



**TENDER NUMBER: DRT 41/02/2020**

**TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION, FOR A PERIOD OF THREE (3) YEARS.**

**PROCUREMENT DOCUMENT**

**JUNE 2021**

**ISSUED BY:**

HEAD OF DEPARTMENT  
DEPARTMENT OF ROADS AND TRANSPORT  
PRIVATE BAG X83  
MARSHALLTOWN  
2107

**NAME OF TENDERING ENTITY:.....**

**ADDRESS: .....**

**TEL NO. .... FAX NO. ....**

**TOTAL OF PRICES INCLUSIVE OF VAT:**

**R.....**

## CONTENTS

	<b>Colour</b>
<b>THE TENDER</b>	
<b>PART T1 : TENDERING PROCEDURES</b>	
T1.1 TENDER NOTICE AND INVITATION TO TENDER	White
T1.2 TENDER DATA	Pink
<b>PART T2 : RETURNABLE DOCUMENTS</b>	
T2.1 LIST OF RETURNABLE DOCUMENTS	Yellow
T2.2 RETURNABLE SCHEDULES	Yellow
<b>THE CONTRACT</b>	
<b>PART C1 : AGREEMENTS AND CONTRACT DATA</b>	
C1.1 FORMS OF OFFER AND ACCEPTANCE	White
C1.2 CONTRACT DATA	White
C1.3 OTHER CONTRACT FORMS	White
<b>PART C2 : PRICING DATA</b>	
C2.1 PRICING INSTRUCTIONS	Yellow
C2.2 BILL OF QUANTITIES	Yellow
<b>PART C3 : SCOPE OF WORK</b>	Blue
C3.1 SCOPE OF WORK	
<b>PART C4 : SITE INFORMATION</b>	Green
C4.1 SITE INFORMATION	
<b>PART C5 : ANNEXURES</b>	White



## PART T1: TENDERING PROCEDURES

### Part T1.1 Tender Notice and Invitation to Tender for Traffic Signals Maintenance, Technology Upgrades and Geometric Upgrades to cater for New Installation, for a period of three (3) years.

Clause number	Tender Data
F.1.1	The employer is the <b>Department of Roads and Transport, Chief Directorate Maintenance of the Gauteng Provincial Government, Private Bag X83, Marshall Town.</b>
F.1.2	<p>The Tender Documents issued by the employer comprise the following documents:</p> <p><b>THE TENDER</b></p> <p><b>Part T1: Tendering procedures</b>            T1.1 - Tender notice and invitation to tender            T1.2 - Tender data</p> <p><b>Part T2: Returnable documents</b>            T2.1 - List of returnable documents</p> <p><b>THE CONTRACT</b></p> <p><b>Part C1: Agreements and Contract data</b>            C1.1 - Forms of offer and acceptance            C1.2 - Contract data            C1.3 - Other Contract Forms</p> <p><b>Part C2: Pricing data</b>            C2.1 - Pricing instructions            C2.2 - Bill of Quantities</p> <p><b>Part C3: Scope of work</b>            C3 - Scope of work</p> <p><b>Part C4: Site information</b>            C4 - Site information</p> <p><b>Part C5 : Appendices</b></p>
F.2.1	<p>Only those Tenderers who are registered with the CIDB at the closing date for submission of tenders, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a Category A class of construction work are eligible to submit tenders.</p> <p>Joint Ventures are eligible to submit tenders provided that:</p>



Clause number	Tender Data
	<ol style="list-style-type: none"> <li>1. Every member of the joint venture is registered with the CIDB at the closing date for tender;</li> <li>2. the lead partner has a contractor grading designation in the <b>5CE &amp; 6EP</b> class of construction work.</li> <li>3. The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a <b>6CE &amp; 7EP</b> class or higher of construction work is eligible to submit tenders.</li> </ol>
F.2.7	<p>The arrangements for the <b>compulsory clarification meeting</b> are:</p> <p>Venue: 1215 Nico Smith (<i>previously Michael Brink</i>) Street, Koedoespoort, Pretoria Date: 16 July 2021</p> <p>Prospective bidders should be represented at the compulsory briefing session by suitable/qualified and experienced individuals who can fully comprehend the scope and complexities of the work involved.</p>
F.2.12	No alternative tenders will be considered.
F.2.13.1	Tenderers are to submit one tender only, either as a single tendering entity or as a member of a Joint Venture.
F2.13.3	Each tender offer communicated on paper shall be submitted as an original, plus 0 copy.
F.2.13.4	Submit only the signed original tender
F.2.13.5 F.2.15.1	<p>The employer's details and address for delivery of tender offers and identification details that are to be shown on each tender offer package are:</p> <p><b>Location of tender box:</b> Ground floor of Life Centre Building <b>Physical address:</b> 45 Commissioner Street, Johannesburg. <b>Identification details:</b> <b>TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION FOR A PERIOD OF 3 YEARS PROVINCE and the closing date and time of the tender.</b></p>
F2.13.6	A two-envelope procedure will not be followed.
F.2.15 F.2.15	<p>The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.</p> <p><b>No telegraphic, telephonic, telex, facsimile or electronic tender offers will be accepted.</b></p>
F.2.16	The tender offer validity period is 90 days.
F.2.20	<b>The tenderer is required to submit a letter of intent from an approved insurer undertaking to provide the Certificate of Insurance Cover in the format included on this procurement document.</b>
F.2.23	The tenderer is required to comply and submit the documents outlined in <b>Part T1.1 Tender Notice and Invitation to Tender</b>
F.2.24	<p><b>Bidders should note the following:</b></p> <ul style="list-style-type: none"> <li>• Where the proposed prices of critical materials to be supplied to the Department are considerably less than the expected market price or rates, the Department reserves the right</li> </ul>



Clause number	Tender Data
	<p>to verify the proposed prices by requesting quotations from the supplier(s) cited in the compilation of the bid.</p> <ul style="list-style-type: none"> <li>• Only suppliers who are registered on the National Centralised Supplier Database (CSD) will be considered for appointment.</li> <li>• Potential suppliers must note that in terms of Departmental policy, the Department reserves the right to cancel a contract and blacklist any supplier for a period of at least 12 months if the supplier fails to adequately perform in terms of the awarded contract.</li> <li>• The bid validity period is 90 days. However, the Department reserves the right to request all bidders to extend such validity period should the need arise.</li> <li>• In terms of Occupational Health and Safety (OHS) Act the contractor is required to appoint a registered Safety officer with South African Council for the Project and Construction Management Professions (SACPCMP). Compliance in respect of the OHS is the responsibility of the contractor.</li> <li>• Prospective bidders should be represented at the compulsory briefing session by suitable/qualified and experienced individuals who can fully comprehend the scope and complexities of the work involved.</li> <li>• The successful bidder will be required to enter into a formal contract with the Department. Such a contract will be governed in terms of the General Conditions of Contract dated 2015.</li> </ul>
F.3.11.3	<p><b><u>PRE-QUALIFICATION CRITERIA FOR PREFERENTIAL PROCUREMENT</u></b></p> <p><b>The Department has decided to apply pre-qualifying criteria, in terms of Preferential Procurement Regulation 4. (1)(b) to advance certain designated groups. Bidders who do not meet the pre-qualification criteria, will be disqualified and will not be considered for further evaluation. Only the following bidders may respond:</b></p> <ul style="list-style-type: none"> <li>• <b>Bidders (including trusts, JV's and consortia) must be an EME (Exempted Micro Enterprise) or QSE (Qualifying Small Enterprise)</b></li> </ul> <p><b><u>B-BBEE Requirements:</u></b></p> <ol style="list-style-type: none"> <li>1. A Bidder who qualifies as an Exempted Micro Enterprises (EME's) must submit a sworn affidavit.</li> <li>2. A Bidder who qualifies as a Qualifying Small Enterprises (QSE's) and is more than 51% black owned must submit a sworn affidavit.</li> <li>3. Sworn affidavits submitted by bidders in support of their B-BBEE level should comply with the DTI or the CIPC format or in a similar format and must be valid, original or certified as a true copy of the original <b>OR</b> B-BBEE verification certificate issued by an Agency accredited by SANAS (South African National Accreditation System).</li> </ol>



Clause number	Tender Data
	<p>4. A Bidder who qualifies as a Qualifying Small Enterprises (QSE's) and is less than 51% black owned must submit a B-BBEE verification certificate issued by an Agency accredited by SANAS (South African National Accreditation System) which has to be valid, original or certified as a true copy of the original.</p> <p>5. A trust, consortium or joint venture (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE Status Level Verification Certificate for every separate tender.</p> <p>6. Public entities and tertiary institutions must also submit B-BBEE Status Level Verification Certificates together with their tenders.</p> <p>Bidders who fail to submit a valid original or certified copy of their B-BBEE Certificate or Sworn Affidavit will result in the bidder being disqualified. Sworn Affidavits and certification as a "true copy of the original", must comply with the requirements outlined in the Justices of the Peace and Commissioners of Oaths Act, No 16 of 1963 and its Regulations promulgated in Government Notice GNR 1258 of 21 July 1972 Justices of the Peace and Commissioners of Oaths Act, No. 16 of 1963.</p> <p><b>NB:</b> The submission of a fraudulent B-BBEE certificate will result in the bidder being disqualified and criminal proceedings being instituted against the bidder. The bidder, the shareholders and / or directors will further be restricted from doing business with any organ of the state for a maximum period of 10 years</p> <p><b><u>COMPULSORY/MANDATORY TENDER REQUIREMENTS:</u></b></p> <p><b>Failure to submit the following required documents will render the bidders tender disqualified:</b></p> <ul style="list-style-type: none"> <li>• Required proof of current CIDB grading of 6CE &amp; 7EP or Higher.</li> <li>• The Construction Manager must be registered with ECSA as an active Professional Civil Engineer/Professional Civil Engineering Technologist (Pr. Eng. /Pr. Tech Eng <b>OR</b> SACPCMP (Pr CM). The prospective bidders must submit proof of registration with the mentioned professional bodies. Recently certified copies (within 3 months of tender closing) of the professional registration certificate indicating the applicable registration number must be attached/ submitted as part of bidders' tender documents</li> <li>• The Electrical Engineer must be registered with ECSA as a Professional Electrical Engineer/Professional Electrical Engineering Technologist (Pr Eng/Tech). The prospective bidders must submit proof of registration with the mentioned professional bodies. Recently certified copies (within 3 months of tender closing) of the professional registration certificate indicating the applicable registration number must be attached/ submitted as part of bidders' tender documents</li> </ul>



Clause number	Tender Data												
	<ul style="list-style-type: none"> <li>• The Traffic Engineer must be registered with ECSA as an active Professional Civil Engineer/Professional Civil Engineering Technologist (Pr. Eng. /Pr. Tech Eng). The prospective bidders must submit proof of registration with the mentioned professional bodies. Recently certified copies (within 3 months of tender closing) of the professional registration certificate indicating the applicable registration number must be attached/ submitted as part of bidders' tender documents</li> <li>• Bidders must submit proof of ECASA registration (Electrical Contractor Association of South Africa)</li> <li>• In the case of joint ventures and consortia, a detailed agreement must be signed by all parties and attached as part of the submitted tender document</li> <li>• Bidders must attend the compulsory site briefing session as indicated above. The attendance register must be completed and will be used as proof of your attendance.</li> <li>• Complete and sign all SBD documents which form part of the tender document.</li> <li>• SBD 6.2 and Annexure C must be completed and attached with the tender document to demonstrate local content compliance of a minimum threshold of 90% to all procured items</li> </ul> <p><b>NB:</b> Bidders who are listed on the National Treasury's register of defaulters and restricted suppliers will be automatically disqualified</p> <p><b><u>OTHER KEY RETURNABLES:</u></b></p> <ul style="list-style-type: none"> <li>• Valid Tax Clearance Certificate or Tax clearance pin (A trust, consortium or joint venture must submit a consolidated Tax Clearance Certificate OR Tax clearance pin of each partner in the trust, consortium or joint venture).</li> <li>• Registration Documents of the business with the Companies and Intellectual Property Commission (CIPC) OR Master of the High Court in South Africa.</li> <li>• Central Supplier Database (CSD) registration summary report</li> <li>• Certified ID Copies of company directors or members and shareholders (NB: the date of certification must be less than 3 months from the date of the bid closure)</li> </ul> <p>The functionality criteria in respect of traffic signal maintenance, technology upgrades, and geometric upgrades to cater for new installation is as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Key Personnel</th> <th style="text-align: center;">Company Experience in Electrical Network Design, Installation, Commissioning and Maintenance</th> <th style="text-align: center;">Plant &amp; Equipment</th> <th style="text-align: center;">Bank Rating</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">(Max 45 points)</td> <td style="text-align: center;">(Max 30 points)</td> <td style="text-align: center;">(Max 10 points)</td> <td style="text-align: center;">(Max 15 points)</td> </tr> <tr> <td style="text-align: center;">Bidders MUST complete forms B1 and B2 attached in the bid documents for key personnel that will be</td> <td></td> <td></td> <td style="text-align: center;">(Failure to submit proof of bank rating from the relevant bank will result in the</td> </tr> </tbody> </table>	Key Personnel	Company Experience in Electrical Network Design, Installation, Commissioning and Maintenance	Plant & Equipment	Bank Rating	(Max 45 points)	(Max 30 points)	(Max 10 points)	(Max 15 points)	Bidders MUST complete forms B1 and B2 attached in the bid documents for key personnel that will be			(Failure to submit proof of bank rating from the relevant bank will result in the
Key Personnel	Company Experience in Electrical Network Design, Installation, Commissioning and Maintenance	Plant & Equipment	Bank Rating										
(Max 45 points)	(Max 30 points)	(Max 10 points)	(Max 15 points)										
Bidders MUST complete forms B1 and B2 attached in the bid documents for key personnel that will be			(Failure to submit proof of bank rating from the relevant bank will result in the										



Clause number	Tender Data			
	<p>involved with the project and <b>MUST</b> clearly indicate the personnel's road construction/road rehabilitation experience, Electrical Network Design, Installation, Commissioning and Maintenance project description, duration and contactable references.</p> <p><b>NB:</b> Failure to complete forms B1 and B2 and submit certified qualifications will result in the bidder getting zero points</p>	<p>(Failure to submit required Completion certificates will result in the bidder getting zero points)</p> <p><b>NB:</b> Completion certificates must be signed by all relevant parties (Certificate that is not signed by all relevant parties will result in the bidder forfeiting points)</p> <p><b>NB:</b> Practical completion certificate will not be accepted.</p>	<p>Bidders <b>MUST</b> complete form T2.1D: Schedule of Plant and Equipment</p> <p><b>NB:</b> Proof of ownership <b>AND/OR</b> lease agreements for proof of plant and equipment for the duration of the period must be submitted.</p> <p>(Failure to submit both proof of ownership <b>AND/OR</b> lease agreements for proof of plant and equipment will result in the bidder getting zero points)</p> <p>Proof of ownership must be in the form of registration papers or Audited report</p>	<p>bidder getting zero points) and</p> <p><b>NB:</b> the date of certification must be less than 12 months from the date of the bid closure.</p>
	<p><b>CONSTRUCTION MANAGER:</b> registered with ECSA (Pr Eng/Tech) <b>OR</b> SACPCMP (Pr CM). A Construction Manager with road construction/road rehabilitation experience, before and after professional registration, will be assessed as follows: <b>(Max 10 points)</b></p> <p><b>Experience:</b></p> <ul style="list-style-type: none"> <li>5 years or more experience road construction/ road rehabilitation <b>(10 points)</b></li> <li>3 to less than 5 years' experience in road construction/ road rehabilitation <b>(7 points)</b></li> </ul>	<p>Completed Electrical network design, installation, commissioning with completion certificates over the past ten (10) years will be assessed as follows: <b>(Max 30 points)</b></p> <ul style="list-style-type: none"> <li>3 or more projects completed: <b>(30 points)</b></li> <li>2 projects completed: <b>(20 points)</b></li> <li>1 project completed: <b>(10 points)</b></li> </ul>	<p>X2 cranes or cherry pickers (EWP min of 12m ext.): <b>(Max 5 points)</b></p> <p>X1 cranes/or cherry pickers (EWP min of 12m ext.): <b>(2 points)</b></p> <p>X2 1 ton LDV: <b>(Max 5 points)</b></p> <p>X1 1 ton LDV: <b>(2 points)</b></p>	<p>Rating A or B: <b>(15 points)</b></p> <p>Rating C: <b>(10 points)</b></p> <p>Rating D: <b>(5 points)</b></p> <p>Rating E-G: <b>(0 points)</b></p>





Clause number	Tender Data			
	<ul style="list-style-type: none"> <li>• 1 to less than 3 years' experience in road construction/ road rehabilitation (5 points)</li> <li>• Less than 1 year experience in road construction/ road rehabilitation (0 points)</li> </ul> <p><b>ELECTRICAL ENGINEER:</b> registered with ECSA (Pr Eng/Tech). An Electrical Engineer with Electrical Network Design, Installation, Commissioning and Maintenance before and after professional registration, will be assessed as follows: <b>(Max 10 points)</b></p> <p><b>Experience:</b></p> <ul style="list-style-type: none"> <li>• 5 years or more experience in Electrical Network Design, Installation, Commissioning and Maintenance <b>(10 points)</b></li> <li>• 3 to less than 5 years' experience in Electrical Network Design, Installation, Commissioning and Maintenance <b>(7 points)</b></li> <li>• 1 to less than 3 years' experience in Electrical Network Design, Installation, Commissioning and</li> </ul>			



Clause number	Tender Data			
	<p>Maintenance (5 points)</p> <ul style="list-style-type: none"> <li>Less than 1 year experience (0 points)</li> </ul> <p>Electrical Network Design, Installation, Commissioning and Maintenance</p> <p><b>TRAFFIC ENGINEER:</b> registered with ECSA (Pr Eng/Tech). A Traffic Engineer with Traffic Signal Design and Traffic Signal Warrant Studies experience, before and after professional registration, will be assessed as follows: <b>(Max 10 points)</b></p> <p><b>Experience:</b></p> <ul style="list-style-type: none"> <li>5 years or more experience in Traffic Signal Design and Traffic Signal Warrant Studies <b>(10 points)</b></li> <li>3 to less than 5 years' experience in Traffic Signal Design and Traffic Signal Warrant Studies <b>(7 points)</b></li> <li>1 to less than 3 years' experience in Traffic Signal Design and Traffic Signal Warrant Studies <b>(5 points)</b></li> <li>Less than 1 year experience in Traffic Signal Design and Traffic Signal Warrant Studies <b>(0 points)</b></li> </ul> <p><b>QUALIFIED ELECTRICIAN:</b> trade test certificate and</p>			



Clause number	Tender Data			
	<p>single phase wireman's license. Electricians with electrical network wiring and cabling experience will be assessed as follows: <b>(Max 10 points)</b></p> <p><b>Experience:</b></p> <ul style="list-style-type: none"> <li>• 5 years or more experience in electrical network wiring and cabling <b>(10 points)</b></li> <li>• 3 to less than 5 years' experience in electrical network wiring and cabling <b>(7 points)</b></li> <li>• 1 to less than 3 years' experience in electrical network wiring and cabling <b>(5 points)</b></li> <li>• Less than 1 year experience in electrical network wiring and cabling <b>(0 points)</b></li> </ul> <p><b>SAFETY OFFICER:</b> with a minimum Diploma qualification, a qualified/certified Safety Officer. The Safety Officer with road construction/ road rehabilitation experience, before and after qualification, will be assessed as follows: <b>(Attach certified qualification/ certification) (5 points)</b></p> <p><b>Experience:</b></p>			



Clause number	Tender Data			
	<ul style="list-style-type: none"> <li>• 3 years or more experience in road construction/ road rehabilitation (5 points)</li> <li>• 1 to less than 3 years' experience in roads construction/ road rehabilitation (3 points)</li> <li>• Less than 1 year experience in road construction/ road rehabilitation (0 points)</li> </ul> <p><i>NB: An official is not permitted to perform a dual role i.e. the bidder cannot nominate an official more than once as key personnel.</i></p>			
	<p><b>NB: BIDDERS WHO FAIL TO MEET THE MINIMUM THRESHOLD OF 60 Points FOR FUNCTIONALITY WILL NOT BE CONSIDERED FOR FURTHER EVALUATION</b></p> <p><b>NB: BIDDERS ARE REQUESTED TO SUBMIT THEIR KEY PERSONNEL CONTACTABLE REFERENCES FOR VERIFICATION (FAILURE TO DO SO MAY LEAD TO POINTS NOT BEING ALLOCATED)</b></p> <p>Tenders will be evaluated for Functionality. Tenderers who qualify for Functionality will be evaluated further for Price and Preference only. Tenderers who do not qualify will not be evaluated further.</p> <ul style="list-style-type: none"> <li>• <b>Potential tenderers must note that in terms of Departmental policy, the Department reserves the right to cancel and blacklist any tenderer for a period of at least 12 months if the tenderer fails to adequately perform in terms of the awarded contract.</b></li> </ul>			
F.3.13.1	<p>Tender offers will only be accepted if:</p> <ul style="list-style-type: none"> <li>a) No tender will be awarded to any tenderer whose tax matters have not been declared by the SARS to be in order;</li> </ul>			



<b>Clause number</b>	<b>Tender Data</b>
	<p>b) <u>The proposed Guarantor</u> must complete the Form of Intent to Provide a Form of Guarantee in the format included on page 33 of this procurement document</p> <p>c) The tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation.</p> <p>d) 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;</p> <p>e) The tenderer has not:</p> <ul style="list-style-type: none"><li>i) abused the Employer's Supply Chain Management System; or</li><li>ii) failed to perform on any previous contract and has been given a written notice to this effect;</li></ul> <p>and</p> <p>f) 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 and persons in the employ of the state are permitted to submit tenders or participate in the contract;</p> <p>g) The tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer;</p> <p>h) The employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014 (as amended), issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely.</p>

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## **PART T2: RETURNABLE DOCUMENTS**

### **Part T2.1 List of Returnable Documents**

#### **1 Documents required for tender administrative purposes**

- Compulsory Enterprise Questionnaire
- Record of Addenda to Tender Documents
- Certificate of Authority
- Schedule of Proposed Subcontractors
- Schedule of recently Completed and Current Contracts
- Schedule of Plant and Equipment
- Occupational Health and Safety Act: Statement by Tendering Entity
- Experience of Key Staff and number of Staff employed
- Tenderer's Bank Details
- Schedule of Tenderer's Litigation History
- Schedule of Special Materials

#### **2 Returnable Schedules required for tender evaluation purposes**

The tenderer must complete the following returnable documents:

- Tax Pin Clearance Certificate for Tenders
- Form of Intent to Provide a Form of Guarantee
- Registration with Construction Industry Development Board
- Certificate of Insurance Cover
- SBD 4: Declaration of Interest
- SBD 8: Declaration of Bidder's Past Supply Chain Management Practices
- SBD 9: Certificate of Independent Bid Termination.

#### **3 Returnable Schedules that will be used for tender evaluation purposes and be incorporated into the contract**

- Tenderer's B-BBEE Verification Certificate / Sworn Affidavit
- SBD 6.1: Preference Points Claim Form in Terms of the Preferential Procurement Regulations 2017.
- SBD 6.2.: Declaration Certificate for Local Production and Content For Designated Sectors.

#### **4 C1.1 Forms of Offer and Acceptance**

#### **5 C1.2 Contract Data (C1.2.3)**

#### **6 C2.2 Bill of quantities**



## TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION

### 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 (attach certified ID Copies)**

Name*	Identity number*	Personal income tax number*

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

**Section 5: Particulars of companies and close corporations**

Company registration number .....

Close corporation number .....

Tax reference number .....

**Section 6: Record 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"/> an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| <input type="checkbox"/> a member of any provincial legislature                                | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity  |
| <input type="checkbox"/> a member of the National Assembly or the National Council of Province | <input type="checkbox"/> an employee of Parliament or a provincial legislature  |
| <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                   |   |

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



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

\*insert separate page if necessary

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

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

- |  |   |
|--|---|
| <input type="checkbox"/> a member of any municipal council                                     | <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 1 of 1999) |
| <input type="checkbox"/> a member of any provincial legislature                                | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity  |
| <input type="checkbox"/> a member of the National Assembly or the National Council of Province | <input type="checkbox"/> an employee of Parliament or a provincial legislature  |
| <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                   |   |

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) authorizes 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 of 2004;
- iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- 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* .....

---



**TENDER NUMBER: 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**Record of Addenda to Tender Documents**

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

	<b>Date</b>	<b>Title or Details</b>
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

Attach additional pages if more space is required.

Signed ..... Date .....

Name ..... Position .....

*Enterprise name* .....



**TENDER NUMBER DRT: 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION.**

**Certificate of Authority**

This Returnable Schedule is to be completed by the tendering entity.

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

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
CIDB registration number: .....		Signature. .... Name ..... Designation
CIDB registration number: .....		Signature..... Name ..... Designation
CIDB registration number: .....		Signature..... Name ..... Designation



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE,  
TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR  
NEW INSTALLATION.**

## **Schedule of Proposed Subcontractors**

### **T2.1.C. SCHEDULE OF PROPOSED SUBCONTRACTORS**

We notify you that it is our intention to employ the following subcontractors for work in this contract. If we are awarded a contract, we agree that this notification does not change the requirement for us to submit the name of proposed subcontractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list, shall be binding between us.

<b>Name and address of proposed Subcontractor</b>	<b>Company Registration No &amp; CIDB Classification</b>	<b>Description of Work to be executed by Subcontractor</b>
1.		
2.		
3.		
4.		



5.			

Signed..... Date.....

Name..... Position.....

Tenderer.....



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**Schedule of Recently Completed and Current Contracts**

List not more than seven contracts completed in the last five years

Contract title:	Employer (name) Place (town)	Reference person		Contract Amount (R million)	Contract Period (months)	Date of Completion*
		Name	Tel			
1						
2						
3						
4						
5						
6						
7						

\*Completed means that a certificate has been issued in terms of a contract by the employer, signifying that the whole of the construction works have reached a state of readiness for occupation or use for the purposes intended, although some minor work may be outstanding.



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List all current contracts not complete at the time

Project:	Employer (name) Place (town)	Reference person		Contract Amount (R million)	Contract Period (months)	Date of commencement	Date of expected Completion*
		Name	Tel				
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

\*Date when defects liability period commenced



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Signed .....

Date .....

Name .....

Position .....

*Enterprise  
name*

.....





**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE,  
TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW  
INSTALLATION**

**Occupational Health and Safety Act:  
Statement by Tendering Entity**

I, ..... duly authorised

to represent ..... (company name)

in my capacity as .....

hereby confirm that I accept full and exclusive responsibility for compliance by myself and all persons who perform work for me with the provisions of the Occupational Health and Safety Act, No. 85 of 1993 (as amended) and all regulations promulgated from time to time, whilst performing work on .....

.....  
I confirm that all employees who perform work on the site shall be properly trained to do this in a manner which is safe and without risk to health and safety to themselves and others in the vicinity and undertake to have our activities adequately supervised in the interest of health and safety.

---

Signed ..... Date .....

Name ..... Position .....

Tenderer .....

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION.**

## **Experience of Key Staff and Number of Staff Employed**

Bidders must complete **B1 form** and **B2 form**, certified copies of qualifications of the following:  
The key personnel required for this project is as follows:

- Construction Manager (maximum 10 points)
- Electrical Engineer (maximum 10 points)
- Traffic Engineer (maximum 10 points)
- Qualified Electrician (maximum 10 points)
- Safety Officer (maximum 5 points)

**TENDER NUMBER: 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**FORM B1: CANDIDATE'S TECHNICAL/MANAGERIAL RECORD**

NAME	DATE OF BIRTH	POSITION IN TEAM	QUALIFICATION
		<i>Construction Manager (CM)</i>	

Note1:

- List only the projects completed that the tenderer considers relevant to the specified scope of works.

