mm)	0 – 2.3	0 – 2.0	N/A
Voids in mix (300 gyrations of the Superpave Gyratory Compactor) (%)	>2,0	>2,5	N/A

Note :

The properties shall be tested and verified for the initial mix design for approval. Should the aggregates or binders change significantly through the duration of the contract the Engineer may request retesting of some of the properties to verify the ongoing compliance.

B 4204 PLANT AND EQUIPMENT

(a) General

Add the following:

Over and above the equipment normally used for asphalt surfacing, the following equipment will be necessary:

- (i) A mobile pneumatic pump or compressor capable of producing at least 3 m³ / minute at 750 kPa for cleaning out joints and patches.
- (ii) A vibratory roller having a mass approximately equal to that of a Bomag 905 or similar, with an adjustable amplitude and frequency of vibration.
- (iii) Special cutting tools and saws for cutting through surfacing.

All equipment shall be suitable for the specified use in working areas and capable of obtaining the specified results. All equipment used shall be in good working condition and operated by experienced personnel. Plant and vehicles used at the laying site shall be free from oil, fuel and hydraulic leaks. Any item of plant or vehicle showing signs of these leaks shall immediately be removed from site.

(b) Mixing plant

Add the following :

The asphalt shall be produced by an approved commercial supplier.

(c) Spreading Equipment

Add the following:

The Contractor shall use a self-propelled paver with leveling beams (6m minimum) and automatic screed control on both sides for the construction of the asphalt inlays and overlays.

(d) Rollers

(i) General Requirements

Add the following:

Paving teams for asphalt surfacing layers shall have at least three rollers of which one shall be an approved heavy vibratory roller and one an approved heavy pneumatic roller.

No heavy vibrating compaction equipment may be used on bridge decks. For bridge work, a suitable light roller with static and dynamic modes shall be used, with the latter capable of adjustable frequency and amplitude settings.

B4205 GENERAL LIMITATIONS AND REQUIREMENTS AND THE STORAGE OF MIXED MATERIALS

(c) Surface requirements

(iii) Tack coat

Add the following:

A tack coat consisting of 30% stable-grade bituminous emulsion(cationic) shall be applied at a nominal application rate of 0,55l/m² to the prepared surface to be paved.

A tack coat consisting of 60% stable-grade emulsion shall be applied to the exposed edges of the asphalt base and surfacing layers in milled-out excavations prior to placing abutting layers. The nominal application rate shall be 2,0l/m².

Where required, exposed bridge deck concrete and concrete channels (if required) are to be tacked with a 30% spray grade emulsion at 0.4 l/m² (no priming required).

Add the following new paragraph:

Hand spraying shall only be permitted on areas approved by the Engineer. The binder distributor shall be capable to apply the binder evenly over the full area. The equipment shall comply with clause 4103. Tack coat shall be applied to all transverse and longitudinal joints by hand utilizing a paint brush.

B4207 SPREADING THE MIXTURE

Add the following to sub-clause (a):

Special precautions shall be taken by the Contractor to ensure that the temperature of the total mass of asphalt does not decrease by more than 15°C from point of dispatch to the point where it is to be paved. The use of thermal blankets is obligatory at all times.

- The following paving restrictions will strictly apply:
- 21 No paver stops will be allowed for reversing supply trucks
 - 22 Paver speed to be regulated to prevent supply related stops where practically possible,
 - 23 Levelling skid-beams (6m length at least with free wire between ends) or wire guide system to be used on both sides of initial lane paved –joint matchers can only be used if agreed or instructed by the Engineer and on side matching completed layers
 - 24 Automatic auger feed control, which can keep the asphalt mount in-front of the screed constant, are required,
 - 25 No pneumatic rolling as breakdown rolling on the final surfacing layer.
 - 26 All applicable criteria and best practice guidelines as per the latest SABITA Manual 5

In the case of non-compliance herewith the Engineer's personnel shall stop the paving operations. No paving will be allowed until such time as adherence to the specifications has been met by the contractor. Asphalt paved after such instruction to stop paving shall be removed and re-executed.

B4208 JOINTS

Add the following to clause 4208 :

All asphalt joints shall be cut by a roller or milled back by a milling machine (minimum 150mm in 2 x roller wheel cuts) in a straight line to the satisfaction of the Engineer and in accordance with the joint detail drawings. Paving widths shall be full lane widths except where turning lanes or widening areas are encountered – refer to construction layout drawings.

No saw-cutting will be allowed on newly placed asphalt or any cut that will be paved against.

Whenever the paver stops for more than 10 minutes and/or the un-compacted material already laid cools down to below compaction temperature (100°C), a joint shall be constructed as specified and all cooled un-compacted materials removed from the road up to a position where the completed compacting effort stopped. All un-laid asphalt that has cooled to below the specified spreading temperature (120°C) shall be removed from the paver and from the site.

The cost of all such joint construction activities (temporary and permanently, transverse and longitudinal joints) is to be included into the relevant asphalt layer rates. Transverse joint to be similarly cut-back and treated as specified for the longitudinal joints. Temporary transverse joints to be rolled smooth as to the Engineer's satisfaction.

The cut edges of all asphalt joints shall receive a tack coat before the adjacent asphalt is placed against it. When applicable the Engineer will specify the special treatment of the asphalt layer joints in accordance with the details on the drawings with an approved bitumen emulsion.

Add the following new sub-clauses:

(a) Contractor's survey for tie-in to existing levels

On a contract of this nature involving the reconstruction of existing roads, it is inevitable that discrepancies will occur between existing levels and the proposed design levels. On any section of road where new surfacing or kerbing is required to tie in with existing levels, i.e. on road widening sections or at the tie-in of new work to existing work, the Contractor shall carry out sufficient level checks in order to ensure that the proposed levels are adequate. If there is a discrepancy, the Contractor shall submit to the Engineer cross-sections taken at ten meter intervals along the centre-line of the existing roadway.

The Contractor shall supply these levels at least two weeks before the tie-in work is programmed to commence so that the design levels can be checked and new levels provided if necessary.

(b) Excavation of existing asphalt surfacing

Where a section of existing roadway is to be widened with asphalt, the Contractor shall cut the existing surfacing with a mechanical saw along the line specified to a minimum depth of 35 mm. The existing asphalt shall be carefully removed, to a minimum width of 150 mm, so that the adjacent asphalt remains undisturbed and the bond between the asphalt and the base is not broken.

A bituminous tack coat shall be applied to the exposed surfaces of the base and asphalt in the excavation.

(c) Butt joints between overlays and existing asphalt surfacing

At the limits of overlay construction, where new asphalt overlay is tied into the existing surfacing, a section of existing asphalt shall be removed beyond the limit of construction, over the full road width and over a length of 3.0 m, unless otherwise instructed by the Engineer, to produce a smooth transition between the two surfaces. The asphalt joints shall be saw-cut vertically in a neat straight line and the asphalt shall be carefully removed. A wedge of asphalt backfill, tapering from zero thickness at the butt joint to full layer thickness at the other joint, shall first be placed and compacted in the excavation. The exposed surfaces of the asphalt and the base shall be tacked before the asphalt surfacing is placed.

Measurement and payment for sawing and removal of asphalt shall be covered in the relevant items in Section 3900. The asphalt wedge shall be measured and paid for under pay item 42.20.

(d) longitudinal and transverse steps

Where the difference in level between the new work and the existing road surface exceeds 25mm, joints shall be treated as follows:

Transverse steps at the end of a day's work shall be tapered off at a slope of 1 vertical to 20 horizontal (1:20) to tie in with the existing surface. The tapered section shall be removed before surfacing is recommenced and a joint formed in accordance with clause 4208 of the specification.

Longitudinal joints exposed to traffic shall be provided with a taper of compacted asphalt material over the full length of the exposed joint. The width of the taper shall be at least 5 times the difference in level between the old and new work.

The tapered section shall be removed before surfacing is recommenced and a joint formed in accordance with Clause 4208 of the specification. Cutting the joint and the removal of the asphalt tapers shall take place just prior to paving the adjacent area after closure to traffic.

All costs involved in the provision of, cutting the joint and removal of these temporary ramps shall be deemed to have been included in the rates tendered for the relevant asphalt pay item.

B 4210 COMPACTION

Replace the sixth paragraph with the following:

The sequence of rollers used in compaction is at the discretion of the Contractor provided the completed surfacing layers are compacted to a minimum of 93 percent of the theoretical maximum density, determined as described in TMH1, method C4 (Rice's density). The Contractor to take account of the fact that the work is mostly on bridge decks and that vibratory action rolling cannot be used (except where approved by Engineer). In addition, hereto the compaction immediately adjacent to joints shall be carried out to ensure densities of not less than 2% of those specified (above) in the rest of the layers (including all hot and cold joints). A combination of Calibrated thin layer Nuclear Gauge testing and Marvel permeability testing (both methods to be calibrated versus asphalt cores densities), will be used to access and approve joint densities before covering thereof with consecutive layers.

Replace subclause (e) with the following:

In restricted areas, or where services are located, and where the specified rollers cannot be used, compaction shall be carried out with hand operated mechanical compaction equipment or approved smaller vibratory rollers. The revised compaction procedure shall be predetermined and submitted to the Engineer for approval. No vibratory rollers to be used where services are located in close proximity ($\pm 3\text{m}$) from where work is being undertaken.

Note that for work on bridge decks vibratory rolling may only be used in areas cleared or approved in writing by the Engineer and Employer.

B 4213 CONSTRUCTION TOLERANCE AND FINISH REQUIREMENTS (a) Construction tolerances

Add the following:

The construction tolerances for an asphalt levelling course shall be as specified for an asphalt base.

(iii) Thickness

Replace with the following:

The thickness tolerance for asphalt base shall be as follows:

- 27 Average thickness less than specified minimum thickness = 0 mm
- 28 Average thickness greater than the specified minimum thickness = 10 mm

The thickness tolerance for asphalt surfacing shall be as follows:

- 29 Average thickness less than specified minimum thickness = 0 mm
- 30 Average thickness greater than the specified minimum thickness = 5 mm

Thicknesses shall be determined from carefully controlled levels taken before and after construction in exactly the same position and/or from cores drilled from the completed layer.

If the average thickness of a lot is greater than the specified minimum thickness plus the allowable tolerance, payment shall only be made for the maximum tolerance thickness. Any additional tonnage used shall be for the Contractor's account.

If the average thickness of a lot is less than the minimum specified thickness the lot shall be rejected and shall be replaced or repaired with approved remedial actions. The Engineer and Employer reserve the right to reject such proposed remedial actions which are deemed to be unsatisfactory and request that the asphalt be removed and replaced to the correct thickness.

Add the following new sub-clause:

(viii) Surface regularity at manholes and transverse joints

The maximum value of any irregularity when measured with a 3 m meter straight edge in any direction across any manhole cover, bellto by, valve chamber or any service access point in the road and when measured across a transverse joint shall be 4 mm.

(c) Grading

Amend the table 4213/1 as follows:

The permissible deviation from the approved target grading for the continuously graded asphalt base and surfacing for the 0,075 mm sieve is $\pm 2\%$.

(d) Binder content

Delete "or clause 8305" at the end of the first paragraph.

(e) Voids

Replace this sub-clause with the following:

The void content shall not deviate from the approved design void content by more than 1%.

(f) Construction tolerances for overlays

Replace the 4th paragraph in sub-clause 4213 (f) (iii) with the following:

The maximum thickness shall be the specified nominal thickness + 10 mm, except in areas where localized surface depressions exceed this amount.

B 4214 QUALITY OF MATERIALS AND WORKMANSHIP

Add the following:

The Engineer reserves the right to withhold payment for asphalt work until all test results for the section of work concerned have been received and the work is fully approved."

Tests results and measurements shall be assessed in accordance with Quality Control Scheme 1 of Section 8200.

(b) Coring of asphalt layers

Add the following after the last paragraph:

Cores may only be drilled when the road temperature is 20°C or less. Core holes must be tacked, dried out and backfilled immediately with hot mix asphalt. Coring shall be carried out within 48 hours after the paving has been completed. The process control core test results and material testing results shall be submitted to the Engineer within 72 hours after coring and sampling respectively.

(c) Routine inspection and tests

Add the following paragraph:

The contractor shall keep accurate records of:

- (i) The position where every truckload of asphalt is paved (chainage, lane, time and date).
- (ii) The temperatures of the asphalt in the trucks both at the mixing plant and at the paving equipment immediately prior to discharging the load.
- (v) The truck and load number from which control samples are taken. All samples taken shall be appropriately numbered."

Add the following new sub-clauses:

(d) Minimum testing frequency

The Contractor shall ensure that the following tests are carried out at frequencies at least equal to those specified below:

Test	Minimum Frequency
Stability and flow (TMH 1, method C2)	1 per 50 t
Voids (TMH 1, method C3)	1 per 50 t
Maximum theoretical density (TMH 1, method C4)	1 per 50 t
Binder content and grading (TMH 1, method C7)	1 per 20 t
Density of paved asphalt (cores)	1 per 20 t

(e) Process Control

The Contractor shall keep full records of where every truck load of mixture is laid (distance, lane, time and date) and he shall also record the truck number from which control samples are taken as well as the sample number and the temperature of the asphalt in the truck at the plant and at the paver, and make the information available to the Engineer.

The Contractor shall make use of an approved, calibrated thin layer nuclear density apparatus to monitor the degree of compaction of the asphalt layer during paving operations. Test results shall be supplied to the Engineer within 24 hours of testing.

(f) Special tests

n-Heptane-Xylene Equivalent (Spot test) (AASHTO-T102)

If the Engineer suspects that bitumen or asphalt has been overheated, he may order that the bitumen, or the bitumen recovered from the asphalt, be subjected to the Spot Test. Recovery of binder for use in the Spot Test shall be carried out according to an approved method.

Any bitumen having an n-Heptane-Xylene equivalent in excess of 36, or in excess of the manufacturers test result on the dispatched stock, shall be considered to have been overheated and shall be deemed to be rejected unless proven otherwise.

B4215 MEASUREMENT AND PAYMENT

Amend Item 42.01 as follows:

For the purposes of this tender, payment item 42.01 shall be subdivided into the following work types stating the application method, thickness and type of bitumen:

Item	Unit
42.01.01 Asphalt base - hand applied (50/70 bitumen, 28mm max. stone)	ton (t)
42.01.02 Asphalt base - hand applied (A-H2, 28mm max. stone)	ton (t)
42.01.03 Asphalt base machine applied (50/70 bitumen; 28mm max. aggregate)	ton (t)
42.01.04 Asphalt base machine applied (A-H2 modified bitumen)	ton (t)
42.01.05 Asphalt base machine applied (A-E2 modified bitumen)	ton (t)
42.01.06 Asphalt base machine applied (A-P1 modified bitumen)	ton (t)

The unit of measurement shall be the ton of asphalt base as specified on the written instruction of the Engineer.

For the purpose of the tender the rate for hand application shall include full compensation for procuring and providing all materials, all mixing, placing by hand, spreading using hand tools, compacting and finishing as specified, for all transport, machinery, equipment, labour, supervision and other incidentals for executing the work complete as specified.

For the purpose of this tender the rate for machine application shall include full compensation for procuring and providing all materials all mixing, placing by machine, spreading, compacting and finishing as specified, for all transport, machinery, equipment, labour, supervision and other incidentals for executing the work complete as specified.

Amend Item 42.02 as follows

For the purposes of this tender, payment item 42.02 shall be subdivided into the following work types stating the application method, thickness and type of bitumen:

Item	Unit
42.02.01 Asphalt surfacing - hand applied (50/70 bitumen)	ton (t)
42.02.02 Asphalt surfacing machine applied (35/50 bitumen)	ton (t)
42.02.03 Asphalt surfacing machine applied (50/70 bitumen)	ton (t)
42.02.04 Asphalt surfacing machine applied (A-E2 modified bitumen)	ton (t)
42.02.05 Asphalt surfacing machine applied (A-P1 modified bitumen)	ton (t)
42.02.06 Asphalt surfacing machine applied (A-H2 modified bitumen)	ton (t)
42.02.07 Asphalt surfacing machine applied (A-R1 modified bitumen)	ton (t)

The unit of measurement shall be the ton of asphalt base as specified on the written instruction of the Engineer.

For the purpose of the tender the rate for hand application shall include full compensation for procuring and providing all materials, all mixing, placing by hand, spreading using hand tools, compacting and finishing as specified, for all transport, machinery, equipment, labour, supervision and other incidentals for executing the work complete as specified.

For the purpose of this tender the rate for machine application shall include full compensation for procuring and providing all materials all mixing, placing by machine, spreading, compacting and finishing as specified, for all transport, machinery, equipment, labour, supervision and other incidentals for executing the work complete as specified.

Add the following payment item:

B42.02.08 Residential Mix (50/70 bitumen)

- (i) 10mm residential type hot mix asphalt surfacing (nominal 5.5% bitumen)
- (1) 25mm minimum thickness
- (2) 30mm minimum thickness

The unit of measurement shall be the ton of asphalt base as specified on the written instruction of the Engineer.

C3 . 90

For the purpose of this tender the rate for machine application shall include full compensation for procuring and providing all materials all mixing, placing by machine, spreading, compacting and finishing as specified, for all transport, machinery, equipment, labour, supervision and other incidentals for executing the work complete as specified

Replace Item 42.07 with the following

Item	Unit
B42.07 Extra over Items B42.01 and B42.02 for construction of trial sections	
(a) Asphalt base (state specified thickness)	ton (t)
(b) Asphalt surfacing (state specified thickness)	ton (t)

The unit of measurement shall be the ton of asphalt base and surfacing placed as specified on the written instruction of the Engineer.

The tendered rate shall be paid as extra over the rates tendered for the items mentioned above and shall include full compensation for all additional costs to produce and place asphalt trial sections on the instruction of the Engineer.

Payment will not distinguish between various types of asphalt.

Item	Unit
B42.08 Cores in asphalt paving	
(a) 100 mm diameter	Number (No)

Amend the first sentence in the description of the unit of measurement to read:

The unit of measurement shall be the number of cores drilled, irrespective of depth, and recovered as instructed by the Engineer for his own testing."

Item	Unit
B42.15 Application of Waterblok or similar approved bitumen rubber to the edges of a layer	litre (l)

The unit of measurement shall be the liter as specified.

The tendered rate shall include full compensation for obtaining, procuring and applying the material, irrespective of the layer thickness, method of application or the size of the area which it has to be applied.

Item	Unit
B42.20 Extra Over for backfilling of excavations for patching:	
(a) Asphalt base (state specified thickness)	ton (t)
(b) Asphalt surfacing (state specified thickness)	ton (t)

Delete the first paragraph and replace with:

The item is measured as an extra over for patching, irrespective of type of binder, and the unit of measurement will be the ton of asphalt base or asphalt surfacing as applicable as stipulated under 42.01 and 42.02.

The volume for each patch will be measured individually and the total volume of patches with an area of 100m² or less will be summed or accumulated and measured under item 1 and volumes for patches with an area exceeding 100m² will be summed or accumulated and measured under item 2.

Add the following payment items

For the purposes of this tender, payment item 42.21 shall be subdivided into the following work types stating the application method, thickness and type of bitumen:

Item	Unit
B42.21.01 Asphalt hand applied - Other mixes not specified under Items B42.01 and B42.02	
(a) Asphalt base (state specified thickness)	ton (t)
(b) Asphalt surfacing (state specified thickness)	ton (t)
Item	Unit
B42.21.02 Asphalt machine applied - Other mixes not specified under Items B42.01 and 42.02	
(a) Asphalt base (state specified thickness)	ton (t)
(b) Asphalt surfacing (state specified thickness)	ton (t)

The unit of measurement shall be the ton of asphalt base/surfacing placed by hand or machine as specified on the written instruction of the Engineer.

The tendered rate shall include full compensation for all mixing, placing by hand or machine, spreading, compacting and finishing as specified, for all transport, all machinery, equipment, labour, supervision and other incidentals for executing the work complete as specified.

Payment for the procurement and furnishing of all asphalt materials shall be included under item B42.22. which shall include full compensation for procuring, furnishing and supplying the materials as specified. Expenditure under subitem (ii) shall be made in accordance with Clause 6.6 (GCC 2015) of the General Conditions of Contract. The provisional sum allowed shall include for the actual cost incurred for the procurement of the materials. The actual costs for materials shall not be subject to contract price adjustment.

Item	Unit
B42.22 Material charges	
(a) Material cost in respect of item B42.21.01 and B42.21.02	Provisional Sum (Prov sum)
(b) Handling costs, profit and all other charges in respect of B42.22(a)	Percentage (%)

Payment for the procurement and furnishing of all asphalt materials shall be included under item B42.22(a) which shall include full compensation for procuring, furnishing and supplying the materials as specified. Expenditure under item (a) shall be made in accordance with Clause 6.6 (GCC 2015) of the General Conditions of Contract. The provisional sum allowed shall include for the actual cost incurred for the procurement of the materials. The actual costs for materials shall not be subject to contract price adjustment.

The tendered percentage is a percentage of the amount actually spent under subitem B42.22(a) and shall include full compensation for the handling costs of the Contractor, profit, overheads and incidentals in connection with materials used on the instructions of the Engineer.

Payment for expenditure under this item will be made in full as and when the money is expended subject to written proof by the Contractor of payment of invoiced amounts.

Add the following payment items

Item	Unit
B 42.23 Transportation of bitumen binder supplied by a refinery outside the Western Cape Province	
(a) Kwa-Zulu Natal	ton (t)
(b) Free State	ton (t)

The unit of measurement shall be the ton of net cold penetration-grade bitumen binder in the asphalt placed. The mass of binder shall be determined for each day's work based on the average field density of the asphalt placed and the average binder content of the mix.

The tendered rate shall be paid extra over the applicable pay items for asphalt surfacing and shall include full compensation for the additional transport costs incurred for having to import, at the express instruction of the Engineer, bitumen which complies with SABS 307 from a refinery or other sources outside the Western Cape Province.

Item	Unit
B42.22 Extra over items 42.01 and 42.02 for static rolling	square meter (m ²)

The unit of measurement shall be the square meter of asphalt base and/or surfacing rolled statically at the instruction of the Engineer.

The tendered rate shall be paid as extra over the rates tendered for the items above, and shall include full compensation for all additional costs to statically roll the asphalt base and/or surfacing as instructed by the Engineer.

SECTION B4300: SEALS: MATERIALS AND GENERAL REQUIREMENTS**B4302 MATERIALS**

Add the following to the first paragraph:

Any tests referred to in the publication "Technical Guideline: The Use of Modified Bituminous Binders in Road Construction (TG 1-2007): Asphalt Academy", shall supersede those specified in the COLTO Standard Specifications for Road and Bridge Works 1998. This document is available from the Asphalt Academy.

(a) Bituminous binders

(ii) Non-homogeneous (heterogeneous) modified binders (summer grade)

(4) Diluent

Add the following sentence:

The addition of a diluent or cutter to the blend shall not be permitted unless approved by the Engineer.

(5) Bitumen-rubber blend

Replace table 4302/3 in the first paragraph and table 4302/4 in the fourth paragraph respectively with:

"table B4302/3 and table B4302/4"

In the fourth paragraph, add the following after the word "requirements": "for binder class S-R1".

TABLE B4302/3: BITUMEN-RUBBER COMPOSITIONAL AND BLENDING LIMITS

Property	Limits
Percentage of rubber by mass of total blend	20 – 24
Percentage of extender oil by mass of total blend	4 (max)
Percentage of diluent/cutter by mass of total blend	5 (max) (* ¹)
Blending / reaction temperature	170°C – 210°C
Reaction time (reaction time commences when all the rubber crumbs have been added to the blend)	0,5 - 4,0 hours (* ²)

*** Notes:**

1. The addition of a diluent is not recommended in bitumen-rubber for use in hot-mix asphalt applications
2. The reaction time for the product is highly influenced by the composition of the base bitumen and the particle size of the rubber crumbs, and it may remain acceptable for up to 6 hours.

