WATER & SANITATION DEPARTMENT

CONTRACT NUMBER: WS 01-2017

BID DOCUMENT
(IN COMPLIANCE WITH THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011 PUBLISHED IN GOVERNMENT GAZETTE NO. 34350 OF 8 JUNE 2011)

THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5.5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

CIDB GRADING: 8CE OR HIGHER

<table>
<thead>
<tr>
<th>ISSUED BY:</th>
<th>PREPARED BY:</th>
<th>PREPARED FOR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tel: (011) 999-6540 / 6567 Fax: (011) 999-7511</td>
<td>Project Manager: Ms. Sibongile Mbonani Email: <a href="mailto:Sibongile.Mbonani@ekurhuleni.gov.za">Sibongile.Mbonani@ekurhuleni.gov.za</a></td>
<td>Acting HOD: Ms. M. Matiwane Email: <a href="mailto:Sibongile.Mbonani@ekurhuleni.gov.za">Sibongile.Mbonani@ekurhuleni.gov.za</a></td>
</tr>
</tbody>
</table>

NAME OF BIDDER (BIDDING ENTITY) : ____________________________________________________________

(FULL NAME, i.e. (CC, (Pty) Ltd, Ltd, JV/CONSORTIUM, SOLE PROPRIETOR etc.)

TEL NUMBER : ____________________________________________________________

FAX NUMBER : ____________________________________________________________
NOTICE TO BIDDERS

VERY IMPORTANT NOTICE ON DISQUALIFICATIONS:

A bid not complying with the peremptory requirements stated hereunder will be regarded as not being an “Acceptable bid”, and as such will be rejected.

“Acceptable bid” means any bid which, in all respects, complies with the conditions of bid and specifications as set out in the bid documents.

A BID WILL BE REJECTED:

1. If a VALID ORIGINAL tax clearance certificate or copy thereof (or in the case of a joint venture or consortium, of all the partners in the joint venture or consortium) has not been submitted with the bid document on closing date of the bid. (An expired tax clearance certificate submitted at the closure of the bid will NOT be accepted)

   In bids where Consortia and Joint Ventures are involved, each party must submit a separate Tax Clearance Certificate.

   Copies of the TCC 001 “Application for a Tax Clearance Certificate” form are available from any SARS branch office nationally or on the website www.sars.gov.za.

   Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za.

2. If any pages have been removed from the bid document, and have therefore not been submitted.

3. In the event of a failure to complete and sign the schedule of quantities as required, i.e. only lump sums provided.

4. In the event of there being scratching out, writing over or painting out rates or information, affecting the evaluation of the bid, without initialling next to the amended rates or information

5. In the event of the use of correction fluid (e.g. tippex), any erasable ink, or any erasable writing instrument (e.g. pencil)

6. In the event of non-attendance of compulsory information session

7. If the Bid has not been properly signed by a person having the authority to do so. (Refer to Declaration)

8. If particulars required in respect of the bid have not been completed, except if only the Broad –Based Black Economic Empowerment Certificate as provided for in Regulation 10 of The Preferential Procurement Regulations 2011, is not submitted, the bid will not be disqualified but no preference points will be awarded.

9. If the bidder attempts to influence, or has in fact influenced the evaluation and/or awarding of the contract.

10. If the bid has been submitted either in the wrong bid box or after the relevant closing date and time.

11. If any municipal rates and taxes or municipal service charges owed by the bidder or any of its directors/members to the municipality or municipal entity, or to any other municipality or municipal entity, are in arrears for more than three months

12. If any bidder who during the last five years has failed to perform satisfactorily on a previous contract with the municipality, municipal entity or any other organ of state after written notice was given to that bidder that performance was unsatisfactory.

13. The accounting officer must ensure that irrespective of the procurement process followed, no award may be given to a person –

   (a) who is in the service of the state, or;
   (b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder, is a person in the service of the state; or;
   (c) who is an advisor or consultant contracted with the municipality in respect of contract that would cause a conflict of interest.

14. If the bidder is not registered in the required CIDB contractor grading designation (category) or higher, if required in this bid documentation.
15. If the bidder or any of its directors is listed on the Register of Bid 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.

16. If the bidder has abused the EMM’s Supply Chain Management System and action was taken in terms of paragraph 38 of the EMM SCM Policy.

17. In the event of non-submission of financial statements if required (SEE BID DATA OR PRICING SCHEDULE). In this regard please note:

(17.1) If a bidder is a registered company required by law to have its annual financial statements audited or independently reviewed in compliance with the requirements of the Companies Act Act No.71 of 2008, or any other law, audited or independently reviewed annual financial statements, as the case may be, prepared within six (6) months of the end of the bidders most recent financial year together with the audited or independently reviewed annual financial statements for the two immediately preceding financial years, unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted.

(17.2) If a bidder is a registered close corporation, annual financial statements in compliance with the provisions of the Close Corporations Act, Act No. 69 of 1984, prepared within nine (9) months of the end of the bidders most recent financial year together with the annual financial statements for the two immediately preceding financial years, unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted.

(17.3) Annual financial statements submitted must comply with the requirements of the Companies Act or the Close Corporations Act.

(17.4) If the bidder only commenced business within the past three years, the bidder is required to submit annual financial statements in compliance with the provisions of (17.1) and (17.2) above for each of its financial years since commencing business.

(17.5) If a bidder is not required by law to have its annual financial statements audited or independently reviewed, or is not a Close Corporation, then non-audited annual financial statements for the periods referred to above must be submitted.

18. If the following have not been fully completed and signed:

FORM 2.2.2 - GENERAL DECLARATION
FORM 2.2.3 - DECLARATION OF INTEREST
FORM 2.2.4 - DECLARATION OF BIDDER’S PAST SCM PRACTICES
FORM 2.2.5 - DECLARATION FOR PROCUREMENT ABOVE R10 MILLION
FORM 2.2.6 - CERTIFICATE OF INDEPENDENT BID DETERMINATION
FORM 2.2.7 - DECLARATION FOR MUNICIPAL ACCOUNTS
FORM 2.2.8 - DECLARATION FOR MUNICIPAL ACCOUNTS WHERE BIDS ARE EXPECTED TO EXCEED R10 MILLION
FORM 2.2.14 - COID – LETTER OF GOOD STANDING
FORM 2.2.18 - FORM OF INTENT TO PROVIDE A PERFORMANCE GUARANTEE
FORM 2.3.1 - FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS
NOTE:

1. IN THIS DOCUMENT AND OTHER DOCUMENTS REFERRED TO BUT NOT ATTACHED, THE FOLLOWING WORDS ARE SYNONYMOUS WITH EACH OTHER.

   1.1. CLIENT, EMPLOYER, EKURHULENI METROPOLITAN MUNICIPALITY (EMM).
   1.2. BID, TENDER AND VARIATIONS THEREOF
   1.3. JOINT VENTURE / CONSORTIUM

1. **Very important notice** Bidders must note that only information filled in at the spaces provided therefore in the bid document will be considered for evaluation purposes unless additional space is required and then only if the location of the additional information in the attachments is properly referred to by page number and section heading. Information supplied anywhere else will be disregarded which may lead to the rejection of the bid.

2. The attachment or inclusion of information not specifically asked for is not desirable and lead to delays in the awarding of bids. This includes Company Profiles and CV's if not specifically requested
EKURHULENI METROPOLITAN MUNICIPALITY

DEPARTMENT NAME: WATER & SANITATION DEPARTMENT

CONTRACT NO: WS 01-2017

FOR

THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

SUMMARY FOR BID OPENING PURPOSES

NAME OF BIDDING ENTITY: ............................................................................................................................................

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

<table>
<thead>
<tr>
<th>PHYSICAL STREET ADDRESS:</th>
<th>POSTAL ADDRESS:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

TELEPHONE NUMBER: ..................................................................................................................................................

FAX NUMBER: ............................................................................................................................................................

E-mail ADDRESS: ........................................................................................................................................................

CIDB GRADING: ..........................................................................................................................................................

TIME FOR COMPLETION: ............................................................................................................................................

CONTRACT PRICE: R ....................................................................................................................................................

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

(Amount brought forward from the Form of Offer and Acceptance)*

Signed by authorised representative of the Bidding Entity: ............................................................................................

DATE: .................................................................................................................................................................

• Should any discrepancy occur between this figure and that stated in the Form of Offer and Acceptance, the latter shall take precedence and apply.
EKURHULENI METROPOLITAN MUNICIPALITY

DEPARTMENT NAME: WATER & SANITATION DEPARTMENT

CONTRACT NO: WS 01-2017

FOR

THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

CONTENTS

<table>
<thead>
<tr>
<th>THE BID</th>
<th>PAGE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART T1: BIDDING PROCEDURES</td>
<td></td>
</tr>
<tr>
<td>T1.1 Notice and Invitation to Bid</td>
<td>9</td>
</tr>
<tr>
<td>T1.2 Bid Data</td>
<td>11</td>
</tr>
<tr>
<td>PART T2: RETURNABLE DOCUMENTS</td>
<td></td>
</tr>
<tr>
<td>T2.1 Returnable Schedules required for Bid Evaluation Purposes</td>
<td>36</td>
</tr>
<tr>
<td>T2.2 Other Documents required for Bid Evaluation Purposes</td>
<td>49</td>
</tr>
<tr>
<td>T2.3 Returnable Schedules that will be incorporated in the Contract</td>
<td>98</td>
</tr>
</tbody>
</table>

<p>| THE CONTRACT | |
| PART C1: AGREEMENT AND CONTRACT DATA | |
| C1.1 Form of Offer and Acceptance | 120 |
| C1.2 Contract Data | 124 |
| C1.3 Form of Guarantee | 134 |
| C1.5 Declaration of Insurances | 139 |
| C1.6 Blasting Indemnity | 140 |
| PART C2: PRICING DATA | |
| C2.1 Pricing Instructions | 142 |
| C2.2 Bill of Quantities/Schedule of Activities | 144 |
| PART C3: SCOPE OF WORKS | |
| C3.1 Description of Works | 164 |
| C3.2 Engineering | 166 |
| C3.3 Procurement | 168 |
| C3.4 Construction | 170 |
| C3.5 Management of the Works | 235 |
| C3.6 Health and Safety | 236 |</p>
<table>
<thead>
<tr>
<th>C3.7</th>
<th>Environmental Management Plan ..................................................... (BLUE) 237</th>
</tr>
</thead>
</table>

**PART C4: SITE INFORMATION**

<table>
<thead>
<tr>
<th>C4.1</th>
<th>Locality Plan &amp; Co-ordinates .......................................................... (GREEN) 237</th>
</tr>
</thead>
<tbody>
<tr>
<td>C4.2</td>
<td>Construction Notice Board .................................................................. (GREEN) 237</td>
</tr>
<tr>
<td>C4.3</td>
<td>GRPS Drawing ..................................................................................... (GREEN) 237</td>
</tr>
<tr>
<td>C4.4</td>
<td>Topographical Survey ......................................................................... (GREEN) 237</td>
</tr>
</tbody>
</table>

**PART C5: ANNEXURES**

<table>
<thead>
<tr>
<th>C5.1</th>
<th>Geotechnical Report .......................................................................... (WHITE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C5.2</td>
<td>Health and Safety Specifications ....................................................... (WHITE)</td>
</tr>
<tr>
<td>C5.3</td>
<td>Environmental Management Plan ....................................................... (WHITE)</td>
</tr>
</tbody>
</table>
EKURHULENI METROPOLITAN MUNICIPALITY

DEPARTMENT NAME: WATER & SANITATION DEPARTMENT

CONTRACT NO: WS 01-2017

FOR

THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 M€ ELEVATED WATER TOWER IN NORTHMEAD BENONI

PART T1 BIDDING PROCEDURES

<table>
<thead>
<tr>
<th>T1.1</th>
<th>BID NOTICE AND INVITATION TO BID</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1.2</td>
<td>BID DATA</td>
<td>11</td>
</tr>
</tbody>
</table>
EKURHULENI METROPOLITAN MUNICIPALITY

Bids are hereby invited for the following:

**WATER AND SANITATION Projects**

<table>
<thead>
<tr>
<th>CONTRACT NO.:</th>
<th>DESCRIPTION:</th>
<th>DOC. FEE</th>
<th>CLOSING DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS 01-2017</td>
<td>The appointment of a contractor for the construction of the 5,5 mℓ elevated water tower in Northmead Benoni</td>
<td>R400.00</td>
<td>13 DECEMBER 2016</td>
</tr>
</tbody>
</table>

Bidders must note that this bid may be awarded to more than one bidder. Bidders must note that certain works under this Bid may only be constructed using labour-based construction methods and must limit the utilization of their permanently employed personnel to Key Personnel and all other personnel and labourers must be recruited locally.

Bidders must note that only steel conveyance pipes that is 80% locally produced or locally manufactured and from local raw material or input will be considered.

Bidders must be registered with the Construction Industry Development Board (CIDB) in a contractor grading designation determined in accordance with the sum tendered for an 8 CE class of construction work. Enterprises who have a 7 CEPE grading may also submit bids.

Acceptable bids will be evaluated by using a system that awards points on the basis of 90 points for bid price and a maximum of 10 points for the Broad-Based Black Economic Empowerment (B-BBEE) status level of contributor and functionality as contained in the bid document.

Please note that a valid original or copy of a company’s tax clearance certificate (or in the case of a joint venture, of all the partners in the joint venture) must be submitted with the bid document.

Bid documentation will be available as from 12:00 on MONDAY, 14 NOVEMBER 2016, and thereafter on weekdays from 08:00 until 15:00 ONLY, upon payment of a cash non-refundable document fee of R400-00 per set, at the Tender Offices, Ground Floor, 68 Woburn Avenue, Benoni. (Tel. No. (011) 999-6540/6567)

A compulsory information session will be held at 10:00 on TUESDAY, 22 NOVEMBER 2016. Prospective bidders are requested to meet on the said date and time at: THE RESERVOIR SITE, CORNER AERODROME DRIVE AND FARRAR STREET, NORTHMEAD, BENONI, (GPS: 26° 9'45.96"S, 28°18'35.48"E). Bid documentation will not be available at the compulsory information session.

Bids are to be completed in accordance with the conditions and bid rules contained in the bid documents and supporting documents must be sealed and externally endorsed with the CONTRACT NUMBER AND DESCRIPTION and placed in bid box number FOUR (04), on the Ground Floor, 68 Woburn Avenue, Benoni, not later than 10:00 on TUESDAY, 13 DECEMBER 2016. Bids will be opened immediately thereafter, in public, in the Conference Room, Ground Floor, at above-mentioned address. All bids shall hold good for 120 days as from the closing date of bids.

Bids which are not received and/or deposited in the specified bid box before 10:00 on the closing date for the bid mentioned hereinbefore, will be marked as late bids and such bids shall in terms of the SCM Policy of the Ekurhuleni Metropolitan Municipality, not be considered by the Council as valid bids.

Enquiries must be directed to Ms. Sibongile Mbonani at e-mail address Sibongile.Mbonani@ekurhuleni.gov.za

Bidders attention is specifically drawn to the provisions of the bid rules which are included in the bid documents. The lowest or any bid will not necessarily be accepted and the Council reserves the right not to consider any bid not suitably endorsed or comprehensively completed, as well as the right to accept a bid in whole or part.
Bids completed in pencil will be regarded as invalid bids. Bids may only be submitted on the documentation provided by the EMM.

TELEFAX OR E-MAIL BIDS ARE NOT ACCEPTABLE

DR. I. MASHAZI
ACTING CITY MANAGER
EMM
# T1.2 BID DATA

The conditions of bid are the Standard Conditions of Tender as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement, Board Notice 136 Government Gazette No 38960 of 10 July 2015. A copy is attached hereto, immediately after page 22.

The under mentioned items of data and deviations will have precedence over the Standard Conditions of bid conditions in Annex F.

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

<table>
<thead>
<tr>
<th>Clause number</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>F.1.1 ACTIONS</td>
<td>The Employer is: The City Manager Ekurhuleni Metropolitan Municipality Private Bag 1069 Germiston 1400</td>
</tr>
<tr>
<td>F.1.2 TENDER DOCUMENTS</td>
<td>The bid documents issued by the Employer comprise:</td>
</tr>
<tr>
<td></td>
<td><strong>VOLUME 1</strong></td>
</tr>
<tr>
<td></td>
<td><strong>THE BID</strong></td>
</tr>
<tr>
<td>Part T1 Bidding procedures</td>
<td>Part T1.1 Bid notice and invitation to bid Part T1.2 Bid data</td>
</tr>
<tr>
<td>Part T2 Returnable documents</td>
<td>Part T2.1 List of returnable documents Part T2.2 Other document required for bid evaluation purposes Part T2.3 Returnable schedules that will be incorporated in the Contract</td>
</tr>
<tr>
<td></td>
<td><strong>VOLUME 2</strong></td>
</tr>
<tr>
<td></td>
<td><strong>THE CONTRACT</strong></td>
</tr>
<tr>
<td>Part C1 Agreements and contract data</td>
<td>C1.1 Form of offer and acceptance C1.2 Contract data C1.3 Form of Guarantee C1.4 Agreement in terms of Occupational Health and Safety Act, 1993 C1.5 Declaration of Insurances C1.6 Blasting Indemnity</td>
</tr>
<tr>
<td>Part C2 Pricing Data</td>
<td>C2.1 Pricing Instructions C2.2 Bill of Quantity</td>
</tr>
</tbody>
</table>
### Clause number

<table>
<thead>
<tr>
<th>VOLUME 2</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part C3</strong></td>
<td><strong>Scope of Works</strong></td>
</tr>
<tr>
<td>C3.1</td>
<td>Description of Works</td>
</tr>
<tr>
<td>C3.2</td>
<td>Engineering</td>
</tr>
<tr>
<td>C3.3</td>
<td>Procurement</td>
</tr>
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<td>C3.4</td>
<td>Construction</td>
</tr>
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<td>C3.5</td>
<td>Management of the Works</td>
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<tr>
<td>C3.6</td>
<td>Health and Safety</td>
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<tr>
<td>C3.7</td>
<td>Environmental Management Plan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Part C4</strong></th>
<th><strong>Site Information</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>C4.1</td>
<td>Locality Plan &amp; Co-ordinates</td>
</tr>
<tr>
<td>C4.2</td>
<td>Construction Notice Board</td>
</tr>
<tr>
<td>C4.3</td>
<td>GRPS Drawing</td>
</tr>
<tr>
<td>C4.4</td>
<td>Topographical Survey</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Part C5</strong></th>
<th><strong>Annexures</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>C5.1</td>
<td>Geotechnical Report</td>
</tr>
<tr>
<td>C5.2</td>
<td>Health and Safety Specifications</td>
</tr>
<tr>
<td>C5.3</td>
<td>Environmental Management Plan</td>
</tr>
</tbody>
</table>

### VOLUME 3

#### Drawings

<table>
<thead>
<tr>
<th>F.1.4</th>
<th>COMMUNICATION AND EMPLOYER'S AGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Employer's agent is:</td>
<td></td>
</tr>
<tr>
<td>Name: Ekurhuleni Metropolitan Municipality: Department Water and Sanitation</td>
<td></td>
</tr>
<tr>
<td>Address: Boksburg Civic Centre, Corner Pritchard &amp; Market</td>
<td></td>
</tr>
<tr>
<td>Fax: (086) 581-8542</td>
<td></td>
</tr>
<tr>
<td>Email: <a href="mailto:Sibongile.Mbonani@ekurhuleni.gov.za">Sibongile.Mbonani@ekurhuleni.gov.za</a></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>F.2.1</th>
<th>ELIGIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only those bidders who are registered with the CIDB in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 8 CE class of construction work, or by a contractor who is registered as a potential emerging enterprise in terms of these regulations at a contractor grading designation one level lower than the required class as specified above are eligible to submit bids, provided that the employer:</td>
<td></td>
</tr>
</tbody>
</table>

(a) Is satisfied that such a contractor has the potential to develop and qualify to be registered in that higher grade; and

(b) Ensures that financial, management or other support is provided to that contractor to enable the contractor to successfully execute that contract.

Joint Ventures are eligible to submit bids provided that:

1. each member of the joint venture is registered with the CIDB,
2. the lead partner has a contractor grading designation in the 7 CE class of construction work; and
3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations (according to the CIDB website Joint Venture Grading Designation Calculator) is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 8 CE class of construction work.

<table>
<thead>
<tr>
<th>F.2.7</th>
<th>CLARIFICATION MEETING</th>
</tr>
</thead>
<tbody>
<tr>
<td>The arrangements for a compulsory information session are:</td>
<td></td>
</tr>
<tr>
<td>Location: Cnr Aerodrome Drive and Farrar Street, Northmead, Benoni</td>
<td></td>
</tr>
<tr>
<td>Date: <strong>TUESDAY, 22 NOVEMBER 2016</strong> Starting time: <strong>10:00</strong></td>
<td></td>
</tr>
<tr>
<td>Clause number</td>
<td>Data</td>
</tr>
<tr>
<td>--------------</td>
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</tr>
<tr>
<td>F.2.12</td>
<td><strong>ALTERNATIVE TENDER OFFERS</strong> If a bidder wishes to submit an alternative bid offer, the only criteria permitted for such alternative bid offer is that it demonstrably satisfies the Employer's standards and requirements, the details of which may be obtained from the Employer's Engineer. Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative bid offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative satisfies the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal. Acceptance of an alternative bid offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the bidder, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements.</td>
</tr>
<tr>
<td>F.2.13.3</td>
<td><strong>SUBMITTING A TENDER OFFER</strong> The <strong>whole original</strong> bid document, <strong>as issued by the EMM</strong>, shall be submitted. <strong>No copies will be accepted.</strong> THE BIDDER MAY SUBMIT, TOGETHER WITH THE FULLY COMPLETED BID DOCUMENT, A CD WITH A COPY IN PDF FORMAT OF THE ORIGINAL COMPLETED BILL OF QUANTITIES/PRICING SCHEDULE. THIS CD MAY BE USED WHENEVER THERE IS A DISPUTE BETWEEN THE BIDDER AND EMM. Bids may only be submitted on the Bid documentation issued by the EMM.</td>
</tr>
<tr>
<td>F.2.13.5</td>
<td><strong>SUBMITTING A TENDER OFFER</strong> The Employer's address for delivery of bid offers and identification details to be shown on each bid offer package are: Location of bid box: Bid box number FOUR (04) Physical address: Finance Head Office Building Ground Floor 68 Woburn Avenue Benoni Identification details: Contract Number: <strong>WS 01 - 2017</strong> <strong>The Construction of the 5,5 Mℓ Elevated Water Tower in Northmead Benoni</strong></td>
</tr>
<tr>
<td>F.2.15</td>
<td><strong>CLOSING TIME</strong> The closing time for submission of bid offers is: <strong>10:00 on on TUESDAY, 13 DECEMBER 2016</strong> Telephonic, telegraphic, telex, facsimile or e-mailed bid offers will <strong>not</strong> be accepted.</td>
</tr>
<tr>
<td>F.2.16</td>
<td><strong>TENDER OFFER VALIDITY</strong> The bid offer validity period is <strong>120 days.</strong></td>
</tr>
<tr>
<td>F.2.18</td>
<td><strong>PROVIDE OTHER MATERIAL</strong> The tenderer is required to submit with his tender a bank rating, certified by his banker, to the effect that he will be able to successfully complete the contract at the tendered amount within the specified time for completion. However, should the Tenderer be unable to provide a bank rating with his tender, he shall state the reasons as to why he is unable to do so, and in addition provide the following details of his banker and bank account that he intends to use for the project.</td>
</tr>
<tr>
<td>F.2.19</td>
<td>Access shall be provided for the following inspections: Site inspection at the site as per Scope</td>
</tr>
</tbody>
</table>
### Clause number

<table>
<thead>
<tr>
<th>Clause number</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSPECTIONS, TESTS AND ANALYSIS</td>
<td>of Works</td>
</tr>
<tr>
<td>F.2.20 SUBMIT SECURITIES, BONDS, POLICIES, ETC.</td>
<td>The tenderer is required to submit with this tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part C1.3 of this procurement document.</td>
</tr>
<tr>
<td>F.2.23 CERTIFICATES</td>
<td>The bidder is required to submit with his bid.</td>
</tr>
</tbody>
</table>

1. In order to obtain B-BBEE Status Level points in terms of the provisions of Regulations 5(2) or 6(2) of the Preferential Procurement Regulations, 2011 if a bidder is not an Exempted Micro Enterprise (EME) in terms of the Broad-Based Black Economic Empowerment Act, Act No. 53 of 2003, a certificate issued by a registered accounting officer (as contemplated in section 60(4) of the Close Corporation Act, Act No. 69 of 1984) or an accredited verification agency, in compliance with the requirements of Regulation 10 of the Preferential Procurement Regulations, 2011;

2. In order to obtain B-BBEE Status Level points in terms of the provisions of Regulations 5(2) or 6(2) of the Preferential Procurement Regulations, 2011 if a bidder is not an Exempted Micro Enterprise (EME) in terms of the Broad-Based Black Economic Empowerment Act, Act No. 53 of 2003, an original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating its B-BBEE rating, in compliance with the requirements of Regulation 10 of the Preferential Procurement Regulations, 2011;

3. A valid original Tax Clearance Certificate or copy thereof, issued by the South African Revenue Services;

4. If a bidder is a registered company required by law to have its annual financial statements audited or independently reviewed in compliance with the requirements of the Companies Act, Act No. 71 of 2008, or any other law, audited or independently reviewed annual financial statements, as the case may be, prepared within six (6) months of the end of the bidders most recent financial year together with the audited or independently reviewed annual financial statements for the two immediately preceding financial years, unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted.

5. If a bidder is a registered close corporation, annual financial statements in compliance with the provisions of the Close Corporations Act, Act No. 69 of 1984, prepared within nine (9) months of the end of the bidders most recent financial year together with the annual financial statements for the two immediately preceding financial years, unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted.

6. Annual financial statements submitted must comply with the requirements of the Companies Act or the Close Corporations Act.

7. If the bidder only commenced business within the past three years, the bidder is required to submit annual financial statements in compliance with the provisions of (1) and (2) above for each of its financial years since commencing business.
If a bidder is not required by law to have its annual financial statements audited or independently reviewed, or is not a Close Corporation, then non-audited annual financial statements for the periods referred to above must be submitted.

The tenderer is required to submit with his Bid as Part T2 Returnable Documents:

- Form 2.1.4 Proposed Key Personnel
- Form 2.1.5 Schedule of Previous work carried out by Bidder
- Form 2.2.16 Quality Control Procedures
- Form 2.2.17 Proposed Programme and Method Statement

The associated scores used in the evaluation of functionality shall be as follows:

<table>
<thead>
<tr>
<th>Quality Criteria</th>
<th>Sub-criteria</th>
<th>Less than requirement / threshold</th>
<th>Min. Number of points</th>
<th>Max. Number of points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience of the key staff (assigned personnel) in relation to the scope of work (Please attach proof of evidence to Form 2.1.4 CV’s and Qualification)</td>
<td>Qualifications and experience of Project Manager (After Qualification)</td>
<td></td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>NQF6 or higher with Project Management:</td>
<td></td>
<td>3 – 5 years</td>
<td>(15/20)</td>
</tr>
<tr>
<td></td>
<td>Qualifications and experience of the Site Agent (After Qualification)</td>
<td></td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Nation Diploma NQF6 (Civil) or higher:</td>
<td></td>
<td>3 – 5 years</td>
<td>(10/20)</td>
</tr>
<tr>
<td></td>
<td>Qualifications and experience of the Safety Officer</td>
<td></td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Aaccredited by SAMTRAC or similar Safety Certificate: REGISTERED WITH SACPCMP</td>
<td></td>
<td>3 – 5 years</td>
<td>(10/20)</td>
</tr>
<tr>
<td>Company experience with respect to specific aspects of the project / comparable projects (Please attach proof of evidence to Form 2.1.5 Completion Certificate)</td>
<td>Previous similar water tower and reservoir or water retaining structures projects experience as provided in the Returnable Schedule 2.1.5</td>
<td></td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Projects completed</td>
<td></td>
<td>3 Mℓ to 4 Mℓ</td>
<td>(20/30)</td>
</tr>
<tr>
<td>Quality Management System (QMS)</td>
<td>Evidence of QMS standard (5 points)</td>
<td></td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Evidence of QMS accreditation – ISO or Approved Similar (10 points)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Score Range</td>
<td>Bidders scoring less than 60 points will not be considered. Bidders to score minimum points on each discipline. Zero in any of above discipline or requirement will be a disqualification.</td>
<td></td>
<td>0</td>
<td>60</td>
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<tr>
<td>Clause number</td>
<td>Data</td>
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<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>F.3.13.1</td>
<td><strong>ACCEPTANCE OF BID OFFERS</strong></td>
<td></td>
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<tr>
<td></td>
<td>Bids containing any one or more of the errors or omissions, or bids not having complied with any one of the peremptory bid conditions as detailed on pages 2 and 3 of this bid document, shall not be considered and shall automatically be rejected.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>F.3.17</td>
<td><strong>PROVIDE COPIES OF THE CONTRACTS</strong></td>
<td></td>
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<tr>
<td></td>
<td>The number of paper copies of the signed contract to be provided by the Employer is <strong>one</strong>.</td>
<td></td>
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<tr>
<td>F.3.4</td>
<td><strong>OPENING OF BID SUBMISSIONS</strong></td>
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<td></td>
<td>The time and location for opening of the bid offers are:</td>
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<td></td>
<td>Immediately after the closing time for submission of bid.</td>
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<td></td>
<td>Location: Conference Room</td>
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<tr>
<td></td>
<td>Ground Floor</td>
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<tr>
<td></td>
<td>EMM Finance Head Office</td>
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<td></td>
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<tr>
<td></td>
<td>68 Woburn Avenue</td>
<td></td>
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<tr>
<td></td>
<td>BENONI</td>
<td></td>
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<tr>
<td>F.3.5</td>
<td><strong>TWO-ENVELOPE SYSTEM</strong></td>
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<td></td>
<td>A two-envelope procedure will <strong>not</strong> be followed.</td>
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<tr>
<td>F.3.9</td>
<td><strong>ARITHMETICAL ERRORS</strong></td>
<td></td>
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<tr>
<td>3.9.1</td>
<td>Replace the contents of the clause with the following:</td>
<td></td>
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<tr>
<td></td>
<td>“Check responsive tender offers for arithmetical errors, correcting them in the following manner:</td>
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<tr>
<td></td>
<td>a) Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern.</td>
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<td></td>
<td>b) If bills of quantities (or schedule of quantities or schedule of rates) apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the rate shall govern and the line item total shall be corrected.</td>
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<td></td>
<td>c) Where there is an error in the total of the prices either as a result of corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall be adjusted to reflect the arithmetically correct summation of corrected line item totals.</td>
<td></td>
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<tr>
<td></td>
<td>Consider the rejection of a tender offer if the tenderer does not accept the correction of the arithmetical errors in the manner described above.”</td>
<td></td>
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<tr>
<td>F.3.11</td>
<td><strong>EVALUATION OF BID OFFERS</strong></td>
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<tr>
<td></td>
<td>The preference procedure for evaluation of responsive bid offers shall be the <strong>90/10</strong> point preference system, being a maximum of 90 points for price and a maximum of 10 points for B-BBEE Status level of Contributor substantiated by the Broad-Based Black Economic Empowerment Status Level Certificate to be submitted in accordance with Regulation 10 of the Preferential Procurement Regulations, 2011, in full compliance with Form 2.3.3.</td>
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<td></td>
<td>The mandatory CIDB Grading criteria and the quality criteria, as the special criteria will be used.</td>
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<tr>
<td>F.3.13.1</td>
<td><strong>ACCEPTANCE OF BID OFFERS</strong></td>
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<tr>
<td></td>
<td>Bids containing any one or more of the errors or omissions, or bids not having complied with any one of the peremptory bid conditions as detailed on pages 2 and 3 of this bid document, shall not be considered and shall automatically be rejected.</td>
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<tr>
<td>Clause number</td>
<td>Data</td>
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<tr>
<td>F.3.17 PROVIDE COPIES OF THE CONTRACTS</td>
<td>The number of paper copies of the signed contract to be provided by the Employer is one.</td>
<td></td>
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</tr>
<tr>
<td>F.4 ADDITIONAL CONDITIONS APPLICABLE TO THIS BID</td>
<td>The additional conditions of bid are:</td>
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</tr>
<tr>
<td></td>
<td>1 The Employer/Engineer may also request that the bidder provide written evidence that his financial, labour and other resources are adequate for carrying out the contract.</td>
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<tr>
<td></td>
<td>2 The Employer reserves the right to appoint a firm of chartered accountants and auditors and/or execute any other financial investigations on the financial resources of any bidder. The bidder shall provide all reasonable assistance in such investigations.</td>
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<td></td>
<td>3 The bid document shall be submitted as a whole and shall not be taken apart.</td>
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</tr>
<tr>
<td></td>
<td>4 <strong>List of returnable documents (PART T2) must be completed in full.</strong> <em>(A bidder’s company profile will not be used by the EMM to complete PART T2 on behalf of the bidder)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 Minimum requirements as per Functionality Criteria.</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td><strong>NB: If PART T2 is not completed in full by the bidder, this offer will be rejected.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F4.1 COMPLIANCE WITH OCCUPATIONAL HEALTH AND SAFETY ACT 1993</td>
<td>Tenderers are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993: Construction Regulations, 2014 issued in terms of Section 43 of the Act. The tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.</td>
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<tr>
<td></td>
<td>In terms of Clause 4.(1), the client (Employer) shall be responsible for the following in order to ensure compliance with the provisions of the Act:</td>
<td></td>
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<tr>
<td></td>
<td>a) to prepare a health and safety specifications for the construction work, and provide any principal contractor who is making a bid or appointed to perform construction work for the client with the same: See Volume 2, Scope of Work &amp; Specifications, Part C 3.6 Health and Safety</td>
<td></td>
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<tr>
<td></td>
<td>b) to ensure that every principal contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to work commencing on site; and</td>
<td></td>
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<tr>
<td></td>
<td>c) to ensure that potential principal contractors (Contractors) submitting tenders, have made provision for the cost of health and safety measures during the construction process: See Volume 2, Returnable Documents, Part C 2.2 Schedule of Quantities</td>
<td></td>
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</tbody>
</table>

**Risk Assessment** *(Construction Regulations, Regulation 9)*

The Contractor shall before the commencement of any construction work and during construction work, cause a risk assessment to be performed by a competent person (appointed in writing). The risk assessment shall be written in the form of a matrix consisting of 6 columns at the top and however many rows for all the risks listed on the left hand side. Column 1 will be for the task, column 2 for the reference number used for that task Column 3 for the hazard, column 4 for the risk, column 5 for the category (Health, Safety, or Environmental), and column 6 for the risk score. The risk assessment shall form part of the Health and Safety Plan to be applied on the site and shall include at least:

<p>| | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>a) The identification of the risks and hazards to which persons may be exposed</td>
<td>b) The analysis and evaluation of the risks and hazards identified based on a documented method;</td>
</tr>
<tr>
<td>c) A documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;</td>
<td>d) A monitoring plan; and</td>
</tr>
</tbody>
</table>
Clause number | Data
--- | ---
e) A review plan. **NOTE: Detailed Risk Assessment as per sections C3.6.1 and Annexure C5.2**

**F4.2 QUALITY MANAGEMENT**

Only Contractors capable of testing and commissioning of plant and equipment to the quality standards required under this tender will be considered. Materials and components used by the Contractor shall comply with the requirements of the specification and, in addition, shall be of demonstrated quality for the purpose for which they are intended. Tenderers will be required, to understand and demonstrate compliance with these requirements by the submission of their Quality System at the time of tender.

The Quality System shall take the form of a coordinated and formally documented statement and shall include quality management objectives, policies, organisation, procedures and work instructions that demonstrate the Contractor's implementation of the requirements of ISO 9001/2000 Code for Quality Management Systems.

The Tenderer shall submit an assessment report on his Quality System with his tender. The assessment report shall be issued by an independent quality assurance authority, and shall have been carried out not more than 12 months prior to the date of submission of this tender.

The Tenderer shall at the time of tender submit a Project Specific Quality Control Plan.

The Tenderer shall at the time of tender submit the names of all staff responsible for administration of the Contract, the quality assurance procedures, and control of the quality of material and components to be used in the manufacture of the plants and equipment. Curriculum Vitae for each employee so nominated and the Quality Manager responsible for implementation of the Quality System shall also be submitted.

**F4.3 CLAIMS ARISING AFTER SUBMISSION OF TENDER**

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

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

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

Standard Conditions of Tender


F.1 General

F.1.1 Actions

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

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

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

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

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

F.1.2 Tender Documents

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

F.1.3 Interpretation

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

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

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

a) **conflict of interest** means any situation in which:
   i) someone in a position of trust has competing professional or personnel interests which make it difficult to fulfil his or her duties impartially;
   ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personnel or corporate benefit; or
iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.

b) **comparative offer** means the tenderer's financial offer after all tendered parameters that will affect the value of the financial offer have been taken into consideration in order to enable comparisons to be made between offers on a comparative basis

c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process; and

d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels

e) **organization** means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body

f) **functionality** means the measurement according to the predetermined norms of a service or commodity designed to be practical and useful, working or operating, taking into account quality, reliability, viability and durability of a service and technical capacity and ability of a tenderer.

**F.1.4 Communication and Employer’s agent**

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

**F.1.5 Cancellation and Re-Invitation of Tenders**

F1.5.1 An organ of state may, prior to the award of the tender, cancel a tender if-

(a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or

(b) funds are no longer available to cover the total envisaged expenditure; or

(c) no acceptable tenders are received.

F1.5.2 The decision to cancel a tender must be published in the CIDB website and in the government Tender Bulletin for the media in which the original tender invitation was advertised.

**F.1.6 Procurement procedures**

F.1.6.1 **General**

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

F.1.6.2 **Competitive negotiation procedure**

F.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of F.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of F.3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

F.1.6.2.2 All responsive tenderers, or not less than three responsive tenderers that are highest ranked in terms of the evaluation method and evaluation criteria stated in the tender data, shall be invited in each round to enter into competitive negotiations, based on the principle of equal
treatment and keeping confidential the proposed solutions and associated information. Notwithstanding the provisions of F.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer’s competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

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

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

F.1.6.3 Proposal procedure using the two stage-system

F.1.6.3.1 Option 1
Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

F.1.6.3.2 Option 2
F.1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.
F.1.6.3.2.2 The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

F.2 Tenderer’s obligations

F.2.1 Eligibility
F.2.1.1 Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.
F.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer’s written approval to do so prior to the closing time for tenders.

F.2.2 Cost of tendering
F.2.2.1 Accept that, unless otherwise stated in the tender data, the Employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.
F.2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.
F.2.3 Check documents
Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.

F.2.4 Confidentiality and copyright of documents
Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the Employer only for the purpose of preparing and submitting a tender offer in response to the invitation.