**Technical/Managerial Experience**

CLIENT & PROJECT No.	PROJECT TYPE	RELEVANT EXPERIENCE STARTED	RELEVANT EXPERIENCE ENDED	VALUE	POSITION HELD	CONTACT PERSON AND POSITION	CONTACT No.

**TENDER NUMBER: 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**FORM B1: CANDIDATE'S TECHNICAL/MANAGERIAL RECORD**

NAME	DATE OF BIRTH	POSITION IN TEAM	QUALIFICATION
		<i>Electrical Engineer (EE)</i>	

Note1:

- List only the projects completed that the tenderer considers relevant to the specified scope of works.

**Technical/Managerial Experience**

CLIENT & PROJECT No.	PROJECT TYPE	RELEVANT EXPERIENCE STARTED	RELEVANT EXPERIENCE ENDED	VALUE	POSITION HELD	CONTACT PERSON AND POSITION	CONTACT No.

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**



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REPUBLIC OF SOUTH AFRICA

### FORM B1: CANDIDATE'S TECHNICAL/MANAGERIAL RECORD

NAME	DATE OF BIRTH	POSITION IN TEAM	QUALIFICATION
		<i>Traffic Engineer (TE)</i>	

Note1:

- List only the projects completed that the tenderer considers relevant to the specified scope of works.

#### Technical/Managerial Experience

CLIENT & PROJECT No.	PROJECT TYPE	RELEVANT EXPERIENCE STARTED	RELEVANT EXPERIENCE ENDED	VALUE	POSITION HELD	CONTACT PERSON AND POSITION	CONTACT No.

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**FORM B1: CANDIDATE'S TECHNICAL/MANAGERIAL RECORD**

NAME	DATE OF BIRTH	POSITION IN TEAM	QUALIFICATION
		<i>Qualified Electrician (QE)</i>	

Note1:

- List only the projects completed that the tenderer considers relevant to the specified scope of works.

**Technical/Managerial Experience**

CLIENT & PROJECT No.	PROJECT TYPE	RELEVANT EXPERIENCE STARTED	RELEVANT EXPERIENCE ENDED	VALUE	POSITION HELD	CONTACT PERSON AND POSITION	CONTACT No.

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**FORM B1: CANDIDATE'S TECHNICAL/MANAGERIAL RECORD**

NAME	DATE OF BIRTH	POSITION IN TEAM	QUALIFICATION
		<i>Safety Officer (SO)</i>	

Note1:

- List only the projects completed that the tenderer considers relevant to the specified scope of works.

**Technical/Managerial Experience**

CLIENT & PROJECT No.	PROJECT TYPE	RELEVANT EXPERIENCE STARTED	RELEVANT EXPERIENCE ENDED	VALUE	POSITION HELD	CONTACT PERSON AND POSITION	CONTACT No.

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**FORM B2: CANDIDATE'S CONTINUING PROFESSIONAL DEVELOPMENT RECORD**

Note: Tenderers to add additional copies of this form as necessary to their tender submissions

Personal Details of Candidate

Name	Position in team (Note 1)	Position in Company (Note 2)
	<i>Construction Manager (CM)</i>	

Registration with professional bodies

Professional registration body	ECSA (Note 3)	SACPCMP (Note 3)	Highest Engineering qualification	Institution	Date graduated
Level of registration					
Registration number			Initial relevant Tertiary Qualification	Institution	Date graduated
Date of registration					

Continuing Professional Development (candidate to list 5 most recent courses that he/she considers relevant to the engineering field)





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REPUBLIC OF SOUTH AFRICA

Course Type (Note 4)	Host Institute (Note 5)	Participation (Note 6)	Course Content	When held (Note 7)	Field Study (Note 8)



**TENDER NUMBER: 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**Tenderer's Bank Details**

**Notes to tenderer:**

1. The tenderer shall attach to this form a letter from the bank at which he declares he conducts his account. The contents of the bank's letter must state the *credit rating* that it, in addition to the information required below, accords to the tenderer for the business envisaged by this tender as well as the working capital at the disposal of the tenderer. Failure to provide the required letter with the tender submission may render the tenderer's offer unresponsive in terms of tender condition F.3.8.
2. The tenderer's banking details as they appear below shall be completed.
3. In the event that the tenderer is a joint venture enterprise, details of all the members of the joint venture shall be similarly provided and attached to this form.

The tenderer shall provide the following:

- i) Name of Account Holder: .....
- ii) Account Number: .....
- iii) Bank name:.....
- iv) Branch Number:.....
- v) Bank and branch contact details.....  
.....

SIGNED BY TENDERER: .....



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

## **Schedule of Tenderer's Litigation History**

**Note to tenderer:**

The tenderer shall list below details of any litigation with which the tenderer (including its directors, shareholders or other senior members in previous companies) has been involved with any organ of state or state department within the last ten years. The details must include the year, the litigating parties, and the subject matter of the dispute, the value of any award or estimated award if the litigation is current and in whose favour the award, if any, was made.

<b>Employer</b>	<b>Other litigating party</b>	<b>Dispute</b>	<b>Award value</b>	<b>Date resolved</b>

SIGNED BY TENDERER: .....



## **TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

### **Schedule of Special Materials**

**Notes to tenderer:**

1. Refer to Particular Condition of contract amending sub clause 13.8 of the General Conditions of Contract.
2. Only net bitumen content of asphalt and bituminous products shall be subject to rise and fall and no account shall be taken of transport, emulsifiers, diluents or modifiers that may be supplied ex refinery or added later.
3. For the purpose of clarity when using this form, a supplier is any company (including refineries) that supplies to a tenderer a bituminous product that it manufactures using bitumen as the sole or blended ingredient in the product. A tenderer shall, in compliance with note 4 below, attach to this form a letter of supply from each supplier it intends using in the performance of the contract.
4. Tenderers shall append to this page the following information on a letterhead from their selected supplier:
  - The supplier's company registration and address details; and
  - The product range available including refinery from which the base bitumen is drawn; and
  - The net base bitumen type and content for each product; and
  - The supply price (excluding VAT but including all other obligatory taxes and levies) to the tenderer for the net bitumen base content of each product; and
  - The date from which the supply prices apply.
5. Rise and fall adjustments shall only be made upon receipt by the engineer of the appropriate letters of supply in compliance to note 4 above, but with the changed supply prices and date of application, as well as reasons for the changes.
6. A change of supplier may be permitted, but only upon application to the engineer with the appropriate letters of supply in compliance to Note 4 above and approval thereof.
7. Non-disclosure of reduction in supply prices shall be deemed a contractor's deliberate action to defraud the Employer and grounds for the Employer, at its sole discretion, to terminate the contract.

Each material dealt with as a special material in terms of clause 4 of the Contract Price Adjustment Schedule of the Appendix to the Particular Conditions of Contract as amended by the Particular Conditions is stated in the list below. The rates and prices for the special materials shall be furnished by the tenderer as an attachment to this Form, which rates and prices shall not include VAT but shall include all other obligatory taxes and levies.

<b>SPECIAL MATERIAL</b>	<b>UNIT*</b>	<b>NAME OF SUPPLIER AND RATE OR PRICE FOR THE BASE MONTH</b>
Bitumen (Net bitumen content)	Ton	As stated on supplier's letter attached to this form

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

SIGNED ON BEHALF OF THE TENDERER: .....

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE,  
TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW  
INSTALLATION**

## **Tax Pin Clearance for Tenders**

The tenderer is to affix to this page:

A Valid Tax Pin Clearance for Tenders issued by the South African Revenue Services (S.A.R.S.) in the Name of the Tendering Entity indicating the Trading Name.

**Note:**

**Failure to affix such certificate may result in this tender not being considered for the award of the contract**

**This certificate must still be valid on the closing date of this tender.**



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION.**

**Form of Intent to Provide a Form of Guarantee**

- 1 With reference to the tender of .....  
..... (hereinafter referred to as the “**TENDERER**” for the project  
..... (hereinafter referred to as  
the “**CONTRACT**” for the DEPARTMENT OF ROADS AND TRANSPORT of the Gauteng Provincial  
Government, (hereinafter referred to as the “**EMPLOYER**” for the tender dated  
..... for the offered total of prices of  
(R.....)  
..... (in  
words)
- 2 I/We ..... in my/our capacity as  
..... and hereby  
representing .....  
..... (hereinafter referred to as the “**GUARANTOR**” advise that the “**GUARANTOR**”  
undertakes to provide a **Form of Guarantee** to the **EMPLOYER** to the Employer’s format included  
in Part C1.3 of this document within five (5) working days of the written acceptance of the contractor’s  
tender offer.

Thus done and signed at ..... on .....

.....  
*Name of signatory*

.....  
*Capacity of authorised signatory*

.....  
*As witness*

.....  
*for and on behalf of the **Guarantor**  
who by signature hereof warrants  
authorisation hereto*

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

## **Registration with Construction Industry Development Board**

The tenderer for traffic signals maintenance, technology upgrades, and geometric upgrades to cater for new installation Contract is to affix to this page:

- Written proof of registration with the CIDB as a Category **6CE & 7EP** or higher

**Note:**

1. **Failure to affix such documentation as prescribed to this page shall result in this tender not being further considered for the award of the contract.**
2. **In the case of a joint venture, a consolidated CIDB registration certificate must be attached.**



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION.**

## **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:

i) Name of Tenderer: .....

ii) Period of Validity: .....

iii) Value of Insurance:

- Insurance for Works and Contractor's Equipment

Company: .....

Value: .....

- Insurance for Contractor's Personnel

Company: .....

Value: .....

- General public liability

Company: .....

Value: .....

- SASRIA

Company: .....

Value: .....

SIGNED BY TENDERER: .....





**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**SBD 4**

**Declaration of Interest**

1. Any legal person, including persons employed by the state<sup>1</sup>, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes an advertised competitive bid, a limited bid, a proposal or written price quotation). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where-

- the bidder is employed by the state; and/or
- the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.

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

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

2.2 Identity Number: .....

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

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

2.5 Tax Reference Number: .....

2.6 VAT Registration Number.....

2.7

2.6.1 The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / PERSAL numbers must be indicated in paragraph 3 below.

<sup>1</sup>"State" means –

- (a) 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);
- (b) any municipality or municipal entity;
- (c) provincial legislature;
- (d) national Assembly or the national Council of provinces; or
- (e) Parliament.

<sup>2</sup>"Shareholder" means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.



2.7 Are you or any person connected with the bidder presently employed by the state? **YES / NO**

2.7.1 If so, 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:

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

2.7.2 If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector? **YES / NO**

2.7.2.1 If yes, did you attach proof of such authority to the bid document? **YES / NO**

(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.

2.7.2.2 If no, furnish reasons for non-submission of such proof:

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

2.8 Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months? **YES / NO**

2.8.1 If so, furnish particulars:

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

2.9 Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

2.9.1 If so, furnish particulars.

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



2.10 Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between any other bidder and any person employed by the state who may be involved with the evaluation and or adjudication of this bid? **YES/NO**

2.10.1 If so, furnish particulars.  
.....  
.....  
.....

2.11 Do you or any of the directors / trustees / shareholders / members of the company have any interest in any other related companies whether or not they are bidding for this contract? **YES/NO**

2.11.1 If so, furnish particulars:  
.....  
.....  
.....

**3 Full details of directors / trustees / members / shareholders.**

Full Name	Identity Number	Personal Income Tax Reference Number	State Employee Number / Persal Number



**4 DECLARATION**

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

CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....  
Signature

.....  
Date

.....  
Position

.....  
Name of bidder



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**SBD 8**

**Declaration of Bidder's Past Supply Chain Management Practices**

- 1 This Standard Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by institutions in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be disregarded if that bidder, or any of its directors have-
  - a. abused the institution's supply chain management system;
  - b. committed fraud or any other improper conduct in relation to such system; or
  - c. failed to perform on any previous contract.
- 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?  <b>(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).</b></p> <p>The Database of Restricted Suppliers now resides on the National Treasury's website(<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) and can be accessed by clicking on its link at the bottom of the home page.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	<p>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)?  <b>The Register for Tender Defaulters can be accessed on the National Treasury's website (<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) by clicking on its link at the bottom of the home page.</b></p>	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 outside of 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	Was any contract between the bidder and any 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"/>
4.4.1	If so, furnish particulars:		

**CERTIFICATION**

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

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

.....  
**Signature**

.....  
**Date**

.....  
**Position**

.....  
**Name of Bidder**

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**SBD 9**

**Certificate of Independent Bid Determination**

- 1 This Standard Bidding Document (SBD) must form part of all bids<sup>1</sup> invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).<sup>2</sup> Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:
  - a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.
  - b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
- 4 This SBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (SBD 9) must be completed and submitted with the bid:

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

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



I, the undersigned, in submitting the accompanying bid:

---

(Bid Number and Description)

in response to the invitation for the bid made by:

---

(Name of Institution)

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

I certify, on behalf of:.....that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
  - (a) has been requested to submit a bid in response to this bid invitation;
  - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
  - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium<sup>3</sup> will not be construed as collusive bidding.

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





## GAUTENG PROVINCE

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

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

.....  
Signature

.....  
Date

.....  
Position

.....  
Name of Bidder

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE,  
TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW  
INSTALLATION**

**SBD 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.**

---

**1. GENERAL CONDITIONS**

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

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

1.2

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

1.3 Points for this bid shall be awarded for:

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



1.4 The maximum points for this bid are allocated as follows:

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

- 1.5 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.
- 1.6 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.

## 2. DEFINITIONS

- (a) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) **“B-BBEE status level of contributor”** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- (d) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) **“EME”** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (f) **“functionality”** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) **“prices”** includes all applicable taxes less all unconditional discounts;
- (h) **“proof of B-BBEE status level of contributor”** means:
- 1) B-BBEE Status level certificate issued by an authorized body or person;
  - 2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
  - 3) Any other requirement prescribed in terms of the B-BBEE Act;

- (i) “**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;
- (j) “**rand value**” means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

### 3. POINTS AWARDED FOR PRICE

#### 3.1 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

### 4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

- 4.1 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
---------------------------	---	---

**5. BID DECLARATION**

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

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

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

**7. SUB-CONTRACTING**

7.1 Will any portion of the contract be sub-contracted?

**(Tick applicable box)**

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

7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted.....%
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE

**(Tick applicable box)**

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

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

<b>Designated Group: An EME or QSE which is at last 51% owned by:</b>	<b>EME</b> √	<b>QSE</b> √
<i>Black people</i>		
<i>Black people who are youth</i>		
<i>Black people who are women</i>		
<i>Black people with disabilities</i>		
<i>Black people living in rural or underdeveloped areas or townships</i>		
<i>Cooperative owned by black people</i>		
<i>Black people who are military veterans</i>		



<b>OR</b>		
Any EME		
Any QSE		

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

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

8.2 VAT \_\_\_\_\_ registration  
number:.....

8.3 Company \_\_\_\_\_ registration  
number:.....

**8.4 TYPE OF COMPANY/ FIRM**

- Partnership/Joint Venture / Consortium
- One person business/sole propriety
- Close corporation
- Company
- (Pty) Limited

[TICK APPLICABLE BOX]

**8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES**

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

**8.6 COMPANY CLASSIFICATION**

- Manufacturer
- Supplier
- Professional service provider
- Other service providers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

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

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



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

WITNESSES
1. ....
2. ....

..... SIGNATURE(S) OF BIDDERS(S)
DATE: .....
ADDRESS .....
.....



## **SBD 6.2**

### **DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS**

This Standard Bidding Document (SBD) 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 National Standards (SANS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

#### **1. General Conditions**

- 1.1. Preferential Procurement Regulations, 2017 (Regulation 8) make provision for the promotion of local production and content.
- 1.2. 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.
- 1.3. 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.
- 1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SANS 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 4.1 below.





**The SANS 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.**

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

**2. 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>
Electrical and Telecomm Cable	90%

3. Does any portion of the goods or services offered have any imported content?

*(Tick applicable box)*

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

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](http://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):

<b>Currency</b>	<b>Rates of exchange</b>
US Dollar	R 15.07
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 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

- 1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.
- 2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on [http://www.thdti.gov.za/industrial\\_development/ip.jsp](http://www.thdti.gov.za/industrial_development/ip.jsp). Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid 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:

- (a) The facts contained herein are within my own personal knowledge.
- (b) I have satisfied myself that:
  - (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- (c) 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	



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

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

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

- (d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the 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 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:** \_\_\_\_\_



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**T 2.1 D SCHEDULE OF PLANT AND EQUIPMENT**

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

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

<b>QTY</b>	<b>Description, size, capacity, etc.</b>

Attach additional pages if more space is required.

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

<b>QTY</b>	<b>Description, size, capacity, etc.</b>

Attach additional pages if more space is required

Signed..... Date.....

Name..... Position.....

Tenderer.....



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

## **Part C1 Agreements and Contract Data**

<b>TABLE OF CONTENTS</b>		<b>PAGE</b>
<b>C1.1</b>	<b>FORMS OF OFFER AND ACCEPTANCE.....</b>	<b>52</b>
<b>C1.1.1</b>	<b>FORM OF OFFER.....</b>	<b>73</b>
<b>C1.1.2</b>	<b>FORM OF ACCEPTANCE .....</b>	<b>75</b>
<b>C1.1.3</b>	<b>APPENDIX TO FORM OF ACCEPTANCE.....</b>	<b>77</b>
<b>C1.2</b>	<b>CONTRACT DATA .....</b>	<b>78</b>
<b>C1.2.1</b>	<b>CONDITIONS OF CONTRACT .....</b>	<b>78</b>
<b>C1.2.2</b>	<b>CONTRACT DATA – INFORMATION PROVIDED BY THE EMPLOYER.....</b>	<b>78</b>
<b>C1.2.3</b>	<b>CONTRACT DATA – INFORMATION PROVIDED BY THE TENDERER .....</b>	<b>99</b>
<b>C1.3</b>	<b>OTHER STANDARD FORMS .....</b>	<b>100</b>
<b>C1.3.1</b>	<b>FORM OF OCCUPATION HEALTH AND SAFETY ACT 1993 .....</b>	<b>100</b>
<b>C1.3.2</b>	<b>FORM OF GUARANTEE .....</b>	<b>102</b>
<b>C1.3.3</b>	<b>FORM OF REGISTRATION OF CONTRACT WITH DEPARTMENT OF LABOUR .....</b>	<b>104</b>
<b>C1.3.4</b>	<b>FORM OF BANKING DETAILS .....</b>	<b>106</b>



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**C1.1 FORMS OF OFFER AND ACCEPTANCE**

**C1.1.1 FORM OF OFFER**

Head of Department  
Department Of Roads and Transport  
Private Bag X83  
Marshalltown  
2107

Sir,

I/we, by signing this part of the forms of offer and acceptance, confirm that I/we practise the principles of corporate governance that abhors corruption and fraud and that I/we have examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules and am/are duly authorised to represent and commit the tenderer to the contractual obligations contained therein.

I/we further confirm that by submitting this offer the tenderer accepts the conditions of tender and offers to perform all of the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of tender and the conditions of contract identified in the contract data.

THE OFFERED TOTAL OF THE PRICES (INCLUSIVE OF VALUE ADDED TAX) IS;

Bill: .....

..... (in words)

(R ..... in figures)

You may accept this offer by signing and returning to the tenderer one copy of the Form of acceptance before the end of the period of validity stated in the tender data, (or at the end of any agreed extension thereof), whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Notwithstanding anything contained in a covering letter to this tender, I/we declare this offer is submitted entirely without variations or deviations other than those stipulated in the form for Proposed Amendments and Qualifications by the tenderer and that it is made free from any fraud, corruption and misrepresentation.

Yours faithfully

SIGNATURE:..... DATE:.....

NAME (IN CAPITALS): .....

CAPACITY: .....



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

Date and minute reference of Board resolution if different from returnable document: Certificate of Authority

Certificate of Authority for signature.....

NAME AND ADDRESS OF ORGANISATION:.....

.....

NAME AND SIGNATURE OF WITNESS:

SIGNATURE:..... DATE:.....

NAME (IN CAPITALS): .....



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**C1.1.2 FORM OF ACCEPTANCE**

To \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ *(Name of successful tenderer)*

Dear Sir,

1. It is our pleasure to inform you that the Department of Roads and Transport (the Employer) accepts your offer for the.....Bill ..... in the amount of R..... (I.e. including VAT but excluding CPA, and any contingent sum not in the priced schedule).

Benoni Bill A: .....

..... (in words)

(R ..... in figures)

2. The amount due may not be the accepted price but payment shall be made in accordance with the conditions of contract identified in the contract data.
3. Acceptance shall form an agreement between us according to the terms and conditions contained in this form and in the contract that is comprised of:

- Part C1: Agreements and Contract Data (including this form of acceptance),
- Part C2: Pricing Data,
- Part C3: Scope of the Work,
- Part C4: Site Information, and
- Part C5: Annexures

together with issued drawings and other documents, or parts thereof, which may be incorporated by reference into the Parts listed above.

- a) Deviations and/or variations included in your offer as well as any changes to the terms of the offer agreed by us during the process of offer and acceptance shall not be valid unless contained in the appended schedule of deviations. *(If no deviation state "There are no deviations, variations or changes to the documents.)* Addenda issued during the tender period are deemed not to be deviations to the tender documents and schedules.
- b) Within 14 calendar days of the date of this form of acceptance (including the schedule of deviations if any) you shall deliver to the Employer:
  - Performance Security (per clause 4 of the FIDIC Conditions of Contract) a proforma of which is attached for your reference. The 10% calculation shall be based on the accepted contract value as contained in this form and there shall be no deviations from the wording of the proforma guarantee.
  - Proof of insurance in terms of the information provided in the contract data and clause 18 of the FIDIC Conditions of Contract. Proof of currency of insured cover shall be provided on a monthly basis until contract completion.
  - Proof that the contract has been registered by the Department of Labour in terms of Occupational Health and Safety legislation, for which purpose the relevant forms have already been partially completed by the Employer and attached hereto.





- The completion of the attached Employer’s Form of Banking Details.

Failure to fulfil any of these obligations shall constitute a repudiation of this agreement.

4. The effective date of the contract shall be the date of this form of acceptance unless you, within seven (7) calendar days of the effective date, notify the Employer in writing of any justification why you cannot accept the contents of this agreement.
5. The commencement date of the contract shall be that on which the site hand-over meeting is held, which shall not be later than .... *(Usually 28 calendar days after the date of this form, or earlier if circumstances demand and as agreed between tenderer/Employer).*
6. Notwithstanding that a full, original-signed copy of the contract document containing all contract data and schedules (including that of accepted deviations) will be delivered to you, this form of acceptance constitutes the binding contract between us.

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

Name.....

Capacity.....

**for the Employer**            Department of Roads and Transport  
   Chief Directorate Maintenance

Name and.....

Signature of

Witness..... Date .....

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**C1.1.3 APPENDIX TO FORM OF ACCEPTANCE**

Schedule of deviations

1. The deviations listed below constitute agreed variations/amendments to the tender data and schedules negotiated between the tenderer and Employer based on information provided in Form A4: Schedule of Variations or deviations by tenderer or conditions imposed by the Employer in its acceptance of the offer.
2. In the event that an alternative offer is accepted in terms of F.2.12 of the Tender Data, it is a fundamental condition of acceptance that all responsibilities and concomitant liabilities arising from the alternative design pass from the Employer to the contractor.
3. Addenda issued during the tender period are deemed not to be variations to the tender.

1. ....
2. ....
3. ....
4. ....



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**C1.2 CONTRACT DATA**

**C1.2.1 CONDITIONS OF CONTRACT**

**Note to tenderer:**

1. The Conditions of Contract for Construction (1999 edition) prepared by the International Federation of Consulting Engineers (FIDIC), as amended, shall apply to this contract. The amendments are those issued by FIDIC and reproduced hereafter, together with additional amendments (particular conditions of contract) as prescribed by The Department of Roads and Transport

<b>TABLE OF CONTENTS</b>	<b>PAGE</b>
<b>PART A: GENERAL CONDITIONS - FIDIC AMENDMENTS.....</b>	<b>80</b>
<b>PART B: PARTICULAR CONDITIONS OF CONTRACT.....</b>	<b>80</b>
<b>1.1 DEFINITIONS .....</b>	<b>82</b>
<b>1.2 INTERPRETATION.....</b>	<b>83</b>
<b>1.5 PRIORITY OF DOCUMENTS.....</b>	<b>83</b>
<b>1.6 CONTRACT AGREEMENT.....</b>	<b>83</b>
<b>1.7 ASSIGNMENT .....</b>	<b>83</b>
<b>1.8 CARE AND SUPPLY OF DOCUMENTS .....</b>	<b>-83</b>
<b>2.3 EMPLOYER'S PERSONNEL .....</b>	<b>83</b>
<b>3.1 ENGINEER'S DUTIES AND AUTHORITY.....</b>	<b>83</b>
<b>4.2 PERFORMANCE SECURITY.....</b>	<b>84</b>
<b>4.4 SUBCONTRACTORS.....</b>	<b>84</b>
<b>4.7 SETTING OUT .....</b>	<b>84</b>
<b>4.8 SAFETY PROCEDURES .....</b>	<b>84</b>
<b>4.10 SITE DATA .....</b>	<b>84</b>
<b>4.13 RIGHTS OF WAY AND FACILITIES .....</b>	<b>84</b>
<b>4.17 CONTRACTOR'S EQUIPMENT .....</b>	<b>84</b>
<b>4.18 PROTECTION OF THE ENVIRONMENT .....</b>	<b>84</b>
<b>4.19 ELECTRICITY, WATER AND GAS.....</b>	<b>85</b>
<b>4.20 EMPLOYER'S EQUIPMENT AND FREE-ISSUE MATERIAL.....</b>	<b>85</b>
<b>4.21 PROGRESS REPORTS.....</b>	<b>85</b>
<b>4.22 SECURITY OF THE SITE .....</b>	<b>85</b>
<b>4.24 FOSSILS.....</b>	<b>85</b>
<b>6.5 WORKING HOURS.....</b>	<b>85</b>
<b>6.7 HEALTH AND SAFETY .....</b>	<b>85</b>



<b>“6.12</b>	<b>INDEMNITY BY CONTRACTOR.....</b>	<b>85</b>
<b>8.1</b>	<b>COMMENCEMENT OF WORK.....</b>	<b>86</b>
<b>8.4</b>	<b>EXTENSION OF TIME FOR COMPLETION.....</b>	<b>86</b>
<b>8.7</b>	<b>DELAY DAMAGES.....</b>	<b>86</b>
<b>10.2</b>	<b>TAKING OVER OF PARTS OF THE WORKS.....</b>	<b>86</b>
<b>11.9</b>	<b>PERFORMANCE CERTIFICATE.....</b>	<b>86</b>
<b>11.11</b>	<b>CLEARANCE OF SITE.....</b>	<b>86</b>
<b>12.3</b>	<b>EVALUATION.....</b>	<b>86</b>
<b>13.3</b>	<b>VARIATION PROCEDURE.....</b>	<b>87</b>
<b>13.5</b>	<b>PROVISIONAL SUMS.....</b>	<b>87</b>
<b>13.6</b>	<b>DAYWORK.....</b>	<b>87</b>
<b>13.8</b>	<b>ADJUSTMENTS FOR CHANGES IN COSTS.....</b>	<b>87</b>
<b>14.3</b>	<b>APPLICATION FOR INTERIM PAYMENT CERTIFICATES.....</b>	<b>87</b>
<b>14.5</b>	<b>PLANT AND MATERIALS INTENDED FOR THE WORKS.....</b>	<b>88</b>
<b>14.6</b>	<b>ISSUE OF INTERIM PAYMENT CERTIFICATES.....</b>	<b>88</b>
<b>14.7</b>	<b>PAYMENT.....</b>	<b>88</b>
<b>14.8</b>	<b>DELAYED PAYMENT.....</b>	<b>88</b>
<b>14.10</b>	<b>STATEMENT AT COMPLETION.....</b>	<b>88</b>
<b>14.11</b>	<b>APPLICATION FOR FINAL PAYMENT CERTIFICATE.....</b>	<b>88</b>
<b>14.15</b>	<b>CURRENCIES OF PAYMENT.....</b>	<b>88</b>
<b>15.2</b>	<b>TERMINATION BY THE EMPLOYER.....</b>	<b>88</b>
<b>17.3</b>	<b>EMPLOYER’S RISKS.....</b>	<b>89</b>
<b>18.1</b>	<b>GENERAL REQUIREMENTS FOR INSURANCES.....</b>	<b>89</b>
<b>18.2</b>	<b>INSURANCE FOR WORKS AND CONTRACTOR’S EQUIPMENT.....</b>	<b>89</b>
<b>18.3</b>	<b>INSURANCE AGAINST INJURY TO PERSONS AND DAMAGE TO PROPERTY.....</b>	<b>89</b>
<b>18.4</b>	<b>INSURANCE FOR CONTRACTOR’S PERSONNEL.....</b>	<b>89</b>
<b>19.1</b>	<b>DEFINITION OF FORCE MAJEURE.....</b>	<b>89</b>
<b>19.5</b>	<b>FORCE MAJEURE AFFECTING SUBCONTRACTOR.....</b>	<b>89</b>
<b>20.1</b>	<b>CONTRACTOR’S CLAIMS.....</b>	<b>90</b>
<b>20.2</b>	<b>SETTLEMENT OF DISPUTES.....</b>	<b>90</b>
<b>20.3</b>	<b>MEDIATION.....</b>	<b>91</b>
<b>20.4</b>	<b>REFERENCE TO COURT.....</b>	<b>92</b>
<b>20.5</b>	<b>SPECIAL DISPUTES.....</b>	<b>92</b>
<b>20.6</b>	<b>CONTINUING VALIDITY OF SUB-CLAUSES 20.2 TO 20.6.....</b>	<b>92</b>
	<b>APPENDIX: GENERAL CONDITIONS OF DISPUTE ADJUDICATION AGREEMENT.....</b>	<b>92</b>
	<b>ANNEX: PROCEDURAL RULES.....</b>	<b>93</b>
	<b>CONTRACT PRICE ADJUSTMENT SCHEDULE.....</b>	<b>93</b>

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**PART A: GENERAL CONDITIONS - FIDIC AMENDMENTS**

Up to 1 March 2006 no amendments have been issued by FIDIC.