TABLE B4302/4: PROPERTIES OF BITUMEN-RUBBER FOR USE IN SURFACE SEALS AND ASPHALT

Property	Unit	Test Method	Binder Class
			S-R 1
Compressions Recovery: 5 minutes	%	MB-11	>70
Compression recovery: 1 hour	%	MB-11	>70
Compression recovery: 4 days	%	MB-11	>25
Softening Point ¹	°C	MB-17	55 - 62
Resilience @25°C	%	MB-10	13 - 35
Flow	mm	MB-12	15 - 70
Dynamic Visc. (Haake @ 190°C)	dPa.s	MB-13	20 - 40

Note:

1. The prescribed test method is based on not using stirrers although it has been reported that the use of stirrers has shown no difference in test results. For referee purposes no stirrers should be used.

(iv) Homogenous cold applied modified binders

Replace the entire sub-sub-clause with the following:

(1) Base bitumen

The cationic emulsion shall be manufactured from bitumen complying with the requirements of SABS 307.

(2) Polymer

The Contractor shall indicate, in the relative pay item in the Pricing Schedule, the type of polymer to be used in the blend.

(3) Polymer modified emulsion blend

All blending shall be done at the factory. The modified binder for this project shall be **Binder Class SC-E1 or E2 (65-68)** and shall comply with the requirements in table B4302/5.

The use of a volatile solvent flux added to the bitumen shall not be permitted unless approved by the Engineer."

TABLE B4302/5: PROPERTIES OF POLYMER MODIFIED EMULSIONS FOR SURFACE SEALS

Property		Unit	Test Method	Modified Binder Class			
				SC-E1		SC-E2	
Modified Binder Content		(%)	MB-22	65-68	70-73	65-68	70-73
Saybolt Furol Viscosity @ 50°C		Second	MB-21	51-200	51-400	51-200	51-400
Residue on sieving ⁴ 4/(100ml)	710µm sieve	g	MB-23	≤0,1		≤0,1	
	150µm sieve			≤0,5		≤0,5	
Particle charge		-	MB-24	Positive		Positive	
Sedimentation after 60 rotations		°C	SANS 309	Nil		Nil	
Properties of recovered binder residue (MB-20) ¹							
Softening Point ²		°C	MB-17	≥48		≥55	
Elastic recovery @ 15°C		%	MB-4	≥50		≥55	
Force Ductility @ 5°C		N	EN 13703	Report ³		Report ³	

Notes:

1. Either the rotary vacuum or the simple evaporation method can be used. For on-site testing the simple method is more practical and is thus recommended. The simple method retains a very small portion of the fluxing oils whereas these are removed in the rotary vacuum method. The latter method renders a better indication of the binder properties after in-service curing.
2. The prescribed test method is based on not using stirrers although it has been reported that the use of stirrers has shown no difference in test results. For referee purposes no stirrers should be used.
3. No values given but the test can be used to rank various binders according to their low temperatures cohesion properties.
4. Pour the emulsion through the larger sieve to remove the skin and larger particles before passing the emulsion through the finer sieve.

* **Note:** The properties listed as "Report" will only be determined on instruction of the engineer. The contractor will not be liable for the cost of such testing.

(v) Homogeneous hot applied polymer modified binders (summer grades)

Replace the entire sub-sub-clause with the following:

(1) *Base bitumen*

The base bitumen shall comply with the requirements of SABS 307. In addition, the chemical composition of the bitumen shall be such as to permit blending with the proposed polymer to form a stable product.

(2) *Polymer*

The type and percentage of polymer to be blended with the bitumen is not prescribed, however the contractor shall indicate, in the relevant pay item in the Pricing Schedule, the type of polymer to be utilized.

(3) *Polymer modified blend*

The polymer modified bitumen shall be blended at the factory.

The polymer modified bitumen to be used on this project shall be **Binder Class S-E1 or E2** and shall comply with the requirements of table B4302/7.

The binder for the day's production shall be tested on site to determine the softening point before any seal work is commenced with. No claim for delays due to this requirement shall be considered. As a control, a hand held spindle viscometer shall be used to monitor the viscosity of the binder at the spray temperature."

TABLE B4302/7 PROPERTIES OF POLYMER MODIFIED BINDERS FOR HOT SEALING APPLICATIONS

Property	Unit	Test Method	Binder Class	
			S-E1	S-E2
Softening Point ¹	°C	MB-17	50-60	60-80 ³
Dynamic Viscosity @165°C	Pa.s	MB-18	≤0,55	≤0,60
Force Ductility @ 5°C	N	EN 13703	Report ²	Report ²
Complex Shear Modulus ($G^* / \sin \delta$ @ rad/s)	°C	AASHTO:TP 5	Report	Report
Creep Stiffness: Bending Beam Rheometer	MPa	AASHTO:TP 1	Report	Report
Elastic Recovery @ 15°C	%	MB-4	>50	>70
Flash Point	°C	ASTM:D93	>230	>230
Stability (R&B diff. @ 160°C)	°C	MB-6	≤5	≤5
Adhesion @ 5°C	%	MB-7	Report	Report
Properties after ageing (RTFOT)				
Difference in Softening Point	°C	MB-17	-2 to +8	-2 to +8
Elastic Recovery @ 15°C	%	MB-4	>40	>50
Mass Change	%	MB-3	≤1.0	≤1.0
Dynamic Viscosity @ 165°C	Pa.s	MB-18	Report	Report

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. For refereeing purposes no stirrers should be used.
2. No values provided but the test can be used to rank various binders according to their low temperature cohesion properties
3. The softening point values obtained for bitumen modified with SBS will tend to fluctuate over time and on reheating.

* **Note:** The properties listed as "Report" will only be determined on instruction by the engineer. The contractor will not be liable for the cost of any such testing.

(b) Aggregates**(i) Aggregates for seals**

Add the following at the end of the sentence:

“and durability.”

(1) *Grading*

Add the following:

Only grade 1 aggregate shall be used for the construction of seals on this project.

(3) *Shape*

Add Table B4302/13 and the following paragraph:

“Ninety five (95%) percent of the particles shall have at least three fractured faces. The Average Least Dimension (ALD) of the relevant nominal aggregate sizes shall comply with the requirements of Table B4302/13.”

TABLE B4302/13: MINIMUM ALD REQUIREMENTS

Nominal Aggregate Size (mm)	Minimum ALD (mm)
20	12,0
14	8,0
10	5,5

Add the following sub-sub-clause:

(4) *Durability*

Aggregate used in seals and asphalt shall show a durability index of less than 4 as determined by the test method specified in Clause B8105 paragraph (g).”

(ii) Aggregate for slurry seals

In the first paragraph, add the following after the first sentence:

The Engineer may order the addition of an approved natural sand or additional cement to improve either the permeability or workability of the slurry.

Add the following sub-sub-clause:

(iii) Aggregate for blinding

The aggregate used for blinding the single seal shall consist of 2,00mm to 5mm crushed aggregate or river sand. The aggregate shall be clean, hard and free from clay, silt or other deleterious matter.

(d) Hydrophilic aggregates**(i) Precoating of aggregate for stockpiling or for immediate use:**

In the second paragraph, delete “12 liter” in the second sentence, and add the following sentence:

Precoating fluid shall be manufactured from petroleum based products. The use of tar based precoating fluids will not be permitted. For tender purposes the nominal quantity of precoating fluid for the relevant nominal aggregate sizes is specified in table B4302/14.

TABLE B4302/14: NOMINAL APPLICATION RATES FOR PRECOATING FLUID

Nominal aggregate size (mm)	Nominal precoating application rate (l/m ³)
20	12
14	16
10	19
7	22

Add the following sub-clauses:

“(e) Water for diluting emulsions

Water used for the dilution of emulsions on site shall be suitable potable water, and each source of water used shall be tested for compatibility with the emulsion before it is added to the bulk emulsion.

(f) Testing of polymer modified bitumen/emulsion

Testing shall be in accordance with the methods described in “Technical Guideline: The use of Modified Bituminous Binder in Road Construction (TG 1-2007): Asphalt Academy”.

During spraying of each batch, the Contractor shall draw off at least three test samples of the modified bitumen/emulsion product and submit them to the engineer for acceptance testing purposes. The supplier shall submit all his tests results to the engineer for correlation purposes, failing which the engineer's results shall be binding in terms of acceptance or rejection of the product.”

B4303 PLANT AND EQUIPMENT

(b) Binder distributor

Add the following:

Prior to the commencement of any work, a calibration certificate, not older than 12 months, for the binder distributor shall be presented to the engineer for approval.

The binder distributor shall be capable of spraying the binder at the specified application rates and to the satisfaction of the engineer. The pump of the distributor shall be capable of delivering the binder at the spray bar nozzles at the correct pressure to obtain the specified application rates, irrespective of the viscosity properties of the prescribed binder. The spray bar of the distributor shall be fitted with fishplates at the outside edge of the bar to prevent over spraying onto gravel shoulders or staining of concrete elements on the edge of the surfacing of the road

In addition, the transverse distribution of the spray bar shall be field-verified by means of the "Bakkie" test as described in B8117. The maximum permissible tolerance permitted between the troughs (excluding the outer 300mm) is dependent on the viscosity of the binder type being applied and shall be as follows:

- Emulsions, cutback and penetration grade bitumen - 5%
- Homogeneous modified bitumen - 7%
- Non- homogeneous binders (bitumen rubber) - 10%

The spray bar shall be of such design as to allow for any adjustments to be made in order to meet the above tolerances. This procedure shall be carried out each time the distributor is first established on site and once a week thereafter or when a problem with transverse distribution is suspected. The binder distributor shall thus have a set of troughs available in order to allow the execution of the test. For limited quantities of spray-work, the engineer may accept the results of a recently completed distribution test that has been recorded and approved by an independent supervisor on the distributor's test log book.

The binder distributor shall be fitted with a suitable valve or other access gate for taking of samples of the binder for testing purposes.”

(c) Chip spreaders

Add the following at the end of the first paragraph:

The chip spreader shall be capable of delivering a proper and uniform transverse distribution of chips across the conveyor belts. The chip distribution shall be tested by means of canvas patches, each 1,0m by 1,0m and placed side by side. The mass of chips spread onto each individual canvas patch shall not deviate by more than 10% from the calculated average spread per canvas patch.

Add the following to the last paragraph:

A non-self-propelled chip spreader may only be used in the event of a breakdown of the self-propelled chip spreader during a pull, and shall be limited to the completion of that pull. No further application of binder shall be permitted until such time as the self-propelled chip spreader is repaired or replaced.

B4304 GENERAL LIMITATIONS AND REQUIREMENTS**(a) Weather limitations**

Add the following:

Seal work using bitumen rubber or polymer modified binder shall not be permitted during the months of July, August and September. Winter grade binders shall not be used in any seal work and the Contractor's programme shall reflect this limitation."

(d) Preparation of areas to be sealed**(i) General**

Add the following:

Seal work shall not be permitted on granular base layers if the moisture content in the upper 50mm exceeds 50% of the optimum moisture content, determined in accordance with TMH1 Method A7. This limitation shall apply even if the layer has been previously primed.

Sealing work shall not commence until the engineer has approved all other works ordered on that section of road.

(e) Demarcation of the working areas**(i) New work**

Add the following:

Before the tack coat and first application of aggregate may be applied, the centerline of the road shall be demarcated by means of a clearly visible weatherable fibre rope, pegged down with nails driven into the existing surface at intervals of 15m on straight sections and 3m apart on curves. The demarcating rope shall be removed prior to the application of the tack coat and aggregate on the adjacent lane.

B4305 HEATING AND STORAGE OF BITUMINOUS BINDERS**(b) Non-homogeneous (heterogeneous) modified binders (summer grade)**

Replace the entire sub-clause with:

After completion of the bitumen-rubber reaction, the handling of the binder shall comply with the requirements listed in table B4305/4. The binder may only be stored in tanks with circulation systems.

The Engineer's supervisory staff shall, through timeous notification by the contractor, be afforded the opportunity to attend all bitumen-rubber blending operations in order to exercise control sampling and testing of the binder from the stage just prior to the addition of the rubber to the base bitumen up to the end of the allowable spraying period. Failure to conform to this requirement will be considered reason enough by the engineer to reject the batch of binder."

TABLE B 4305/4: TEMPERATURE/TIME LIMITS FOR BITUMEN-RUBBER

Binder Class	Short term handling		Storage		Spraying/Asphalt mixing		
	Temp (°C) max	Time (hrs) max	Temp (°C) max	Time (hrs) max	Temp (°C) max	Temp (°C) min	Time (hrs) max
Binder for seal (S-R1)	165	24	150	240	210	195	Refer to time/viscosity curve *2
Binders for asphalt (A-R1)	165	24	140	240	210	190	
Binders for crack sealing *1	165	24	*1	-	190	180	-

*** Notes:**

1. Due to the relatively small quantities utilized, bitumen rubber crack sealants are invariably supplied in a cold, pre-blended, form. Only the quantity required should thus be heated immediately prior to application. Rapid localized heating of the product should be avoided.

2. The Time/Viscosity relationship must be determined for each specific blend.
3. If the time period has been exceeded, the binder should be resampled and tested to ensure that the properties of the binder have not degraded.

(d) Homogeneous cold applied modified binders

Add the following:

The requirements for short term handling, storage and application of these binders shall comply with the requirements listed in table B4305/5.”

TABLE B4305/5: TEMPERATURE/TIME LIMITS POLYMER MODIFIED EMULSIONS

Binder Class	Short term handling		Storage		Spraying		
	Max Temp (°C)	Max Time (hrs)	Max Temp (°C)	Max Time (hrs)	Max Temp (°C)	Min Temp (°C)	Max Time (hrs)
SC-E1 ¹ SC-E2 ¹	70	24	Ambient	240+	80	50	2
CC-E1	Ambient	240+	Ambient	240+	Ambient		240+

Notes:

1. This applies to modified emulsions with a binder content of approximately 70% m/m. For emulsions with a binder content of approximately 65% m/m the maximum short term handling and maximum spraying temperature limit shall be reduced by 10°C.

(e) Homogeneous hot-applied binders (summer grade)

In the second paragraph, replace table 4305/3 with “table B4305/3”:

TABLE B4305/3: TEMPERATURE/TIME LIMITS FOR HOT POLYMER MODIFIED BINDERS²

Binder Class	Short term handling		Storage		Spraying/Asphalt Mixing/Application		
	Max Temp (°C)	Max Holding Time (hrs)	Max Temp (°C)	Max Holding Time (hrs)	Max Temp (°C)	Min Temp (°C)	Max Holding Time (hrs)
S-E1 (SBR)	180	24	150	240	210	190	8
S-E1 (SBS)	180	24	150	240	185	175	12
S-E2	180	24	150	240	185	175	12
A-E1 (SBR)	180	24	150	240	190	175	8
A-E1 (SBS)	180	24	150	240	180	170	12
A-E2	180	24	150	240	180	170	12
A-P1	180	24	150	240	170	150	24
C-E1	160	24	140	240	180	160	8

Notes:

1. If the recommended maximum holding time has been exceeded then resample and test the binder to ensure compliance with the specification.
2. In the event of non-polymer modified binders being used, refer to the supplier for guidelines on handling and application temperatures.

B4306 STOCKPILING OF AGGREGATE

(a) General

Add the following:

The contractor shall heed the environmental requirements of Part C of these Specifications in the preparation, operation and closure of stockpile sites. The positions for stockpiling of aggregate and the proposed operation methods shall be approved by the engineer before delivery of the aggregate can commence.

After application of the seal all loose stones swept off the road surface are to be heaped either in the drain or gravel shoulder, whichever is applicable, and removed in one operation. No sweepings are to be left on site for more than 24 hours. No sweepings are to be heaped or stored on the vegetated areas of the road reserve. No loose stone is to be spoiled in the road reserve.

B4307 CONSTRUCTION OF SEAL

(b) Single and double aggregate seals

(i) Application of tack coat and aggregate

Replace the last sentence of the fourth paragraph with the following:

The Contractor shall so place the strips when constructing the seal that the joint between two adjacent aggregate applications shall be located along the centerline and at 3,7m from the centerline."

Add the following to the fourth paragraph:

Joints shall be straight and aggregate shall be broomed back in a neat straight line before the next spray. String lines shall be used to demarcate joint edges. All stone-loss and "tram- lining/roping" shall be made good by the contractor at no additional cost.

(ii) Initial rolling of aggregate

Replace the second sentence with the following:

In the case of modified emulsions, initial rolling by means of self-propelled 5-ton flat steel wheel rollers shall only be permitted if crushing of aggregate does not occur. Pneumatic-tyred rolling shall be delayed until the emulsion has been allowed to break sufficiently to firmly secure the aggregate. Rolling shall be postponed if there is any pick-up of aggregate on the tyres of the pneumatic type roller.

(iii) Broom drag and final rolling of aggregate

Add the following after the first paragraph:

The contractor shall provide a back-chipping team, together with a pneumatic-tyred roller, of sufficient capacity to ensure that back-chipping and rolling of aggregate shall be completed within thirty minutes after initial application of the aggregate.

Replace third paragraph with the following:

After completing the spreading of the aggregate, final rolling shall consist of a minimum of four passes utilizing a 15-ton to 20-ton pneumatic-tyred roller, followed by one or two passes of a 6-8 ton flat steel wheel roller.

(iv) Joints between binder sprays

Add the following at the end of the paragraph:

The protective sheets shall be made of reinforced building paper.

(v) Protection of kerbs, channels etc.

Add the following:

Where bitumen binder is to be sprayed directly adjacent to existing concrete kerbs, channels, side drains, concrete edge beams and bridge balustrades, or over bridge joints, such concrete elements shall be covered with an approved reinforced building paper.

Add the following sub-sub-clause:

(vi) Trial section

Before the Contractor commences with the construction of any seal work he shall demonstrate that the equipment and processes he proposes to use will enable him to construct the seal in accordance with the specified requirements.

At the commencement of the surfacing operation, a 200m half-width section shall be considered as a trial. After completion of each phase of the seal on this 200m section, the engineer will review and then approve/reject the work method. If approval is granted for a specific operation i.e. application of tack coat, aggregate, fog or slurry, the Contractor may proceed with that approved operation.

Should the Contractor at any stage fail to deliver an acceptable product he shall rectify the problems at his own cost and demonstrate with a further trial section that he can carry out the operation successfully. No specific payment shall be made for conducting these trials and the cost thereof shall be deemed to be included in the tendered rates of section 4300."

B4308 RATES OF APPLICATION

In the first sentence of the first paragraph, delete the following after "conventional": "or homogeneous modified"

Add the following at the beginning of the second sentence: "Homogeneous and"

In the second paragraph, replace 4314 with:

"B4314"

Add the following at the end of the second paragraph:

"In the case of single seals the Engineer may, at his discretion, permit the application of a diluted emulsion fog spray in instances where application rates are below the minimum allowable tolerances. In such instances no additional payment over and above the unit rate tendered for the accepted seal, plus or minus any variation from the nominal, will be made. In the case of sand seals or graded seals the Engineer may accept, at his discretion, an application of binder sprayed above the allowable tolerance subject to the Contractor, at his own cost, applying and rolling any additional sand/aggregate necessary as a result of such over application."

B4314 TOLERANCES AND FINISH REQUIREMENTS

(c) The rate of application

Replace the first paragraph the following:

The maximum permissible variation from the rates of application of aggregate or slurry, as ordered by the Engineer, shall be plus or minus 5%.

For binders, the maximum permissible variation from that specified shall be 5% for conventional bitumen and all emulsions (measured net cold), and 5% for hot applied modified binders (measured at spray temperature). Provided he is satisfied that the seal will perform satisfactorily, the Engineer may, at his discretion, conditionally accept out of tolerance variations at the reduced rates of payment listed in Table B4314/1 below. However, variations in total binder application rates in excess of those tabled shall be deemed rejected. Rejected sprays will not be considered for payment unless corrected to the satisfaction of the Engineer.

A lot for acceptance control purposes shall be at least 2000 liters. Lots smaller than 2000 liters shall be combined with succeeding lots until a combined lot not less than 2000 liters is obtained. "

TABLE B4314/1: PAYMENT REDUCTION FACTORS FOR CONDITIONALLY ACCEPTED BINDER APPLICATION RATES

Conventional bitumen and emulsion. Deviation from specified spray rate Net cold bitumen. (%)	Hot applied homogeneous and non-homogeneous modified bitumen. Deviation from specified rate. At spray temperature. (%)	% Payment of tendered rate for seal
±5,0	±5,0	100%
±6,0	±6,0	97,5%
±7,0	±7,0	95%
±8,0	±8,0	90%
±9,0	±9,0	85%
±10,0	±10,0	80%

Add the following at the end of the last paragraph:

The completed surfacing shall be of uniform texture without gaps or patches and shall be free from longitudinal and transverse corrugations and any loose aggregate or binder spillage.

The edges of the completed bituminous surfacing shall be true to line.

(d) Conditional acceptance

Delete the entire sub-clause

SECTION 4400: SINGLE SEALS**B4403 CONSTRUCTION****(a) Fog Spray***Amend as follows:*

... a fog spray of 60% or 30% anionic or cationic emulsion or MSP 3 rejuvenator (or similar approved)..

B4404 MEASUREMENT AND PAYMENT**Item****Unit****B 44.04 Application of fog spray***Add the following subitem*

(c) MSP3 or similar approved rejuvenator liter (l)

SECTION 4600: BITUMINOUS SINGLE SEAL WITH SLURRY (CAPE SEAL)**B4604 SLURRY****(b) Second application of binder**

Add the following to this paragraph

When a “flux” or “cutter” has been added to any of the applications of bituminous binders then this period shall be a minimum period of 48hrs after the application of the final spray of the binders. This period should be extended to 72hrs during the winter months.

(c) Composition of slurry

Replace entire sub-clause with the following:

(i) Conventional slow setting anionic fine slurry (Slurry type 1)

The slurry used shall be a fine slurry (fine grade) as specified in sub-subclause 4302(b)(ii) together with a 60% anionic stable-grade emulsion, filler and water in the proportions as directed by the Engineer.

The composition of the slurry (Cape seal application) shall be based on the following mass proportions for tender purposes:

Slurry aggregate (dry): 100
Emulsion: 20
Cement: 1 – 1.5
Water: 15

The following proportions (all other applications) shall apply for tendering purposes only:

Slurry aggregate (saturated volume): 1 m³
Emulsion at mixing temperature: 260 liter
Cement: 0.01 m³
Water: approx. 235 liter

The saturated volume of slurry shall be determined by applying a correction for bulking of moist aggregate, as described in item 46.05.

(ii) Rapid setting polymer modified cationic fine slurry (Slurry type 2)

The slurry used shall be a fine slurry (fine grade) as specified in sub-subclause 4302(b)(ii) together with a polymer modified cationic emulsion, filler, additive and water in the proportions as directed by the Engineer.

The composition of the slurry (Cape seal application) shall be based on the following mass proportions for tender purposes:

Slurry aggregate (dry): 100
Emulsion: 20
Cement: 1 – 1.5
Water: 15

The following proportions (all other applications) shall apply for tendering purposes only:

Slurry aggregate (saturated volume): 1 m³
Emulsion at mixing temperature: 200 liter
Cement: 0.015 m³
Water: approx. 235 liter (with approx. 4 liter of additive)

The saturated volume of slurry shall be determined by applying a correction for bulking of moist aggregate, as described in item 46.05.

SECTION 4800: TREATMENT OF AN EXISTING SURFACE EXHIBITING CERTAIN DEFECTS**B4801 SCOPE**

Add the following:

This section also covers work in connection with the crack sealing of a concrete slab prior to the application of an asphalt overlay and the subsequent saw cutting and sealing of joints.