F.2.5 Reference documents
Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

F.2.6 Acknowledge addenda
Acknowledge receipt of addenda to the tender documents, which the Employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

F.2.7 Clarification meeting
Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

F.2.8 Seek clarification
Request clarification of the tender documents, if necessary, by notifying the Employer at least five working days before the closing time stated in the tender data.

F.2.9 Insurance
Be aware that the extent of insurance to be provided by the Employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.

F.2.10 Pricing the tender offer
F.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes (except Value Added Tax (VAT)), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable 14 days before the closing time stated in the tender data.

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

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

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

F.2.11 Alterations to documents
Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the Employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations. Erasures and the use of masking fluid are prohibited.
F.2.12 Alternative tender offers

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

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

F.2.12.3 An alternative tender offer may only be considered in the event that the main tender offer is the winning tender.

F.2.13 Submitting a tender offer

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

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

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

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

F.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as “ORIGINAL” and “COPY”. Each package shall state on the outside the employer’s address and identification details stated in the tender data, as well as the tenderer’s name and contact address.

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

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

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

F.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

F.2.14 Information and data to be completed in all respects
Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.

F.2.15 Closing time

F.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

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

F.2.16 Tender offer validity

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

F.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.

F.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted.

F.2.16.4 Where a tender submission is to be substituted, submit a substitute tender in accordance with the requirements of F.2.13 with the packages clearly marked as “SUBSTITUTE”.

F.2.17 Clarification of tender offer after submission

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

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

F.2.18 Provide other material

F.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment. Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

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

F.2.19 Inspections, tests and analysis

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

F.2.20 Submit securities, bonds, policies, etc.
If requested, submit for the employer’s acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.

F.2.21 Check final draft
Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

F.2.22 Return of other tender documents
If so instructed by the employer, return all retained tender documents within 28 days after the expiry of the validity period stated in the tender data.

F.2.23 Certificates
Include in the tender submission or provide the employer with any certificates as stated in the tender data.

F.3 The employer’s undertakings

F.3.1 Respond to requests from the tenderer

F.3.1.1 Unless otherwise stated in the tender Data, respond to a request for clarification received up to five working days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.

F.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:
   a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
   b) the new partners to a joint venture were not prequalified in the first instance, wither as individual firms or as another joint venture; or
   c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

F.3.2 Issue Addenda
If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who drew documents.

F.3.3 Return late tender offers
Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

F.3.4 Opening of tender submissions

F.3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers’ agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.
F.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points claimed for its BBBEE status level and time for completion for the main tender offer only.

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

F.3.5 Two-envelope system

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

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

F.3.6 Non-disclosure
Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

F.3.7 Grounds for rejection and disqualification
Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.

F.3.8 Test for responsiveness

F.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:
   a) complies with the requirements of these Conditions of Tender,
   b) has been properly and fully completed and signed, and
   c) is responsive to the other requirements of the tender documents.

F.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:
   a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
   b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
   c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.
Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.

F.3.9 Arithmetical errors, omissions and discrepancies
F.3.9.1 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 for:

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

F3.9.2 The employer must correct the arithmetical errors in the following manner:

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

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

F.3.10 Clarification of a tender offer

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

F.3.11 Evaluation of tender offers

F.3.11.1 General

Appoint an evaluation panel of not less than three persons. Reduce each responsive tender offer to a comparative offer and evaluate them using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

F.3.11.2 Method 1: Price and Preference

In the case of a price and preference:

1) Score tender evaluation points for price
2) Score points for BBBEE contribution
3) Add the points scored for price and BBBEE.

F.3.11.3 Method 2: Functionality, Price and preference

In the case of a functionality, price and preference:

1) Score functionality, rejecting all tender offers that fail to achieve the minimum number of points for functionality as stated in the Tender Data.
2) No tender must be regarded as an acceptable tender if it fails to achieve the minimum qualifying score for functionality as indicated in the tender invitation.

3) Tenders that have achieved the minimum qualification score for functionality must be evaluated further in terms of the preference points system prescribed in paragraphs 4 and 4 and 5 below.

The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R1 million

4) (a)(i) The following formula must be used to calculate the points for price in respect of tenders (including price quotation) with a rand value equal to, or above R 30 000 and up to Rand value of R 1 000 000 (all applicable taxes included):

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

Where
- \(P_s\) = Points scored for comparative price of tender or offer under consideration;
- \(P_t\) = Comparative price of tender or offer under consideration; and
- \(P_{\text{min}}\) = Comparative price of lowest acceptable tender or offer.

(4)(a)(ii) An employer of state may apply the formula in paragraph (i) for price quotations with a value less than R30 000, if and when appropriate:

(4)(b) Subject to subparagraph(4)(c), points must be awarded to a tender for attaining the B-BBEE status level of contributor in accordance with the table below:

<table>
<thead>
<tr>
<th>B-BBEE status level of contributor</th>
<th>Number of points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
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<tr>
<td>3</td>
<td>16</td>
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<tr>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Non-compliant contributor</td>
<td>0</td>
</tr>
</tbody>
</table>

(4)(c) A maximum of 20 points may be allocated in accordance with subparagraph (4)(b)

(4)(d) The points scored by tender in respect of B-BBEE contribution contemplated in subparagraph (4)(b) must be added to the points scored for price as calculated in accordance with subparagraph (4)(a).

(4)(e) Subject to paragraph 4.3.8 the contract must be awarded to the tender who scores the highest total number of points.

The 90/10 preference points system for acquisition of services, works or goods with a Rand value above R 1 million

(5)(a) The following formula must be used to calculate the points for price in respect of tenders with a Rand value above R1 000 000 (all applicable taxes included):

\[
P_s = 90 \left(1 - \frac{P_t - P_{\text{min}}}{P_{\text{min}}} \right)
\]
Where
\[ Ps = \text{Points scored for comparative price of tender or offer under consideration;} \]
\[ Pt = \text{Comparative price of tender or offer under consideration;} \]
\[ P_{\text{min}} = \text{Comparative price of lowest acceptable tender or offer.} \]

(5)(b) Subject to subparagraph (5)(c), points must be awarded to a tender for attaining the B-BBEE status level of contributor in accordance with the table below:

<table>
<thead>
<tr>
<th>B-BBEE status level of contributor</th>
<th>Number of points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
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<tr>
<td>2</td>
<td>9</td>
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<tr>
<td>3</td>
<td>8</td>
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<td>6</td>
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<tr>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Non-compliant contributor</td>
<td>0</td>
</tr>
</tbody>
</table>

(5)(c) A maximum of 10 points may be allocated in accordance with subparagraph (5)(b).

(5)(d) The points scored by tender in respect of B-BBEE contribution contemplated in subparagraph (5)(b) must be added to the points scored for price as calculated in accordance with subparagraph (5)(a).

(5)(e) Subject to paragraph 4.3.8 the contract must be awarded to the tender who scores the highest total number of points.

**F.3.11.4 Method 3 : Financial offer and quality**

In the case of a financial offer and quality:

a) Score each tender in respect of the financial offer made and the quality offered in accordance with the provisions of F.3.11.7 and F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.

b) Calculate the total number of tender evaluation points \( (T_{\text{EV}}) \) in accordance with the following formula:
\[ T_{\text{EV}} = N_{\text{FO}} + N_{\text{Q}} \]
where:
\[ N_{\text{FO}} \] is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
\[ N_{\text{Q}} \] is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

c) Rank tender offers from the highest number of tender evaluation points to the lowest.

d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub clause is repeated.
F.3.11.5 Method 4: Financial offer, quality and preferences

In the case of a financial offer, quality and preferences:

a) Score each tender in respect of the financial offer made, preferences claimed, if any, and the quality offered in accordance with the provisions of F.3.11.7 to F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.

b) Calculate the total number of tender evaluation points (TEV) in accordance with the following formula:

\[ \text{TEV} = N_{FO} + N_P + N_Q \]

where:
- \( N_{FO} \) is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
- \( N_P \) is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8;
- \( N_Q \) is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

c) Rank tender offers from the highest number of tender evaluation points to the lowest.

d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub clause is repeated.

F.3.11.6 Decimal Places

Score price, preferences and functionality, as relevant, to two decimal places.

F.3.11.7 Scoring Financial Offers

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

\[ N_{FO} = W_1 \times A \]

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

<table>
<thead>
<tr>
<th>Table F.1: Formulae for calculating the value of A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
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<tr>
<td>---------</td>
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<tr>
<td>1</td>
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<tr>
<td>2</td>
</tr>
</tbody>
</table>

* \( P_m \) is the comparative offer of the most favourable tender offer.
* \( P \) is the comparative offer of tender offer under consideration.

F.3.11.8 Scoring preferences

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

Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the tender data.
F.3.11.9 Scoring quality
Score each of the criteria and sub criteria for quality in accordance with the provisions of the Tender Data.

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

\[ N_Q = W_2 \times \frac{S_Q}{M_S} \]

where:
- \( S_Q \) is the score for quality allocated to the submission under consideration;
- \( M_S \) is the maximum possible score for quality in respect of a submission; and
- \( W_2 \) is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data.

F.3.12 Insurance provided by the employer
If requested by the proposed successful tenderer, submit for the tenderer's information the policies and/or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

F.3.13 Acceptance of tender offer
Accept tender offer, if in the opinion of the employer, it does not present any risk and only if the tenderer:

a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,

b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,

c) has the legal capacity to enter into the contract,

d) is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of Companies Act, 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,

e) complies with the legal requirements, if any, stated in the tender data, and

f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

F.3.14 Prepare contract documents

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

a) addenda issued during the tender period,

b) inclusion of some of the returnable documents,

c) other revisions agreed between the employer and the successful tenderer, and

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

F.3.15 Complete adjudicator's contract
Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

F.3.16 Notice to unsuccessful tenderers
F.3.16.1 Notify the successful tenderer of the employer’s acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period.

F.3.16.2 After the successful tenderer has been notified of the employer’s acceptance of the tender, notify other tenderers that their tender offers have not been accepted.

F.3.17 Provide copies of the contracts
Provide to the successful tenderer the number of copies stated in the Tender Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

F.3.18 Provide written reasons for actions taken
Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender, but withhold information which is not in the public interest to be divulged, which is considered to prejudge the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

F3.19 Transparency in the procurement process

F3.19.1 The CIDB prescripts require that tenders must be advertised and be registered on the CIDB i. Tender system.

F3.19.2 The employer must adopt a transparency model that incorporates the disclosure and accountability as transparency requirements in the procurement process.

F3.19.3 The transparency model must identify the criteria for selection of projects, project information template and the threshold value of the projects to be disclosed in the public domain at various intervals of delivery of infrastructure projects.

F3.19.4 The client must publish the information on a quarterly basis which contains the following information:
- Procurement planning process
- Procurement method and evaluation process
- Contract type
- Contract status
- Number of firms tendering
- Cost estimate
- Contract title
- Contract firm(s)
- Contract price
- Contract scope of work
- Contract start date and duration
- Contract evaluation reports

F3.19.5 The employer must establish a Consultative Forum which will conduct a random audit in the implementation of the transparency requirements in the procurement process.

F3.19.6 Consultative Forum must be an independent structure from the bid committees.

F3.19.7 The information must be published on the employer’s website.

F3.19.8 Records of such disclosed information must be retained for audit purposes.
EKURHULENI METROPOLITAN MUNICIPALITY

DEPARTMENT NAME:  WATER & SANITATION DEPARTMENT

CONTRACT NO:  WS 01-2017

FOR

THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

PART T2  LIST OF RETURNABLE DOCUMENTS
The bidder must complete the following returnable documents.

CONTENTS

<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>PAGE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T2.1 RETURNABLE SCHEDULES REQUIRED FOR BID EVALUATION PURPOSES</td>
<td>37</td>
</tr>
<tr>
<td>T2.2 OTHER DOCUMENTS REQUIRED FOR BID EVALUATION PURPOSES</td>
<td>50</td>
</tr>
<tr>
<td>T2.3 RETURNABLE SCHEDULES THAT WILL BE INCORPORATED IN THE CONTRACT</td>
<td>99</td>
</tr>
</tbody>
</table>

NOTE:
Although the documents under Part T2 is headed “Returnable Documents” in line with the CIDB model, these are not the only documents to be returned together with the bid. All the documents indicated on Part T1, must be completed and signed where applicable and submitted as a complete set of documents.
### T2.1 RETURNABLE SCHEDULES REQUIRED FOR BID EVALUATION PURPOSES

<table>
<thead>
<tr>
<th>SCHEDULE</th>
<th>PAGE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCHEDULE OF CONSTRUCTION PLANT</td>
<td>38</td>
</tr>
<tr>
<td>SIZE OF ENTERPRISE AND CURRENT WORKLOAD</td>
<td>40</td>
</tr>
<tr>
<td>STAFFING PROFILE</td>
<td>41</td>
</tr>
<tr>
<td>PROPOSED KEY PERSONNEL</td>
<td>42</td>
</tr>
<tr>
<td>SCHEDULE OF PREVIOUS WORK CARRIED OUT BY BIDDER</td>
<td>43</td>
</tr>
<tr>
<td>JOINT VENTURE/ CONSORTIUM AUTHORITY</td>
<td>44</td>
</tr>
<tr>
<td>SCHEDULE OF PROPOSED SUB CONTRACTORS</td>
<td>46</td>
</tr>
<tr>
<td>FINANCIAL REFERENCES (not required if CIDB grading applies)</td>
<td>47</td>
</tr>
<tr>
<td>DETAILS OF ALTERNATIVE BIDS SUBMITTED</td>
<td>48</td>
</tr>
<tr>
<td>AMENDMENTS &amp; QUALIFICATIONS BY BIDDER</td>
<td>48</td>
</tr>
<tr>
<td>LABOUR-ENHANCED METHODS: PROPOSED PLANNED ACTIONS OF BIDDER RESULTING IN DEVIATIONS FROM SPECIFIED WORK</td>
<td>49</td>
</tr>
</tbody>
</table>
Form 2.1.1 Schedule of Constructional Plant

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

<table>
<thead>
<tr>
<th>Description, Size, Capacity</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DESCRIPTION, SIZE, CAPACITY</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FORM 2.1.2 SIZE OF ENTERPRISE AND CURRENT WORKLOAD

What was your turnover in the previous financial year?  R________________________

What is the estimated turnover for your current financial year?  R________________________

Physical facilities:

Provide information on offices, factories, yards and warehouses occupied by your enterprise (attach details if the space provided is not enough)

<table>
<thead>
<tr>
<th>Description</th>
<th>Address</th>
<th>Area (m²)</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

SMME STATUS - (COMPULSORY)

TO BE COMPLETED FOR STATISTICAL PURPOSES ONLY AND WILL NOT BE USED FOR EVALUATION PURPOSES

Provide details on the following

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

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Value (R)</th>
<th>Start date</th>
<th>Duration</th>
<th>Expected completed date</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Do you have the capacity to supply the goods and services described in this bid, should the contract be awarded to you?

**FORM 2.1.3 STAFFING PROFILE**

Provide information on the staff that you have available to execute this contract (attach a separate list if the space provided is insufficient)

<table>
<thead>
<tr>
<th>Own staff:</th>
<th>Number of staff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staff to be employed for the project:</th>
<th>Number of staff</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
**FORM 2.1.4 PROPOSED KEY PERSONNEL**

The Bidder shall list below the key personnel (including first nominee and the second choice alternate), whom he proposes to employ on the project should his Bid be accepted, both at his headquarters and on the Site, to direct and for the execution of the work, together with their qualifications, experience, positions held and their nationalities.

<table>
<thead>
<tr>
<th>DESIGNATION</th>
<th>NAME OF (i) NOMINEE (ii) ALTERNATE</th>
<th>NATIONALITY</th>
<th>SUMMARY OF QUALIFICATIONS</th>
<th>EXPERIENCE AND PRESENT OCCUPATION</th>
<th>NQF 7 Certified Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEADQUARTERS</td>
<td>Partner/director</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project manager</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Other key staff (give designation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION MONITORING</td>
<td>Site Agent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Engineer on Site</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Construction supervisor (give designation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other key staff (give designation)</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
FORM 2.1.5 SCHEDULE OF PREVIOUS WORK CARRIED OUT BY BIDDER

Provide the following information on relevant previous experience. Indicate comparable projects of similar or larger size. This information is material to the award of the Contract. No points will be awarded if reference cannot be reached or if it refuses to supply information. Give at least two (2) names and telephone numbers and e-mail address per reference.

<table>
<thead>
<tr>
<th>EMPLOYER (Name, tel no and fax no)</th>
<th>CONSULTING ENGINEER (Name, tel no and fax no)</th>
<th>NATURE OF WORK CARRIED OUT PREVIOUSLY</th>
<th>VALUE OF WORK</th>
<th>YEAR OF COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
FORM 2.1.6  JOINT VENTURE/ CONSORTIUM AUTHORITY

JOINT VENTURE / CONSORTIUM INFORMATION

(Complete only if applicable)

The parties hereto form a Joint Venture/ Consortium for the purpose of jointly bidding and obtaining the award of contract for THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI and of jointly performing such contract under joint and several responsibility.

The share of the partners in the Joint Venture/ Consortium shall be:

Full Name and address of Lead enterprise
………………………………………………………………………….. ………%  
…………………………………………………………………………..  
Full Name and address of 2<sup>nd</sup> enterprise
………………………………………………………………………….. ………%  
…………………………………………………………………………..  
Full Name and address of 3<sup>rd</sup> enterprise
………………………………………………………………………….. ………%  
…………………………………………………………………………..

The Lead Partner is hereby authorised to incur liabilities, receive instructions, payments, sign all documents in connection with the bid, and to be responsible for the entire execution and administration of the contract for and on behalf of the partners.

The parties hereto shall make available to the Joint Venture/ Consortium the technical advice and benefit of their individual experience and shall, in all other respects, endeavour to share the responsibility and burden of the performance of the Joint Venture/ Consortium.

To this end the parties hereto shall share, in the above proportions, in all risks and obligations arising out of or in connection with the Contract, especially in the provisions of all necessary working capital and guarantees, in profit and loss and personnel.

The Lead Partner shall supply, in its name, the necessary insurance prescribed for the industry and such other insurance as may be prescribed by the EMM, for the amount and period as stated in the Contract Data.

The Joint Venture/ Consortium may not be terminated by any of the parties hereto until either:

The contract has been awarded to another bidder

or

The work undertaken by the Joint Venture/ Consortium under the contract has been completed and all liabilities and claims incurred by and made by the Joint Venture/ Consortium have been settled, the bid is cancelled or the period of validity of bid extended.
No party to the Agreement shall be entitled to sell, assign or in any manner encumber or transfer its interest or any part thereof in the Joint Venture/Consortium without obtaining the prior written consent of the other party hereto.

The Parties of the Joint Venture/Consortium shall cooperate on an exclusive basis. No Party shall during the validity period of the bid submit a bid to or enter into a Contract with the EMM or any other party for the Project, either alone or in collaboration with a third party.

Authorised Signature Lead Partner .................................................................
Name ...........................................................................................................
Designation ...............................................................................................
Signed at……………………………………… on ....................................................

Authorised Signature of 2nd Partner .............................................................
Name ...........................................................................................................
Designation ...............................................................................................
Signed at……………………………………… on ....................................................

Authorised Signature of 3rd Partner .............................................................
Name ...........................................................................................................
Designation ...............................................................................................
Signed at……………………………………… on ....................................................

(ALL SIGNATORIES SHALL CONFIRM THEIR AUTHORITY BY ATTACHING TO THE LAST PAGE OF THE BID, ORIGINAL OR CERTIFIED COPIES OF DATED AND SIGNED RESOLUTIONS OF THE MEMBERS/DIRECTORS/PARTNERS AS THE CASE MAY BE.)

In the event that there are more than 3 Joint Venture/Consortium partners, additional page/s may be added in order to furnish the requested information and authorised signatures.
Regulation 11(8) of the Preferential Procurement Regulations, 2011 provides that:

“A person must not be awarded points for B-BBEE Status Level if it is indicated in the tender documents that such a tenderer intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a tenderer qualifies for, unless the intended sub-contractor is an exempted micro enterprise that has capability and ability to execute the sub-contract.”

Regulation 11(9) of the Preferential Procurement Regulations, 2011 provides that:

A bidder awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the bidder concerned, unless the contract is sub-contracted to an exempted micro enterprise that has the capability and ability to execute the sub-contract.

Provide details on all sub-contractors you intend utilising for this contract:

<table>
<thead>
<tr>
<th>Type of work to be used for</th>
<th>As a % of contract</th>
<th>Name of sub-contractor</th>
<th>B-BBEE Status Level of Contributor Points of sub-contractor</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
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<tr>
<td>Total % of contract sub-contracted</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
**FORM 2.1.8 FINANCIAL REFERENCES**

**DETAILS OF BIDDING ENTITY'S BANK**

If the bidder is a Joint Venture or partnership, the information requested below is required for each member / partner.

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

<table>
<thead>
<tr>
<th>DESCRIPTION OF BANK DETAIL</th>
<th>BANK DETAILS APPLICABLE TO BIDDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of bank</td>
<td></td>
</tr>
<tr>
<td>Contact person</td>
<td></td>
</tr>
<tr>
<td>Branch name</td>
<td></td>
</tr>
<tr>
<td>Branch code</td>
<td></td>
</tr>
<tr>
<td>Street address</td>
<td></td>
</tr>
<tr>
<td>Postal address</td>
<td></td>
</tr>
<tr>
<td>Telephone number</td>
<td>( )</td>
</tr>
<tr>
<td>Fax number</td>
<td>( )</td>
</tr>
<tr>
<td>Account number</td>
<td></td>
</tr>
<tr>
<td>Type of account, (i.e. cheque account)</td>
<td></td>
</tr>
</tbody>
</table>

**BIDDER’S TAX DETAILS**

Bidder’s VAT vendor registration number: ................................................................................................................

Bidder’s SARS tax reference number: ........................................................................................................................
**FORM 2.1.9 DETAILS OF ALTERNATIVE BIDS SUBMITTED**

See condition of bid

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
</tr>
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<tbody>
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<table>
<thead>
<tr>
<th>PAGE</th>
<th>DESCRIPTION</th>
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<tbody>
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</tbody>
</table>

**FORM 2.1.10 AMENDMENTS AND QUALIFICATIONS BY BIDDER**

See condition of bid

<table>
<thead>
<tr>
<th>PAGE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
## FORM 2.1.11
LABOUR-ENHANCED METHODS: PROPOSED PLANNED ACTIONS OF BIDDER RESULTING IN DEVIATIONS FROM SPECIFIED WORK

<table>
<thead>
<tr>
<th>ACTIVITY OR PAY ITEM</th>
<th>DESCRIPTION OF PLANNED ACTION RESULTING IN DEVIATION FROM SPECIFIED WORK</th>
</tr>
</thead>
<tbody>
<tr>
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</table>
EKURHULENI METROPOLITAN MUNICIPALITY

DEPARTMENT NAME: WATER & SANITATION DEPARTMENT

CONTRACT NO: WS 01-2017

FOR

THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

T2.2 OTHER DOCUMENTS REQUIRED FOR BID EVALUATION PURPOSES

<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>PAGE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORM 2.2.1 TAX CLEARANCE CERTIFICATE</td>
<td>52</td>
</tr>
<tr>
<td>FORM 2.2.2 GENERAL DECLARATION</td>
<td>53</td>
</tr>
<tr>
<td>FORM 2.2.3 DECLARATION OF INTEREST</td>
<td>55</td>
</tr>
<tr>
<td>FORM 2.2.4 DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES</td>
<td>59</td>
</tr>
<tr>
<td>FORM 2.2.5 DECLARATION FOR PROCUREMENT ABOVE R10 MILLION</td>
<td>61</td>
</tr>
<tr>
<td>FORM 2.2.6 CERTIFICATE OF INDEPENDENT BID DETERMINATION</td>
<td>63</td>
</tr>
<tr>
<td>FORM 2.2.7 DECLARATION FOR MUNICIPAL ACCOUNTS</td>
<td>66</td>
</tr>
<tr>
<td>FORM 2.2.8 DECLARATION FOR MUNICIPAL ACCOUNTS WHERE BIDS ARE EXPECTED TO EXCEED R10 MILLION</td>
<td>68</td>
</tr>
<tr>
<td>FORM 2.2.9 B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE</td>
<td>70</td>
</tr>
<tr>
<td>FORM 2.2.10 CONFIRMATION OF EMPLOYMENT EQUITY POLICY FROM THE DEPARTMENT OF LABOUR</td>
<td>71</td>
</tr>
<tr>
<td>FORM 2.2.11 LATEST UIF RETURN</td>
<td>72</td>
</tr>
<tr>
<td>FORM 2.2.12 PROOF OF EXPENDITURE FOR SKILLS DEVELOPMENT</td>
<td>73</td>
</tr>
<tr>
<td>FORM 2.2.13 REGISTRATION CERTIFICATE/AGREEMENT/POWER OF ATTORNEY/ID DOCUMENT (IF APPLICABLE)</td>
<td>74</td>
</tr>
<tr>
<td>FORM 2.2.14 COID – LETTER OF GOOD STANDING</td>
<td>75</td>
</tr>
<tr>
<td>FORM 2.2.15 CERTIFICATE OF AUTHORITY OF SIGNATURE</td>
<td>76</td>
</tr>
<tr>
<td>FORM 2.2.16 QUALITY CONTROL PROCEDURES</td>
<td>81</td>
</tr>
<tr>
<td>Form Number</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>2.2.17</td>
<td>Proposed Programme and Method Statement</td>
</tr>
<tr>
<td>2.2.18</td>
<td>Form of Intent to Provide a Performance Guarantee</td>
</tr>
<tr>
<td>2.2.19</td>
<td>Certificate of Attendance at Clarification Meeting</td>
</tr>
<tr>
<td>2.2.20</td>
<td>Exchange Rate and Import Content</td>
</tr>
<tr>
<td>2.2.21</td>
<td>Technical Data Sheets</td>
</tr>
<tr>
<td>2.2.22</td>
<td>Declaration Certificate for Local Production and Content for Designated Sectors</td>
</tr>
</tbody>
</table>
FORM 2.2.1  TAX CLEARANCE CERTIFICATE

A VALID ORIGINAL TAX CLEARANCE CERTIFICATE OR COPY THEREOF, OBTAINED FROM SARS TO BE SUBMITTED WITH BID DOCUMENTS.

Copies of the TCC 001 “Application for a Tax Clearance Certificate” form are available from any SARS branch office nationally or on the website www.sars.gov.za.

Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za.

Note:
1. Failure to affix such documentation as prescribed to this page shall result in this bid not being further considered for the award of the contract, by the Bid Evaluation Committee.
FORM 2.2.2 GENERAL DECLARATION

I/We, the undersigned:

(a) bid to supply and deliver to the EKURHULENI METROPOLITAN MUNICIPALITY [hereafter “EMM”] all or any of the supplies and to render all or any of the articles, goods, materials, services or the like described both in this and the other Schedules to this Contract;

(b) agree that we will be bound by the specifications, prices, terms and conditions stipulated in those Schedules attached to this bid document, regarding delivery and execution;

(c) further agree to be bound by those conditions, set out in, “PARTS T1; T2; C1; C2; C3, C4 and C5”, attached hereto, should this bid be accepted in whole or in part;

(d) confirm that this bid may only be accepted by the EMM by way of a duly authorised Letter of Acceptance;

(e) declare that we are fully acquainted with the Bid document and Schedules, and the contents thereof and that we have signed the Bill of Quantities and completed the Returnable Schedules and declarations, attached hereto;

(f) declare that all amendments to the bid document have been initialled by the relevant authorised person and that the document constitutes a proper contract between the EMM and the undersigned;

(g) certify that the item/s mentioned in the bid document, qualifies/qualify for the preference(s) shown.;

(h) acknowledge that the information furnished is true and correct;

(i) accept that in the event of the contract being awarded as a result of preference claimed in this bid document, I may be required to furnish documentary proof to the satisfaction of the EMM that the claims are correct. If the claims are found to be inflated, the EMM may, in addition to any other remedy it may have, recover from me all cost, losses or damages incurred or sustained by the EMM as a result of the award of the contract and/or cancel the contract and claim any damages which the EMM may suffer by having to make less favourable arrangements after such cancellation;

declare that no municipal rates and taxes or municipal service charges owed by the bidder or any of its directors to the municipality, or to any other municipality or municipal entity, are in arrears for more than three (3) months; and

(k) declare that I have not failed to perform satisfactorily during the last five (5) years on a previous contract with the Municipality, Municipal entity or any other organ of state, after written notice was given to me that my performance was unsatisfactory.

(l) declare that the signatory to the bid document is duly authorised; and

(m) agree that documentary proof regarding any tendering issue will, when required, be submitted to the satisfaction of the EMM.

(n) declare that the Broad-Based Black Economic Empowerment Certificate submitted herewith in terms of Regulation 10 of the Preferential Procurement Regulations, 2011 is based on true and accurate information and has been obtained from a duly accredited verification agency (or, in the case of an Exempted Micro-Enterprise(EME) from a registered auditor, accounting officer or accredited verification agency)

(o) declare that the following responses to be true and correct:

Does the bidder have participation in the submission of any other offer for the supplies/services described in the attached documents?  
(Tick applicable box)  

YES  NO
If YES the following information must be supplied:

a. The name(s) of the other Bidder(s) involved ............................................................................
............................................................................
............................................................................

b. The full details of the Bidder(s) participation ............................................................................
............................................................................
............................................................................

(p) declare that all of the information furnished is true and correct

Signed at.............................................................this.................day of........................................... 20…

Name of Authorised Person:  __________________________________________________

Authorised Signature:  __________________________________________________

Name of Bidding Entity:  __________________________________________________

Date:  __________________________________________________

As witness:  1.  __________________________________________________

2.  __________________________________________________
FORM 2.2.3 DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.

2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.

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

3.1 Full Name of Owner of the Bidding Entity: ………………………………………

3.2 Identity Number if applicable: …………………………………………………

3.3 Position occupied in the Company (director, trustee, shareholder²): …………

3.4 Company Registration Number: …………………………………………………

3.5 Tax Reference Number: …………………………………………………………

3.6 VAT Registration Number: ……………………………………………………

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

² Shareholder” means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.
3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state?  
(Tick applicable box)  

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

3.8.1 If yes, furnish particulars.  

………………………………………………………………………………

………………………………………………………………………………

3.9 Have you been in the service of the state for the past twelve months?  
(Tick applicable box)  

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

3.9.1 If yes, furnish particulars.  

………………………………………………………………………………

………………………………………………………………………………

3.10 Do you have any relationship (close family member, partner or associate) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?  
(Tick applicable box)  

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

3.10.1 If yes, furnish particulars.  

………………………………………………………………………………

………………………………………………………………………………

3.11 Are you aware of any relationship (close family member, partner or associate) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid?  
(Tick applicable box)  

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

3.11.1 If yes, furnish particulars.  

………………………………………………………………………………

………………………………………………………………………………

3.12 Are any of the company’s directors, trustees, managers, principle shareholders or stakeholders in service of the state?  
(Tick applicable box)  

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

3.12.1 If yes, furnish particulars.  

………………………………………………………………………………

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

(Tick applicable box)

3.13.1 If yes, furnish particulars.

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

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

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

(Tick applicable box)

3.14.1 If yes, furnish particulars:

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

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


<table>
<thead>
<tr>
<th>Full Name</th>
<th>Identity Number</th>
<th>State Employee Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

CERTIFICATION

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

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

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

.................................................................  .................................................................
Capacity                                            Name of Bidding Entity
NAME OF BIDDING ENTITY ………………………………………………………

FORM 2.2.4 DECLARATION OF BIDDER’S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

1 This Municipal Bidding Document must form part of all bids invited.

2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.

3 The bid of any bidder may be rejected if that bidder, or any of its directors have:
   a. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
   b. been convicted for fraud or corruption during the past five years;
   c. wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
   d. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Is the bidder or any of its directors listed on the National Treasury's database as a company or person prohibited from doing business with the public sector? (Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the audi alteram partem rule was applied).</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4.1.1</td>
<td>If so, furnish particulars:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>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)? (To access this Register enter the National Treasury's website, <a href="http://www.treasury.gov.za">www.treasury.gov.za</a>, click on the icon “Register for Tender Defaulters” or submit your written request for a hard copy of the Register to facsimile number (012) 3265445).</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4.2.1</td>
<td>If so, furnish particulars:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3</td>
<td>Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4.3.1</td>
<td>If so, furnish particulars:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.4</td>
<td>Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?</td>
<td>Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>4.4.1</td>
<td>If so, furnish particulars:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.5</td>
<td>Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?</td>
<td>Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>4.7.1</td>
<td>If so, furnish particulars:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CERTIFICATION**

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

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

………………………………………...    ………………………………………….. ……..
Signature        Date

………………………………………….                               .………………………………………..………..
Position                        Name of Bidder
NAME OF BIDDING ENTITY ……………………………………………………………

FORM 2.2.5 DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (VAT INCLUDED)

MUST BE COMPLETED FOR THIS BID

BIDDERS MUST COMPLETE THE FOLLOWING QUESTIONNAIRE:

1.1 Are you by law required to prepare annual financial Statements? 
(Tick applicable box)  

If yes:  

1.1.1 If a bidder is a registered company required by law to have its annual financial statements audited or independently reviewed in compliance with the requirements of the Companies Act, Act No. 71 of 2008, or any other law, audited or independently reviewed annual financial statements, as the case may be, prepared within six (6) months of the end of the bidders most recent financial year together with the audited or independently reviewed annual financial statements for the two immediately preceding financial years must be submitted, (unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted).

1.1.2 If a bidder is a registered close corporation, annual financial statements in compliance with the provisions of the Close Corporations Act, Act No. 69 of 1984, prepared within nine (9) months of the end of the bidders most recent financial year together with the annual financial statements for the two immediately preceding financial years must be submitted, (unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted).

1.1.3 Annual financial statements submitted must comply with the requirements of the Companies Act or the Close Corporations Act. Summaries and/or extracts of annual financial statements shall not be acceptable and shall result in the rejection of the bid.

1.2 If your answer to 1.1 above is YES then, did you only commence business within the past three years? 
(Tick applicable box)  

1.2.1 If yes, the bidder is required to submit annual financial statements in compliance with the provisions of 1.1.1 and 1.1.2 above for each of its financial years since commencing business.

1.3 If your answers to 1.1 above is NO, un-audited financial statements must be submitted with your bid for the periods specified in 1.1.1, 1.1.2 or 1.2.1 above, as the case may be.

2. Do you have any outstanding undisputed commitments for municipal services towards a municipality or any other service provider in respect of which payment is overdue for more than 30 days? 
(Tick applicable box)
2.1 If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days.

2.2 If yes, provide particulars.

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

3. Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract? (Tick applicable box)

3.1 If yes, furnish particulars.

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

4. Will any portion of goods or services be sourced from outside the Republic and if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic? (Tick applicable box)

4.1 If yes, furnish particulars

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

CERTIFICATION

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

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

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

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

........................................................................................................................................
Position           Name of Bidder
NAME OF BIDING ENTITY .................................................................

FORM 2.2.6  CERTIFICATE OF INDEPENDENT BID DETERMINATION

1 This Form “2.2.6” must form part of all bids¹ invited.

2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a pe se prohibition meaning that it cannot be justified under any grounds.

3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
   a. take all reasonable steps to prevent such abuse;
   b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
   c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.

4 This Form “2.2.6” 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 (Form “2.2.6”) must be completed and submitted with the bid:

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

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

I, the undersigned, in submitting the accompanying bid:

CONTRACT NUMBER: WS 01 - 2017
THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

(Bid Number and Description)

in response to the invitation for the bid made by:

EKURHULENI METROPOLITAN MUNICIPALITY

(Name of Municipality / Municipal Entity)

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

I certify, on behalf of: __________________________________________________ that:

(Name of Bidder)

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 consortium³ will not be construed as collusive bidding.

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

FORM 2.2.7 DECLARATION FOR MUNICIPAL ACCOUNTS

MUST BE COMPLETED FOR THIS BID

Declaration in terms of paragraph 38(1)(d)(i) of the Supply Chain Management Policy of the EMM, irrespective of the contract value of the bid:

NB: Please note that this declaration must be completed by ALL bidders

(i). I, the undersigned hereby declare that the signatory to this tender document; is duly authorised and further declare:

(ii) that at the closing date of the bid, no municipal rates and taxes or municipal service charges owed by the bidder or any of its directors/members to the EMM, or to any other municipality or municipal entity, are in arrears for more than three (3) months.

(iii). I acknowledge that should it be found that any municipal rates and taxes or municipal charges as set out in (i) above are in arrears for more than three (3) months, the bid will be rejected and the EMM may take such remedial action as is required, including the rejection of the bid and/or termination of the contract.

(iv) I further declare that copies of any rates and taxes or municipal service charges account/s, will be submitted to the EMM to its satisfaction, PRIOR to the commencement with the service/work but not later than 14 days after having been informed of the acceptance of the bid; and that

(v) I declare that if the bid is awarded to the bidding entity, any moneys due to the bidding entity for services/goods rendered shall be utilised to offset any monies due to a municipality or a municipal entity.

(vi) The following account/s of the bidding entity has reference:

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Account number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
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</tr>
<tr>
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<td></td>
</tr>
</tbody>
</table>

(NB: If insufficient space above, please submit on a separate page)
**PLEASE NOTE** further that if no municipal rates and taxes or municipal charges are payable by the bidding entity, indicate the reason/s for that in the space below by means of a tick next in the relevant block,

<table>
<thead>
<tr>
<th>Bidding entities who operate from informal settlements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidding entities who operate from a property owned by a director / member / partner</td>
<td></td>
</tr>
<tr>
<td>Bidding entities who operate from somebody else’s property</td>
<td></td>
</tr>
<tr>
<td>Bidding entities who rent premises from a landlord</td>
<td></td>
</tr>
<tr>
<td>Other (Please specify)</td>
<td></td>
</tr>
</tbody>
</table>

Signed at.............................……this..............day of…………………………. 20…

Name of Duly Authorised Signatory: (Please print)................................................

Authorised Signature: ....................................................

As witness: 1..............................................................

2. .................................................................
Declaration in terms of paragraph 21(1)(d)(ii) of the Supply Chain Management Policy of the Ekurhuleni Metropolitan Municipality (EMM), to be completed by ALL bidders in cases where the value of the transaction is expected to exceed R10 million (VAT included).

(i). I, the undersigned hereby declare that the signatory to this tender document; is duly authorised and further declare:

(ii). that at the closing date of the bid, the bidder had no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days.

(iii). I acknowledge that should it be found that any undisputed commitments for municipal services charges towards a municipality or other service provider in respect of which payment is overdue for more than 30 days, the EMM may take such remedial action as is required.