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**PART B: PARTICULAR CONDITIONS OF CONTRACT**

**Note to tenderer:**

**The following amendments are the Department of Roads and Transport's standard particular conditions to the general conditions and shall apply to this contract.**

The following additional amendments to the FIDIC Conditions of Contract 1999 apply to this contract:



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**CONDITIONS OF CONTRACT**

**PARTICULAR CONDITIONS AMENDING THE GENERAL CONDITIONS OF FIDIC**

**SUBJECT INDEX**

	<b>Clause</b>		<b>Clause</b>
BE Definitions	1.1.2.11	Fossils	4.24
BE Subcontractors	4.1 & 4.4	Health & Safety	6.7
Appendix to Tender	1.1.1.9	Indemnity by Contractor	6.12
Assignment	1.7		
Clearance of Site	11.11	Insurance – General requirements	18.1
Commencement of Works	8.1	Laws	1.1.6.5
The Contract	1.1.1	Letter of Acceptance	
Contract Agreement	1.6	Materials on Site	14.5
Contract Documents - no. of copies	1.8	Payment Certificates	14.6
Contract Price Adjustment schedule	13.8	Performance Certificate	11.9
Contractor's Claims	20.1	Performance Security	4.2
Contractor's Equipment	4.17	Priority of Documents	1.5
Contractor's Obligations – B-BBEE Requirements	4.1	Programme	8.3
Currencies of Payment	14.15	Protection of Environment	4.18
Day work	13.6	Provisional Sums	13.5
Disorderly Conduct	20.2	Retention Money Guarantee	14.3
Disputes	20.3	Right of way & facilities	4.13
Settlement of Mediation	20.3	Safety Procedures	4.8
Court	20.4	Site Data	4.10
Special	20.5	SMME	1.1.2.12
Documents – Priority	1.5	Specifications	
Electricity, Gas, Water	4.19	Subcontractors & Suppliers	4.4
Employer's Equipment	4.20	Supplementary Agreement	1.1.6.10
		Taking over parts of works	10.2
Employer's Personnel	2.3	Tender	
Employer's Risks (SASRIA)	17.3	Variations – Procedures	13.3
Employer's Sole Authority	3.1	Working hours	6.5
Environmental Protection	4.18	Written Communications	1.2
Force Majeure: Subcontractor and Supplier	19.5		

## **PARTICULAR CONDITIONS AMENDING THE GENERAL CONDITIONS OF FIDIC**

### **1.1 Definitions**

#### **1.1.1 The Contract**

“**Contract**” means the Form of Offer and Acceptance, Contract Data, these Conditions, the Specifications, the Drawings, the Schedules, and the further documents (if any), which are listed in the Form of Offer and Acceptance, and further includes drawings and documents or parts thereof, which any of the aforesaid documents incorporate by reference.”

“**Letter of Acceptance**” means the Form of Acceptance as contained in part C1.1.2 of the contract documents.”

“**Letter of Tender**” means the Form of Offer as contained in part C.1.1.1 of the contract document.”

“**Specification**” means that document entitled Scope of Work, as included in the Contract, and any additions and modifications to the Scope of Work in accordance with the Contract. Such document specifies the Works.”

“**Schedules**” means the document(s) completed by the Contractor and submitted with his tender offer, as included in the Contract. Such document(s) may include the Bill of Quantities, data lists and schedules of rates and/or prices.”

“**Tender**” means that section of the Form of Offer and Acceptance called ‘Offer’ and all other documents which the Contractor submitted as Returnable Documents, as included in the Contract.”

“**Appendix to Tender**” means the completed section entitled C1.2.2 Contract Data – Information provided by the Employer included in the Contract Data:”

“**Bill of Quantities**” shall also mean the Pricing Schedule as contained in section C2.2 of the contract document.”

#### **1.1.3 Dates, Tests, Periods and Completions**

“A “**day**” means a calendar day, except for any extension of time that is granted under sub-clause 8.4, [Extension of Time for Completion], in which case a day means a working day. A “**Year**” means 365 calendar days”

## 1.1.6 Other Definitions

### 1.1.6.5 "Laws"

"1.1.6.10 **"Supplementary Agreement"** means an agreement between the Employer and the Contractor for executing work, supplemental to the original Contract, which was not contemplated in the original Contract and is also not required for the proper completion of the original Contract."

## 1.2 Interpretation

"The expression "written", "in writing", "notify", "the giving of notice", "giving consent", "as instructed" or "at the request of" means that communication, either hand-written or printed by whatever means, including transmission by telefax or e-mail, and resulting in a permanent record. However, such notice, instruction, consent or request is not deemed to have been delivered by virtue of its appearance in the minutes of meetings."

## 1.5 Priority of Documents

- (a) the Forms of Offer and Acceptance
- (b) the Appendix to Tender within the Contract data
- (c) the Particular Conditions of Contract
- (d) the General Conditions
- (e) the Scope of Works,
- (f) the project Drawings,
- (g) the standard Specifications,
- (h) the standard Drawings, and
- (i) the Schedules and any other documents forming part of the Contract."

## 1.6 Contract Agreement

"The Parties shall enter into a Contract Agreement when the Employer issues the Form of Acceptance (see Particular Condition 1.1.1.3). The Contract Agreement shall be in the form prescribed in the tender documents"

## 1.7 Assignment

"Neither Party shall, without the written consent of the other, assign the contract or any part thereof or any obligation under the Contract or cede any right or benefit thereunder."

## 1.8 Care and Supply of Documents

## 2.3 Employer's Personnel

## 3.1 Engineer's Duties and Authority

"In addition to the actions stipulated in the General Conditions whereby the Engineer shall first obtain the approval of the Employer, the Employer's approval shall also be obtained before taking any action under sub-clauses 8.4, 11.9, 13.3 and 20.1 as amended in these Particular Conditions".



#### **4.2 Performance Security**

“The Contractor shall deliver the Performance Security to the Employer within 14 days of the date of issue of the Letter of Acceptance. The Performance Security shall be issued by a bank or insurance company registered or licensed as a bank or insurance company to do business in the Republic of South Africa and approved by the Employer and having an office or banking facility in the Republic of South Africa. The Performance Security shall be subject to approval by the Employer and shall be in the form prescribed in the tender documents or in another form approved by the Employer.”

#### **4.4 Subcontractors**

#### **4.7 Setting Out**

“.....reference, provided that the Contractor shall provide proof of their inaccuracy before they are used.”

#### **4.8 Safety Procedures**

“(f) enter into and execute an agreement as provided for under Section 37(2) of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and shall comply with all other requirements of Act No 85 of 1993 and Construction Regulations, 2014 (as amended). The agreement in the relevant form shall be prepared at the expense of the Employer.”

#### **4.10 Site Data**

*In the 1st paragraph, 1st sentence, replace “prior to the Base Date” with “either as part of or by reference in the Tender Documents or, otherwise, not later than 7 days before the latest date for submission of the Tender Documents”, and delete the 2nd sentence.*

#### **4.13 Rights of Way and Facilities**

“The Contractor shall abide by the procedures for the provision of deviation, haul and construction roads, and the requirements for the construction, maintenance and final reinstatement of such roads, all as set out in the standard Specifications.”

#### **4.17 Contractor’s Equipment**

“The Contractor shall notify the Engineer, in writing, of the names and addresses of the owners of all major items of equipment not owned by the Contractor.”

#### **4.18 Protection of the Environment**

and shall ensure compliance with all the environmental requirements indicated in part C3 Scope of Work.”

“The Contractor shall indemnify the Employer against any liability arising from or in relation to any of the above matters.”

#### **4.19 Electricity, Water and Gas**

#### **4.20 Employer's Equipment and Free-Issue Material**

#### **4.21 Progress Reports**

#### **4.22 Security of the Site**

"... on the Site, or utility or service owners whom the Employer or the Engineer identifies as having also been authorised. Without said notice, the Contractor may refuse access to such utility or service owners; and"

*Add the following sub clause:*

"(c) The Contractor shall indemnify the Employer against any liability for damage incurred to, or loss of, property within the site identified in the contract documents as not belonging to the Employer regardless of whether or not such damage or loss is caused by the Contractor's equipment."

#### **4.24 Fossils**

*In the 1st paragraph, 1st sentence after "fossils" insert "and graves" and in the 2nd sentence, add "and shall indemnify the Employer against any liability arising from such loss or damage."*

#### **6.5 Working Hours**

"No work shall be carried out on Site on Sundays or on any special non-working day stated in the Contract Data or between sunset and sunrise on any day, unless:"

#### **6.7 Health and Safety**

"The Contractor shall provide and maintain on the Site adequate and suitable sanitary and first aid services (including the provision at all times of a person qualified to render medical first aid) and a supply of potable water for the Contractor's, the Employer's and the Engineer's personnel engaged on the Contract and, if necessary, similar facilities elsewhere for such personnel off the Site."

#### **"6.12 Indemnity by Contractor**

The Contractor shall indemnify the Employer against and from all damages, losses and expenses (including legal fees and expenses) resulting from:

- (a) the loss of output and delay caused by the slowing down or partial or total stoppage of work caused by:
  - i. all or any of the Contractor's workforce as a result of a dispute between all or any of the Contractor's workforce and the Contractor; or
  - ii. all or any of the Contractor's suppliers' difficulty or impossibility to deliver goods or materials needed to perform the Works;

(b) any unlawful, riotous or disorderly conduct by or amongst the Contractor's personnel."

## **8.1 Commencement of Work**

*In the 1st paragraph, delete the 1st sentence, and in the 2nd sentence replace "42 days after the Contractor receives the Letter of Acceptance" with "28 days of the date of issue of the Letter of Acceptance."*

*In the 2nd line of the 2nd paragraph, after the words "Commencement Date", insert "but within the period stated in the Contract Data."*

## **8.4 Extension of Time for Completion**

"Employer"

## **8.7 Delay Damages**

"The Contractor shall in consultation with the specific regional manager determine the commencement date and the period required to complete a specific work order. Should the Contractor fails to comply he shall pay delay damages to the Employer as stated in the Appendix to Tender."

"Where stated in the Appendix to tender, the contractor shall be subject to penalties for non-compliances with specified accommodation of traffic road signage identified by the engineer and for each additional day of lane closure needed to complete programmed work sections."

## **10.2 Taking Over of Parts of the Works**

"The Employer may make use of any part of the Permanent Works prior to the issue of a Taking Over-Certificate."

## **11.9 Performance Certificate**

### **11.11 Clearance of Site**

"With the exception of Plant, Materials and Contractor's Equipment required to complete any outstanding work or to remedy defects or damage as notified by, or on behalf of, the Employer and which Plant, Materials and Contractor's Equipment have been agreed by the Engineer and the Contractor, the Contractor shall, upon receipt of the Taking-Over Certificate, remove all Contractor's Equipment and surplus material, wreckage, rubbish and Temporary Works, from the Site unless otherwise instructed by the Engineer."

"after the Employer receives a copy of the Performance Certificate" *with* "after the issue of the Taking-Over Certificate".

## **12.3 Evaluation**

“However a new rate or price shall be appropriate for an item of work only if notice has been given and if “Contract” with ‘Appendix to Tender’.

### **13.3 Variation Procedure**

“Each instruction to execute a Variation, unless the Variation is to be executed on a Day work basis, shall be a written instruction presented in the form of a Variation order. The Variation order shall be presented to the Employer, who shall signify his approval before the order is signed by the Engineer and issued to the Contractor, who shall acknowledge his acceptance by signing the order. The Contractor shall not accept a Variation order that is not approved and signed by the Employer”.

### **13.5 Provisional Sums**

“services” *insert* “and including items for which a prime cost sum has been provided in the Bill of Quantities”.

### **13.6 Day work**

“The following procedure shall apply.”

“The work shall be valued in accordance with the Day work Schedule included in the Contract or, in the absence of a Day work Schedule or for items not included in the Day work Schedule the Contractor shall be paid the aggregate of:

- (i) the gross remuneration of the workmen for the time they are actually engaged on the work concerned,
- (ii) the net cost of Materials actually used,
- (iii) an amount in respect of Contractor’s Equipment which shall be charged on a time basis at the rates stated in the Tender, failing which at rates, to be agreed between the Contractor and the Engineer or, failing agreement, to be determined by the Engineer on the basis of ruling equipment hire rates and
- (iv) the percentage allowances stated in the Contract Data, which allowances shall be held to cover all charges for the Contractor’s and/or Subcontractor’s profits, timekeeping, clerical work, insurance, establishment, superintendence and the use of hand tools.”

### **13.8 Adjustments for Changes in Costs**

*Replace this sub-clause with the following:*

“The value of certificates issued in terms of Sub-clause 14.6 (excluding the value of those special Materials specified in the Contract Data) shall be increased or decreased by applying a Contract Price adjustment factor calculated according to the formula and the conditions set out in the Contract Price adjustment Schedule appended to these Particular Conditions.

Price adjustments for variations in the costs of special Materials specified in the Contract Data shall be made in the manner set out in the Contract Price adjustment schedule.”

### **14.3 Application for Interim Payment Certificates**

“above amounts” *insert* “and 80% of the value of Materials on Site”

“If, as stated in the Contract Data, a Retention Money Guarantee is permitted and the Contractor elects to furnish it, the guarantee shall, at the cost of the Contractor, be executed by an insurance company or bank in a form approved by the Employer.

The said company or bank shall be registered or licensed to do business in the Republic of South Africa and shall have an office and banking facility in the Republic of South Africa and shall be subject to approval by the Employer.

The aggregate liability under the guarantee shall be the maximum amount of retention monies to be retained by the Employer, which amount shall be as stated in the Contract Data.

Other conditions, if any, additional to the above standard conditions shall be as stated in the Contract Data.

The guarantee shall expire on the date on which the last of the retention monies (which, but for the guarantee, would have been retained by the Employer) becomes payable to the Contractor.

The guarantee shall be returned to the guarantor upon final payment of the aggregate liability or on the date of expiry, whichever is the earlier."

#### **14.5 Plant and Materials intended for the Works**

"If this Sub-Clause applies".

- "(a) (ii) supported by satisfactory evidence; and
- (a) (iii) the relevant Plant and Materials have been delivered to and ..."

"If so agreed in writing by the Employer, the provisions of this Sub-Clause 14.5, as amended herein, shall apply equally to Plant and Materials intended for incorporation in the Permanent Works and stored at places other than the Site."

#### **14.6 Issue of Interim Payment Certificates**

#### **14.7 Payment**

#### **14.8 Delayed Payment**

"These financing charges shall be at the rate prescribed in terms of the Prescribed Rate of Interest Act, 1975 (Act No 55 of 1975)".

#### **14.10 Statement at Completion**

#### **14.11 Application for Final Payment Certificate**

"Hereafter, when the dispute is finally resolved, the Contractor shall then prepare and submit to the Employer (with a copy to the Engineer) a Final Statement."

#### **14.15 Currencies of Payment**

#### **15.2 Termination by the Employer**

- "(f) Gives or has given, offers to give or has offered to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:
  - (i) for doing or forbearing to do any action in relation to the Contract or any other contract with the Employer or State Department or Organ of State, or

- (ii) for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other contract with the Employer or State Department or Organ of State,

or if any of the Contractor's Personnel, agents or Subcontractors gives or has given, offers to give or has offered to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (f). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination."

"(g) Misrepresented, whether innocently, negligently or fraudulently, the true facts requested in the tender documents."

"including the right to terminate any other contract between the Employer and the Contractor and to forbid the Contractor or any employee, partner, shareholder or director of the Contractor to tender on any future projects put out to tender by the Employer for a period of five years from the date of notice of termination, which period may be reduced by application to and at the sole discretion of the Employer."

### **17.3 Employer's Risks**

"unless these risks are insurable with the South African Special Risks Insurance Association (SASRIA) at the time of tendering and it is stipulated in the Contract Data that the Contractor is to effect insurance against these risks".

### **18.1 General Requirements for Insurances**

"The Contractor shall effect all insurances as have been proposed and agreed by the Contractor as being necessary to adequately cover his insurable obligations under the Contract and shall maintain such insurances for the duration of the Contract.

With regard to the insurances to be effected for insurance against injury to Persons and Damage to property the Contractor shall arrange for the policy to be issued in the joint names of the Contractor, the Employer and Subcontractors and will incorporate a Cross Liability clause.

The Employer shall be entitled at his discretion to call for evidence of the scope and validity of such insurance as and when this may be required.

If required, the Contractor shall provide proof that he has paid all contributions required in terms of the compensation for Occupational Injuries and Diseases, 1993 (Act No 130 of 1993)."

### **18.2 Insurance for Works and Contractor's Equipment**

### **18.3 Insurance against Injury to Persons and Damage to Property**

### **18.4 Insurance for Contractor's Personnel**

### **19.1 Definition of Force Majeure**

### **19.5 Force Majeure Affecting Subcontractor**

"Force Majeure Affecting Subcontractor and Supplier".

## 20.1 Contractor's Claims

"If an extension of time is granted the Contractor shall be paid such additional time-related Preliminary and General allowances as are appropriate having regard to any other compensation which may already have been granted in respect of the circumstances concerned. Payment of costs additional to the above will only be considered if the costs derive from claims that fall within the terms of Clause 13 [Variations and Adjustments] and/or Sub-clause 17.3 [Employer's Risks]."

"After receiving a claim or any further particulars supporting a previous claim, the Engineer shall present such claim or particulars to the Employer, together with his recommendations, for a ruling, which ruling shall be given to the Contractor within 42 days after receiving a claim or any further particulars, provided that the said period of 42 days may be extended by application from one Party and approval of the other. If the Employer fails to give his ruling within the specified period, or agreed extension thereto, it shall be deemed that the Employer has dismissed the claim."

## 20.2 to 20.8

### 20.2 Settlement of Disputes

- (a) The Contractor shall have the right to dispute any ruling given or deemed to have been given by the Employer or the Engineer, provided that, unless the Contractor shall, within 42 days after his receipt of a ruling or after a ruling shall have been deemed to have been given, give written notice (hereinafter referred to as a "Dispute Notice") to the Engineer, referring to this Clause, disputing the validity or correctness of the whole or a specified part of the ruling, he shall have no further right to dispute that ruling or the part thereof not disputed in the said Dispute Notice.
- (b) All further references herein to a ruling shall relate to the ruling, or part thereof, specified in the Dispute Notice, as varied or added to by agreement between the Contractor and the Engineer or by the Engineer's decision in terms of sub-paragraph (c) or by the Mediator's opinion to the extent that it has become binding in terms of Sub-clause 20.3(f).
- (c) The Engineer shall
  - i) before giving his decision on the dispute, consult the Employer thereon and give the Contractor a reasonable opportunity to present written or oral submissions thereon, which latter shall be confirmed in writing within 7 days
  - ii) deliver his decision in writing to the Employer and to the Contractor, and
  - iii) give his decision within 56 days of his receipt of the Dispute Notice, or within any further period as may be agreed between the Engineer and the Contractor, failing which, he shall be deemed to have given a decision affirming, without amendment, the ruling concerned.
- (d) Unless either the Employer or the Contractor, shall, within 28 days after his receipt of notice of the decision in terms of sub-paragraph (c)(ii) or after the decision is deemed to have been given in terms of sub-paragraph (c)(iii), have given notice in writing to the Engineer, with a copy to the other Party, disputing the Engineer's decision or a specific part thereof, he shall have no further right to dispute any part of the ruling not specified in his said notice.
- (e) If either Party shall have given written notice in compliance with sub-paragraph (d), the dispute shall be referred to mediation in terms of Sub-Clause 20.3 unless either Party has given written notice to the other Party of its intention to refer the matter in dispute to court, which notice shall be given either:
  - i) within 28 days of receipt of notice of the Engineer's decision, or



- ii) within 14 days of receipt by the one Party of the other Party's notice of dispute of the Engineer's decision.

If notice of intention to refer the matter in dispute to Court has been served by either party, the matter in dispute shall not be referred to mediation but shall be referred to Court.

- (f) Notwithstanding that the Contractor may, in respect of a ruling, have given a Dispute Notice, the ruling shall be of full force and carried into effect unless and until otherwise agreed by both Parties in terms of Sub-Clause 20.3(f) or as determined in a court judgement.

### **20.3 Mediation**

- (a) The mediation referred to in Sub-Clause 20.2(e) shall be conducted by a mediator selected by agreement between the Parties or, failing such agreement within 7 days after a written request by either Party for such agreement, nominated on the application of either Party by the President for the time being of the South African Institution of Civil Engineering.

If, for any reason, the person appointed fails to assume or to continue in the office concerned:

- (i) the provisions of Sub-Clause 20.3 shall apply mutatis mutandis in the appointment of a successor, and
  - (ii) in making his nomination in terms of this sub-clause, the president for the time being of the South African Institution of Civil Engineering shall, at his own discretion, act in consultation with the presidents for the time being of Consulting Engineers South Africa and the South African Federation of Civil Engineering Contractors, and
  - (iii) if the president required to make a nomination in terms of this sub-clause shall have a direct or indirect interest in the subject matter of the dispute, the nomination shall be made by the chief executive officer or the next senior officer of the body concerned who has no such interest.
- (b) Neither Party shall be entitled to be represented at any hearing before, or at, any meeting, or in any discussion, with the mediator except by any of the following:
    - i) the Party himself, if a natural person,
    - ii) a partner in the case of a partnership,
    - iii) an executive director in the case of a company,
    - iv) a member in the case of a close corporation,
    - v) the Engineer,
    - vi) a bona fide employee of the party concerned, and
    - vii) a professional engineer appointed for the purpose by the Party concerned.
  - (c) The mediator shall, as he deems fit, follow formal or informal procedure and receive evidence or submissions orally or in writing, sworn or unsworn, at joint meetings with the Parties or separately or from any person whom he considers can assist in the formulation of his opinion, provided that:
    - i) each Party shall be given reasonable opportunities of presenting evidence or submissions and of responding to evidence or submissions of the other Party, and
    - ii) each Party shall be given full details of any evidence or submissions received by the Mediator from the other Party or any other person otherwise than at a meeting where both Parties are present or represented.
  - (d) The mediator shall have the power to propose to the Parties compromise settlements of or agreements in disposal of the whole or portion of the dispute.





- (e) The mediator shall, as soon as reasonably practical, give to each of the Parties his written opinion on the dispute, setting out the facts and the provisions of the Contract on which the opinion is based and recording the details of any agreement reached between the Parties during the mediation.
- (f) The mediator's opinion shall become binding on the Parties only to the extent correctly recorded as being agreed by the Parties in the mediator's written opinion or otherwise as recorded as being agreed in writing by both Parties subsequent to the receipt of the mediator's opinion.
- (g) The dispute on any matter still unresolved after the application of the provisions of sub-paragraph (f) shall be resolved by court proceedings.
- (h) Save for reference to any portion of the mediator's opinion which has become binding in terms of sub-paragraph (f), no reference shall be made by or on behalf of either Party, in any proceedings subsequent to mediation, to the mediator's opinion, or to the fact that any particular evidence was given, or to any submission, statement or admission made in the course of the mediation.
- (i) Irrespective of the nature of the mediator's opinion:
  - (i) each Party shall bear his own costs arising from the mediation, and
  - (ii) the Parties shall in equal shares pay the mediator the amount of his expenses and the amount of his fee based on a scale of fees as agreed between the mediator and the Parties before the commencement of the mediation.

#### **20.4 Reference to Court**

If a dispute is still unresolved as provided for in sub-paragraph (g) of sub-clause 20.3 or the dispute is one described in sub-clause 20.5, the dispute shall be determined by court proceedings, provided that:

- (a) nothing herein contained shall deprive the Contractor of the right to institute immediate court proceedings in respect of failure by the Employer to pay the amount of a payment certificate on its due date or to refund any amount of retention money on its due date for refund,
- (b) no ruling or decision given by the Engineer in accordance with the provisions of the Contract shall disqualify him from being called as a witness and giving evidence before the court on any matter whatsoever relevant to the dispute concerned, and
- (c) the court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Engineer relevant to the matter in dispute.

#### **20.5 Special Disputes**

Notwithstanding anything elsewhere provided in sub-clauses 20.2, 20.3 and 20.4, any dispute between the Contractor and the Employer,

- (a) not relating to a ruling, decision, order, instruction or certificate by the Engineer, or
- (b) arising after the completion of the Contract or, if a Defects Notification Period is provided, after the termination of that period,

shall be determined, without the application of the provisions of sub-clauses 20.2 and 20.3 by court proceedings which may be initiated by either Party, in which event the provisions of sub-clause 20.4 shall apply.

#### **20.6 Continuing Validity of sub-clauses 20.2 to 20.6**

Sub-clauses 20.2 to 20.6 inclusive constitute a separate, divisible agreement from the rest of the Contract and shall remain valid and applicable, notwithstanding that the Works may have been completed or that the rest of the Contract may be void or voidable or may have been cancelled for any reason."