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 B4801: CLASSIFICATION OF MODIFIED BINDERS FOR CRACK SEALING

Modified Binder Class (C)	Application
C-E1	Crack Sealant - Hot applied
CC-E1	Crack Sealant - Cold applied
C-R1	Crack Sealant - Hot applied

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

C – 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) ¹	°C	MB-17	≥80	≥80 ²	55-65
Elastic recovery @ 15°C	%	MB-4	≥80 (min)	≥60 ²	report ³
Flow	mm	MB-12	N/A	N/A	15-70
Resilience @ 25°C	%	MB-10	N/A	N/A	13 - 40
Binder content (m/m)	%	MB-22	N/A	≥55	N/A
Dynamic Viscosity @ 25°C	Pa.s	MB-18	N/A	≥0,8	N/A
Dynamic Viscosity @ 165°C	Pa.s	MB-18	≤0,65	N/A	N/A
Dynamic viscosity @ 190°C	dPa.s	MB-13	N/A	N/A	20 - 40

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.

Add the following sub-sub-clauses:

- (x) Joint sealant for expansion joints and cracks wider than 20 mm

Joint sealant for expansion joints and cracks wider than 20mm shall be a hot-applied **C-E1** type (150°C) styrene-butadiene-styrene (SBS) polymer modified bitumen used with 7mm aggregate.

- (xi) Sealant for narrow cracks (3 mm < crack width < 20 mm) and saw-cuts

Sealant for narrow cracks and saw-cuts shall be a cold-applied **CC-E1** type styrene-butadiene-rubber (SBR) modified mineral filled bitumen emulsion.

Add the following sub-clause:

(d) Rapid-setting slurry

Rapid-setting slurry shall be either "Colmat®", "Colrut®" or similar approved.

(e) Joint filler

Joint filler for the forming of expansion joints shall be manufactured from a closed-cell polyethylene and the filler strips shall be provided with tear-off cover strips. The joint filler shall comply with the requirements of AASHTO-M153, and the particular type used shall be subject to the Engineer's approval. Payment for the provision and installation of joint filler shall be made under clause B4807 of this particular section.

(f) Geotextile seal bandage

Cracks and cracked areas designated by the Engineer shall be treated by using a geotextile seal bandage. The geotextile shall be "Sealmac (150)" or similar approved. The minimum width for individual cracks and joints shall be 200mm. The widths for larger cracked areas shall be dictated by the size of the cracked area to be treated.

B4804 CONSTRUCTION

(f) Sealing cracks

(ii) Preparation

Delete second and third paragraph.

(iv) Cracks wider than 3mm and narrower than 20mm (including saw-cuts)

Delete entire sub-clause and replace with the following:

Fill the cracks with an approved sealant.

The Contractor shall exercise due care not to overfill the adjacent surfaces with the emulsion. The Contractor shall note that the initial treatment as described above may be insufficient and that successive applications of modified emulsion may be required.

The finished crack shall not at any point be lower than the adjacent concrete surface nor be higher than 3mm from the level determined by means of a 200mm straight-edge across the crack.

The Contractor shall blind the cracks with sand or crusher dust prior to the opening of the road to traffic.

(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 5mm shall then be applied using shovels and the area should be opened to traffic."

Add the following sub-clause

- (v) Expansion joints and cracks wider than 20mm

Mark the position of the existing expansion joints accurately on either side against the kerb or road edge.

Clean the expansion joint or crack with compressed air of all debris, loose stones or loose concrete to a depth between 35mm and 50mm. The use of a pick may be required to remove loose stones or concrete.

Install an approved expansion joint filler. Fill the joint with an approved joint sealant.

The finished joints or cracks shall not at any point be lower than the adjacent concrete surface nor be higher than 3mm from the level determined by means of a 200mm straight-edge across the crack.

After the application of the asphalt overlay, saw-cut the overlay accurately in line with and vertically above the position of the existing expansion joint to a width of 6mm to 8mm.

Fill the saw-cut with a cold-applied styrene-butadiene-rubber (SBR) modified mineral filled bitumen emulsion.

The Contractor shall exercise due care not to spoil the adjacent asphalt surfacing with the emulsion. The Contractor shall blind the cracks with sand or crusher dust prior to the opening of the road to traffic.

B4807 MEASUREMENT AND PAYMENT

Item		Unit
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B48.04 Screed of asphalt or coarse slurry

Add the following sub-item:

- (d) Rapid-setting polymer modified coarse slurry..... cubic meter (m³)

The unit of measurement shall be the cubic meter of aggregate mix used in the slurry.

The tendered rate shall include full compensation for furnishing all materials, equipment and labour for producing and applying the slurry irrespective of the number of applications required to attain the required thickness.

Amend pay item 48.06 as follows:

Item		Unit
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B48.06 Cleaning the cracks with compressed airmeter (m)

Replace "kilometer" with "meter" in second paragraph.

Add the following pay items:

Item		Unit
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B48.14 Sawing of asphalt layers square meter (m²)

The unit of measurement shall be the square meter of saw-cut area calculated in accordance with the authorized length of saw-cut and the average saw depth measured after excavation of the material.

The tendered rate shall include full compensation for all material and sawing costs and sawing the pavement in accordance with the instructions of the Engineer.

Payment will not distinguish between the various depths of sawing irrespective of the number of separate cuts which may be required for sawing the layer to the required depth.

Item	Unit
B48.15 Applying bituminous binders for sealing cracks (concrete slabs)	
(a) Expansion joint sealing and wide crack sealing .....meter (m) (cracks > 20mm)	
(b) Narrow crack sealing (3mm < cracks < 20mm ) .....meter (m) and saw-cut sealing	

The unit of measurement shall be the meter of crack, saw-cut or expansion joint treatment calculated in accordance with the authorized lengths.

The tendered rate shall cover the cost to prepare and seal existing expansion joints, wide cracks (> 20mm), narrow cracks (between 3mm and 20mm) and saw-cuts according to the requirements set out in sub-sub-clauses B4804(f)(ii), B4804(f)(iv) and B4804(f)(v).

Separate payment is provided for the sawing of asphalt.

Item	Unit
B48.16 Provision and installation of an expansion joint filler.....meter (m)	

The rate shall cover the cost for the provision and installation of an approved joint filler (see subclause B4802(d)).

Item	Unit
B48.17 Provision and application of "Sealmac" seal bandage or similar approved square meter (m ²)	

The unit of measurement shall be the square meter (m²) of bandage supplied and laid.

The tendered rate shall include full compensation for cleaning and preparing the surface, for furnishing the material, applying the bandage and for all other incidentals necessary for completing the work according to the manufacturer's specifications.

SECTION 5700: ROAD MARKINGS**B5701 SCOPE**

Replace “South African Road Traffic Signs Manual” in the second paragraph with “SADC Road Traffic Signs Manual”

Replace the words “ordinary road marking paint” with “solvent borne road marking paint”.

Replace “BS 3262” with “EN 1436”.

Replace “Hot melt plastic road marking” with “thermoplastic road marking”.

B5702 MATERIALS

Insert the following before sub-clause (a) Paint:

The selection of the appropriate road marking paint and materials for permanent road markings to ensure conformance with the requirements of this specification rests with the contractor. Such paint and material shall have technical characteristics (brightness, luminance, skid resistance, durability) equal to or greater than road marking paint and materials specified in sub-clauses 5702(a), (b) and B5702(c).

Where plastic road-marking material (hot-melt plastic (also known as thermoplastic) and two- component (also known as cold plastic)) is used, the contractor shall obtain an approved guarantee from the manufacturer that the paint complies with the specification. This shall be submitted to the Engineer on request.

(a) Paint

Replace sub-sub-clause B5702(a)(i) with the following:

(i) Road marking paint

Road marking paint shall be Type 1 as specified in SANS 731-1. Only paint, manufactured in a SANS approved and accredited facility shall be accepted. The no-pick-up time of road-marking paint shall comply with the Class 1 requirement in accordance with SANS 731-1.

The paint shall be delivered at the site in sealed containers marked in accordance with SANS 731-1. The viscosity of the paint shall be such that it can be applied without being thinned down.

(ii) Retro-reflective road-marking paint

Amend paragraph as follows:

Retro-reflective road marking paint shall comply with the requirements of sub-subclause 5702 (a)(i),

(iii) Plastic road-marking material

Add the following:

Plastic road-marking material shall be of the hot-applied hydro-carbon resin type with a minimum application thickness of 1,2 mm. Tendered rates shall be based on an application thickness of 1,2mm.

Replace sub-sub-clause B5702(a)(iii) with the following:

(iii) Thermoplastic road marking material

Thermoplastic road marking material shall comply with the requirements of EN 1436, and EN 1423: 1998 for drop-on glass beads for road marking and anti-skid aggregates and mixtures thereof. Blending of thermoplastic road marking material and glass beads shall comply with EN 1424: 1998.

The binder shall be an elasticized synthetic resin and the material shall be reflectorized by mixing in 25% by mass Class A glass beads in accordance with EN 1424: 1998. An additional topping of glass beads shall be applied to the hot surface of the material for instant retro-reflectivity.

The white road marking material shall contain 6% by mass minimum titanium dioxide content and shall have a skid resistance of 45 S.R.T. – units or higher. SABS Method 1248: 1995 shall be used for determination of traffic wear index; indication of durability.

The following minimum lumination values are required for the completed product:

- 250 mcd/m².lux & 120 mcd/m².lux for white & yellow lines respectively, at 30 days after application.
- 200 mcd/m².lux & 100 mcd/m².lux for white & yellow lines respectively, at 6 months after application.

Determination of coefficient of retro-reflected luminance by means of portable retro-reflectometer shall be carried out using SANS 6261: 2008. Application of the permanent road marking will thus have to be performed within the first 6 months of the 12 month defects liability period to allow for the second measurement to fall within the contract dates. Should the application of the permanent road-marking fall outside the first half of the defects liability period for whatever reason, the settlement of the retention money will be delayed until the second measurement of luminance can be performed at the stipulated time.

Two-component cold plastic road marking material shall be used for symbols, arrows and letters (hand painted markings) unless otherwise instructed by the Engineer.

Add the following sub-sub-item:

(v) Cold plastic road marking material

Cold plastic road marking material shall be used for symbols, arrows and letters (hand painted markings) and shall consist of a solvent-free reactive acrylic resin, stuffing, beads and pigment to which a hardener shall be added. Application is carried out using a trowel. Material applied by paint brush shall not be used.

Cold plastic road marking material shall be reflectorized by mixing in 25% by mass (or 400 g/m²) Class A glass beads in accordance with EN 1424: 1998. An additional topping of glass beads is applied to the wet surface of the material after application and will comply with EN 1423: 1997.

(b) 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 at least 20mm. Round road studs shall be 100mm in diameter and not less than 20mm in height.

Add the following new paragraph:

In terms of SANS 1442 5h3 following are definitions of the various categories of road studs:

Category A road studs	Corner cube retro-reflectors
Category B road studs	Biconflex retro-reflectors
Category C road studs	Omnidirectional retro-reflectors

Add the following sub-item:

(c) Retro-reflective beads

Retro-reflective glass beads shall be applied to the wet paint, thermoplastic and cold plastic.

The beads shall comply with Class A beads in accordance with EN 1424: 1998, with the following requirements or as approved by the Engineer:

- color : crystal clear
- roundness : > 80%
- size range of : 14 – 200 US Mesh (75 – 1400
- refractive index : > 1.5
- specific gravity : ± 2.5
- granulometry :

CUMULATIVE RETAINED MASS		
SIEVE	MINIMUM	MAXIMUM
1700	0	2
1400	0	10
1180	5	30
850	40	80
600	70	100
425	80	100
355	90	100
212	95	100
PAN	100	100

The beads shall be delivered to the site in sealed bags, marked with the name of the manufacturer, the batch number and an inspection seal of SANS, confirming that the beads form part of a lot tested by SANS and comply with the requirements of EN 1424: 1998. Alternatively, the Contractor shall at all times have a SANS certificate on the site, identifying the batches to which the inspection seals apply and certifying that they have been tested by SANS, and comply with the requirement of EN 1424: 1998.

B5704 MECHANICAL EQUIPMENT FOR PAINTING

Add the following sentence at the end of the first paragraph:

"The road-marking machine shall be fitted with a device to guide the operator to the centre of the line to be painted. This device shall be used at all times of operation.

B5705 SURFACE PREPARATION

Add the following at the end of the second paragraph:

The onus is on the contractor to ensure that the surface on which the road markings are to be applied is sufficiently clean and dry to ensure that the quality of the road markings will not be adversely affected. The contractor is also responsible for protecting road studs from being painted over, and the subsequent cleaning thereof if such over-painting did occur.

B5706 SETTING OUT THE ROAD MARKINGS

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 re-assessed on site by the engineer before the contractor commences with the road marking.

B5707 APPLYING THE PAINT

Insert the following before the first paragraph:

The Contractor's establishment on site and general obligation shall be deemed to fully include the establishment of the road-marking team, irrespective of the number of times the road-marking team is required to be on site or is required to move within the site.

Provision is also made under item B57.07 for de-establishment and re-establishment in the contract or maintenance period if such action is required by delays not attributable to the contractor and/or ordered by the Engineer.

Replace the sixth paragraph with the following:

Solvent borne road marking paint shall be applied at a nominal rate of 0,42 l/m² or as directed by the Engineer. Thermoplastic road marking shall be applied at a nominal rate of 2,5 kg/m² to achieve a minimum thickness of 1,25mm to 1,5mm or as directed by the Engineer. The two-component road marking material shall be applied by hand by means of a trowel. The desired symbol or line shall be marked with a tape or a template on the road surface. Thereafter apply the required volume of material and spread uniformly over the entire area. When dry/set, remove the tape or template. A spreading rate of 4,5kg/m² is estimated to achieve a 2,0mm material thickness.

In order to ensure proper coverage on all types of surfaces the Engineer may order an increase in the above nominal application rates. Payment for these variations in application rates shall be made under item 57.04.

A daily log-sheet, provided by the Employer, shall be completed and signed by the Contractor and the Engineer's representative, recording the quantities of paint and glass beads used on that day and shall be available for inspection at all times. The completed and signed log-sheet for the period covered by a payment certificate shall be attached to the payment certificate.

Replace the last paragraph with the following:

Solvent-based road marking as specified by the Engineer shall be carried out within 14 days of opening the road full width to traffic after the completion of the surfacing.

If in the in the opinion of the Engineer, conditions are unsafe, the centre-line shall be painted immediately after 2,0 km of continuous road has received a new asphalt layer, or 4,0 km of continuous road has received a new seal surfacing.

B5708 APPLYING THE RETRO-REFLECTIVE BEADS

In the first paragraph, replace the nominal application rate of 0,8kg/l with "400gm/m²".

Replace the second paragraph with the following:

The thermoplastic road marking material and two-component road marking material shall contain insitu glass beads of minimum content of 25% in order to obtain night visibility (reflectivity). The contractor shall immediately apply additional glass beads at 400g/m² to obtain immediate reflectivity. The beads shall be sprayed onto the road marking layer by means of a pressure sprayer. Where letter, symbol, traverse line and island road marking is undertaken by hand, the glass beads may be applied by hand if approved by the Engineer. Prior to any hand application work, the contractor shall first request approval from the Engineer.

Add the following:

Beads shall be applied in accordance with EN 1424.

B5710 TOLERANCES

Add the following paragraphs to sub-clause (c) Alignment of markings:

When an unbroken line and a broken line are painted alongside each other, the beginning and the end of the unbroken line shall coincide with the beginning of one broken line and the end of another broken line. When existing lines are repainted, the new markings shall not deviate more than 100mm in the longitudinal direction nor 10 mm in the transverse direction from the existing marking.

The alignment of the road studs shall not deviate from the true alignment by more than 10mm and shall be positioned so that the reflective faces are within 5° of a right angle to the centre line of the road.

Add the following sub-clause:

(e) Testing

(1) Plant

Before painting any permanent road markings, the Contractor shall satisfy himself and the Engineer, by painting test lines on a section of pavement other than the section required to be marked:

- (i) that the painting machine is in good working order and properly adjusted;
- (ii) that the operator is fully experienced; and
- (iii) that the machine sprays at the specified rate of paint application.

The Contractor shall bear the cost of all materials and workmanship required for the above plant tests. In addition, the Contractor shall conduct random paint thickness tests and dip/spread tests as required by the Engineer."

B5711 GENERAL

Insert the following into the last sentence of the last paragraph between “black paint” and “or chemical paint remover”:

“, bituminous emulsion, slurry”

Add the following to the last paragraph: “Where black paint is used, it shall be matt.”

Add the following clause:

The Contractor shall provide temporary traffic control facilities in accordance with Section 1500 of the COLTO's standard specifications for road and bridge works to ensure traffic safety where work is being executed.

Property and/or road signs damaged by the Contractor, his personnel, his agents or sub-contractors shall be repaired or restored to their condition prior to the damage at his own cost.

B5712 FAULTY WORKMANSHIP OR MATERIAL

Add the following paragraphs to this item:

The Contractor shall rectify in an acceptable manner and at his own costs; all marking that do not comply with the specified requirements.

While work is in progress, tests shall be carried out on materials and/or the quality of work to ensure compliance with the specified requirements. The sampling methods are specified in SANS 731-1. The sampling methods described in TMH5 shall be followed where applicable.

B5713 PROTECTION

Add the following paragraph

Traffic cones shall be placed on the road not further than 48m apart. Cones shall not be removed before the paint on the road has hardened to such an extent that it will not be damaged by traffic. All marks on the road caused by traffic driving over wet paint shall be removed by the Contractor at his own cost.

B5714 MEASUREMENT AND PAYMENT

Replace “kilometer” with “meter” in all instances.

Amend Item 57.03 as follows:

Item	Unit
B57.03 Plastic road-marking paint (Thermoplastic)	
(a) White lines (broken or unbroken) (width of line indicated)	meter (m)
(b) Yellow lines (broken or unbroken) (width of line indicated)	meter (m)
(c) Red lines (broken or unbroken) (width of line indicated)	meter (m)
(d) White lettering and symbols	square meter (m ²)
(e) Yellow lettering and symbols	square meter (m ²)

Delete payment item 57.05 and replace with the following

Item	Unit
B57.05 Road studs:	
(a) Installation of road studs (type indicated)	Number (No)

C3 . 114

- (b) Material Costs in respect of B57.05(a) Provisional Sum (Prov Sum)
- (c) Handling Costs in respect of B57.05(b) Percentage (%)

The unit of measurement for (a) shall be the actual number of road studs installed. The tendered rates shall include full compensation for procuring and furnishing all labour and equipment related to the installation of the road studs but excluding the costs of the actual road studs.

Expenditure under item (b) shall be made in accordance with Clause 6.6 (GCC 2015) of the General Conditions of Contract. The provisional sum allowed shall include for the actual cost incurred for the procurement of the materials. The actual costs for materials shall not be subject to contract price adjustment.

The tendered percentage for (c) is a percentage of the amount actually spent under subitem B57.05(b) and shall include full compensation for the handling costs of the Contractor, profit, overheads and incidentals in connection with materials used on the instruction of the Engineer.

No additional payment will be made should temporary or permanent road studs be replaced if lost or broken during the construction period or during the Defects Notification Period.

Item	Unit
B57.06 Setting out and pre-marking the lines (excluding traffic island markings, lettering and symbols)	meter(m)

Add the following:

Referencing of existing barrier lines and other road marking lines prior to milling and other operations, shall be included in the tendered rate for setting out and pre-marking.

Add the following pay items:

Item	Unit
B57.10 Cold plastic road marking material	
(a) White lettering and symbols	square meter (m ²)
(b) Yellow lettering and symbols	square meter (m ²)
(c) Transverse lines, painted island and arrestor bedmarkings (any color)	square meter (m ²)

The unit of measurement for applying the road-marking material for the lettering, symbols, transverse lines, islands and arrestor bed markings shall be the square meter, and the quantity to be paid for shall be the actual surface area of the lettering, symbols, transverse lines, islands and arrestor bed markings, completed in accordance with the instructions of the Engineer.

The tendered rate per square meter for applying the road-marking material shall include full compensation for procuring and furnishing all material, including the retro-reflective beads and all necessary equipment, and for applying, protecting and maintenance as specified, including the setting out of lettering, symbols, transverse lines, islands and arrestor bed markings.

SECTION 6600: NO-FINES CONCRETE, JOINTS, BEARINGS, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURES

B 6601 SCOPE

Add the following to sub-clause 6601 of the Specifications:

- (f) The installation of new asphaltic plug expansion joints.

B 6603 JOINTS IN STRUCTURES

(g) Installing the expansion joints

Add the following at the beginning of Sub-clause 6603(g) of the Specifications:

If required by the Engineer, the specialist sub-contractor shall arrange for the attendance on site of the manufacturer or supplier of the joint system, particularly during the mixing and placing of the elastic asphaltic plug joint material. The handling, storing, mixing and placing of the elastic asphaltic plug joint material shall be in accordance with the manufacturer's recommendations and instructions for use.

The joints shall be formed as follows:

The previously laid asphalt surfacing shall be cut with a diamond saw blade to correspond with the specified width of joint, and all material shall be removed from the joint recess. The concrete surfaces of the recess shall then be sandblasted or scabbled to expose the aggregate and to ensure a clean rough contact surface with the joint material. Where applicable, the joint recesses shall continue up into the kerbs. Where the concrete is too uneven, it shall be levelled either by scabbling the high spots or by building up the low spots with an approved non-shrink quick setting mortar to ensure that the bridging plates for asphaltic plug joints are well bedded on the concrete surface.

Where the concrete surface of the recess is unsound or where the recess is more than 40 mm deeper than specified, it shall be repaired or built-up as specified in Subclause B6603(h). Where the recess is too shallow or narrow, additional breaking will be required.

Add the following new Sub-clauses:

(h) Repairing and preparation of concrete in the joint recess

Where the concrete in the expansion joint recess is unsound or where the recess is more than 40 mm deeper than specified, it shall be repaired or built-up before the joint is installed. This shall be done as follows:

All loose and unsound concrete shall be removed and the sound concrete scabbled to ensure a clean rough surface. Preparation of the faces will include cleaning with pressure jetting as well as mechanical means, i.e. a wire brush, brush cup, angle grinder or other mechanical means.

The edges of the recess to be repaired shall be recessed at least 10mm to avoid feather edges. The area to be patched or built-up shall be shuttered if required and then repaired with a fast set non-shrink factory packed concrete such as Speedcrete as supplied by Bridge Seals and Products (Pty) Limited, or similar approved. When instructed by the Engineer, the patching material shall be anchored to the existing concrete by means of 10mm diameter dowels grouted into holes drilled into the concrete. The use of dowels will only be required when the depth of the patching mortar exceeds 80 mm.

(i) Water tightness test

On completion of the joint or component installation the contractor shall perform a water tightness test of the joint. The test shall consist of ponding water to an average depth of 150mm provided that at no place the depth shall be less than 50mm above the joint constructed under the particular phase of work (i.e. the half width). The ponding shall be maintained for a period of one hour and if no evidence of leakage is detected the joint shall be accepted as being of watertight construction.

If the joint is found to be leaking, the Contractor shall remedy the situation and repeat all subsequent tests on the affected section of joint at his own cost.

The testing shall be carried out immediately on completion of the section of joint to take advantage of the accommodation of traffic arrangement in existence at the time.

(j) Temporary bridging

Due to restricted hours within which construction can take place, it will be necessary to carry out the work in stages. It will thus be necessary to provide temporary bridging of the affected areas to facilitate the crossing of traffic during the interim periods when work is prohibited and the road open to traffic. The bridging may comprise heavy steel plates of 25 mm minimum thickness with beveled edges of at least 45°, or temporary infill material that will not ravel during the period that it is subjected to traffic. The method employed by the Contractor shall be subject to the approval of the Engineer.

B 6609 ANCILLARY REPAIR WORK

When instructed by the Engineer, the Contractor shall effect other repair work. The repair work comprises work that has not been specified, detailed or scheduled separately in the schedule of quantities and includes the repair of:

Existing damage.

Damage caused by the Contractor:

That could not have reasonably been anticipated at tender stage or avoided during construction.

That was not caused as a result of negligence or lack of care exercised by the Contractor during construction.

Of which the repair cost is not included in the rates tendered for the scheduled items.