(iv) I further declare that copies of any rates and taxes or municipal service charges account/s, will be submitted to the EMM to its satisfaction PRIOR to the commencement with the service/work but not later than 14 days after having been informed of the acceptance of the bid: and that

(v) I declare that if the bid is awarded to the bidding entity, any moneys due to the bidding entity by the EMM for services/goods rendered in terms of this bid shall be utilised to offset any monies due to a municipality or a municipal entity.

(vi) The following account/s has reference:

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Account number</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
</tbody>
</table>

Signed at................................this...........day of.................................. 20......

(NB: If insufficient space above, please submit on a separate page)
PLEASE NOTE further that if no municipal rates and taxes or municipal charges are payable by the bidding entity, indicate the reason/s for that in the space below by means of a tick next in the relevant block,

<table>
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<tr>
<th>Bidding entities who operate from informal settlements</th>
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<tr>
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</tr>
<tr>
<td>Bidding entities who operate from somebody else’s property</td>
<td></td>
</tr>
<tr>
<td>Bidding entities who rent premises from a landlord</td>
<td></td>
</tr>
<tr>
<td>Other (Please specify)</td>
<td></td>
</tr>
</tbody>
</table>

Signed at........................................this..............day of........................................ 20...

Name of Duly Authorised Signatory: (Please print)................................................

Authorised Signature: ....................................................

As witness: 1...............................................................

2. .................................................................
FORM 2.2.9 DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

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

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

1. General Conditions

1.1. Preferential Procurement Regulations, 2011 (Regulation 9) makes provision for the promotion of local production and content.

1.2. Regulation 9.(1) prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.

1.3. Where necessary, for bids 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 SABS approved technical specification number SATS 1286:2011 as follows:

\[ LC = \left[ 1 - \frac{x}{y} \right] \times 100 \]

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 the South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as required in paragraph 4.1 below.


1.6. A bid may be disqualified if –

(a) this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation; and
(b) the bidder fails to declare that the Local Content Declaration Templates (Annex C, D and E) have been audited and certified as correct.

2. Definitions

2.1. “bid” includes written price quotations, advertised competitive bids or proposals;

2.2. “bid price” price offered by the bidder, excluding value added tax (VAT);

2.3. “contract” means the agreement that results from the acceptance of a bid by an organ of state;

2.4. “designated sector” means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;

2.5. “duly sign” means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility (close corporation, partnership or individual).

2.6. “imported content” means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour and intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;

2.7. “local content” means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;

2.8. “stipulated minimum threshold” means that portion of local production and content as determined by the Department of Trade and Industry; and

2.9. “sub-contract” means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.

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

<table>
<thead>
<tr>
<th>Description of services, works or goods</th>
<th>Stipulated minimum threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEM</td>
<td>PAYMENT</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
</tr>
<tr>
<td>3.2.7</td>
<td>8.3.3.4</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3.5</td>
<td>Existing Services that Intersect or Adjoin a Pipe</td>
</tr>
<tr>
<td></td>
<td>Trench</td>
</tr>
<tr>
<td></td>
<td>a) Services that intersect a trench</td>
</tr>
<tr>
<td>3.2.8</td>
<td>Steel pipe 250 ND and smaller</td>
</tr>
<tr>
<td>3.2.9</td>
<td>Steel pipe 300 ND to 500 ND inclusive</td>
</tr>
<tr>
<td>3.2.10</td>
<td>Steel pipe greater than 500 mm ND</td>
</tr>
<tr>
<td>3.2.11</td>
<td>Fence</td>
</tr>
<tr>
<td>3.2.11</td>
<td>Electrical cable</td>
</tr>
<tr>
<td></td>
<td>b) Services that adjoin a trench</td>
</tr>
<tr>
<td>3.2.13</td>
<td>Steel pipe 250 ND and smaller</td>
</tr>
<tr>
<td>3.2.14</td>
<td>Steel pipe 300 ND to 500 ND inclusive</td>
</tr>
<tr>
<td>3.2.15</td>
<td>Steel pipe greater than 500 mm ND</td>
</tr>
<tr>
<td>3.2.16</td>
<td>Fence</td>
</tr>
<tr>
<td>3.2.17</td>
<td>Electrical cable</td>
</tr>
<tr>
<td>SANS 1200 L</td>
<td>MEDIUM PRESSURE PIPELINES</td>
</tr>
<tr>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>8.2.1</td>
<td>Supply, lay and bed pipes complete with couplings, corrosion protection as specified</td>
</tr>
<tr>
<td>3.3.1</td>
<td>700mm ND x 10 mm WT steel pipes</td>
</tr>
<tr>
<td>3.3.2</td>
<td>500mm ND x 8mm WT steel pipes</td>
</tr>
<tr>
<td>PSL 8.2.2</td>
<td>Extra-over 8.2.1 for supplying, laying and bedding of specials complete with coupling, corrosion protection as specified</td>
</tr>
<tr>
<td>3.3.3</td>
<td>Flanged reducing sweep tee 700 x 500 angled at 52 deg</td>
</tr>
<tr>
<td>3.3.4</td>
<td>500m ND pipe section, flanged both ends, 0.9 m long</td>
</tr>
<tr>
<td>ITEM</td>
<td>PAYMENT</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
</tr>
<tr>
<td>3.3.5</td>
<td></td>
</tr>
<tr>
<td>3.3.6</td>
<td></td>
</tr>
<tr>
<td>3.3.7</td>
<td></td>
</tr>
<tr>
<td>3.3.8</td>
<td></td>
</tr>
<tr>
<td>3.3.9</td>
<td></td>
</tr>
<tr>
<td>3.3.10</td>
<td></td>
</tr>
<tr>
<td>3.3.11</td>
<td></td>
</tr>
<tr>
<td>3.3.12</td>
<td></td>
</tr>
<tr>
<td>3.3.13</td>
<td></td>
</tr>
<tr>
<td>3.3.14</td>
<td></td>
</tr>
<tr>
<td>3.3.15</td>
<td></td>
</tr>
<tr>
<td>3.3.16</td>
<td></td>
</tr>
<tr>
<td>3.3.17</td>
<td></td>
</tr>
<tr>
<td>3.3.18</td>
<td></td>
</tr>
<tr>
<td>3.3.19</td>
<td></td>
</tr>
<tr>
<td>3.3.20</td>
<td></td>
</tr>
<tr>
<td>3.3.21</td>
<td></td>
</tr>
</tbody>
</table>

**PSL 8.2.2** Extra-over 8.2.1 for supplying and fittings of specials through or within the reservoir structure
### 3.3.22

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>LOCAL CONTENT %</th>
<th>FOREIGN CONTENT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>long 700mm pipe with flange at end</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>900 mm ND x 90 deg flanged, extender by 500mm length on both ends</td>
<td>No.</td>
<td>80%</td>
<td></td>
</tr>
</tbody>
</table>

### ITEM PAYMENT DESCRIPTION UNIT LOCAL CONTENT % FOREIGN CONTENT %

3.3.23 | 40mm ND stainless steel pipe mounted vertically including pipe supports brackets as required | m | 80% | |
3.3.24 | 40mm ND stainless steel pipe, 1200 mm long, puddle flange 550mm | No. | 80% | |
3.3.25 | 40mm stainless steel gate valve | No. | 80% | |
3.3.26 | PSL 8.2.16 Pipeline Markers | No. | | |

### 3.4 VALVE CHAMBERS

**SANS 1200 D EARTHWORKS**

8.3.2 **Bulk Excavation**

a) Excavate in all materials and use for embankment, or backfill or dispose, as ordered

3.4.1 Excavation of valve chambers | m³ | | |

b) Extra over for

3.4.2 2) Hard Rock excavation | m³ | | |

8.3.6 **Overhaul**

No overhaul shall apply (see PD 5.2.3)

**PSL 8.2.18 Isolation Valve Chamber**

3.4.4 700 mm valve | No. | | |
3.4.5 500 mm valve | No. | | |

**PSL 8.2.19 Water meter chamber**

3.4.6 500 mm meter on 500mm ND steel pipe | No. | | |
3.4.7 600 mm meter on 700mm ND steel pipe | No. | | |

**PSL 8.2.20 Inlet chamber**

3.4.8 700mm inlet to new tower | No. | | |
4. Does any portion of the services, works or goods offered have any imported content?
(Tick applicable box)

YES | NO

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

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

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

<table>
<thead>
<tr>
<th>Currency</th>
<th>Rates of exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Dollar</td>
<td></td>
</tr>
<tr>
<td>Pound Sterling</td>
<td></td>
</tr>
<tr>
<td>Euro</td>
<td></td>
</tr>
<tr>
<td>Yen</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

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

5. Were the Local Content Declaration Templates (Annex C, D and E) audited and certified as correct?
(Tick applicable box)

YES | NO

5.1 If yes, provide the following particulars:
(a) Full name of auditor: .................................................................
(b) Practice number: .................................................................
(c) Telephone and cell number:
.................................................................
(d) Email address: .................................................................

(Documentary proof regarding the declaration will, when required, be submitted to the satisfaction of the Accounting Officer / Accounting Authority)

6. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the Accounting Officer / Accounting Authority provide directives in this regard.
LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)

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

IN RESPECT OF BID NO. ..............................................................

ISSUED BY: (Procurement Authority / Name of Municipality / Municipal Entity):
........................................................................................................................

NB
1 The obligation to complete, duly sign and submit this declaration cannot be transferred
to an external authorized representative, auditor or any other third party acting on behalf of
the bidder.

2 Guidance on the Calculation of Local Content together with Local Content Declaration
Templates (Annex C, D and E) is accessible on http://www.thedti.gov.za/industrial
development/ip.jsp. Bidders should first complete Declaration D. After completing
Declaration D, bidders should complete Declaration E and then consolidate the information
on Declaration C. Declaration C should be submitted with the bid documentation at
the closing date and time of the bid in order to substantiate the declaration made in
paragraph (c) below. Declarations D and E should be kept by the bidders for verification
purposes for a period of at least 5 years. The successful bidder is required to continuously
update Declarations C, D and E with the actual values for the duration of the contract.

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

(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

(ii) the declaration templates have been audited and certified to be correct.

(c) The local content percentages (%) indicated below has been calculated using the
formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in
paragraph 4.1 above and the information contained in Declaration D and E which has been
consolidated in Declaration C;

<table>
<thead>
<tr>
<th>Bid price, excluding VAT (y)</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imported content (x), as calculated in terms of SATS 1286:2011</td>
<td>R</td>
</tr>
<tr>
<td>Stipulated minimum threshold for local content (paragraph 3 above)</td>
<td></td>
</tr>
</tbody>
</table>
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 / Municipality /Municipal Entity 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 / Municipal / Municipal Entity imposing any or all of the remedies as provided for in Regulation 13 of the Preferential Procurement Regulations, 2011 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

| SIGNATURE: | DATE: __________ |
| WITNESS No. 1 | DATE: __________ |
| WITNESS No. 2 | DATE: __________ |
### Annex C

**Local Content Declaration - Summary Schedule**

<table>
<thead>
<tr>
<th>Tender No.</th>
<th>Tender description</th>
<th>Designated products</th>
<th>Tender Authority</th>
<th>Tendering Entity name</th>
<th>Tender Exchange Rate</th>
<th>Final Tender exchange rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GB£</td>
<td></td>
</tr>
</tbody>
</table>

#### Calculation of local content

<table>
<thead>
<tr>
<th>Tender Item no/s</th>
<th>List of items</th>
<th>Tender price each (excl VAT)</th>
<th>Exempted imported value</th>
<th>Tender value net of exempted imported content</th>
<th>Imported value</th>
<th>Local value</th>
<th>Local content % (per item)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Tender summary

<table>
<thead>
<tr>
<th>Tender City</th>
<th>Total tender value</th>
<th>Total exempted imported content</th>
<th>Total imported content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Statement of tenderer from Annex B

<table>
<thead>
<tr>
<th>Tender City</th>
<th>Total tender value</th>
<th>Total exempted imported content</th>
<th>Total imported content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tender City</th>
<th>Total tender value</th>
<th>Total exempted imported content</th>
<th>Total imported content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: All tender excludes from all calculations.

BID NUMBER: WS 01 – 2017. THE CONSTRUCTION OF THE 5.5 ME ELEVATED WATER TOWER IN NORTHMEAD BENONI

75 of 241
### Annex D

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

#### A. Exempted Imported Content

<table>
<thead>
<tr>
<th>Tender Item No.</th>
<th>Description of imported content</th>
<th>Local supplier</th>
<th>Overseas supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(A2)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### B. Imported directly by the Tenderer

<table>
<thead>
<tr>
<th>Tender Item No.</th>
<th>Description of imported content</th>
<th>Local supplier</th>
<th>Overseas supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>(B1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(B2)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Description of imported content</th>
<th>Unit of measure</th>
<th>Local supplier</th>
<th>Overseas supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>(C1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(C2)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### D. Other foreign currency payments

<table>
<thead>
<tr>
<th>Type of payment</th>
<th>Local supplier exchange rate</th>
<th>Foreign currency exchange rate</th>
<th>Tender Item No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(D1)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Summary

**Tender Qty**

**Exempted imported value**

**Calculation of imported content**

<table>
<thead>
<tr>
<th>Tender Item No.</th>
<th>Description of imported content</th>
<th>Local supplier</th>
<th>Overseas supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(A2)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tender Qty**

**Total imported value**

**Calculation of imported content**

<table>
<thead>
<tr>
<th>Tender Item No.</th>
<th>Description of imported content</th>
<th>Local supplier</th>
<th>Overseas supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>(B1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(B2)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tender Qty**

**Total imported value**

**Calculation of imported content**

<table>
<thead>
<tr>
<th>Description of imported content</th>
<th>Unit of measure</th>
<th>Local supplier</th>
<th>Overseas supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>(C1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(C2)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tender Qty**

**Total imported value**

**Calculation of foreign currency payments**

<table>
<thead>
<tr>
<th>Type of payment</th>
<th>Local supplier exchange rate</th>
<th>Foreign currency exchange rate</th>
<th>Tender Item No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(D1)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tender Qty**

**Total foreign currency payments**

**Summary of payments**

**Local supplier payments**

### Notes

This total must correspond with note (C10).

---

**BID NUMBER: WS 01 – 2017: THE CONSTRUCTION OF THE 5.5 ME VOLUME ELEVATED WATER TOWER IN NORTHMEAD BENONI**

76 of 241
## Annex E

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

<table>
<thead>
<tr>
<th>Tender No.</th>
<th>Tender description:</th>
<th>Designated products:</th>
<th>Tendering entity name:</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Local Products (Goods, Services and Works)</th>
<th>Description of items purchased</th>
<th>Local suppliers</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(E5)</td>
<td>(E6)</td>
<td>(E7)</td>
<td>(E8)</td>
</tr>
<tr>
<td>(E9)</td>
<td>Total local products (Goods, Services and Works)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(E10) Manpower costs</th>
<th>Tenderee's manpower cost</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>(E11) Factory overheads</th>
<th>Rental, depreciation &amp; amortisation, utility costs, consumables etc.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>(E12) Administration overheads and mark-up</th>
<th>Marketing, insurance, financing, interest etc.</th>
</tr>
</thead>
</table>

| (E13) Total local content | This total must correspond with Annex C - C14 |

Signature of tenderer from Annex B

Date: ____________________________

---

BID NUMBER: WS 01 – 2017. THE CONSTRUCTION OF THE 5.5 M³ ELEVATED WATER TOWER IN NORTHMEAD BENONI

77 of 241
1. Bidders are required to submit original and valid B-BBEE Status Level Verification Certificates or certified copies thereof together with their bids, to substantiate their B-BBEE rating claims.

2. Bidders who do not submit B-BBEE Status Level Verification Certificates or are non-compliant contributors to B-BBEE do not qualify for preference points for BBBEE but should not be disqualified from the bidding process. They will score points out of 90 or 80 for price only and zero (0) points out of 10 or 20 for BBBEE.

3. A trust, consortium or joint venture must submit a consolidated B-BBEE Status Level Verification Certificate for every separate bid.

4. Public entities and tertiary institutions must also submit B-BBEE Status Level Verification Certificates together with their bids.

Refer to Section T1.2 Bid Data, Clause F.3.11 Evaluation of Bid Offers and to Form 2.3.3 Adjudication of Bids – “Preference points claim form in terms of Preferential Procurement Regulations 2011” Clauses 7 and 9.9 and also insert information pertaining to the above.

Signed ____________________________________  Date ____________________________________

Name ____________________________________  Position ____________________________________

Tenderer ____________________________________
The Tenderer must attach hereto a copy of the confirmation from the department of labour that their Employment Equity Policy has been submitted.

Employment Equity Act, 55 of 1998

Employment Equity Plan: Section 20

a. A designated employer must prepare and implement a plan to achieve employment equity, which must:

- have objectives for each year of the plan;
- include affirmative action measures;
- have numerical goals for achieving equitable representation;
- have a timetable for each year;
- have internal monitoring and evaluation procedures, including internal dispute resolution mechanisms; and
- identify persons, including senior managers, to monitor and implement the plan.
FORM 2.2.11 LATEST UIF RETURN

The Tenderer must attach hereto a copy of the latest Unemployment Insurance Fund return.

Unemployment Insurance Contributions Act, No. 4 of 2002

“CHAPTER 2

Duty to contribute and recovery of contributions

5. Duty to contribute to Fund

   (1) Every employer and every employee to whom this Act applies must, on a monthly basis, contribute to the Unemployment Insurance Fund.

   (2) The contributions must be paid by the employer either to the Commissioner in terms of section 8 or to the Unemployment Insurance Commissioner in terms of section 9, whichever is applicable to the particular employer.”

Signed

Date

Name

Position

Tenderer
FORM 2.2.12 PROOF OF EXPENDITURE FOR SKILLS DEVELOPMENT

The Tenderer must attach hereto proof of expenditure on skills development as required.

SKILLS DEVELOPMENT LEVIES ACT, 1999

3. Imposition of levy

   (1) Every Employer must pay a skills development levy

Signed

__________________________________________ Date ____________________________________________

Name

__________________________________________ Position ____________________________________________

Tenderer

__________________________________________________________________________________________
Important note to Tenderer: Registration Certificates for Companies, Close Corporation and Partnerships, or Agreements and Powers of Attorney for Joint Ventures, or ID Document for Sole Proprietor, all as referred to in the foregoing forms and in T2.1 must be inserted under this heading.

Signed

Date

Name

Position

Tenderer
FORM 2.2.14  COID LETTER OF GOOD STANDING

The Tenderer must attach hereto a valid Letter of Good Standing issued by the Compensation Commissioner confirming that the Tenderer is in compliance with the Act.


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

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

Tenderer ...........................................................................................................................
FORM 2.2.15  CERTIFICATE OF AUTHORITY OF SIGNATORY

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

<table>
<thead>
<tr>
<th>(I) COMPANY</th>
<th>(II) CLOSE CORPORATION</th>
<th>(III) PARTNERSHIP</th>
<th>(IV) JOINT VENTURE</th>
<th>(V) SOLE PROPRIETOR</th>
</tr>
</thead>
</table>

All signatories, including sole proprietors, shall confirm their authority by attaching to this page of this tender a duly signed and dated original or certified copy of the relevant resolution of their members or their board of directors, as the case may be.

(I) Certificate for Company

I, .................................................................................................................., chairperson of the Board of Directors of .................................................................................................................., hereby confirm that by resolution of the Board (copy attached) taken on ......................... 20......, Mr/Ms ..................................., acting in the capacity of ................................................................................................................., was authorized to sign all documents in connection with the tender for WS 01 - 2017 and any contract resulting from it on behalf of the company.

Chairman: ........................................................................................................

As Witnesses: 1................................................................................................

2................................................................................................

Date: ........................................

BID NUMBER: WS 01 – 2017. THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI
84 of 241
(II) Certificate for Close Corporation

We, the undersigned, being the key members in the business trading as ................................................. ................................................. hereby authorize Mr/Ms ......................................... , acting in the capacity of.........................................................., to sign all documents in connection with the tender for Tender WS 01 – 2017 and any contract resulting from it on our behalf.

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

We, the undersigned, being the key partners in the business trading as, ……………………………………………………………………….., hereby authorize Mr/Ms …………………………………………………., acting in the capacity of …………………………………………………., to sign all documents in connection with the tender for Tender WS 01 – 2017 and any contract resulting from it on our behalf.

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*Note: This certificate is to be completed and signed by all key partners upon whom rests the direction of the affairs of the partnership as a whole.*
(IV) **Certificate of Authority for Joint Ventures**

This Returnable Schedule is to be completed by joint ventures.

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

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<th>NAME OF FIRM</th>
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*Note: This certificate is to be completed and signed by all key partners upon whom rests the direction of the affairs of the Joint Venture as a whole.*
(V) **Certificate for Sole Proprietor**

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

**Signature** of sole owner: .............................................. Date: .................................................................

As Witnesses:

1. ................................................................. Date: .................................................................
2. ................................................................. Date: .................................................................
FORM 2.2.16  QUALITY CONTROL PROCEDURES

Evaluation Schedule:

The quality control practices and procedures which ensure compliance with stated employer's requirements will be evaluated. Refer to T1.2 Bid Data, F.4.2 Quality Management.

Tenderer should very briefly outline all the procedures in relation to the project and attach this to this schedule.

I, the undersigned, who warrants that I am duly authorised to do so on behalf of the enterprise, and confirm that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

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

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

Tenderer ..................................................................................................................................
FORM 2.2.17 PROPOSED PROGRAMME, NUMBER OF PERSONNEL AND METHOD STATEMENT

Refer to the Contract Data in Clause C1.2 Part 2 Sub-Clause 5.6.1 “Programme of Works”.

Tenderers are required to provide a detailed project plan listing all the activities and sub activities related to the scope of work. This must be represented in a Gantt Chart (preferably MS project) clearly indicating an indicative commencement date as well as completion date that is in line with the clients expected duration. Duration of activities must be realistic to the scope of work. Those activities that are interdependent must be properly reflected. Tenderers are encouraged to provide as much relevant detail as possible to reflect their knowledge and expertise with regards to the scope. It is also important to reflect clearly the resource that are to be used.

The programme is to be accompanied by a detailed method statement as required by the addition to Sub-Clause 5.6.1 of the General Conditions of Contract.

Signed

Date

Name

Position

Tenderer
FORM 2.2.18 FORM OF INTENT TO PROVIDE A PERFORMANCE GUARANTEE

The Tenderer must attach hereto a letter from the bank or institution with whom he has made the necessary arrangements, to the effect that the said bank or institution will be prepared to provide the required performance guarantee when asked to do so.

Refer to Form T 2.1.6 “Financial ability to execute the project” and also insert information pertaining to the above.

Signed

Date

Name

Position

Tenderer
FORM 2.2.19  CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING

This is to certify that (tenderer)………………………………………………………………………………………………………………..
of (address)……………………………………………………………………………………………………………………………………..

was represented by the person(s) named below at the compulsory meeting held for all tenderers at (location)……………………………………..

on (date)…………………………………… starting at (time) ……………

I / We acknowledge that the purpose of the meeting was to acquaint myself / ourselves with the Site of the Works and its surroundings and / or matters incidental to doing the work specified in the Tender Documents in order for me / us to take account of everything necessary when compiling our rates and prices included in the tender.

I / We also acknowledge that I / we have examined the Site Data made available by the Employer (including borehole cores and related information).

Particulars of person(s) attending the meeting:

Name: .....................................………………..  Signature: .............….................................
Capacity: ........................................................

Name: ................................................………..  Signature: ................…..............................
Capacity: ........................................................

Attendance of the above person(s) at the meeting is confirmed by the Employer's representative, namely:

Name: ................................…………..............  Signature: .................................................
Capacity: ..............................…………............  Date and Time: .........................................
The tenderer must indicate below the items of import goods subject to exchange rate and the applicable rate at the time of tendering. Further sheets may be added by the tenderer. Forward cover must be taken out by the Tenderer within 14 days of receipt of Letter of Appointment.

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<tr>
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<th>DESCRIPTION OF GOODS</th>
<th>COUNTRY OF ORIGIN</th>
<th>AMOUNT SUBJECT TO EXCHANGE</th>
<th>PROPOSED PORT OF ENTRY</th>
<th>EXCHANGE RATE</th>
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Signed:  

Date:  

Name:  

Position:  

Tenderer:  

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BID NUMBER: WS 01 – 2017. THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI  
93 of 241
FORM 2.2.21  TECHNICAL DATA SHEETS

The attached Technical Data Sheets must be completed in full. The Technical Data Sheets will be used in the evaluation of functionality and will be included in the contract document.

The information provided in the Technical Data Sheets by the Tenderer is complete and correct.

Signed  

Date  

Name  

Position  

Tenderer
Technical Data Sheets:

Civil and Mechanical
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<th>Ref No.</th>
<th>Specification:</th>
<th>PKA</th>
<th>Information to be provided by (✓):</th>
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EKURHULENI METROPOLITAN MUNICIPALITY

DEPARTMENT NAME: WATER & SANITATION DEPARTMENT

CONTRACT NO: WS 01-2017

FOR

THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

T2.3 RETURNABLE SCHEDULES THAT WILL BE INCORPORATED IN THE CONTRACT

CONTENTS

<table>
<thead>
<tr>
<th>FORM</th>
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<tbody>
<tr>
<td>FORM 2.3.1 FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2014</td>
<td>100</td>
</tr>
<tr>
<td>FORM 2.3.2 RECORD OF ADDENDA TO BID DOCUMENTS</td>
<td>102</td>
</tr>
<tr>
<td>FORM 2.3.3 ADJUDICATION OF BIDS</td>
<td>103</td>
</tr>
<tr>
<td>FORM 2.3.4 GENERAL INFORMATION</td>
<td>112</td>
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FORM 2.3.1  FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2014

In terms of 5(1)h of the Construction Regulations, 2014 (hereinafter referred to as the Regulations), promulgated on 07 February 2014 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her bid for the due fulfilment of all the applicable requirements of the Act and the Regulations.

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

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

<table>
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<tr>
<th>Own resources, competent in terms of the Regulations (refer to 3 below)</th>
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<td>Own resources, still to be hired and/or trained (until competency is achieved)</td>
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<td>Specialist subcontract resources (competent) - specify:</td>
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3. Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the Contract team as specified in the Regulations (CVs to be attached):

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

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5 Potential key risks identified and measures for addressing risks:

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

YES

NO

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

1 ......................................................................................................................... ID NO: .................................................................

2 ......................................................................................................................... ID NO: .................................................................
We confirm that the following communications received from the Procuring Department before the submission of this bid offer, amending the bid documents, have been taken into account in this bid offer:

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<tr>
<th>Date</th>
<th>Title or Details</th>
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Attach additional pages if more space is required.

Signature of Authorized person: __________________________ Date: _____________

Name: __________________________ Position: __________________________
FORM 2.3.3 ADJUDICATION OF BIDS

PROCUREMENT FORM

ADJUDICATION OF BIDS

Bids are adjudicated in terms of EMM Supply Chain Management Policy, and the following framework is provided as a guideline in this regard.

1. Technical adjudication and General Criteria

Bids will be adjudicated in terms of inter alia:

- Compliance with bid conditions
- Technical specifications

If the bid does not comply with the bid conditions or technical specifications, the bid shall be rejected. See pages 2, 3 and 4 for examples.

2. Infrastructure and resources available

Evaluation of the following in terms of the size, nature and complexity of goods and/or services required:

- Physical facilities
- Plant and equipment available for the contract owned by the bidder
- Plant and equipment the bidder intends renting or acquiring, should the contract be awarded to him.

3. Size of enterprise and current workload

Evaluation of the bid’s position in terms of:

- Previous and expected current annual turnover
- Current contractual obligations
- Capacity to execute the contract

4. Staffing profile

Evaluation of the bid’s position in terms of:

- Staff available for this contract being bid for
- Qualifications and experience of key staff to be utilised on this contract.

5. Previous experience

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

- Experience in the relevant technical field
- Experience of contracts of similar size
- Some or all of the references will be contacted to obtain their input.

6. Financial ability to execute the contract

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

- Surety proposed
- Estimated cash flow
- Contact the bidder’s bank manager to assess the bidder’s financial ability to execute the contract and the bidder hereby grants his consent for this purpose.
7. Good standing with SA Revenue Service

Establish whether a valid original tax clearance certificate or copy thereof has been submitted with the Bid document on closing date of the bid. If no such Certificate or copy thereof has been submitted, the bid must be rejected. If a valid original tax clearance certificate has not been submitted, the bidder shall be requested in writing to submit a valid original tax clearance certificate by a specific date and at a specific venue. **NB** A failure to submit a valid original tax clearance certificate in terms of the aforesaid written request shall result in the rejection of the bid.

The bidder **must affix a valid original Tax Clearance Certificate or copy thereof**, to the **last page** of the bid document.

In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.

Copies of the TCC 001 “Application for a Tax Clearance Certificate” form are available from any SARS branch office nationally or on the website [www.sars.gov.za](http://www.sars.gov.za).

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

**NB:**

If the bid does not meet the requirements contained in the EMM Supply Chain Management Policy, and the mentioned framework, it shall not be considered an acceptable bid and shall be rejected by the Municipality, and may not subsequently be made acceptable by correction or withdrawal of the non-conforming deviation or reservation.

8. Adjudication using a Points System

Acceptable bids will be evaluated using a system that awards points on the basis of bid price and **B-BBEE Status Level of Contribution**. Failure on the part of a bidder to fill in and/or to sign this form and submit a B-BBEE Verification Certificate (from a Verification Agency accredited by the South African Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA)) together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

For bids with a bid amount equal to or below R 1 000 000.00 (all applicable taxes included) a maximum of 80 points is allocated for price and a maximum of 20 points for B-BBEE Status Level of Contribution. For bids with a bid amount above R 1 000 000.00 (all applicable taxes included) a maximum of 90 points is allocated for price and a maximum of 10 points for B-BBEE Status Level of Contribution.

A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.

A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

The Municipality shall award the Contract to the Bidder obtaining the highest number of points for Price and B-BBEE Level of Contribution calculated in accordance with the Preferential Procurement Regulations, 2011, unless there are grounds that justify the award to another bidder, in accordance with the provisions of Section 2 (f) of the Procurement Policy Framework Act, Act No. 5 of 2000.
9. Remedies

The City Manager must act in terms of paragraph 13 of the Preferential Procurement Policy Regulations, 2011, against the bidder or person awarded the contract upon detecting that the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis, or any of the conditions of the contract have not been fulfilled.

Regulation 13 of the Preferential Procurement Policy Regulations provides as follows:

"13(1) An organ of state must, upon detecting that-

(a) The B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis; or
(b) Any of the conditions of the contract have not been fulfilled act against the tenderer or person awarded the contract.

(2) An organ of state may, in addition to any other remedy it may have against the person contemplated in sub-regulations (1) –

(a) Disqualify the person from the tendering process;
(b) recover all 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) Restrict the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, from obtaining any business from any organ of state for a period not exceeding 10 years, after audi alteram partem (hear the other side) rule has been applied; and
(e) Forward the matter for criminal prosecution."
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, 2011.

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 R1 000 000 (One Million Rand) (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R1 000 000 (One Million Rand) (all applicable taxes included).

1.2 The value of this bid is estimated to exceed R1 000 000 (all applicable taxes included) and therefore the 90/10 system shall be applicable.

1.3 Preference points for this bid shall be awarded for:

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

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

<table>
<thead>
<tr>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.1.1 PRICE</td>
</tr>
<tr>
<td>1.3.1.2 B-BBEE STATUS LEVEL OF CONTRIBUTION</td>
</tr>
</tbody>
</table>

Total points for Price and B-BBEE must not exceed 100

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

1.5 The purchaser reserves the right to require of a 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

2.1 “all applicable taxes” includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;

2.2 “B-BBEE” means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;

2.3 “B-BBEE status level of contributor” means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad Based Black Economic Empowerment Act;

2.4 “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 services, works or goods, through price quotations, advertised competitive bidding processes or proposals;
2.5 “Broad-Based Black Economic Empowerment Act” means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
2.6 “comparative price” means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;
2.7 “consortium or joint venture” 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;
2.8 “contract” means the agreement that results from the acceptance of a bid by an organ of state;
2.9 “EME” means any enterprise with an annual total revenue of R5 million or less.
2.10 “Firm price” means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;
2.11 “functionality” means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;
2.12 “non-firm prices” means all prices other than “firm” prices;
2.13 “person” includes a juristic person;
2.14 “rand value” means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;
2.15 “sub-contract” means the primary contractor’s assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;
2.16 “total revenue” bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the Government Gazette on 9 February 2007;
2.17 “trust” means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and
2.18 “trustee” means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

3. ADJUDICATION USING A POINT SYSTEM

3.1 The bidder obtaining the highest number of total points may be awarded the contract.
3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts.
3.3 Points scored must be rounded off to the nearest 2 decimal places.
3.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.
3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.
3. Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.
4. POINTS AWARDED FOR PRICE

4.1 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

\[
\begin{align*}
Ps & = \text{Points scored for comparative price of bid under consideration} \\
Pt & = \text{Comparative price of bid under consideration} \\
P_{min} & = \text{Comparative price of lowest acceptable bid}
\end{align*}
\]

5. Points awarded for B-BBEE Status Level of Contribution

5.1 In terms of Regulation 5 (2) and 6 (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:

<table>
<thead>
<tr>
<th>B-BBEE Status Level of Contributor</th>
<th>Number of points (90/10 system)</th>
<th>Number of points (80/20 system)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>16</td>
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<tr>
<td>4</td>
<td>5</td>
<td>12</td>
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<tr>
<td>5</td>
<td>4</td>
<td>8</td>
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<tr>
<td>6</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Non-compliant contributor</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

5.2 Bidders who qualify as EMEs in terms of the B-BBEE Act must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA’s approval for the purpose of conducting verification and issuing EMEs with B-BBEE Status Level Certificates.

5.3 Bidders other than EMEs must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.

5.4 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.
A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.

Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized score card contained in the B-BBEE Codes of Good Practice.

A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended subcontractor is an EME that has the capability and ability to execute the sub-contract.

A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

6. BID DECLARATION

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

7. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.3.1.2 AND 5.1

7.1 B-BBEE Status Level of Contribution: .................. = ............... (maximum of 10 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or an Accounting Officer as contemplated in the CCA).

8 SUB-CONTRACTING

8.1 Will any portion of the contract be sub-contracted? YES / NO

8.1.1 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? YES / NO

9 DECLARATION WITH REGARD TO BIDDING ENTITY

9.1 Name of bidding entity; ...................................................................................................

9.2 VAT registration number: ...................................................................................................

9.3 Registration number of bidding entity: ...................................................................................................

9.4 TYPE OF ENTITY

[TICK APPLICABLE BOX]
9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

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

9.6 CLASSIFICATION
[TICK APPLICABLE BOX]

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

9.7 MUNICIPAL INFORMATION
Municipality where business is situated ............................................
Consumer Account Number ..........................................................
Stand Number ..............................................................................

9.8 TOTAL NUMBER OF YEARS THE FIRM HAS BEEN IN BUSINESS AND REGISTRATION DETAILS?
Date of Registration ____________________________________________;
Date that commenced business, if different to date of registration ________.

9.9 I/we, the undersigned, who is / are duly authorised to do so on behalf of the bidder, certify that the points claimed, based on the B-BBEE status level of contribution indicated in paragraph 7 of the foregoing certificate, qualifies the bidder 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 paragraph 7, 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 contribution 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; restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, 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
   (d) forward the matter for criminal prosecution.
WITNESSES:

1. ........................................... ..................................................

    SIGNATURE(S) OF BIDDER(S)

    DATE: ....................................

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

    ......................................
## FORM 2.3.4 GENERAL INFORMATION

1. Details of Bidding Entity

<table>
<thead>
<tr>
<th>Name of Bidder</th>
<th>…………………………………………………………………………………………………………</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postal Address</td>
<td>…………………………………………………………………………………………………………</td>
</tr>
<tr>
<td>Street Address</td>
<td>…………………………………………………………………………………………………………</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone Number: CODE……..NUMBER………………………………………………………………</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellphone Number: ………………………………………………………………………………………….</td>
</tr>
<tr>
<td>Facsimile Number: CODE………..NUMBER…………………………………………………………………</td>
</tr>
<tr>
<td>E-mail Address: …………………………………………………………………………………………….</td>
</tr>
</tbody>
</table>

| VAT Registration Number | ……………………………………………………………………………………………………………. |

Has an original and valid Tax Clearance Certificate been attached? (Tick applicable box)

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

Has a B-BBEE Status Level Verification Certificate been submitted? (Tick applicable box)

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

If yes, who was the certificate issued by? (Tick applicable box)

- [ ] an accounting officer as contemplated in the Close Corporation Act (CCA)
- [ ] a verification agency accredited by the South African National Accreditation System (SANAS)
- [ ] a registered auditor

**(A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE)**

Are you the accredited representative in South Africa for the goods/services/works offered? (Tick applicable box)

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

**(IF YES ENCLOSE PROOF)**
2. Legal entity: Mark with an X.

<table>
<thead>
<tr>
<th>Sole proprietor</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Partnership</td>
<td></td>
</tr>
<tr>
<td>Close corporation</td>
<td></td>
</tr>
<tr>
<td>Company</td>
<td></td>
</tr>
<tr>
<td>Joint venture/ Consortium</td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td></td>
</tr>
<tr>
<td>Tertiary Institution</td>
<td></td>
</tr>
<tr>
<td>Public Entity</td>
<td></td>
</tr>
</tbody>
</table>

3. In the case of a Joint venture/ Consortium, provide details on joint venture/ consortium partners:

<table>
<thead>
<tr>
<th>Joint venture/Consortium member</th>
<th>Type of entity (as defined above)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

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

   ______________________________       _________________________
   ______________________________       _________________________

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

   ______________________________       _________________________
   ______________________________       _________________________
6. Company, close corporation, or trust registration number (COMPULSORY):  
(In the case of a joint venture, provide for all joint venture members)

____________________________      ___________________________

____________________________       ___________________________

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

____________________________      ___________________________

____________________________       ___________________________

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

9. For joint ventures/ consortiums the following must be attached:
   • Written authority of each JV / consortium partner, for authorized signatory.
   • The joint venture/ consortium agreement.

10. For Trusts the following must be attached
   a. Certified copy of the trust deed;
   b. Certified copies of the Letters of Authority issued in terms of S6 of the Trust Property Control Act, Act No.57 of 1988
   c. Certified copy of the resolution of the trustees of the trust authorising the signatory to sign the bid on behalf of the trust

SIGNATURE OF AUTHORIZED PERSON : ……………………………………………………

DATE : ……………………………………………………
DETAILS OF PROPRIETOR, PARTNERS, CLOSE CORPORATION MEMBERS, COMPANY DIRECTORS, TRUSTEES,
(In the event of a joint venture/ consortium, to be completed by all of the above of the joint venture/ consortium partners)

<table>
<thead>
<tr>
<th>Name and Surname</th>
<th>Identity Number</th>
<th>Relevant qualifications and experience</th>
<th>Years of relevant experience</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

NAME OF BIDDING ENTITY .................................................................
EQUITY OWNERSHIP – (COMPULSORY)

TO BE COMPLETED FOR STATISTICAL PURPOSES ONLY AND WILL NOT BE USED FOR EVALUATION PURPOSES

List all partners, shareholders or members of bidding entity by name, identity number, citizenship, gender, race, HDI status and ownership. In the case of a Joint Venture, Consortium or Partnership complete an “Equity ownership” for each member.