#### **APPENDIX: General Conditions of Dispute Adjudication Agreement**



**ANNEX: Procedural Rules**

**APPENDIX TO THE PARTICULAR CONDITIONS:**

**CONTRACT PRICE ADJUSTMENT SCHEDULE**

1. **Contract Price Adjustment** In accordance with sub-clause 13.8, the value of each certificate issued in terms of sub-clause 14.6 shall be increased or decreased by the amount obtained by multiplying “Ac”, defined in clause 2 of this Schedule, by the Contract Price adjustment factor, rounded off to the fourth decimal place, determined according to the formula:

$$(1 - x) \left[ \frac{aL_t}{L_o} + \frac{bE_t}{E_o} + \frac{cM_t}{M_o} + \frac{dF_t}{F_o} - 1 \right]$$

in which the symbols have the following meanings:

“x” is the proportion of “Ac” which is not subject to adjustment. Unless otherwise stated in the Appendix this proportion shall be 0, 15.

“a”, “b”, “c” and “d” are the co-efficient determined by the Engineer and specified in the Contract Data, which are deemed, irrespective of the actual constituents of the work, to represent the proportionate value of labour, equipment, materials (other than “special materials” specified, in terms of sub-clause 13.8, in the Contract Data) and fuel respectively. The arithmetical sum of “a”, “b”, “c”, and “d” shall be unity.

“L” is the “Labour Index” and shall be the “Consumer Price Index for all items” for the urban area specified in the Contract Data, as published in the Statistical Release P0141.1, Table A, of Statistics South Africa.

“E” is the “Equipment Index” and shall be the “Plant and Equipment list” from the “Mining & Construction Plant & Equipment Price Index” as published in the Statistical Release P0151.1, Table 4, of Statistics South Africa.

“M” is the “Materials Index” and shall be the “Civil Engineering Materials Price Indices”, as published in the Statistical Release P0151.1, Table 6, of Statistics South Africa. Note that “Civil engineering material – roads, general (excluding bitumen)” is applicable to this project.

“F” is the “Fuel Index” and shall be the index for diesel, as published in the Statistical Release P0142.1, Table 1, of Statistics South Africa.

The suffix “o” denotes the basic indices applicable on the Base Date as defined in sub-clause 1.1.3.1 of the General Conditions of Contract.

The suffix “t” denotes the current indices applicable to the month in which the last day of the period falls to which the relevant payment certificate relates.

If any index relevant to any particular Payment Certificate is not known at the time when the certificate is prepared, the Engineer may estimate the value of such index. Any correction which may be necessary when the correct indices become known shall be made by the Engineer in subsequent Payment Certificates.

2. **Assessment** For the purpose of calculating the adjustment to the value of the



**of amount  
subject to  
adjustment**

certificates, the amount “Ac” shall be determined by the formula:

$$Ac = T - S - D - W - G - Ap$$

In which formula the symbols have the following meanings:

“T” is the summation of the total value of the

- (i) preliminary and general items,
- (ii) work done, and
- (iii) Materials on Site

as certified in the Payment Certificate under consideration without any deduction whatsoever and before any adjustment made in terms of this Schedule

“S” is the aggregate of (i), (ii), (iii) and (iv), referred to below, and included in “T”:

- (i) the amounts actually expended and substituted for any prime cost sums;
- (ii) the value of any work done by Nominated Subcontractors;
- (iii) the value of any work done against Provisional Sums
- (iv) the value of any extra or additional work done under a Variation order

where special arrangements for price adjustments in respect of those amounts were made and recorded at the time the work was ordered.

“D” is the value of work included in “T” and done at new rates fixed in terms of sub-clause 12.3, where those rates are not based on labour, Contractor’s Equipment or Materials costs in force at the time of tendering. Generally new rates may be based on current costs and de-escalated to the Base Date of the indices, in which case work done at these rates shall not be included in the value of “D”.

“W” is the amount included in “T” and paid for any Day work executed at Cost plus percentage allowances as set out in sub-clause 13.6 as amended by Particular Condition.

“G” is the amount included in “T” for Materials classified and dealt with as “special materials” in terms of sub-clause 13.8 as amended by Particular Condition.

“Ap” is the summation of all “Ac” amounts determined in terms of Clause 2 of this Schedule for all Payment Certificates preceding in time the Payment Certificate under consideration.

**3. Reduction of  
CPAF after  
Time for  
Completion  
has expired**

Save only for Variations ordered to be carried out after the Time for Completion has expired, the Contract Price adjustment factor to be applied to certificates relating to work done or materials supplied after the of the Time for Completion shall be half the factor calculated by inserting in the formula referred to in Clause 1 of this Schedule the indices Lt, Et, Mt and Ft applicable at the date of expiry of the Time for Completion.

**4. Special  
materials**

The price of each “special material” specified in the Contract Data shall be increased or decreased by the net amount of any variation incurred after the date of the Tender on the basis set out in the Contract, provided that any claim for adjustment in terms hereof shall be substantiated by the submission of acceptable invoices and any other supporting documents which the Engineer considers necessary for that purpose, and provided also that no further adjustment be permitted to the price of any “special material” after the Time for



## GAUTENG PROVINCE

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

Completion has expired unless such material forms part of any additional work or variation ordered to be carried out after that date.

For the purpose of this clause, “the net amount of any Variation” in respect of a particular material referred to as a “special material” in terms of sub-clause 13.8 shall be calculated by multiplying the difference between the rate or price entered in the Contract by the Contractor for that Material and the equivalent rate or price actually paid by the Contractor for the Material by the quantity of the Material in question.

5. **Assessment of indices if certificates are not issued monthly**

If more than one month intervenes between the months applicable to any Payment Certificate and the month applicable to the immediately succeeding payment certificate, then the indices “Lt”, “Et”, “Mt” and “Ft” applicable to the succeeding Payment Certificate shall each be taken as the arithmetic mean, rounded off to the second decimal place, of the relevant indices applicable to the month of measurement and to such intervening months.



**C1.2.2 CONTRACT DATA - INFORMATION PROVIDED BY THE EMPLOYER**

**APPENDIX TO TENDER**

Note: Clause numbers (Cl. No.) refer to the FIDIC “General Conditions of Contract for Construction for Building and Engineering Works designed by the Employer” (1999). The prefix A refers to an amendment in the Particular Conditions.

Item	Clause No	Data
Employer	1.1.2.2	means The Department of Roads and Transport  The Employer’s address is:  Department of Roads and Transport Private Bag X83 Marshalltown 2107
Project Manager	1.1.2.4	The Director, Directorate Traffic Engineering at Johannesburg Head Office will act as the Project Manager.
Communications	1.3	The addresses for communication between the parties shall be:  <b>45 Commissioner Street</b> <b>Life Centre Building</b> <b>Johannesburg</b> TEL: 072 103 6784
Period of validity of tender	-	90 days after the closing date for tenders
Time for completion of works	1.1.3.3.	36 months including the contractor’s holidays in December and January
Defects for notification period	1.1.3.7	12 calendar months
Laws	1.1.6.5	The law governing this contract is South African law
Time for access to the site	2.1	Nil (access on Commencement Date)
Amount of performance security	4.2	10 % of the accepted contract amount (Cl no. 4.11)



## GAUTENG PROVINCE

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

Special non-working hours/days	A6.5	All designated public holidays (including all foreseeable statutory declared election days),
Period in which works must commence	A8.1	Not later than 14 days after the date on a Works Order
Delay damages for the works	A8.7	(a) Delay Damages (i) Late delivery / completion <b>R 5000 per day</b> for any specific works order (ii) Non-compliance <b>R1000 per day</b>
<i>Penalties for non-conformance</i>	A8.13	(b) Accommodation of traffic penalties (i) <b>R5000.00</b> per identified event (ii) <b>R500.00</b> per hour beyond instructed time for rectification
Day work allowances	A 13.6	Not applicable
Special materials	A13.8	Bitumen binder extracted from petroleum-based products and used on site with base price listed in returnable Schedule of Special Materials. Including that used in asphalt, irrespective of whether it is produced and/or placed by the contractor or an approved subcontractor
Evaluation	A12.3	The term "fixed rate item" shall apply to all items of work listed in the Pricing Schedule. (Including agreed items of work listed in variation orders)
CPA	A13.8	CPA Applicable x=0.15 a=0.48 b=0.37 c=0.05 d=0.10 "L" is the Consumer Price Index for Gauteng are CPA factor rounded to fourth decimal
Retention money: - Percentage	14.3 (c)	Not Applicable 0 %
- Limit	14.3 (c)	Not Applicable
Minimum amount of interim payment certificate	14.6	Not Applicable
Contractor to insure with SASRIA	A17.3 (c)	Applicable / Required
Appointment of DAB	A 20.2	Not Applicable



BEE Target values (CPG)	E3.2	Not Applicable
Labour Content		Not Applicable
SMME/BE utilization		Not Applicable
Termination by Employer	15	Applicable
Suspension and Termination by Contractor	16	Applicable
Risk and Responsibility	17	Applicable
Insurance	18.1	Applicable / Required
Insurance for contractors works and equipment	18.2	Applicable / Required
General Public Liability Cover for claims against the Contractor	18.3	Applicable / Required
Insurance for contractors' personnel	18.4	Applicable / Required

SIGNED BY TENDERER: .....



**C1.2.3 CONTRACT DATA – INFORMATION PROVIDED BY THE TENDERER**

The Contractor is .....

Physical Address: .....

Telephone: .....

Facsimile: .....

The authorised and designated representative of the Contractor is:

Name: .....

The postal address for receipt of communications is: .....

Telephone: .....

Facsimile: .....

Physical Address: .....

Email: .....





**C1.3 OTHER STANDARD FORMS**

**C1.3.1 FORM OF OCCUPATION HEALTH AND SAFETY ACT 1993  
(ACT NO. 85 OF 1993)**

This AGREEMENT made at ..... on this the ..... day of ..... in the year ..... between THE DEPARTMENT OF ROADS AND TRANSPORT (hereinafter called "the Employer") on the one part, herein represented by ..... in his capacity as ..... and delegate of the Employer in terms of the Employer's standard powers of delegation pursuant to the provisions of Act No. 7 of 1998, and ..... (hereinafter called "the Mandatory") on the other part, herein represented by ..... in his capacity as .....

WHEREAS the Employer is desirous that certain works be constructed, viz TENDER NR: .....for.....

and has accepted a tender by the Mandatory for the construction, completion & maintenance of such works and whereas the Employer and the Mandatory have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatory with the provisions of the Occupational Health and Safety Act 1993 (Act 85 of 1993);

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. The Mandatory shall execute the work in accordance with the contract documents pertaining to this contract.
2. This Agreement shall hold good from its commencement date, to either :
  - a) the date of the Performance Certificate issued in terms of sub-clause 11.9 of the FIDIC Conditions of Contract for Construction for building and engineering works designed by the Employer (1999) (hereinafter referred to as "the GCC"), as contained in Volume 1 of the contract documents pertaining to this contract, or
  - b) the date of termination of the contract in terms of clauses 15, 16 or 19 of the GCC.
3. The Mandatory 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.
  - b) The procedures and safety rules of the Employer as pertaining to the Mandatory and to all his subcontractors.



4. In addition to the requirements of sub-clause 4.8, 6.7 and 17.1 of the GCC and all relevant requirements of Volume 3 of the contract documents pertaining to this contract, the Mandatory agrees to execute all the works forming part of this contract and to operate and utilize all machinery, plant and equipment in accordance with The Act.
5. The Mandatory is responsible for the compliance with the Act by all his subcontractors, whether or not nominated and/or approved by the Employer.
6. The Mandatory warrants that all his and his subcontractors' workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act 1993, which cover shall remain in force whilst any such workmen 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.
7. The Mandatory undertakes to ensure that he and/or his subcontractors and/or their respective employees will at all times comply with the following conditions:
  - a) The Mandatory shall assume the responsibility in terms of Section 16.1 of The Act. The Mandatory shall not delegate any duty in terms of Section 16.2 of The Act without the prior written approval of the Employer. If the Mandatory 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 Act shall be reported by the Mandatory 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 Act into any incident involving the Mandatory and/or his employees and/or its subcontractors.

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

SIGNED FOR AND ON BEHALF OF EMPLOYER: .....

WITNESS: .....

NAME (IN CAPITALS) .....

SIGNED FOR AND ON BEHALF OF THE MANDATARY .....

WITNESS: .....

NAME (IN CAPITALS): .....



**C1.3.2 FORM OF GUARANTEE**

To: The Department of Roads and Transport  
Private Bag X83  
Marshalltown  
2107

**Note to tenderer:**

**This pro forma is for information only. The successful tenderer's guarantor will need to reproduce it without amendment, omission or addition for completion and lodgement with the Employer. A separate copy of this pro forma will be issued to the successful tenderer with the letter of acceptance.**

**TENDER NUMBER: DRT 41/02/2020 THE TRAFFIC SIGNAL MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

1. I/We , the undersigned, and .....  
in our respective capacities as .....  
and .....  
and as such duly authorised to represent: .....  
(hereinafter referred to as "the Guarantor") (*in the case of a company, a resolution to be attached*)  
do hereby hold at your disposal the amount of .....  
(R.....) including VAT, for the due fulfilment by .....  
(*insert the name of Contractor*) (hereinafter referred to as "the Contractor") of its obligations to The Department of Roads and Transport (hereinafter referred to as "Employer") in terms of the above stated contract between the Contractor and the Employer.
2. The Guarantor hereby renounces the benefits of the exceptions non numeratae pecuniae, non causa debiti, excursions and divisions, the meanings and effect whereof we declare ourselves to be fully conversant.
3. The Guarantor undertakes and agrees to pay to the Employer the said amount of R .....  
.....  
(R.....) including VAT, or such portion as may be demanded on receipt of a written demand from the Employer, which demand may be made by the Employer if, (in your opinion and at your sole discretion), the said Contractor fails and/or neglects to commence the work as prescribed in the contract or if he fails and/or neglects to proceed therewith or if, for any reason, he fails and/or neglects to complete the services in accordance with the conditions of contract, or if he fails or neglects to refund to the Employer any amount found to be due and payable to the Employer, or if his estate is sequestrated or if he surrenders his estate in terms of the Insolvency Law in force within the Republic of South Africa.
4. Subject to the above and without in anyway detracting from your rights to adopt any of the procedures set out in the contract, the said demand can be made by you at any stage.



5. The said amount of R.....  
(R.....) including VAT, or such portion as may be demanded may be retained by the Employer on condition that after completion of the service, as stipulated in the contract, the Employer shall account to the Guarantor showing how this amount has been utilised and refund to the Guarantor any balance due.
6. This guarantee 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 5 above, or
  - b) shall lapse upon the issue of the Taking-Over Certificate in terms of sub-clause 10.1 of the General Conditions of Contract and
  - c) shall not be interpreted as extending the Guarantor's liability to anything more than payment of the amount guaranteed.
7. This guarantee shall be governed by South African Law and subject to the jurisdiction of South African Courts.

THUS DONE AND SIGNED AT .....

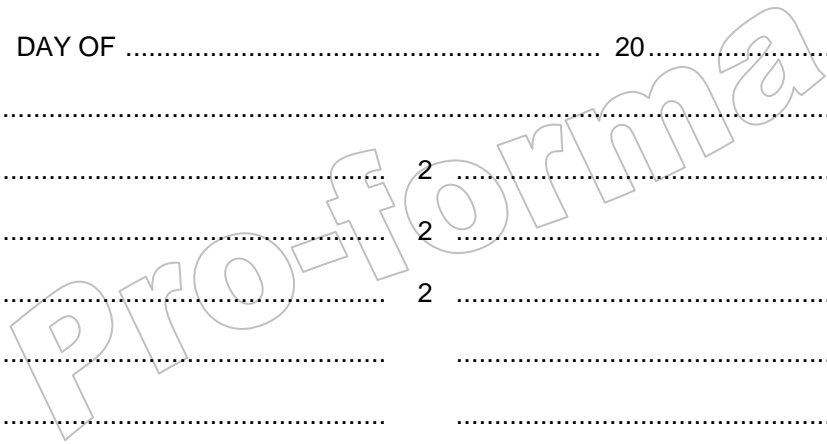
ON THIS ..... DAY OF ..... 20.....

GUARANTOR: .....

AS WITNESSES: 1 ..... 2 .....

NAMES (PRINT) 1 ..... 2 .....

ADDRESSES 1 ..... 2 .....



**C1.3.3 FORM OF REGISTRATION OF CONTRACT WITH DEPARTMENT OF LABOUR**

**Annexure A**

**Occupational Health and Safety Act, 1993**

**Construction Regulations, 2014 (as amended)**

**Regulation 3 of the Construction Regulations, 2014 (as amended)**

**NOTIFICATION OF CONSTRUCTION WORK**

1. (a) Name and postal address of principal contractor:  
.....  
.....
- (b) ..... Name and telephone number of principal contractor's contact person:  
.....
2. Principal contractor's compensation registration number:  
.....
3. (a) Name and postal address of client:  
*The Department of Roads and Transport, (insert Regional office postal address)*
- (b) Name and telephone number of client's contact person or agent:  
Client: *(enter Project Manager Name and telephone number)*  
.....  
Agent: *(enter Engineer name and telephone number)*  
.....
4. (a) Name and postal address of designer(s) of the Project:  
.....
- (b) Name and telephone number of the designer's contact person:  
.....
5. Name and telephone number of principal contractor's construction supervisor on site appointed in terms of Regulation 6(1):  
.....



6. Name(s) of principal contractor's subordinate supervisors on site appointed in terms of Regulation 6(2):

.....

7. Exact physical address of the construction site or site office:

.....

8. Nature of construction work:

.....

.....

9. Expected commencement date: .....

10. Expected completion date: .....

11. Estimated maximum number of persons on the construction site: .....

12. Planned number of contractors on the construction site accountable to the principal contractor:

.....

13. Name(s) of contractors already chosen:

.....

.....

.....

.....

.....

.....

.....

.....  
PRINCIPAL CONTRACTOR

.....  
DATE

.....  
CLIENT

.....  
DATE



- THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR PRIOR TO COMMENCEMENT OF WORK ON SITE.
- ALL PRINCIPAL CONTRACTORS THAT QUALIFY TO NOTIFY MUST DO SO EVEN IF ANOTHER PRINCIPAL CONTRACTOR ON THE SAME SITE HAD DONE SO PRIOR TO THE COMMENCEMENT OF WORK

#### **C1.3.4 FORM OF BANKING DETAILS**

##### **Notes to Contractor:**

1. The Employer applies an Electronic Funds Transfer system for all payments.
2. If you are already registered as a vendor with the Employer, you are not required to submit the documentation as per note 3.
3. If you are not registered as a vendor with the Employer, you are required to supply:
  - an original cancelled cheque bearing your company name and account number; or
  - if you are unable to supply an original cancelled cheque, you are to provide a letter on your letterhead as per the pro forma below and return the original letter to the address as stated in clause 1.3 of C1.2.2 - Information provided by the Employer, delivered by hand or sent by post.

---

To:  
The Department of Roads and Transport  
Chief Directorate Traffic Engineering  
45 Commissioner Street  
Life Centre Building  
Johannesburg

Dear Sir

#### **TENDER NUMBER: DRT 41/02/2020 THE TRAFFIC SIGNAL MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION BANKING DETAILS**

By signing this document, we accept the following:

- The banking details submitted are those of ..... and we take full responsibility for their correctness.
- We indemnify the Employer from any and all outcomes if an electronic transfer is made into an incorrect bank account using the banking details submitted.

Account Name: .....

Bank: .....

Branch Name: .....

Branch Code: .....

Account Number: .....



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

Yours sincerely

.....  
Authorised Signatory for

DATE: '.....



## TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION

### Part C2.1 Pricing Instructions

1. Measurement and payment shall be in accordance with the relevant provisions of the COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 edition) as amended in the Scope of Works.
2. The units of measurement described in these Bill of Quantities are metric units. Abbreviations used in these Bill of Quantities are as follows:

%	=	percent	m <sup>2</sup> -pass	=	square meter-pass
h	=	hour	m <sup>3</sup>	=	cubic meter
ha	=	hectare	m <sup>3</sup> -km	=	cubic meter/kilometer
kg	=	kilogram	MN	=	mega newton
kl	=	kiloliter	MN.m	=	mega newton-meter
km	=	kilometer	MPa	=	mega Pascal
km-pass	=	kilometer-pass	No.	=	number
kPa	=	kilopascal	Prov sum	=	Provisional sum
kW	=	kilowatt	PC sum	=	Prime Cost sum
l	=	liter	R/only	=	Rate only
m	=	meter	sum	=	lump sum

mm = millimeter                      t = ton (1000 kg)  
m<sup>2</sup> = square meter                      W/day = Work day

3. For the purpose of these Bills of Quantities, the following words shall have the meanings hereby assigned to them:

Unit: The unit of measurement for each item of work as defined in the COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 edition).

Quantity: The number of units of work for each item.

Rate: The agreed payment per unit of measurement.

Amount: The product of the quantity and the agreed rate for an item.

Lump sum: An agreed amount for an item, the extent of which is described in the Bill of Quantities but the quantity of work of which is not measured in any units.

4. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

5. It will be assumed that prices included in the Bill of Quantities, unless otherwise stated in the Scope of Work, are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published before the closing date for tenders. (Refer to [www.stanza.org.za](http://www.stanza.org.za) or [www.iso.org](http://www.iso.org) for information on standards)

6. The prices and rates in this Bill of Quantities are fully inclusive prices for the work described under the items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit.

7. Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered such items

8. **All items in the Bill of Quantities need to be completed separately. No grouping of items with a single lump sum will be allowed.**

9. The quantities set out in these Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in this Bill of Quantities.

10. Reasonable compensation will be received where no pay item appears in the Bill of Quantities in respect of work required in terms of the Contract and which is not covered in any other pay item.
11. The short descriptions of the items of payment given in these Bill of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.
12. The item numbers appearing in the Bill of Quantities refer to the corresponding item numbers in the COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 edition).
13. The contractor shall bear all the costs and charges for special and temporary rights of way required by him in connection with access to the Site. The Contractor shall also provide at his own cost any additional facilities outside the Site required for the purposes of the Works.
14. The Bills of Quantities in the Tender Document must be completed in Black Ink and signed.
15. The Bills of Quantities in the Tender Document must be fully completed – every item must be priced.
16. The contract will come to an end when either the money or the time period is finished. It is the sole discretion of the Department to increase the quantities or not.

**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION**

**Part C2.2 Bill of Quantities**

**NB: RATES Using EPWP Individuals (Excl. Vat)**

Part C2.2 Bill of Quantities					
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
C3.10	Obtaining information pertaining to other services: If the Council is unable to supply suitable way leaves or to supply them in time then the contractor(s) must obtain the required information from the other service providers (SP) at these quoted rates	per intersection	20		
C3.36.4	Tracing of existing ducts (measured per running metre of excavation 600 mm wide and less than 1,5 metre deep)	m3	500		



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

<b>C3.36.7</b>	<b>Cutting, lifting and replacing of:</b>					
	<b>a)</b>	<b>Interlocking blocks / bricks or concrete slabs (existing materials to be reused)</b>	<b>m<sup>2</sup></b>	<b>200</b>		
	<b>b)</b>	<b>Solid concrete, including supply of materials (10 MPa minimum)</b>	<b>m<sup>2</sup></b>	<b>500</b>		
	<b>c)</b>	<b>Asphalt paving (including supply of materials)</b>	<b>m<sup>2</sup></b>	<b>100</b>		
<b>C3.36.8</b>	<b>Removal and preserving of lawn grass</b>		<b>m<sup>2</sup></b>	<b>2 000</b>		
<b>C3.36.8</b>	<b>Excavating, backfilling and compaction of trenches</b>					
	<b>a)</b>	<b>In existing pick-able soil</b>	<b>m<sup>3</sup></b>	<b>800</b>		
	<b>b)</b>	<b>In hard pick-able soil with boulders</b>	<b>m<sup>3</sup></b>	<b>2 000</b>		
	<b>c)</b>	<b>In hard material</b>	<b>m<sup>3</sup></b>	<b>800</b>		
<b>C3.36.6</b>	<b>Road Crossing</b>					
	<b>a)</b>	<b>Cutting and lifting of the surface</b>				
	<b>i</b>	<b>Tarmac</b>	<b>Lm</b>	<b>2 000</b>		
	<b>ii</b>	<b>Cement</b>	<b>Lm</b>	<b>800</b>		
	<b>iii</b>	<b>Paving (including stockpiling of re-useable paving)</b>	<b>Lm</b>	<b>1 000</b>		



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

	b)	Excavating and stockpile of spoil material per linear meter trench and backfilling with approved material	Lm	1 000		
	c)	Re-instatement of road surface to original state				
	i	Tarmac	Lm	2 000		
	ii	Cement	Lm	800		
	iii	Paving (including stockpiling of re-useable paving)	Lm	1 000		
<b>C3.36.12</b>		<b>Under-road direct drilling in pick able soil (excluding supply of sleeves / pipes)</b>				
	a)	40 or 50 mm hole direct drilling				
	i	Up to 12m long	m	200		
	ii	12 – 25 m long	m	100		
	iii	Longer than 25 metres	m	100		
	b)	Extra-over sub item(a) for drilling in hard pick able soil with boulders	m	100		
	c)	Extra-over sub item(a) for drilling in hard material, irrespective of length	m	100		
<b>TOTAL CARRIED FORWARD TO NEXT PAGE</b>						



ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
<b>TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE</b>					
	-				
	d) 110 mm hole direct drilling				
	i Up to 12m long	m	500		
	ii 12 – 25 m long	m	800		
	iii Longer than 25 metres	m	10		
	e) Extra-over sub item(d) for drilling in hard pick able soil with boulders	m	10		
	f) Extra-over sub item (d) for drilling in hard material, irrespective of length	m	100		
C3.36.12	Under-road directional drilling in pick able soil (excluding supply of sleeves / pipes)				
	a) 40- or 50-mm hole directional drilling				
	i Up to 12m long	m	50		



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

	ii	12 – 25 m long	m	100		
	iii	Longer than 25 metres	m	10		
	b)	Extra-over sub item(a) for drilling in hard pick able soil with boulders	m	10		
	c)	Extra-over sub item(a) for drilling in hard material, irrespective of length	m	20		
	d)	40- or 50-mm hole directional drilling				
	i	Up to 12m long	m	50		
	ii	12 – 25 m long	m	50		
	iii	Longer than 25 metres	m	500		
	e)	Extra-over sub item(a) for drilling in hard pick able soil with boulders	m	600		
	f)	Extra-over sub item(a) for drilling in hard material, irrespective of length	m	10		
<b>C3.36.18</b>		<b>Installation of sleeves / pipes and draw wire under roadway for excavated trenches, including the supply of 1,5mm galvanised steel wire, excluding the supply of sleeves.</b>				
	a)	110 mm sleeves	m	1 000		
<b>C3.36.18</b>		<b>Installation of sleeves / pipes and draw wire for direct and directional drilling, including the supply of sleeves as well as draw wire</b>				
	a)	110 mm sleeves	m	1 000		





<b>C3.36.18</b>	<b>Installation of sealing caps</b>					
	a)	110 mm	No.	200		
<b>C3.42</b>	<b>Disposal of rock or spoil from excavations</b>		m <sup>3</sup>	150		
<b>C3.42</b>	<b>Supply of imported selected material / filling soil</b>		m <sup>3</sup>	20		
<b>C3.42</b>	<b>Supplying of paving bricks (upon approval)</b>					
	a)	60mm thick	No.	2 500		
	b)	80mm thick	No.	2 500		
<b>TOTAL CARRIED FORWARD TO SUMMARY PAGE</b>						
<b>ITEM NO</b>	<b>DESCRIPTION</b>		<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
	-					
<b>C3.37.4</b>	<b>Cutting of inductive loops for vehicle actuated signals or traffic responsive systems, e.g., SCOOT</b>					
	a)	Cut in asphalt for inductive loops	m	1 000		
	b)	Cut in concrete for inductive loops	m	50		