The Engineer shall be the sole judge of the validity of the above provisions under the given conditions and whether payment is due to the Contractor under the circumstances.

B 66.08 MEASUREMENT AND PAYMENT

Amend pay item 66.05 as follows:

Item	Unit
B66.05 Expansion joints	
(a) Asphaltic plug in roadway.....	meter (m)

The unit of measurement shall be the meter of complete expansion installed over the roadway.

In addition the Contractor must also make provision in his rates, as applicable, for the opening of test holes in the existing pavement at the joint location in order to confirm the proposed joint details before commencement of the installation.

Payment shall be made in two installments, 80% at completion of the joint installation and the remaining 20 % after the water tightness has been tested and accepted by the Engineer.

The unit of measurement for sub-item (e) in respect of increases or decreases in binder material due to variation in the specified joint size shall be the liter of binder material. Payment for variation shall be made as specified in clause 1213.

Add the following new pay items:

Item	Unit
B 66.27 Preparation of joint recess for the installation of asphaltic plug in roadway.....	meter (m)

The unit of measurement for the preparation of the joint recess across the roadway shall be the meter of recess prepared. This item applies only to the joint recess in the existing concrete and surfacing and the joint recess shall be deemed to include the recess on either side of the joint centre-line.

The tendered rate shall include full compensation for all supervision, transport, labour, plant, materials and equipment required; to saw-cut asphalt and concrete; to remove and dispose of all asphalt, concrete and materials within the recess; and to prepare the surface of the recess for a satisfactory bond with the joint material including, where applicable.

Item	Unit
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B 66.28 Testing for water-tightness.....	number (No)
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The unit of measurement shall be the number of one meter wide sections of expansion joint first tests carried out. Payment will not be made for repaired or replaced joints producing a failed result.

The tendered rate shall include full compensation for providing and maintaining the pond, carrying out the test as well as for the water, materials, equipment, incidentals and labour required for the testing and removal and clearing away the pond on completion.

Item	Unit
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B 66.29 Additional elastic asphaltic plug expansion joint material to build up in recesses and/or existing seal leaking joints	liter (l)
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The unit of measurement shall be the liter of elastic material in place. Quantities shall only include the additional quantity of elastic material required if the recess is deeper than the depth of the elastic material specified on the drawings and if it is impractical to build-up the concrete with a suitable patching material. The use of additional elastic material must be approved by the Engineer prior to installation.

The tendered rate shall include full compensation for supplying, transporting, handling and storing all materials required for the installation of the elastic material and including all labour, equipment and consumables. The tendered rate shall also include the removal and replacing of expansion joint cover plates and for cleaning of surfaces prior to installing the elastic material.

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

B 66.30 Patching material to build up concrete in expansion joint recess - Speedcrete or similar approved	liter (l)
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The unit of measurement shall be the liter of patching material in place. No deduction in volume measured for payment shall be made for the volume of any reinforcement embedded in the patching material.

The tendered rate shall include full compensation for supplying all materials, applying the primer, all labour, equipment and incidentals required for placing the patching material in the recess as specified and for all waste material.

Item	Unit
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B 66.31 Temporary bridging of expansion joint recess	
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(a) Temporary infill (asphaltic plug joints)	meter (m)
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(b) Bridging (concrete nosings joints)	meter (m)
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The unit of measurement for sub-item (a) shall be the length of temporary infill provided in accordance with the details given in sub-paragraph B6603 (j) of the Project Specifications. The unit of measurement for sub-item (b) shall be the length of temporary bridging provided in accordance with the details given in sub-paragraph B6603 (j) of the Project Specifications. Measurement shall be along the length of the expansion joint and will be measured once only for each expansion joint irrespective of the number of times the temporary infill has to be constructed or of the number of re-uses of the bridging plates.

The tendered rate shall include full compensation for the supply and transport to site of the units and infill materials, for all the tools, equipment, incidentals and labour required for erecting of the units in place or constructing the temporary infill, for re-using the bridging plates as required, for maintaining the temporary infill material and steel plates and/or for demolition and removal of the units or temporary infill material upon completion of the construction of the joints.

SECTION 8100: TESTING MATERIALS AND WORKMANSHIP**B8108 DETERMINING THE TOTAL APPROXIMATE DRY BULK RELATIVE DENSITY AND THE APPARENT DENSITY**

Add the following to the end of sub-clause 8108 (b) (iii)

"For materials where the total water absorption, when determined according to TMH1 Methods B14 and B15, is in excess of 1,5%, the Apparent Density shall be calculated in accordance to the following formula:

$$\frac{(b - a)}{(d - a) + \{ (w - 1.0)/100 \times (b - a) \} - (c - b)}$$

This formula shall be used as an alternative to note (5) regarding soaking period, when so instructed by the engineer."

Add the following pay item :

B 8117 MEASUREMENT AND PAYMENT

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

B 81.04 Provision for commercial laboratory testing

- | | |
|--|-----------------|
| (a) Actual cost of testing | Provisional Sum |
| (b) Contractor's charges in respect of sub-item B 81.04(a) above | Percentage (%) |

Expenditure under this item shall be made in accordance with the Conditions of Contract.

The provisional sum is allowed to cover the cost of all authorized testing carried out by commercial laboratories on the instructions of the Engineer, as well as the transport of the relevant samples. The Contractor shall be required to pay for all testing instructed by the Engineer and carried out by a commercial laboratory and the Contractor shall be reimbursed for the invoiced costs. Measurement and payment shall be based on invoices submitted to the Engineer.

The item does not include for the Contractor's own control testing of workmanship and materials.

The tendered percentage is a percentage of the amount actually spent under subitem (a) and shall include full compensation for all charges and incidental costs of the Contractor, profit and overheads in connection with the laboratory testing.

Payment for expenditure under this item will be made in full as and when the money is expended subject to written proof by the Contractor of payment of the amounts and receipt by the Engineer of the results of the testing undertaken. No payment other than that provided above will be made in respect of laboratory testing.

SECTION 8300: QUALITY CONTROL (SCHEME 2)**B8301 SCOPE**

Add the following:

Quality control scheme 2 as set out in this section shall apply to this tender.

B8305 PROCEDURES**(d) Cementitious binder content of stabilized layers and uniformity of mix.**

Replace "50 samples" with "6 samples" in the entire paragraph ii)

Replace "not more than 12" with "not more than 2".

Table 8305/1

Add the following:

Layer	Prescribed Compaction	Unit of measurement	Minimum average relative compaction for the following sample sizes						Minimum value for any single test for the following sample sizes					
			4	5	6	7	8	9	4	5	6	7	8	9
Recycled granular base	98,0%	Mod. AASHTO density	98,1	98,4	98,6	98,7	98,9	99,0	94,4	94,2	94,0	93,9	93,8	93,7

Table 8307/1

Add the following:

Property	Structure
Relative compaction	(iv) Recycled granular base

Table 8307/2

Add the following:

Property	Structure	Rejection limits (L_r and L'_r)
Relative compaction	(c) Recycled granular base	$L_r = (L_a - 2,000) \% \text{ relative compaction}$
Net bitumen content	Recycled granular base	$L_r = (L_a - 0,200) \%$ $L'_r = (L'_a + 0,200) \%$ Values of L_a and L'_a for specified net bitumen content $< 2,0\%$ $L_a = 0,90 \times \text{specified net bitumen percentage}$ $L'_a = 1,10 \times \text{specified net bitumen percentage}$ <u>Values of L_a and L'_a for specified net bitumen content $\geq 2,0\%$</u> $L_a = 0,95 \times \text{specified net bitumen percentage}$ $L'_a = 1,05 \times \text{specified net bitumen percentage}$

B8307 CONDITIONAL ACCEPTANCE

(e) Applying the payment-reduction factor

Add the following: **Recycled granular base** Items C10.01, C10.02, C10.03

PART C: ENVIRONMENTAL SPECIFICATIONS

This part of the Project Specifications contains comprehensive additional standard specifications for Environmental matters not covered by the Standard Specifications.

The number of each clause and each payment item in this part of the Project Specification is prefixed with a C to differentiate these clauses and items as additional works.

The following additional specifications are covered under this part of the Project Specifications:

SECTION C1000 : ENVIRONMENTAL MANAGEMENT

CONTENTS

- C1001 SCOPE**
- C1002 ENVIRONMENTAL MANAGEMENT PLAN**
- C1003 REHABILITATION**
- C1004 EMERGENCY**
- C1006 ENVIRONMENTAL AUDITING AND PENALTIES**
- C1007 MEASUREMENT AND PAYMENT**

C1001 SCOPE

The following Environmental Management Plan (EMP) is intended to assist the appointed Contractors to fulfil the environmental requirements of the project. The objective of the EMP is to ensure that the potential impacts upon the environment are minimized, and that upon completion of each section of work the area is left in a clean and sustainable condition.

Overall the environmental impacts of the project are considered to be low as long as the listed procedures are followed. These are given in the Environmental Specification in C3.5.

The Contractor is advised that there are cost implications to the EMP and these must be factored into the tendered price.

C1002 ENVIRONMENTAL MANAGEMENT PLAN

C2.1 Objectives

The prime objective of the EMP is to minimize or avoid significant environmental impacts by using a proactive approach and planning procedures.

The second objective is to have a plan in place to rehabilitate areas that have been impacted upon and, thirdly,

To have a plan in place for emergency situations that arise and are detrimental to the environment e.g. fuel or bitumen spills.

The Contractor will be responsible for the day-to-day implementation of the EMP. During the course of construction regular compliance audits will be undertaken. This environmental auditing will be conducted by qualified environmental practitioners.

C2.2 Environmental Control Officer (ECO)

An ECO will oversee the environmental aspects of the construction phase of the project in consultation with the Engineer and Contractor.

The ECO will attend the monthly site meetings and report back to the meeting with regards compliance of the Contractor to the environmental specifications.

The ECO will not issue site instructions directly to the Contractor. All instructions to the Contractor will be issued via the Engineer. Similarly, any queries that the Contractor may have can be directed to the ECO via the Engineer.

C2.3 Environmental Awareness Program

The Engineer will implement an Environmental Awareness Program for the Contractor, his staff, sub-contractors and all people working on the project. The initial session will be immediately prior to construction commencing.

C2.4 Method Statements

The Contractor shall submit written method statements for activities that are identified by the Engineer, together with the ECO, as being potentially harmful to the environment, or for work that is to be undertaken in areas identified as being environmentally sensitive.

Such activities include dewatering of excavations, pumping, working with cement, erection of construction camps and fuel stores, etc.

The Method Statement shall cover applicable details with regard to:

- construction procedures,
- materials and equipment to be used,
- getting the equipment to and from site,
- how the equipment/ material will be moved while on site,
- how and where material will be stored,
- the containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur,
- timing and location of activities,
- compliance/ non-compliance with the Specifications, and
- any other information deemed necessary by the Engineer.

Method statements shall be submitted at least 10 days prior to commencing work on the activity to give the Engineer and ECO time to study the method statement and consult with contractor and specialists and to obtain written approval of the method statements. The Contractor shall not commence on that activity until such time as the method statement has been agreed to in writing by the ECO and Engineer. This will be done within this 10 day period.

Any changes required to the method statements once construction has commenced must be agreed upon in writing with the Engineer and ECO before being instituted.

C2.5 Working Areas

The scope of the work, as defined in the tender documentation, limits the working areas to the road reserve. Regardless of the extent of the work, the following applies to all of these areas :

- All materials must be stockpiled or stored in a designated area (at each site) avoiding sensitive areas such as river banks, wetlands, etc..
- No materials must be left on site once work is completed neither may they be dumped at any other place on site.
- Litter bins and containers for waste materials must be provided by the Contractor at each site. Bins should be weatherproof and scavenger proof.
- All waste must be placed in the bins and containers. No waste may be left lying on the site.
- Visible anti-litter signs must be displayed around the waste collection points and all employees must be encouraged to observe site rules pertaining to solid waste management practices. A concerted effort should be made to collect and dispose of materials suitable for recycling, separately from the other solid waste.
- No burning or burial of waste is permitted.
- Any soils contaminated by the contractor must be removed or rehabilitated. If a significant amount of soil has to be removed fresh soil must be imported and the site rehabilitated by grading and planting vegetation.
- All waste must be removed to an authorized landfill site, or taken to a facility for recycling.
- Any excess road building materials must either be:
 - (i) taken to a site for stockpiling and future re-use,
 - (ii) used for localized rehabilitation, or
 - (iii) removed from site by the contractor for disposal.

- The contractor shall provide waste bins for solid waste collection and storage. Such bins should be placed at designated areas within the site. The refuse collected from the site must be removed for landfill disposal at least once a week.
- Vehicles may not park in the road reserve except with the prior permission of the engineer as stated in Clause B1502.
- Every care should be taken to avoid damaging vegetation or land when vehicles are in use.
- Fuel tanks, pumps, and all equipment using oil, diesel, etc. must have drip trays. The drip trays must have sufficient capacity to contain liquids that will spill in the case of failure of the tanks, etc. The waste liquids taken from the trays must be disposed of at a landfill which permits disposing of liquid wastes.
- Only emergency repairs to vehicles and equipment may take place on site. Where emergency repairs take place it is the responsibility of the contractor to ensure that all waste (e.g. spare parts and oils) are removed from site as soon as possible. All other repairs must take place at a yard off-site, where facilities are suitable and waste facilities are appropriate.
- Whenever practical a tarpaulin should be laid down, prior to emergency repairs taking place, to protect the environment from contamination.
- No natural vegetation may be gathered, removed or destroyed in the course of the project, except where agreed to by the landowner.
- No hunting is permitted.
- Fires are prohibited.
- Erosion control measures must be implemented if the need arises.
- Pollution of water courses by any means must be avoided.
- No defacement of any natural or other features will be allowed; this includes markings for road works, unless markings are restricted to the road surface.
- Dust suppression measures should be implemented if and when required.
- Chemical toilets must be provided at all sites and must be within walking distance of the workers. They must be serviced on a regular basis in order to be kept clean and hygienic. The toilets must be placed in a sheltered place and should be locked after working hours if they are outside a camp area.
- All waste from toilets must be disposed of at a permitted landfill or waste treatment works.

C2.6 On-site Workers Camp

C2.6.1 Site Camp

The campsite selection should be carried out in consultation with the landowner or relevant authority. The site must be selected with due regard to the environment. Due care should be taken to avoid areas where sensitive vegetation and habitats occur.

When the site selection process has been completed, the contractor will define the boundaries of the site and erect a fence with a controlled access around it if practical.

All activities associated with the camp must be restricted to the demarcated area.

It is the responsibility of the contractor to ensure the safety of all personnel within the boundaries of the site. The contractor should have an on-site contingency plan detailing measures to be observed in the case of a health, safety or environmental emergency.

The contractor should ensure that the employees have a clear understanding of safety regulations and procedures.

C2.6.2 Water, wastewater, and storm water

Site occupants must have access to safe drinking water.

If water is stored on site a clear distinction should be made between drinking water and multi-purpose water storage facilities.

All water used on site must be taken from a legal source and comply with recognized standards for potable and other uses.

If water is taken from rivers or streams the contractor must ensure that the taking and use thereof complies with the National Water Act and the Regulations of the Act.

Wastewater that is contaminated with soaps, detergents and other undesirable materials, such as grease and oils, should be collected in conservancy tanks and disposed of safely in a wastewater treatment facility.

It is illegal to discharge water into a public stream if the quality does not conform to required health standards.

In all camps storm water must be managed to prevent erosion.

Run-off will be diverted to control ponds so that silt may settle and any pollutants are trapped.

Subsequently, any pollutants must be treated, or removed and disposed of at a permitted landfill site or recycling facility.

All materials should be protected from the rain to prevent them being washed into storm water channels.

C2.6.3 Ablution Facilities

The contractor shall provide proper and adequate sanitary facilities for all the site employees.

These facilities shall be maintained in good and working condition at all times. Odors emanating from these facilities should be controlled within acceptable levels.

Provision must be made for washing of clothes as washing in rivers and water bodies is strictly forbidden.

C2.6.4 Fires and Cooking Facilities

Fires will not be allowed.

The contractor must supply cooking facilities that are suitable for the environment and are not liable to cause the outbreak of fires.

Firefighting equipment must be supplied by the Contractor at suitable locations.

C2.7 Plant and Equipment Storage Facility

C2.7.1 Plant

At the end of the shift all plant should be driven or transported back to the campsite for proper and safe overnight storage.

Plant and equipment must not be driven into the veld unless prior agreement is made with the landowner.

If plant is moved into the veld for temporary storage then care must be taken to minimize damage to the vegetation.

The contractor should ensure that equipment left elsewhere is stored in a manner that will not impact negatively upon the environment.

The plant should be regularly inspected for fuel and oil leaks that may be harmful to the environment, and/or aquatic life if washed into a stream or river.

C2.7.2 Hazardous Materials

Hazardous materials should be stored under lock and key in designated areas with properly displayed and visible warning signs.

All storage of hazardous materials must comply with legislation and regulations

C1003 REHABILITATION

Upon completion of each section of work the site must be cleared of all equipment, waste and any rehabilitation work must be undertaken. This may include local grading of soils and re-vegetation where sites have been disturbed.

Immediately after the demolition of the campsite, the contractor shall restore the site to its original state, paying particular attention to its appearance relative to the general landscape.

It is imperative that any potential erosion problems are addressed. This may require subsequent site visits to monitor the efficacy of erosion control measures.

C1004 EMERGENCY PLANS

The onus is on the contractor to assess the potential risks to the environment as a result of the project. For example, accidental spillage of materials may pollute the soil or any water body.

The contractor must draw up a suitable emergency plan to contain such pollution. The emergency plans and procedures must be taught to all the workers on site, so that everyone is prepared to cope with an emergency.

Appropriate equipment must be available to carry out the emergency plans.

C1005 ENVIRONMENTAL AUDITING AND PENALTIES

On a regular basis, a qualified auditor will carry out a site audit to ascertain and verify the contractor's level of compliance with the requirements of the EMP

Transgression will be treated as a contravention of the contractual agreement.

Deviation from these prescribed requirements will be met with penalties that are intended to enforce compliance.

It is a requirement that the contractor keep concise records of mitigatory measures undertaken at each site to minimize environmental impacts.

Any emergency situations that impact upon the environment should be recorded by the contractor together with the action that was taken to rehabilitate and remediate the site.

A copy of all completed environmental audits will be given to the contractor and the engineer by the Engineer.

Any public complaints regarding the environment must be recorded and discussed with the Engineer to determine an appropriate course of action.

The contractor will be responsible for all costs incurred in the rehabilitation of sites.

The contractor will be responsible for all costs incurred where emergency procedures are implemented to deal with accidents that impact upon the environment.

The contractor will be responsible for ensuring that all procedures required to rehabilitate all sites are implemented.

If third parties are called to the site to perform clean up and rehabilitation procedures, the contractor will be responsible for all costs.

Penalties will be imposed for contravention of the EMP, as follows:

- (i) A fine of R250 per day will be imposed should the contractor fail to remove waste from the site upon completion of each section of work or when given written instructions to do so by the Engineer.
- (ii) A fine of R500 will be imposed for each mature tree damaged.
- (iii) A fine of R1000 will be imposed for each incident involving damaging or polluting wetlands, rivers and surrounding areas.

C1007 MEASUREMENT AND PAYMENT

Item	Unit
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C10.01 Contractor's obligations in respect of Environmental Management

- | | |
|--|---------------------|
| (a) Environmental Control Officer (ECO)..... | lump sum |
| (b) Environmental aspects and impacts | lump sum |
| (c) Provision of environmental emergency measures | prime cost (PC) sum |
| (d) Contractor's charge to allow for handling costs and profit in respect
of sub-item C10.01(c) | percentage (%) |
- (i) Payment of the lump sum tendered in sub-item C10.01(a) shall include full compensation for all costs resulting from the recruitment, employment of a designated Environmental Control Officer (ECO), the control and management of, the on-site hands-on and in-house Training for, the provision of transport to and from the training venues for, and the assistance rendered to personnel, staff and equipment engaged in construction and other tasks on the site of Works. The cost of the on-site Training facility if specified is measured and paid for under Section 1400 of the Schedule of Quantities.
- The lump sum tendered in sub-item C10.01(a) will be payable monthly in installments in relation to the month under consideration and the total time of the completion of the Works.
- (ii) Payment of the lump sum tendered in sub-item C10.01(b) shall include full compensation for complying with the requirements in respect of the environmental management plan as specified.
- The lump sum tendered in sub-item C10.01(b) will be payable monthly in equal installments over the full duration of time for completion of the Works.
- (iii) Payment under the PC sum provided in sub-item C10.01(c) to cover costs incurred in complying with the requirements in respect of the provision of environmental emergency measures effected in accordance with the provisions of Clause 6.6 (GCC 2015) of the General Conditions of Contract.
- (iv) The tendered percentage in sub-item C10.01(d) is the percentage of the amount actually spent under sub-item C10.01(c) that will be paid to the Contractor in full compensation for the Contractor's handling costs and profit in respect of the provision of environmental emergency measures.

PART D: LABOUR SPECIFICATIONS

This part of the Project Specifications contains comprehensive additional specifications for matters not covered by and work which is not carried out in terms of the Standard Specifications.

The number of each clause and each payment item in this part of the Project Specification is prefixed with a D to differentiate these clauses and items as additional works.

The following additional works are covered under this part of the Project Specifications:

SECTION D : LABOUR BASED WORK AND TRAINING REQUIREMENTS

ADDITIONAL SPECIFICATIONS

CONTENTS

D1	:	GENERAL
D2	:	LABOUR INTENSIVE COMPETENCIES OF SUPERVISORY AND MANAGEMENT STAFF
D3	:	LABOUR BASED ACTIVITIES
D4	:	EMPLOYMENT OF LOCAL LABOUR
D5	:	COMMUNITY LIAISON OFFICER (CLO)
D6	:	CONDITIONS OF EMPLOYMENT OF TASK-BASED WORKERS
D7	:	EMPLOYMENT OF UNSKILLED AND SEMI-SKILLED WORKERS IN LABOUR-INTENSIVE WORKS
D8	:	TASK WORK RELATED ACTIVITIES
D9	:	TRAINING
D10	:	MEASUREMENT AND PAYMENT

D1 GENERAL

It is a requirement that this Contract is executed using labour based methods. All labour used in the execution of the contract, excluding artisans, technical staff and supervisory staff, must be employed from the Westlake local community. This Contract shall be carried out strictly in accordance with the guidelines for the Implementation of Labour-Intensive Infrastructure Project under Expanded Public Works Program (EPWP). Before construction commences, every task shall be agreed to with the community and people will be employed and trained accordingly.

The aim of this labour-based construction project is to afford the maximum number of residents of local community the opportunity to obtain temporary employment. It will enable these temporary workers to obtain accredited on-the-job training, increase their level of experience and enhance their ability to secure future employment.

The construction is to be planned in such a way that those operations that can be done reasonably by means of hand labour are carried out in such a manner.

D2 LABOUR-INTENSIVE COMPETENCIES OF SUPERVISORY AND MANAGEMENT STAFF

Established contractors shall only engage supervisory and management staff in labor-intensive works that have either completed or, are registered for training towards, the skills program outlined in Table 1 overleaf.