<table>
<thead>
<tr>
<th>Name and Surname</th>
<th>Position occupied in Enterprise</th>
<th>Identity number</th>
<th>Citizenship</th>
<th>Gender Male / Female</th>
<th>Race</th>
<th>HDI Status (Y/N)</th>
<th>%Owned by HDI's</th>
<th>% Owned by Women</th>
<th>% Owned by Black</th>
<th>% Owned by White</th>
<th>% Owned by Disabled</th>
</tr>
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<tbody>
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</tbody>
</table>

**PLEASE NOTE:** KINDLY ATTACHED COPIES OF IDENTITY DOCUMENTS OF THE ABOVEMENTIONED MEMBERS
OCCUPATIONAL HEALTH AND SAFETY INFORMATION FOR BIDS

THE CONTRACTOR SHALL/MUST SUBMIT THE FOLLOWING TO THE MANAGER OH&S TO OBTAIN A CERTIFICATE OF COMPLIANCE FROM OH&S EKURHULENI METROPOLITAN MUNICIPALITY BEFORE ANY WORK MAY COMMENCE.

1. Proof of Registration with the Compensation Commissioner.
2. Letter of “Good Standing” with Compensation Commissioner.
3. Certified copy of first aid certificate.
4. Physical address where contract is taking place (on Company letterhead).
5. Detailed description of intended work (on Company letterhead).
6. List of all Personal Protective Equipment issued to employees (company letterhead).
7. List of ALL employees on site (on company letterhead).
8. Detailed Health and Safety Plan (on company letterhead).
11. All related statutory appointments.
12. Certificates of relevant Training.

The above list represents the minimum content of a safety file in terms of the Construction Regulations, 2014 (the regulations) as promulgated in Government Gazette No 37307 and Regulation Gazette No 10113 of 07 February 2014.

OHS Act 85 of 1993.
PLEASE REMEMBER:

(1) In order to obtain B-BBEE Status Level points in terms of the provisions of Regulations 5(2) or 6(2) of the Preferential Procurement Regulations, 2011, if a bidder is an Exempted Micro Enterprise (EME) in terms of the Broad-Based Black Economic Empowerment Act, Act No. 53 of 2003, the bidder must attach a certificate issued by a registered auditor, accounting officer (as contemplated in section 60(4) of the Close Corporation Act, Act No. 69 of 1984) or an accredited verification agency, in compliance with the requirements of Regulation 10 of the Preferential Procurement Regulations, 2011;

(2) In order to obtain B-BBEE Status Level points in terms of the provisions of Regulations 5(2) or 6(2) of the Preferential Procurement Regulations, 2011 if a bidder is not an Exempted Micro Enterprise (EME) in terms of the Broad-Based Black Economic Empowerment Act, Act No. 53 of 2003, the bidder must attach an original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating its B-BBEE rating, in compliance with the requirements of Regulation 10 of the Preferential Procurement Regulations, 2011;

(3) TO ATTACH A VALID ORIGINAL TAX CLEARANCE CERTIFICATE OR COPY THEREOF;

(4) IN THE CASE OF A JOINT VENTURE/CONSORTIUM, THE VALID ORIGINAL TAX CLEARANCE CERTIFICATE OR COPY/IES THEREOF, OF EACH ENTITY CONSTITUTING THE JOINT VENTURE/CONSORTIUM, MUST BE SUBMITTED WITH THE BID DOCUMENT;

(5) ATTACH ALL REQUIRED DOCUMENTS TO THE LAST PAGE OF YOUR BID DOCUMENT

(6) BIDDERS OTHER THAN EMES MUST SUBMIT THEIR ORIGINAL AND VALID B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE OR A CERTIFIED COPY THEREOF, SUBSTANTIATING THEIR B-BBEE RATING ISSUED BY A REGISTERED AUDITOR APPROVED BY IRBA OR A VERIFICATION AGENCY ACCREDITED BY SANAS.
EKURHULENI METROPOLITAN MUNICIPALITY

DEPARTMENT NAME: WATER & SANITATION DEPARTMENT

CONTRACT NO: WS 01-2017

FOR

THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 M€ ELEVATED WATER TOWER IN NORTHMEAD BENONI

THE CONTRACT

<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>PAGE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART C1 AGREEMENT AND CONTRACT DATA</td>
<td>120</td>
</tr>
<tr>
<td>PART C2 PRICING DATA</td>
<td>142</td>
</tr>
<tr>
<td>PART C3 SCOPE OF WORKS</td>
<td>162</td>
</tr>
<tr>
<td>PART C4 SITE INFORMATION</td>
<td>238</td>
</tr>
</tbody>
</table>
**PART C1 AGREEMENT AND CONTRACT DATA**

<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>PAGE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1.1 FORM OF OFFER AND ACCEPTANCE</td>
<td>121</td>
</tr>
<tr>
<td>C1.2 CONTRACT DATA</td>
<td>125</td>
</tr>
<tr>
<td>C1.3 FORM OF GUARANTEE</td>
<td>135</td>
</tr>
<tr>
<td>C1.4 AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993</td>
<td>137</td>
</tr>
<tr>
<td>(ACT NO 85 OF 1993)</td>
<td></td>
</tr>
<tr>
<td>C1.5 DECLARATION OF INSURANCE</td>
<td>140</td>
</tr>
<tr>
<td>C1.6 BLASTING INDEMNITY</td>
<td>141</td>
</tr>
</tbody>
</table>
FORM OF OFFER AND ACCEPTANCE

OFFER

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

THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

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

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

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

rand (in words);

___________________________________________________________________________________________

____________________________   R________________________(in figures),

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

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

FOR THE BIDDER:

Signature(s) __________________________________________ _____________________________

Name(s) __________________________________________ _____________________________

Capacity __________________________________________ _____________________________

(Name and address of organisation)

Name and signature of Witness____________________________

Date ________________________
ACCEPTANCE

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

The terms of the contract, are contained in

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

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

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

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

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

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

FOR THE EMM:

Signature(s)

____________________________ _____________________________

Name(s)

____________________________ _____________________________

Capacity

____________________________ _____________________________

EKURHULENI METROPOLITAN MUNICIPALITY

(Name and address of organisation)

Name and signature of witness____________________________________________________

Date _________________________

BID NUMBER: WS 01 – 2017. THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

122 of 241
SCHEDULE OF DEVIATIONS

Notes:

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

1 Subject ____________________________________________________________________________
Details ____________________________________________________________________________

2 Subject ____________________________________________________________________________
Details ____________________________________________________________________________

3 Subject ____________________________________________________________________________
Details ____________________________________________________________________________

4 Subject ____________________________________________________________________________
Details ____________________________________________________________________________

5 Subject ____________________________________________________________________________
Details ____________________________________________________________________________

6 Subject ____________________________________________________________________________
Details ____________________________________________________________________________

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

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the bid documents and the receipt by the Bidder of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.
<table>
<thead>
<tr>
<th>FOR THE BIDDER:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Signature(s)</strong></td>
</tr>
<tr>
<td><strong>Name(s)</strong></td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
</tr>
<tr>
<td>(Name and address of organisation)</td>
</tr>
<tr>
<td>Name and signature of witness</td>
</tr>
<tr>
<td>Date __________________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FOR THE EMM:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Signature(s)</strong></td>
</tr>
<tr>
<td><strong>Name(s)</strong></td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
</tr>
<tr>
<td><strong>EKURHULENI METROPOLITAN MUNICIPALITY</strong></td>
</tr>
<tr>
<td>(Name and address of organisation)</td>
</tr>
<tr>
<td>Name and signature of witness</td>
</tr>
<tr>
<td>Date __________________________</td>
</tr>
</tbody>
</table>
C1.2 CONTRACT DATA
CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works (Second Edition) 2010, print 3.1, published by the South African Institution of Civil Engineering, is applicable to this Contract and is incorporated herein by reference. Copies of these Conditions of Contract may be obtained from the South African Institution of Civil Engineering, Tel. No. (011) 805-5947/48/53.

All of the following Notes apply:

NOTES

Note 1

The edition number (2nd Edition) of GCC 2010 must not be confused with its print number. The GCC 2010 in itself has had various print runs, each designated by a print number since its first print. Various early print runs of the GCC 2010 contain text that has been amended in later print numbers. It is therefore important that the correct print number be specified and used for this contract.

The print number appears as the last line of text on the page that precedes page iii in the beginning of the publication for each of the print runs after the first print. These therefore appear only in the Revised Second Print, Revised Third Print and Print 3.1. No such print number appears for the First Print, i.e. for the print preceding the Revised Second Print.

The following print numbers of GCC 2010 specifically do apply to this contract:

- Print 3.1
- All print numbers subsequent to Print 3.1, provided the content does not differ with that of Print 3.1. Where the content differ, the content of Print 3.1 shall take precedence.

A copy of the GCC 2010 where a print number is not displayed, or where any of the following print numbers is displayed, specifically does not apply to this contract:

- Revised Second Print
- Revised Third Print

Note 2

The GCC 2010 makes several references to the Contract Data. The Contract Data shall take precedence over the GCC 2010 in the interpretation of any ambiguity or inconsistency.

Each item of data below is cross-referenced to the clause in the GCC 2010 to which it applies.

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

a) The Form of Offer and Acceptance.
b) Amplifications of the General Conditions of Contract within the Contract Data.
c) Additional special conditions or amendments to the General Conditions of Contract within the Contract Data.
d) The General Conditions of Contract.
e) The Specifications, Drawings, Schedules and other documents forming part of the Contract (in that order) contained in the Scope of Work and the Site Information.
If any ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

**Note 3**

Certain pro-forma forms and pro-forma agreements contained in the GCC 2010 have been adapted for this particular contract. Those pro-forma forms and pro-forma agreements contained in the GCC 2010 do not apply where replaced by similar pro-forma forms and pro-forma agreements in this document.

**PART 1: DATA PROVIDED BY THE EMPLOYER**

The following contract specific data are applicable to this Contract:

<table>
<thead>
<tr>
<th>Clause</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1.13</td>
<td>The Defects Liability Period is twelve (12) months from the date of the Certificate of Completion for a work order.</td>
</tr>
<tr>
<td>1.1.1.14</td>
<td>The Work shall be completed within 18 Months. The time for achieving Practical Completion is as agreed between the Engineer and Contractor before start of construction.</td>
</tr>
<tr>
<td>1.1.1.15</td>
<td>The name of the Employer is <strong>Ekurhuleni Metropolitan Municipality</strong>.</td>
</tr>
<tr>
<td>1.1.1.16</td>
<td>The name of the Employer is Ekurhuleni Metropolitan Municipality Contact person is: Ms. M Matiwane (Acting HOD) The name of the Engineer: Will be provided once the Contractor was appointed.</td>
</tr>
<tr>
<td>1.1.1.26</td>
<td>The Pricing Strategy of a Re-measurement Contract shall apply.</td>
</tr>
<tr>
<td>1.2.1.2</td>
<td>The Employer’s address for receipt of communications is:</td>
</tr>
<tr>
<td></td>
<td>Physical address:</td>
</tr>
<tr>
<td></td>
<td>Ekurhuleni Metropolitan Municipality C/o Cross &amp; Rose Streets GERMISTON 1400</td>
</tr>
<tr>
<td></td>
<td>Postal address:</td>
</tr>
<tr>
<td></td>
<td>Private Bag 1069 GERMISTON 1400</td>
</tr>
<tr>
<td></td>
<td>The Engineer’s address for receipt of communication is:</td>
</tr>
<tr>
<td></td>
<td>Physical address:</td>
</tr>
<tr>
<td></td>
<td>Boksburg Civic Centre Corner Pritchard &amp; Market Boksburg 1460</td>
</tr>
<tr>
<td></td>
<td>Post address:</td>
</tr>
<tr>
<td></td>
<td>P O Box 215 Boksburg 1460</td>
</tr>
<tr>
<td></td>
<td>Fax: (086) 581-8542 E-mail: <a href="mailto:Sibongile.Mbonani@ekurhuleni.gov.za">Sibongile.Mbonani@ekurhuleni.gov.za</a></td>
</tr>
<tr>
<td>3.1.3</td>
<td>The Engineer shall obtain the specific approval of the Employer before executing any of his functions or duties according to the following Clauses of the General Conditions of Contract:</td>
</tr>
<tr>
<td></td>
<td>− Certify additional costs / expenditure (Clause 3.1.2)</td>
</tr>
<tr>
<td></td>
<td>− Determining extension of Time for Practical Completion (Clause 5.12)</td>
</tr>
<tr>
<td></td>
<td>− Taking over of the Works (Clause 5.14)</td>
</tr>
<tr>
<td>5.3.1</td>
<td>The documentation required before commencement with Works execution are: Health and safety Plan (Clause 4.3) Initial programme (Clause 5.6) Guarantee from Bank or Insurance Company (Clause 6.2)</td>
</tr>
<tr>
<td>Clause</td>
<td>Content</td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Insurance of Construction Machinery Plant (Clause 8.6)</strong>&lt;br&gt;<strong>Insurance of Motor Vehicle Liability (Clause 8.6)</strong>&lt;br&gt;<strong>Common Law Liability Insurance (Clause 8.6)</strong>&lt;br&gt;<strong>Commissioner of COID (Clause 8.6)</strong>&lt;br&gt;<strong>Signed Notification to the Department of Labour</strong>&lt;br&gt;<strong>Method Statement and QCP</strong></td>
<td></td>
</tr>
<tr>
<td><strong>5.3.2</strong></td>
<td>The time to submit the documentation required before commencement with Works execution is 14 Days.</td>
</tr>
<tr>
<td><strong>5.4.2</strong></td>
<td>The access and possession of Site shall not be exclusive to the Contractor but as set out in the Site Information.</td>
</tr>
<tr>
<td><strong>5.5.1</strong></td>
<td>The whole of the Works shall be completed within 36 months with effect from _______ until _______.</td>
</tr>
<tr>
<td><strong>5.6.1</strong></td>
<td>The Contractor shall provide a programme for execution of the Works. The programme shall be submitted to the Engineer within fourteen (14) days of the receipt of the Works Order.</td>
</tr>
<tr>
<td><strong>5.7.2</strong></td>
<td>Approval to be obtained from Employer to work at night.</td>
</tr>
<tr>
<td><strong>5.7.3</strong></td>
<td>Payment for acceleration:&lt;br&gt;− Certify additional costs/expenditure (Clause 3.1.2)&lt;br&gt;− Work at night (Clause 5.7.2)&lt;br&gt;− Payment for acceleration (Clause 5.7.3)&lt;br&gt;− Work during non-working times (Clause 5.8.1.1)&lt;br&gt;− Suspension of the Works (Clause 5.11.1)&lt;br&gt;− Determining extension of Time for completion (Clause 5.12)&lt;br&gt;− Acceleration instead of extension of time (Clause 5.12.4)&lt;br&gt;− Reduction in penalty (Clause 5.13.2)&lt;br&gt;− Taking over of the Works – Practical Completion (Clause 5.14)&lt;br&gt;− Variation orders (Clause 6.3.1)&lt;br&gt;− Dayworks as a variation order (Clause 6.4.1.4)&lt;br&gt;− Materials for dayworks (Clause 6.5.2)&lt;br&gt;− Termination of Contract (Clause 9.1.5)&lt;br&gt;− Ruling on Contractor’s claim (Clause 10.1.5)</td>
</tr>
<tr>
<td><strong>5.8.1</strong></td>
<td>The non-working Days are Saturdays and Sundays.&lt;br&gt;The special non-working Days are:&lt;br&gt;− Statutory public holidays; and&lt;br&gt;− All annual year-end shutdown periods as recommended by the South African Federation of Civil Engineering Contractors (SAFCEC), and which commence after the Commencement Date and which commence before the Due Completion Date.</td>
</tr>
<tr>
<td><strong>5.13.1</strong></td>
<td>The penalty for failing to complete a Works Order by the Due Completion Date is R50 000,00 per calendar day or part thereof, beyond the stated completion date.</td>
</tr>
<tr>
<td><strong>5.16.3</strong></td>
<td>The latent defect period is 10 years for civil engineering works. The latest defect period is 3 years for electrical and mechanical works.</td>
</tr>
</tbody>
</table>
| **6.1** | All payments to bidders will only be made by means of Electronic Fund Transfer (EFT). Successful bidders will be requested to submit within 14 days after appointment, the following documents:<br>− An original letter from the banking institution to confirm full details of the bank account to the Council (Company name, account number)<br>− An original cancelled cheque (if applicable)<br>− An original letter on the bidding entity’s letterhead confirming bank account details into which all
Clause

contract payments must be made, signed by an authorised official of bidding entity.

6.2.1 The Form of Guarantee must substantially contain the wording of the document included as “Form of Guarantee” – See Form C1.3

The liability of the Guarantee shall be in accordance with paragraph 21 (1)(f) of the EMM’s Supply Chain Management Policy, which reads as follows:

(f) where surety is required it shall be in the form of cash, a certified cheque, or a bank guarantee from a banking institution registered in terms of the Banks Act, 1990 (Act No. 94 of 1990) or from an insurer registered in terms of the Insurance Act, 1943 (Act No. 27 of 1943). Where bidders in Category A cannot raise the required surety of 2.5%, and it is feasible to deduct the amount from the first payment certificate, such concessions may be granted;

Guarantees will be required as follows:

<table>
<thead>
<tr>
<th>CATEGORY A</th>
<th>PROJECT VALUE</th>
<th>GUARANTEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>&lt; R500 000</td>
<td>2.5%</td>
</tr>
<tr>
<td>B</td>
<td>R500 001 – R1 000 000</td>
<td>5%</td>
</tr>
<tr>
<td>C</td>
<td>R1 000 001 – R2 000 000</td>
<td>7.5%</td>
</tr>
<tr>
<td>D</td>
<td>&gt;R2 000 000</td>
<td>10%</td>
</tr>
</tbody>
</table>

The Form of Guarantee is to be delivered with 14 (Fourteen) days after the Commencement Date.

6.5.1.2.3 The percentage allowance to cover overhead charges is:

10 per cent for labour; and
10 per cent for materials and hand tools

6.8.2 Contract Price Adjustment is applicable:

Price adjustment shall be in accordance with the Contract Price Adjustment Schedule included in the General Conditions of Contract:

\[ f = (1 - x) \left( a \frac{Lt}{Lo} + b \frac{Pt}{Po} + c \frac{Mt}{Mo} + d \frac{Ft}{Fo} - 1 \right) \]

The value of "x" is 0.1
The values of the coefficients shall be:

a = 0.25
b = 0.15
c = 0.55
d = 0.05

The urban area nearest to the Site shall be Ekurhuleni, as listed in the Statistical Release P0141, Additional Tables: Table 14 “CPI – all items, according to area” of Statistics South Africa (which shall apply to the “Labour Index” as a relevant Consumer Price Index).

The Construction Equipment shall be Civil Engineering plant, as listed in Statistical Release P0151, Table 4 “Producer Price Index” of Statistics South Africa (which shall apply to the “Plant Index” as a relevant Producer Price Index).

The Materials shall be Building and Construction - Civil Engineering, as listed in the Statistical Release P0151, Table 3 or Table 4 respectively, of Statistics South Africa (which shall apply to the “Materials Index” as a relevant Producer Price Index).

The area for Diesel at wholesale level shall be Witwatersrand, as listed in the Statistical Release P0151, Table 4 of Statistics South Africa (which shall apply to the “Fuel Index” as a relevant Producer Price Index).

The base month is one month prior to the closing of the bid.
<table>
<thead>
<tr>
<th>Clause</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.8.3</td>
<td>The following are special materials: <strong>NIL</strong>. No price adjustments for variations in the costs of special materials are allowed.</td>
</tr>
<tr>
<td>6.10.1.5</td>
<td>The percentage advance on materials not yet built into the Permanent Works is eighty percent (80%).</td>
</tr>
<tr>
<td>6.10.3</td>
<td>Retention rate is 10% of the amounts due to the Contractor. The limit of retention money is 10%. A Retention Money Guarantee is not permitted.</td>
</tr>
</tbody>
</table>
| 6.10.4  | All payments to bidders will only be made by means of Electronic Fund Transfer (EFT). Successful bidders will be requested to submit within 14 days after appointment, the following documents:  
- An original letter from the banking institution to confirm full details of the bank account to the Council (Company name, account number)  
- An original cancelled cheque (if applicable)  
- An original letter on the bidding entity’s letterhead confirming bank account details into which all contract payments must be made, signed by an authorised official of bidding entity. |
| 7.5.3   | **ADD THE FOLLOWING:**  
“Provided further that if the Works or excavation(s) are not ready for inspection or are incorrect or are not in accordance with the drawings or specifications, the fruitless expenditure so incurred by the Engineer will be for the Contractor’s account. In such case a further adequate notice shall be given by the Contractor to the Engineer.” |
| 8.6     | A Coupon Policy for Special Risks is to be issued. (To be approved by the Employer’s Claim Management Services Provider) |
| 8.6.1.1.2| The value of Plant and materials supplied by the Employer to be included in the insurance sum is R Nil |
| 8.6.1.1.3| The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R250,000.00 |
| 8.6.1.3  | The limit of the liability insurance is R5,000,000.00 for any single claim – the number of claims to be unlimited during the construction and Defects Liability period. (To be approved by the Employer’s Claims Management Services Provider) |
| 8.6.1.5  | The following additional and varied insurances are required: Not applicable |

**PART 2: VARIATIONS TO THE CONDITIONS OF CONTRACT ARE:**

<table>
<thead>
<tr>
<th>Clause</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3</td>
<td>Add new sub-clauses 4.3.3 &amp; 4.3.4:</td>
</tr>
</tbody>
</table>
| 4.3.3   | “The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Amendment Act, 1993 (Act 85 of 1993), hereinafter referred to as ‘the Act’, that the following arrangements and procedures shall apply between them to ensure compliance by the Contractor with the provisions of the Act:  
i. The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all relevant provisions of the Act and the Regulations promulgated in terms of the Act.  
ii. The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations on the Contractor will be fully complied with.  
iii. The Contractor accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from himself being obliged to comply with any of the aforesaid duties, obligations and prohibitions, with the exception of such duties, obligations and prohibitions expressly assigned to the Employer in terms of the Act and its associated Regulations. |
iv. The Contractor agrees that any duly authorized officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to monitor that the Contractor has conformed to his undertakings as described in paragraphs (i) and (ii) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or any appropriate records or safety plans held by the Contractor.

v. The Contractor shall be obliged to report forthwith to the Employer and Engineer any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this Contract, and shall, on written demand, provide full details in writing, to the Employer and Engineer, of such investigation, complaint or criminal charge."

4.3.4 “The Contractor shall furthermore, in compliance with Constructional Regulations 2003 to the Act:

i. Acquaint himself with the requirements of the Employer's health and safety specification as laid down in regulation 4(1)(a) of the Construction Regulation 2003, and prepare a suitably and sufficiently documented health and safety plan as contemplated in regulation 5(1) of the Construction Regulation 2003 for approval by the Employer or his assigned agent. The Contractor's health and safety plan and risk assessment shall be submitted to the Employer for approval within fourteen (14) days after receiving a completed copy of the Agreement and shall be implemented and maintained from the Commencement of the Works.

ii. The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2003, to ensure that the Contractor is compliant in respect of his obligations. Failure by the contractor to comply with the requirements of these Regulations shall entitle the Engineer, at the request of the Employer or his agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, until such time that the Employer or his agents are satisfied that the issues in which the Contractor has been in default have been rectified.”

4.12 Add new sub-clause 4.12.4:

4.12.4 Health and Safety Officer

“It is a requirement of this Contract that the Contractor provides a Health & Safety Officer (HSO) on the project. The duties and qualifications of the H&S Officer are described in the Scope of Work (Part C3.1). The CV and credentials shall be submitted for approval by the Employer's Health & Safety Agent.

Failure by the Contractor to provide a suitable H&SO shall be deemed to be a reason justifying termination by the Employer under Sub-Clause 9.2.1, with specific reference to Sub-Clause 9.2.1.3.5

5.3.1 Add the following to sub-clause 5.3.1 after “… commence”, in line 3:

“subject to the Contractor having an approved project specific health and safety plan in terms of the Occupational Health and Safety Act 1993: Construction Regulations 2003 and complied with the initial requirements thereof.

5.4.1 Add the following to sub-clause 5.4.1 between “… site,” and “the location …” in line 3 & 4:

“subject to the Contractor having an approved project specific health and safety plan in terms of the Occupational Health and Safety Act 1993: Construction Regulations 2003 and complied with the initial requirements thereof.”

5.6.1 Add the following to sub-clause 5.6.1:

“The programme is to be accompanied by a detailed method statement on the demolition and removal of the water tower. The method statement is to take into account that the acceptable “modus operandi” is to be: demolish – load – remove from site. Thus no stockpiling on site.”

Clause

5.12.1 Delete “of any kind whatsoever” and replace with “in the Clause 5.12.2”
5.12.2 Delete the first two lines and replace with:
“The circumstances are ...”

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

\[ V = (N_w - N_n) + \frac{(R_w - R_n)}{X} \]

Where:
- \( V \) = Extension of time in calendar days in respect of the calendar month under consideration.
- \( N_w \) = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded.
- \( N_n \) = Average number of days in the relevant calendar month, as derived from existing rainfall records, on which a rainfall of 20 mm or more has been recorded for the calendar month.
- \( R_w \) = Actual average rainfall in mm recorded for the calendar month under consideration.
- \( R_n \) = Average rainfall in mm for the calendar month as derived from existing rainfall records as stated in the Site Information.

For purposes of the Contract \( N_n \), \( R_n \), \( X \) and \( Y \) shall have those values assigned to them in the South African Weather Service’s rainfall records of the nearest station to the site.

If \( V \) is negative and its absolute value exceeds \( N_n \), then \( V \) shall be taken as equal to minus \( N_n \).

The total extension of time shall be the algebraic sum of all monthly totals for the period under consideration, but if the total is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for part of a month shall be calculated using pro rata values of \( N_n \) and \( R_n \).

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

The factor \((N_w - N_n)\) shall be considered to represent a fair allowance for variations from the average in the number of days during which rainfall exceeds 10 mm. The factor \((R_w - R_n)\) shall be considered to represent a fair allowance for variations from the average in the number of days during which the rainfall did not exceed 10 mm but wet conditions prevented or disrupted work.

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

5.12.2.2 Add the following at the end of Sub-Clause 5.12.2.2:

“In the case of excessive rainfall the extension of time shall be calculated in terms of the formula included below Clause 5.12.2”
<table>
<thead>
<tr>
<th>Section</th>
<th>Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.12.3</td>
<td>Delete and replace with: &quot;If an extension of time is granted and for which compensation is payable in terms of the Contract, the Contractor, subject to such additional provisions (if any) set out in the Scope of Works, shall be paid in accordance with the rates bidded for extension of time at the closing of bids and in terms of the Contract.&quot;</td>
</tr>
<tr>
<td>6.2</td>
<td>Add the following Sub-Clause 6.2.4: &quot;The Performance Guarantee shall have the same wording as the document included as Part C1.3 under this Part C1.3 of the document.&quot;</td>
</tr>
<tr>
<td></td>
<td>The amount of the Guarantee is to be 10% of the Contract Price. Failure by the Contractor to provide a suitable Guarantee within the stipulated timeframe shall be deemed to be a reason justifying termination by the Employer under Sub-Clause 9.2.1, with specific reference to Sub-Clause 9.2.1.3.5.&quot;</td>
</tr>
<tr>
<td>6.8</td>
<td>Add new Sub-Clause 6.8.5: In the event of price/prices being based on the exchange rate, the successful tenderer/s will be required to obtain exchange rate cover in order to protect EMM against exchange rate variations. Proof must be provided within 14 days after the tender has been awarded that forward Exchange Rate cover has been taken out. If proof that cover was taken out, and is not submitted to EMM within 14 days after the tender/contract has been awarded, the Tender/contract will be null and void. All claims for adjustments by which the contract price is sought to be increased or decreased shall be supported by documentary evidence as to their correctness. Any variations shall be adjusted up to the guaranteed or actual delivery date, whichever is the earlier. The Tenderer shall state the name of the South African port at which it is proposed to land the material, on Schedule 2.2.20. In order to enable the Employer to consider the tenders submitted on a common basis, the Tenderer shall specify the rates and the total amounts on which the estimates are based for freight, insurance, Customs Duty, railage and other importing charges. These rates will form the base rates for any adjustments to the amounts shown, and the rates shall be proved if a claim is made. The Contractor shall not be entitled to any increase in rates, freight, insurance, customs duty, railage and other importing charges on account of any errors or omissions made by the Contractor in Schedule 2.2.20.</td>
</tr>
<tr>
<td>6.9.1</td>
<td>Add new Sub-Clause 6.9.1.3: &quot;All temporary Works owned by the Contractor and brought on to the Site for the purposes of the Contract.&quot;</td>
</tr>
<tr>
<td>7.5.3</td>
<td>Add the following: &quot;Provided further that if the Works or excavation(s) are not ready for inspection or are incorrect or are not in accordance with the drawings or specifications, the fruitless expenditure so incurred by the Engineer will be for the Contractor’s account. In such case a further adequate notice shall be given by the Contractor to the Engineer.&quot;</td>
</tr>
<tr>
<td>Clause</td>
<td>Changes</td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>7.6.3</td>
<td>Add new sub-clause 7.6.3.3</td>
</tr>
<tr>
<td>7.6.3.3</td>
<td>“Where the Engineer considers that either or both sub-clauses 7.6.3.1 and 7.6.3.2 above apply to an event of a serious nature, he shall have the right to involve the Employer in the matter, in which case he will arrange a joint meeting between the Employer, the Engineer and the Contractor before giving any instructions to the Contractor”</td>
</tr>
<tr>
<td>8.6.1.1.3</td>
<td>Delete the word ‘movables’ and replace with ‘materials’</td>
</tr>
<tr>
<td>8.6.1</td>
<td>Add new Sub-Clause 8.6.1.6:</td>
</tr>
<tr>
<td>8.6.1.6</td>
<td>“Notwithstanding the provisions of the General Conditions of Contract and without limiting the obligations, liabilities or responsibilities of the Contractor in any way whatsoever including but not limited to the provision by the Contractor of any insurances, the Contractor will effect and maintain for the duration of the Contract until the date of the Certificate of Completion</td>
</tr>
<tr>
<td></td>
<td>i. Contract Works Insurance;</td>
</tr>
<tr>
<td></td>
<td>ii. Public Liability Insurance;</td>
</tr>
<tr>
<td></td>
<td>iii. A Coupon for Special Risk Insurance (SASRIA) issued by the South African Special Risk Insurance Association;</td>
</tr>
<tr>
<td></td>
<td>In the name of the Contractor (including all Sub-Contractors) and Municipality’s insurable interest must be noted in the policy.</td>
</tr>
<tr>
<td></td>
<td>A copy of the Contract Works Insurance, Public Liability Insurance policies and Coupon for Special Risk Insurance as arranged by the Contractor, must be submitted to Municipality. The Insurances will be maintained from the Commencement Date to the date of the Certificate of Completion.</td>
</tr>
<tr>
<td></td>
<td>The Contractor shall effect and pay for any supplementary insurance, which in its own interest it may deem necessary.</td>
</tr>
<tr>
<td></td>
<td>The Contractor shall insure that all potential and appointed Sub-contractors are aware of the whole content of this clause, and enforce the compliance by Sub-contractors with this clause where applicable.</td>
</tr>
<tr>
<td></td>
<td>Any clarification of the scope of cover to be provided by the Policies arranged by the Contractor or the Municipality should be obtained from the Municipality’s Broker.</td>
</tr>
<tr>
<td></td>
<td>The Contractor and its Sub-contractors are deemed to have full knowledge of the terms and conditions under which the required Insurance cover is issued.”</td>
</tr>
<tr>
<td>8.6</td>
<td>Add new Sub-Clauses 8.6.8 and 8.6.9:</td>
</tr>
<tr>
<td>8.6.8</td>
<td>“In the event of any claim arising under the policy or policies held, the Contractor shall without delay take all the necessary steps to lodge his claim on the joint behalf of himself and the Municipality, and the claim submitted shall cover all costs to repair and make good in terms of Sub-clause 8.6.1.1 The Contractor shall submit copies of all claims and related documents to the Engineer. Settlement of claims will be paid to the Municipality who will pay such amounts to the Contractor on certificate of the Engineer in terms of Clause 2.2 as the rectification proceeds. All claims shall be submitted in accordance with the requirements of the policy.”</td>
</tr>
<tr>
<td>8.6.9</td>
<td>“The Executive Manager Insurance &amp; Risks (Mr Dries van den Berg – (011) 999-7369) will verify the contractors All Risks insurance cover and issue a letter of confirmation that adequate cover is in place or not.”</td>
</tr>
</tbody>
</table>
## PART 3: DATA PROVIDED BY THE CONTRACTOR

<table>
<thead>
<tr>
<th>Clause</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1.9</td>
<td>The Contractor is …………………………….</td>
</tr>
</tbody>
</table>
| 1.2.1 | The Contractor's address for receipt of communications is:  
Physical address: ……………………………  
Postal address: ……………………………  
…………………………  
…………………………  
…………………………  
…………………………  
Fax: ……………………………..  
E-mail:…………………………... |
| 1.1.1.14 | The time for completing the works is ……... days |
| 6.5.1.2.3 | The percentage allowances to cover all charges for the Contractor's and subcontractor's profits, timekeeping, clerical work, insurance, establishment, superintendence and the use of hand tools is ……% |
C1.3 FORM OF GUARANTEE

PRO FORMA

CONTRACT NO. WS 01 - 2017

WHEREAS Ekurhuleni Metropolitan Municipality (hereinafter referred to as “the Employer”) entered into, a Contract with ____________________________________________________________________________ (hereinafter called “the Contractor”) on the __________ day of __________________________ 20____ for the construction of _____________________________________________________________________ at _______________________________________________________________________________________________

AND WHEREAS it is provided by such Contract that the Contractor shall provide the Employer with security by way of a guarantee for the due and faithful fulfilment of such Contract by the Contractor;

AND WHEREAS ___________________________________________ ______________________________ has/have at the request of the Contractor, agreed to give such guarantee;

NOW THEREFORE WE, ___________________________________________________________________ do hereby guarantee and bind ourselves jointly and severally as Guarantor and Co-principal Debtors to the Employer under renunciation of the benefits of division and excussion for the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions:

1. The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorized and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Completion Date which the Employer may make, give, concede or agree to under the said Contract.

2. This guarantee shall be limited to the payment of a sum of money

3. The Employer shall be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor.

4. This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.

5. Our total liability hereunder shall not exceed the sum of ______________________________________ (R________________________) 

The Guarantor reserves the right to withdraw from this guarantee by depositing the Guaranteed Sum with the beneficiary, whereupon the Guarantor’s liability hereunder shall cease.

We hereby choose our address for the serving of all notices for all purposes arising here from as ______________________________________

_____________________________________________________________________________________________
IN WITNESS WHEREOF this guarantee has been executed by us at ________________________________
on this ______________________ day of ________________________________ 20____

As witnesses:

1. ____________________________ Signature _____________________________________

2. ____________________________ Signature _____________________________________

Duly authorized to sign on behalf of ________________________________

Address __________________________________________________________

________________________________________________________

________________________________________________________
C1.4 AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

THIS AGREEMENT made at ________________________________________________________________
on this the ___________ day of __________________________ in the year ___________

between THE EKURHULENI METROPOLITAN MUNICIPALITY (hereinafter called “the Employer”) of the one part, herein represented by

in his capacity as ________________________________________________________________

and

______________________________ (hereinafter called “the Mandatory”) of the other part, herein represented by

______________________________ in his capacity as ____________________________________________

WHEREAS the Employer is desirous that certain works be undertaken, viz CONSTRUCTION OF THE 5.5 Mℓ NORTHMEAD ELEVATED WATER TOWER

and has accepted a Bid by the Mandatory for the construction and demolition, completion and 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, which shall be the date of a written notice from the Employer or Engineer requiring him to commence the execution of the Works, to either
   (a) the date of the Final Approval Certificate issued in terms of Clause 5.16.1 of the General Conditions of Contract (hereinafter referred to as “the GCC”),
   (b) the date of termination of the Contract in terms of Clauses 9.1, 9.2 or 9.3 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 mandataries, and
      (iv) Subsection 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 Clause 33 of the GCC and all relevant requirements of the above-mentioned Volume 3, the Mandatory agrees to execute all the Works forming part of this Contract and to operate and utilise 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 selected 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 subcontractors and/or their respective employers will at all times comply with the following conditions:

(a) The Mandatory shall assume the responsibility in terms of Section 16.1 of the Occupational Health and Safety Act. The Mandatory shall not delegate any duty in terms of Section 16.2 of this 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 Occupational Health and Safety 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 inquiry conducted in terms of section 32 of the Occupational Health and Safety Act into any incident involving the Mandatory and/or his employees and/or his subcontractors.

8 The contact details of the OH&S Agent for the EMM will be advised on date of award

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

SIGNED FOR AND ON BEHALF OF THE EMM:

WITNESS 1 .................................

NAME 1 ...........................................
(IN CAPITALS)

SIGNED FOR AND ON BEHALF OF THE MANDATORY:

WITNESS 1 .................................

NAME 1 ...........................................
(IN CAPITALS)
CERTIFICATE OF AUTHORITY FOR SIGNATORY TO AGREEMENT IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

The signatory for the company that is the Contractor in terms of the above-mentioned Contract and the Mandatory in terms of the above-mentioned Act shall confirm his or her authority thereto by attaching to this page a duly signed and dated copy of the relevant resolution of the Board of Directors.

An example is given below:

"By resolution of the Board of Directors passed at a meeting held on __________________________ 20_____,
Mr/Ms ___________________________________________ whose signature appears below, has been duly authorised to sign the AGREEMENT in terms of THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT 85 of 1993) on behalf of __________________________
__________________________________________________________

SIGNED ON BEHALF OF THE COMPANY: ______________________________________________________

IN HIS/HER CAPACITY AS: _________________________________________________________________

DATE: _____________________________________________________________

SIGNATURE OF SIGNATORY: ______________________________________________________________

WITNESS 1 ...........................................

NAME 1 ...........................................
(IN CAPITALS)
C1.5 DECLARATION OF INSURANCES

I/We hereby declare that the insurance policies enumerated below have been effected by me/us in accordance with the Contract Data.