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

<b>C3.37.6</b>	<b>Placing of loop wire including bedding and Epoxy / bitumen seal</b>		<b>m</b>	<b>1 000</b>			
<b>C3.37.6</b>	<b>Supply and placing of 20mm PVC conduit in excavated surfaces</b>		<b>m</b>	<b>50</b>			
<b>C.37.5</b>	<b>Installation of OVERHEAD detector</b>		<b>No.</b>	<b>50</b>			
<b>C3.2</b>	<b>Installation of Magnetometer detector</b>		<b>No.</b>	<b>50</b>			
<b>C3.2</b>	<b>Make alive, test and commission detector installation</b>		<b>No.</b>	<b>50</b>			
<b>C3.37.3</b>	<b>Supply and Laying of Cables, drawing cable through sleeves, laying in trenches and connection at end points:</b>						
	<b>a)</b>	<b>16mm<sup>2</sup> x 2core supply cable</b>	<b>m</b>	<b>2 000</b>			
	<b>b)</b>	<b>1,5mm<sup>2</sup> x 2core loop cable</b>	<b>m</b>	<b>2 000</b>			
	<b>c)</b>	<b>2,5mm<sup>2</sup> x 19core cable</b>	<b>m</b>	<b>2 000</b>			
	<b>d)</b>	<b>2,5mm<sup>2</sup> x 27core cable</b>	<b>m</b>	<b>5 000</b>			
	<b>e)</b>	<b>2,5mm<sup>2</sup> x 37core cable</b>	<b>m</b>	<b>500</b>			
	<b>f)</b>	<b>3 Pair Sheathed Comms Cable</b>	<b>m</b>	<b>5 000</b>			



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

	g)	16 mm <sup>2</sup> bare copper earth wire	m	1 000		
	h)	Extra-over sub item (b) for an additional turn of wire	m	1 000		
<b>C3.37.3</b>	<b>Cable Joint(s)</b>					
	a)	16mm <sup>2</sup> x 2core + earth	No.	50		
	b)	1,5mm <sup>2</sup> x 2core loop cable	No.	50		
	c)	2,5mm <sup>2</sup> x 19core	No.	100		
	d)	2,5mm <sup>2</sup> x 27core	No.	100		
	e)	2,5mm <sup>2</sup> x 37core	No.	50		
<b>C3.37.3</b>	<b>Cable Termination - With glands</b>					
	a)	16mm <sup>2</sup> x 2core + earth	No.	50		
	b)	1,5mm <sup>2</sup> x 2core loop cable	No.	100		
	c)	2,5mm <sup>2</sup> x 19core	No.	1 000		
	d)	2,5mm <sup>2</sup> x 27core	No.	1 000		



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

	e)	2,5mm <sup>2</sup> x 37core	No.	200		
	f)	22 mm 3 pair sheathed comms cable	No.	100		

**TOTAL CARRIED FORWARD TO SUMMARY PAGE**

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
-					
<b>C3.38.2</b>	<b>Installation of concrete bases for traffic signal poles, including excavation, casting of concrete footing and placing of steel base-plate and frame</b>				
a)	for standard height pole (0,5m x 0,5m x 0,5m) per footing in all types of material	No	500		
b)	for high pole (1,0m x 1,0m x 1,0m) per footing in all types of material	No	50		



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

	c)	for cantilever pole (1,0m x 1,0m x 1,0m) per footing in all types of material	No	50			
<b>C3.38.3</b>	<b>Collection and installation of</b>						
	a)	standard height traffic signal pole	No	500			
	b)	Extended height signal pole	No	100			
	c)	Cantilever traffic signal pole	No	50			
<b>C3.38.4</b>	<b>Painting of poles with 2 coats anti-corrosive paint followed by golden yellow paint, with top 750mm of pole in black enamel for:</b>						
	a)	Standard height traffic signal pole	No	500			
	b)	Extended height signal pole	No	100			
	c)	Cantilever traffic signal pole	No	100			
<b>C3.38.4</b>	<b>Installation of Reflective tape on traffic signal poles</b>		Per pole	1 000			



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

<b>C3.38.5</b>	<b>Assembly and installation of traffic signal heads including backing boards, all visors, lenses, lamps, cabling, straps for fixtures, including material and labour:</b>				
	<b>a)</b>	<b>Three aspect signal head : Type S1, S1L, S1R, S2, S3 or S4</b>	<b>No</b>	<b>1 000</b>	
	<b>b)</b>	<b>Four aspect signal head: S5, S6 or S7</b>	<b>No</b>	<b>100</b>	
	<b>c)</b>	<b>Five aspect signal head: Type S8 or S9</b>	<b>No</b>	<b>250</b>	
	<b>d)</b>	<b>Two aspect signal head: S10</b>	<b>No</b>	<b>150</b>	
	<b>e)</b>	<b>Two aspect pedestrian signal head: S11</b>	<b>No</b>	<b>800</b>	
	<b>f)</b>	<b>Extra over for installation on extended pole</b>	<b>No</b>	<b>50</b>	
	<b>g)</b>	<b>Extra over for installation on cantilever pole</b>	<b>No</b>	<b>50</b>	
<b>C3.38.7</b>	<b>Installation of pedestrian push buttons</b>		<b>No</b>	<b>50</b>	
<b>C3.38.8</b>	<b>Installation devices for visually handicapped pedestrians</b>		<b>No</b>	<b>50</b>	
<b>C3.38.9</b>	<b>Installation of pole top connectors</b>		<b>No</b>	<b>10 000</b>	
<b>C3.38.11</b>	<b>Installation of Directional Signs</b>		<b>No</b>	<b>50</b>	
<b>TOTAL CARRIED FORWARD TO SUMMARY PAGE</b>					



TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION

**Part C2.2 Bill of Quantities**

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
-					
C3.39.2	Installation of controller footing, controller pole, if required and controller cabinet, including excavation for controller pole 0,4 m <sup>3</sup> in all types of material and casting of concrete base.	No	30		
C3.39.2	Installation of controller, including transportation to site, drawing all cables from signal poles into the controller cabinet and marking of cables to indicate signal heads, drawing of cable from power supply into controller cabinet:				



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

	a)	Automotor ESA10, or similar		No	10		
	b)	Automotor ESA22, or similar		No	10		
	c)	Automotor ESA32, or similar		No	10		
	d)	Siemens ST900/ST950, or similar		No	50		
	e)	Syntell Movac 4 (plinth mounted), or similar		No	5		
	f)	Syntell MX, or similar		No	10		
	g)	Syntell TMPC, or similar		No	5		
C3.39.3		Connection of the controller to the main power supply	No	100			
C3.39.4		Commissioning of intersection and testing of operation in the presence of a representative of the GDRT	No	50			





**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

C3.2.1	Electrical certificate of compliance (COC)	No	100		
<b>ITEM NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
	-				
C3.40.6	Remove all old equipment from traffic signal poles as indicated by the GDRT Project Manager				
	a) Standard height traffic signal pole	The lot	20		
	b) Extended height traffic signal pole	The lot	20		
	c) Cantilever traffic signal pole	The lot	20		
C3.40.3	Remove old traffic signal poles, disassemble as indicated by the GDRT Project Manager				
	a) Standard height traffic signal pole	No	20		
	b) Extended height traffic signal pole	No	20		



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

	c)	Cantilever traffic signal pole	No	20		
C3.40.4		Dismantling the controller and removal of the controller.	No	20		
C3.40.5		Remove damaged concrete bases for				
	a)	Standard height pole (0,5m x 0,5m x 0,5m)	No	50		
	b)	Extended range pole (1m x 1m x 1m)	No	30		
	c)	Cantilever type pole (1m x 1m x 1m)	No	30		
C3.2.10		Cut and remove existing damaged cable	m	800		
C3.2.10		Reconnection of traffic signal heads				
	a)	Disconnect and reconnect 5-Aspect signal head	No.	100		
	b)	Disconnect and reconnect 4-Aspect signal head	No.	20		
	c)	Disconnect and reconnect 3-Aspect signal head	No.	150		



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

	d)	Disconnect and reconnect	No.	50		
		2-Aspect signal head				
C3.2.10		Fault finding on Traffic Signal installations	hour			
C3.2.10		Underground cable fault location	No	500		
C3.2.10		Megger Cable, including disconnecting and reconnecting both cable ends	No	500		
<b>TOTAL CARRIED FORWARD TO SUMMARY PAGE</b>						

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	-				



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

C3.2.11	<b>APPLYING HOT-APPLIED THERMO PLASTIC ROAD MARKING MATERIALS</b>						
	Hot-applied thermo-plastic road marking material, procured, supplied and applied as directed by the GDRT in accordance with SARTSM						
	a)	White lines (broken or unbroken)	Lm	15 000			
	b)	Yellow lines (broken or unbroken)	Lm	5 000			
	c)	Red lines (broken or unbroken)	Lm	2 000			
	d)	White lettering and symbols	m <sup>2</sup>	5 000			
	e)	Yellow lettering and symbols	m <sup>2</sup>	1 000			
	f)	Traffic island markings, and stop lines (any colour)	m <sup>2</sup>	5 000			
C3.2.11	<b>APPLYING TWO PART COLD PLASTIC ROAD MARKING MATERIALS</b>						
	Two part cold-plastic road marking material, procured, supplied and applied as directed by the GDRT in accordance with SARTSM						



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

	a)	White lines (broken or unbroken)	Lm	15 000		
	b)	Yellow lines (broken or unbroken)	Lm	5 000		
	c)	Red lines (broken or unbroken)	Lm	2 000		
	d)	White lettering and symbols	m <sup>2</sup>	500		
	e)	Yellow lettering and symbols	m <sup>2</sup>	1 000		
	f)	Traffic island markings, and stop lines (any colour)	m <sup>2</sup>	5 000		
C3.41.13		Setting out and pre-marking lines as required including all materials (1 linear meter = 1 m x 100mm)	LM	5 000		
C3.41.13		ROADSTUDS				
	a)	Supply road studs (Stimsonit C80 or similar)	No	500		
	b)	Applied with Epoxy	No	500		



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

	c)	Applied with epoxy and drilling a 15mm hole in the road surface and filled with epoxy	No	250		
<b>C3.2.11</b>	<b>REMOVAL OF EXISTING, TEMPORARY OR PERMANENT ROAD MARKINGS</b>					
	Removal of existing, temporary or permanent road markings by means of					
	a)	Sand blasting	m <sup>2</sup>	2 000		
	b)	Water jet	m <sup>2</sup>	2 000		
	c)	Shot blast	m <sup>2</sup>	2 000		
<b>TOTAL CARRIED FORWARD TO SUMMARY PAGE</b>						

<b>ITEM NO</b>						



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

SECTION G: INSTALLATION OF ROAD TRAFFIC SIGNS							
	DESCRIPTION			UNIT	QUANTITY	RATE	AMOUNT
	-						
<b>C3.36</b>							
	<b>ERECTION OF GROUND MOUNTED SIGNS</b>						
	Supply and Erection of signs on poles less than 4m high in accordance with SARTSM.						
	a)	Regulatory and Warning Signs					

<b>EXCAVATION AND BACKFILLING FOR ROAD AND TRAFFIC SIGN SUPPORTS</b>							
	a)	Excavation for the footings of road signposts in all types of material including the removal of paving material, lawn and/or concrete, if any, all equipment, tools, ladders, safety signs, barricades, the		No	100		



**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

		disposal of the surplus excavated soil, concrete and/or paving material, if any, at an approved dumping site. hole (300mm x 300mm x 600mm deep)				
	b)	Installation of poles for street and traffic signs < 4m				
	c)	Installation of poles for street and traffic signs > 4m	No	100		
	d)	Backfilling holes using 20kg mix Crete (to be supplied by Contractor(s)) and compacted in 100mm layers per specifications	No	50		
	e)	Extra-over for rock excavation per hole (300mm x 300mm x 600mm deep)	No	50		
	f)	Replacing Concrete Paving Slabs	No	200		
	g)	Replacing Paving Bricks	No	50		
<b>TOTAL CARRIED FORWARD TO SUMMARY PAGE</b>						
<b>ITEM NO</b>	<b>DESCRIPTION</b>		<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>





**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

	-					
	Provisional sum for geometric works which may be required for new traffic signal installation for 4-way/3-way intersections		Provisional Sum	For 4-way/3-way	R1 000 000	R1 000 000
	<b>PROVISIONAL SUM FOR CONTINGENCIES</b>		Provisional Sum	Portion as required	R500 000	R500 000
	This item is an allowance for items that is not covered in the above, which is required for the execution of the works as above. This can include where the need has arisen unforeseeably so, where upon the contractor can supply a quote and upon approval by the GDRT project manager, can supply the required material.					
	Provisional Sum for students in training (5)		Provisional Sum	Portion as required	R400 000	R400 000
	Extra work/additional duties and day works.		hr	Rate		
	<b>Day Works</b>					
	Labour rates for:					







**GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

		<b>SECTION G: INSTALLATION OF ROAD TRAFFIC SIGNS</b>	<b>R</b>
		<b>SECTION H: PROVISIONAL SUM TO ALLOW FOR CONTINGENCIES</b>	<b>R</b>
<b>SUB TOTAL</b>			<b>R</b>
<b>ADD 10% ESCALATION.</b>			<b>R</b>
<b>SUB TOTAL</b>			<b>R</b>
<b>VALUE-ADDED TAX (VAT)</b> <b>15%</b> The tenderer shall add 15% of the subtotal for VAT			<b>R</b>
<b>TENDER SUM CARRIED TO FORM OF OFFER</b>			<b>R</b>

SIGNED ON BEHALF OF TENDERER: .....



**TENDER NO. DRT 41/02/202**

**TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES  
TO CATER FOR NEW INSTALLATION**

## **C3: Scope of Works**

**C3: SCOPE OF WORKS**

### **General Requirements**

**C3.1.1** The purpose of this Bid is to enable the GDRT to integrate all aspects of the implementation of new traffic signals, signs and markings as well as the repair, replacement and maintenance of traffic signal equipment as per the SARTSM requirements and compliance.

**C3.1.2** The advantage of one integrated contract would be that the coordination of tasks and project management as well as the communication between sub-contractor(s) and ECSA registered consultants(s)/Engineer(s)/Technologist(s) would become the responsibility of the Main Contractor(s) and not the GDRT. It will also increase available resources to meet a variable demand in workflow and improve service delivery.

**C3.1.3** Main Contractor(s) may form consortia to ensure that they have the capabilities required for this contract, however only the prime contractor(s) may be in direct contact with the GDRT.

**C3.1.4** This is an "as and when" contract for a period of 3 years from the date of award of this Bid.

### **C3.2 PROJECT SCOPE OF WORK**

**C3.2.1** The project entails the execution of work connected with the installation of traffic signals in accordance with SARTSM, including road crossings (the excavation of trenches or underground horizontal drilling), laying of cables, casting of concrete footings, installation of traffic signal poles, threading of cables and installation of traffic signal heads and controllers. The work also includes cutting and installation of loops or core drilling and installation magnetometer for traffic signal equipment and all electrical work related to connecting the signal heads with the controller, connection of the traffic signal controller to the main electrical power supply and related electrical and maintenance work. All major electrical work might require a certificate of compliance (CoC) upon completion. The contract will also include the installation of road signs and road markings related to traffic signals.

**C3.2.2** All labour, designs for new installation, supervision, transport, specialized plant, equipment and facilities as well as minor consumables necessary to execute the Works must be supplied by the Main Contractor(s).

**C3.2.3** The work has a civil, electrical as well as electronic engineering component. Bidder(s) must ensure that all these competencies are within their company's capacity. The Bidder(s) may choose to subcontract other competencies that are not within their company's capacity. Should

the Bidder(s) subcontract other competencies, the name and full details of the specific subcontractor(s) and Consultant(s)/Engineer(s)/Technologist(s) must be provided in the necessary form attached. An agreement between the Bidder(s) and subcontractor(s) should be attached to the bid document before submission.

**C3.2.4** The location and the detail drawings for the traffic signal installations will be prepared by a professional Traffic Engineer and approved by the GDRT; it will therefore be supplied to the Contractor(s) in the form of a works order by the GDRT Project Manager for each installation.

**C3.2.5** All traffic signal material and equipment to be installed, such as cables, sleeves, poles, signal heads, visors, backing boards, lenses, traffic signal controllers, will be supplied by the Contractor(s). The Contractor(s) shall have adequate insurance cover against the loss of or damage to any material or equipment for which he has taken delivery.

**C3.2.6** The Contractor(s)'s insurance should cover any damage caused by the Contractor(s) or his staff to electrical, water, sewer, gas, telephone or any other services or to private or GDRT property.

**C3.2.7** The description of the work is merely a broad exposition of the work, and will not limit the work carried out by the Contractor(s) under this contract.

**C3.2.8** The work connected with the installation of traffic signals entail different aspects of work, with the following making up the most important elements of the contract:

**C3.2.9** The contractor will be responsible for the designs and execution of geometric works which may be required for new traffic signal installation or upgrades of existing signalised intersections.

**C3.2.10** Crossing of existing streets for the laying of ducts where ducts are not available. This includes cutting of the asphalt, excavation, laying of ducts, backfilling and compaction of material and repairing of asphalt.

- a) Obtaining information on the locality of services as well as the way leave.
- b) Underground horizontal drilling and installation of sleeves (sleeves for this operation to be provided by contractor(s) for roads which cannot be trenched across.
- c) Collection of material(s) and equipment from the supplier and transporting to site.
- d) Installation of traffic signal poles, which includes the excavation for and casting of footings and the mounting of the traffic signal poles onto the footings.
- e) Assembling and mounting of traffic signal heads.
- f) Installation of the traffic signal controller.
- g) Excavation of trenches for the laying of cables to the nearest electricity point of supply.
- h) Laying of ducts in trenches and threading of cables through ducts/sleeves.
- i) Connection of the signal to the controller.
- j) Cutting in asphalt or concrete and installation of inductor loop detectors for vehicle-actuated signals and traffic responsive control systems, eg Split Cycle Offset Optimisation Technique (SCOOT).
- k) Installation of magnetometer detection devices (core drilling required)
- l) Installation of any type of pushbutton
- m) Supply and installation of PVC conduits as alternative to cutting in concrete slabs or roads with block paved surfacing.

- n) Reconstruction of existing traffic signal controlled intersections, including the removal of signal heads, poles, controller, tracing of existing cables and conduits, etc.
- o) Where faults occur within the controller as a result of poor workmanship by the Contractor(s), the Contractor(s) will be notified to repair such faults under supervision of the GDRT Project Manager. All controllers will be maintained by the Main Contractor(s) and the Sub-Contractor(s) will not be allowed to open the controller, unless upon instruction / request from the Main Contractor after commissioning and final acceptance of the installation by the GDRT.
- p) Installation of equipment into the controller,
- q) Maintenance on traffic signals
- r) Call outs
- s) Revising of the timing cycles of existing signalised intersection as per the engineer(s) instructions and approved by the GDRT.

**C3.2.11 Installation of Thermo-Plastic, Cold-Plastic or Water Based Road markings** The road markings may comprise any of the following types, either separately or in combination:

- (i) Transverse marking
  - (ii) Longitudinal markings
  - (iii) Arrows
  - (iv) Painted islands
  - (v) Symbols
  - (vi) Words, letters and/or numerals
  - (vii) Road studs
- a) The intention for including road markings is to get road markings at signalized intersections SARTSM compliant.
  - b) Main Contractor(s) will be required to supply thermo plastic, cold plastic and water based road marking products.
  - c) The application of road markings entails different aspects of work, with the following making up the most important elements of the contract:
    - (i) Permanent marking of the road surface with white, yellow or road painted lines or symbols using thermo-plastic, cold-plastic or water based paint supplied by the Contractor(s).
    - (ii) The fixing of retro-reflective road studs supplied by the Contractor(s).
    - (iii) Removal of existing, temporary or permanent road markings.
    - (iv) Supply of plant, labour, supervision, transport, specialized plant, equipment and facilities as well as consumables (such as nozzles, brushes, measuring tape, chalk, stencils, paint cleaning products, etc) necessary to execute the work.
    - (v) Attendance of regular site meeting with the GDRT.
  - d) The description of the work is merely a broad exposition of the work, and will not limit the work carried out by the Contractor(s) under this contract.
  - e) The GDRT reserves the right to extend the scope of the work at the rates supplied by the Bidder(s) in the Schedule of Quantities.
  - f) All labour and equipment must be supplied by the Main Contractor(s).

**C3.2.12 Installation of road signs.** The erection of road and traffic signs entails different aspects of work, with the following making up the most important elements:

- (i) Erection of road and traffic signs, which includes the excavation for and backfilling for planting of poles and/or the mounting of the signs onto the poles.
- (ii) Erection of standard regulatory and warning traffic signs.
- (iii) Collection of material(s) and equipment from the supplier and transporting to site.



## **GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

- (iv) **Removal and/or re-erection of GDRT road and traffic signs for maintenance of the signs.**
  - (v) **Attendance of regular site meeting with the GDRT.**
- a) **All labour, designs, supervision, transport, specialized plant, equipment, tools and facilities as well as minor consumables (such as bolts, nuts, rivets and concrete) necessary to execute the work must be supplied by the Main Contractor(s).**

**C3.2.13 The GDRT reserves the right to extend the scope of the work at the rates bidded in the Schedule of Quantities.**

**C3.2.14 Routine maintenance will be carried out by the Main Contractor(s), but the Sub-Contractor(s) will be required to provide hourly rates for work related routine maintenance if required by the Main Contractor(s) in emergency situations.**

### **C3.3 extra WORK/Additional DUTIES and day work**

**C3.3.1 The Bidder(s) shall take cognizance of the fact that this is an "As and When" contract and the GDRT cannot guarantee the extent of work to be carried out nor the amount of money to be used.**

**C3.3.2 The successful Bidder(s) will be required to undertake this work, as and when required, anywhere within the areas of supply covered by the GDRT in the Gauteng Province.**

**C3.3.3 The Contract will be awarded to the Bidder(s) who attains the highest points in terms of the adjudication system.**

**C3.3.4 An "alternative" or "additional" contractor(s) may be required to undertake work described in this bid should the primary contractor(s) not be available and/or capable to perform the work.**

**C3.3.5 The GDRT may issue additional duties when the need arises and that work will form part of this scope.**

**C3.3.6 Day works includes labour and plant that will be required to undertake work on the contract that is not individually itemised, and item of extra work. The contractor is to price each item in the schedule of quantities.**

### **C3.4 QUANTITIES**

**C3.4.1 This is an "As and When" contract and no quantities are provided in the contract document. The quantities will be dependent on the budget that the GDRT has available for this type of work. Quantities for each installation will be measured and agreed between the GDRT and the Main Contractor(s).**



## **SECTION A: STANDARD AMENDMENTS ISSUED BY COLTO**

### **Notes to tenderer:**

- 1. The Standard Specifications for Road and Bridge Works for State Road Authorities (1998 edition) prepared by the Committee of Land Transport Officials, (COLTO), as amended, shall apply to this contract. The amendments are those issued by COLTO and reproduced in Section A, together with additional amendments as set out in Section B.**
- 2. Where reference is made to the General Conditions of Contract and sub-clauses thereof in the abovementioned Standard Specifications, they refer to the appropriate edition of the ‘General Conditions of Contract for Road and Bridge Works for State Road Authorities’ issued by COLTO (clause 1115 of the Standard Specifications refers).**
- 3. The General Conditions of Contract applicable to this contract are the “Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer” (1999), issued by the International Federation of Consulting Engineers (FIDIC) and the necessary amendments to the Standard Specifications have been made and included in the Project Specifications contained in this document.**
- 4. The terms “Schedule of Quantities”, (used throughout the Standard Specifications) and “Bill of Quantities”, (used in all other documents forming part of this contract), and “Pricing Schedule” are synonymous.**

As at time of this tender no amendments have been issued.

## **SECTION B: PROJECT SPECIFICATION AMENDMENTS TO THE PROJECT SPECIFICATION**

### **Notes to tenderer:**

- 1. 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.**
  
- 2. 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 series, new clause or a new payment item which does not form part of a series, 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.**
  
- 3. The tenderer shall note that the standard COLTO specification is based on the COLTO General Conditions of Contract. References to specific COLTO General Conditions of Contract clauses will need to be exchanged for the equivalent clause in the FIDIC Conditions of Contract as amended by the Particular Conditions of Contract to be found in Part C1 of this document. The employer assumes no responsibility for the contractor's interpretation of which is the correct relevant clauses.**



## PROJECT SPECIFICATIONS

### COLTO SERIES 1000: GENERAL

### SECTION B1100: DEFINITIONS AND TERMS

### B1115 GENERAL CONDITIONS OF CONTRACT

*Replace Clause 1115 with the following:*

The General Conditions applicable to this Contract are the FIDIC Conditions of Contract for Construction for Building and Engineering Works designed by the Employer, 1st Edition 1999.

Accordingly, all reference in the Standard Specifications to any other General Conditions of Contract (GCC) has to be amended. The Standard Specifications have been scrutinized and clauses which refer to another GCC identified. These are tabulated below together with the relevant equivalent clause in the FIDIC Conditions of Contract. The context of the reference to the GCC is also noted.

Whereas every effort has been made to include all of the affected clauses in the table, there may be some omissions. In every case, however, the FIDIC Conditions of Contract for Construction, as amended by the Particular Conditions of Contract in Part C1.2 of this Volume, shall apply and the contractor shall be responsible for interpretation of the equivalent clause

### CHANGES TO REFERENCES BY THE COLTO STANDARD SPECIFICATIONS TO THE COLTO GENERAL CONDITIONS OF CONTRACT AND FIDIC GENERAL CONDITIONS

COLTO Standard Specification		COLTO General Conditions of Contract 1998 (GCC)		FIDIC Conditions of Contract for Construction 1st edition 1999	
Clause No	Page No	Clause No	Description or Reference	Clause No	Description or Reference
1115	1100-2		Definition of GCC		Definition of FIDIC
1204	1200-2	15	Construction programme	8.3	Construction programme
1204	1200-2		General reference to GCC		Applicable to FIDIC
1206	1200-3	14	Setting out of works	4.7	Setting out of works
1209(a)	1200-4		General references to GCC		Applicable to FIDIC
1209(e)	1200-5	52(2)	Valuation of material brought onto site	14.5	Plant and material intended for use in the works.
1210	1200-5	54(1)	Certificate of practical completion	10.1	Taking-over certificate
1212(1)	1200-7	49(2)	CPA on alternative designs	13.8	CPA on alternative designs
1215	1200-9	45(2)	Extension of time for completion due to abnormal rainfall.	8.4	Extension of time for completion due to abnormal rainfall.
1217	1200-10	35	Care of the works	17.2	Care of the works
1303(ii)	1300-1		General reference to GCC		Applicable to FIDIC
1303(iii)	1300-1	49	Price adjustment Item 13.01(a)	13.7&13.8	Price adjustment Item 13.01(a)
1303(iii)	1300-2	49	Price adjustment Item 13.01(b)	13.7&13.8	Price adjustment Item 13.01(b)
1303(iii)	1300-1	53	Variations exceeding 20%		Not applicable to this contract
1303(iii)	1300-2	53	Variations exceeding 20%		Not applicable to this contract
1303	1300-2	12	Payment Item 13.01(c)	8.1	Payment Item 13.01(c)
1303	1300-2	45	Payment Item 13.01(c)	8.4	Payment Item 13.01(c)
1403(c)(ii)	1400-4	40(1)	Variation for rented accommodation	13.3	Variation for rented accommodation
1505	1500-3	40(1)	Variation for temporary drainage	13.3	Variation for temporary drainage
Item 15.08	1500-8	48	Payment of Provisional Sum	13.5	Payment of Provisional Sum



COLTO Standard Specification		COLTO General Conditions of Contract 1998 (GCC)		FIDIC Conditions of Contract for Construction 1st edition 1999	
Clause No	Page No	Clause No	Description or Reference	Clause No	Description or Reference
Item 15.09	1500/8	48	Payment of Provisional Sum	13.5	Payment of Provisional Sum
Item 15.11	1500-8	48	Payment of Provisional Sum	13.5	Payment of Provisional Sum
Note (2)	3100-4	40	Payment for prospecting for materials	13.5	Payment for prospecting for materials
3204(b)(iii)	3200-2	40	Payment for oversize material	13.3	Payment for oversize material
3303(b)	3300-2	2	Engineer's decisions, with reference to materials classification	3	Engineer's decisions, with reference to materials classification
Item 44.06	4400-3		General reference to GCC, PC Sums	13.5	Provisional Sums in FIDIC
Item 45.06	4500-3		General reference to GCC, PC Sums	13.5	Provisional Sums in FIDIC
5803(c)	5800-3	40	Variation, for landscaping	13.3	Variation, for landscaping
5805(d)	5800-4	40	Variation, for grassing	13.3	Variation, for grassing
Item 58.10	5800-10	48	Payment for Extra Work	13.5	Payment for Extra Work
8103(c)	8100-1	40	Variation, for testing material	13.3	Variation, for testing material
Item 81.02	8100-26		General reference to GCC, Provisional Sums		Applicable to FIDIC, Provisional Sums
Item 81.03	8100-26	22	Clearance of site on completion, with reference to core drilling	11.11	Clearance of site on completion, with reference to core drilling

Add the following clause:

**“B1156 OTHER DEFINITIONS**

The COLTO Standard Specifications for Roads and Bridge Works for State Road Authorities (1998 edition) has been written for all contractors, employers and engineers. Similarly, the works and the site are not defined and the general nature of the entities and elements that collectively constitute construction under a contract are characterized by the use of lower case letters throughout.