Table 1: Skills program for supervisory and management staff

<u>Personnel</u>	<u>NQF level</u>	<u>Unit standard titles</u>	<u>Skills programme description</u>
Team leader / Supervisor	2	Apply Labour-Intensive Construction Systems and techniques to Work Activities	This unit standard must be completed, and
		Use Labour-Intensive Construction Methods to Construct and maintain Roads and Storm water Drainage	Any one of these 3 unit standards
		Use Labour-Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	
Foreman / Supervisor	4	Implement Labour-Intensive Construction Systems and Techniques	This unit standard must be completed, and
		Use labour-Intensive Construction Roads and Storm water Drainage	Any one of these 3 unit standards
		Use Labour-Intensive Construction Water and Sanitation Services	
		Use Labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent / Manager (i.e. the contractor's most senior representative that is resident on the site)	5	Manage labour-Intensive Construction processes	Skills Program against this single unit standard
Details of these skills programs may be obtained from the CETA ETQA manager (e-mail: Gerard@ceta.co.za , Tel: 011-265 5900)			

<u>Personnel</u>	<u>NQF level</u>	<u>Unit standard titles</u>	<u>Skills programme description</u>
Team leader / Supervisor	2	Apply Labour-Intensive Construction Systems and techniques to Work Activities	This unit standard must be completed, and
		Use Labour-Intensive Construction Methods to Construct and maintain Roads and Storm water Drainage	Any one of these 3 unit standards
		Use Labour-Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	
Foreman / Supervisor	4	Implement Labour-Intensive Construction Systems and Techniques	This unit standard must be completed, and
		Use labour-Intensive Construction Roads and Storm water Drainage	Any one of these 3 unit standards
		Use Labour-Intensive Construction Water and Sanitation Services	
		Use Labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent / Manager (i.e. the contractor's most senior representative that is resident on the site)	5	Manage labour-Intensive Construction processes	Skills Program against this single unit standard
Details of these skills programs may be obtained from the CETA ETQA manager (e-mail: Gerard@ceta.co.za , Tel: 011-265 5900)			

D3 LABOUR BASED ACTIVITIES

The following activities have been identified as suitable for labour based methods:

(a) Activities

	Activity
Earth Side Drains	Excavate earth side drains
Mole Barriers	Trench excavation for mole barriers Install mole barrier sheeting Backfilling of mole barrier trenches Soil crete capping
Clearing and Grubbing	Removal of vegetation (excluding trees) Clearing out of hydraulic structures
Traffic Accommodation	Operating of STOP and GO-RY signs Operating of traffic signals Erection and relocation/moving traffic control devices
Subsoil drainage	Trench excavation for subsoil drainage (soft material) Backfilling of subsoil drainage system Installation of pipes in subsoil system Installation of filter fabric in subsoil system Shaping to accommodate drainage
Prefabricated Culverts	Trench excavation for culverts (soft material) Placing of pipe culverts Backfilling trenches Concrete work: mixing and casting and formwork Placing and fixing of reinforcement Brick work Construction of manholes, kerb inlet and grid inlet structures
Work relating to services	Excavation to determine position of existing services
Concrete kerbing and channeling	Lay concrete kerb (including excavation) Lay concrete kerb and channel (including excavation)
Concrete lined side drains	Trimming of excavations for concrete lined side drains (soft material) Concrete work: mixing and casting and formwork Construction of sealed joints Installation of Polyethylene sheeting
Protection against erosion	Packing of stones for stone pitching (Method 1 and Grouted stone pitching) Concrete work: mixing and casting for concrete bed
Road signs	Excavation of road sign supports Backfilling of road sign supports Erecting supports and road signs
Road marking	Installation of road studs
Landscaping and erosion control	Mowing grass Cutting trees

The listed activities relating to subsoil drains and mole barriers are compulsory activities which the Contractor shall undertake by task-based workers. The remainder of the activities are optional for the Contractor to obtain his tendered labour targets.

(b) Manufactured Elements

Elements manufactured or designed by the Contractor, such as precast kerbs, cover slabs, masonry units and edge beams shall not individually, have a mass of more than 320kg. In addition, the items shall be large enough so that four workers can conveniently and simultaneously acquire a proper handhold on them.

The Contractor may also propose to the Engineer additional labour based activities, or alternative activities in place of any of the abovementioned activities that cannot be executed using labour based methods due to unforeseen and abnormal circumstances.

However, the Contractor's obligation in providing the stipulated amount of paid employment to members of the local community (as described in clause D1) will still have to be met.

D4 EMPLOYMENT OF LOCAL LABOUR

Tenderers are required to submit full details of the activities for which they intend to employ local labour. For this purpose Form D1 : Tenderer's Direct Participation of Targeted Labour in T2.2 : Returnable Schedules must be completed and signed.

Tenders will be partially evaluated on the amount of money spent on labour, as calculated from the total number of person days of temporary employment offered supported by the detail information supplied in the abovementioned Annexure. Once a tender is accepted, this information will become contractually binding.

The amount of employment actually provided, measured as paid tasks will be recorded and certified by the Engineer. Any shortfall at the completion of the contract will result in a reduction in payment to the Contractor. This will be calculated as covered in the Special Conditions of Contract. Any surplus in person days provided will not result in additional payment.

The aim of task-based labour is to link payment of the labour force to productivity. An increase in productivity can lead to higher pay, by applying the task-work principle. The Contractor will thus be required to remunerate the labour based workers for tasks completed. The size of tasks must be determined from production rates based on the Contractor's previous experience and production rates proposed by SAFCEC (See Clause D7) and their sources covered in the EPWP Guidelines. Production rates must be submitted by the Contractor in Form D1 : Tenderer's Direct Participation of Targeted Labour in T2.2 : Returnable Schedules.

D5 COMMUNITY LIAISON OFFICER (CLO)

In order that the employment of local labour proceeds smoothly, a community representative will be identified and appointed as the Community Liaison Officer (CLO). The status and duties of the CLO are listed below:

D5.1 Status of the CLO

The CLO is nominated by the Employer in conjunction with the community representation structures, and is appointed by the Engineer. He will attend all project meetings. The CLO will be appointed for the duration of the construction phase of the contract.

The CLO will be administered by the Engineer and paid by the Employer via the disbursements of the Engineer. The CLO will work from his own office in the Engineer's camp. His duties will be to identify, screen and nominate labour from the community in accordance with the Contractor's requirements. He will communicate and agree with the Contractor daily regarding labour requirements.

Should it become apparent that the appointed CLO fails to perform his duties satisfactorily, he may be relieved from his duties and be replaced by a new CLO. These steps can only take place in consultation with and with approval of the Employer and community representation structures.

D5.2 Duties of the CLO

The CLO will be available on site daily between the hours of 07h15 and 10h30, and at other times as the need arises. His normal work day will extend from 07h15 in the morning until 17h15 in the afternoon.

The CLO will consult with the Contractor and the Engineer daily, to determine the labour requirements regarding amount and skills. Together with the Contractor he will determine the needs of the local labour for relevant technical training. Again he will be responsible for the identification of suitable candidates for training. He will also be required to attend some of the training sessions.

The CLO is responsible to screen all candidates, to inform them of their conditions of temporary employment and to ensure their timeous availability. He will ensure that all labourers who are involved in activities where productivity rates determine their income, are fully informed regarding principles of task work, the measurement methods and production rates.

The CLO will attend disciplinary proceedings and ensure that hearings are fair and in accordance with pre-determined guidelines. If any form of labour dispute or labour unrest threatens to delay the contract, the CLO must identify the potential problem early and bring to the attention of the Contractor, Engineer and the community representation structures. He must do everything within his capability to sort out any problems as quickly as possible.

He will also be responsible to inform the task-based workers timeously when their services will no longer be required.

The CLO will keep a daily written record of his interviews and liaison with the community. He will attend the first part of the monthly contractual site meetings to report about the local community labour involvement as well as any other relevant aspect that needs attention. He will act as a liaison officer between the Contractors on site and the community representation structures to ensure that their co-operation is obtained and that their decisions are accommodated in the contract.

D5.3 Termination of Service of the CLO

The CLO can, at any time with due regard to the agreed period of notice, be relieved of his duties and replaced with a new CLO, as a result of the following circumstances, amongst others:

- i) Failure to perform duties
- ii) No longer acceptable to community
- iii) The CLO leaving the community and establishing himself in another community
- iv) Any breach of the code of conduct that justifies dismissal

On dismissal the CLO will be replaced with a person that is appointed on the same basis as in D5.1.

D5.4 Remuneration

The remuneration of the CLO shall be determined jointly by the Contractor, the Engineer and the Employer. A Prime Cost Sum is provided in the Schedule of Quantities to cover the remuneration of the Community Liaison Officer.

D9 TRAINING

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

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

D10 MEASUREMENT AND PAYMENT

Measurement and payment for all work executed in terms of training shall be measured and paid for in accordance with the principles set out in these project specifications. Except as may be specifically provided for in the schedule of quantities, no additional payment will be made for any of the extra costs which will be incurred as a result of the additional supervision required for managing labour intensive activities and for providing informal training to the workers. The Contractor shall make suitable allowance for these costs in his tendered rates for the various work items. Additional allowance must also be made for the involvement of senior staff members, directors and managers in training and guidance of emerging contractors and attendance at meetings and discussions in respect of all training matters.

Except as specifically provided in the relevant pay items included in the Bill / Schedule of Quantities no additional payment will be made to the Contractor in respect of the execution of the prescribed and approved training program. Full compensation for training costs not covered by following pay items shall be deemed to be provided by the rates tendered for the Contractor's general obligations.

Item	Unit
D10.01 In-Task Training of Local Labour	Lump Sum

The amount covers the cost of additional training including supervision, materials, plant, time and other incidentals necessary for the in-task training of local labour. Payment of this item will be on a pro-rata basis of the actual number of person days worked against the total person days tendered.

Item	Unit
D10.02 Accredited Training of Local Labour by an Approved Services Provider	Prime Cost (PC) Sum

A Prime Cost (PC) Sum has been provided for the Accredited Training of Local Labour. The Engineer, Contractor and the approved Service Provider will agree on the actual costs before a training scheme is implemented and the Contractor will be reimbursed on the basis of this agreement. Actual costs will include the following:

- a) actual training costs
- b) payment to the temporary employee during this time
- c) costs of providing certificates
- d) costs of administration of the training
- e) costs of infrastructure

The Contractor's time costs are not included here because they are covered by the General Items.

Item	Unit
D10.03 Training allowance paid to labour in terms of formal training	Provisional Sum

This item allows for the payment of labour who attends the formal training.

Item	Unit
D10.04 Extra-over item D10.03 for the administration of payment allowances to targeted labour	Percentage (%)

Item	Unit
D10.05 Transport and accommodation cost of workers for training where it is not possible to undertake the training in close proximity the site	Provisional Sum

A Provisional Sum has been allowed for the transport and accommodation cost of workers for training. The Engineer and Contractor will agree on the actual costs for training and accommodation of the workers.

Item	Unit
D10.06 Management of Labour-Based Work	Lump Sum

An item is included in the Schedule of Quantities to allow for any additional costs the Tenderers feel entitled to, in order to comply with the requirements of the labour-based contract. The Sum tendered shall cover the costs of increased supervision, administration, management, liaison with the local community, applicable items due to the lead time required for in-task training plus any other costs which are not covered by items in the Schedule of Quantities.

Payment of this item will be made on a pro rata basis as for Time Related Items.

Item	Unit
D10.07 Workman's Compensation Act	Lump Sum

The amount covers the costs of paying the necessary workmen's compensation levies, the cost of administration as well as any other incidentals necessary regarding the requirements and implementation of the Workmen's Compensation Act.

Pro-rata amounts of the sum tendered, based on the number of temporary employees engaged, will be paid each month.

Item	Unit
D10.08 Community Liaison Officer (CLO)	
(a) Remuneration of Community Liaison Officer (CLO)	Prime Cost (PC) sum
(b) Contractor's charge to allow for handling costs and profit in respect of sub-item D10.08(a)	percentage (%)

Payment under the Prime Cost (PC) sum provided in (a) to cover the employment and remuneration of the Liaison Officer shall be effected in accordance with the provisions of Clause 6.6 (GCC 2015) of the General Conditions of Contract.

The tendered percentage in sub-item (b) is the percentage of the amount actually spent under sub-item (a) that will be paid to the Contractor in full compensation for the Contractor's handling costs and profit in respect of the employment and remuneration of the Community Liaison Officer.

GEORGE MUNICIPALITY**TENDER No. T/ING/004/2022****TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND
ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS****C3.5 Management****CONTENTS**

1. PLANNING AND PROGRAMMING
2. FORMS FOR CONTRACT ADMINISTRATION
3. PARTICIPATION OF TARGETED LABOUR
4. COMMUNITY LIAISON OFFICER
5. ENVIRONMENTAL MANAGEMENT PROGRAMME
6. HEALTH AND SAFETY

1. PLANNING AND PROGRAMMING

The requirements for programming will be specified in the Works Project contract document.

2. FORMS FOR CONTRACT ADMINISTRATION

The Contractor shall complete, sign and submit with each monthly statement for payment in respect of each Works Project contract, the following updated returns (the format of which are attached in C3.6 Annexes):

- a) Pro Forma Monthly Project Labour Report (Annex 1)
- b) B-BBEE Sub-contract Expenditure Report (Annex 2)
- c) Joint Venture Expenditure Report (Annex 3)
- d) Targeted Labour Contract Participation Expenditure Report (Annex 4)
- e) Example of Works Project Contract Document (Annex 5)

The Monthly Project Labour Report must include details of all labour (including that of sub-contractors) that are South African citizens earning less than **R350** per day, as adjusted from time to time (excluding any benefits), who are employed on a temporary or contract basis on this contract in the month in question.

In addition to the Monthly Project Labour Report the Contractor shall simultaneously furnish the Engineer with copies of the employment contracts entered into with such labour, together with copies of identification documents as well as evidence of payments to such labour in the form of copies of pay slips or payroll runs. If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it.

Monthly Project Labour Reports shall be completed and submitted in accordance with the instructions therein.

The B-BBEE Sub-contract Expenditure Report is required for monitoring the prime contractor's compliance where, in a Works Project offer, the Contractor has declared in the Works Project Acceptance/Refusal Notice (Form C1.8) to the effect that "I/we **DO NOT** intend sub-contracting more than 25% of the value of the Works Project contract to sub-contractors that do not qualify for at least the points that I/we as prime contractor qualified for in my/our framework contract".

The Joint Venture Expenditure Report is required for monitoring the joint venture's compliance with the percentage contributions of the JV partners as tendered, where the joint venture has been awarded preference points in respect of its consolidated B-BBEE scorecard.

The Targeted Labour Contract Participation Expenditure Report is required for monitoring the contractor's compliance for achieving the specified minimum targeted labour contract participation goal (CPG_L) and, if applicable, for calculating any penalty in terms of Clause 4.6 below.

The Expenditure Reports shall be verified by the Engineer/Engineer's Representative.

In respect of Annexes 2 and 3, the Employer shall, in addition to any other sanctions available to it, apply the financial penalties applicable to breach of preferencing conditions in Returnable Schedule Form C7 in Part T2.2 Returnable Schedules. In the case of joint ventures (Annex 3), the contractor shall prove his compliance with item 6) in Section 2 of the Preferencing Schedule by providing a consolidated scorecard at his own cost on instruction from the Engineer.

3 PARTICIPATION OF TARGETED LABOUR

3.1 Minimum targeted labour contract participation goal

In support of the National Department of Public Works' Expanded Public Works Program which is aimed at the alleviation of poverty through the creation of employment opportunities, the Employer is seeking to increase the intensity of labour, as appropriate, in all of its infrastructure sector projects.

It is a requirement of this term tender contract, therefore, that the work be executed in such a manner so as to maximize the use of labour intensive construction methods in order to provide low and semi-skilled employment opportunities.

To this end, a minimum targeted labour contract participation goal is specified below, which shall be achieved by the Contractor in the performance of each Works Project contract, failing which, penalties as described will be applied.

The specified minimum targeted labour contract participation goal (CPG_L) is

0.5 %

The minimum CPG_L is such that the Contractor will have to carry out some of the work that would normally have been undertaken using mechanized construction methods, by using labour intensive construction methods instead. It is left to the discretion of the Contractor to identify suitable work activities for the intensification of labour. The Contractor shall, within 5 working days of being requested in writing by the Engineer to do so, submit details of his/her plan to achieve the minimum CPG_L in the Works Project. If, due to the selection of items and quantities in any individual Works Project, it is not possible for the Contractor to achieve the specified minimum CPG_L on that particular Works Project, then the Engineer, at his/her sole discretion, may reduce such minimum CPG_L upon motivation by the Contractor.

3.2 Definitions

For the purposes of the requirements in respect of the participation of targeted labour, the following definitions shall apply:

"Target area" means the geographical area described in the Works Project contract document.

"Targeted labour contract participation goal (CPG_L)" means the sum of the wages (excluding any benefits), for which the Contractor, or any of his/her sub-contractors contracts targeted labour in the performance of the contract, expressed as a percentage of the value of the contract.

"Targeted labour" means low and semi-skilled individuals, whose wages (excluding any benefits) do not exceed the threshold value, who reside in the target area, that are employed by the Contractor, or any of his/her sub-contractors, in the performance of the contract.

"Threshold value" is **R350.00** per day as adjusted from time to time (excluding any benefits). The threshold value is not to be confused with any industry sector minimum wage determined in accordance with the Basic Conditions of Employment Act, 75 of 1977.

"Value of the contract" means the **Works Project** contract sum (accepted contract amount) less provisional sums, contingencies and VAT.

3.3 The selection and recruitment of targeted labour

Where targeted labour is to be drawn from specific local communities (defined in terms of the target area), such labour shall be identified using the relevant Sub-Council Job-Seekers Database. The Contractor shall request, via a Community Liaison Officer (if required in terms of the contract), a list of suitable candidates from the database, from which the Contractor shall make his/her final selection. The contractor shall enter into written contracts of temporary employment with all targeted labour.

Any difficulty experienced by the Contractor in identifying candidates through the Job-Seekers Database, or as regards any matter relating to the employment of targeted labour, shall be immediately referred to the Engineer.

3.4 Contract participation goal credits

Credits towards the achieving the minimum CPG_L shall be granted by converting the total monetary value of wages paid to targeted labour (including that of sub-contractors) to a percentage of the value of the contract. No credits shall be accorded should the contractor/sub-contractor fail to enter into written contracts with the targeted labour. Furthermore, no credits shall be accorded in respect of targeted labour employed on work in respect of provisional sums or prime cost items. Such labour shall nevertheless be recorded on the Monthly Project Labour Report which is required to be furnished by the Contractor.

3.5 Training of targeted labour

The Contractor is required to provide all informal (on-the-job) skills training so as to ensure that a minimum level of competence is achieved and maintained, such that the various activities are carried out safely and to the required standard. The cost of informal training shall be included in the rates for the various work activities.

3.6 Penalties

The financial penalty to be applied for failing to meet the specified minimum targeted labour contract participation goal in the performance of the contract (unless proven to be beyond the control of the Contractor), is as follows:

$$\text{Penalty} = (CPG_L^S - CPG_L^A) \times P^*$$

Where CPG_L^S = the specified minimum targeted labour contract participation goal (expressed as a percentage).

CPG_L^A = the targeted labour contract participation goal achieved (expressed as a percentage).

P^* = the value of the contract.

4. COMMUNITY LIAISON OFFICER

Certain Works Projects may require a Community Liaison Officer (CLO) to be appointed by the Contractor. The primary functions of the CLO shall be to assist the Contractor with the selection and recruitment of targeted labour, to represent the local community in matters concerning the use of targeted labour (and/or enterprises) on the works, and to assist with and facilitate communication between the Contractor, the Engineer and the local communities.

The identification of suitable candidates (maximum 5; minimum 3) for the CLO position shall be resolved by the relevant Ward Councilor/s. Should suitable candidates not be identified within two weeks of the date of request, the Contractor shall be allowed to seek candidates from the relevant Sub-Council Job-Seekers Database. The final selection and appointment of the CLO in terms of the contract shall be the responsibility of the Contractor.

The period of appointment of the CLO shall be as stated in the Contract for Temporary Employment as a Community Liaison Officer referred to below. The date of commencement of temporary employment of the CLO shall be as agreed with the Engineer.

If it is required, therefore, that the Contractor enters into a contract of temporary employment with the selected CLO, the contracting parties will be the Contractor and the CLO. To this end, a specimen Form of Contract of Temporary Employment as Community Liaison Officer is included in this document (Part C1.9 Community Liaison Officer). This Form of Contract sets out, inter alia, the agreement between the parties, the duties and conditions of employment of the CLO (including the rate of remuneration to be paid). As said contract will be between the Contractor and the CLO, all costs involved shall be borne by the Contractor and items will be provided in the Bills of Quantities in the Works Project contract document therefor.

5. ENVIRONMENTAL MANAGEMENT PROGRAMME

Particular Specification E: Environmental Management Specification and its Annexures are attached hereto.

6. HEALTH AND SAFETY

Particular Specification H: Health and Safety Specification is attached hereto.

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ANNEXURE C :	CONSTRUCTION PERSONNEL INFORMATION POSTER
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E: ENVIRONMENTAL MANAGEMENT SPECIFICATION

For use with the General Conditions of Contract for Construction Works, Third Edition, 2015.

E1 SCOPE

The Environmental Management Program (EMP) for the project is comprised of this Environmental Management (EM) Specification and its Annexures, including the "Additional environmental issues deemed to form part of the Environmental Management Specification" attached as Annexure D hereto, which together cover the requirements for controlling the impact on the environment of construction activities.

E2 INTERPRETATIONS**E2.1 Supporting specifications**

The following standardized specification shall, *inter alia*, apply to this Contract:

- a) SANS 1200A, as may be varied or added to in the Scope of Work

E2.2 Application

This EM Specification contains clauses that are generally applicable to the undertaking of construction works in areas where it is necessary to impose pro-active controls on the extent to which the construction activities impact on the environment.

In the event of any difference or discrepancy between the provisions of the Standardized Specifications and the provisions of the EM Specification, the latter shall prevail.

E2.3 Definitions and abbreviations

For the purposes of this EM Specification the following definitions and abbreviations shall apply:

E2.3.1 Environment

The surroundings within which humans exist and that are made up of -

- a) the land, water and atmosphere of the earth;
- b) micro-organisms, plant and animal life;
- c) any part or combination of i) and ii) and the interrelationships among and between them; and
- d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

E2.3.2 Potentially hazardous substance

A substance which, in the reasonable opinion of the Engineer, can have a deleterious effect on the environment.

E2.3.3 Method Statement

A written submission by the Contractor to the Engineer in response to the EM Specification or a request by the Engineer, setting out the plant, materials, labour and method the Contractor proposes using to carry out an activity, in such detail that the Engineer is enabled to assess whether the Contractor's proposal is in accordance with the Scope of Work and/or will produce results in accordance with the EM Specification.

E2.3.4 Reasonable

Unless the context indicates otherwise, means reasonable in the opinion of the Engineer after he has consulted with a person suitably experienced in "environmental implementation plans" and "environmental management plans" (both as defined in the National Environmental Management Act, 107 of 1998).

E2.3.5 Solid waste

All solid waste, including construction debris, chemical waste, excess cement/ concrete, wrapping materials, timber, tins and cans, drums, wire, nails, domestic waste, dead vegetation, asphalt products, etc.

E2.3.6 Contaminated water

Water contaminated by the Contractor's activities containing cements, concrete, lime, paint products, thinners, turpentine, chemicals, fuels, oils washing detergents, etc.

E2.3.7 Working area

Any area within the boundaries of the Site where construction is taking place.

E2.3.8 Contractor's camp or construction camp

The area designated for all temporary site offices, storage areas, construction plant parking areas, staff welfare facilities, etc.

E2.3.9 Engineer

The person/firm so named in the Contract Data, whose function is to administer the Contract as agent of the Employer.

E2.3.10 Engineer's Representative (ER)

The natural person appointed by the Engineer in terms of the Contract, who shall observe the execution of the Works, examine and test materials and workmanship, and deliver and receive communications to/from the Contractor.

E2.3.11 Environmental Officer (EO)

Appointed by the Engineer as his environmental representative on Site, with the mandate to enforce compliance with the EMP. The duties of the EO are stipulated in the City's guideline document for the EO and ER.

E2.3.12 Environmental Control Officer (ECO)

An independent appointment to objectively monitor implementation of relevant environmental legislation, conditions of Environmental Authorizations (EAs), and the EMP for the project.

E2.3.13 Environmental Site Officer (ESO)

Employed by the Contractor as his environmental representative to monitor, review and verify compliance with the EMP by the Contractor. The ESO must ensure that he is involved at all phases of the construction (from site clearance to rehabilitation).