<table>
<thead>
<tr>
<th>Cover effected</th>
<th>Clause</th>
<th>Insurer</th>
<th>Policy</th>
<th>Expiry date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Plant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provisions of the COID Act</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Law Liability</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Motor Vehicle Liability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other deemed necessary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Indemnity</td>
<td>as applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Copies of the abovementioned policies are attached

**NOTE:** In respect of COID, a copy of the current receipt and letter of good standing is attached

For and on behalf of the Contractor: ________________________________

Official Capacity: ________________________________

Date: ________________________________

**NOTE:** This schedule shall be completed and submitted to Ekurhuleni Metropolitan Municipality within 14 days from the Commencement Date of the contract and will serve as a condition precedent. The Contractor shall ensure that all policies are in place for the full period under contract, and were policies need to be renewed and or any changes effected, Ekurhuleni Metropolitan Municipality is to be provided with the renewal confirmation and/or details of changes within 14 days of such renewal or changes.
C1.6 BLASTING INDEMNITY

CONTRACT NO. ....................................................

Given by ..............................................................

*Company Registration No.: ........................................

Address: ........................................................................

A *Company incorporated with limited liability according to the company laws of the Republic of South Africa, *Partnership, *Close Corporation, *Public Company (hereinafter called the Contractor), represented herein by ___ in his capacity as the Contractor ____________ duly Authorized.

Hereto by a resolution of the Contractor dated ________________ a certified copy of which resolution is attached to this indemnity.

WHEREAS the Contractor has entered into a Contract with Ekurhuleni Metropolitan Municipality (hereinafter called the Company) for, ________________ and the Company required this Indemnity from the Contractor.

NOW THEREFORE THIS DEED WITNESSETH that the Contractor does hereby indemnify and hold harmless the Company in respect of all loss or damage that may be incurred or sustained by the Company by reason of or in any way arising out of or caused by blasting operations that may be carried out by the Contractor in connection with the aforementioned Contract and also in respect of all claims that may be made against the Company in consequence of such blasting operations, by reason of or in any way arising out of any accidents or damage to persons, life or property or any other cause whatsoever, and also in respect of all legal or other expenses that may be incurred by the Company in examining, resisting or settling any such claims; for the due performance of which the Contractor binds itself according to law.

THUS DONE AND SIGNED for and on behalf of the Contractor at ____________________________

on the ____ day of ______________________ 20__ in the presence of the subscribing witnesses.

AS WITNESSES

1. ___________________________ ___________________________
   SIGNATURE DESIGNATION OF SIGNATORY

2. ___________________________ ___________________________
   SIGNATURE DESIGNATION OF SIGNATORY

* Delete where not applicable
EKURHULENI METROPOLITAN MUNICIPALITY

DEPARTMENT NAME: WATER & SANITATION DEPARTMENT

CONTRACT NO: WS 01 - 2017

FOR

THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

PART C2 PRICING DATA

<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>PAGE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2.1 PRICING INSTRUCTIONS</td>
<td>143</td>
</tr>
<tr>
<td>C2.2 BILL OF QUANTITY</td>
<td>145</td>
</tr>
</tbody>
</table>
C2.1 PRICING INSTRUCTIONS

1. The General Conditions of Contract, the Contract Data, the Specifications (including the Project Specifications), the Drawings, the Municipal Financial Management Act and the Supply Chain Management Regulations shall be read in conjunction with the Bill of Quantities.

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

   Although the Bidder is at liberty to insert a rate of his own choosing for each item in the Bill, he should note the fact that the Contractor is entitled, under various circumstances, to payment for additional work carried out and that the Engineer is obliged to base his assessment of the rates to be paid for such additional work on the rates the Contractor inserted in the Bill.

   Clause 8 of each Standardized Specification, and the measurement and payment clause of each Particular Specification, read together with the relevant clauses of the Project Specifications, all set out which ancillary or associated activities are included in the rates for the specified operations.

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

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

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

6. The quantities set out in the schedule of quantities are only approximate quantities. The quantities of work finally accepted and certified for payment, and not the quantities given in the schedule of quantities, will be used to determine payments to the contractor.

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

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

   Should the Bidder group a number of items together and bid one sum for such group of items, the single bidded sum shall apply to that group of items and not to each individual item, or should he indicate against any item that full compensation for such item has been included in another item, the rate for the item included in another item shall be deemed to be nil.

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

8. The quantities of work as measured and accepted and certified for payment in accordance with the Conditions of Contract, and not the quantities stated in the Bill of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by differences between the quantities in the Bill of Quantities and the quantities certified for payment.

---

1 The standard system of measurement of civil engineering quantities published by the South African Institution of Civil Engineers.
Ordering of materials are not to be based on the Bill of Quantities, but only on information issued for construction purposes.

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

Unit : The unit of measurement for each item of work as defined in the Standardized, Project or Particular Specifications
Quantity : The number of units of work for each item
Rate : The payment per unit of work at which the Bidder bids to do the work
Amount : The quantity of an item multiplied by the bidded rate of the (same) item
Sum : An amount bidded for an item, the extent of which is described in the Bill of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units

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

mm = millimetre
m = metre
km = kilometre
km-pass = kilometre-pass
m² = square metre
m²-pass = square metre-pass
ha = hectare
m³ = cubic metre
m³-km = cubic metre-kilometre
kW = kilowatt
kN = kilonewton
kg = kilogram
t = ton (1 000 kg)
% = per cent
MN = meganewton
MN-m = meganewton-metre
PC Sum = Prime Cost Sum
Prov Sum = Provisional Sum
NB: PLEASE NOTE:

CONTRACT PRICE ADJUSTMENT SHALL BE APPLICABLE.

IF THE VALUE OF THE PAYMENT CERTIFICATES IS TO BE ADJUSTED BY A CONTRACT PRICE ADJUSTMENT

FACTOR THE VALUE OF THE CERTIFICATES ISSUED SHALL BE ADJUSTED IN ACCORDANCE WITH THE

CONTRACT PRICE ADJUSTMENT

\[ f = (1 - x) \left( a \frac{L_t}{L_0} + b \frac{P_t}{P_o} + c \frac{M_t}{M_o} + d \frac{F_t}{F_o} - 1 \right) \]

SCHEDULE WITH THE FOLLOWING VALUES.

THE VALUE OF "X" IS 0.1

THE VALUE OF THE COEFFICIENTS ARE:

A = 0.25 (LABOUR)

B = 0.15 (CONTRACTOR’S EQUIPMENT)

C = 0.55 (MATERIAL)

D = 0.05 (FUEL)

THE URBAN AREA NEAREST THE SITE IS BENONI

THE BASE MONTH IS THE MONTH PRIOR TO THE CLOSING OF THE BID
PLEASE NOTE:

As this bid is estimated to exceed a rand value of R10 million (VAT, escalation and contingencies included), all bidders are required to furnish,-

(1) If a bidder is a registered company required by law to have its annual financial statements audited or independently reviewed in compliance with the requirements of the Companies Act, Act No.71 of 2008, or any other law, audited or independently reviewed annual financial statements, as the case may be, prepared within six (6) months of the end of the bidders most recent financial year together with the audited or independently reviewed annual financial statements for the two immediately preceding financial years, unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted.

(2) If a bidder is a registered close corporation, annual financial statements in compliance with the provisions of the Close Corporations Act, Act No. 69 of 1984, prepared within nine (9) months of the end of the bidders most recent financial year together with the annual financial statements for the two immediately preceding financial years, unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted.

(3) Annual financial statements submitted must comply with the requirements of the Companies Act or the Close Corporations Act.

(4) If the bidder only commenced business within the past three years, the bidder is required to submit annual financial statements in compliance with the provisions of (1) and (2) above for each of its financial years since commencing business.

(5) If a bidder is not required by law to have its annual financial statements audited or independently reviewed, or is not a Close Corporation, then non-audited annual financial statements for the periods referred to above must be submitted.

Signature of person authorised to sign bid documents

_____________________________
Name in block letters

_____________________________
Designation Date


BID NUMBER: WS 01 – 2017. THE CONSTRUCTION OF THE 5,5 ML ELEVATED WATER TOWER IN NORTHMEAD BENONI
162 of 241
**PART C3 SCOPE OF WORKS**

**CONTENTS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Description of Works</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C3.1.1</td>
<td>EMM's objectives</td>
<td>165</td>
</tr>
<tr>
<td>C3.1.2</td>
<td>Overview of the Works</td>
<td>165</td>
</tr>
<tr>
<td>C3.1.3</td>
<td>Extent of Works</td>
<td>165</td>
</tr>
<tr>
<td>C3.1.4</td>
<td>Location of the Works</td>
<td>167</td>
</tr>
</tbody>
</table>

**C3.2 ENGINEERING**

<table>
<thead>
<tr>
<th>Section</th>
<th>Design</th>
<th>167</th>
</tr>
</thead>
<tbody>
<tr>
<td>C3.2.2</td>
<td>Drawings</td>
<td>168</td>
</tr>
<tr>
<td>C3.2.3</td>
<td>Design Procedures</td>
<td>169</td>
</tr>
</tbody>
</table>

**C3.3 PROCUREMENT**

<table>
<thead>
<tr>
<th>Section</th>
<th>Preferential Procurement</th>
<th>169</th>
</tr>
</thead>
<tbody>
<tr>
<td>C3.3.2</td>
<td>Use of Local Labour</td>
<td>169</td>
</tr>
<tr>
<td>C3.3.3</td>
<td>Subcontracting</td>
<td>170</td>
</tr>
<tr>
<td>C3.3.4</td>
<td>Attendance on subcontractors</td>
<td>171</td>
</tr>
</tbody>
</table>

**C3.4 CONSTRUCTION**

<table>
<thead>
<tr>
<th>Section</th>
<th>General</th>
<th>171</th>
</tr>
</thead>
<tbody>
<tr>
<td>C3.4.2</td>
<td>Work Specifications</td>
<td>172</td>
</tr>
<tr>
<td>C3.4.3</td>
<td>Site Establishment</td>
<td>181</td>
</tr>
<tr>
<td>C3.4.4</td>
<td>Plant and Materials</td>
<td>195</td>
</tr>
<tr>
<td>C3.4.5</td>
<td>Construction Equipment</td>
<td>196</td>
</tr>
<tr>
<td>C3.4.6</td>
<td>Existing Services</td>
<td>196</td>
</tr>
<tr>
<td>C3.4.7</td>
<td>Variations and Additions to SANS 1200 Standard Specifications and Particular Specifications</td>
<td>196</td>
</tr>
</tbody>
</table>

**C3.5 MANAGEMENT OF THE WORKS**

<table>
<thead>
<tr>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>236</td>
</tr>
</tbody>
</table>
C3.6 HEALTH AND SAFETY
C3.6.1 Health and Safety Specifications and Plans ................................................................. 237
C3.6.2 Protection of the Public ............................................................................................... 237
C3.6.3 Barricades and Lighting .............................................................................................. 238
C3.6.4 Traffic Control on Roads ............................................................................................ 238
C3.6.5 Measures against Disease and Epidemics ................................................................. 238
C3.6.6 AIDS Awareness ....................................................................................................... 238

C3.7 ENVIRONMENTAL MANAGEMENT PLAN... .............................................................. 238

C4.0 SITE INFORMATION .................................................................................................... 239
STATUS

In the event of any discrepancy between the Scope of Works and a part or parts of the SABS 1200 Standardized Specifications, the Bill of Quantities or the Drawings, the Project Specifications shall take precedence and prevail in the Contract.

C3.1 DESCRIPTION OF THE WORKS

C3.1.1 EMMS OBJECTIVES

The employer's objective is to construct a new 5.5 Mℓ Northmead Elevated Water Reservoir in order to reduce pressure problems experienced in this area.

The employer's objectives are to deliver public infrastructure using labour-intensive methods. Labour-intensive works comprise the activities described in SANS 1921-5/Earthworks activities which are to be performed by hand/Labour-Intensive Specification(1) and its associated specification data. Such works shall be constructed using local workers who are temporarily employed in terms of this scope of work.

C3.1.2 OVERVIEW OF THE WORKS

The reservoir is to be constructed from reinforced and precast concrete. The new reservoir's invert level is to be 1711.95 and top water level 1720.55.

The structure for the 5.5 Mℓ elevated water tower will be approximately 31m high with a circular cross section of 28.6m internal diameter.

C3.1.3 EXTENT OF WORKS

The construction of an elevated concrete water tower to be carried out under this contract comprises mainly of the following:

(a) Foundation excavation of approximately 920m³
(b) Concrete foundations of approximately 485m³
(c) A central concrete core of 5m internal diameter and 23.990m in height. The central core will house a staircase and pipework.
(d) 8 No. large concrete walls/fins with breath tapering from 10.55m to 7.5m, 0.35m thick and 23.990m high connected to the central column.
(e) 8 No. small concrete walls/fins with breath tapering from 3.95m to 2.48m, 0.35m thick and 23.990m high.
(f) A 30.3m diameter, 0.75m thick concrete tank floor.
(g) A 28.6m internal diameter concrete storage tank, 9.25m high with a wall thickness of 350mm and a flat concrete roof slab with thickness of 250mm. The roof slab top surface will slope from the perimeter to a central drain housed in the central cone. The soffit will be 1721.20.

The roof is to be covered with a 100mm thick layer of 19mm crushed stone to provide thermal insulation. Support to the roof will be provided by the reservoir walls along the circumference and by 13 No 350mm diameter columns inside the tank. An upstand beam around the edge of the roof is to be provided to:
i. retain the 19mm stone insulating layer
ii. to control and guide run-off, which will be discharged through 6 No. 125mm diameter HDPE pipes housed in the central core.

The Reservoir will be equipped with the following:
(a) 1 No. inlet pipe into the New tower
(b) 1 No. inlet to the existing tower
(c) 1 No. bottom outlet which also acts as the scour
(d) 2 sets of Isolation valves and automatic level control valve with respective valve chambers. One set for the new tower and another set for the existing tower.
(e) 2 No. water flow meter meters and chambers for the inlet and the outlet of the new tower
(f) 1 No. water flow meter for the inlet into the existing tower
(g) 1 No. overflow pipework
(h) 2 No. scour chambers for the overflow and the outlet/scour
(i) a 40mm pipe for the inlet automatic control valve
(j) 2 No. standard access manhole with a watertight, lockable cover raised 250mm above the roof top surface
(k) an overflow mechanism
(l) air vents – these should not give access to insects, birds or other contaminants
(m) 1 No. access ladder housed inside the smaller central core which provides access to the reservoir roof.

All pipes running below the reservoir will be embedded in concrete.

The design of reservoir structure complies with the following design requirements:
1. Design criteria/code: BS 8007 “Design of concrete structures for retaining aqueous liquids”
2. Loads:
   (a) Roof – 100mm thick layer of 19mm saturated crushed stone, on roof slab – Live load of 2.5 kPa
   (b) Walls – Hydrostatic pressure due to water having a density of 10kN/m³
3. Materials:
   (a) Concrete grade 35 as minimum with a minimum cement content of 420kg/m³
   (b) Reinforcing Steel – 450 MPa yield strength
   (c) Structural Steel: Grade 355W for hot rolled sections. Grade 355W for plates.
4. Minimum cover to all reinforcement: 40mm
5. Maximum design crack width: 0.1mm
6. Fall in temperature between the hydration peak and ambient assumed to be 25°C

Pipework

Pipe arrangement has been designed as follows:
- Full supply level determines the tower capacity.
- The reservoir empties every 4 to 6 hours and should not have stagnant water problems. In general no diffuser will be required.
• Bottom outlet has been used.
• The outlet will be used as the scour pipe and has scour valve and chamber for this purpose.
• 500mm freeboard was allowed although a 150mm head was used for sizing the overflow pipe.
• Two automatic inlet control valves have been allowed for both the new tower and the existing tower.
• A 40mm diameter pipe inside the reservoir is allowed for providing the water level to the automatic control valve. A much smaller pipe will be connected to this pipe and the valve. Its size will depend on the valve supplied.
• All valves shall be placed in suitable concrete valve chambers.
• All valves shall be left hand closing.
• All pipes inside the reservoir shall be stainless steel.
• All other pipes shall be heavy duty, hot dip galvanised and with electrical insulation gaskets connection to stainless steel pipes.

This description of the Works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract.

Approximate quantities of each type of work are given in the Schedule of Quantities.

C3.1.4 LOCATION OF THE WORKS
The site is located at the corner of Aerodrome Drive and Farrar Street in Northmead, Benoni. 
(GPS: 26° 9'45.96"S, 28°18'35.48"E).

C3.2 ENGINEERING
C3.2.1 DESIGN

Design and other responsibilities through to contract completion are as follows:

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>RESPONSIBLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inception, Concept and Viability</td>
<td>Employer</td>
</tr>
<tr>
<td>Design Development and documentation, including drawing up of necessary</td>
<td>Engineer</td>
</tr>
<tr>
<td>specifications</td>
<td></td>
</tr>
<tr>
<td>Tendering and providing the necessary information required in terms of the</td>
<td>Tenderers</td>
</tr>
<tr>
<td>Tender Documents including compliance with the Specifications</td>
<td></td>
</tr>
<tr>
<td>Tender adjudication report</td>
<td>Engineer</td>
</tr>
<tr>
<td>Tender award</td>
<td>Employer</td>
</tr>
<tr>
<td>Construction drawings</td>
<td>Engineer</td>
</tr>
<tr>
<td>Construction of the Works including necessary Temporary Works</td>
<td>Contractor</td>
</tr>
<tr>
<td>Frequent sampling and testing</td>
<td>Contractor</td>
</tr>
<tr>
<td>Testing for water tightness</td>
<td>Contractor</td>
</tr>
<tr>
<td>Cleansing and disinfection</td>
<td>Contractor</td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Commissioning of the Whole of the Works</td>
<td>Contractor</td>
</tr>
<tr>
<td>Preparation of as-built drawings</td>
<td>Contractor &amp; Engineer</td>
</tr>
<tr>
<td>Preparation of Operation and Maintenance Manuals</td>
<td>Contractor</td>
</tr>
<tr>
<td>Maintaining of the Works during the Defects Liability Period</td>
<td>Contractor</td>
</tr>
</tbody>
</table>

(a) The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.

(b) The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works.

(c) The Contractor shall supply all details necessary to assist the Engineer in the compilation of the as-built drawings.

**C3.2.2 DRAWINGS**

1. The Contractor shall use only the dimensions stated in figures on the Drawings in setting out the Works, and dimensions shall not be scaled from the Drawings, unless required by the Engineer. The Engineer will, on the request of the Contractor in accordance with the provisions of the Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

2. The levels given on the structural drawings are subject to confirmation on the site, and the Contractor shall submit all levels to the Engineer for confirmation before he commences any structural construction work. The Contractor shall also check all clearances given on the drawings and shall inform the Engineer of any discrepancies.

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

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

5. All information in possession of the Contractor, required by the Engineer and/or the Engineer's Representative to complete the as-built/record drawings, must be submitted to the Engineer's Representative before a Certificate of Completion will be issued.

6. The Drawings prepared by the Employer for the permanent Works are listed in Table 3.2.2 below and bound in a separate volume/bound at the back of this volume(1). The Employer reserves the right to issue amended and/or additional drawings during the Contract.

7. The following drawings as listed in Table 3.2.2 below as well as all drawings prepared by the contractor in complying with any performance specifications, form part of the contract.
Table 3.2.2: List of Drawings

<table>
<thead>
<tr>
<th>CONSULTANT’S DRAWING NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>27682BS 012</td>
<td>Proposed position for Geotech Trail Pits</td>
</tr>
<tr>
<td>27682BS-GPR</td>
<td>Benoni Water Tank GPR Survey</td>
</tr>
<tr>
<td>27682RW-001</td>
<td>Layout Plan</td>
</tr>
<tr>
<td>27682RW-014</td>
<td>Concrete plan layouts @ LVL 1687.96 to 1708.89</td>
</tr>
<tr>
<td>27682RW-015</td>
<td>Concrete plan layouts floor, roof and sections</td>
</tr>
<tr>
<td>27682RW-100</td>
<td>Pipe work details, pipe sections and details (1 of 2)</td>
</tr>
<tr>
<td>27682RW-101</td>
<td>Pipe work details, pipe sections and details (2 of 2)</td>
</tr>
<tr>
<td>27682RW-102</td>
<td>Pipe work details, inlet and outlet chamber details (1 of 1)</td>
</tr>
<tr>
<td>27682RW-103</td>
<td>Pipe work details, spill chamber details &amp; 500ND inlet chamber details</td>
</tr>
<tr>
<td>27682RW-104</td>
<td>Pipe work details, typical scour valve chamber details</td>
</tr>
<tr>
<td>27682RW-105</td>
<td>Pipe work details, typical isolation valve chamber for valves &gt; 400mm ND</td>
</tr>
<tr>
<td>27682RW-106</td>
<td>Pipe work details, typical ladder details</td>
</tr>
<tr>
<td>27682RW-107</td>
<td>Pipe work details, typical large electromagnetic flow meter &gt; 300 installation details</td>
</tr>
<tr>
<td>27682RW-108</td>
<td>Pipe work details, typical large magnetic flow meter chamber (2.0m x 2.0m)</td>
</tr>
</tbody>
</table>

C3.2.3 DESIGN PROCEDURES

The Contractor shall be responsible for the design and specifications for the following aspects of the Works:
- Any temporary works requirements, if any, e.g. specialized items of equipment;
- Design integration before and during construction;
- Procedures for all necessary approvals;
- Special procedures e.g. environmental;
- Design change procedures, and
- Record keeping and tracking of documents.

C3.3 PROCUREMENT

C3.3.1 PREFERENTIAL PROCUREMENT

The system of measurement of preferential procurement points shall be as defined in the Section T1.2: Tender Data. Acceptable bids will be evaluated using a system that awards points on the basis of 90 points for bid price and 10 points for the BEE rating.

C3.3.2 USE OF LOCAL LABOUR

It is a requirement of the Employer that the maximum possible use is made of local labour.
The Contractor is therefore required to limit the use of non-local labour to key personnel only and to employ only local labour on this Contract.

The Contractor shall fill in the relevant forms regarding "Key Personnel" and state how many non-local key personnel he intends to employ in the various categories.

The numbers stated in the "Key Personnel" forms shall be strictly controlled during the Contract Period and any increase in numbers shall be subject to the approval of the Engineer.

C3.3.3  SUBCONTRACTING

C3.3.3.1 Scope of mandatory subcontract works

The Contractor shall sub-let to local sub-contractors appropriate portions of the works that are designated in Clause C3.3.1.1 as being reserved for labour intensive construction methods.

C3.3.3.2 Preferred subcontractors/suppliers

The Contractor shall be responsible for all work carried out by subcontractors on his behalf. The Engineer will not liaise directly with any such sub-contractor, nor will he become involved in any problems and/or disputes related to payments, programming, workmanship, etc., unless provided for in the Conditions of Contract. Such problems and/or disputes shall remain the sole concern of the Contractor and his subcontractors.

C3.3.3.3 Subcontracting procedures

The Engineer may at his discretion, upon receipt of a written and fully motivated application from the Contractor, and where he deems the circumstances so warrant, and provided always that the Contractor has complied fully and in all respects with the provisions of the Contract pertaining to subletting to local sub-contractors or has utilised his best endeavours to comply therewith, authorise in writing that the Contractor may employ local residents in terms of clause C3.3.1.1 with the sole intent of executing on-the-job training of such local residents to suitable levels of skill that will enable the Contractor to sub-let appropriate portions of the Works as specified in clause C3.3.1.1 to such local residents.

Without limiting the generality of application of this sub-clause, circumstances which may be considered by the Engineer to warrant such authorization include:

a) non-receipt of valid or acceptable tenders/quotations from local sub-contractors;
b) serious default or failure of appointed local sub-contractors;

The Engineer shall not grant such authority in cases where it may reasonably be concluded on the available evidence that the invitation of further tenders/quotations in accordance with the terms of the Contract, is likely to result in the successful completion of the portions of the Works concerned by local sub-contractors.

Should the Contractor, after suitable due endeavour, be unable to identify local residents suitable for and desiring to train as sub-contractors for portions of the Works as specified in clause C3.3.2.1, then the Contractor shall be permitted to undertake the Works in question with his own workforce as provided for in clause C3.3.1.1 above.

The Engineer shall monitor progress achieved with subcontractor training, and successful completion of this training shall be subject to his approval or instruction. The Contractor shall tender rates for the training of subcontractors and labour.
C3.3.3.4 Attendance on subcontractors

The Contractor shall approach the Labour Desk that is established for the purposes of the Contract for assistance and advice regarding conditions of employment, minimum wages, disputes and disciplinary procedures in respect of local sub-contractors.

C3.4 CONSTRUCTION

C3.4.1 GENERAL

C3.4.1.1 Nature of the Ground

A geotechnical investigation has been carried and is attached in Volume 2 Section C5.1.

The Contractor may undertake, at his own cost, further investigations or trial excavations he may require for his tender purposes, provided that the prior approval of the Engineer is obtained.

C3.4.1.2 Construction Programme

The submission of a construction programme as stated per Clause 5.6 of the General Conditions of Contract is compulsory.

- Before any work is to be commenced on the site, the contractor must submit a detailed project programme for the construction of the Works to the Engineer for his approval.

In preparation of the construction programme the Contractor must liaise with the Engineer and the programme must take into account the coordination of all activities. The programme must consist of a detailed schedule or block diagram covering all aspects of the Works and the planned time thereof must, with the Contract Period as time basis, be shown.

Rainfall conditions will be taken as abnormal when the average rainfall, as shown below, is exceeded and the contractor must then apply in writing for extension of the contract period using Clause 5.12 of the General Conditions of Contract.

The Contractor shall submit to the Engineer a realistic, detailed programme not later than 14 days after receipt of the Letter of Acceptance. The programme shall be in bar-chart format showing in detail how the Contractor proposes to complete the work covered by this contract by the Due Completion Date.

The following details must be stated:

(i) The quantity of work applicable to each bar item as well as the rate at which the work will be completed.
(ii) A budget of the value of completed work, month by month, for the full contract period.
(iii) The Contractor’s plant commitment on the contract for every fortnight.
(iv) The critical path.

The programme shall be kept up to date. If a Contractor fails to maintain progress in terms of the programme, he shall produce a revised programme showing the modifications to the original programme necessary to ensure completion of the Works before the Due Completion Date.
RAINFALL FIGURES

The following figures are applicable for Clause 5.12 of the General Conditions of Contract.

<table>
<thead>
<tr>
<th>Calendar Month</th>
<th>Expected No of Working Days Lost Due to Normal Rainfall</th>
<th>Average Monthly Rainfall (mm)</th>
<th>Calendar Month</th>
<th>Expected No of Working Days Lost Due to Normal Rainfall</th>
<th>Average Monthly Rainfall (mm)</th>
</tr>
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<tr>
<td>January</td>
<td>4.2</td>
<td>131.5</td>
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<td>September</td>
<td>0.9</td>
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<tr>
<td>April</td>
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<td>43.9</td>
<td>October</td>
<td>2.5</td>
<td>78.7</td>
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<tr>
<td>May</td>
<td>0.5</td>
<td>13.6</td>
<td>November</td>
<td>3.8</td>
<td>112.3</td>
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<tr>
<td>June</td>
<td>0.1</td>
<td>4.3</td>
<td>December</td>
<td>3.6</td>
<td>107.9</td>
</tr>
</tbody>
</table>

C3.4.1.3  Time for Completion

The maximum time allowed for the completion of the contract is 18 months (excluding special non-working days and the year-end break) from the Commencement Date.

C3.4.2  WORKS SPECIFICATIONS

C3.4.2.1  Applicable SANS 1200 Standardized Specifications

The following SANS 1200 Standardized Specifications for civil engineering construction are applicable:

- SANS 1200 A : General (1986)
- SANS 1200 AB : Engineer's Office (1986)
- SANS 1200 C : Site clearance (1980)
- SANS 1200 D : Earthworks (1988)
- SANS 1200 DK : Gabions and pitching (1996)
- SANS 1200 G : Concrete (structural) (1982)
- SANS 1200 HA : Structural steelwork (sundry items) (1990)
- SANS 1200 HB : Cladding and sheeting (1985)
- SANS 1200 HC : Corrosion protection of structural steelwork (1988)
- SANS 1200 L : Medium-pressure pipelines (1983)
- SANS 1200 LB : Bedding (pipes) (1983)
- SANS 1200 ME : Subbase (1981)

A bidder should get his own copies of the above documentation.

The following SANS specifications are also referred to in this document and the Contractor is advised to obtain them from Standards South Africa (a division of SABS) in Pretoria.
SANS 1914-1 to 6 (2002) : Targeted Construction Procurement
SANS 10313 (2008) : Protection of Structures against Lightning

The term “project specification” must be replaced by “scope of works” wherever it appears in these standardized specifications.

C3.4.2.2 Particular Specifications

The following Particular Specification for work not covered by the SANS 1200 Standardized Specifications are also included hereunder:

PD GENERAL REQUIREMENTS FOR MECHANICAL AND ELECTRICAL WORKS

Contents
PD 1.0 Scope
PD 2.0 Design
PD 3.0 Installation
PD 4.0 Fasteners
PD 5.0 Anchor Bolts
PD 6.0 Labels
PD 7.0 Starting, Site Testing & Commissioning
PD 8.0 Installation, Operation & Maintenance Manuals
PD 9.0 Maintenance
PD 10.0 Contractor’s Drawings
PD 11.0 Spares
PD 12.0 Compulsory Forms & Certificates
PD 13.0 Motor Control Centre
PD 14.0 Pressure Gauges
PD 15.0 Valves
PD 16.0 Check Valves
PD 17.0 Painting & Plant Equipment Identification
PD 18.0 Payment

PD 1 Scope

The clauses in this particular specification shall apply wherever electrical or mechanical equipment is installed on a project, unless they are superseded by the detailed requirements in other sections of the Project Specification.

Wherever, electrical and mechanical equipment is to be installed on a project, the scope of the work for this portion of the work shall include the design, supply, installation, commissioning and the upholding during the defects liability period of such equipment.
PD 2  Design

PD 2.1  General

A high quality standard is required to ensure reliability, long life, trouble free operation, efficient, ease of maintenance and operation and neatness.

All plant and equipment shall be of robust construction and the design shall, as applicable, be based on:

- the full range of duties which can be reasonably anticipated;
- the power and torque transmitted by the driver system under full load and stalled conditions;
- the maximum pressure or vacuum which can be produced by pumps, under all conditions including blocked or closed inlet and outlet circuits;
- conservative service and safety factors based on approved standards or laid down in the printed specifications of reputable and approved manufacturers;
- a safety margin of at least 20% in addition to any service or safety factors which apply;
- twenty four hour per day operation;
- prevention of serious damage from normal operational problems such as blockages, blinding, jamming, seizure, malfunction and, as far as is practical, mal-operation, if these occurrences cannot be avoided by good design,
- motors shall be sized so that they cannot be overloaded by the driven machine.

PD 2.2  Fail Safe Operation and Protections

Where damage can occur from normal operations, or from other foreseeable problems, plant, equipment and systems must be designed to fail safe i.e. must return to a safe condition in the event of failure, malfunction, mal-operation or overload where no further damage can be done.

PD 2.3  Moving Parts

The following general requirements apply not only to machines but to all equipment with moving parts such as headstocks, extension spindles, swiveling davits, heavy duty hinges, pivots and the like: -

- All rotating or swiveling shafts, pins and the like, shall be adequately supported, guided and restrained by lubricated or self-lubricating bearings, collars and/or bushes.
- Swiveling joints on linkages and the like shall be of the "universal" or fork and rod type with bearings or bushes fitted to the eyes or forks.
- On abrasive applications, abrasion resistant materials and slow speed operation shall be utilised.
- All applications associated with waste or raw (untreated) water shall be regarded as corrosive and materials of construction shall be selected to suit.
- Susceptibility to fatigue failure shall be minimised by proper design and manufacturing procedures. In particular, changes in section shall be "radiused" and care must be taken to avoid the use of welded components in areas of fluctuating stress.
- The locking of nuts and pins in position shall be done to the approval of the Engineer.
- Wearing parts shall be designed for interchangeability and ease of removal and replacement.
PD 2.4  **Arrangement and Mounting**

The arrangement and general design shall take the following requirements into consideration: -

- Lifting eyes, lugs, hooks, etc. shall be provided on heavy and large items to facilitate handling.
- Castings or fabrications shall have machined pads for seating and be mounted on either soleplates or baseplates as appropriate.
- Where accurate alignment is required, positioning pins and/or jacking screws shall be provided.
- The needs of operation and maintenance including neatness, access, working space, safety, cleaning, adjustment, handling, assembly, alignment, disassembly, removal, etc. shall be taken into account.
- With plant and equipment to be mounted on or against concrete or brick structures built by others, provision shall be made for adjustment in the mechanical design. Any special accuracy requirements must be specified on the Contractor's Drawings.

PD 2.5  **Safety**

Safety shall be an all-important and overriding consideration and proper attention shall be paid to this aspect at the design and installation stage. The regulations of the Occupational Health and Safety Act, Act 85 of 1993, as amended, shall be strictly observed and the following must also be noted: -

- Hazards must be avoided or guarded. Nip points shall be guarded; sharp corners shall be rounded off; operating handles, supports and protrusions shall be kept clear of access ways; and so forth.
- The Contractor's Drawings and specifications shall clearly specify the structural requirements of the Works and the Contractor shall be responsible for covering all unsafe gaps and openings left in structures after installation.
- Moving parts shall be properly guarded to the satisfaction of the Engineer.
- An emergency stop button shall be installed on the motor control centre.
- Where, in the opinion of the Engineer, an installation is not safe, the Contractor shall remedy such defect at his own cost to the satisfaction of the Engineer.

PD 3  **Installation**

All equipment shall be installed according to the manufacturer's specifications. Furthermore, the following requirements shall apply:

- When complete, the installations shall be of a neat and workmanlike appearance, solidly and evenly supported, true to line and level and in proper working order;
- The Contractor shall provide and install all holding down bolts, supports, hangers, brackets etc. required to support and fix the equipment;
- The Contractor shall undertake all the grouting of the equipment installed under this contract;
- The use of more than three (3) shims in the alignment of the equipment shall not be permitted;
- Fastener threads shall be coated with a nickel based anti-seize compound before assembly.
PD 4  Fasteners

PD 4.1  Standards
Bolts and nuts shall be hexagon head type complying with SABS 135-1971 with threads of the coarse pitch series. Allen head screws of any type shall not be used without the Engineer’s written consent.

PD 4.2  Fasteners M10 and smaller
All fasteners M10 and smaller shall be manufactured of AISI Grade 316 stainless steel.

PD 4.3  Fasteners larger than M10
Fasteners larger than M10 shall, except when specified otherwise, be hot dip galvanised and coated with a similar coating system as the items being fastened.

PD 4.4  High Tensile Bolts
Where high tensile bolts are necessary, they shall be galvanised and coated. The bolt holes and crevices shall be filled and sealed, all to the approval of the Engineer.

PD 4.5  Material Compatibility
Fastener material shall always be of equal or better corrosion resistance than the items being fastened e.g. 316 stainless steel bolts must be used to fasten together 316 stainless steel fabrications or flanges.

PD 4.6  Washers
Washers of similar material to the bolts shall be provided under each nut and set screw head. Multiple washers or shims shall not be used. Spring washers or other approved locking arrangement shall be used on all fasteners subject to vibration.

PD 4.7  Anti-seize compound
Before assembly all threads shall be coated with an approved nickel based anti-seize/corrosion protection compound. If it is found during inspection that anti seize compound has not been applied to any of the fastener threads, the Contractor shall be required to disassemble all fasteners and comply with this Clause.

PD 4.8  Thread projection
Bolt threads shall project between 1 and 6 mm from the head of the nuts when fixed. Longer projections will only be allowed if the Contractor can show that bolts of a more suitable length are not manufactured.

PD 4.9  Corrosion protection
After installation the exposed surfaces of bolts not made of 316 ss shall be coated as for the items being fastened.

PD 5  Anchor Bolts

PD 5.1  Hook bolts
Grade 316 stainless steel hook bolts shall be supplied and grouted into pockets in the concrete structure in accordance with the Contractor’s requirements. The grouting products shall be used strictly in accordance with the manufacturer’s instructions.
PD 5.2  **Alternative anchor bolts**

The use of 316 stainless steel "Hilti Kwik Bolt" stud bolts, chemical anchor or other anchor system may be used if approved by the Engineer. If steel reinforcing bars are encountered while the holes are being drilled, the Contractor shall knock a hole in the concrete around the steel and grout in a stainless steel hook bolt as described above.

PD 5.3  **Through bolt anchors**

Where machinery is anchored by studs or bolts which extend through the supporting structure and is therefore fastened down with the use of nuts from both sides, these, together with associated washers and brackets, shall also be of type 316 stainless steel.

PD 5.4  **Anti seize compound**

All threads shall be coated with an approved nickel based anti-seize/corrosion protection compound before assembly.

PD 5.5  **Gaskets**

The jointing material used on flange joints shall be of rubber or compressed asbestos at least 1.5 mm thick complying with BS 3063 or BS 2815 as applicable. Full face gaskets shall be used for full face flanges. Inner bolt circle gaskets shall be used on raised face flanges and when clamping items such as wafer type valves between flanges inside the bolt circle. Properly designed O-ring seals are also acceptable.

PD 6  **Labels**

- Labels shall be installed as required in terms of the relevant codes of practice and as further specified in this document.
- All labels shall be in English. All labels shall be of ivorine, plastic or aluminium plate. Capital letters in black and on a white background or stamped into the aluminium plate shall be a minimum of 10 mm in height. Labels shall be riveted in place.
- All safety signage installed shall be in accordance with SANS 1186
- Danger Notices / Signage
- The Contractor shall supply and install all danger, sub-station and safety notices and signs in terms of the relevant regulations. The construction symbols of safety signs shall comply with SANS 1186.

PD 7  **Starting, Site Testing and Commissioning**

The Contractor shall start and test all installed equipment to ensure that it is operating in accordance with the specified requirements. The Engineer must witness all tests and all adjustments shall be made during this period.

The Contractor shall train the operational staff in starting, operating, stopping and undertaking routine maintenance of the installation.

Before starting any installation, the Contractor shall undertake all the necessary checks to ensure that the installation has been correctly carried out and that the equipment has been cleaned, correctly aligned, lubricated and is in all respects ready to start with safety.

The Engineer, and where applicable the sub-contractor, shall be present whenever an installation is started.
Installation, Operation and Maintenance Manuals

GENERAL
The Contractor is required to furnish 4 sets of Operating and Maintenance Manuals and supply these to the Consulting Engineers.

PREPARATION OF THE MANUAL

The manuals shall be prepared within the contract, and shall be particular to the project. All charges that may be required by manufacturers’ suppliers for the provision of information and literature shall be included in the contract price and the entire cost of producing and providing the O & M manuals shall be to the Contractors’ account.

The manual shall be arranged with an index and referencing system. A matching flysheet will give the names and addresses of the principals involved on the project.

The covers shall be hard bound with a four-post loose-leaf system. The contract details shall be embossed on the front cover. Numbered card dividers shall be inserted between the sections.