These project specifications continue to use lowercase spellings in order to avoid the appearance of the capitalised and non-capitalised words to describe or prescribe the same elements of work required on this project. However, for the purposes of this contract the following definitions shall apply:

Contractor

The Contractor and the contractor is the same persona defined under clause 1.1.2.3 of the FIDIC Conditions of Contract, but who will only be formally identified by the completed Form of Acceptance C1.1.2 in this document and which will be bound into the final contract document.

Employer

The Employer and employer is the same persona and is defined in C1.2.2 Contract Data, and clause 1.1.2.2 of the FIDIC Conditions of Contract.

Engineer

The Engineer and engineer is the same persona and is defined in the C1.2.2 Contract Data, and clause 1.1.2.4 of the FIDIC Conditions of Contract.

Site

The site is defined in clause 1.1.6.7 of the FIDIC Conditions of Contract. It is bound by the limits of construction as shown in the drawings or the title of the project and extends to also include the following:

- Areas outside the construction zone areas where accommodation of traffic is placed.
- All borrow pits defined in the applications approved by the relevant Department of Minerals and Energy.
- All haul roads constructed by the contractor for purposes of access.



## GAUTENG PROVINCE

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

- Any non-adjacent sites specified in the contract documentation.
- The contractors and his subcontractors camp sites

### Works

The works is described in Part C4 of this document and is as defined in clause 1.1.5.8 of the FIDIC Conditions of Contract and prescribed in Sections B, C & D of this Volume.

## **SECTION B1200: GENERAL REQUIREMENTS AND PROVISIONS**

### **B1204 PROGRAMME OF WORK**

#### **(a) General requirements**

*Replace the first paragraph with the following:*

"The contractor shall base his initial programme of work for a specific order on the scope of works as indicated by the engineer or engineer's representative at that stage. This programme shall be revised based on the scope of works as contained in the official order."

*Add the following subclause:*

#### **(c) Execution**

The following must be followed in the execution of the works:

- (i) **The engineer or engineer's representative shall inform the contractor of the scope of works pertaining to a particular section of a road or different road sections within the same administrative region.**
- (ii) **The contractor shall inspect the identified site or sites and agree the classification of the different sites with the engineer and prepare an estimate of quantities, monetary value and contract period for executing the work on this site/sites. A cost estimate shall be prepared and submitted in a form acceptable to the engineer and priced in terms of the relevant contract rates and prices.**
- (iii) **The engineer or engineer's representative shall receive this estimate priced Bill of Quantities, consider the availability of funds and the proposed construction period. No work shall be done unless an approved estimate priced Bill of Quantities has been issued by the employer. The contractor shall also not be allowed to commence with any work until such time as he has entered into agreement with the employer in terms of the Occupational Health and Safety Act, 1993.**
- (iv) **The contractor shall then programme the work pertaining to a particular order to start within the required response time and to be completed by the due completion date. The programme shall be prepared in terms of working days and be approved by the Employer before work commence.**
- (v) **The contractor shall execute the works in compliance with the specifications and with due regard of the total amount of the approved Bill of Quantities. Should the contractor find that the scope of work or the quantities required to effect the necessary work included in the specific order would result in an over expenditure on that Bill of Quantities, he shall inform the engineer or**



## **GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

**engineer's representative timeously. No over expenditure on a particular Bill of Quantities shall be accommodated unless the engineer or engineer's representative had been informed timeously of the possible over-expenditure and had been given the opportunity to review the scope of works for that particular Bill of Quantities with the view of adjusting it to remain within the Bill of Quantities amount or to initiate alternative measures available within the Provincial Financial System. Such alternative measures may include the issue of a supplementary Bill of Quantities to conclude the work included in the original scope of works, if approved by the engineer.**

- (vi) No work shall be done if the environmental conditions are such that the quality of the work will be detrimentally affected or will constitute a hazard to the motoring public.
- (vii) Should conditions outside of the control of the Contractor be encountered on site which would materially influence the production by the Contractor, the Contractor may claim for an extension of time. Such a claim shall in all respects comply with the requirements in the Conditions of Contract.

The length of the extension of time claimed, shall be based on the minimum production rates quoted in the attached form, or on the production rate implied by the Contractor in his programme for that particular order, whichever gives the shorter possible extension of time period.

### **B1205 WORKMANSHIP AND QUALITY CONTROL**

"The contractor shall implement a quality assurance system in accordance with ISO 9002 and appoint a quality manager who shall ensure that members of the contractor's staff comply with the requirements of the quality system. The quality system and the methods used to implement it shall be described in a quality plan produced by the contractor.

The quality manager shall be resident on-site full time. No construction activities shall take place on site before the engineer approves the quality plan".

"The intensity of control and of tests to be conducted by the contractor in terms of these obligations shall be at least to a sample level of 5 % of the total works contained in that specific order or such higher sample level to ensure that proper control is being exercised."

### **B1206 THE SETTING OUT OF WORK AND PROTECTION OF BEACONS**

"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".

### **B1209 PAYMENT**

(b) **Rates to be inclusive**

“VAT shall be excluded from the rates.”

**B 1215 EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL**

**"B 1215 EXTENSION OF TIME**

Extension of time in terms of Clause 8.4 of the Conditions of Contract shall be determined by mutual agreement between the engineer and the contractor. Delays on working days only (based on a six-day working week) and excluding non-working days as indicated in the Appendix will be taken into account for the determination of the extension of time."

**B1224 THE HANDING OVER OF THE ROAD RESERVE**

"The road reserves of all the roads to be fog sprayed under this contract will be handed over to the contractor after receipt by the contractor of the official order from the employer for such a time as indicated in the programme of work or such extended period as approved by the engineer.

The occupation of the road reserves of the roads to be fog sprayed shall be limited to those sections as directed by the engineer. The contractor will be permitted to work on any portion of the road within the specified limits provided that a free and safe flow of traffic is maintained at all times and that the requirements of the Specifications are complied with. No work may be undertaken on any section of road without an official order from the engineer."

**B 1227 MONTHLY SITE MEETINGS**

"The venue of such site meetings shall be determined by the engineer."

**"B 1230 REPORTING OF ACCIDENTS**

The contractor shall report every accident which occurs on the road, within the extent of the Works, to the engineer, within twenty-four (24) hours of such accident occurring, irrespective of whether such accident has a bearing on damage to the Works or to persons, property or things. The report must be in writing and must contain full particulars of the accident. Photographs of each accident should also be included in the report. The contractor shall include and submit the reports with his payment certificates to the engineer. The engineer has the right to conduct, or have conducted, any or all enquiries, either on the site or elsewhere, as to the causes and consequences of any such accident."

**B1231 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 comply with this specification.

Where so specified, materials shall bear the official mark of the appropriate authority. Samples ordered or specified shall be delivered to the engineer's office site free of charge.

Where materials are specified under trade names tenders must be based on these materials.

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

All places where materials are being manufactured or obtained for use in the works, and all the processes in their entirety connected therewith shall be open to inspection by the engineer (or other persons authorised by the engineer) at all reasonable times, and the engineer shall be at liberty to suspend any portion of work which is not being executed in conformity with these specifications.”



**SECTION B1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS**

**B1302 GENERAL REQUIREMENTS**

**(c) Legal and Contractual Requirements and responsibilities to the public**

*Add the following:*

“Legislation imposes mutual obligations on the Employer and contractor in the performance of their duties to society and to the built and natural environment. To assist the contractor in understanding and assessing his obligations, and thus to make allowances for the cost of compliance with this legislation, the following additional specifications are included in the project specifications.

Section C of the Scope of Works 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. The contractor shall include such costs in the existing payment items under section B1303: Payment. However, non-compliance with the provisions of this section may lead to the imposition of penalties by the relevant authority.

Section D of the Scope of Works contains the specifications that regulate the contractor’s construction methods so far as to ensure health and safety of his employees and of the public. A new pay item has been made available under this section to allow the contractor to make separate provision for the cost of health and safety measures during the construction process.”

**B1303 PAYMENT**

<b>Item</b>		<b>Unit</b>
-------------	--	-------------

**B13.01 The contractor's general obligations**

“(d) Establishment on site for orders for two days or less ..... days”

“(e) Establishment on site for orders for longer than two days ..... days”

The unit of measurement shall be the number of working days as agreed with the engineer at the time the scope will be confirmed for a particular section of work.

Payment of the sum tendered for subitem (d) and (e) shall include the compensation to the Contractor for such charges as indicated hereafter and which would not be reasonably recovered from the tendered rates for the sealing of cracks on an order of this size.

“(f) Health and safety obligation ..... month”

The unit of measurement shall be per month.



## **GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

The tendered rate shall include full compensation for compliance with the Occupational Health and Safety (OH&S) Act, No. 85 of 1993 and it covers all aspects of occupational health and safety as affected by this contract.

The tendered rate per month for subitem B13.01 (d) will be paid monthly, pro rata for parts of a month, from the date on which the contractor has received the Letter of Acceptance, until the end of the period of completion of the works, plus any extension thereof as provided in clause 8.4 of the conditions of contract.

“(v) Complying with the requirements and conditions of the additional specifications relating to the Environmental Management Plan.

### **SECTION B1500: ACCOMMODATION OF TRAFFIC**

#### **B1501 SCOPE**

“It is a condition of this contract that traffic is accommodated taking into account the provisions of the latest edition of the South African Road Traffic Signs Manual (SARTSM). The latest version for use in the accommodation of traffic is volume 2, chapter 13 of the June 1999 edition. Copies of this publication are available from Government Printers –Tel: (012) 334 4507/8/9 or (012) 3344510 Fax: (012) 323 9574.

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

#### **B1502 GENERAL REQUIREMENTS**

##### **(a) Safety**

“... flow of traffic, including the prohibition of his, and his subcontractor’s, construction plant from disregarding the stop/go accommodation of traffic control facilities. Failure to comply with this requirement shall be taken as a penalty event in terms of B1502(l).”

"Should the contractor park any of his construction plant within the road reserve at night, it shall be done in such a way that the vehicle is more than 5 m away from the shoulder of the road and it shall be properly illuminated and signposted to ensure safe passing by motorists."

##### **(f) Approval of temporary deviations**

*Add the following:*

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

##### **(i) Traffic Safety Officer**



## GAUTENG PROVINCE

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

“The contractor shall submit a CV of the candidate to the engineer for approval before the candidate is appointed as the traffic safety officer. “

“make himself available to discuss road safety and traffic accommodation matters whenever required by the engineer during the official construction period as specified in each specific order and shall be responsible...”

- “(ii) Record on neat and dimensioned sketches and submit to the engineer the position and sign reference number, where applicable, of each sign, barricade, delineator, cone, amber flicker light, guardrail and permanent or temporary painted road marking feature. The position of each shall be adequately referenced from the marker boards or other surveyed points on the site of the works.

These records shall also show the date and time at which the recorded traffic accommodation features are certified correct by the traffic safety officer, and shall be signed by the traffic safety officer before being submitted to the engineer.

The records shall similarly account for whatever changes are made in the field. Such changes shall record the position of flagmen and stop/go control men and their associated traffic accommodation equipment wherever they are used.

- (iii) Personally inspect the position and condition of each traffic accommodation feature on the whole site of works twice each day by 09h30 and by 16h30, to record all irregularities discovered and the remedial action taken, and to sign off as correct and submit to the engineer such record sheets by midday of the next working day. The traffic safety officer shall keep a duplicate book for this specific purpose.

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

- “(ix) The traffic safety officer shall be equipped with a cellular telephone and shall have a traffic safety vehicle when required by the engineer and sufficient labour at his disposal 24 hours a day, including all prescribed non-working days, and shall not be utilised for other duties. He shall be directly answerable to the contractor’s site agent. The traffic safety officer shall have his own vehicle to carry out inspections and at least one assistant to accompany him full time. Furthermore the traffic safety vehicle shall be a truck with a capacity of 5 tons and shall be equipped with a high visibility rear panel in accordance with the requirements of the SARTSM as well as a truck mounted attenuator – ALPHA 70 K as supplied by Armco Road Safety Products, or similar approved complying with TL-2 criteria when tested in accordance with NCHRP 350 or N1 criteria when tested in accordance with EN 1317; certification of compliance to be provided by the contractor at the request of the engineer. The attenuator shall be used when the vehicle is utilized to close traffic lanes or when attending to stationary or broken down vehicles or accident scenes. 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 both the traffic safety officer’s vehicle and the traffic safety vehicle at least 1,5 m above ground level. The proposed sign and letter dimensions shall be submitted to the engineer for his approval.

The vehicle shall also be equipped with an amber-coloured flashing light of the rotating parabolic reflector type with a minimum intensity of 100. The warning light shall be switched on at all times and the sign shall be displayed when the vehicle is used on site.



## **GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

The traffic safety officer shall have a direct line of communication at all times with the police and traffic officers responsible for the area within limits of the contract. The provision of the road safety vehicle, driver, labourers and the cost of the cellular telephone shall be deemed to be included in the rates tendered for the contractor's establishment on site.

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

### **“(j) Crossing the median or carriageway centreline**

No vehicle or item of equipment shall be allowed to cross the median of a dual carriageway road or the centreline of a single carriageway unless the traffic accommodation and signage specifically allows for this and is approved by the engineer as safe.

### **(k) Site personnel**

The contractor shall ensure that all his personnel, excluding those who are permanently office bound, are equipped with reflective safety jackets and that these are worn at all times when working on or near to the travelled way. Any person found not wearing a reflective jacket under these circumstances shall be removed from the site until such time as he is in possession of and wearing a reflective jacket. Reflective safety jackets shall be kept in good condition and any jackets that are, in the opinion of the engineer, ineffective shall be immediately replaced by the contractor.

### **(l) Penalty events**

Whenever the following events occur, the contractor shall be subjected to penalty conditions expressed in the Appendix to Tender.

#### **(i) Non-compliance with accommodation of traffic specifications**

Failure or refusal on the part of the contractor to take the necessary steps to ensure the safety and convenience of the travelling public, accommodation of traffic, plant and personnel in accordance with these specifications or as required by statutory authorities or ordered by the engineer, shall be sufficient cause for the engineer to apply penalties as follows:

A fixed penalty of R5 000,00 per occurrence shall be deducted for each and every occurrence of non-compliance with any of the requirements of section 1500 of the standard specifications and section B1500 of the project specifications.



## **GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

In addition, a time-related penalty of R500,00 per hour over and above the fixed penalty shall be deducted for non-compliance to rectify any defects in the accommodation of traffic within the allowable time after the engineer has given an instruction to this effect. The engineer's instruction shall state the allowable time, which shall be the time in hours for reinstatement of the defects. Should the contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

### **B1503 TEMPORARY TRAFFIC-CONTROL FACILITIES**

"All temporary road signs, devices, sequences, layouts and spacings shall comply with the requirements of the National Road Traffic Act, 1996 (Act 93 of 1996) and the National Road Traffic Regulations 2000, the requirements of the relevant authority the SA Road Traffic Signs Manual, Vol 2, Chapter 13 : Roadworks Signing and the Drawings."

"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 these special provisions and as shown on the drawings and in the SARTSM and remove them when no longer required. It shall be incumbent upon the contractor to see to it that the abovementioned traffic-control devices are present where required at all times and are functioning properly."

"The type of construction, spacing and placement of traffic-control devices shall be in accordance with the SARTSM. The recommended arrangements of the traffic control devices illustrated and/or drawings issued by the engineer shall not be departed from without prior approval of the engineer. The arrangements expected to be most commonly used in the contract are given on the tender drawings.

The details shown for spacing and placement of traffic-control facilities may however, be revised at the discretion of the engineer where deemed necessary to accommodate local site geometry and traffic conditions."

#### **(b) Road signs and barricades**

"The contractor shall be responsible for the protection and maintenance of all signs, and shall at his own cost replace any that have been damaged, lost, or stolen.

All temporary road signs required to remain in position for some time shall be pole mounted as shown on the drawings. All temporary road signs required to be moved more often shall be mounted on portable supports for the easy moving of signs to temporary positions. The only permitted method of ballasting the sign supports shall consist of durable sandbags filled with sand of adequate mass to prevent signs from being blown over by wind. The cost of the sandbags shall be included in the tendered rates for the various types of temporary road signs.

The covering of permanent road signs, if applicable, shall be by utilizing a hessian bag that shall be pulled over the sign in the form of a hood and fastened to the signposts. Plastic bags or other materials and fastened by means of adhesive tape shall not be permitted. The cost of covering of permanent road signs shall be included in the tendered rates of items B15.01 and B15.10."

#### **(c) Channelization devices and barricades**



## GAUTENG PROVINCE

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

"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).

TW 401 and TW 402 delineators shall comply with the following requirements:

- (i) It shall be manufactured from a flexible material and should comply with SANS 1555. The blade portion of the delineator shall be positively affixed to a base unit which in turn shall be stable on its own or be stabilised by means of sandbags when used on the road.
- (ii) The blade shall be retro-reflectorized, with class I yellow sheeting on the side facing oncoming traffic.
- (iii) It shall be nominally 1 000 mm high x 250 mm wide and the bottom edge of the delineator shall not be more than 200 mm above the road surface.
- (iv) It shall be subject to the approval of the engineer.
- (v) It shall 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 m<sup>2</sup> and ballasted by sandbags with sand;
- (vi) together with its mounting be designed such that it will collapse in a safe manner under traffic impact.

Traffic cones shall comply with the following requirements:

- (i) Traffic cones may be used only at short term lane deviations during daylight.
- (ii) Cones shall not be used on their own but shall be interspersed with delineators at a ratio not exceeding 3:1.
- (iii) Cones used on all deviations shall be 750 mm high.
- (iv) Lane closures which continue into the night-time shall be demarcated by delineators only.
- (v) They shall be manufactured from a flexible material and be fluorescent orange in colour.
- (vi) The base of the cone shall be non-circular to limit any rolling action should the cone be upended.
- (vii) Whenever cones will be used in times of restricted visibility the cones shall be fitted with white retro-reflective sleeves.
- (viii) The maximum spacing between centres of delineators or cones shall be as shown on the Drawings or as directed by the engineer."

### (e) Warning devices



## **GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

“All construction vehicles and plant used on the works shall be equipped with rotating amber flashing lights and warning boards as specified. All vehicles and plant before being allowed onto 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 and shall be mounted in such a way as to be highly visible from all directions. The lights on construction vehicles shall not be switched on while vehicles are being operated on unrestricted sections of a public road, but shall be switched on while construction vehicles are operating within the accommodation of traffic area, as the vehicles decelerate to enter a construction area, and as the vehicles accelerate to the general speed when entering the road from a construction area. Lights on plant shall operate continuously while the plant is working alongside sections of road open to public traffic

All LDV's and cars operating on site shall also be equipped with rotating amber flashing lights which shall be placed so as to be highly visible and operated continuously while the vehicles are manoeuvring in or out of traffic or are travelling or parked alongside roads open to public traffic.

Rotating lights and the "construction vehicle" signs on the contractor's vehicles and plant shall not be paid for separately but shall be included in the rates covering the use of the vehicles.

The contractor shall apply and maintain lights together with temporary mounting brackets, to the approval of the engineer. Vehicles and plant that do not comply with these requirements shall be removed from the site.

(ii) Sign mounted flashing lights

Two amber flashing lights shall be vertically mounted on top of the traffic signs at each end of each traffic accommodation section as shown on the drawings. The lights shall be operated during the hours of darkness.”

**“(g) Other traffic control measures ordered by the engineer**

The engineer may instruct the contractor to provide any other road sign, reflective tape, etc not measured in standard pay items. Such road signs shall conform to the requirements of the SARTSM, or specification provided by the engineer. Similarly, in order to ensure that the travelling public is kept fully informed and warned on matters relating to the accommodation of traffic, construction sign posting and the effect of the construction on the free flow of traffic through the site, the engineer may arrange for advertising in the press and/or for other forms of publicity.

**(h) Flagmen**

Flagmen shall be provided where shown on the drawings or required by the specification. During the daytime, at least two flagmen shall be provided at each traffic control point in addition to the STOP/GO sign operator, one flagman at the 80 km/h sign and a second roving flagman to indicate to the traffic at the end of the queue to stop. At night-time only one roving flagman equipped with a Stromberg Lightman xenon strobe, or similar approved, and a torch is required at each traffic control point as well as the traffic light operator. Where the shoulder of the road is closed to traffic, a flagman shall be provided at the leading end of the closure during



## GAUTENG PROVINCE

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

daytime. This flagman shall be provided at the 80-km/h sign to warn the traffic about the closure. No flagman shall be on duty for a period of more than 10 hours per day.

Flagmen shall be adequately trained in the standard flagging techniques as described in the SARTSM (refer to figure 13.23 of detail 13.23.1) and be provided with conspicuous clothing such as safety jackets utilizing retro-reflective and/or fluorescent panels in red, yellow and/or white.

Flagmen shall have in their possession, at all times, certification that they have attended and passed an accredited course in flagging techniques before being allowed onto the construction site.

Flags shall be made from bright red or red-orange material and shall be square with a minimum side length of 600 mm. The flag shall be attached to a staff at least 1,0 m in length.

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

### (i) Safety vests

The contractor shall provide the engineer and visitors with safety vests for moving around on site. The vests shall be fluorescent orange in colour with reflective material sewn onto it and shall be to the approval of the engineer.

No separate payment will be made for the safety vests and full compensation therefore shall be deemed to be included in the rates tendered for Section 5700."

### (j) Retro-reflective material

Retro-reflective material for temporary signs shall comply with the requirements of SANS 1519 for weathered material. Tests shall be carried out with a field retro reflectometer. The testing procedure and classification are described in Clause B8118."

## B1517 MEASUREMENT AND PAYMENT

"Item	Unit
<b>B15.01 Accommodating traffic and maintaining temporary deviations:</b>	
(a) On dual carriageways .....	kilometre (km)
(b) On single carriageways .....	kilometre (km)

"The unit of measurement shall be the kilometre, measured along the centre lines of the road where work is carried out. Accommodation of traffic shall be measured once only.

Item	Unit
<b>B15.03 Temporary traffic control facilities</b>	

*Add the following:*





day “(a) **Flagmen** ..... man-

“The unit of measurement shall be a full day and night worked by flagmen. A man-day shall be deemed to comprise of 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.”

*Add the following pay items:*

<b>Item</b>	<b>Unit</b>
“ <b>B15.14 Accommodation of traffic during Measurement and testing work</b> .....	day

The unit of measurement shall be the number of days during which the accommodation of traffic was done as specified.

The tendered rate per day shall include full compensation for the cost to provide the traffic accommodation as specified.

<b>Item</b>	<b>Unit</b>
<b>B15.15 Extra over item B15.01 for the provision of a truck-mounted attenuator (TMA) and a 5 ton gross mass vehicle as described in Clause B1502 (i)(ix)</b> .....	day

The unit of measurement shall be the number of days during which the specified attenuator had been provided.

<b>Item</b>	<b>Unit</b>
“ <b>B15.16 Amber flashing lights mounted on signs</b> .....	number (No)

The tendered lump sum shall include full compensation to provide, erect, operate and maintain two amber flashing lights per sign at each end of the traffic accommodation sections. It shall also include the provision of power to operate the lights, replacing bulbs as required and keeping the lenses clean and visible.

<b>Item</b>	<b>Unit</b>
<b>B15.17 Provision of traffic safety equipment for use by the engineer</b>	

(a) Safety jackets .....	number (No)
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The unit of measurement shall be the number of each item provided as specified, and approved by the engineer.

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

<b>Item</b>	<b>Unit</b>
<b>B15.18 Traffic safety officer</b> .....	month



The unit of measurement shall be the period in months or part thereof that the approved traffic safety officer is employed during the official construction period as specified in each specific order.

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

**Item** **Unit**

**B15.19 Penalties**

- (a) Fixed penalty per occurrence ..... number (No)
- (b) Time related penalty ..... hour (h)

In subitem B15.19(a) the unit of measurement shall be number and applied 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 at the rate specified in the pricing schedule.

In subitem B15.19(b) the unit of measurement shall be hour and applied for each hour over and above the time set by the engineer that the identified non-compliance has not been rectified.

The above pay items shall be applied at the rates stated in the Appendix to Tender and in the pricing schedule and become payable by the contractor in each and every month they occur and shall be deducted from the amount due to the contractor on the relevant monthly payment certificates.”

**SECTION 4000: ASPHALT PAVEMENTS AND SEALS**

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

**B4802 MATERIALS**

**(a) Bituminous binders**

*Add the following to the first paragraph*

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

**TABLE B4801: CLASSIFICATION OF MODIFIED BINDERS FOR CRACK SEALING**

Modified Binder Class (C)	TEST METHOD
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) <sup>1</sup>	°C	MB-17	≥80	≥80 <sup>2</sup>	55-65
Elastic recovery @ 15°C	%	MB-4	≥80 (min)	≥60 <sup>2</sup>	report <sup>3</sup>
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



## GAUTENG PROVINCE

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

Dynamic viscosity @ 190°C	dPa.s	MB-13	N/A	N/A	20 - 40
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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.

### B4804 CONSTRUCTION

#### (f) Sealing cracks

##### (ii) Preparation

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

With:

The cracks that are to be sealed shall be blown out with heated compressed air using the approved equipment. All dirt, grit and other foreign matter shall be blown out and be removed from the cracks and the road surface.

##### (iii) Cracks smaller than 3mm

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

##### (iii) Cracks of 3mm and wider

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

#### (3) Other sealants

"(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/m<sup>2</sup> 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/m<sup>2</sup> which is spread out with a squeegee. The second application of the emulsion may be diluted with water to aid the saturation of the geotextile. A layer of washed sand as specified in Table 4903/1, not more than 5mm thick, with a nominal stone size of 4,75mm shall then be applied using shovels and the area should be opened to traffic.

**(v) Restrictions**

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

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

**B4807 MEASUREMENT AND PAYMENT**

**"Item** **Unit**

**B48.14 Sealing Cracks**

- (a) Cleaning crack with hot compressed air and sealing using Class C-R1 modified binder crack sealant .....meter (m)
- (b) Cleaning crack with cold compressed air, priming, and sealing using Class C-E1 modified binder crack sealant .....meter (m)

The unit of measurement of sealing of cracks shall be the meter of crack sealed as specified.