E2.3.14 Abbreviations

The following abbreviations occur in this EM Specification:

EMP - Environmental Management Program
 EM Specification – Environmental Management Specification
 EO - Environmental Officer
 ECO – Environmental Control Officer
 ESO – Environmental Site Officer
 ER – Engineer's Representative
 MSDS - Material Safety Data Sheets

E2.4 Engineer's authority to delegate

In terms of Clause 3.2.4 of the General Conditions of Contract, Third Edition, 2015 (GCC 2015), the Engineer has the authority to appoint a representative. Other than the Engineer's Representative (ER) in terms of Clause 3.2, this can be in the form of an Environmental Officer (EO), who shall be responsible for monitoring compliance with the EMP. All instructions given by the EO shall go through the ER, who will then convey these to the Contractor, except in the case of an environmental emergency, in which case the EO can issue an instruction directly to the Contractor. An environmental emergency is one which, in the opinion of the EO, would cause serious environmental harm if not addressed immediately.

Depending on the nature/environmental sensitivity of the Contract the following variations in the organizational structure are possible:

- a) The ER may work together with an EO; or
- b) There may be an ER only (for construction projects with low potential for causing significant environmental impacts). In this case the ER has responsibility for the EO's functions.
- c) There may be an independently appointed Environmental Control Officer (ECO) who will fulfil essentially the same functions as the EO. The ECO may work with just the ER (if there is no EO) or may work with both the ER and EO.

The term "Engineer" in this EM Specification refers to the Engineer as defined in Clause E2.3.9 acting through the ER/EO/ECO as delegated.

E3 MATERIALS

E3.1 Materials handling, use and storage

The Contractor shall ensure that any delivery drivers are informed of all procedures and restrictions (including "no go" areas) required to comply with the EM Specification. The Contractor shall ensure that these delivery drivers are supervised during off-loading by someone with an adequate understanding of the requirements of the EM Specification.

Materials shall be appropriately secured to ensure safe passage between destinations. Loads, including but not limited to, sand, stone chip, fine vegetation, refuse, paper and cement, shall have appropriate cover to prevent them spilling from the vehicle during transit. The Contractor shall be responsible for any clean-up resulting from the failure by his employees or suppliers to properly secure transported materials.

All manufactured and or imported materials shall, where reasonably possible, be stored within the Contractor's camp and, if so required by the Engineer, out of the rain. The location and method of protection of such materials stored outside of the Contractor's camp and the method of rehabilitation of these areas, shall be subject to the Engineer's approval.

Stockpile areas shall be approved by the Engineer before any stockpiling commences.

E4 Hazardous substances

Hazardous chemical substances (as defined in the Regulations for Hazardous Chemical Substances in GN 1179 (25 August 1995)) stored on Site for use during construction shall be stored in secondary containers which are clearly and appropriately marked/signed. The relevant Material Safety Data Sheets (MSDS) shall be available on Site. Procedures detailed in the MSDS's shall be followed in the event of an emergency situation.

If potentially hazardous substances are to be stored on Site, the Contractor shall inform the Engineer of such substances and provide a Method Statement detailing the substances/ materials to be used, together with the storage, handling and disposal procedures of the materials. Hazardous substances shall be stored out of flood risk areas and disposal of these substances shall be at a licensed waste disposal facility.

PLANT (referring to "Construction Equipment" as defined in GCC 2015, and the Contractor's facilities as used in SANS 1200A) E4.1 Fuel (petrol and diesel) and oil

E4.1.1 Storage

If fuel and oil is to be stored on Site, then the Contractor shall submit a Method Statement covering the procedures for dealing with accidental hydrocarbon spillage and leaks, and detailing how these liquids will be stored, handled and disposed of.

The Engineer shall approve the location of all fuel storage areas. All necessary approvals with respect to fuel storage and dispensing shall be obtained from the appropriate authorities. Symbolic safety signs depicting "**No Smoking**", "**No Naked Lights**" and "**Danger**" conforming to the requirement of SANS 1186 are to be prominently displayed in and around the fuel storage area. There shall be adequate fire-fighting equipment at the fuel storage area.

The Contractor shall ensure that all liquid fuels and oils are stored in tanks with lids, which are kept firmly shut and adequately secured. The capacity of the tank shall be clearly displayed and the product contained within the tank clearly identified using the emergency information system detailed in SANS 0232 part 1. Fuel storage tanks shall have a capacity not exceeding 9000 liters and shall be kept on site only for as long as fuel is needed for construction activities, on completion of which they shall be removed.

The tanks shall be situated on a smooth impermeable base with an earth bund. The volume inside the bund shall be 110% of the total capacity of the largest storage tank. The base may be constructed of concrete, or of plastic sheeting with impermeable joints, covered by a layer of compacted earth to protect the sheeting. The impermeable lining shall extend to the crest of the bund. The floor of the storage area shall be sloped to enable any spilled fuel and/or fuel-contaminated water to be removed easily.

If any rainwater collects in the bunded areas, it shall be promptly removed and taken off Site to a disposal site approved by the Engineer.

Only empty and externally clean tanks may be stored on the bare ground. Empty and externally dirty tanks shall be sealed and stored on an area where the ground has been protected.

Adequate precautions shall be provided to prevent spillage during the filling of any tank and during the dispensing of the contents. If fuel is dispensed from 200 liter drums, the proper dispensing equipment shall be used, and the drum shall not be tipped in order to dispense fuel. The dispensing mechanism for the fuel storage tanks shall be stored in a waterproof container when not in use.

E4.1.2 Refueling

Plant shall be refueled at a designated refueling area approved by the Engineer. The surface under the temporary refueling area shall be protected against pollution to the reasonable satisfaction of the Engineer prior to any refueling activities. The Contractor shall ensure that there is always a supply of absorbent material (e.g. Spill Sorb or Enretech #1 powder or equivalent) readily available that is designed to absorb, break down and encapsulate minor hydrocarbon spillage. The quantity of such material shall be able to handle a minimum of 200 liters of hydrocarbon liquid spill.

E4.1.3 Treatment and remediation

Treatment and remediation of hydrocarbon spill and leak areas shall be undertaken to the satisfaction of the Engineer. In the event of a hydrocarbon spill the source of the spillage shall be isolated and the spillage contained.

E4.2 **Ablution and toilet facilities**

Washing, whether of the person or of personal effects, defecating and urinating are strictly prohibited other than at the facilities provided.

The Contractor shall provide ablution facilities for all personnel employed on the Site, including shelter, toilets and washing facilities. The Contractor's personnel will not be permitted to use the City's ablution facilities

Toilet facilities provided by the Contractor shall occur in a ratio of not less than 1 toilet per 30 workers (1:15 is preferred) of each sex. Toilet facilities shall be located within the Contractor's camp, but also at work areas remote from the camp, all to the satisfaction of the Engineer. All portable toilets shall be adequately secured to the ground to prevent them toppling over as a result of wind or any other cause.

The Contractor shall ensure that the entrances to these toilets are adequately screened from view, that they are maintained in a hygienic state, serviced regularly, that no spillage occurs when they are cleaned and that contents are removed from Site. Toilets shall also be emptied before any temporary site closure for a period exceeding one week. Discharge of waste from toilets into the environment and burial of waste is strictly prohibited. The Contractor shall provide toilet paper at all times.

No ablution facilities shall be located closer than 50m to any water body

A Method Statement shall be provided by the Contractor detailing the provision, location, and maintenance of ablution facilities.

E4.3 **Eating areas**

The Contractor shall designate eating areas within the approved Contractor's camp. The feeding of, or leaving of food for, animals is strictly prohibited. Sufficient bins, as specified in Clause E4.4 below, shall be present in these areas.

Any cooking on Site shall be done on well-maintained gas cookers with fire extinguishers present. No open fires for cooking purposes shall be permitted, unless for occasional use in facilities specifically provided for this purpose and within the confines of the Contractor's camp.

E4.4 Solid waste management**E4.4.1 Litter and refuse**

The site shall be kept neat and clean at all times, littering is prohibited.

No on-site burying or dumping of any waste materials, vegetation, litter or refuse shall occur. The Contractor shall provide scavenger and weatherproof bins with lids, of sufficient number and capacity to store the solid waste produced on a daily basis. The lids shall be kept firmly on the bins at all times. Bins shall not be allowed to become overfull and shall be emptied regularly, at least once a week. Waste from bins may be temporarily stored on Site in a central waste area that is weatherproof and scavenger-proof, and which the Engineer has approved. Wherever possible refuse shall be recycled, and containers for glass, paper, metals and plastics shall be provided and the contents delivered to suitable recycling facilities when necessary.

All other litter and refuse shall be disposed of off Site at an approved landfill site. The Contractor shall supply the Engineer with a certificate of disposal.

E4.4.2 Construction waste

Where possible all construction waste or spoil material shall be recycled, either on Site or elsewhere. As a last resort all construction waste shall be disposed of off Site at an approved landfill site. The Contractor shall supply the Engineer with a certificate of disposal.

E4.5 Contaminated water management

Potential pollutants of any kind and in any form shall be kept, stored, and used in such a manner that any spill or escape can be contained and the water table and/or any adjacent water courses or bodies are not endangered. Spill kits which can be used to contain and/or mop up spills shall be available. Water containing such pollutants as cements, concrete, lime, chemicals, oils and fuels shall be discharged into a conservancy tank for removal from the Site to a licensed disposal facility. This particularly applies to water emanating from concrete batching plants and to runoff from fuel storage, refueling or construction equipment washing areas. Wash down areas shall be placed and constructed in such a manner so as to ensure that the surrounding areas are not polluted.

No paint products, chemical additives and cleaners, such as thinners and turpentine, may be disposed of into the storm water system or elsewhere on Site. Brush/roller wash facilities shall be established to the satisfaction of the Engineer.

A Method Statement shall be provided by the Contractor detailing the management of contaminated water.

Should contaminated water be released into the environment, specifically into a water course, monitoring thereof shall commence in accordance to the National Water Act, 36 of 1998, Section 21(f) – refer to GN 399 (26 March 2004). Contaminated water must not be released into the environment without authorization from the relevant authority.

The Contractor shall notify the Engineer immediately of any pollution incidents on Site and, at his own cost, take all reasonable measures to contain and minimize the effects of the pollution.

Any rehabilitation of the environment required as a result of such pollution shall be carried out by the Contractor at his own cost in accordance with a Method Statement approved by the Engineer.

E4.6 Site structures

The type and color of roofing and cladding materials to the Contractor's temporary structures shall be selected to reduce the visual impact.

E4.7 Lights

The Contractor shall ensure that any lighting installed on the Site for his activities does not cause a reasonably avoidable disturbance to other users of the surrounding area.

Lighting installed shall, as far as practically possible, be energy efficient. Lighting utilized on Site shall be turned off when not in use.

E4.8 Workshop, equipment maintenance and storage

No workshops or plant maintenance facilities shall be constructed on Site for performing major or routine maintenance of equipment and vehicles.

The Contractor shall ensure that in those areas where, after obtaining the Engineer's approval, the Contractor carries out emergency or minor routine plant maintenance, there is no contamination of the soil, water sources or vegetation. Drip trays to collect waste oil and other lubricants shall be provided in any areas of the Site where such maintenance takes place. Drip trays must be emptied regularly and after rain, and the contents disposed of at a licensed disposal facility.

All vehicles and plant shall be kept in good working order. Leaking vehicles and plant shall be repaired immediately or removed from the Site.

The washing of vehicles and plant on Site shall be restricted to emergency or minor routine maintenance requirements only. Washing may only be undertaken in areas designated by the Engineer.

E4.9 Noise

The Contractor shall limit noise levels (for example, by installing and maintaining silencers on plant). The provisions of SANS 1200A Clause 4.1 regarding "built-up areas" shall apply.

Appropriate directional and intensity settings are to be maintained on all hooters and sirens.

No amplified music shall be allowed on Site. The use of audio equipment shall not be permitted, unless the volume is kept sufficiently low so as to be unobtrusive. The Contractor shall not use sound amplification equipment on Site, unless in emergency situations.

Construction activities generating output levels of 85 dB(A) or more in residential areas, shall be confined to the hours 08h00 to 17h00 Mondays to Fridays. Should the Contractor need to do this work outside of the above times, he shall do so only with the approval of the Engineer, and the surrounding communities shall be informed prior to the work taking place.

E5 CONSTRUCTION

E5.1 Method Statements

The Contractor shall submit the environmental method statements required within such reasonable time as the Engineer shall specify or as required by the EM Specification. The Contractor shall not commence any activity until the Method Statement in respect thereof has been approved and shall, except in the case of emergency activities, allow a period of two weeks for consideration of the Method Statement by the Engineer.

The Engineer may require changes to a Method Statement if the proposal does not comply with the specification or if, in the reasonable opinion of the Engineer, the proposal may result in, or carries a greater than reasonable risk of, damage to the environment in excess of that permitted by the EM Specification.

Approved Method Statements shall be readily available on the Site and shall be communicated to all relevant personnel. The Contractor shall carry out the Works in accordance with the approved Method Statement. Approval of the Method Statement shall not absolve the Contractor from any of his obligations or responsibilities in terms of the Contract.

Changes to the way the Works are to be carried out must be reflected by amendments to the original approved Method Statements, and these amendments require the signature of both the Contractor and the Engineer.

Method Statements shall consider all environmental hazards and risks identified by the Contractor and/or Engineer and shall contain sufficient information and detail to enable the Engineer to assess the potential negative environmental impacts associated with the proposed activity and shall cover applicable details with regard to:

- a) construction procedures,
- b) materials and equipment to be used,
- c) getting the equipment to and from Site,
- d) how the equipment/material will be moved while on Site, e) how and where material will be stored,
- f) the containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur,
- g) the control of fire,
- h) timing and location of activities,
- i) compliance/non-compliance with the EM Specification,
- j) any other information deemed necessary by the Engineer.

The format to be used for the required method statements is bound in Annexure A of this EM Specification. The Contractor (and, where relevant, any sub-contractors) must also sign the Method Statement, thereby indicating that the work will be carried out according to the methodology contained in the approved Method Statement.

E5.1.1 Method Statements to be provided within 14 days from the Commencement Date

- a) Layout and Preparation of Contractor's Camp (E5.4).
- b) Ablution Facilities: number of, location, cleaning, method of securing to the ground, etc. of portable toilets (E4.2).
- c) Solid Waste Management: number of, type, location, cleaning, method of securing to the ground, etc. of bins (E4.4).
- d) Environmental Awareness Training: logistics for the environmental awareness courses for all the Contractor's management staff, as well as other employees (E5.2).
- e) Emergency Procedures for Accidental Hydrocarbon Leaks and Spillages (E4.1 and E5.8).
- f) Asphalt and Bitumen: details of all methods and logistics associated with the use of bitumen and asphalt (E5.11).

E5.2 **Environmental Awareness Training**

It is a requirement of this Contract that environmental awareness training courses are run for all personnel on Site. Two types of courses shall be run: one for the Contractor's and subcontractors' management, and one for all site staff and labourers. Courses shall be run during normal working hours at a suitable venue provided by the Contractor. All attendees shall remain for the duration of the course and sign an attendance register that clearly indicates participants' names on completion, a copy of which shall be handed to the Engineer. The Contractor shall allow for sufficient sessions to train all personnel. Subsequent sessions shall be run for any new personnel coming onto Site. A Method Statement with respect to the organization of these courses shall be submitted.

Notwithstanding the specific provisions of this clause, it is incumbent upon the Contractor to convey the spirit of the EM Specification to all personnel involved with the Works.

E5.2.1 Training Course for Management and Foremen

The environmental awareness training course for management shall include all management and foremen. The course, which shall be presented by the Engineer or his designated representative, shall be of approximately one hour duration. The course shall be undertaken prior to the commencement of work on Site.

E5.2.2 Training Course for Site Staff and Labour

The environmental awareness training course for site staff and labour shall be presented by the Contractor from material provided by the Engineer. The course shall be approximately one hour long. The course shall be undertaken not later than 3 working days after the commencement of work on Site, with sufficient sessions to accommodate all available personnel.

All the Contractor's employees, sub-contractors' employees and any suppliers' employees that spend more than 1 day a week or four days in a month on Site shall attend the Environmental Awareness Training Course for Site Staff and Labour

E5.3 **Contractor's Environmental Representative (ESO)**

The Contractor shall appoint an environmental representative, also called an Environmental Site Officer (ESO), who shall be responsible for undertaking a daily site inspection to monitor compliance with this EM Specification. The Contractor shall forward the name of the environmental representative (ESO) to the Engineer for his approval. The environmental representative (ESO) shall complete Environmental Site Inspection Checklists (Annexure B attached hereto) and these shall be submitted to the Engineer once a week.

E5.4 **Site division, demarcation and "no go" areas**

The Contractor shall restrict all his activities, materials, plant and personnel to within the Site or any particular working areas specified or indicated on the drawings.

The Contractor shall erect and maintain permanent and/or temporary fences of the type and in the locations specified elsewhere in the Scope of Work or on the drawings. Such fences shall, if so specified, be erected before undertaking any construction activities.

Where environmentally sensitive areas are specified as "no go" areas, the Contractor shall ensure that, insofar as he has the authority, no person, plant or material shall enter the "no go" areas at any time.

A Method Statement detailing the layout and method of establishment of the Contractor's camp (including all offices, shelters, eating areas, storage areas, ablution facilities and other infrastructure required for the running of the project) shall be provided.

E5.5 Access routes/ haul roads

On the Site and, if so required, within such distance of the Site as may be stated by the Engineer, the Contractor shall control the movement of all vehicles and construction equipment, including that of his suppliers, so that they remain on designated routes, are distributed so as not to cause an undue concentration of traffic, and that all relevant laws are complied with. In addition, the movement of such vehicles and construction equipment shall be planned and operated so as to minimize disruption to regular users of the routes. As far as possible the Contractor shall use existing access and haul routes. Damage to existing access roads as a result of construction activities shall be repaired to the satisfaction of the Engineer, using material similar to that originally used. The cost of the repairs shall be borne by the Contractor. New temporary access or haul routes may only be established with the prior approval of the Engineer. The rehabilitation of such routes shall be to the Contractor's own cost and to the approval of the Engineer.

Any directional signage required by the Contractor for the purposes of directing the movement of his own vehicles and construction equipment (or that of his subcontractors or suppliers) must be of a design and in a location approved by the Engineer. Directional signage may not be erected in such a manner that it interferes with sight lines or pedestrian movement.

E5.6 Construction personnel information posters

The Contractor shall erect and maintain information posters for the information of his employees, depicting actions to be taken to ensure compliance with aspects of the EM Specification. A2 information posters, printed on white vinyl, shall be erected at the eating areas and any other locations specified by the Engineer. The specification for the poster is presented in Annexure C of this EM Specification. The symbols shall be black and the circles shall be red lines. The Contractor shall ensure that the construction personnel information posters are not damaged in any way, and shall replace a poster if any part of it becomes illegible.

E5.7 Fire control

Other than for cooking purposes as specified in Clause E4.3, no fires may be lit on Site. Any fires which occur shall be reported to the Engineer immediately.

Smoking shall not be permitted in those areas where it is a fire hazard. Such areas shall include fuel storage and refueling areas, and any other areas where the vegetation or other materials are susceptible to the start and rapid spread of fire.

In terms of the National Environment Management: Air Quality Act, 39 of 2004 and Community Fire Safety By-law, burning is not permitted as a disposal method.

The Contractor shall appoint a Fire Officer (who may be the ESO) who shall be responsible for ensuring immediate and appropriate actions in the event of a fire and shall ensure that employees are aware of the procedure to be followed. The Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it. The Contractor shall forward the name of the Fire Officer to the Engineer for his approval.

The Contractor shall comply with Clause 27 of the Construction Regulations, 2014 where applicable, and shall ensure that there is suitable and sufficient fire-fighting equipment available on Site at all times.

The Contractor shall be liable for any costs relating to the rehabilitation of burnt areas, should the fire be the result of the Contractor's activities on Site

The Contractor shall submit a Method Statement to the Engineer covering the procedure to be followed in the event of a fire.

E5.8 Emergency procedures

The Contractor's attention is drawn to the Method Statements required in terms of Clauses E4.1 and E5.7 above. Such Method Statements shall include procedures to be followed by the Contractor in the event of an emergency.

Furthermore, in the event of an emergency the Contractor shall contact the George Municipality's Emergency Call Centre. Telephone numbers of emergency services, including the local firefighting service, shall be posted conspicuously in the Contractor's office near the telephone.

E5.9 Health and safety

The Contractor shall comply with requirements of the Occupational Health and Safety Act, 85 of 1993 and Construction Regulations, 2014, the Health and Safety Specification and relevant clauses of GCC 2015, insofar as health and safety is concerned.

E5.10 Community relations

If so required, the Contractor shall erect and maintain information boards in the position, quantity, design and dimensions specified in the Scope of Work or as directed by the Engineer. Such boards shall include contact details for complaints by members of the public in accordance with details provided by the Engineer.

The Contractor shall keep a "Complaints Register" on Site. The Register shall contain all contact details of the person who made the complaint, and information regarding the complaint itself.

E5.11 General protections in terms of the National Heritage Resources Act, 25 of 1999

The Contractor shall take cognisance of the provisions of the National Heritage Resources Act, 25 of 1999 in respect of, *inter alia*, structures older than 60 years; archaeology, paleontology and meteorites; burial grounds and graves; and public monuments and memorials.

E5.12 Protection of natural features

The Contractor shall not deface, paint, damage or mark any natural features (e.g. rock formations) situated in or around the Site for survey or other purposes, unless agreed beforehand with the Engineer. Any features affected by the Contractor in contravention of this clause shall be restored/ rehabilitated to the satisfaction of the Engineer. The cost of restoration/rehabilitation shall be borne by the Contractor.

The Contractor shall not permit his employees to make use of any natural water sources (e.g. springs, streams, open water bodies) for the purposes of swimming, personal washing and the washing of machinery or clothes.

E5.13 Protection of flora and fauna

Except to the extent necessary for the carrying out of the Works, as specified by the Engineer, no vegetation shall be removed, damaged or disturbed.

The presence of any wild animals found on Site shall be reported to the Engineer, who shall issue an instruction with regard to their removal or relocation. If a wild animal needs removal from the Site the Cape Nature (Metro Region) Conservation Services Manager may be contacted for assistance (telephone 021 955 9132/9121/3122/9130). Trapping poisoning, injuring or shooting animals is strictly forbidden. No domestic pets or livestock are permitted on Site, with the exception of controlled watchdogs approved by the Engineer.

Where the use of herbicides, pesticides and other poisonous substances has been specified, the Contractor shall submit a Method Statement to the Engineer for approval.

E5.14 Erosion and sedimentation control

The Contractor shall take all reasonable measures to limit erosion and sedimentation due to the construction activities and shall, in addition, comply with such detailed measures as may be required by the Scope of Work. Where erosion and/or sedimentation, whether on or off the Site, occurs, rectification shall be carried out in accordance with details specified by the Engineer. Where erosion and/or sedimentation occur due to the fault of the Contractor, rectification shall be carried out to the reasonable requirements of the Engineer, at the Contractor's cost. In particular, the Contractor shall ensure that the City's storm water system is kept free from sediment arising from the Works.

Any runnels or erosion channels developed during the construction period or during the vegetation establishment period shall be backfilled and compacted, and the areas restored to a proper condition. Stabilization of cleared areas to prevent and control erosion shall be pro-actively managed by the Contractor. The method of stabilization shall be determined in consultation with the Engineer.

E5.15 Aesthetics

The Contractor shall take any requisite measures to ensure that construction activities do not have an undue negative impact on the aesthetics of the area.