The completed set of manuals shall be provided to the Engineers at practical completion. A draft text of the manual shall be issued for approval.

CONTENTS OF OPERATING AND MAINTENANCE MANUAL

The format of the manual shall be in accordance with the following sections, after a preface and index.

Section 1:
This shall comprise the introduction, abbreviations, and any warnings that may be required by the Machinery and Occupational Safety Act, Local Authorities and other such bodies.

Section 2:
A full description of each system, together with the main plant components and locations, plus the mode of operation of automatic control systems associated with such system shall be reflected in this section.

Section 3:
This shall comprise the complete plant technical data of each item of equipment (e.g. manufacturers name and address, type and size of unit, serial number, bearing pulley and belt details, motor details, unit performance and duty details). This information shall be derived from a site inspection of identification plates together with information obtained from manufacturers.

Section 4:
This section shall describe in detail the operating procedures necessary for starting up, running and shutting down each individual system. This shall include the control panel starter and selection facilities together with any alarm and safety interlocks as identified on the control panels.

Section 5:
This shall comprise the maintenance operations on a daily, weekly, monthly etc basis for each item of plant. The preparation of this section shall be carried out by obtaining from the manufacturer his advice and recommendations for lubrication, adjustment and routine maintenance.

Section 6:
This section shall comprise the emergency procedures to be adopted by personnel engaged on the operation and maintenance of the mechanical and electrical services, with respect to fire, first aid, general failures to water and electrical systems, gas lines, chiller refrigerant pipework, and call-out procedures for maintenance personnel in working hours and out of working hours.
Section 7:
A recommended action on plant malfunction shall be detailed in this section. This is to assist both the user and maintenance engineer in the event of a fault developing in a system by indicating the nature of the fault and the recommended action.

Section 8:
This shall comprise a list of recommended spares and lubricants. The preparation of this section shall be carried out by obtaining the manufacturers recommendations and also incorporate the Clients requirements regarding spares.

Section 9:
A schedule of the record or as-built drawings together with reduced copies (A4 size) of the record drawings will be inserted in numerical order in this section.

Section 10:
This section shall comprise test certificates and commissioning reports. It shall also contain copies of fan and pump curves with the duty points clearly indicated.

Section 11:
This shall comprise the manufacturers literature, arranged in alphabetical order to match the manufacturers list. It shall also give the manufacturers (or their local representatives) names, addresses and telephone numbers.

COPIES OF DRAWINGS

In addition to the as-built drawings required for the Manuals one set of these drawings, in an approved electronic format, shall be provided within the contract.

PD 9  Maintenance

The Contractor shall guarantee the installed equipment against faulty materials and workmanship for a twelve (12) month period from the date of the Certificate of Completion and shall at his own cost, repair or replace any equipment which may become defective during this period.

PD 10  Contractor’s Drawings

The following requirements shall apply to the preparation of drawings for items to be designed by the Contractor:

- Drawings shall be prepared in accordance with the SABS or BS code of engineering drawing practice.
- Drawings shall be to scale, with both the scale and the drawing being large enough to clearly show all relevant components of the plant and equipment without misunderstanding.
- In addition to the usual plan and two side elevations, sufficient additional sections shall be included to clearly show the arrangement of all plant and equipment.
- General arrangement and detail drawings shall be intelligently cross referenced.
- Items and components shall be systematically and clearly numbered, with consistency (same item numbers) between layout and detail drawings for the same plant or equipment.
- Item lists shall be provided on the drawing or on a separate parts list form.
- Item descriptions shall include the material of construction, quantity and full identification information, including, as applicable, brand name, manufacturers reference number, model number, size, rating, source, duty, quantity etc.
The cost of preparing and correcting drawings to the satisfaction of the Engineer and to incorporate reasonable changes required by the Engineer shall be for the Contractor's account.

**PD 11  Spares**

Tenderers shall include with their tender, a list of recommended spare parts, which should be carried in stock by the Employer.

**PD 12  Compulsory Forms and Certificates**

The Contractor shall submit the necessary commencement, compliance and completion forms for the installation as required in terms of the OHS Act, as amended, the relevant SABS Specifications and the requirements of the relevant Supply Authorities.

**PD 13  Motor Control Centre**

The MCC shall:

1. Comply with the requirements of the relevant regulations and standards
2. It shall be modular with standard size cubicles and shall be as space efficient as possible
3. Shall be wall mounted with cable entry and exit from the bottom

**PD 14  Pressure Gauges**

Pressure gauges shall be installed on the discharge sides of each pump set. Gauges shall be glycerine filled 100 mm dial type complete with venting type gauge cocks, and shall be scaled from 0 to 150% of normal plant operating pressures.

**PD 15  Valves**

All valves shall be rated for the duty of the installation and shall be of the same diameter as the relevant pipe size. Valves shall be Resilient Seal Gate Valves.

**PD 16  Check Valves**

All check valves shall be of the double flap, positive closing type.

Valves shall be cast iron body with stainless steel seat and flaps. The flaps shall be stainless steel spring loaded, and shall be designed to be non-sticking. The axis of rotation shall be vertical.

Valves shall be installed between suitable retaining flanges, which shall be independent of any other piece of equipment.

Valves shall be guaranteed to be leak tight in their particular application.

**PD 17  Painting and Plant Equipment Identification**

Painting of all components shall be strictly in accordance with The Department of Water Affairs Specifications (DWAF) or those of the Employer, if different.

All valves and components shall be clearly and securely identified in a method approved by the Engineer.

Arrows indicating the direction of flow must be provided on the pipework.
PD 18  Payment

All costs incurred by the Contractor in complying with the requirements of this specification shall be
deemed to be included in the rates tendered.

C3.4.2.3  Variations and Additions to the SABS 1200 Standardized Specifications

Variations and additions to the following SANS 1200 Standardized Specification listed in C3.4.1 are given in
section C3.4.6.

C3.4.3  SITE ESTABLISHMENT

C3.4.3.1  Services and facilities provided by the Employer

(a)  Water sources

A reticulated potable water supply is not available in the vicinity of the Site.

The Contractor is to make his own arrangements regarding water supply for construction purposes
and domestic consumption.

(b)  Electricity supply

A reticulated electrical power supply is not available in the vicinity of the Site.

The Contractor is to make his own arrangements regarding electricity supply.

(c)  Excrement disposal

No water-borne sewage or other off-site excrement disposal systems are available in the vicinity of
the Site. The Contractor is to provide chemical toilets.

(d)  Area for contractor’s site establishment

The Site of the Works is restricted and the Employer has no suitable areas available where the
Contractor may erect offices, workshops, stores and other facilities that he requires for the purposes
of the Contract. The Contractor shall, at his own cost, be responsible for locating and making all
arrangements necessary for securing an area suitable to meet his needs in respect of the erection of
the Contractor’s offices, stores and other facilities, including the facilities to be provided for the
Engineer in accordance with the Contract.

Any potential area proposed by the Contractor shall be within reasonable proximity to the Site of the
Works and its location shall be subject to the approval of the Engineer, which approval shall not be
unreasonably withheld.

C3.4.3.2  Facilities provided by the Contractor

(a)  Facilities for the Engineer

The Contractor shall provide on the Site, for the duration of the Contract and for the exclusive use of
the Engineer and/or his Representative (as applicable), the various facilities described hereunder. All
such facilities shall be provided promptly on the commencement of the Contract and failure on the
part of the Contractor to provide any facility required in terms of this specification shall constitute
grounds for the Engineer to withhold payment of the Contractor's bidded Preliminary and General
items until the facility has been provided or restored as the case may be.
(i) Office accommodation

The Contractor shall provide on the Site 1 (one) office for the exclusive use of the Engineer. Such office shall comply with and be furnished in accordance with the requirements of subclause 3.2 of SANS 1200 AB. The Contractor shall maintain the office in accordance with the requirements of subclause 5.2 of SANS 1200 AB.

Such office accommodation shall be provided within the Contractor's site establishment facilities.

(ii) Site meeting venue

The Contractor shall provide within his own site establishment facilities, a suitably furnished office or other venue capable of comfortably accommodating a minimum of six (6) persons at site meetings. The Engineer shall be allowed free use of such venue for conducting any other meetings concerning the Contract at all reasonable times.

(iii) Contract nameboards

The Contractor shall provide, erect and maintain 1 (one) contract nameboard at such position and location as are directed by the Engineer, in accordance with the requirements set out in sub-clause 3.1 of SANS 1200 AB.

The Contractor shall before ordering or manufacturing any such contract nameboard, obtain the Engineer's written approval in respect of all names and wording to appear on the contract nameboard.

(iv) Telephone facilities

The Contractor shall, for the duration of the Contract, provide the telephone facilities as specified hereunder for the exclusive use of the Engineer and his staff:

**Cellphone:**

The Contractor shall provide 1 (one) cellphone and associated service contracts from a reputable cellular service provider. The Contractor shall further insure the cellphone against loss or damage from whatever cause arising, and shall ensure that all cellphone accounts are promptly paid on the due dates for payment. The Contractor shall further, at his own cost, ensure the prompt repair of the cellphone provided under this clause, when reasonably required by the Engineer.

The Contractor shall, on production of an itemised statement, be reimbursed only the cost of the Engineer's cellphone calls.

(v) Computer facilities

The Contractor shall, for the duration of the Contract, provide the computer equipment together with the software specified hereunder, for the exclusive use of the Engineer and his staff:

- 1 laptop
- 1 printer

The computer shall comply with the following minimum specifications:

- CORE i5
Printers shall, unless otherwise approved by the Engineer, be Hewlett-Packard Office Jet 600 Series Desk Jet printers or equivalent compatible.

All computer hardware shall be provided complete with the requisite connecting cables and all interfacing devices and software necessary for its efficient operation as an integral system.

The following software shall be properly installed on the computer, and the original licence agreements and disks shall be provided to the Engineer for safekeeping:

(a) MS Office Home and Business 2013
(b) MS Windows 8

All computer equipment provided shall be kept fully serviceable at all times by the Contractor. The Contractor shall have any defective equipment repaired or replaced at his own cost within 12 hours after notification by the Engineer's staff.

The Contractor shall further provide at his own cost, all paper and ink cartridges and other consumables reasonably required by the Engineer.

(vi) Electricity supply for the Engineer

All electricity supply to the Engineer's office and laboratory, whether provided by the Contractor by way of a reticulated supply from a local authority or other authorised electricity supply, or by way of on-site generators, shall be regulated by the Contractor to within limits such as to prevent damage due to fluctuations in the electrical current supply that may occur to any electrical plant and equipment provided by the Contractor or the Engineer.

The Contractor shall be liable for and pay to the Engineer on demand, all costs that the Engineer may incur in the repair or replacement of any electrical equipment provided by the Engineer on the Site. Reliance by the Contractor on the regulation of the electrical supply by the supplier or on current regulators fitted to generators shall not absolve the Contractor of his liabilities in terms of this Subclause and, where appropriate, the Contractor shall provide and install at his own cost, all such electrical current-regulating equipment as is necessary to prevent damage to the said equipment.

(vii) Site instruction book

The Contractor shall keep a triplicate book for site instructions on the Site at all times.

(b) Water

The Contractor shall, at his own expense, be responsible for obtaining and providing all water as may be required for the purposes of executing the contract, including water for both construction purposes and domestic use, as well as for making all arrangements in connection therewith. The Contractor shall further, at his own expense, be responsible for providing all necessaries for procuring, storing, transporting and applying water required for the execution of the Contract, including but not limited to all piping, valves, tanks, pumps, meters and other plant and equipment, as well as for all work and superintendence associated therewith.
The sources of all water utilised for the purposes of the Contract shall be subject to the prior approval of the Engineer, which approval shall not be unreasonably withheld.

The Contractor shall comply with all prevailing legislation in respect of drawing water from natural and other sources and shall, when required by the Engineer, produce proof of such compliance. The distribution of water shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

All water provided by the Contractor for construction purposes shall be clean, free from undesirable concentrations of deleterious salts and other materials and shall comply with any further relevant specifications of the Contract. The Contractor shall, whenever reasonably required by the Engineer, produce test results demonstrating such compliance. Water provided by the Contractor for human consumption shall be healthy and potable to the satisfaction of the health authorities in the area of the Site.

No separate payment will be made to the Contractor for the obtainment, providing and consumption of water, the costs of which will be deemed to be included in the Contractor’s bidded rates.

(c) **Electricity**

The Contractor shall, at his own expense, be responsible for obtaining and providing all electricity as he may require for the purposes of executing the Contract, including electricity for both construction purposes and domestic use, as well as for making all arrangements in connection therewith.

The distribution of electricity shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

No separate payment will be made to the Contractor for the obtainment, providing and consumption of electricity, the costs of which will be deemed to be in the Contractor’s bidded rates and prices.

(d) **Excrement disposal**

The Contractor shall, at his own expense, be responsible for safely and hygienically dealing with and disposing of all human excrement and similar matter generated on the Site during the course of the Contract, to the satisfaction of the responsible health authorities in the area of the Site and the Engineer. All such excrement shall be removed from the Site and shall not be disposed of by the Contractor on the Site.

The Contractor shall further comply with any other requirements in this regard as may be stated in the Contract.

No separate payment will be made to the Contractor in respect of discharging his obligations in terms of this subclause and the costs thereof shall be deemed to be included within the Contractor’s bidded Preliminary and General items.

**C3.4.3.3 Site usage**

There is an existing functional water tower that is to be protected and it should not be disturbed during the construction of the new tower.

**C3.4.3.4 Permits and wayleaves**

The Engineer will obtain initial approval of all the wayleaves.

The Contractor shall be responsible to obtain all the wayleave renewals required under this Contract. No separate payment item has been included under Section 1200 A of the Schedule of Quantities to compensate the Contractor for all his expenses to obtain the wayleaves and permits.
C3.4.3.5 Features requiring special attention

(a) Site maintenance

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner, and shall keep the Site free from debris and obstructions.

(b) Testing and quality control

(i) Contractor to engage services of an independent laboratory

Notwithstanding the requirements of the Specifications pertaining to testing and quality control, the Contractor shall engage the services of an approved independent laboratory to undertake all testing of materials, the results of which are specified in, or may reasonably be inferred from, the Contract. These results will be taken into consideration by the Engineer in deciding whether the quality of materials utilised and workmanship achieved by the Contractor comply with the requirements of the Specifications. The foregoing shall apply irrespective of whether the specifications indicate that the said testing is to be carried out by the Engineer or by the Contractor.

The Contractor shall be responsible for arranging with the independent testing laboratory for the timeous carrying out of all such testing specified in the Contract, at not less that the frequencies and in the manner specified. The Contractor shall promptly provide the Engineer with copies of the results of all such testing carried out by the independent laboratory.

For the purposes of this clause, and “independent laboratory” shall mean an “approved laboratory” (as defined in subclause 7.2 of SANS 1200A) which is not under the management or control of the Contractor and in which the Contractor has no financial interest, nor which has any control or financial interest in the Contractor.

(ii) Additional testing required by the Engineer

In addition to the provisions of subclause C3.4.2.5(b)(i): Contractor to engage services of an independent laboratory, the Engineer shall be entitled at times during the Contract to require that the Contractor arrange with the independent laboratory to carry out any such tests, additional to those described in subclause C3.4.2.5(b)(i), at such times and at such locations in the Works as the Engineer shall prescribe. The Contractor shall promptly and without delay arrange with the independent laboratory for carrying out all such additional testing as required by the Engineer, and copies of the test results shall be promptly submitted to the Engineer.

(iii) Cost of testing

(a) Tests in terms of subclause C3.4.2.5(b)(i)

The costs of all testing carried out by the independent laboratory in accordance with the requirements of subclause C3.4.2.5(b)(i), above shall be borne by the Contractor and shall be deemed to be included in the bidded rates and process for the respective items of work as listed in the Schedule of Quantities and which require testing in terms of the Specifications. No separate payments will be made by the Employer to the Contractor in respect of any testing carried out in terms of subclause C3.4.2.5(b)(i).

Where, as a result of the consistency of the materials varying or as a result of failure to meet the required specifications for the work, it becomes necessary to carry out additional tests (eg re-tests on rectified work and/or replacement materials), the costs of such additional testing shall be for the Contractor’s account.
(b) Additional tests required by the Engineer

The costs of any additional tests required by the Engineer in terms of subclause C3.4.2.5(b)(i): Additional testing required by the Engineer, shall be reimbursed to the Contractor against substitution of the Provisional Sum allowed therefore in the Schedule of Quantities; provided always that the costs of any such additional test ordered by the Engineer, the results of which indicate that the quality of the materials utilised and/or the standard of workmanship achieved are/is not in accordance with the specifications, shall not be reimbursable to the Contractor.

(I) COSTS OF TESTING

(a) Tests in terms of subclause C3.4.2.5(c)(i)

The costs of all testing carried out by the independent laboratory in accordance with the requirements of subclause C3.4.2.5(b)(i), above shall be borne by the Contractor and shall be deemed to be included in the bidded rates and prices for the respective items of work as listed in the Schedule of Quantities and which require testing in terms of the Specifications. No separate payments will be made by the Employer to the Contractor in respect of any testing carried out in terms of subclause C3.4.2.5(b)(i).

Where, as a result of the consistency of the materials varying or as a result of failure to meet the required specifications for the work, it becomes necessary to carry out additional tests (eg re-tests on rectified work and/or replacement materials), the costs of such additional testing shall be for the Contractor’s account.

(b) Additional tests required by the Engineer

The costs of any additional tests required by the Engineer in terms of subclause C3.4.2.5(b)(ii): Additional testing required by the Engineer, shall be reimbursed to the Contractor against substitution of the Provisional Sum allowed therefore in the Schedule of Quantities; provided always that the costs of any such additional tests ordered by the Engineer, the results of which indicate that the quality of the materials utilised and/or the standard of workmanship achieved are/is not in accordance with the specifications, shall not be reimbursable to the Contractor.

(II) METHOD STATEMENTS AND QUALITY REQUIREMENTS

(a) Method Statements

**The contractor shall prepare method statements before any work take place.** A method statement will be required for each and every activity, including site establishment. The Engineer to check and approved these method statements and give written permission for proceeding of any work. The workforce is to be briefed on each method statement and Engineer’s safety inspectors will query the workforce periodically to confirm that this is taking place. The following headings will be required for each method statement;

- Goal of activity
- Person responsible
- Dangers identified
- Safety measures to be instituted based on risk assessment
• Work methodology
• Personnel and plant and equipment
• Clearing of site
• Quality Plan
• Diagrams, sketches drawn to scale
• Timeframes and indication if the activity is on a critical path or not
• Other headings can be included.

(b) Quality requirements

The Contractor complies in full with the Employer quality requirements. During execution of the Tender no actions to provide the Works are implemented at any part of the site before the relevant quality control documentation is submitted and the Contract Manager accepts the procedures.

The Contractor is responsible for the complete quality assurance requirements imposed on his Sub-contractors and suppliers, in terms of SANS ISO 9000 Series.

The Contractor is responsible to inspect, expedite, administer and monitor in a pro-active manner Sub-contractors and supplier's work and the enforcing of the terms and conditions of their Tenders, except where extraordinary circumstances warrant the inclusion of Employer’s participation.

A Quality Control Plan (QCP), which includes hold points and an inspection plan are provided by the Contractor to the Contract Manager for all fabrication, supply (transport) and installation of components for approval prior to start of manufacturing. The Employer uses or modifies the Contractor’s QCP’s and this includes inspection hold points, dimensional checks, material quality checks, tagging procedure for items, etc.

Contractor submits 3 (three) copies of his QCP to the Contract Manager for review and acceptance within 2 (two) weeks after tender award.

(c) Contractors’ QA/QC Responsibilities

All machinery, material and workmanship comply with the appropriate specifications and codes, and bear the official mark of such specifications and codes;

All machinery and material is new and of the most suitable grade, and suitable to withstand and to operate satisfactorily under all possible climate and weather conditions which are reasonably expected at the Site. Such machinery and material is subject to inspection and/or test by the Engineer, who is granted access by the Contractor and Sub-Contractor.

The Contractor conducts a continuous programme of construction quality control for all work performed on the Site. All relevant inspections and tests are adequately documented and signed off by the Engineer;

The Contractor complies with any quality assurance procedures required by the Employer.

The Engineer monitors the Contractor’s adherence to quality requirements independently. Any rejections by the Supervisor based on design, specifications, codes and the like is binding.

(i) Quality Audits
The Employer reserves the right to perform quality audits at any time during the execution of the Works.

The Contractor gives 48 (forty-eight) hours' notice (in writing) to the Engineer, prior to testing. The Supervisor exercises the option to witness or not, such test.

(ii) Inspection Authority

If an authorised inspection authority (AIA) is appointed and he is paid for by the Employer, in terms of the OHS act, the Contract Manager will compile and submits the scope of work for the AIA.

(c) Subcontractors

All matters pertaining to subcontractors and the work executed by them shall be dealt with directly between the Engineer and the Contractor in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.

The Engineer will not liaise directly with any subcontractors nor will he issue instructions concerning the subcontract works directly to any subcontractor.

All matters arising from the subcontract agreements shall be dealt with directly between the Contractor and the subcontractors and the Engineer will not become involved.

(d) Opening up and closing down of designated borrow pits

Measurement and payment for opening up and closing down designated borrow pits. Including removing and stockpiling overburden and restoring the Site, shall be made under item 8.3.4 of SANS 1200 D. This item applies to all borrow material required under this Contract.

The requirements of subclause 5.2.2.2 of SANS 1200 D regarding the opening up, maintenance and closing down of borrow pits shall be adhered to.

(e) Access to properties

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. In this respect the Contractor's attention is drawn to Clause 8.1.2 of the Conditions of Contract.

If, as a result of restricted road reserve widths and the nature of the work, the construction of bypasses is not feasible, construction shall be carried out under traffic conditions to provide access to erven and properties.

Notwithstanding the aforegoing, the Contractor may, with the prior approval of the Engineer (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the occupiers of erven and properties to close off part of a street, road, footpath or entrance temporarily, provided that the Contractor duly notifies the occupiers of the intended closure and its probable duration, and reopens the route as punctually as possible. Where possible, such streets, roads, footpaths and entrances shall be made safe and reopened to traffic overnight. Such closure shall not absolve the Contractor from his obligations under the Contract to provide access at all times. Barricades, traffic signs, drums and other safety measures appropriate to the circumstances shall be provided by the Contractor to suit the specific conditions.

(f) Existing residential areas

Electricity and water supply interruptions in existing residential areas shall be kept to a minimum. The Engineer's approval shall be obtained prior to such interruptions and residents shall be notified in
writing at least 24 hours but not more than 48 hours in advance. Supplies shall be normalised by 16:00 on the same day.

(g) **Labour-intensive competencies of supervisory and management staff**

Contractor having a CIDB contractor grading designation of 8CE and higher shall only engage supervisory and management staff in labour intensive works who have either completed, the skills programme outlined in Table 1.

The managing principal of the contractor, namely, a sole proprietor, the senior partner, the managing director or managing member of a close corporation, as relevant, having a contractor grading designation of 1CE, 2CE, 3CE and 4CE shall have personally completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme for the NQF level 2. All other site supervisory staff in the employ of such contractors must have completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme, for the NQF level 2 unit standards or NQF level 4 unit standards.

Table 1: **Skills programme for supervisory and management staff**

<table>
<thead>
<tr>
<th>Personnel</th>
<th>NQF level</th>
<th>Unit standard titles</th>
<th>Skills programme description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team leader / supervisor</td>
<td>2</td>
<td>Apply Labour-intensive Construction systems and Techniques to Work Activities</td>
<td>This unit standard must be completed, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use Labour-intensive Construction Methods to Construct and Maintain roads and Stormwater Drainage</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use Labour-intensive Construction Methods to Construct and Maintain Water and Sanitation Services</td>
<td>one of these 3 unit standards be used</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use Labour-intensive Construction Methods to Construct, Repair and Maintain Structures</td>
<td></td>
</tr>
<tr>
<td>Foreman / supervisor</td>
<td>4</td>
<td>Implement Labour-intensive Construction systems and Techniques</td>
<td>This unit standard must be completed, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use Labour-intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage</td>
<td>any one of these 3 unit standards be used</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use Labour-intensive Construction Methods to Construct and Maintain Water and Sanitation Services</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use Labour-intensive Construction Methods to Construct, Repair and Maintain Structures</td>
<td></td>
</tr>
<tr>
<td>Site Agent / Manager (ie the contractor’s most senior representative who is resident on the site)</td>
<td>5</td>
<td>Manage Labour-intensive Construction Processes</td>
<td>Skills Programme against this single unit standard</td>
</tr>
</tbody>
</table>

(h) **Employment of unskilled and semi-skilled workers in labour-intensive works**

(I) **REQUIREMENTS FOR THE SOURCING AND ENGAGEMENT OF LABOUR**

(1) Unskilled and semi-skilled labour required for the execution of all labour-intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.
In accordance with the Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes (clause 10.4), the public body must set a rate of pay (task-rate) for workers to be employed on the labour-intensive projects.

Clause 10.4 requires that the following should be considered when setting rates of pay for workers:

10.4.1 The rate set should take into account wages paid for comparable unskilled work in the local area per sector, if necessary.

10.4.2 The rate should be an appropriate wage to offer an incentive for work, to reward effort provided and to ensure a reasonable quality of work. It should not be more than the average local rate to ensure people are not recruited away from other employment and jobs with longer-term prospects.

10.4.3 Men, women, youth, disabled persons and the aged must receive the same pay for work of equal value."

(1) Tasks established by the contractor must be such that:
   (aa) the average worker completes 5 tasks per week in 40 hours or less; and
   (bb) the weakest worker completes 5 tasks per week in 55 hours or less.

(2) The Contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 1.1.3.

(3) The Contractor shall, through all available community structures, inform the local community of the labour-intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and/or who come from households:
   (aa) where the head of the household has less than a primary school education;
   (bb) that have less than one full-time person earning an income;
   (cc) where subsistence agriculture is the source of income;
   (dd) those who are not in receipt of any social security pension income.

(4) The contractor must provide monthly statistics to the EMM indicating the number of new jobs created through this contract. This statistic must be provided with each monthly payment certificate using Council's electronic prescribed format, which will be provided by the Project Manager of this project to the successful bidder. Failure to provide the required statistics Council may withhold payment.

(ii) SPECIFIC PROVISIONS PERTAINING TO SANS 1914-5

(1) Definition
   Targeted labour: Unemployed persons who are employed as local labour on the project.

(2) Contract participation goals
   (aa) There is no specified contract participation goal for the contract. The contract participation goal shall be measured in the performance of the contract to enable the employment provided to targeted labour to be quantified.
   (bb) The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task-rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

(3) Terms and conditions for the engagement of targeted labour
   Further to the provisions of clause 3.3.2 of SANS 1914-5, written contracts shall be entered into with targeted labour.

(4) Variations to SANS 1914-5
   (aa) The definition for net amount shall be amended as follows:
       Financial value of the contract upon completion, exclusive of any value-added tax or sales tax which the law requires the employer to pay the contractor.
(bb) The schedule referred to in 5.2 shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of days of formal training provided to targeted labour.

(iii) TRAINING OF TARGETED LABOUR

(1) The Contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.

(2) The cost of the formal training of targeted labour, will be funded by the provincial office of the Department of Labour. This training will take place as close to the project site as practically possible. The Contractor must access this training by informing the relevant provincial office of the Department of Labour in writing, within 14 days of being awarded the contract, of the likely number of persons that will undergo training and when such training is required. The Employer must be furnished with a copy of this request.

(3) A copy of this training request made by the contractor to the DOL provincial office must also be faxed to the EPWP Training Director in the Department of Public Works – Cinderella Makunike, Fax: 012 328 6820 or email cinderella.makunike@dpw.gov.za, Tel: 083 677 4026.

(4) The contractor shall be responsible for scheduling the training of workers and shall take all reasonable steps to ensure that each beneficiary is provided with a minimum of six (6) days of formal training if he/she is employed for 3 months or less and a minimum of ten (10) days if he/she is employed for 4 months or more.

(5) The Contractor shall do nothing to dissuade targeted labour from participating in training programmes.

(6) An allowance equal to 100% of the task rate or daily rate shall be paid by the Contractor to workers who attend formal training, in terms of 1.3.4 above.

(7) Proof of compliance with the requirements of 1.3.2 to 1.3.6 must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

i) Employment of local labour

It is the intention that this Contract should make maximum use of the local labour force that is presently underemployed. To this end the Contractor shall limit the utilisation on the Contract of non-local employees to that of key personnel only and to employ and train local labour to the extent necessary for the execution and completion of this Contract.

The Contractor shall fill in the form entitled Key Personnel in the Forms to be completed by the Bidder. The data stated on the above-mentioned form will be strictly monitored during the Contract period and any deviations therefrom shall be subject to the prior approval of the Engineer, which approval shall not be unreasonably withheld.

The employment of casual labour will be done in co-operation with community leaders and local structures. The bidder shall ensure that all remuneration paid to employees is in line with the relevant sectorial determination in terms of the Basic Conditions of Employment Act, No 75 of 1997, as determined by the Department of Labour.

j) Monthly statements and payment certificates

The statement to be submitted by the Contractor in terms of Clause 6.10 of the Conditions of Contract shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Engineer, in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit two (2) A4 size paper copies of the statement.
For the purposes of the Engineer’s payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Engineer for the purposes of accurately reflecting the actual quantities and amounts which the Engineer deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Engineer within three (3) normal working days from the date on which the Engineer communicated to the Contractor the adjustments required. The Contractor shall submit to the Engineer five (5) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Engineer the requisite copies of the adjusted statement for the purposes of the Engineer’s payment certificate will be added to the times allowed to the Engineer in terms of Subclause 6.10.4 of the Condition of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the employer is required to make payment to the Contractor.

k) Construction in restricted areas

Working space is sometimes restricted. The construction method used in these restricted areas largely depends on the Contractor’s Plant. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and process bid will be deemed to include full compensation for any difficulties encountered by the Contractor while working in restricted areas. No extra payment nor any claim for payment due to these difficulties will be considered.

l) Notices, signs, barricades and advertisements

All notices, signs and barricades, as well as advertisements, may be used only if approved by the Engineer. The Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his bid rates.

The Engineer shall have the right to instruct the Contractor to move any sign, notice or advertisement to another position, or to remove it from the Site of the Works if in his opinion it is unsatisfactory, inconvenient or dangerous.

m) Workmanship and quality control

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide suitably qualified and experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times.

The cost of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates bid for the related items of work.

The Contractor’s attention is drawn to the provisions of the various Standardized Specifications regarding the minimum frequency of testing required. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion and submission of every part of the work to the Engineer for examination and measurement, the Contractor shall furnish the Engineer with the results of the relevant tests, measurements and levels to demonstrate the achievement of compliance with the Specifications.

(n) Programme to be supplied by the Contractor
The Contractor shall supply within the period stated in the Appendix to the Tender and for the consideration of the Engineer, a suitable and realistic construction programme that is based on the Drawings issued by the Engineer for construction. The programme shall show the proposed scheduling and methods of execution of the Works, as well as the resources that will be allocated to each item of the Works. Quantities proposed for execution during each month must also be shown. In addition, the anticipated cash flow for the Contract, based upon these quantities, shall be submitted.

The Contractor will be expected to progress with the Works in accordance with the approved programme, and shall not deviate from the order of execution shown in the programme without the prior approval of the Engineer or his Representative. Should such approval be given an adjusted programme shall be produced within 7 days and submitted to the Engineer for evaluation.

Progress in advance of the programme on certain portions of the Works shall not be considered adequate reason for poor progress on another portion or phase.

o) Site Meetings

The Contractor and his authorised representative shall attend all meetings held on the Site with the Employer and the professional team at dates and times to be determined by the Engineer. Such meetings will be held to evaluate the progress of the Contract, and to discuss matters pertaining to the Contract that any of the parties represented may wish to raise. It is not the intention to discuss day-to-day technical matters at such meetings.

C3.4.2.6 Extension of time due to abnormal rainfall

(a) Extension of time in respect of delays resulting from wet climatic conditions on the Site will only be considered in respect of abnormally wet climatic conditions and shall be determined for each calendar month or part thereof, in accordance with the formula given below:

<table>
<thead>
<tr>
<th>MONTH</th>
<th>Rn (mm)</th>
<th>Nn (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>86</td>
<td>14.4</td>
</tr>
<tr>
<td>February</td>
<td>80.4</td>
<td>11.6</td>
</tr>
<tr>
<td>March</td>
<td>75.4</td>
<td>11.2</td>
</tr>
<tr>
<td>April</td>
<td>29.9</td>
<td>6.9</td>
</tr>
<tr>
<td>May</td>
<td>17.4</td>
<td>3.1</td>
</tr>
<tr>
<td>June</td>
<td>6.6</td>
<td>1.8</td>
</tr>
<tr>
<td>July</td>
<td>0.9</td>
<td>0.2</td>
</tr>
<tr>
<td>August</td>
<td>6.8</td>
<td>1.9</td>
</tr>
<tr>
<td>September</td>
<td>11.8</td>
<td>2.6</td>
</tr>
<tr>
<td>October</td>
<td>59</td>
<td>9.9</td>
</tr>
<tr>
<td>November</td>
<td>102.8</td>
<td>13.8</td>
</tr>
<tr>
<td>December</td>
<td>114.5</td>
<td>14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>606.7</td>
<td>58</td>
</tr>
</tbody>
</table>

\[ V = (Nw - Nn) + (Rw - Rn)/X \]

in which formula the symbols shall have the following meanings:

\[ V = \text{Potential extension of time in calendar days for the calendar month under consideration:} \]
If $V$ is negative and its absolute value exceeds $N_n$, then $V$ shall be taken as equal to minus $N_n$.

When the value of $V$ for any month exceeds the number of days in the particular month, $V$ will be the number of days in the month.

- $N_w =$ Actual number of days in the calendar month under consideration on which a rainfall of $Y$ mm or more was recorded on the Site
- $N_n =$ Average number of days, derived from existing records of rainfall in the region of the Site, on which a rainfall of $Y$ mm or more was recorded for the calendar month
- $R_w =$ Actual rainfall in mm recorded on the Site in an approved rain gauge for the calendar month under consideration
- $R_n =$ Average rainfall in mm for the calendar month, derived from existing records of rainfall in the region of the Site

The factor $(N_w - N_n)$ shall be deemed to be a fair allowance for variations from the average number of days during which the rainfall exceeds $Y$ mm.

The factor $(R_w - R_n)/X$ shall be deemed to be a fair allowance for variations from the average number of days during which the rainfall did not exceed $Y$ mm but wet conditions prevented or disrupted work.

(b) The rainfall records at rainfall station number 0476762A3 for the period 1998 to 2015 are reproduced in the accompanying table, and the monthly averages ($R_n$ and $N_n$) for this period shall, for the purposes of this Contract be taken as normal and as the values to be substituted for $R_n$ and $N_n$ in the formula above. The values of $X$ and $Y$ shall be 20 and 10 respectively.

The potential extension of time $V$ has been calculated for each month and year of the period concerned to indicate the possible effect of the rainfall formula. The values of $V$ were obtained by applying the rainfall formula and using the actual rainfall figures and the calculated values of $R_n$ and $N_n$ indicated in the table.

(c) The Contractor shall, at his own cost, provide and erect on the Site at a location approved by the Engineer, an approved rain gauge, which shall be fenced off in a manner which will prevent any undue interference by workmen and others. The Contractor shall, at his own cost, arrange for the reading of the rain gauge on a daily basis for the duration of the Contract. The gauge readings, as well as the date and time at which the reading was taken shall be recorded in a separate record book provided by the Contractor for this purpose. All entries in the rainfall record books shall be signed by the person taking the reading and the gauge shall be properly emptied immediately after each reading has been taken. If required by the Engineer, the Engineer shall be entitled to witness the reading of the gauge.

(d) The Contractor's claims in terms of Subclause 5.12.1 of the Conditions of Contract for extension of time in respect of delays resulting from wet climatic conditions on the Site during each month, shall be submitted in writing to the Engineer monthly; provided always that

(i) the period allowed to the Contractor in terms of Clause 10 of the Conditions of Contract in which to submit his claim for each month shall be reduced to seven (7) days, calculated from the last day of the month to which the claim applies; and
(ii) the 28-day period allowed to the Engineer in terms of Subclause 5.12.1 of the Conditions of Contract in which to give his ruling on the claim, shall be reduced to fourteen (14) days.

The Contractor's monthly claim shall be accompanied by a copy of the signed daily rainfall readings for the applicable month.

(e) The extent of any extension of time which may be granted to the Contractor in respect of wet climatic conditions (whether normal or abnormal) shall be determined as the algebraic sum of the
"V" values for each month between the Commencement Date and the Due Completion Date of the Contract, calculated in accordance with subclause C3.4.2.6(a) above; provided always that:

(i) rainfall occurring within the period of the Contractor's Christmas shut-down period shall not be taken into account in the calculation of the monthly "V" values;
(ii) rainfall occurring during any period during which the Contractor was delayed due to reasons other than wet climatic conditions on the Site, and for which delay an extension of time is granted by the Engineer, shall not be taken into account in the calculation of the monthly "V" values;
(iii) if the algebraic sum of the "V" values for each month is negative, the time for completion will not be reduced on account of subnormal rainfall, and
(iv) where rainfall is recorded only for part of a month, the "V" value shall be calculated for that part of the month using pro rata values for Nn and Rn.

f) The Engineer shall, simultaneous with granting any extension of time in terms of this clause, revise the Due Completion Date of the Contract to reflect an extension of time having been granted in respect of wet climatic conditions, to the extent of the algebraic sum of all the "V" values for all the preceding months of the Contract, less the aggregate of the "Nn" values for the remaining (unexpired) months of the Contract (viz less aggregate of the potential maximum negative "V" values for the remaining Contract Period). Thus, provided that where such period is negative, the Due Completion Date shall not be revised.

g) Any extension of time in respect of wet climatic conditions granted in terms of this clause shall not be deemed to take into account delays experienced by the Contractor in repairing or reinstating damage to or physical loss of the Works arising from the occurrence of abnormal climatic conditions. Extension of time in respect of any such repairs or reinstatement regarding damage shall be the subject of a separate application for extension of time in accordance with the provisions of Clause 10 of the Conditions of Contract.

C3.4.4 PLANT AND MATERIALS

C3.4.4.1 Plant and materials supplied by the employer

The Employer shall not supply any plant or materials.

C3.4.4.2 Materials, samples and shop drawings

(a) Samples

Materials or work which do not confirm to the approved samples submitted in terms of Sub-clause 7.4.1 of the Conditions of Contract, will be rejected. The Engineer reserves the right to submit samples to tests to ensure that the material represented by the sample meets the specification requirements.

The costs of any such test conducted by or on behalf of the Engineer, the results of which indicate that the samples provided by the Contractor do not confirm to the requirements of the Contract, shall, in accordance with the provisions of Sub-clause 7.4.4 of the Conditions of Contract, be for the Contractor's account.