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

**"Item** **Unit**

**B48.15 Sealing cracks with 200mm wide geotextile .....metre (m)**

The unit of measurement shall be the linear meter crack sealed with the geotextile as specified.

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

## **SECTION C: ENVIRONMENTAL MANAGEMENT PLAN**

### **C1001 SCOPE**

This Environmental Management Plan (EMP) sets out the methods by which proper environmental controls are to be implemented by the contractor. The duration over which the contractor's controls shall be in place cover the construction period of the project as well as the limited time after contract completion defined by the General Conditions of Contract, and the project specifications, as the Defects Notification Period (maintenance period).

The provisions of this EMP are binding on the contractor during the life of the contract. They are to be read in conjunction with all the documents that comprise the suite of documents for this contract. In the event that any conflict occurs between the terms of the EMP and the project specifications or Record of Decision, the terms herein shall be subordinate.

The EMP is a dynamic document subject to similar influences and changes as are brought by variations to the provisions of the project specification. Any substantial changes shall be submitted to the South African National Roads Agency SOC Limited in writing for approval.

The EMP identifies the following:

- Construction activities that will impact on the environment.
- Specifications with which the contractor shall comply in order to protect the environment from the identified impacts.
- Actions that shall be taken in the event of non-compliance.

### **C1002 DEFINITIONS**

**Alien Vegetation:** alien vegetation is defined as undesirable plant growth which shall include, but not be limited to, all declared category 1 and 2 listed invader species as set out in the Conservation of Agricultural Resources Act (CARA) regulations. Other vegetation deemed to be alien shall be those plant species that show the potential to occupy in number, any area within the defined construction area and which are declared to be undesirable.

**Construction Activity:** a construction activity is any action taken by the contractor, his subcontractors, suppliers or personnel during the construction process as defined in the South African National Roads Agency SOC Limited and National Roads Act, 1998 (Act No. 7, 1998)

**Environment:** environment means the surroundings within which humans exist and that could be made up of -

- (i) the land, water and atmosphere of the earth;
- (ii) micro-organisms, plant and animal life;
- (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and
- (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

**Environmental aspect:** an environmental aspect is any component of a contractor's construction activity that is likely to interact with the environment.

**Environmental impact:** an impact or environmental impact is the change to the environment, whether desirable or undesirable, that will result from the effect of a construction

activity. An impact may be the direct or indirect consequence of a construction activity.

Road reserve:

the road reserve is a corridor of land, defined by co-ordinates and proclamation, within which the road, including access intersections or interchanges, is situated. A road reserve may, or may not, be bounded by a fence.



## **GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

Road width: for the purposes of the EMP, the road width is defined as the area within the road reserve i.e. fence line to fence line, but also includes all areas beyond the road reserve that are affected by the continuous presence of the road, e.g. a reach of a water course.

### **C1003 IDENTIFICATION OF ENVIRONMENTAL ASPECTS AND IMPACTS**

The contractor shall identify likely aspects before commencing with any construction activity. Examples of environment aspects include:

- waste generation
- stormwater discharge
- emission of pollutants into the atmosphere
- chemical use operations
- energy use operations
- water use operations
- use of natural resources
- noise generation

Thereafter the contractor shall programme his work in such a way that each cause and effect of a construction activity is also identified, and the activity planned so as to prevent any impact from happening. If prevention is not practicable, or in the event of mishap or misapplication, the contractor shall provide plans and measures for the engineer's approval, which will limit and contain the magnitude, duration and intensity of the impact. The contractor shall demonstrate that he is capable of carrying out any repair and reinstatement of the damaged environment. These requirements shall be concurrent with the time constraints to produce an approved construction programme according to sub-clause 8.3 as amended by Particular Condition of the general conditions of contract and clause B1204 of these project specifications.

Listed below are some environmental impacts that could adversely alter an aspect of the environment through usual construction activities:

- Pollution of atmosphere, soil or water
- Destruction or removal of fauna and flora and effect on biological diversity
- Deformation of the landscape
- Soil erosion
- Destruction of historical/heritage sites
- Effect on the built environment
- Effect on agricultural land and wetlands

General good construction practice will play an important role in avoiding the occurrence of an Impact. The contractor's attention is drawn, in this regard, to C1008. Environmental Management of Construction Activities

### **C1004 LEGAL REQUIREMENTS**

#### **(a) General**

Construction will be according to the best industry practices, as identified in the project documents. This EMP, which forms an integral part of the contract documents, informs the contractor as to his duties in the fulfilment of the project objectives, with particular reference to the prevention and mitigation of environmental impacts caused by construction activities associated with the project. The contractor should note that obligations imposed by the EMP are legally binding in terms of environmental statutory legislation and in terms of the additional conditions to the general conditions of contract that pertain to



this project. In the event that any rights and obligations contained in this document contradict those specified in the standard or project specifications then the latter shall prevail.

**(b) Statutory and other applicable legislation**

The contractor is deemed to have made himself conversant with all legislation pertaining to the environment, including provincial and local government ordinances, which may be applicable to the contract.

**C1005 ADMINISTRATION OF ENVIRONMENTAL OBLIGATIONS**

**(a) Appointment of a Designated Environmental Officer (DEO)**

For the purposes of implementing the conditions contained herein, the contractor shall submit to the engineer for approval the appointment of a nominated representative of the contractor as the DEO for the contract. The request shall be given, in writing, at least fourteen days before the start of any work clearly setting out reasons for the nomination, and with sufficient detail to enable the engineer to make a decision. The engineer will, within seven days of receiving the request, approve, reject or call for more information on the nomination. Once a nominated representative of the contractor has been approved, he/she shall be the DEO and shall be the responsible person for ensuring that the provisions of the EMP are complied with during the life of the contract. The engineer will be responsible for issuing instructions to the contractor where environmental considerations call for action to be taken. The DEO shall submit regular written reports to the engineer, but not less frequently than once a month.

The engineer shall have the authority to instruct the contractor to replace the DEO if, in the engineer's opinion, the appointed officer is not fulfilling his/her duties in terms of the requirements of the EMP or this specification. Such instruction will be in writing and shall clearly set out the reasons why a replacement is required.

There shall be an approved DEO on the site at all times.

**(b) Administration**

Before the contractor begins each construction activity the DEO shall give to the engineer a written statement setting out the following:

- The type of construction activity.
- Locality where the activity will take place.
- Identification of the environmental aspects and impacts that might result from the activity.
- Methodology for impact prevention for each activity or aspect.
- Methodology for impact containment for each activity or aspect.
- Emergency/disaster incident and reaction procedures.
- Treatment and continued maintenance of impacted environment.

The contractor may provide such information in advance of any or all construction activities provided that new submissions shall be given to the engineer whenever there is a change or variation to the original.

The engineer may provide comment on the methodology and procedures proposed by the DEO, but he shall not be responsible for the contractor's chosen measures of impact mitigation and emergency/disaster management systems. However, the contractor shall demonstrate at inception and at least once during the contract that the approved measures and procedures function properly.

**(c) Good housekeeping**



The contractor shall undertake “good housekeeping” practices during construction as stated in clause 1217 of the COLTO Standard Specifications for Roads and Bridge Works for State Road Authorities (1998 edition) and sub-clauses 4.18 and 11.11 of the General Conditions of Contract. This will help avoid disputes on responsibility and allow for the smooth running of the contract as a whole. Good housekeeping extends beyond the wise practice of construction methods that leaves production in a safe state from the ravages of weather to include the care for and preservation of the environment within which the site is situated.

#### **C1006 TRAINING**

The designated environmental officer (DEO) must be conversant with all legislation pertaining to the environment applicable to this contract and must be appropriately trained in environmental management and must possess the skills necessary to impart environmental management skills to all personnel involved in the contract.

The contractor shall ensure that adequate environmental training takes place. All employees shall have been given an induction presentation on environmental awareness. Where possible, the presentation needs to be conducted in the language of the employees. The environmental training should, as a minimum, include the following:

- The importance of conformance with all environmental policies
- The environmental impacts, actual or potential, of their work activities;
- The environmental benefits of improved personal performance;
- Their roles and responsibilities in achieving conformance with the environmental policy and procedures and with the requirement of the Agency’s environmental management systems, including emergency preparedness and response requirements;
- The potential consequences of departure from specified operating procedures;
- The mitigation measures required to be implemented when carrying out their work activities.

In the case of permanent staff, the contractor shall provide evidence that such induction courses have been presented. In the case of new staff (including contract labour) the contractor shall inform the engineer when and how he intends concluding his environmental training obligations.

#### **C1007 ACTIVITIES/ASPECTS CAUSING IMPACTS**

A list of possible causes of environmental impacts that occur during construction activities is given in Table 7/1: Aspects or Activities that Cause Environmental Impacts during Construction Activities, which is to be found at the end of Section C. This list is not exhaustive and shall be used for guideline purposes only.

#### **C1008 ENVIRONMENTAL MANAGEMENT OF CONSTRUCTION ACTIVITIES**

##### **(a) Site establishment**

##### **(i) Site plan**

The contractor shall establish his construction camps, offices, workshops, staff accommodation and testing facilities on the site in a manner that does not adversely affect the environment. However, before construction can begin, the contractor shall submit to the engineer for his approval, plans of the exact location, extent and construction details of these facilities and the impact mitigation measures the contractor proposes to put in place.



## **GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

The plans shall detail the locality as well as the layout of the waste treatment facilities for litter, kitchen refuse, sewage and workshop-derived effluents. The site offices should not be sited in close proximity to steep areas, as this will increase soil erosion. Preferred locations would be flat areas along the route. If the route traverses water courses, streams and rivers, it is recommended that the offices, and in particular the ablution facilities, aggregate stockpiles, spoil areas and hazardous material stockpiles are located as far away as possible from any water course. Regardless of the chosen site, the contractor's intended mitigation measures shall be indicated on the plan. The site plan shall be submitted not later than the first site meeting. Detailed, electronic colour photographs shall be taken of the proposed site before any clearing may commence. These records are to be kept by the engineer for consultation during rehabilitation of the site. Read in conjunction with COLTO Specification 1302(a) and 1402(e).

### (ii) Vegetation

The contractor has a responsibility to inform his staff of the need to be vigilant against any practice that will have a harmful effect on vegetation.

The natural vegetation encountered on the site is to be conserved and left as intact as possible. Vegetation planted at the site shall be indigenous and in accordance with instructions issued by the engineer. Only trees and shrubs directly affected by the works, and such others as may be indicated by the engineer in writing, may be felled or cleared. In wooded areas where natural vegetation has been cleared out of necessity, the same species of indigenous trees as were occurring shall be re-established.

The project specification for the rehabilitation of the grass cover shall be strictly adhered to. Any proclaimed weed or alien species that propagates during the contract period shall be cleared by hand before seeding. (Read in conjunction with COLTO Specification 5801(b), 5802(b), (c), (d) and (e), 5804, 5805, 5806 and 5807). Fires shall only be allowed in facilities or equipment specially constructed for this purpose. A firebreak shall be cleared and maintained around the perimeter of the camp and office sites.

### (iii) Rehabilitation

The area where the site offices were erected will require rehabilitation at the end of the contract. All construction material, including concrete slabs and braai areas shall be removed from the site on completion of the contract.

### (iv) Water for human consumption

Water for human consumption shall be available at the site offices and at other convenient locations on site.

All effluent water from the camp / office sites shall be disposed of in a properly designed and constructed system, situated so as not to adversely affect water sources (streams, rivers, pans dams etc). Only domestic type wastewater shall be allowed to enter this drain.

### (v) Heating and cooking fuel

The contractor shall provide adequate facilities for his staff so that they are not encouraged to supplement their comforts on site by accessing what can be taken from the natural surroundings. The contractor shall ensure that energy sources are available at all times for construction and supervision personnel for heating and cooking purposes.

## **(b) Sewage treatment**

Particular reference in the site establishment plan shall be given to the treatment of sewage generated at the site offices, site laboratory and staff accommodation and at all localities on the site where there

will be a concentration of labour. Sanitary arrangements should be to the satisfaction of project management, the local authorities and legal requirements.

Safe and effective sewage treatment will require one of the following sewage handling methods: septic tanks and soak-away, dry-composting toilets such as “enviro loos”, or the use of chemical toilets which are supplied and maintained by a subcontractor. The type of sewage treatment will depend on the geology of the area selected, the duration of the contract and proximity (availability) of providers of chemical toilets. Should a soak-away system be used, it shall not be closer than 800 metres from any natural water course or water retention system. The waste material generated from these facilities shall be serviced on a regular basis. The positioning of the chemical toilets shall be done in consultation with the engineer. Read with COLTO Specifications 1402(g) and 1404(a).

Toilets and latrines shall be easily accessible and shall be positioned within walking distance from wherever employees are employed on the works. Use of the veld for this purpose shall not, under any circumstances, be allowed.

Outside toilets shall be provided with locks and doors and shall be secured to prevent them from blowing over. The toilets shall also be placed outside areas susceptible to flooding. The contractor shall arrange for regular emptying of toilets and shall be entirely responsible for enforcing their use and for maintaining such latrines in a clean, orderly and sanitary condition to the satisfaction of the engineer.

**(c) Waste management**

The contractor’s intended methods for waste management and waste minimisation shall be implemented at the outset of the contract. All personnel shall be instructed to dispose of all waste in the proper manner.

(i) Solid waste

Solid waste shall be stored in an appointed area in covered, tip proof metal drums for collection and disposal. A refuse control system shall be established for the collection and removal of refuse to the satisfaction of the engineer. Disposal of solid waste shall be at a Department of Water Affairs and Forestry (DWAF) licensed landfill site or at a site approved by DWAF in the event that an existing operating landfill site is not within reasonable distance from the site offices and staff accommodation. No waste shall be burned or buried at or near the site offices, nor anywhere else on the site, including the approved solid waste disposal site. Read with COLTO Specification 1404(a).

(ii) Litter

No littering by construction workers shall be allowed. During the construction period, the facilities shall be maintained in a neat and tidy condition and the site shall be kept free of litter.

Measures shall be taken to reduce the potential for litter and negligent behaviour with regard to the disposal of all refuse. At all places of work the contractor shall provide litter collection facilities for later safe disposal at approved sites. (Read in conjunction with COLTO Specification 1302(b)).

(iii) Hazardous waste

Hazardous waste such as bitumen, tar, oils etc. shall be disposed of in a Department of Water Affairs and Forestry approved landfill site. Special care shall be taken to avoid spillage of tar or bitumen products such as binders or pre-coating fluid to avoid water-soluble phenols from entering the ground or contaminating water.

Under no circumstances shall the spoiling of tar or bituminous products on the site, over embankments, in borrow pits or any burying, be allowed. Unused or rejected tar or bituminous products shall be returned to the supplier’s production plant. Any spillage of tar or bituminous products shall be attended to immediately and affected areas shall be promptly reinstated to the satisfaction of the engineer.

**(d) Control at the workshop**

The contractor's management and maintenance of his plant and machinery will be strictly monitored according to the criteria given below, regardless of whether it is serviced on the site (i.e. at the place of construction activity or at a formalised workshop).

(i) Safety

All the necessary handling and safety equipment required for the safe use of petrochemicals and oils shall be provided by the contractor to, and used or worn by, the staff whose duty it is to manage and maintain the contractor's and his subcontractor's and supplier's plant, machinery and equipment.

(ii) Hazardous Material Storage

Petrochemicals, oils and identified hazardous substances shall only be stored under controlled conditions. All hazardous materials e.g. tar or bitumen binders shall be stored in a secured, appointed area that is fenced and has restricted entry. Storage of tar or bituminous products shall only take place using suitable containers to the approval of the engineer.

The contractor shall provide proof to the engineer that relevant authorisation to store such substances has been obtained from the relevant authority. In addition, hazard signs indicating the nature of the stored materials shall be displayed on the storage facility or containment structure. Before containment or storage facilities can be erected the contractor shall furnish the engineer with details of the preventative measures, he proposes to install in order to mitigate against pollution of the surrounding environment from leaks or spillage. The preferred method shall be a concrete floor that is bunded. Any deviation from the method will require proof from the relevant authority that the alternative method proposed is acceptable to that authority. The proposals shall also indicate the emergency procedures in the event of misuse or spillage that will negatively affect an individual or the environment.

(iii) Fuel and gas storage

Fuel shall be stored in a secure area in a steel tank supplied and maintained by the fuel suppliers. An adequate bund wall, 110 % of volume, shall be provided for fuel and diesel areas to accommodate any leakage spillage or overflow of these substances. The area inside the bund wall shall be lined with an impervious lining to prevent infiltration of the fuel into the soil. Any leakage, spillage or overflow of fuel shall be attended to without delay.

Gas welding cylinders and LPG cylinders shall be stored in a secure, well-ventilated area.

(iv) Oil and lubricant waste

Used oil, lubricants and cleaning materials from the maintenance of vehicles and machinery shall be collected in a holding tank and sent back to the supplier. Water and oil should be separated in an oil trap. Oils collected in this manner, shall be retained in a safe holding tank and removed from site by a specialist oil recycling company for disposal at approved waste disposal sites for toxic/hazardous materials. Oil collected by a mobile servicing unit shall be stored in the service unit's sludge tank and discharged into the safe holding tank for collection by the specialist oil recycling company.

All used filter materials shall be stored in a secure bin for disposal off site. Any contaminated soil shall be removed and replaced. Soils contaminated by oils and lubricants shall be collected and disposed of at a facility designated by the local authority to accept contaminated materials.



**(e) Clearing the Site**

In all areas where the contractor intends to or is required to clear the natural vegetation and soil, either within the road reserve, or at designated or instructed areas outside the road reserve, a plan of action shall first be submitted to the engineer for his approval.

The plan shall contain a photographic record and chainage/land reference of the areas to be disturbed. This shall be submitted to the engineer for his records before any disturbance/stockpiling may occur. The record shall be comprehensive and clear, allowing for easy identification during subsequent inspections.

The contractor shall be responsible for the re-establishment of grass within the road reserve boundaries for all areas disturbed during road construction. This includes, for example, service roads, stockpile areas, stop/go facilities, windrows and wherever material generated for, or from, road construction has to be stored temporarily or otherwise within the road reserve, or at designated or instructed areas outside the road reserve. This responsibility shall extend until expiry of the Defects Notification Period.

**(f) Soil management**

**(i) Topsoil**

Topsoil shall be removed from all areas where physical disturbance of the surface will occur and shall be stored and adequately protected. The contract will provide for the stripping and stockpiling of topsoil from the site for later re-use. Topsoil is considered to be the natural soil covering, including all the vegetation and organic matter. Depth may vary at each site. The areas to be cleared of topsoil shall include the storage areas. All topsoil stockpiles and windrows shall be maintained throughout the contract period in a weed-free condition. Weeds appearing on the stockpiled or windrowed topsoil shall be removed by hand. Soils contaminated by hazardous substances shall be disposed of at an approved Department of Water Affairs and Forestry waste disposal site. (Read with COLTO Specifications 3104(a), 5802(a), (g), 5804(a), (b) and (c)). The topsoil stockpiles shall be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself be eroded by the action of water. Stockpiles of topsoil shall not exceed a height of 2 m, and if they are to be left for longer than 6 months, shall be analysed, and if necessary, upgraded before replacement. Stockpiles shall be protected against infestation by weeds.

The contractor shall ensure that no topsoil is lost due to erosion – either by wind or water. Areas to be top soiled and grassed shall be done so systematically to allow for quick cover and reduction in the chance of heavy topsoil losses due to unusual weather patterns. The contractor's programme shall clearly show the proposed rate of progress of the application of topsoil and grassing. The contractor shall be held responsible for the replacement, at his own cost, for any unnecessary loss of topsoil due to his failure to work according to the progress plan approved by the engineer. The contractor's responsibility shall also extend to the clearing of drainage or water systems within and beyond the boundaries of the road reserve that may have been affected by such negligence.

**(ii) Subsoil**

The subsoil is the layer of soil immediately beneath the topsoil. It shall be removed, to a depth instructed by the engineer, and stored separately from the topsoil if not used for road building. This soil shall be replaced in the excavation in the original order it was removed for rehabilitation purposes.

**(g) Drainage**

The quality, quantity and flow direction of any surface water runoff shall be established prior to disturbing any area for construction purposes. Cognisance shall be taken of these aspects and incorporated into the planning of all construction activities. Before a site is developed or expanded, it shall be established how this development or expansion will affect the drainage pattern. Recognised water users / receivers

shall not be adversely affected by the expansion or re-development. No water source shall be polluted in any way due to proposed changes.

Streams, rivers, pans, wetlands, dams, and their catchments shall be protected from erosion and from direct or indirect spillage of pollutants such as refuse, garbage, cement, concrete, sewage, chemicals, fuels, oils, aggregate, tailings, wash water, organic materials and bituminous or tar products.

The contractor shall submit to the engineer his proposals for prevention, containment and rehabilitation measures against environmental damage of the identified water and drainage systems that occur on the site. Consideration shall be given to the placement of sedimentation ponds or barriers where the soils are of a dispersive nature or where toxic fluids are used in the construction process. The sedimentation ponds must be large enough to contain runoff so that they function properly under heavy rain conditions.

**(h) Earthworks and Layer works**

This section includes all construction activities that involve the mining of all materials, and their subsequent placement, stockpile, spoil, treatment or batching, for use in the permanent works, or temporary works in the case of deviations. Before any stripping prior to the commencement of construction, the contractor shall have complied with the requirements of sections C1008 (e) and C1008 (g). In addition, the contractor shall take cognisance of the requirements set out below.

(i) Quarries and borrow pits

The contractor's attention is drawn to the requirement of the Department of Minerals and Energy that before entry into any quarry or borrow pit, an EMP for the establishment, operation and closure of the quarry or borrow pit shall have been approved by the Department. It is the responsibility of the contractor to ensure that he is in possession of the approved EMP or a copy thereof, prior to entry into the quarry or borrow pit. The conditions imposed by the relevant EMP are legally binding on the contractor and may be more extensive and explicit than the requirements of this specification. In the event of any conflict occurring between the requirements of the specific EMP and these specifications the former shall apply. The cost of complying with the requirements shall be deemed to be included in existing rates in the Pricing Schedule. (Read with COLTO Specification 3100 and 3200).

(ii) Excavation, hauling and placement

The contractor shall provide the engineer with detailed plans of his intended construction processes prior to starting any cut or fill or layer. The plans shall detail the number of personnel and plant to be used and the measures by which the impacts of pollution (noise, dust, litter, fuel, oil, and sewage), erosion, vegetation destruction and deformation of landscape will be prevented, contained and rehabilitated. Particular attention shall also be given to the impact that such activities will have on the adjacent built environment. The contractor shall demonstrate his "good housekeeping", particularly with respect to closure at the end of every day so that the site is left in a safe condition from rainfall overnight or over periods when there is no construction activity. (Read with COLTO Standard Specification clauses 1217 and 3309)

(iii) Spoil sites

The contractor shall be responsible for the safe siting, operation, maintenance and closure of any spoil site he uses during the contract period, including the Defects Notification Period. This shall include existing spoil sites that are being re-entered. Before spoil sites may be used proposals for their locality, intended method of operation, maintenance and rehabilitation shall be given to the engineer for his approval. The location of these spoil sites shall have signed approval from the affected landowner before submission to the engineer. No spoil site shall be located within 500m of any watercourse. A photographic record shall be kept of all spoil sites for monitoring purposes. This includes before the site is used and after revegetation.



## GAUTENG PROVINCE

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

The use of approved spoil sites for the disposal of hazardous or toxic wastes shall be prohibited unless special measures are taken to prevent leaching of the toxins into the surrounding environment. Such special measures shall require the approval of the relevant provincial or national authority. The same shall apply for the disposal of solid waste generated from the various camp establishments. The engineer will assist the contractor in obtaining the necessary approval if requested by the contractor.

Spoil sites will be shaped to fit the natural topography. These sites shall receive a minimum of 75 mm topsoil and be grassed with the recommended seed mixture. Slopes shall not exceed a vertical: horizontal ratio of 1:3. Only under exceptional circumstances will approval be given to exceed this ratio. Appropriate grassing measures to minimise soil erosion shall be undertaken by the contractor. This will include both strip and full sodding. The contractor may motivate to the engineer for other acceptable stabilising methods. The engineer may only approve a completed spoil site at the end of the Defects Notification Period upon receipt from the contractor of a landowner's clearance notice and an engineer's certificate certifying slope stability (Read with COLTO standard Specifications clause 1214). The contractor's costs incurred in obtaining the necessary certification for opening and closing of spoil sites shall be deemed to be included in the tendered rates for spoiling.

### (iv) Stockpiles

The contractor shall plan his activities so that materials excavated from borrow pits and cuttings, in so far as possible, can be transported direct to and placed at the point where it is to be used. However, should temporary stockpiling become necessary, the areas for the stockpiling of excavated and imported material shall be indicated and demarcated on the site plan submitted in writing to the engineer for his approval, together with the contractor's proposed measures for prevention, containment and rehabilitation against environmental damage?

The areas chosen shall have no naturally occurring indigenous trees and shrubs present that may be damaged during operations. Care shall be taken to preserve all vegetation in the immediate area of these temporary stockpiles. During the life of the stockpiles the contractor shall at all times ensure that they are:

- Positioned and sloped to create the least visual impact;
- Constructed and maintained so as to avoid erosion of the material and contamination of surrounding environment; and
- Kept free from all alien/undesirable vegetation.

After the stockpiled material has been removed, the site shall be re-instated to its original condition. No foreign material generated / deposited during construction shall remain on site. Areas affected by stockpiling shall be landscaped, top soiled, grassed and maintained at the contractor's cost until clearance from the engineer and the relevant National Authority is received.

Material milled from the existing road surface that is temporarily stockpiled in areas approved by the engineer within the road reserve, shall be subject to the same condition as other stockpiled materials. Excess materials from windrows, in situ milling or any detritus of material from road construction activities may not be swept off the road and left unless specifically instructed to do so in the contract drawing or under instruction from the engineer

In all cases, the engineer shall approve the areas for stockpiling and disposal of construction rubble before any operation commences and shall approve their closure only when they have been satisfactorily rehabilitated. (Read with COLTO Specification B3203 and B4306).

### (v) Blasting activities

Wherever blasting activity is required on the site (including quarries and/or borrow pits) the contractor shall rigorously adhere to the relevant statutes and regulations that control the use of explosives. In addition, the contractor shall, prior to any drilling of holes in preparation for blasting, supply the engineer with a locality plan of the blast site on which shall be shown the zones of influence of the ground and air



shockwaves and expected limits of fly-rock. The plan shall show each dwelling, structure and service within the zones of influence and record all details of the dwellings/structures/services including existing positions, lengths and widths of cracks, as well as the condition of doors, windows, roofing, wells, boreholes etc. The contractor, alone, shall be responsible for any costs that can be attributed to blasting activities, including the collection of fly-rock from adjacent lands and fields. The submission of such a plan shall not in any way absolve the contractor from his responsibilities in this regard. The contractor shall also indicate to the engineer the manner in which he intends to advertise to the adjacent communities and/or road users the times and delays to be expected for each individual blast.

**(i) Batching sites**

Asphalt plants are considered scheduled processes listed in the second schedule to the Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965). Should the use of an asphalt plant be considered on site, the contractor shall be responsible to obtain the necessary permit from the Department of Environmental Affairs and Tourism, regardless of where they are sited?

Crushing plants and concrete batching plants, whether sited inside or outside of defined quarry or borrow pit areas, shall be subject to the requirements of the Department of Minerals and Energy legislation as well as the applicable industrial legislation that governs gas and dust emissions into the atmosphere. Such sites will be the subject of regular inspections by the relative authorities during the life of the project. In addition, the selection, entry onto, operation, maintenance, closure and rehabilitation of such sites shall be the same as for those under section C1008(h)(iii), with the exception that the contractor shall provide additional measures to prevent, contain and rehabilitate against environmental damage from toxic/hazardous substances. In this regard the contractor shall provide plans that take into account such additional measures as concrete floors, bunded storage facilities, linings to drainage channels and settlement dams. Ultimate approval of these measures shall be from the relevant national authority, as shall approval of closure. The engineer will assist the contractor in his submissions to the relevant authority.