E5.16 Temporary site closure

In the event of temporary site closure (for a period exceeding one week), the Contractor's ESO shall carry out checks and ensure that, amongst others, the following conditions pertain and report on compliance with this clause:

- a) Fire extinguishers are serviced and accessible.
- b) There is adequate ventilation in enclosed spaces.
- c) All hazardous substance stores are securely locked.
- d) Fencing and barriers are in place.
- e) Emergency and management contact details are prominently displayed and available.
- f) Wind and dust mitigation measures, e.g. straw, brush packs, irrigation, etc. are in place.
- g) Excavated and filled slopes and stockpiles are at a stable angle and capable of accommodating normal expected water flows.
- h) There are sufficient detention ponds or channels in place.
- i) Cement and materials stores are secured.
- j) Toilets are empty and secured.
- k) Central waste area and all refuse bins are empty and secured.
- l) Contaminated water conservancy tank empty.
- m) Any bunded areas are clean and treated with an approved product where applicable (e.g. Spill Sorb or Enretech #1 powder or equivalent).
- n) Drip trays are empty and secure

E5.17 Asphalt and bitumen

Bitumen drums/products, if stored on Site, shall be stored in an area approved by the Engineer. This area shall be indicated on the Method Statement for the Layout and Preparation of the Contractor's Camp. The storage area shall be constructed with an appropriate base, bunding and sump to the satisfaction of the Engineer. A Method Statement shall be provided in this regard.

When heating bitumen products, the Contractor shall take cognisance of appropriate fire risk controls. Heating shall only be undertaken using LPG or similar zero emission fuels. Appropriate firefighting equipment shall be readily available on Site.

E5.18 Dust

The Contractors shall be solely responsible, at his cost, for the control of dust arising from his activities on Site, and for any costs involved in damages resulting from the dust. The Contractor shall take all reasonable measures to minimize the generation of dust

E5.19 Contractor's advertising signage

Any advertising on the Site or any part of the Works shall remain at the sole discretion of the Employer, who reserves the right to order, via the Engineer, its removal, covering or re-sizing, wherever placed, at no cost to the Employer.

Apart from at the Contractor's camp, no signage advertising the Contractor, or any of its subcontractors, manufacturers, suppliers or service providers shall be placed, fixed or erected anywhere on the Site or on the Works without the prior approval of the Engineer. No advertising signage will be permitted on any designated scenic route. Notwithstanding any prior approval given, the Engineer may instruct the Contractor to remove, cover or re-size any advertising signage at any time at no cost to the Employer.

Advertising signage at the Contractor's camp shall be appropriately designed and sized with due consideration to the surrounding environment, views and sight lines.

Branding or identification markings on the Contractor's and subcontractor's vehicles and equipment is generally permitted, although the Employer reserves the right to instruct, via the Engineer, the removal, covering or re-sizing of any branding, markings or signage, on any equipment (scaffolding, for example), which it considers inappropriate in the environment in which it is placed.

No third party advertising (that is, in respect of any person, business or product that is not associated with the Works) shall be permitted anywhere on the Site or Works.

E5.20 Clearance of Site on completion

On completion of the Works, and at final completion when all defects have been remedied or corrected, the Contractor shall, in addition to the requirements for clearance of the Site in terms of the Contract, ensure that he has complied with the following requirements in terms of this EM Specification:

E5.20.1 Clause E3.1

Clean-up of improperly secured transported materials, and rehabilitation of storage areas.

E5.20.2 Clause E4.1.3

Remediation of hydrocarbon spill and leak areas.

E5.20.3 Clause E4.4

Disposal of litter, refuse and Contractor's waste.

E5.20.4 Clause E5.4

Removal of temporary fences and Contractor's camp.

E5.20.5 Clause E5.5

Repair of access roads damaged by the Contractor, and rehabilitation of temporary access routes.

E5.20.6 Clause E5.7

Rehabilitation of burnt areas should a fire be the result of Contractor's activities on Site.

E5.20.7 Clauses E5.11 to 5.13

Rehabilitation of heritage and natural features, including vegetation which is damaged or disturbed, which required protection in terms of these clauses.

E5.20.8 Clause E5.14

Rectification where erosion and/or sedimentation has occurred due to the fault of the Contractor .

E5.20.9 Clause E5.19

Removal of Contractor's advertising signage.

E6 TOLERANCES**E6.1 Fines**

Environmental management is concerned not only with the final results of the Contractor's operations, but also with the control of how these operations are carried out. Tolerance with respect to environmental matters applies not only to the finished product, but also to the standard of the day-to-day operations required to complete the Works.

It is thus required that the Contractor shall comply with the EM Specification on an on-going basis and any failure on his part to do so will entitle the Engineer to certify the imposition of a fine. Fines may be issued per incident at the discretion of the Engineer. Such fines will be issued in addition to any remedial costs incurred as a result of non-compliance with the environmental specifications. The Engineer will inform the Contractor of the contravention and the amount of the fine, and will deduct the amount from monies due in payment certificates issued under the Contract.

Maximum fines for the following transgressions by either the Contractor and/or his sub-contractors may be imposed by the Engineer, as follows:

	Maximum fine per incident
a) Vehicles, plant or materials related to the Contractor's operations, parked or stored outside the demarcated boundaries of the Site.	R 2 000
b) Persons, vehicles, plant or materials related to the Contractor's operations, found within the designated boundaries of a "no go" area.	R 4 000
c) Persistent and unrepaired oil leaks from machinery/not using a drip tray to collect waste oil and other lubricants/not using specified absorbent material to encapsulate hydrocarbon spillage/using inappropriate methods of refueling (the use of a funnel rather than a pump).	R 3 000

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d)	Refueling in areas not approved by the Engineer.	R 3 000
e)	Litter on Site.	R 1 000
f)	Deliberate lighting of fires on Site.	R 5 000
g)	Individual not making use of the Site ablution facilities.	R 1 000
h)	Damage to trees not specified to be removed.	R 5 000
i)	Dust or excessive noise emanating from the site	R 1 000
j)	Not containing water contaminated with pollutants such as cement, concrete, fuel, etc.	R 2 000

For each subsequent similar offence the fine shall be doubled in value to a maximum value of R50 000.

E7 TESTING

Not used.

E8 MEASUREMENT AND PAYMENT

E8.1 Basic principles

Except where separate pay items have been measured in the Bills of Quantities, all costs in respect of complying with the EM Specification are deemed to be covered by the sum tendered for complying with the EM Specification.

ANNEXURE A: ENVIRONMENTAL METHOD STATEMENT

CONTRACT:.....

DATE:.....

PROPOSED ACTIVITY (give title of method statement and reference number from the EMP):

--

WHAT WORK IS TO BE UNDERTAKEN (give a brief description of the works - attach extra information to ensure accurate description given):

--

WHERE THE WORKS ARE TO BE UNDERTAKEN (where possible, provide an annotated plan and a full description of the extent of the works):

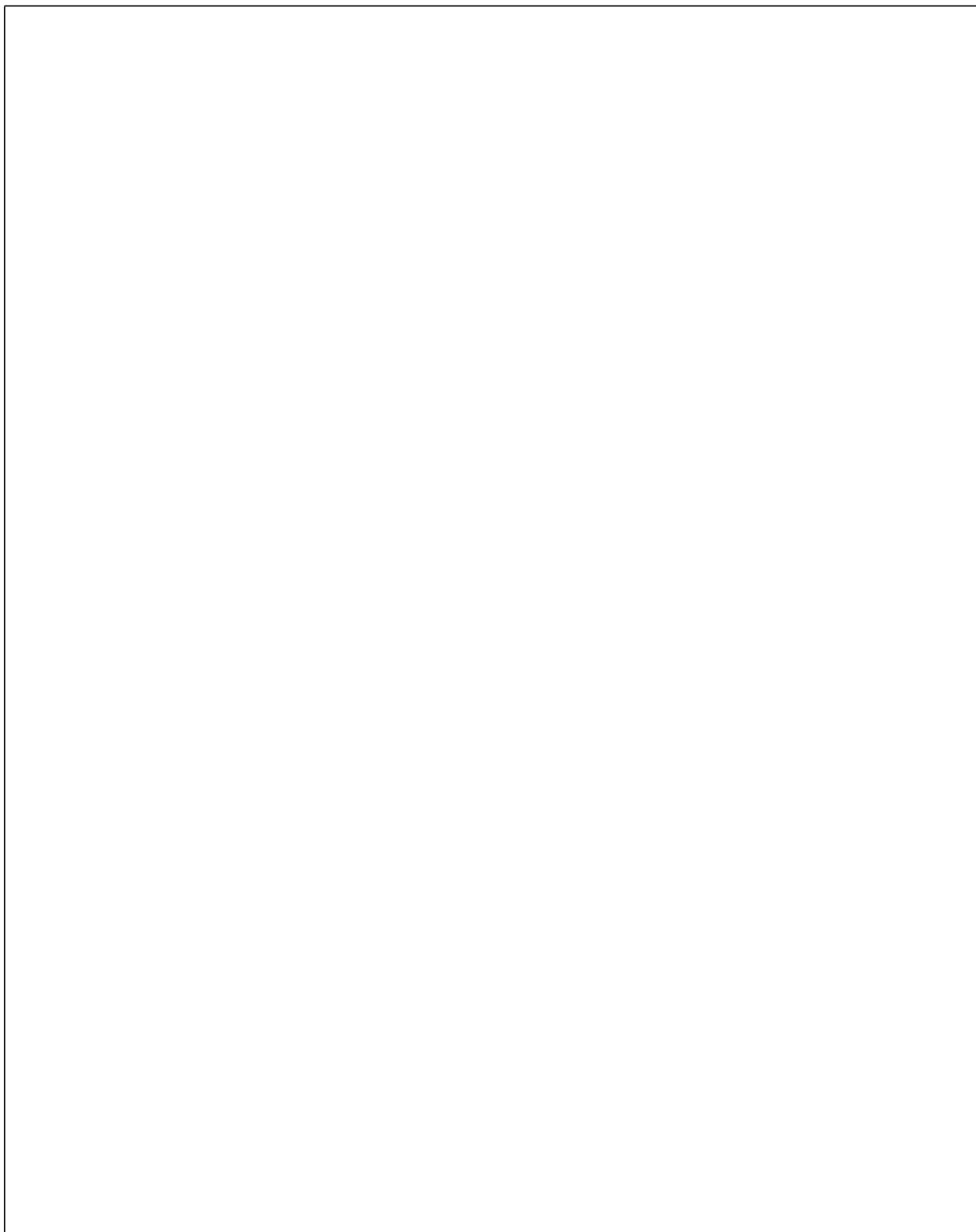
--

START AND END DATE OF THE WORKS FOR WHICH THE METHOD STATEMENT IS REQUIRED:

Start Date:

End Date:

HOW THE WORKS ARE TO BE UNDERTAKEN (provide as much detail as possible, including annotated sketches and plans where possible):

A large, empty rectangular box with a thin black border, intended for the user to provide detailed information and annotated sketches regarding the execution of the work.

Note: please give too much information rather than too little. Please ensure that issues such as emergency procedures, hydrocarbon management, wastewater management, access, individual responsibilities, materials, plant used, maintenance of plant, protection of natural features, etc. are covered where relevant

DECLARATIONS**1) ENGINEER'S REPRESENTATIVE/ENVIRONMENTAL OFFICER/ENVIRONMENTAL CONTROL OFFICER**

The work described in this Method Statement, if carried out according to the methodology described, appears to be satisfactorily mitigated to prevent avoidable environmental harm:

(signed)

(print name)

Dated: _____

2) CONTRACTOR

I understand the contents of this Method Statement and the scope of the works required of me. I further understand that this Method Statement may be amended on application to other signatories and that the Engineer's Representative/Environmental Officer/Environmental Control Officer will audit my compliance with the contents of this Method Statement. I understand that this method statement does not absolve me from any of my obligations or responsibilities in terms of the Contract.

(signed)

(print name)

Dated: _____

3) ENGINEER

The works described in this Method Statement are approved.

(signed)

(print name)

(designation)

Dated: _____

ANNEXURE B: ENVIRONMENTAL SITE INSPECTION CHECKLIST

To be submitted to the Engineer once a week

CONTRACT:.....**DATE:**.....

ENVIRONMENTAL ASPECT	YES/ NO (✓ or X)	COMMENTS
• All new personnel on Site are aware of the contents of the EMP and have been through the environmental awareness course.		
• Contractor's camp is neat and tidy and the labourers' facilities are of an acceptable standard.		
• Sufficient and appropriate firefighting equipment is visible and readily available in the appropriate places.		
• Waste control and removal system is being maintained.		
• Fences are being maintained.		
• Drip trays are being utilized where there is a risk of spillage.		
• Bunded areas/drip trays are being emptied on a regular basis (especially after rain).		
• No leaks are visible from construction vehicles.		
• Refueling of vehicles and plant occurs within designated areas, and appropriate refueling apparatus and drip trays are being used.		
• "No go" areas, natural features, vegetation, etc. have not been damaged.		
• Dust control measures (if necessary) are in place and are effectively controlling dust.		
• Noise control measures (if necessary) are in place and are working effectively.		
• Erosion and sedimentation control measures (if necessary) are in place and are controlling effectively.		
• Material stockpiles are located within the boundary of the Site and are protected from erosion.		
• Other		

Completed by:.....

Signed:.....

Do not work in the stream without direct instruction



Do not damage the banks or vegetation of the stream



ANNEXURE D: ADDITIONAL ENVIRONMENTAL ISSUES DEEMED TO FORM PART OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME

Listed below are issues pertaining to the environment that form part of the Contract Document. The clause references relate to the **General Conditions of Contract for Construction Works, Third Edition, 2015 (GCC 2015)**. They are listed here to emphasize that they form part of the environmental considerations and requirements for this project. They must be read together with any Contract Specific Data referring thereto in Part C1.2 Contract Data. The comments made below on the various issues are to be taken as explanatory, in so far as environmental matters are concerned, and do not modify the clauses in any way.

1. Monitoring

Clause 3.1.1 makes provision for the Engineer to administer the Contract in accordance with the provisions of the Contract, including the monitoring of any environmental variables.

2. Health and safety

Clauses 3.1.4, 4.3.1, 4.3.2 and 4.10.1 remind the Contractor of his obligations in terms of the Occupational Health and Safety Act (No. 85 of 1993) and Construction Regulations 2014.

Clause 5.7 of SANS 1200A reinforces these requirements through the observation of proper and adequate safety arrangements.

3. Engineer's authority to delegate

Clause 3.2.4 gives the Engineer the authority to appoint a representative to act as the Environmental Officer (EO) for the Contract. The EO, who shall be responsible for monitoring compliance with the EMP, may be the Engineer's Representative or any other person accountable to the Engineer.

4. Engineer's instructions

Clause 4.2.1 requires that the Contractor comply with the Engineer's instructions on any matter relating to the Works. Moreover, Clause 4.2.2 ensures that the Contractor only takes instructions from the Engineer, the Engineer's Representative or a person authorized by the Engineer in terms of Clause 3.2.4.

5. Compliance with applicable laws

Clause 4.3.1 requires that the Contractor comply with all applicable laws, regulations, etc. in fulfilling the Contract.

6. Protection of fossils, etc.

Clause 4.7.1 requires the Contractor to take reasonable precautions to prevent any person from damaging, *inter alia* anything of geological or archaeological interest, and requires that he inform the Engineer and follows any instructions issued in this regard.

7. Housing, food and transport

Clause 4.10.1 requires the Contractor to make his own arrangements for payment, housing, feeding and transport for his employees, provided that if he uses any part of the Site for such purposes he shall obtain the Engineer's prior approval.

Clause 4.2 of SANS 1200A further requires that facilities provided comply with local authority regulations and are maintained in a clean and sanitary condition.

8. Competent employees

Clause 4.11.1 requires that all persons employed on Site are careful, competent, and efficient. These attributes embrace knowledge of the environmental matters and issues dealt with in the EMP.

9. Removal from Site

Clause 4.11.2 makes provision for the Engineer to instruct the removal from the Works and Site of any person who is guilty of misconduct, or is incompetent or negligent, or is an undesirable presence on Site.

Clause 7.1.1 requires that all Construction Equipment be in good working order. Accordingly, the Engineer may order that any Construction Equipment not complying with the environmental specifications be removed from Site.

10. **Unacceptable documentation**

Clauses 5.3.1 and 5.3.2 require the Contractor to provide documentation required before commencement with Works execution, failing which the Employer may terminate the Contract. Such documentation includes the Protection of the Environment Declaration provided for in the Contract Document.

11. **Program and Method Statements**

Clause 5.6.1 makes provision for the Engineer to request the programs for carrying out the Works.

Clause 5.6.2 makes provision for the Engineer to request statements from the Contractor for the entire scope of the work. In the case of the environmental specifications, these would be submitted as Method Statements.

12. **Hours of operation**

Clause 5.8.1 restricts the Contractors hours of operation to between sunrise and sunset on working days (usually from Monday to Saturday), unless, *inter alia*, permitted by the Engineer in writing.

Clause 5.7.2 further requires that in the event that permission is granted for night work, then such work shall be carried out without excessive noise and disturbance.

13. **Suspension of Works**

Clause 5.11.1 enables the Engineer to suspend the progress of the Works or any part thereof, which may be as a result of some default or breach of the Contract on the part of the Contractor.

14. **Site clean-up**

Clause 5.15.1 requires that, on completion of the Works, the Contractor shall clear away and remove from the Site all Construction Equipment, surplus materials, rubbish and Temporary Works of every kind and leave the whole of the Site and Works clean and in a safe condition. All streams and watercourses shall be restored to the condition as at the commencement of the Works. Should the Contractor fail to do the work upon notice from the Engineer, the Employer may in terms of Clause 7.8.3, employ others to carry out the work and recover the cost of doing so from the Contractor.

15. **Access to the Works**

Clause 7.3.1 makes provision for the Engineer to authorize the Environmental Officer (EO) to have access to the Works and Site.

16. **Pollution prevention and interferences**

Clause 8.1.2 requires that all operations necessary for the execution of the Works be carried out so as not to cause unnecessary noise or pollution, or to interfere unnecessarily or improperly with public services, or the access to, use and occupation of public or private roads and footpaths or properties.

Clause 5.6 of SANS 1200A further requires the Contractor to minimize dust nuisance and pollution of streams and inconvenience to or interference with the public.

17. **Dust**

Clause 8.1.2 requires that all operations necessary for the execution of the Works be carried out so as not to cause unnecessary pollution.

Clause 5.6 of SANS 1200A requires that the Contractor take all reasonable measures to minimize any dust nuisance.

18. **Noise**

Clause 8.1.2 requires that all operations necessary for the execution of the Works be carried out so as not to cause unnecessary noise.

Clause 4.1 of SANS 1200A requires that when working in built-up areas, the Contractor shall provide and use suitable and effective silencing devices for pneumatic tools and other plant that would otherwise cause a noise level exceeding 85dB.

19. Protection of existing environment

Clause 8.1.3 requires that the Contractor uses every reasonable means to prevent any roads or bridges to or in the vicinity of the Site being subjected to damage by excessive loads, or disruption due to excessive traffic, occasioned by his transport arrangements.

20. Reinstatement

Clauses 8.2 and 8.4 make provision for the Contractor to repair and make good any damage to the Works in his care (other than "excepted risks"), and bear any costs associated with such reinstatement.

21. Reporting accidents

Clause 8.5.1 requires the Contractor to report to the Engineer every occurrence on the Site which causes environmental damage.

H: HEALTH AND SAFETY SPECIFICATION

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H: HEALTH AND SAFETY SPECIFICATION

For use with the General Conditions of Contract for Construction Works, Third Edition, 2015.

H1 DEFINITIONS

For the purposes of this Specification, the definitions given in the Occupational Health and Safety Act, 85 of 1993 and the Construction Regulations, 2014, and the following definitions, shall apply:

- a) "Construction Regulations, 2014" means the Construction Regulations (GNR. 84 of 7 February 2014) published in terms of the OHS Act.
- b) "Contractor" means the Principal Contractor as defined in the Construction Regulations, 2014.
- c) "Employer" means the Client or his agent as defined in the Construction Regulations, 2014.
- d) "Engineer" means the person/firm so named in the Contract Data whose function is to administer the Contract as agent of the Employer, acting through, if appointed, a Health and Safety Agent.
- e) "OHS Act" means the Occupational Health and Safety Act, 85 of 1993.
- f) "subcontractor" means any contractor employed by the Contractor to perform construction work.

H2 SCOPE

In terms of the OHS Act and the Construction Regulations, 2014 the Employer must provide the Contractor with a Health and Safety Specification, to which the Contractor must respond with a Health and Safety Plan for approval by the Employer.

The purpose of this Specification is to ensure that a contractor entering into a contract with the Employer maintains an acceptable level of compliance with regard to health and safety issues during the performance of the Contract. In this regard the Health and Safety Specification forms an integral part of the Contract and the Contractor shall ensure that his subcontractors and/or suppliers comply with the requirements of this Specification.

H3 INTERPRETATION

The OHS Act and its associated regulations shall have precedence in the interpretation of any ambiguity or inconsistency between it and this Specification.

Responsibility for health and safety relating to the Works lies with the Contractor as described in this Specification. Nothing stated in or omitted from this Specification shall in any way limit the Contractor's obligations and liabilities in terms of the OHS Act.

H4 GENERAL REQUIREMENTS

The Contractor shall:

- a) create and maintain a safe and healthy work environment;
- b) execute the Works in a manner that complies with all the requirements of the OHS Act and all its associated regulations, and in so doing, minimize the risk of incidents occurring; and
- c) respond to the instructions issued by the Engineer through the Engineer's Representative, except in the case of a health and safety issue which requires the Contractor's immediate attention, in which case the Employer's Health and Safety Agent can issue an instruction directly to the Contractor.

H5 ADMINISTRATION

H5.1 Application for construction work permit

Not applicable until 7 August 2015.

H5.2 Notification of intention to commence construction work

The Contractor shall notify the Provincial Director of the Department of Labour in writing using the pro forma contained in Annexure 2 of the Construction Regulations, 2014 before construction work commences, and retain a copy of such notification in the health and safety file, if such work will:

- a) include excavation work;
- b) include working at a height where there is a risk of falling;
- c) include the demolition of a structure; or
- d) include the use of explosives to perform construction work.

The Contractor shall ensure that no work commences on an electrical installation which requires a new supply or an increase in electricity supply before the person who supplies or contracts or agrees to supply electricity to that electrical installation has been notified of such work.

The Contractor shall ensure that no asbestos work is carried out before the Provincial Director of the Department of Labour has been notified in writing.

H5.3 Occupational Health and Safety Agreement

The Contractor shall enter into an Agreement with the Employer before the commencement of the Works on site.

H5.4 Good standing with the Compensation Fund or a licensed compensation insurer

The Contractor shall provide the Engineer with a letter of good standing from the Compensation Commissioner or a licensed compensation insurer before the commencement of the Works on Site.

H5.5 Emergency procedures

The Contractor shall submit for acceptance to the Engineer a health and safety emergency procedure, which includes but is not limited to fire, spills, accidents and exposure to hazardous substances, which:

- a) identifies the key personnel who are to be notified of any emergency;
- b) sets out details of available emergency services, including contact particulars; and
- c) the actions or steps which are to be taken during an emergency.

The Contractor shall within 24 hours of an emergency taking place notify the Engineer in writing of the emergency and briefly outline what happened and how it was dealt with.

H5.6 Health and safety file

The Contractor shall ensure that a Health and Safety file, which shall include all documentation required in terms of the provisions of the OHS Act, the Construction Regulations, 2014 and this Health and Safety Specification, is open and kept on Site at all times.

The Health and Safety file shall be made available for inspection by any inspector, subcontractor, the Employer, the Engineer, the Employer's Health and Safety Agent, or employee of the Contractor, upon the request of such persons.

The Contractor shall hand over the Health and Safety file to the Engineer upon Works completion of the Contract and, if applicable, a certificate of compliance accompanied by a test report for the electrical installation in accordance with the provisions of the Electrical Installation Regulations, 1992.

H5.7 Health and safety committee

Where applicable, the Contractor shall establish a health and safety committee, and shall convene health and safety meetings as provided for in the OHS Act.