C3.4.5 CONSTRUCTION EQUIPMENT
C3.4.5.1 Requirements for equipment
The following is a list of minimum equipment requirements:
− Tower Crane or Mobile Crane and Concrete Pump
− Formwork including falsework and scaffolding
− Concrete mixer
− Excavator or TLB
− Tipper Trucks
− Compressor
− Pipe laying equipment and pipe testing equipment
− Roller Compactor

C3.4.5.2 Equipment provided by the employer
The Employer shall not supply any equipment.

C3.4.6 EXISTING SERVICES
C3.4.6.1 Known services
Refer to the GPRS drawing indicating the existing services as listed under point 4C – Site Information.

C3.4.6.2 Treatment of existing services
Existing services no longer required are to be blocked off and cut off as applicable.

C3.4.6.3 Use of detection equipment for the location of underground services
A GPRS was carried out.

C3.4.6.4 Damage to services
All damages shall be for the Contractor’s account.

C3.4.6.5 Reinstatement of services and structures damaged during construction
All the repaired damages and services shall be approved by the Engineer.

C3.4.7 VARIATIONS AND ADDITIONS TO sans 1200 STANDARDIZED SPECIFICATIONS AND PARTICULAR SPECIFICATIONS
SANS 1200 A : General
SANS 1200 AB : Engineer's Office
SANS 1200 C : Site clearance
SANS 1200 D : Earthworks
SANS 1200 DB : Earthworks (pipe trenches)
SANS 1200 DK : Gabions and pitching
SANS 1200 DM : Earthworks (roads, subgrade)
SANS 1200 G : Concrete (structural)
The following variations and additions to the SANS 1200 Standardized Specifications referred to above apply to this Contract. The prefix PS indicates and amendment to SANS 1200. The letters and numbers following these prefixes respectively indicate the relevant Standardized Specification and clause numbers in SANS 1200 to which the variation or addition thereto applies.

PSA : GENERAL (SANS 1200 A)

(etc)
PARTICULAR SPECIFICATIONS

PSA GENERAL (SANS 1200 A)

PSA 1 Scope

Replace the first paragraph of sub-clause 1.1 with the following :-

“1.1 This specification covers requirements, principles and responsibilities of a general nature which are normally applicable to all civil engineering contracts as well as the requirements for the Contractor’s establishment on Site”

PSA 2 Interpretations

PSA 2.3 Definitions

(a) General

Add the following definitions :-

“General Conditions : The General Conditions of Contract specified for use with this Contract and the Special Conditions of Contract as applicable.

Specified : As specified in the Standardised Specifications, the Drawings or the Project Specifications. Specification shall have the corresponding meaning”.

(b) Measurement and Payment

Replace the definitions for fixed charge, time-related charge and value-related charge with the following :-

“Fixed Charge : A charge that is not subject to adjustment on account of variation in the value of the Contract Sum or the Contract time for completion.

Time-related Charge : A charge, the amount of which is varied in accordance with the time for completion of the work as adjusted in accordance with the provisions of the Contract.

Value-related Charge : A charge, the amount of which is varied pro rata the final value of the measured work executed and valued in accordance with the provisions of the Contract.”

PSA 2.4 Abbreviations

a) Abbreviations relating to standard documents

Add the following abbreviations :-

“CSK : SABS Co-ordinating Specification”
PSA 3

Materials

PSA 3.1

Quality

Add the following:

“All manufactured materials supplied shall be new materials unless the contrary is specified. All materials specified in accordance with SABS Specifications shall bear the SABS mark, whether so specified or not.

The Contractor shall arrange for all necessary process control tests for soil properties, density, etc, and concrete cube tests and is responsible for the cost of all testing to ascertain that the materials do comply with the relevant minimum requirements and all such costs shall be deemed to be included in the tendered rates. The cost of acceptance control tests done by the Engineer, of which the results do not comply with the minimum requirements, shall be for the Contractor’s account. The tests must be carried out by an independent laboratory approved by the Engineer.

The Contractor shall inform the Engineer of any process control testing to be done at least 48 hours before such test are required and must allow in his programme for the time necessary for the tests and the processing of the results thereof.”

Add the following sub-clause: -

“PSA 3.3: Ordering of Materials

The quantities set out in the Schedule of Quantities have been carefully determined from calculations based on data available at the time and should therefore be considered to be only approximate quantities. The liability shall rest entirely and solely with the Contractor to determine before ordering, the required types and quantities of the various materials required for completion of the Works in accordance with the Specifications and the Drawings issued to the Contractor for construction purposes.

Any reliance placed by the Contractor on the estimated quantities stated in the Schedule of Quantities issued for tendering purposes, or measurements made by the Contractor from the drawing issued for tendering purposes, shall be entirely at the Contractor’s risk, and the Employer accepts no liability whatever in respect of materials ordered by the Contractor on the basis of Tender Documents.”

PSA 4

Plant

PSA 4.2

Contractor’s Office, Stores and Services

Add the following before the first paragraph: -

“The Contractor’s construction camp shall be fenced off and shall contain all offices, stores, workshops, toilet facilities, etc. The camp shall always be kept in a neat and tidy condition.

No personnel will be allowed to reside on the Site. The Contractor shall be responsible for the security of his construction camp and of the construction Site, at his own cost. Only night-watchmen may be on the Site after hours.”
PSA 5  Construction

PSA 5.1  Survey

PSA 5.1.1  Setting out the Works

Add before the first sentence:

“The Contractor will be required to set out the various sections of the Works in the order that he proposes to undertake the work as per his programme, at least one week prior to commencing work on these sections, to enable the Engineer to check the design proposals in the field and thereafter to make any minor changes which he may deem necessary. Any additional survey work or setting out required as a result of these changes shall be undertaken on a daywork basis.”

PSA 8  Measurement and Payment

PSA 8.1  Measurement

PSA 8.1.2  Preliminary and General Items or Section

PSA 8.1.2.2  Tendered Sums

Replace the contents of this sub-clause with the following :

“The Contractor's tendered sums under items PSA 8.3 and PSA 8.4 shall collectively cover all charges for :

- Risks, costs and obligations in terms of the General Conditions of Contract and of this Standardised Specifications, except to the extent that provision is made in these Project Specifications to cover compensation for any of these items of work.

- Compliance with the SHE Procedures.

- Head-office and site overheads and supervision.

- Profit and financing costs

- Expenses of a general nature not specifically related to any item or items of permanent or temporary work

- Providing facilities on Site for the Contractor's personnel, including offices, storage facilities, workshops, ablutions, for providing services such as water, electricity, sewerage, sewerage and rubbish disposal, for access roads and all other facilities required, as well as for the maintenance and removal of completion of the Works of these facilities and the cleaning up of the camp site on completion of the Works.

- Dealing with water.

- Providing facilities for the Engineer and his staff as specified in SANS 1200 AB and in these Project Specifications.

- One name board as specified. This board is to be erected in a position to be indicated by the Engineer.”
PSA 8.2 Payment

PSA 8.2.1 Fixed-Charge and Value-Related Items

Replace the contents of this sub-clause with the following:

“Payment for the sum tendered under item PSA 8.3.1 will be made in three separate instalments as follows:

a. The first instalment which is 50% of the sum, will be paid when the Contractor has met all his obligations to date under this Specification, the General Conditions of Contract and the Special Conditions of Contract, and where the value of work certified for payment, excluding Materials on Site and any payments under preliminary and general items is equal to not less than 5% of the total value of the work listed in the Schedule of Quantities.

b. The second instalment, which is 35% of the sum, will be made when the amount certified for payment, including retention monies but excluding the second instalment referred to herein, exceeds 50% of the tender sum.

c. The final payment, which is 15% of the sum, will be made when the Works have been certified as completed and the Contractor has fulfilled all his obligations to date under this Specification, the General Conditions of Contract and the Special Conditions of Contract.

No adjustment will apply to item 8.3.1 in respect of variations in the value of work done or the time for completion finally authorised.

Payment for the sum tendered under PSA 8.3.2 will be made in monthly instalments in relation to the value of the work done (excluding the value of any price adjustments in terms of Clause 6.8 of the General Conditions of Contract).

Should the value of the measured work finally completed be more or less than the tender sum (excluding the value of any price adjustments in terms of Clause 6.8 of the General Conditions of Contract), then the sum tendered under item PSA 8.3.2 will be adjusted pro-rata up or down and this adjustment shall be applied to the final instalment.”

PSA 8.2.2 Time-Related Items

Replace the contents of this sub-clause with the following:

“Subject to the provisions of Item 8.2.3 and Item 8.2.4, payment under item PSA 8.4.1 (time-related item) will be made monthly, pro rata for parts of a month, from the Commencement Date, until the end of the period for completion of the works, plus any extension of time awarded, provided always that the total of the monthly amounts so paid for the item is not more than in proportion to the progress of the work as a whole.

Should the Engineer Grant an extension of time for completion of the Works, the Contractor will be entitled to an increase in the sum tendered for the time-related item, which increase shall be in the same proportion to the original tendered sum as the extension of time is to the original time for completion of the Works.

Payment for such increased amounts will be taken to be in full compensation for all additional time-related preliminary and general costs that result from the circumstances pertaining to the extension of time Granted.”
PSA 8.3 **Scheduled Fixed-Charge and Value-Related Items**

Replace the item with the following:-

"PSA 8.3.1 : Fixed Preliminary and General Charges ........................................... Unit : Sum

PSA 8.3.2 : Value-Related Preliminary and General Charges .................................. Unit : Sum

The sums tendered shall include full compensation for all fixed and value-related preliminary and general charges as described in sub-clause PSA 8.1.2.2. Payment will be made as described in sub-clause PSA 8.2.1."

PSA 8.4 **Scheduled Time-Related Items**

Replace the items with the following :-

"PSA 8.4.1 : Time-Related Preliminary and General Charges

(a) General Obligations ................................................................. Unit : Sum

(b) Compliance with SHE Procedures ............................................ Unit : Sum

The sum tendered for item PSA 8.4.1(a) shall include full compensation for all time-related preliminary and general charges as described in sub-clause PSA 8.1.2.2, excluding compliance with the SHE Procedures.

The sum tendered for item PSA 8.4.1 (b) shall include full compensation for any and all costs related to complying with the SHE Procedures.

Payment will be made as described in sub-clause PSA 8.2.2."

PSA 8.4.6.3 Community Liaison Officer .......................................................Unit: Stated Sum

The stated sum shall cover full compensation and all costs payable on a monthly basis, to provide a full time qualified and suitable experienced Community Liaison Office for the duration of the contract. The stated sum shall also cover for the CLO cellphone airtime.

PSA 8.5 **Sums Stated Provisionally by Engineer**

Amend sub-clause 8.5.b)1 and add the following items:

i) Training of Labour ...........................................................................Unit: Stated Sum

Allow for 10 people working for at most 7 months.

ii) Control tests by independent laboratory ............................................. Unit: Stated Sum

Allow for collecting concrete from site, making of the cubes and testing of Cubes. Thus a set of 7 cubes per every 50m³ of concrete.

PSA 8.8 **Temporary Works**

PSA 8.8.2 Dealing with Traffic

This item shall include supply, erection and maintenance of all temporary road signs, delineators and for flagmen that may be required, in terms of Mozambican Legislation, for any and all interfaces with public roads. Construction of road crossings shall be carried out using the method of
half widths and the road shall be re-opened to its full width for two-way traffic overnight. Under no circumstances will the half-widths closure be permitted to remain after normal working hours. All road signs and delineators shall be new.

PSAB 3 ENGINEER’S OFFICE
PSAB 3.1 MATERIALS
PSAB 3.1 NAMEBOARDS
Delete the entire clause and replace with:

“The name board shall be of either tempered hardboard at least 12mm thick or steel sheeting so braced on the reverse side as to prevent warping or buckling and shall be mounted on two or more firmly planted poles as necessary. The quality of the paint shall conform to SANS Standard Specification CKS 193. The colour of the paint shall conform to SANS 1091-1975 colour F11, strong blue. The Employer’s SOC Ltd logo shall be in colour. The height of the larger name board shall be 2400mm and the width 4800mm, whilst the height of the smaller name board shall be 800mm and the width 1600mm”.

PSAB 3.2 OFFICE BUILDING(S)
Delete this sub-clause entirely and re-title the sub-clause “FACILITIES FOR THE ENGINEER”

Add the following sub-clause.

PSAB 3.2.1 Office Building(s)

The Contractor shall provide, furnish and equip one or more offices (as scheduled) for the use of the Engineer.

The Contractor shall provide, furnish and equip one or more offices (as scheduled) for the use of the Engineer.

The Contractor shall provide and furnish one office for the use of the Engineer. Each office shall consist of one room with a floor area of at least 15 m² and a ceiling height of at least 2.5 m.

Each office shall be weatherproof, shall be air conditioned, shall have a wooden boarded floor that is at least 150 mm above the ground, and shall be provided with a ceiling and a lining to the walls, or equivalent insulation, with an acceptable type of door with a secure lock, and two opening windows of glazed area at least 3 m². Each office shall be well ventilated and shall be so insulated as to provide comfortable working conditions.

Office building shall be painted with an approved paint after erection and the paintwork shall be maintained during the contract period.

Each door shall be provided with a lock and two keys.

The sitting of all offices shall be to the Engineer’s satisfaction and shall be decided upon in consultation with him/her and confirmed in writing before erection.
All accommodation shall include the provision of access roads where required, fresh clean portable water and sewerage, which will be considered as part and parcel of the accommodation provided and will not be paid for separately.

The site Office shall be fenced using diamond wire mesh right round with access gate.

All accommodation shall meet with the approval of the Engineer.

The offices shall comply with the following requirements:

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Boardroom</th>
<th>Engineer’s Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum floor area</td>
<td>28 m²</td>
<td>15 m²</td>
</tr>
<tr>
<td>Minimum window area</td>
<td>4.0 m²</td>
<td>3.0 m²</td>
</tr>
<tr>
<td>Minimum window area opening</td>
<td>2.4 m²</td>
<td>1.5 m²</td>
</tr>
<tr>
<td>Minimum clear height</td>
<td>2.5 m</td>
<td>2.5 m</td>
</tr>
<tr>
<td>Shaded parking for vehicles</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

**Furniture and Equipment**

Engineer's shall be equipped with the following:

(i) Office desk with a surface area of at least 1.5m² with at least 3 drawers one of which can be locked.

(ii) Two office chairs.

(iii) a lockable upright steel cabinet with three shelves or a steel filing cabinet with four drawers

(iv) Refrigerator

(v) Printer and other computer equipment as per PSAB4.3

(vi) Sufficient racks and hangers for hanging contract drawings. The hangers shall be of the “Barhold” type, with one hanger to five drawings.

(vii) 1 x Double 80-watt fluorescent light fittings complete with ballast and tubes.

The Boardroom shall be equipped with the following:

(i) Conference table large enough to accommodate twelve people and have an area of at least 15m².

(ii) Fifteen office chairs

(iii) 2 x Double 80-watt fluorescent light fittings complete with ballast and tubes.
The Contractor shall also supply a toilet for the exclusive use of the Engineer.

The Contractor must provide basic survey instruments: dumpy level, tripod stand and staff.

On completion of the Works, ownership of the buildings, furnishings and equipment shall revert to the Contractor who shall remove them from the Site.

**PSAB 4**

**PLANT**

**PSAB 4.1**

**TELEPHONE**

Replace sub-clause 4.1 of SANS 1200 AB with the following:

“The Contractor shall at his own cost, arrange for the provision of a smartphone, airtime and data bundles for the duration of the contract for the Engineer’s representative. The Contractor at the tendered rates under the relevant scheduled item shall recover the associated charges and telephone calls and data bundles associates with the contract.”

**PSAB 4.2**

**SURVEY EQUIPMENT**

Add the following new clause:

“The Contractor shall provide on site and make available for the exclusive use of the Engineer and his staff, the survey equipment listed in Portion A of the Project Specifications.

All survey equipment provided by the Contractor shall be in good condition, properly calibrated and fit for the purpose.

In addition to survey equipment provided by the Contractor for the exclusive use of the Engineer and his staff, the Contractor shall make available for use by the Engineer, the further survey equipment listed in Portion 1 of the Project Specifications, at all times when such is reasonably required by the Engineer and his staff for the purposes of the Contract.”

**PSC**

**SITE CLEARANCE (SANS 1200 C)**

**PSC 3**

**Materials**

**PSC 3.1**

**Disposal of Material**

Replace the words from “Material obtained from clearing and grubbing…..” to “… prior written approval for the Engineer” with the following:

“The Contractor shall make his own arrangements for the disposal of material obtained from clearing and grubbing and from the demolition of structures, which material shall be removed from the site. The disposal site shall meet with the approval of the Local Authority within whose area it falls, and the spoiling shall comply with all the statutory and municipal regulations. No burning of material will be allowed on site.

No overhaul will be paid for any spoil materials and the Contractor shall allow for all haulage in his tendered rates. All costs relating to this activity shall be deemed to be included in the rates tendered for site clearance.”
PSC 5  Construction

PSC 5.2.3.2  Individual Trees

A penalty of ZAR 5,000.00 per tree shall apply. Prior to removing any trees, the Contractor shall together with the Engineer mark the trees to be preserved.

PSC 5  Clearing

Add the following:

"Where the route of a pipeline or other new service traverses existing fences these shall be carefully uplifted, if required, and reinstated during the course of activities in that specific area. Where an uplifted fence interferes with the security of what it controls a temporary fence shall be installed and operated to the satisfaction of the Engineer or his Representative. Prior to removal or dismantling of any fence, the Contractor will be required to photograph the fence for future reference."

PSC 8  Measurement and Payment

PSC 8.1  Basic Principles

Add the following:

"No separate payment will be made for topsoil removal along pipeline routes. The Contractor is to excavate trenches in such a manner that the top 150 mm of material is kept separate from other excavated material, for replacement on completion of backfill operations. All costs related to excavating this vegetation and topsoil, and separate stockpiling shall be deemed to be included in rates tendered for trench excavation."

PSC 8.2.5  Take down existing fences

Add the following:

"The tendered rate shall also include for the re-erection of the fence, photographing and temporary fencing where required all as specified."

PSD  EARTHWORKS (SANS 1200 D)

PSD 2  Interpretations

PSD 2.3  Definitions

Replace the definition “Borrow” with the following:

“Borrow material: Material, other than materials obtained from excavations required for the Works, obtained from sources such as borrow pits or the authorised widening of excavations. ‘Borrow’ shall have a corresponding meaning.”
Replace the definition "Stockpile" with the following:-

“Stockpile (Verb) : The process of selecting and, as may be necessary, loading, transporting and off-loading material in a designated area for later use and a specific purpose.”

Add the following definitions :-

“Fill : An embankment or terrace constructed from material obtained from excavations or borrow. In roads it includes the earthworks up to the underside of the selected sub-grade level.

Fill (Material) : Material used for the construction of an embankment or terrace.

Roadbed : The natural in-situ material on which the fill, or in the absence of fill, any pavement layers, are to be constructed.”

PSD 3 Materials

PSD 3.1 Classification for excavation purposes

PSD 3.1.1 Method of Classifying

Add the following :-

“Classification of material other than ‘soft excavation’ shall be agreed upon before excavation may commence.

The Contractor shall immediately inform the Engineer if and when the nature of the material being excavated has changed to such an extent that a new classification for further excavation is warranted. Failure on the part of the Contractor to advise the Engineer thereof in good time shall entitle the Engineer to classify, at his discretion, such excavation as may have been executed in material of a different nature.”

PSD 3.3 Selection

Add the following sub-clause :-

“PSD 3.3.3 : Selection in borrow pits and excavations

The approval of a borrow area for a certain purpose does not necessarily mean that all material within that area is suitable for the specified purpose. What it does mean, is that the borrow area contains some suitable material. The onus is on the Contractor to ensure that only material that is indeed suitable is removed and used for the specified purpose.

Where the Contractor is required to select material from excavations for a specific purpose, the above provisions relating to borrow areas shall apply mutatis mutandis to excavations.

The Contractor shall not waste or contaminate material that has been selected for a specific purpose”.
PSD 5.2.2.2 Borrow Pits

Add the following:

“A commercial source shall, for the purposes of this Specification, mean a source of material provided by the Contractor, not the Employer.

Where it is specified that material shall be obtained from commercial sources, the Contractor shall be responsible and include in his price for fill from commercial sources, for finding a source of suitable material, for making all arrangements for procuring the material with the owner of the source, for the payment of any royalties, charges or damages and for transporting the material to the site regardless of the distance involved.

No payment will be made for the removal of overburden or stockpiling at the commercial source and no extra over payment for excavating in intermediate, hard or boulder material shall apply.”

PSD 5.2.2.3 Disposal

Add the following:

“The Contractor shall make his own arrangements for the disposal of excess or unsuitable materials. The disposal / spoil site shall meet with the approval of the Local Authority within whose area it falls, and the spoiling shall comply with the statutory and municipal regulations. The cost of all loading, hauling, dumping, spreading, compacting and any other costs or charges will be deemed to be included in the rates tendered for spoiling of material.”

PSD 5.2.4 Finishing

PSD 5.2.4.3 Grass or other Vegetation

Add the following to subclause (f) Grassing:

“The type of grass to be used shall be Cynodon Dactylon, Cynodon Royal Blue or Pennisetum Clandestinum (Kikuyu).

a) General - Grassing shall be carried out at the earliest convenient stage of the construction and shall be arranged to suit the seasonal weather conditions. Fertiliser shall be supplied by the Contractor.

b) Planting grass cuttings - The areas to be grassed by means of grass cutting shall, unless already moist, be thoroughly watered before cuttings are planted to ensure that the soil will be uniformly moist to a depth of at least 150 mm when the planting is done. This method shall only be used on flat areas, such as sidewalks and platforms.

An approved variety of grass cuttings shall be evenly planted by hand or mechanically at a rate of at least 600 kg of cuttings per hectare and shall be covered with 30 mm of approved soil. Fresh cuttings only shall be used but not any grass cuttings that have been allowed to dry out. Immediately after having been planted, the grass cuttings shall be given a copious watering, and, when sufficiently dry, shall be rolled with a light agricultural roller.

c) Sodding - Areas to be grassed by sodding shall be given a layer of topsoil of at least 50 mm in thickness unless, where suitable soil is present, the Engineer orders the topsoil to be omitted. The areas to be sodded shall be thoroughly watered beforehand so that it will be moist to a
depth of at least 150 mm during sodding. The surface shall be roughened slightly to ensure a good penetration of roots into the soil. Sods shall be protected against drying out and kept moist from the time of harvesting until they are finally placed. The handling of the sods shall not result in the sods losing their prescribed soil thickness.

The first row of sods shall, where possible, be laid in a straight line, and if on a slope, laying the sods shall start at the bottom of the slope. The sods shall be butted tightly against each other, and care shall be taken not to stretch or overlap the sods. Where a good fit cannot be obtained, any intervening spaces shall be filled with topsoil. The next row shall be similarly placed tightly against the bottom row with staggered joints, and so on until the entire area has been covered with sods. Sods shall be laid in such a way that unnecessary trampling over areas previously laid is prevented. To this end, a diagonal method of laying sods is preferred, moving up the slope and behind previously laid sods. On steep slopes and batters the sods shall be held in position by a sufficient number of wooden stakes approximately 300 mm long by 20 mm in thickness and these stakes shall be knocked in to a depth of 100 mm into the subsoil.

Sods laid adjacent to concrete side drains and concrete kerbs shall be laid in such a manner that the sodding will be 20 mm higher than the concrete. When stripsodding is required, the sods shall be laid in such a manner that the sods are proud of the surrounding ground level. During stripsodding the areas in between shall be planted as specified in item B5.2.4.3(f)(b) above. Stripsodding shall at all times be staked as specified above.

As sodding is completed each section shall be lightly rolled or firmly pressed to ensure a proper bond with the underlying material, and thoroughly watered afterwards.

d) Maintenance of grassed areas - Maintenance shall include watering, weeding, mowing, reapplication where necessary, regrassing of areas that, in the opinion of the Engineer, are unsatisfactory, and any other work that is necessary to achieve full, healthy and weed-free grass cover to banks and plateaux before the end of the defects liability period.

Mowing shall be undertaken with an approved power mower. All established grass cover shall be cut to a height of 25 mm above ground level. Mowing shall be undertaken initially with the mower set to cut 50 mm above ground level, the height of cut being reduced to 25 mm when adequate cover has been achieved.

PSD 5.2.5 Transport for Earthworks

PSD 5.2.5.1 Freehaul

Delete the contents of sub-clause 5.2.5.1(b) and replace with “All movement of materials from commercial sources, borrow pits selected by the contractor, cut, fill and spoil materials will be regarded as freehaul.”

PSD 5.2.5.2 Overhaul

Delete the contents of sub-clause 5.2.5.2 and replace with “No overhaul shall apply.”
PSDB EARTHWORKS (PIPE TRENCHES) (SANS 1200 DB)

PSDB 3 Materials

PSDB 3.7 Selection

Replace the words “if he so wishes” in the first line of the second paragraph with the words “at his own cost”.

PSDB 5 Construction

PSDB 5.6 Backfilling

PSDB 5.6.1 General

Add the following:

“Notwithstanding the requirements of sub-clause 5.6.1 and 5.6.6, no pipe joint or pipe filling shall be covered by either the blanket fill or the main fill prior to the successful completion of the visual inspection, and the pressure testing of the relevant section of the pipeline.”

PSDB 5.6.4 Disposal of Intermediate and Hard Rock Material

Add the Following:

“Intermediate and/or hard rock material shall be disposed of to sites approved by the Engineer”

PSDB 5.7 Compaction

PSDB 5.7.2 Areas subject to Traffic Loads

Add the following:

“All backfill to pipes under roads and in road reserves or future road reserves shall comply with the requirements of sub-clause 3.5(b) and shall be compacted in accordance with sub-clause 5.7.2.”

PSDB 8 Measurement and Payment

PSDB 8.3 Scheduled Items

PSDB 8.3.1 Site Clearance and Topsoil Removal

No separate payment shall be made for topsoil removal along pipeline routes. See clause PSC 8.1.
**PSG 3.2**  
**Cement**

**PSG 3.2.1 Applicable Specifications**

Add the following:

"Where reference is made in this specification or the Standard Specifications to the cement specifications, e.g. SABS 471: Portland cement and rapid hardening Portland cement, it shall be replaced with the new specification. SABS ENV 197-1: Cement-composition, specifications and conformity criteria. Part 1: Common Cements

Furthermore, where reference is made in this Specification or the Standard Specifications to the different cement types, the following new names shall apply:

<table>
<thead>
<tr>
<th>Old product nomenclature</th>
<th>Typical new product nomenclature</th>
<th>Cement type</th>
<th>Cement strength class</th>
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<tbody>
<tr>
<td>OPC</td>
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<td>CEM I</td>
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<td>RHC</td>
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<tr>
<td></td>
<td>MC</td>
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<td>22,5X</td>
</tr>
</tbody>
</table>

Only Ordinary Portland Cement (O.P.C.) shall be used on the Works. In the case of Strength Concrete and as a substitute for a portion of the cement it is required that between 15% and 30% of the O.P.C. be replaced by Pulverised-fuel ash (Pfa) complying with ASTM C618 (Class F). The choice and proportions of pozzolans in substitution for a portion of the O.P.C. will form a part of the Strength"
PSG 3.2.3 Storage of Cement

Add the following:

“The Contractor shall ensure that cement for Strength Concrete is not stored on Site for longer than four weeks. Copies of all waybills for cement deliveries shall be submitted to the Engineer.”

PSG 3.4 Aggregates

PSG 3.4.1 Applicable Specification

Add the following:

“After the approval of aggregates and prior to commencing production of concrete the Contractor shall ensure continuity of supply of the selected aggregate. Any colour or texture variations of exposed concrete due to changes in aggregates during the Contract shall be rectified by the Contractor at his own cost. Any such remedial measures shall be approved by the Engineer before commencement thereof.”

Add the following new sub-clause:

“PSG 3.9 Jointing Materials

PSG 3.9.1 Waterstops

Waterstops shall be a proprietary design consisting of flexible polyvinylchloride.

- Tensile strength : 15 MPa (min.)
- Elongation at break : 250% (min)
- Hardness (ASTM D1706) : 70 ±5
- Cold crack temperature : 25°C
- Water absorption (48h at 50°C) : 0.5% (max.)

PSG 3.9.2 Joint Sealer

Joint sealer shall be a two component polyurethane base sealing compound or similar approved sealer. The joint sealer shall have a movement tolerance of 25% (min) and shall be capable of withstanding extension and compression over a wide range of moisture and temperature conditions without deterioration. Two component polyurethane sealers shall comply in all respects with SABS 1077-1984, “Sealing Compounds for the Building and Construction Industry, Two-Component Polyurethane - Base.”

PSG 3.9.3 Joint Filler

Joint filler shall be a non-absorbent, closed cell, polyethylene filler, having a density of at least 45 kg/m³. The joint filler shall have a load bearing capacity of 0.2 MPa for 50% compression; moisture absorption shall not exceed 3% by volume.

Fillers shall be provided with a tear out strip for forming the specified recess for the sealant, inclusive of the bond breaker, which shall be an approved PVC tape.”

PSG 4 Plant
THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

PSG 4.5  \textit{Formwork}

PSG 4.5.3  Ties

Delete Sub-Clause 4.5.3 and replace with:

“The types of ties used and their position shall receive careful attention and be subjected to the approval of the Engineer. Ties shall not be left embedded in the concrete closer to the face of the concrete than the minimum specified cover to reinforcement.

Tie cone recesses shall be plugged with well rammed dry 3:1 mortar within 48 hours of casting the concrete. The surfaces of the recesses shall first be roughened by wire brushing.

Where tie cone recesses cannot be plugged within 48 hours of casting, they shall be roughened by scabbing and a wet to dry epoxy shall be applied before plugging the recesses with 3:1 mortar.

The mortar plugs shall be properly cured.”

PSG 5  \textit{Construction}

PSG 5.1  \textit{Reinforcement}

PSG 5.1.2  Fixing

Add the following:

“Sufficient joints shall be made so that the entire reinforcement cage is rigid and to the satisfaction of the Engineer. Tie wire shall not encroach on the specified minimum cover by more than a single strand thickness.

Welding of the reinforcement shall not be permitted.

Spacers to be used shall be of approved design.

Where mortar blocks are used as spacers, they shall be properly shaped so as not to slip out of position and shall be made of the same mix as the mortar of the concrete in which they are to be placed.

The mortar shall be well compacted by approved means into the moulds and the mortar blocks shall be cured in water for at least 7 days before being fixed in place.”

PSG 5.1.3  Cover

The exposure conditions for all water retaining structures, structures below ground etc. shall be considered as being “severe”.

PSG 5.2  \textit{Formwork}

PSG 5.2.1  Classification of Finishes

Add the following:

“Smooth rubbed finish shall be produced on freshly hardened concrete. All necessary patching shall have been done immediately after the forms have been removed and rubbing shall be completed not later than the following day. Surfaces shall be wetted and rubbed, first with a coarse carborundum..."
stone followed by a smooth carborundum stone, or other similar abrasive until a uniform colour and
texture is produced. No cement grout or slurry shall be used during the rubbing process. The
character of the materials used and the care with which forms are constructed and concrete placed are
factors in determining the amount of rubbing required.”

PSG 5.2.2 Preparation of Formwork

Add the following:

“Panel joints for formwork shall be horizontal or vertical and arranged to match symmetrically
throughout the structure.”

PSG 5.5 Concrete

PSG 5.5.1 Quality

PSG 5.5.1.5 Durability

The exposure conditions shall be considered as being “severe”. The maximum water/cement ratio
shall be 0.5.

PSG 5.5.1.7 Strength Concrete

Delete Clause 5.5.17 in its entirety and replace with:

“The Contractor shall employ the services of an approved materials laboratory for the design of
strength concrete mixes. The following shall be taken account of:

(a) The intent of the mix design is to ensure for every part of the structure homogeneous concrete
which will have the required strength and durability
(b) The use of approved fine and coarse aggregates
(c) Compaction by vibration
(d) Mass batching
(e) Slump not exceeding the requirements stated in Table 3 of SANS 1200 G
(f) The necessity to design the mix using O.P.C. and the part substitution with an approved
pozzolan
(g) Utilizing the minimum specified cement content for reasons of durability and imperviousness

The following classes of Strength Concrete together with essential requirements are tabulated below
### Strength Concrete

<table>
<thead>
<tr>
<th>Class of Concrete</th>
<th>Min. Mass Cement Per m³ Concrete Kg</th>
<th>28 Day Design Cube Strength MPa</th>
<th>28 Day Works Cube Strength MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>20/19</td>
<td>300</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>25/19</td>
<td>350</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>30/19</td>
<td>400</td>
<td>35</td>
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</tr>
<tr>
<td>35/19</td>
<td>420</td>
<td>40</td>
<td>35</td>
</tr>
</tbody>
</table>

Add the following Clause:

"PSG 5.5.1.8 No Fines Concrete

No fines concrete shall consist of a mix of 50kg cement and 0.30 m³ of coarse aggregate with a water/cement ration of approximately 0.46. The aggregate shall be graded in such a way that not more than 10% of its mass is retained on a 19mm sieve and not more than 5% of its mass passes a 6.7mm sieve.

The quantities of water used shall be just sufficient to form a smooth grout to completely coat all surfaces of the aggregate.

The no fines concrete shall be mixed for at least 3 minutes in a mechanical mixer. The aggregate shall first be mixed with half the quantity of water before adding the cement and remaining water.

No fines concrete shall be placed in continuous horizontal layers within 15 minutes of mixing. It shall be worked sufficiently to completely fill the shutter but excessive tamping, ramming or any form of vibration shall not be allowed.

The upper surfaces of no fines drainage layers below structural floors of water retaining structures shall be screeded to level and then sealed against the ingress of foreign matter by applying sufficient 1:8 dry mix plaster and wood floating to close the surface voids.

Curing shall be as per Clause 5.5.8 of SANS 1200 G."

PSG 5.5.3.2 Ready Mixed Concrete

The use of Ready Mixed Concrete shall be subject to the approval of the Engineer.

PSG 5.5.5 Placing

Add the following:

“For closed circuits such as circular or rectangular water retaining structures for which no vertical joints have been detailed on the drawings, work shall commence at one or more points in the circuit and proceed in opposite directions at the same time so that on completion of the circuit the junction or junctions are formed with freshly placed concrete. The height of the lift shall be carefully pre-planned so that the concrete can be placed in one continuous operation over the entire perimeter of the wall. No unauthorised vertical or inclined construction joints of any kind will be permitted in continuous walls."
PSG 5.5.6 Compaction

Add the following:

“The tops of all walls and columns shall be re-vibrated within 3 hours of the concrete having been placed”

PSG 5.5.7 Construction Joints

Delete the contents of Clause 5.5.7 and replace with:

“PSG 5.5.7.1 Special Note

Construction joints are a potential source of weakness in the strength, watertightness and appearance of the structure and they shall be positioned and treated with particular care.

PSG 5.5.7.2 Location

(a) Construction joints shall be located as shown on the drawings or to the approval of the Engineer. The spacing of joints shall depend on the volume of concrete that can be properly placed in a normal shift.

(b) Construction joints shall be fixed in advance of the concreting operation.

(c) In general construction joints shall be positioned at the points of maximum compression, minimum shear and at right angles to the main reinforcement.

(d) Where smooth shutter finishes are specified the joints shall coincide with the edges of the shutter boards or panels.

(e) All joints shall be truly vertical or horizontal unless otherwise specified.

PSG 5.5.7.3 Bonding Fresh Concrete to Old

The following methods shall be used:

(a) Existing concrete less than 4 hours old:

(i) Horizontal joints: Place original concrete 25 mm higher than level of joint and strike off surplus concrete as in Clause PSG 5.5.7.4. Place fresh concrete.

(ii) Vertical joints: Remove shutter 1 hour to 2 hours after fresh concrete is placed. Carefully roughen surface with wire brush or compressed air to expose coarse aggregate and remove loose material. Place fresh concrete.

(b) Existing concrete between 4 hrs and 3 days

(i) Horizontal joints: After removing 25 mm of surplus concrete as described in Clause PSG 5.5.7.4 brush the old concrete thoroughly with a wire brush to expose the coarse aggregate. Alternatively use sand blasting. Wash joint with clean water to remove all laitance, dirt and loose particles.

Just before placing fresh concrete apply a thin layer of plastic mortar to the surface of the existing concrete. The mortar shall consist of cement and sand mixed in the same proportion as that contained in the concrete mix (i.e. omitting coarse
aggregate). The mortar shall still be plastic when the fresh concrete is placed against it.

(ii) Vertical Joints: Roughen the surface with a wire brush to expose coarse aggregate and remove loose material. Alternatively use sand blasting. Then treat as for horizontal joint in (b) (i) above.

(c) Existing concrete more than 3 days old:

(i) Horizontal joints: As for (b) (i) above with the addition that the construction joint surface shall be kept continuously damp for 24 hours before the plastic mortar and fresh concrete are placed, but no free water shall be visible on the surface prior to placing the mortar.

(ii) Vertical joints: As for (b) (ii) above with the addition that the construction joint surface shall be kept continuously damp for 24 hours before the plastic mortar and fresh concrete are placed.

(d) Adhesives:

Proprietary adhesives may be used for bonding concrete at easily accessible construction joints (e.g. slabs and beams) subject to the approval of the Engineer.

The manufacturer's instructions shall be followed by the Contractor. In general the existing concrete shall be prepared as described in (b) (i) above.

PSG 5.5.7.4 Horizontal Joints

Unless otherwise specified or shown on the drawings all horizontal joints shall be formed by striking off the top 25 mm of concrete approximately 1 hour after it has been compacted, working to the top of the line formed by the gauge strips specified below.

PSG 5.5.7.5 Gauge Strips

To give all joints a straight-line finish where smooth shutter finishes are specified, 40 mm x 40 mm rebated gauge strips shall be fixed inside the shutters at the joint positions and removed before the new concrete is cast.

PSG 5.5.7.6 Keyed Joints

Joints in beams and slabs shall have keyed faces to transmit shear.

PSG5.5.7.7 Joints Parallel to Main Reinforcement

These joints shall be subject to the approval of the Engineer and shall be formed only when absolutely necessary. The Engineer may order additional splice bars and other load transfer devices to be provided at the joint. No extra payment shall be made for the additional material or labour if such construction joints are requested by the Contractor.

PSG 5.5.7.8 Column Joints

These joints shall be treated as for “Horizontal Joints” except at joints with slabs or beams. In this case it shall project 25 mm into the soffit of the slab or beam when the excess concrete has been struck off as described.
PSG 5.5.7.9 Shuttering at Joints

To obtain joints free from projections the shutters for the new concrete shall be tightly fixed to the existing concrete by means of additional bolts, wedges or clamps. In all possible cases the shutters shall overlap the joint and not be disturbed until the new concrete has hardened.“

PSG 5.5.9 Adverse Weather Conditions

Add the following:

“If plastic shrinkage cracking occurs, the cracks shall be closed up by re-vibrating the concrete with a poker vibrator, within 3 hours of casting. Once the cracks have been closed, the concrete shall be kept thoroughly wet, or covered with plastic sheeting for at least a further 3 hours.”