Effluent from concrete batch plants and crusher plants shall be treated in a suitable designated sedimentation dam to the legally required standards to prevent surface and groundwater pollution. The designs of such a facility should be submitted to the engineer for approval.

The contractor shall invite the relevant department to inspect the site within 2 months after any plant is commissioned and at regular intervals, thereafter, not exceeding 12 months apart

**(j) Spillages**

Streams, rivers and dams shall be protected from direct or indirect spillage of pollutants such as refuse, garbage, cement, concrete, sewage, chemicals, fuels, oils, aggregate, tailings, wash water, organic materials and tar or bituminous products. In the event of a spillage, the contractor shall be liable to arrange for professional service providers to clear the affected area.

Responsibility for spill treatment lies with the contractor. The individual responsible for, or who discovers a hazardous waste spill must report the incident to his/her DEO or to the engineer. The Designated Environmental Officer will assess the situation in consultation with the engineer and act as required. In all cases, the immediate response shall be to contain the spill. The exact treatment of polluted soil / water shall be determined by the contractor in consultation with the DEO and the engineer. Areas cleared of hazardous waste shall be revegetated according to the engineer's instructions

Should water downstream of the spill be polluted, and fauna and flora show signs of deterioration or death, specialist hydrological or ecological advice will be sought for appropriate treatment and remedial procedures to be followed. The requirement for such input shall be agreed with the engineer. The costs of containment and rehabilitation shall be for the contractor's account, including the costs of specialist input.

**(k) Areas of specific importance**



## **GAUTENG PROVINCE**

ROADS AND TRANSPORT  
REPUBLIC OF SOUTH AFRICA

Any area, as determined and identified within the project document as sensitive or of special interest within the site shall be treated according to the express instructions contained in these specifications or the approved EMP. The contractor may offer alternative solutions to the engineer in writing should he consider that construction will be affected in any way by the hindrance of the designated sensitive area or feature. However, the overriding principle is that such defined areas requiring protection shall not be changed. Every effort to identify such areas within the site will have been made prior to the project going out to tender. The discovery of other sites with archaeological or historical interest that have not been identified shall require ad hoc treatment.

(i) Archaeological sites

If an artefact on site is uncovered, work in the immediate vicinity shall be stopped immediately. The contractor shall take reasonable precautions to prevent any person from removing or damaging any such article and shall immediately upon discovery thereof inform the engineer of such discovery. The South African Heritage Resource Agency (SAHRA) is to be contacted who will appoint an archaeological consultant. Work may only resume once clearance is given in writing by the archaeologist. (Read with FIDIC General Condition of Contract sub-clause 4.24 as amended by Particular Condition).

(ii) Graves and middens

If a grave or midden is uncovered on site, or discovered before the commencement of work, then all work in the immediate vicinity of the graves/middens shall be stopped and the engineer informed of the discovery. The South African Heritage Resource Agency (SAHRA) should be contacted and in the case of graves, arrangements made for an undertaker to carry out exhumation and reburial. The undertaker will, together with the SAHRA, be responsible for attempts to contact family of the deceased and for the site where the exhumed remains can be re-interred. (Read with FIDIC General Conditions of Contract sub-clause 4.24 as amended by Particular Condition).

**(l) Noise control**

The contractor shall endeavour to keep noise generating activities to a minimum. Noises that could cause a major disturbance, for instance blasting and crushing activities, should only be carried out during daylight hours. Compliance with the appropriate legislation with respect to noise shall be mandatory.

Should noise generating activities have to occur at night the people in the vicinity of the drilling shall be warned about the noise well in advance and the activities kept to a minimum.

**(m) Dust control**

Dust caused by strong winds shall be controlled by means of water spray vehicles. Dust omission from batching plants shall be subject to the relevant legislation and shall be the subject of inspection by the relevant office of the Department of Minerals and Energy.

**(n) Alien vegetation**

The contractor shall be held responsible for the removal of alien vegetation within the road reserve disturbed during road construction. This includes, for example, service roads, stockpile areas, stop/go facilities, windrows and wherever material generated for or from road construction has been stored temporarily or otherwise within the road reserve. This responsibility shall extend for the duration of the Defects Notification Period.

**C1009 RECORD KEEPING**

The engineer and the DEO will continuously monitor the contractor's adherence to the approved impact prevention procedures and the engineer shall issue to the contractor a notice of non-compliance whenever transgressions are observed. The DEO should document the nature and magnitude of the

non-compliance in a designated register, the action taken to discontinue the non-compliance, the action taken to mitigate its effects and the results of the actions. The non-compliance shall be documented and reported to the engineer in the monthly report.

Copies of any record of decision or EMP's for specific borrow pits or quarries used on the project shall be kept on site and made available for inspection by visiting officials from the employer or relevant environmental departments.

## **C1010 COMPLIANCE AND PENALTIES**

The contractor shall act immediately when a notice of non-compliance is received and correct whatever is the cause for the issuing of the notice. Complaints received regarding activities on the construction site pertaining to the environment shall be recorded in a dedicated register and the response noted with the date and action taken. This record shall be submitted with the monthly reports and an oral report given at the monthly site meetings.

Any non-compliance with the agreed procedures of the EMP is a transgression of the various statutes and laws that define the manner by which the environment is managed therefore any avoidable non-compliance, dependant on severity, shall be considered sufficient grounds for contact to be made with relevant provincial or national authorities.

The engineer's decision with regard to what is considered a violation, its seriousness and the action to be taken against the contractor shall be final. Failure to redress the cause shall be reported to the relevant authority. The responsible provincial or national authorities shall ensure compliance and impose penalties relevant to the transgression as allowed for within its statutory powers.

**TABLE 7/1: MECHANISMS THAT CAUSE ENVIRONMENTAL IMPACTS DURING CONSTRUCTION ACTIVITIES**

Section	Contents	Environmental Impacts				Sensitive Areas <i>(to be completed by compiler)</i>
		Pollution Type	Deformation of Landscape	Soil erosion	Alien Vegetation	
1300	Camp Establishment	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation. Preserve topsoil	Selection of site Preserve indigenous vegetation. Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
1400	Housing, Offices and laboratories	Waste treatment Hazardous waste Water supply Spillage Storage Noise/lights	Selection of site Preserve indigenous vegetation Preserve topsoil Demarcate sensitive areas	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
1500	Accommodation of Traffic	Waste treatment Hazardous waste Water supply Spillage Storage Noise/lights Dust control	Selection of site Preserve indigenous vegetation Preserve topsoil Demarcate sensitive areas Maintenance of windrows	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
1600	Overhaul	Spillage Storage Noise/lights Dust control Exhaust fumes Washing waste	Turning circles Parking areas	Restrict access to sensitive areas	Protection of indigenous vegetation Preserve topsoil	
1700	Clearing and grubbing	Waste treatment Hazardous waste Water supply Noise /lights Dust control	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Protection of indigenous vegetation Preserve topsoil	



Section	Contents	Environmental Impacts				Sensitive Areas <i>(to be completed by compiler)</i>
		Pollution Type	Deformation of Landscape	Soil erosion	Alien Vegetation	
2100 - 2400	Drainage	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
3100	Borrow pits	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
3200	Stockpiling	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
3300	Mass Earthworks	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
3400 - 3900	Pavement layers	Waste treatment Hazardous waste Water supply Spillage Storage Noise / lights Dust control	Selection of site Preserve indigenous vegetation Preserve topsoil Demarcate sensitive areas Maintenance of windrows	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	



Section	Contents	Environmental Impacts				Sensitive Areas <i>(to be completed by compiler)</i>
		Pollution Type	Deformation of Landscape	Soil erosion	Alien Vegetation	
4100	Asphalt works / sealing operations	Waste treatment Hazardous waste Water supply Spillage Storage Noise / lights Dust control Smoke control Storage of materials	Selection of site Preserve indigenous vegetation Preserve topsoil Turning circles Parking areas	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil	
5000	Ancillary roadworks	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
6000	Structures	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
7000	Concrete pavements etc	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	

## **SECTION D: REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS**

### **SCOPE OF WORKS**

## **SECTION D: REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS**

### **1.0 SCOPE**

This part of the specification has the objective to assist principal contractors entering into contracts with The Department of Roads and Transport that they comply with the Occupational Health and Safety (OH&S) Act, No. 85 of 1993. Compliance with this document does not absolve the principal contractor from complying with minimum legal requirements and the principal contractor remains responsible for the health and safety of his employees and those of his Mandataries. Principal and other contractors should therefore insist that this part of the specification form part of any contract that he may have with other contractors and/or suppliers.

This section covers the development of a health and safety specification that addresses all aspects of occupational health and safety as affected by this contract. It provides the requirements that principal contractors and other contractors shall comply with in order to reduce the risks associated with this contract that may lead to incidents causing injury and/or ill health.

### **2.0 GENERAL OCCUPATIONAL HEALTH AND SAFETY PROVISIONS**

#### **2.1 Hazard Identification and Risk Assessment (Construction Regulation 7)**

##### **2.1.1 Risk Assessments**

Paragraph 4 contains a generic list of risk assessment headings that have been identified by The Department of Roads and Transport as possibly applicable to this contract. It is, by no means, exhaustive and is offered as assistance to contractors intending to tender.

##### **2.1.2 Development of Risk Assessments**

Every principal contractor performing construction work shall, before the commencement of any construction work or work associated with the aforesaid construction work and during such work, cause a risk assessment to be performed by a competent person, appointed in writing, and the risk assessment shall form part of the OH&S plan and be implemented and maintained as contemplated in Construction Regulation 5(1).

The risk assessment shall include, at least:

- the identification of the risks and hazards to which persons may be exposed
- the analysis and evaluation of the risks and hazards identified
  - a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards that have been identified
- a monitoring plan and
- a review plan

Based on the risk assessment, the principal contractor shall develop a set of site-specific OH&S rules that shall be applied to regulate the OH&S aspects of the construction. The risk assessment, together with the site-specific OH&S rules shall be submitted to The Department of Roads and Transport before construction on site commences. Despite the risk assessments listed in paragraph 4, the principal contractor shall conduct a baseline risk assessment and the aforesaid listed risk assessment shall be

incorporated into the baseline risk assessment. The baseline risk assessment shall further include the standard working procedures and the applicable method statements based on the risk assessments

All variations to the scope of work shall similarly be subjected to a risk assessment process.

### 2.1.3 Review of Risk Assessment

The principal contractor shall review the hazard identification, risk assessments and standard working procedures at each production planning and progress report meeting as the contract work develops and progresses and each time changes are made to the designs, plans and construction methods and processes. The principal contractor shall provide The Department of Roads and Transport, other contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated in paragraph 2.1.3.

## 2.2 **Legal Requirements**

A principal contractor shall, as a minimum, comply with:

The Occupational Health and Safety Act and Regulations (Act 85 of 1993), an up-to-date copy of which shall be available on site at all times.

The Compensation for Occupational Injuries and Diseases Act (Act 130 of 1993), an up-to-date copy of which shall be available on site at all times.

Where work is being carried out on a “mine”, the contractor shall comply with the Mines Health and Safety Act and Regulations (Act 29 of 1996) and any other OH&S requirements that the mine may specify. An up-to-date copy of the Mines Health and Safety Act and Regulations shall be available on site at all times.

## 2.3 **Structure and Responsibilities**

### 2.3.1 Overall Supervision and Responsibility for OH&S

It is a requirement that the principal contractor, when he appoints contractors (Subcontractors) in terms of Construction Regulations 5(3), 5(5), 5(9), 5(10) and 5(12) includes in his agreement with such contractors the following:

- OH&S Act (85 of 1993), Section 37(2) agreement: “Agreement with Mandatory”
- OH&S Act (85 of 1993), Section 16(2) appointee/s as detailed in his/her/their respective appointment forms.

### 2.3.2 Further (Specific) Supervision Responsibilities for OH&S

The contractor shall appoint designated competent employees and/or other competent persons as required by the Act and Regulations. Below is a generic list of identified appointments and may be used to select the appropriate appointments for this contract. The contractor shall note that it is a generic list only and is intended for use as a guideline.

Ref. Section/Regulation in OH&S Act	
Batch Plant Supervisor	(Construction Regulation 6(1))
Construction Vehicles/Mobile Plant/Machinery Supervisor	(Construction Regulation 21)
Demolition Supervisor	(Construction Regulation 12)
Drivers/Operators of Construction Vehicles/Plant	(Construction Regulation 21)
Electrical Installation and Appliances Inspector	(Construction Regulation 22)
Emergency/Security/Fire Coordinator	(Construction Regulation 27)
Excavation Supervisor	(Construction Regulation 11)
Explosive Powered Tool Supervisor	(Construction Regulation 19)



Fall Protection Supervisor	(Construction Regulation 8)
First Aider	(General Safety Regulation 3)
Fire Equipment Inspector	(Construction Regulation 27)
Formwork & Support work Supervisor	(Construction Regulation 10)
Hazardous Chemical Substances Supervisor	(HCS Regulations)
Incident Investigator	(General Admin Regulation 29)
Ladder Inspector	(General Safety Regulation 13A)
Lifting Equipment Inspector	(Construction Regulation 20)
Materials Hoist Inspector	(Construction Regulation 17)
OH&S Committee	(OH&S Act Section 19)
OH&S Officer	(Construction Regulation 6(6))
OH&S Representatives	(OH&S Act Section 17)
Person Responsible for Machinery	(General Machinery Regulation 2)
Scaffolding Supervisor	(Construction Regulation 14)
Stacking & Storage Supervisor	(Construction Regulation 26)
Structures Supervisor	(Construction Regulation 9)
Suspended Platform Supervisor	(Construction Regulation 15)
Tunnelling Supervisor	(Construction Regulation 13)
Vessels under Pressure Supervisor	(Vessels under Pressure Regulations)
Working on/next to Water Supervisor	(Construction Regulation 24)
Welding Supervisor	(General Safety Regulation 9)

In addition, The Department of Roads and Transport requires that a Traffic Safety Officer be appointed (see COLTO Section 1500). The above appointments shall be in writing and the responsibilities clearly stated together with the period for which the appointment is made. This information shall be communicated and agreed with the appointees. Notice of appointments shall be submitted to The Department of Roads and Transport. All changes shall also be communicated to The Department of Roads and Transport.

The principal contractor shall, furthermore, provide The Department of Roads and Transport with an organogram of all contractors that he/she has appointed or intends to appoint and keep this list updated and prominently displayed on site. Where necessary, or when instructed by an inspector of the Department of Labour, the principal contractor shall appoint a competent construction safety officer.

### 2.3.3 Designation of OH&S Representatives (Section 17 of the OH&S Act)

Where the principal contractor employs more than 20 persons (including the employees of other contractors (subcontractors) he has to appoint one OH&S representatives for every 50 employees or part thereof. General Administrative Regulation 6 requires that the appointment or election and subsequent designation of the OH&S representatives be conducted in consultation with employee representatives or employees. (Section 17 of the Act and General Administrative Regulation 6 & 7). OH&S representatives shall be designated in writing and the designation shall include the area of responsibility of the person and term of the designation.

### 2.3.4. Duties and Functions of the OH&S Representatives (Section 18 of the OH&S Act)

The principal contractor shall ensure that the designated OH&S representatives conduct continuous monitoring and regular inspections of their respective areas of responsibility using a checklist and report thereon to the principal contractor. OH&S representatives shall be included in accident or incident investigations. OH&S representatives shall attend all OH&S committee meetings.

### 2.3.5. Appointment of OH&S Committee (Sections 19 and 20 of the OH&S Act)

The principal contractor shall establish an OH&S committee, which shall meet as specified in the Regulations.

## 2.4. Administrative Controls and the Occupational Health & Safety File

### 2.4.1. The OH&S File (Construction Regulation 5(7))

As required by Construction Regulation 5(7), the principal contractor and other contractors shall each keep an OH&S file on site. The following list is not exhaustive and shall only be used as a guide:

- Notification of construction work (Construction Regulation 3)
- Latest copy of OH&S Act (General Administrative Regulation 4)
- Proof of registration and good standing with COID Insurer (Construction Regulation 4(g))
- OH&S plan agreed with the Client including the underpinning risk assessment/s and method statements (Construction regulation 5(1))
- Copies of OH&S committee and other relevant minutes
- Designs/drawings (Construction Regulation 5(8))
- A list of contractors (subcontractors) including copies of the agreements between the parties and the type of work being done by each contractor (Construction Regulation 9)
- Appointment/designation forms as per paragraphs 2.1.1 and 2.1.2.
- Registers as follows:
  - Accident/Incident register (Annexure 1 of the General Administrative Regulations)
  - OH&S representatives' inspection register
  - Asbestos demolition and stripping register
  - Batch plant inspections
  - Construction vehicles and mobile plant inspections by controller
  - Daily inspection of vehicles, plant and other equipment by the operator/driver/user
  - Demolition inspection register
  - Designer's inspection of structures record
  - Electrical installations, -equipment and -appliances (including portable electrical tools)
  - Excavations inspection
  - Explosive powered tool inspection, maintenance, issue and returns register (incl. cartridges and nails)
  - Fall protection inspection register
  - First aid box contents
  - Fire equipment inspection and maintenance
  - Formwork and support work inspections
  - Hazardous chemical substances record
  - Ladder inspections
  - Lifting equipment register
  - Materials hoist inspection register
  - Machinery safety inspection register (incl. machine guards, lockouts etc.)
  - Scaffolding inspections
  - Stacking and storage inspection
  - Inspection of structures
  - Inspection of suspended platforms
  - Inspection of tunnelling operations
  - Inspection of vessels under pressure
  - Welding equipment inspections
  - Inspection of work conducted on or near water
  - All other applicable records including traffic safety officer reports.

The Department of Roads and Transport will conduct an audit on the OH&S file of the principal contractor from time-to-time.

## 2.5. **Notification of Construction Work (Construction Regulation 3)**

The principal contractor shall, where the contract meets the requirements laid down in Construction Regulation 3, within 5 working days, notify the Department of Labour of the intention to carry out construction work and use the form (Annexure A in the Construction Regulations) for the purpose. A copy shall be kept on the OH&S file and a copy shall be forwarded to The Department of Roads and Transport for record keeping purposes.

## 2.6. **Training and Competence**

The contents of all training required by the Act and Regulations shall be included in the principal contractor's OH&S plan. The principal contractor shall be responsible for ensuring that all relevant training is undertaken. Only accredited service providers shall be used for OH&S training. The principal contractor shall ensure that his and other contractors' personnel appointed are competent and that all training required to do the work safely and without risk to health, has been completed before work commences. The principal contractor shall ensure that follow-up and refresher training is conducted as the contract work progresses and the work situation changes. Records of all training must be kept on the OH&S file for auditing purposes.

## 2.7 **Consultations, Communication and Liaison**

OH&S liaison between the client, the principal contractor, and the other contractors, the designer and other concerned parties will be through the OH&S committee as contemplated in paragraph 2.3.5. In addition to the above, communication may be directly to the client or his appointed agent, verbally or in writing, as and when the need arises.

Consultation with the workforce on OH&S matters will be through their supervisors, OH&S representatives and the OH&S committee. The principal contractor shall be responsible for the dissemination of all relevant OH&S information to the other contractors e.g. design changes agreed with the client and the designer, instructions by the client and/or his/her agent, exchange of information between contractors, the reporting of hazardous/dangerous conditions/situations etc. The principal contractors' most senior manager on site shall be required to attend all OH&S meetings.

## 2.8 **Checking, Reporting and Corrective Actions**

### 2.8.1 Monthly Audit by Client (Construction Regulation 4(1)(d))

The Department of Roads and Transport will conduct monthly audits to comply with Construction Regulation 4(1) (d) to ensure that the principal contractor has implemented and is maintaining the agreed and approved OH&S plan.

### 2.8.2 Other Audits and Inspections by The Department of Roads and Transport

The Department of Roads and Transport reserves the right to conduct other ad hoc audits and inspections as deemed necessary. This will include site safety walks.

### 2.8.3 Contractor's Audits and Inspections

The principal contractor is to conduct his own monthly internal audits to verify compliance with his own OH&S management system as well as with this specification.

### 2.8.4 Inspections by OH&S Representative's and other Appointees

OH&S representatives shall conduct weekly inspections of their areas of responsibility and report thereon to their foreman or supervisor whilst other appointees shall conduct inspections and report thereon as specified in their appointments e.g. vehicle, plant and machinery drivers, operators and users must conduct daily inspections before start-up.

#### 2.8.5 Recording and Review of Inspection Results

All the results of the abovementioned inspections shall be in writing, reviewed at OH&S committee meetings, endorsed by the chairman of the meeting and placed on the OH&S File.

#### 2.9 **Accidents and Incident Investigation (General Administrative Regulation 9)**

The principal contractor shall be responsible for the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to be referred for medical treatment by a doctor, hospital or clinic. The results of the investigation shall be entered into an accident/incident register listed in paragraph 2.4.1.

The principal contractor shall be responsible for the investigation of all minor and non-injury incidents as described in Section 24(1)(b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

#### 2.10 **Reporting**

The principal contractor shall provide The Department of Roads and Transport with copies of all statutory reports required in terms of the Act within 7 days of the incident occurring.

### 3.0 **OPERATIONAL CONTROL**

#### 3.1 **Operational Procedures**

Each construction activity shall be assessed by the principal contractor so as to identify operational procedures that will mitigate against the occurrence of an incident during the execution of each activity. This specification requires the principal contractor:

- to be conversant with Regulations 8 to 29 (inclusive)
- to comply with their provisions
- to include them in his OH&S plan where relevant.

#### 3.2 **Emergency Procedures**

Simultaneous with the identification of operational procedures (per paragraph 3.1 above), the principal contractor shall similarly identify and formulate emergency procedures in the event an incident does occur. The emergency procedures thus identified shall also be included in the principal contractor's OH&S plan.

#### 3.3 **Personal & Other Protective Equipment (Sections 8/15/23 of the OH&S Act)**

The contractor shall identify the hazards in the workplace and deal with them. He must either remove them or, where impracticable, take steps to protect workers and make it possible for them to work safely and without risk to health under the hazardous conditions.

Personal protective equipment (PPE) should, however, be the last resort and there should always first be an attempt to apply engineering and other solutions to mitigating hazardous situations before the issuing of PPE is considered.

Where it is not possible to create an absolutely safe and healthy workplace the contractor shall inform employees regarding this and issue, free of charge, suitable equipment to protect them from any hazards being present and that allows them to work safely and without risk to health in the hazardous environment.

It is a further requirement that the contractor maintain the said equipment, that he instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the employee/s.

Employees do not have the right to refuse to use/wear the equipment prescribed by the employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other reason, the employee cannot be allowed to continue working under the hazardous condition/s for which the equipment was prescribed but an alternative solution has to be found that may include relocating or discharging the employee.

The principal contractor shall include in his OH&S plan the PPE he intends issuing to his employees for use during construction and the sanctions he intends to apply in cases of non-conformance by his employees. Conformance to the wearing of PPE shall be discussed at the weekly inspection meetings.

### 3.4 Other Regulations

Wherever in the Construction Regulations or this specification there is reference to other regulations (e.g. Construction Regulation 22: Electrical Installations and Machinery on Construction Sites) the principal contractor shall be conversant with and shall comply with these regulations.

### 3.5 Public Health & Safety (Section 9 of the OH&S Act)

The principal contractor shall be responsible for ensuring that non-employees affected by the construction work are made aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimise those dangers. This includes:

- Non- employees entering the site for whatever reason
- The surrounding community
- Passers-by to the site

## 4.0 PROJECT/SITE SPECIFIC REQUIREMENTS

### 4.1 List of Risk Assessments

- Clearing and Grubbing of the area/site
- Site establishment including:
  - Office/s
  - Secure/safe storage for materials, plant and equipment
  - Ablutions
  - Sheltered eating area
  - Maintenance workshop
  - Vehicle access to the site
- Dealing with existing structures
- Location of existing services
- Installation and maintenance of temporary construction electrical supply, lighting and equipment
- Adjacent land uses/surrounding property exposures
- Boundary and access control/public liability exposures (NB: the employer is also responsible for the OH&S of non-employees affected by his/her work activities.)
- Health risks arising from neighbouring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning etc.
- Exposure to noise
- Exposure to vibration
- Protection against dehydration and heat exhaustion
- Protection from wet and cold conditions
- Dealing with HIV/Aids and other diseases
- Use of portable electrical equipment including
  - Angle grinder
  - Electrical drilling machine
  - Circular saw



- Excavations including
    - Ground/soil conditions
    - Trenching
    - Shoring
    - Drainage of trench
  - Welding including
    - Arc welding
    - Gas welding
    - Flame cutting
    - Use of LP gas torches and appliances
  - Loading and offloading of trucks
  - Aggregate/sand and other materials delivery
  - Manual and mechanical handling
  - Lifting and lowering operations
  - Driving and operation of construction vehicles and mobile plant including
    - Trenching machine
    - Excavator
    - Rollers
    - Plate compactor
    - Front end loader
    - Mobile cranes and the ancillary lifting tackle
    - Parking of vehicles and mobile plant
    - Towing of vehicles and mobile plant
  - Use and storage of flammable liquids and other hazardous substances
  - Layering and bedding
  - Installation of pipes in trenches
  - Pressure testing of pipelines
  - Backfilling of trenches
  - Protection against flooding
  - Gabion work
  - Use of explosives
  - Protection from overhead power lines
  - As discovered by the principal contractor's hazard identification exercise
  - As discovered from any inspections and audits conducted by the client or by the principal contractor or any other contractor on site
- As discovered from any accident/incident investigation.



**TENDER NUMBER: DRT 41/02/2020 TRAFFIC SIGNALS MAINTENANCE, TECHNOLOGY UPGRADES, AND GEOMETRIC UPGRADES TO CATER FOR NEW INSTALLATION FOR A PERIOD OF 3YEARS**

## **C4: Site Information**

### **PART C4: SITE INFORMATION**

#### **Information Only**

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

#### **MISCELLANEOUS**

The Project Specifications form an integral part of the Contract Documents and supplement the Standard Specifications.

In the event of any discrepancy with a part or parts of the standard specifications, the schedule of rates or the drawings, the project specifications shall take precedence.

The Standard Specifications which form part of this contract have been written to cover all phases of work normally required for road contracts and may therefore cover items not applicable to this particular contract. Tenderers shall take note of the revisions thereto contained in this volume.

The following standard specifications will apply to this contract:

- SABS 309 (SANS 309: 2004)
- COLTO Standard Specifications for Road and Bridge Works for State Road Authorities, 1998 Edition.

The supplier will apply the emulsion according to the specifications given in this document. In these specifications the terms "Contractor" and "Supplier" have the same meaning.



## ANNEXURE A

DRT 41/02/2020

**PAYMENT CHECKLIST PREPARED BY CONTRACTOR:** .....

NO	DESCRIPTION	YES	NO
1	Original Invoice		
2	Copy of the Approved BOQ		
3	Copy of Tax Clearance Certificate		
4	Completed EPWP : Templates		
	: Contracts of Employment		
	: ID Copies		
	: Attendance Registers		
	: Proof of Payments of employees		
5	BBBEE Certificate (copy)		
6	Before and After Photo's of the roads		
7	Control Sheet (Works programme)		

**IMPORTANT:**

- Please note that if any of the above criteria is not met, the Invoice will not be accepted for payment. Non compliance will delay the payment and penalties will be instituted as stated in the contract document.

PREPARED BY  
CONTRACTOR

DATE:

SIGNATURE:

: \_\_\_\_\_