The Engineer or the Employer's Health and Safety Agent shall be invited to attend such meetings as an observer.

The Contractor shall ensure that minutes of the health and safety committee meetings are kept.

H5.8 Inspections, formal enquires and incidents

The Contractor shall inform the Engineer:

- a) beforehand of inspections, investigations or formal inquiries of which he has been notified by an inspector; and
- b) as soon as reasonably practicable of the occurrence of an incident (as defined in the OHS Act) on the Site.

The Contractor shall record all incidents and notify the Engineer of any incident, except in the case of a traffic accident on a public road, as soon as possible after it has occurred and report such incident to an inspector as designated in terms of the OHS Act.

The Contractor shall investigate all incidents and issue the Engineer with copies of such investigations.

H5.9 Personal protective equipment and clothing

The Contractor shall ensure that all workers are issued with the necessary personal protective clothing.

H6 APPOINTMENTS**H6.1 Appointment of construction manager**

The Contractor shall, prior to commencing the Works on Site, appoint a full-time competent person as the construction manager, with the duty of managing all construction work on a single site, including the duty of ensuring occupational health and safety compliance. In the absence of the construction manager an alternative must be appointed by the Contractor.

The Contractor may, having considered the size of the project, appoint, in writing, one or more assistant construction managers for different sections thereof.

No construction manager may manage any construction work on or in any construction site other than the Site in respect of which he or she has been appointed.

H6.2 Appointment of construction supervisor, and health and safety officers

The construction manager shall appoint a competent employee(s) in writing as the construction supervisor(s) for the Site, who will be responsible for construction activities and ensuring occupational health and safety compliance on the construction site. The Contractor may, having considered the size of the project, appoint, in writing, one or more competent employees to assist the appointed construction supervisor(s).

The Contractor may, having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the Site, appoint a full-time or part-time construction health and safety officer in writing, who has in the Contractor's opinion the necessary competencies and resources, to assist the Contractor in the control of all health and safety related aspects on the Site.

The Contractor shall compile and maintain an organogram which outlines the roles and responsibilities of the construction supervisor's assistants, and health and safety officers.

H6.3 Other competent persons

The Contractor shall appoint in writing competent persons to supervise or inspect, as relevant, any of the following:

- a) temporary works operations;
- b) excavation work;
- c) demolition work;
- d) scaffolding work operations;
- e) suspended platform work operations;
- f) rope access work;
- g) material hoists;
- h) operation of bulk mixing plant;
- i) explosive activated fastening device;
- j) cranes;

- k) construction vehicles and mobile plant (equipment);
- l) the stacking and storage of articles on the Site; and
- m) fire equipment.

The Contractor shall appoint in writing competent persons to:

- n) induct employees in health and safety; and
- o) prepare a fall protection plan.

H6.4 Health and safety representative(s)

The Contractor shall appoint in writing, if necessary in terms of the OHS Act, a health and safety employee representative(s), whose duties shall be as described in the OHS Act.

H7 EMPLOYER'S HEALTH AND SAFETY AGENT

The Employer's Health and Safety Agent shall:

- a) audit the Contractor's compliance with the requirements of this Specification prior to the commencement of any physical construction activities on the Site;
- b) accept or reject all safety plans, giving reasons for rejecting such plans;
- c) monitor the effective implementation of all safety plans;
- d) conduct periodic and random audits on the health and safety file to establish compliance with the requirements of this Specification and the Contractor's health and safety plan; and
- e) visit the site at regular intervals to conduct site inspections, and based upon such visits issue, wherever necessary, any notices and/or instructions to the Contractor or any of the Contractor's subcontractors with a copy to the Engineer and, where relevant, to the Contractor.

The Contractor shall invite the Employer's Health and Safety Agent to audit compliance with the requirements of this Specification before commencing with any new construction activity on the Site.

The Contractor shall permit the Employer's Health and Safety Agent to audit the Contractor's compliance with the approved Health and Safety Plan, and shall provide any assistance and/or documentation as may be required in this regard.

H8 CREATING AND MAINTAINING A SAFE AND HEALTHY WORK ENVIRONMENT

H8.1 General

The Contractor shall with respect to the Site and the construction works that are contemplated:

- a) cause a preliminary hazard identification to be performed by a competent person before commencing any physical construction activity;
- b) evaluate the risks associated with such work constituting a hazard to the health and safety of such employees and the steps that need to be taken to comply with the OHS Act; and
- c) as far as is reasonably practicable, prevent the exposure of such employees to the hazards concerned or, where prevention is not reasonably practicable, minimize such exposure.

The Contractor shall ensure that:

- d) all reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work;
- e) no structure or part of a structure is loaded in a manner which would render it unsafe;
- f) relevant information, if any, provided by the designer of the structure is taken into account in the risk assessment; and
- g) the designer of any temporary works complies with the requirements of regulation 6(2) of Construction Regulations, 2014.

The Contractor shall carry out regular inspections and audits to ensure that the Works are being performed in accordance with the requirements of this Specification and the Contractor's health and safety plan

H8.2 Risk assessment

The Contractor shall before the commencement of any construction work on Site and during such construction work, cause risk assessment(s) to be performed by a competent person appointed in writing. Such assessment(s) shall as a minimum:

- a) identify the risks and hazards to which persons may be exposed to;
- b) analyze and evaluate the identified risks and hazards based on a documented method;
- c) document a plan of safe work procedures, including the use of any personal protective equipment or clothing and the undertaking of periodic “toolbox talks” or inductions before undertaking hazardous work, in order to mitigate, reduce or control the risks and hazards that have been identified;
- d) provide a monitoring plan; and e) provide a review plan.

The Contractor shall ensure that as far as is reasonably practicable, ergonomic related hazards are analyzed, evaluated and addressed in the risk assessment.

The Contractor must review the relevant risk assessment -

- f) where changes are effected to the design and or construction that result in a change to the risk profile; or
- g) when an incident has occurred.

H8.3 Health and safety plans

The Contractor shall prior to commencing the Works to which this Specification applies, submit to the Employer's Health and Safety Agent for approval a suitable and sufficiently documented health and safety plan, based on this Specification and the risk assessment that is conducted.

The health and safety plan shall include, but not be limited to, the following:

- a) The safety management structure, including the names of all designated persons such as the construction supervisor and any other competent persons;
- b) Safety method statements and procedures to be adopted to ensure compliance with the OHS Act; Construction Regulations, 2014 and this Health and Safety Specification;
- c) The provision and use of temporary services;
- d) Personal protective equipment, devices and clothing required;
- e) Emergency procedures;
- f) Provision of workers' welfare facilities;
- g) Induction and training;
- h) Arrangements for monitoring and control to ensure compliance with the safety plan; and
- i) Provision and maintenance of the health and safety file and all other relevant documentation.

The Contractor shall provide each subcontractor with the sections of this Health and Safety Specification pertaining to the construction work to be performed by that subcontractor. The subcontractor shall provide the Contractor with a health and safety plan pertaining to his work, for incorporation into the Contractor's health and safety plan.

The Contractor shall discuss the submitted health and safety plan with the Employer's Health and Safety Agent, modify such plan in the light of the discussions and resubmit the modified plan for approval.

The Contractor shall apply the approved health and safety plan from the date of its approval and for the duration of the Works to which this Specification applies.

The Contractor shall conduct periodic audits for compliance with the approved health and safety plan at intervals agreed upon with the Employer's Health and Safety Agent, but at least once every month.

The Contractor shall update the health and safety plan whenever changes to the Works are brought about

H8.4 Responsibilities towards employees and visitors

The Contractor shall, as far as is reasonably practicable, cause every employee to be made conversant with the hazards to his health and safety attached to any work which he has to perform, any article or substance which he has to produce, process, use, handle, store or transport and any plant or machinery which he is required or permitted to use, as well as with the precautionary measures which should be taken and observed with respect to those hazards or safe work procedures.

The Contractor shall ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment.

The Contractor shall cause a record of all induction training to be kept, which indicates the names, identity numbers and job description of all those who attended such training.

The Contractor shall not allow or permit any employee to enter the Site, unless such person has undergone health and safety induction training pertaining to the hazards prevalent on the Site at the time of entry.

The Contractor shall ensure that all of his employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner on the prescribed form.

The Contractor shall ensure that each visitor to the Site, save where such visitor only visits the site office and is not in direct contact with the construction work activities:

- a) undergoes health and safety instruction pertaining to the hazards prevalent on the Site; and
- b) is in possession of and using the necessary personal protective equipment.

The Contractor shall cause a record of all induction training to be kept in the Health and Safety file. The

Contractor shall provide suitable on-site signage to alert workers and visitors to health and safety hazards and requirements. Such signage shall include but not be limited to:

- c) prohibited unauthorized entrance;
- d) signage to indicate what personal protective equipment is to be worn; and
- e) activity related signs.

The Contractor shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a workplace.

H8.5 Subcontractors

The Contractor may only subcontract work in terms of a written subcontract and shall only appoint a subcontractor should he be reasonably satisfied that such a subcontractor has the necessary competencies and resources to safely perform the work falling within the scope of the subcontract.

The Contractor shall ensure that all of his obligations in respect of subcontractors in terms of the Construction Regulations, 2014 are adhered to.

H8.6 Work permits and wayleaves

The Contractor shall be responsible for obtaining all the wayleaves, permissions or permits applicable to working near any existing services or other infrastructure on Site, and shall abide by the safety conditions imposed by such wayleaves, permissions or permits.

H8.7 Access to the Site

The Contractor shall ensure that access to the Site is strictly controlled and that, where possible, only authorized persons are permitted onto the Site.

The Contractor shall control the access to Site of his own personnel and equipment, and that of his subcontractors and suppliers, in such a way so as to ensure that the safety of all public pedestrian and vehicular traffic is not compromised.

H8.8 First aid and emergency procedures

The Contractor shall, where more than five employees are employed at a workplace, provide a first aid box or boxes at or near the workplace, which shall be available and accessible for the treatment of injured persons at that workplace. Such first aid boxes shall contain suitable first aid equipment.

The Contractor shall ensure, where there are more than 10 employees employed on the Site, that for every group of up to 50 employees at that workplace at least one person is readily available during normal working hours who is in possession of a valid certificate of competency in first aid.

The following information shall be conspicuously posted in the offices of the Contractor for the duration of the Contract:

- a) Telephone numbers of emergency services;
- b) The names of all safety representatives and safety officers; and
- c) The name(s) of the competent first aider(s).

The Contractor shall post, in prominent places, notices indicating where the first aid box(es) is/are kept, as well as the name of the person in charge of the first aid box.

H8.9 Housekeeping

The Contractor shall ensure, *inter alia*, that suitable housekeeping is continuously implemented on the Site, including provision for the:

- a) removal of scrap, waste and debris, and materials which are no longer required for use, at appropriate intervals (in accordance with Construction Regulation 27); and
- b) proper stacking and storage of materials and equipment (in accordance with Construction Regulations 27 and 28).

H8.10 Fire precautions

The Contractor shall ensure that all appropriate measures are taken to minimize the risk of fire and that appropriate procedures and equipment are in place to deal with the event of a fire, all in accordance with Construction Regulation 29 and the Environmental Management Specification in Part C3.5 of the Scope of Work.

H8.11 Facilities for workers

The Contractor shall provide ablution facilities and eating areas all as specified in the Environmental Management Specification in Part C3.5 of the Scope of Work.

H9 GENERAL HAZARDS AND RISKS APPLICABLE TO WORK REQUIRED IN TERMS OF THIS TERM TENDER

H9.1 Existing Site conditions

H9.2 Information provided by the designer (CR 6(1))

H9.3 Environmental hazards

H9.4 Traffic hazards

H9.5 Construction materials (hazardous substances)

H9.6 Fall protection (working at heights) (CR 10)

H9.7 Structures (CR 11)

H9.8 Temporary works (CR 12)

H9.9 Excavation work (CR 13)

H9.10 Demolition work (CR 14)

H9.11 Tunneling (CR 15)

H9.12 Scaffolding (CR 16)

H9.13 Suspended platforms (CR 17)

H9.14 Rope access work (CR 18)

H9.15 Material hoists (CR 19)

- H9.16 Bulk mixing plant (CR 20)**
- H9.17 Explosive actuated fastening device (CR 21)**
- H9.18 Cranes (CR 22)**
- H9.19 Construction vehicles and mobile plant (equipment) (CR 23)**
- H9.20 Electrical installations and machinery (CR 24)**
- H9.21 Flammable liquids (CR 25)**
- H9.22 Water environments (CR 26)**
- H9.23 Overhead Work (CR 27(g))**
- H9.24 Confined spaces**
- H9.25 Other hazards...**

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GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND
ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

C3.6 Annexes

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Annex 1: Pro Forma Monthly Project Labour Report

Annex 2: B-BBEE Sub-contract Expenditure Report

Annex 3: Joint Venture Expenditure Report

Annex 4: Targeted Labour Contract Participation Expenditure Report

Annex 1: Pro Forma Monthly Project Labour Report



PROJECT: _____

[illegible]

BENEFICIARY LIST

Name of Contractor

Project Name

Project Number

Month:

Youth = 35yrs and less

[illegible]

Signature of CLO

PAYMENT REGISTER

Contractor Name

Period

Project Number

Month:

Name and surname	ID Number	Contact no	Number of Workdays	Task Rate	Payment Due	Signature for Payment Received	Comments

Signature of CLO_____
Signature of Contractor to verify accuracy

Signature of Consultant

Signature of Contractor for receipt of monies

DAILY SITE ATTENDANCE REGISTER

Name of Contractor
Project Name

Project Number
Month:

1 = At Work A = Absent L = Leave SC = Site Closed
SL = Sick Leave P = Public Holiday 2 = Training

Validation: Cannot be
more than 23 days per
person per month.

Surname	Initials	ID Number	Birth Date	Rate per day (R)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total Work days	Total Training Days	Total work days & training days
TOTALS																																					

Signature of CLO

Week 1 -2: Signature of Contractor Organisation

Week 3-4: Signature of Contractor Organisation

Week 1: Signature of Contractor

Week 2: Signature of Contractor

Week 3: Signature of Contractor

Week 4: Signature of Contractor

Validation: Total work days
Total training days
Total work days +
training days
Variance

Variance must be 0

LABOUR MONTHLY SUMMARY SHEET

Name of Contractor

Project Name

Project Number

Applicable Month

No of Working Days: Maximum including training = 23 days per month

Number of workers	Surname	Initials	First Name	ID Number	Birth Date	(M)ale / (F)emale	(D)isabled	Rate per day	Number of days worked this month	Number of training days this month	Total amount paid to beneficiary	Course name	Course Code
	Totals for month												

Signature Consultant

PROGRESS REPORT BY CONSULTANTS and ENGINEERS

(To be submitted with monthly Invoice/Claims for payment)

PROJECT		Proj. No.	
CONSULTANT		Date: Month	
ENGINEER		Year	
CONTRACTOR			
COMPLETED BY			

Note: All sections must be completed

1. ACTUAL EMPLOYMENT GENERATION (P=Person; PD=Person Days)

1.1 Actual Number of persons employed

Occupational Category	Total		Adult				Youth				Disabled			
			Women		Men		Female		Male		Female		Male	
	P	PD	P	PD	P	PD	P	PD	P	PD	P	PD	P	PD
Clerical														
Labourer														
Managerial														
Semi skilled														
Skilled														
Supervisor														
Total														

Please note: - The definition of youth is any person under the age of 35 years. (18-35 Years)

- Each person may only be counted once. If a person falls into more than one category, disabled persons take preference, then youth, then adults.

- Must include all occupational categories (Clerical, Labourer, Managerial, Semi skilled, Skilled and Supervisor).

1.2. Average daily wage per category

Please note that the totals are calculated averages for the number of records submitted per category.

Occupational Category	Category Average	Adult		Youth		Disabled	
		Women	Men	Female	Male	Female	Male
		Daily wage	Daily wage	Daily wage	Daily wage	Daily wage	Daily wage
Clerical							
Labourer							
Managerial							
Semi skilled							
Skilled							
Supervisor							
Average of the Daily Wage							

2. TRAINING ACTIVITIES

2.1 Non-Accredited Training

Training Type	Totals		Adult				Youth				Disabled			
			Women		Men		Female		Male		Female		Male	
	Persons Trained	Training days	Persons	Days	Persons	Days	Persons	Days	Persons	Days	Persons	Days	Persons	Days
Administration														
Technical														
Lifeskills/ ISD														
Literacy & Numeracy														
Vocational Skills														
Business Skills														
Total Training														

2.2 Accredited Training

Training Type	Totals		Adult				Youth				Disabled			
			Women		Men		Female		Male		Female		Male	
	Persons Trained	Training days	Persons	Days	Persons	Days	Persons	Days	Persons	Days	Persons	Days	Persons	Days
Administration														
Technical														
Lifeskills/ ISD														
Literacy & Numeracy														
Vocational Skills														
Business Skills														
Total Training														

2.3 Categories of Accreditation

Training Type	If Accredited			Note:
	NSB Number	NQF Level	ETQA/CETA	
Administration				NQF Level of Training Level 1 - General Education and Training Level 2,3,4 - Further Education and Training Level 5 - Higher Education and Training NSB Number: NSB 01: Agriculture and Nature Conservation NSB 02: Culture and Arts NSB 03: Business, Commerce and Management Studies NSB 04: Communication Studies and Language NSB 05: Education, Training and Development NSB 06: Manufacturing, Engineering and Technology NSB 07: Human and Social Studies NSB 08: Law, Military Science and Security NSB 09: Health Science and Social Services NSB 10: Physical, Mathematical, Computer and Life Sciences NSB 11: Services NSB 12: Physical Planning and Construction
Technical				
Lifeskills / ISD				
Literacy & Numeracy				
Vocational Skills				
Business Skills				
Total Training				

3. SMME'S USED SINCE THE START OF THE PROJECT:

Please remember to include all the SMME's that worked on the project since it started. Then add all the person days and all the funds paid to each SMME since the start of the project, and only record the latest total in the table.

For example, if a SMME completed all their work during the first reporting period, the name and details of that SMME must be added to every subsequent report.

SMME	Information about the SMME. (If it is a subsidiary: provide information for whole group and not for the SMME only)		Information about the work on the PROJECT			
Name of SMME	No. of permanent employees	Turnover previous 12 months	Total no. of person days to date	Amount paid to SMME to date. (Total)	Person days locally sourced: 0-25% 26-50% 51-75% 75-100%	Total value of work: SMME Involvement

4. BEE ORGANISATIONS USED SINCE THE START OF THE PROJECT:

Note that Black Economic Empowerment (BEE) Organisations are referred to in the table below as Affirmable Business Enterprises (ABE's). The definition of an ABE is as per the Department of Public Works definition: *A sole trader, partnership or legal entity which adheres to statutory labour practises, is registered with South African revenue Services and is a continuing and independent enterprise for profit, providing a commercially useful function and for which at least two thirds (67%) is owned by one or more PDI's and whose management and daily business operations are in control of one or more PDI's who effectively own it, and provided that the annual average turnover excluding VAT, does not exceed the maximum values given for each respective ABE category.*

Please remember to include all the ABE's that worked on the project since it started. Then add all the person days and all the funds paid to each ABE since the start of the project, and only record the latest

ABE	Information about the abe. (If it is a subsidiary: provide information for whole group and not for the ABE only)		Information about the work on the PROJECT			
Name of ABE	No. of permanent employees	Turnover previous 12 months	Total no. of person days to date	Amount paid to ABE to date. (Total)	Person days locally sourced: 0-25% 26-50% 51-75% 75-100%	Total value of work: SMME Involvement

5. TARGET DATES

Item to Track Date format (dd/mm/yyyy)	Target Date	Revised / Actual Date	Change Revised / Actual Date	Milestone Achieved? (Y/N)
Design Report Approved				
Tenders Awarded				
Contract Signed				
Contractor on Site				
Contractual Conditions met				
Construction Completion Date				

Final Payment (Retention Payment is Final)					
Design Report Approved					

6. CONTRACTOR ASSESSMENT

	Yes / No
Has the Contractor met construction targets this month?	
Has the Contractor met all financial obligations pertaining to the project?	
Are targeted labour components approved in the Registration form being achieved?	
Please rate the standard of work done (1 = Very Poor, 2 = Poor, 3 = Average, 4 = Good, 5 = Excellent)	

7. PROGRESS

Describe fully all milestones achieved on project to date e.g. km kerbs laid, km roads completed, km pipes laid, % of reservoir completed etc.

Month Qty

Total to date

8. COMMENT ON PROBLEMS / PROGRESS

Describe problems encountered and proposed solutions

CONTRACT NO. AND NAME: _____

CONTRACTOR: _____

Value of the contract (as defined in Schedule 19: Preferencing Schedule) (P*)	R	B-BBEE Status Level of Prime Contractor	
--	---	---	--

Signatures

Declared by Contractor to be true and correct:

Date: _____

Verified by Engineer/ Engineer's Representative:

Date: _____

ANNEX 3**GEORGE MUNICIPALITY**

CONTRACT NO. AND NAME:

CONTRACTOR:

JOINT VENTURE EXPENDITURE REPORT BASED ON PAYMENT CERTIFICATE NO.

Value of the contract (as defined in Schedule 19: Preferencing Schedule) (P*)	R	B-BBEE Status Level of Joint Venture	
---	---	--------------------------------------	--

Name of Joint Venture partner (list all)	B-BBEE Status Level of each JV partner as at contract award	Percentage contribution of JV partner per JV Agreement ¹ A	Total value of JV partner's contribution (excl. VAT) ¹ B = A% x P*	Value of JV partner's contribution to date (excl. VAT) ¹ C	Value of JV partner's contribution as a percentage of the work executed to date D = C/P*x100
JV Partner A		%	R	R	%
JV Partner B		%	R	R	%
JV Partner C		%	R	R	%

¹ Documentary evidence to be provided**Signatures**

Declared by Contractor to be true and correct:

Date: _____

Verified by Engineer/ Engineer's Representative:

.....

Date:.....

ANNEX 4**GEORGE MUNICIPALITY**

CONTRACT NO. AND NAME:

CONTRACTOR:

TARGETED LABOUR CONTRACT PARTICIPATION EXPENDITURE REPORT BASED ON CERTIFICATE NO.

Value of the contract (as defined in Schedule 19: Preferencing Schedule) (P*)

R

Specified Targeted Labour Contract Participation Goal

%

Name of Contractor/Sub-contractor (list all)	Total previous expenditure on wages in respect of targeted labour	Net Amount for this month ¹	Total expenditure on wages in respect of targeted labour
Contractor	R	R	R
Sub-contractor A	R	R	R
Sub-contractor B	R	R	R
Total			R
			%

¹ Documentary evidence to be provided

Expressed a percentage of P*

SignaturesDeclared by Contractor
to be true and correct:

Date

Verified by Engineer/
Engineer's
Representative:

Date

GEORGE MUNICIPALITY

TENDER No. T/ING/004/2022

**TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND
ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

Site Information (Part C4)

C4 Site Information

4.1 DESCRIPTION OF THE SITE AND ACCESS

The site of the works will be described in each individual Works Project.

4.2 EXISTING PAVEMENT AND SUBSOIL CONDITIONS

4.2.1 Test Pit Information

Test pit information, where available, will be supplied in each individual Works Project.

C4.3 WEATHER AND WORKING CONDITIONS

The conditions are typical of the Southern Cape region, with year-round rainfall and an annual average of some 500mm.

C4.4 SOURCING OF CONSTRUCTION MATERIALS

All the materials that are required for the works, e.g. pavement layer materials, asphalt, bitumen and emulsions, ready mixed concrete etc., are locally available from commercial sources and it is not expected that any problems will be experienced with the procurement of such materials.

Water for construction purposes is available from the municipal water supply. The Contractor shall make his own arrangements in this regard.

GEORGE MUNICIPALITY

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**TERM TENDER FOR ROAD REHABILITATION, RESURFACING AND
ANCILLIARY WORKS FOR A PERIOD OF THREE (3) YEARS**

Drawings (Part C5)