PSG 5.5.11 Watertight Concrete

Delete the contents of Clause 5.5.11 and replace with the following:

“All reinforced concrete structures in this Contract shall be deemed to be water retaining structures and have been designed accordingly. Water retaining structures are subject to the provisions of the following Sub-Clauses:

PSG 5.5.11.1 Pipes and Conduits Embedded in Concrete

Except with the written approval of the Engineer, no pipes other than those shown on the drawings shall be embedded in concrete and the approval of the Engineer for the position of all services to be embedded shall be obtained before concreting commences. The clear space between pipes of any kind embedded in reinforced concrete and the clear space between such pipes and reinforcement shall not at any point be less than;

(a)  40 mm or
(b)  5 mm plus the maximum size of coarse aggregate, whichever is the greater.

PSG 5.5.11.2 Grouting of Pipes and Specials Through Walls:

Where entry holes for pipes/specials have been provided in walls the Contractor shall be responsible for the grouting-in of such pipes/specials, regardless of whether or not these have been supplied by himself.

Before commencing the positioning in holes of any pipes/specials the Contractor shall;

(a) remove all shuttering and boxing remaining in the holes;
(b) make any alterations required to the position and shape of the holes;
(c) thoroughly scrub and clean the sides of the holes so as to obtain a satisfactory bond surface for the new concrete; and
(d) free all surfaces of the pipes/specials of all coatings, and thoroughly scrape and clean the pipes/specials.

After accurately positioning the pipes/specials in their respective holes, the Contractor shall fix the pipes/specials in the holes.

Immediately before grouting is carried out by the placing of mortar and concrete around the pipes, the surface of the existing concrete shall be saturated with water. All surplus water shall be removed and the surface covered with a layer, approximately 12 mm thick, of mortar consisting of 3 parts of concrete sand and 1 part of cement.
The concrete ingredients shall be mixed and placed as dry as possible to obtain a dense, waterproof concrete. Where a watertight seal is required, the concrete shall be carefully worked around the puddle flange, if any, and the pipe barrel or body of the special, and shall be vibrated in layers so as to obviate any falling away from pipe/special surfaces of the concrete already placed. The hole shall, when set, form a dense, homogeneous, and waterproof mass. A spare vibrator with an independent power source shall be kept in readiness to ensure continuity of placing in the event of the breakdown of the duty vibrator.

Smooth formwork that has been suitably strengthened for use with a vibrator shall be provided for facing the concrete around each pipe/special.

**PSG 5.5.11.3 Test for Watertightness**

All measures required for obtaining, purchasing, tankering, pumping and/or piping the water are to be included in the price for testing.

Concrete work, which is required to contain water shall not be accepted as complete until it has been proved by test to be watertight. Testing shall not commence sooner than 14 days after the structure has been completed.

Neither backfilling around the Works up to original ground level nor Banking around structures will be permitted until after the satisfactory completion of the appropriate stages of testing for watertightness in accordance with the provisions of this Clause as set out hereunder.

Water retaining structures are to be tested for watertightness at four stages unless otherwise ordered by the Engineer; one at quarter-full depth of water, one at half-full, one at three-quarter-full and one at normal full level. In each case as soon as the water surface is reasonably steady after filling, the water level is to be established and recorded by the Engineer each successive 24 hours and the results graphed so as to establish a progressive rate of absorption and leakage. To make allowance for variations caused by evaporation or rainfall in the case of un-roofed structures a watertight open-topped container of at least 2 m² plan area by 1 m deep 80% filled with water shall be floated on the water and moored. By taking measurements of the water level in the container, the losses or gains due to evaporation or rainfall will be assessed.

If the rate of leakage at any stage exceeds 2 mm per 24 hours at the end of 7 days, or if damp patches are apparent on the concrete face remote from the contained water, and there is no prospect, in the opinion of the Engineer, of the leakage reducing to tolerable limits, he shall have the right to deem the structure to be not watertight and to notify the Contractor accordingly, who shall take such steps at his own expense and to the approval of the Engineer, as may be considered necessary to achieve watertightness, other than by plastering. In the event of the measures taken by the Contractor proving ineffective in reducing the drop in water level over a period of 7 days to less than 2 mm per 24 hours, and/or the apparent dampness externally to limits which are considered tolerable by the Engineer, he shall have the right to order the Contractor to plaster or coat with an approved product the floors and inside faces of walls and the Contractor shall at his own expense carry out this work to the approval of the Engineer.

On completion of this work and after cleaning out the structure it shall again be tested in the manner specified and at the Contractor's cost. If the retest fails to reveal a satisfactory degree of watertightness, the Contractor shall carry out such other measures at his own expense as may be directed by the Engineer.

In the event of leakage being evident at any time during the Defects Liability Period, the Engineer before issuing the Certificate of Completion may call for further testing and rectification as already described, and will have the right to withhold his Certificate until he considers the work to be satisfactory.
PSG 5.5.11.4 Cleaning and Disinfection

Before being put into use all structures which will contain potable water are to be thoroughly cleaned out and disinfected inside by brushing, removing all dirt, grit and rubbish, hosing with clean water and finally washing with a solution of permanganate of potash mixed in the proportion of 1gm to 5 litres of water. Excess solution should then be run to waste before testing for watertightness.

In cases where there is a risk of discolouration of potable water by the permanganate solution, chloride of lime or other approved chlorinating chemicals shall be used for disinfection. Pipework installed by the Contractor and which is in direct or indirect contract with the potable water shall similarly be disinfected.

Insert the following new Clauses:

"PSG 5.5.16 Expansion Joints

PSG 5.5.16.1 Location

(a) Expansion joints shall be located as shown on the drawings.
(b) Where smooth shutter finishes are specified the edges of the shutter boards or panels shall coincide with the joints.
(c) All joints shall be truly vertical or horizontal unless otherwise specified.

PSG 5.5.16.2 Forming Joints

All expansion joints shall have a shuttered face. The shuttering shall be fixed firmly in position and shall be split as required to accommodate waterstops and/or dowel bars without loss of mortar at the joint.

To obtain a joint free from projections the shutters for the new concrete shall be tightly fixed to the existing concrete. Where possible the shutters shall overlap the joint and not be disturbed until the new concrete has hardened.

Joint recesses are to be formed to the dimensions and shapes indicated on the drawings. The recesses are to be formed by means of untreated clean timber with rough sides and so shuttered that the shuttering is rigidly fixed during placing of concrete and can be removed without any timber having to be left in the recesses. Shuttering shall be left in the joint until these are ready for sealing, whereupon the shuttering shall be removed and the surfaces of the recesses shall be thoroughly cleaned by light hammering with a chipping hammer and wire brushing to remove all laitance oil and moisture traps, and by heating with a blow-lamp; care shall be taken not to overheat the concrete.

PSG 5.5.16.3 Construction

(a) Each section of premoulded waterstop shall be of the maximum practicable length so that the number of end joints will be minimised. Continuous seals are to be obtained in the field by jointing the waterstops by heat fusion using suitable jigs and heating tools. Joints shall develop effective watertightness equal to that of the continuous material and shall permanently develop the full mechanical strength of the parent section and retain its flexibility. Waterstops shall be securely and accurately located in position in the shutters before concreting commences. Nails, wires or other fastenings shall be used only in anchoring ribs.

Concrete around waterstops shall be properly placed and compacted to avoid honeycombing. To ensure full contact between the waterstop and the concrete around its periphery, concrete in the vicinity of the seal is to be well vibrated and the seal worked up and down by hand to expel entrained air, when the concrete has reached the level of the seal.
(b) Joint filler to the sizes and thicknesses shown on the drawings shall be fixed to the joint face before the adjoining concrete is cast.

(c) All recesses to receive joint sealer shall first be cleaned as described in Clause PSG 5.5.17.2. Thereafter a primer matched to the sealer, shall be applied by brushing it well into the sides of the joint to ensure complete coverage. Sealants shall be tooled into position for complete air-free filling of voids. The surface of the joint shall be smoothed with a clean spatula. To obtain neat straight line joints the adjacent concrete shall be suitably masked.

The preparation and priming of joint surfaces, the mixing of the components of the sealer, the application and tooling shall all be carried out strictly in accordance with manufacturer's instructions. Priming of joints shall not be commenced before the concrete has cured for at least 21 days.

(d) Sliding joints shall be formed where shown on the drawings. The upper concrete surfaces forming the sliding surface are to be steel trowelled to a smooth and level surface. Only when thoroughly set and dry and prior to the upper layer of concrete being cast thereon, shall these surfaces receive two coats of an approved bituminous paint.

PSG 7  Tests

PSG 7.1  Facilities and Frequency of Sampling

PSG 7.1.2  Frequency of Sampling

PSG 7.1.2.2  Amend sub-clause 7.1.2.2 to read as follows:

“At least one set of samples shall be taken from each days casting and from at least every 10 m³ of concrete placed.”

PSG 8  Measurement and Payment

PSG 8.4  Scheduled Concrete Items

Add the following items:

"PSG 8.4.7 Pipes and Conduits Embedded in Concrete............................................Unit : Number (No.)

Measurement will be the number of pipes or conduits embedded in the concrete in accordance with the dimensions and details given on the drawings.

The rate tendered shall include full compensation for all materials, equipment and work required to carry out the work as specified.

PSG 8.4.8 Grouting of Pipes/Specials through walls.........................................................Unit : Number (No.)

Measurement will be the number of pipes/specials grouted into preformed entry holes in the concrete in accordance with the dimensions and details given on the drawings. Various pipe sizes and/or specials will be scheduled separately.

The rate tendered shall include full compensation for all materials, equipment and work required to complete the work as specified."
Add the following new items:

“PSG 8.9 Testing for Watertightness ............................................................unit: Lump Sum

PSG 8.10 Cleansing and Disinfection ............................................................unit: Lump Sum

The payment for testing for watertightness and the cleansing and disinfection will be made once the Engineer is satisfied that the work is complete in terms of the specification.”

PSL  MEDIUM PRESSURE PIPELINES (SANS 1200 L)

PSL 1 Scope

This specification covers the supply and installation of pipelines, for rising mains, gravity mains, pipework for pumping installations and reservoirs as well as reticulation.

PSL 2 Interpretations

PSL 2.4 Abbreviations

Add the following:

“HDPE : High Density Polyethelene
mPVC : Modified Polyvinyl Chloride
GRP : Glass Fibre Reinforced Plastic
DI : Ductile Iron”

PSL 3 Materials

PSL 3.4 Steel Pipes, Fittings and Specials

Add the following new sub-clauses:

“PSL 3.4.5 Stainless Steel Pipework

Pipework fittings and specials shall comply with the dimensional requirements specified for mild steel pipe work, fittings and specials. The wall thickness shall be not less than 4,0 mm for pipes of diameter up to 150 mm and not less and 5,0 mm for pipes exceeding 150 mm in diameter, or as called for on the pipe schedules.

Stainless Steel pipework, fittings and specials shall be Grade 304L and shall not be supplied coated.

Plain ends of pipes and fittings shall be covered and protected against damage whilst being transported and stored.

PSL 3.4.6 Steel Pipes

All steel pipes and fittings, irrespective of their diameter, shall be fabricated from plain-ended pipes and shall be coupled by means of welded flanges as detailed. Screwed flanges and fittings shall not be permitted. The lengths of the pipes shall be as dimensioned on the drawings but shall be verified on site prior to galvanising. No cutting or welding of pipes shall be permitted on site.”
PSL 3.7 Other Types of Pipes

PSL 3.7.2 Polyethylene Pipes

HDPE Pipes shall be of PE100 and shall comply with SABS ISO 4427.

Add the following sub-clauses:

"PSL 3.7.3 mPVC Pipes shall not be permitted unless otherwise shown or agreed with the Engineer.

PSL 3.7.4 Ductile Iron Pipes

Ductile Iron Pipes shall be the spigot and socket type, unless otherwise specified, manufactured to ISO 2531 and/or SABS EN 545.

PSL 3.7.4.1 Ductile Iron Fittings and Accessories

All bends, fittings, couplings and other accessories for ductile iron (DI) pipe shall be fabricated from ductile iron (DI) and shall comply with the test pressures as specified.

Corrosion protection coatings (external) and linings (internal) for fitting and accessories shall be as specified for pipes save that, where appropriate, hand application of linings and coatings may be used.

Repair work shall be carried out as for pipes.

PSL 3.7.4.2 Corrosion Protection of Ductile Iron (DI) Pipes

Unless otherwise stated, ductile iron pipes shall be cleaned and then externally zinc sprayed with a finishing layer (coating) to ISO 8179-1.

Pipe ends shall be coated as follows:

External surface of spigot: Zinc spray coating with finishing layer

Flanges and sockets (face and internal surface): Bituminous paint or synthetic resin paint to supplement the zinc spray coating. All paints shall be approved for use on potable water applications by an approved body (USA Environmental Protection Agency (EPA) or similar).

External Zinc Coating and Finishing Layer

The external coating of centrifugally spun ductile iron pipes shall comprise a layer of metallic zinc, covered by a finishing layer of bituminous or synthetic resin and compatible with zinc. Both layers (zinc and finishing layer) shall be works-applied using suitable spray equipment.

The metallic zinc coating shall cover the external surface of the pipe and provide a dense and continuous uniform layer. It shall be free of bare patches, areas of lack of adhesion or other defects and shall be visually uniform. The mean mass of zinc shall not be less than 130 g/m² with a local absolute minimum of 110 g/m².

The finishing layer (bituminous or synthetic resin paint) shall be physically and visually uniform over the entire metallic zinc layer and shall be free from defects such as bare patches, areas of lack of adhesion, air bubbles, pinholes, runs and sags. The mean thickness of the finishing layer shall not be less than 70 µm and the local absolute minimum thickness shall be 50 µm.
Shop and Field Repairs

Damage to coatings where the area of total removal of zinc has a width exceeding 5 mm or other areas designated by the Engineer shall be repaired in the following manner:

Where applicable, remove the finishing layer by mechanical or other means, to 50mm beyond the zinc area to be repaired, to achieve a sound, clean zinc substrate surround.

Repair the damaged area by means of metallic zinc spray or by means of a zinc rich paint containing at least 90% zinc by mass as appropriate. The mean mass of the cured applied zinc paint dry film shall not be less than 150 g/m². The zinc paint repair shall terminate 10 to 15 mm from the finishing layer of the repair site. The zinc repair site shall appear visually uniform and shall be free of defect.

Once the zinc repair has cured completely, the entire area shall be painted with bituminous or synthetic resin paint, overlapping at least 20mm onto the sound undisturbed finishing layer and allowed to cure. The finishing layer shall be defect free and appear to be visually uniform and shall be allowed to cure completely before being handled or buried.

Polyethylene Sleeving

Where specified for Ductile Iron pipes as an additional external corrosion protection barrier to the zinc coating and finishing layer, polyethylene sleeving shall comply with ISO 8180 – 1995. The nominal thickness of the sleeving shall not be less than 200 µm and the density shall be between 910 and 930 kg/m³.

Internal Cement Mortar Lining

The cement mortar lining of ductile iron pipes shall constitute a dense, homogeneous layer covering the entire internal surface of the pipe barrel. It shall be works applied by centrifugal spinning process or by centrifugal spray head or a combination of these methods. Trowelling to achieve a smooth internal bore shall be permitted.

The cement mortar mix shall comprise cement (or high alumina cement) to ENV 197-1, suitably graded sand (with no organic impurities, fine clay particles or other deleterious matter that may adversely affect the mortar quality) and potable water. Chloride-free admixtures shall be permitted with the approval of the Engineer. The ratio of sand to cement shall not exceed 3.5 by mass. The water / cement ratio shall be determined for the particular lining process and this ratio shall be maintained to achieve the relevant specifications.

The freshly applied lining shall be cured by approved means to provide sufficient hydration of the cement and, after curing, the cement mortar shall have a minimum 28-day compressive strength of 50 MPa.

The surface of the cement mortar lining shall be uniform and smooth and shall have a nominal lining thickness and minimum lining thickness as indicated below. Trowel marks may be evident but there shall be no recesses, intrusions or local defects which reduce the thickness to below the minimum thickness specified below. Upon installation, the pipes shall have a minimum Hazen Williams smoothness coefficient of 120 (C >= 120).

Fine crazing or hairline cracking associated with cured cement-rich mortars will be acceptable provided that there is no evidence of mortar disbondment from the substrate. The maximum permissible shrinkage crack width and radial displacement is given below.
# CEMENT MORTAR LINING THICKNESS AND PERMISSIBLE CRACK WIDTH

<table>
<thead>
<tr>
<th>Diameter Nominal (DN)</th>
<th>Lining Thickness</th>
<th>Maximum crack width and radial displacement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nominal ¹</td>
<td>Tolerance ²</td>
</tr>
<tr>
<td>40 to 300</td>
<td>3.5</td>
<td>-1.5</td>
</tr>
<tr>
<td>350 to 600</td>
<td>5.0</td>
<td>-2.0</td>
</tr>
<tr>
<td>700 to 1200</td>
<td>6.0</td>
<td>-2.5</td>
</tr>
<tr>
<td>1400 to 2000</td>
<td>6.0</td>
<td>-3.0</td>
</tr>
</tbody>
</table>

**NOTE:**

1. Pipe ends may have a chamfer not exceeding 50 mm in length
2. Negative tolerance specified only

## Shop and Field Repairs

Where cement mortar lining repair is deemed to be necessary, it shall be repaired in the following manner:

Defective mortar shall be carefully removed to ensure that adjacent sound mortar is fully bonded to the ductile iron pipe substrate.

The adjacent sound mortar shall not be feathered but shall be cut-back at approximately an 80° angle to achieve a "dove-tail" joint.

All mortar shall be removed from the repair area to achieve a clean ductile iron pipe substrate and the repair area shall be washed with copious quantities of potable water.

The repair shall be effected using either a rich cement mortar or a compatible polymer mortar (EPIDERMIX 338 or similar approved) which shall be worked in by hand; care being taken to avoid the inclusion of air bubbles. Latex additives, designated (by EPA or similar body) as being suitable for use on potable water installations may be used on large repair areas.

The repair shall be smoothly and neatly trowelled to match the adjacent pipe profile.

## PSL 3.7.5 GRP Pipes

GRP pipes shall be the plain ended type with minimum stiffness class SN5000, unless otherwise specified, manufactured to AWWA C950 and / or DIN 16868.

## PSL 3.8 Jointing Materials

### PSL 3.8.3 Flanges and Accessories

Add the following:

“All flanges shall be drilled in accordance with SANS 1123. Flanges shall be drilled to Table 16 as a minimum and shall be drilled to match the pressure rating of the adjacent fitting or pipe for pipes and fittings rated greater than 16 bars.”
Add the following:

"Nuts and Bolts and other fasteners shall be hexagon head type and comply with the requirements of SABS 135 - 1971 with threads of the coarse pitch series."

Add the following:

"In the case of Ductile Iron Pipes, joint gaskets shall comply with ISO 4633 and one joint gasket shall be supplied with each length of pipe, fitting or accessory.

In the case of double socket fittings, two (2) gaskets shall be supplied with each fitting."

Add the following new sub-clause:

"PSL 3.8.8 Compression Type Fittings

Fittings for HDPE pipes shall be of the compression type complying with the requirements of ISO 3458, ISO 3459 and ISO 3503 respectively. Fittings shall be rated to 16 bar as a minimum and shall be supplied to match the pressure rating of the adjacent fitting or pipe for pipes and fittings rated greater than 16 bar."

Delete Sub-Clauses 3.9.2.1 and 3.9.2.2 and replace with:

"Steel pipes, fittings, flanges and specials shall have their surfaces thoroughly cleaned by grit blasting to a finish complying with the requirements of SIS 05 59 00 for a Sa 2½ finish. Grit for blast cleaning shall be in accordance with SABS 064. Surfaces shall within 4 hours after cleaning be primed with the specified primer or if no primer is specified with the first coat of the specified system.

All materials used shall be of the highest quality and in accordance with the manufacturer's requirements. Particular care shall be taken to ensure compatibility of all materials used with others forming part of the corrosion protected system. Manufacturer's application and over coating times and specific instructions relating to curing periods and humidity limitations shall be strictly adhered to.

Corrosion protection systems shall not be applied over any surface containing traces of grit, grease, oil, loose rust, millscale or any contaminants or corrosion products. All surfaces shall be absolutely dry.

Welds and adjacent parent metal shall be ground smooth and all weld spatters removed. Sharp edges shall be avoided and where they are evident the removal shall be effected by grinding to a radius of not less than 3 mm.

The Contractor shall arrange for the Engineer or his representative to be present during surface preparation and coating application to ensure compliance with the specification.

(1) All internal and external surfaces of steel pipes, as well as associated flanges, couplings etc. Apply Powder-Lak Fusion Bonded Powder Coating E 2000. Minimum dry film thickness of
300 microns. All coatings to be applied strictly in accordance with manufacturers specifications.

(2) External surfaces of FBE coated steel pipes, which will be buried or cast into concrete shall be wrapped with a bitumen fibre glass wrap, which shall extend at least 500 mm beyond the soil/concrete/air interface and shall have a minimum thickness of 5 mm as follows:

a) Materials
- Primer
- Tape (5 mm thick x 300 mm wide)

All materials shall be used strictly in accordance with the manufacturer's instructions and as specified below.

b) Surface Preparation and Priming
(i) Remove all grit and/or dust before priming at the average spread rate as specified by the manufacturer.
(ii) The adjacent coating shall be cleaned to a minimum of 300 mm beyond the section to be wrapped.
(iii) Grease and oil shall be removed with a non-volatile solvent. The surface shall then be cleaned with potable water and allowed to dry completely.
(iv) Cleaned pipe shall be primed, extending 300 mm on either side of the area to be wrapped, the same day and prior to any recontamination to the pipe. Any surface oxidation or other foreign agents shall be removed by reprocessing through the necessary cleaning steps.
(v) The primer shall be applied in a uniformly thin film, free of runs and sags covering the entire surface of the pipe. The flow of primer shall be regulated so that the pipe surface is entirely covered. Solvents shall be allowed to flash off for a minimum of 30 minutes before application of tape or mastic. Uncoated, flooded, or areas primed over improperly cleaned pipe, shall be cleaned to the satisfaction of the Engineer and recoated.

c) Profiling Tape
Apply 5 mm thick x 300 mm wide tape to the full circumference of the pipe, strictly in accordance with manufacturer's specifications. Care shall be taken to ensure a smooth profile and to avoid air bubbles being trapped beneath the tape. The tape shall not be stretched.

3.9.2.2 Hot Dip Galvanising

Where ordered or specified, galvanised steel pipework shall comply with SANS 934 and 763 and be entirely coated with zinc after fabrication by complete immersion in a zinc bath. The finished surface shall be clean and uniform and any excess being removed. The zinc deposit shall exceed the following :-

Coastal areas 0.735 kg / m²
Inland areas 0.400 kg / m²

‘Coastal areas’ shall apply to this contract.”
PSL 3.9.5 Joints, Bolts, Nuts and Washers

Delete Sub-Clause 3.9.5 and replace with:

“All joints, bolts, nuts and washers shall be hot-dip galvanised in accordance with SABS 763 unless stated otherwise. Electroplating shall not be permitted.”

PSL 3.10 Valves

Add the following:

“PSL 3.10.1 Isolation Valves (General)

Unless otherwise stated, all isolation and scour valves shall be of the Waterworks Pattern sluice Valve type.

The following general requirements shall be met:

a) The valve class shall be at least equal to that of the pipework in which is to be installed. All valves shall be rated for a working pressure of at least 1,6 MPa (Class 16).

b) The valves shall be doubled flanged.

c) The valves shall be supplied with non-rising type spindle. Spindles shall be threaded such that two turns of the hand wheel shall effect a movement of 25 mm on the valve gate. This allows for easy identification of the valve diameter.

d) The valves shall be fitted with a cast iron cap attached to the spindle by means of a Stout brass screw with hexagonal head or with a hand-wheel as indicated on the drawings or specified in the Schedule of Quantities. The hand-wheel shall indicate the direction of closing.

e) The valves shall be CLOCKWISE CLOSING.

f) The design of the valve guides shall be such that all valves supplied can be mounted in any position.

g) The stuffing box may either be of the conventional type with gland packing with a gland secured with 2 No. bolts and nuts. The nuts shall be of the Tee pattern and the gland stuffing box shall be capable of holding four rings of a standard size of gland packing. The gland stuffing box shall be capable of being repacked under working pressure, preferably with the gate in the open position. The gland shall fit neatly and snugly into the stuffing box. The base of the gland and the stuffing box shall be chamfered to force the packing against the spindle.

Alternatively the sealing of the spindle in the body may be by means of O-rings which are retained in position by means of machined grooves in the valve body and which seal against the spindle. If this type of valve is offered, tenderers should indicate with their tender the cost of a service head for each size of valve offered. Such service head shall be supplied complete with seals, gate, spindle and cap.

h) The valves shall be double flanged and drilled in accordance with SANS 1123/1977 appropriate to the Class of valve required/specified.

i) Each valve shall be supplied with 2 No. full face rubber gaskets and the requisite number of bolts, nuts and washers to suit the valves. Sufficient bolts, nuts and washers shall be supplied for both faces of the valves. The cost of these items shall be included in rates tendered.

k) The valves shall be drop tight at the specified working pressure applied to one side of the gate and the other side subject to open end conditions.
l) In addition to the above conditions (k) when called for in Schedule of Quantities, valves for installation on fire hydrants shall be drop tight when subjected to working pressures within in range 345 kPa to 1380 kPa under unbalanced open end conditions, and chattering of the gate in its guides during operation of the valves shall be reduced to a minimum to prevent damage to the valve seats.

m) Every valve shall be internally and externally fusion bonded epoxy powder coated to 250 micron DFT, as standard.

PSL 3.10.1.1 Resilient Seal Valves

a) General

Gate valves shall be double flanged and be resilient seated and unless otherwise specified, the valves shall be of the non rising spindle type.

The valves shall be capable of withstanding the nominal pressure and specified test pressure and shall have the capability to seal drip tight bi-directionally. The valves shall generally be manufactured in accordance to SANS 664.

b) Gate Design

The gate shall be fully rubber encapsulated inside and outside therefore to ensure drip tight sealing and avoid corrosion. The gate shall further have a drain hole, preventing stagnant water or impurities from collecting.

Rubber utilised in the coating of the wedge shall be inert and shall not impart odour, taste and colour and shall be suitable for drinking water applications. The gate nut shall not be fixed to the wedge, thereby reducing opening torques.

c) Gate and Body Design

The gate shall have optimally placed guides of wear resistant plastic so as reduce the torques as well as reduce wear between the rubber and the coating on the body. The bore of the body shall be straight through design in order to allow cleaning with a badger.

d) Valve Bonnet

The valve shall utilise 3 independent bonnet seals which shall include a set of stem steels embedded in non corrosive material, a back seal to prevent leakage when changing seals, and wiper ring to protect against debris entering the valve.

Two friction washes (sizes 50mm – 200mm) and thrust ball bearings (250mm – 600mm) shall be in incorporated to ensure smooth spindle operation as well as to reduce opening and closing torques.

A full circle thrust collar shall be utilised to ensure low torque operation. O-ring stem seals shall be replaceable under pressure for sizes 50mm – 200mm.

e) Spindle
Spindles shall be made of stainless steel. The stem threads shall be rolled to maintain steel structure and increase strength and, to ensure smooth thread edges and consequently a low operating torque.

f) Body and Bonnet Assembly

The rubber bonnet gasket shall fit in a recess in the valve bonnet preventing blow out of the seal under surge conditions. The bonnet bolts shall pass through the gasket and sunk into the bonnet and sealed for corrosion protection.

An edge protecting ring shall permanently be fitted around the body and bonnet joint in order to protect the coating during transportation and installation.

PSL 3.10.1.2 Wedge Gate Valves

Wedge Gate Valves shall be of the Waterworks Pattern Sluice Valve type and be manufactured to a standard of not less than that specified in SANS 664.

The following special requirements shall be met:

a) The lugs on the gate and the spindle are to conform to 3.2.3 of SANS 664 and are to be machined to a good fit and finish.

b) Valve trim shall be either Type B (Gun metal trim) or Type C (Stainless Steel trim) as specified in SANS 664 Clause 3.5.5. Tenderers must indicate in their tender what type of trim is offered.

c) Seat rings shall comply with Clause 3.5.6 of SANS 664 and shall be pinned into position.

d) The stuffing box may either be of the conventional type with gland packing with a gland secured with 2 No. bolts and nuts. The nuts shall be of the Tee pattern and the gland stuffing box shall be capable of holding four rings of a standard size of gland packing. The gland stuffing box shall be capable of being repacked under working pressure, preferably with the gate in the open position. The gland shall fit neatly and snugly into the stuffing box. The base of the gland and the stuffing box shall be chamfered to force the packing against the spindle.

e) Valves which incorporate a thrust plate of the horseshoe type will NOT be considered.

f) Every sluice valve shall be provided with substantial guides cast on each side of the gate, preferably extending to the top of the nut box and operating along corresponding guides cast in the sides of the valve body. (Brass trim only).

g) When called for in the Schedule of Quantities, valves shall, in place of the guides described in (f) above, be fitted with machined bronze guide shoes on either side of the gate operating in accurately matching machined bronze guide channels fixed on the sides of the valve body. The bronze guides shall be of phosphor bronze to B.S. 1400 PB 2-0.

h) The gate valves shall be supplied with the gland packing installed and shall be either "Maxmech Style M57, Chesterton 1724" or similar approved.

PSL 3.10.1.3 Butterfly Valves

Butterfly valves shall be manufactured to a standard of not less than that specified in SANS 1123. Valves shall be of the cartridge type with easily replaceable fully bonded EPDM rubber liner. The disc shall be of 316 Stainless Steel and have a square drive connection to the shaft.

PSL 3.10.2 Air release valves
a) Function

The required valves shall provide any of the functions, or combination of functions, described below as specified in the schedule of quantities:

- Pipeline filling
  Uninterrupted high volume air discharge through the large orifice.
- Pipeline draining or Column Separation
  Uninterrupted high volume air intake through the large orifice.
- Pipeline full and operating
  Discharge of disentrained pressurized air through the small orifice.
- Rapid Filling / Column Separation
  The valve must incorporate an integral surge alleviation mechanism which will automatically dampen surge pressures due to rapid air discharge or the subsequent rejoining of separated water columns.

b) Construction and design

The air release and vacuum break valve shall be of a compact single chamber design with solid cylindrical High Density Polyethylene control floats housed in a tubular stainless steel or corrosion protected body with epoxy powder coated cast iron, or stainless steel ends secured by means of stainless steel tie rods.

The valve shall have an integral surge alleviation mechanism which shall operate automatically to limit transient pressure rise or shock induced by closure due to high velocity air discharge or the subsequent rejoining of separated water columns. The limitation of pressure rise must be achieved by deceleration of approaching water prior to valve closure. Relief mechanisms that act subsequent to valve closure cannot react in the low millisecond time span required and are therefore unacceptable.

Large orifice sealing shall be effected by the flat face of the control float seating against a nitrile/EPDM rubber ‘O’ Ring housed in a dovetail groove circumferentially surrounding the large orifice. Discharge of pressurized air shall be controlled by the seating and unseating of a small orifice on a natural/EPDM rubber seal affixed to the control float.

The intake/discharge orifice area shall be equal to the nominal size of the valve i.e. a 150mm (6") valve shall have a 150mm (6") intake/discharge orifice. The valve construction shall be proportioned with regard to material strength characteristics, so that the deformation, leaking or damage of any kind does not occur by submission to twice the designed working pressure.

The valve design shall incorporate an over pressure safety feature that will fail without an explosive effect, such as is normally the case when highly compressed air is released suddenly. This feature shall consist of easily replaceable components such as gaskets, seals or the like.

The air valve class shall be at least equal to that of the pipework in which is to be installed, with a minimum working pressure of at least 1,6 MPa (Class 16).

PSL 3.10.3  Float Valves
Float Valves shall be hydraulically controlled dual diaphragm end line type control valves with either a direct or remote pilot to facilitate automatic control of levels in tanks and reservoirs with an inherent slow closing characteristic to automatically reduce induced pressure when closing.

Float valves shall be dual diaphragm end of line type with concentric cast iron body and bonnet, which shall be coated and lined with fusion bonded epoxy powder coated to 250 microns.

The spacer piece and plug assembly shall be manufactured from solid HDPE and the diaphragms shall be manufactured from proprietary elastomer as specified by the manufacturer. The internal filter mechanism shall be manufactured from LG2 brass and 304 stainless steel. The control orifice, trim and fasteners shall all be manufactured from grade 304 stainless steel.

Valve construction shall be such that deformation, leaking or damage of any kind does not occur when the valve is subjected to testing pressures of 1.5 x the designed working pressure.

The valve shall be supplied with a direct or remote (as specified), magnetic two level latch type pilot with a fixed deadband. The pilot shall be constructed of brass with stainless steel trim and shall be fitted with an “Eclipse shallow pot” type magnet. The pilot float arm shall be constructed from stainless steel and the ball from polypropylene.

The pilot shall be able to remain “closed” or “open” when the water surface is turbulent and shall only change state at either end of the deadband.

Where a filter is specified to prevent debris from entering the valve, it shall be a cone filter manufactured from powder coated mild steel.

Float valves shall be supplied with stud connections suitable for alignment to flanges conforming to PN16 ratings of BS 4504 standards.

Float valves shall be suitable for operating under a static pressure of 16 bars and shall be able to operate at a residual pressure of at least 0.1 bar.”

PSL 3.11 Manholes and Surface Boxes

Add the following sub-clause:

“PSL 3.11.7 Pipeline Markers

Where so instructed by the Engineer or as shown on the drawings, the Contractor shall erect pipeline markers. These markers will be precast concrete units manufactured out of 25 Mpa concrete to the dimensions shown on the drawings and shall comply with SANS 1200 GA Concrete (Small Works).”

Add the following new sub-clause:

Article I...
Article II: “PSL 3.12 .......... Padlocks for Manholes, Air Valve Chambers, Reservoirs etc.

All padlocks for use in locking manholes, air valves chambers, valve chambers, reservoirs etc shall be “lock-a-like” 50 mm “VIRO” or similar approved with all working mechanisms treated with copper slip.”
PSL 4

Plant

PSL 4.1

Handling and Rigging

Add the following:

"PSL 4.1.1 Stacking of Ductile Iron Pipes

The pipes shall be stacked in uniform stacks, sockets at the same end, as described below:

Bottom Layer: The bottom layer shall be laid on 2 timbers, arranged in parallel; one timber being 1m from the socket end and the other 1m from the spigot end. The pipes shall be laid parallel with one another. The sockets touch and shall not be in contact with the ground. The pipes at the two ends shall be secured at the socket and spigot with large wooden wedges nailed to the timbers. The intermediate pipes shall be secured at the spigot end only, using smaller wedges.

Upper Layers: Each tier consists of parallel pipes laid in line vertically. Each tier is separated by timbers slightly thicker than the difference in diameter (socket – barrel).

Fittings and accessories shall be packed in robust timber crates and secured in position to prevent chaffing in transit.

The contractor shall supply all necessary timber dunnage/crating necessary to stack the pipes in accordance with the above specification. Timber dunnage shall be sufficiently robust to prevent crushing or breaking and shall be of sufficient size to prevent contact with the ground."

PSL 5

Construction

PSL 5.1

Laying

PSL 5.1.4 Depths and Cover

Add the following:

"Water mains shall be so laid in road verges that the minimum cover from the finished surface level to the top of the pipe barrel is 800 mm. Under carriageways, water mains shall be laid horizontally and so that the minimum cover is 1000 mm, the change to the cover under the carriageway from the verge being effected as specified in Subclause 5.1.4.2 of SANS 1200 L. Bulk supply mains shall be laid so that the minimum cover, in all situations, is 1000mm."

Add the following new sub-clause:

"PSL 5.11 Pipeline Markers

Markers are to be erected 300 mm off the edge of the pipe trench to the left of the trench and at right angles to the trench centre line at all horizontal changes of direction and on both sides of all road and river crossings, at valve chambers and at intermediate intervals as agreed with the Engineer.

At bends the marker will be erected at the P.I. point of these 300 mm offset lines."
PSL 7 Testing

PSL 7.2 Initial Tests on Welded Steel Pipe

PSL 7.2.2 Radiographic Examination

All welds shall be examined radiographically unless otherwise specified.

PSL 7.3 Standard Hydraulic Pipe Test

PSL 7.3.1 Test Pressure and Time of Test

Add the following to subclause 7.3.1.2:

“The test pressure for field testing of the section of pipeline under test, shall be 1,50 times the maximum working pressure. The maximum working pressure, for testing purposes, shall be deemed to be the pressure rating of the pipe being tested.”

Add the following new sub-clauses:

“PSL 7.5 Testing of Valves
All valves shall be pressure tested according to SANS 664 or other applicable code at the appropriate test pressure. Test certificates shall be issued to the Engineer upon delivery to site. No separate payment shall be made for testing of valves and hydrants and the scheduled rates for the supply and installation of valves shall include for all costs in respect of testing.”

PSL 8 Measurements and Payment

PSL 8.2 Scheduled Items

PSL 8.2.1 Supply, Lay and Bed Pipes Complete with Couplings

Add the following:

“Until all the specified work has been completed and all requirements complied with, pipes will be regarded as “materials on site”.

PSL 8.2.2 Extra-over 8.2.1 for the Supplying, Laying and Bedding of Specials Complete with Couplings.

Add the following:

“Until all the specified work has been completed and all requirements complied with, specials and couplings will be regarded as “materials on site”.

PSL 8.2.3 Extra-over 8.2.1 for the Supply, Fixing and Bedding of Valves

Add the following:

“Until all the specified work has been completed and all requirements complied with valves will be regarded as “materials on site”.
Add the following new payment items:

"PSL 8.2.16 Pipeline Markers……………………………………………………………………………………… Unit: No.
The unit of measurement will be the number of markers erected and accepted by the Engineer and the rate will include for all materials, manufacturing, delivery, painting and erection of each unit.

PSL 8.2.17 Valve Markers………………………………………………………………………………………….. Unit: No.
The unit of measurement will be the number of markers erected and accepted by the Engineer and the rate will include for all materials, manufacturing, delivery, painting and erection of each unit.

PSL 8.2.18 Isolation Valve Chamber…………………………………………………………………………….. Unit: No.
The unit of measurement will be the number of chambers constructed and accepted by the Engineer and the rate will include for all materials, manufacturing, delivery, painting and erection of each unit. The structure and pipework shall be included, as per the drawing. The excavation is measure elsewhere.

PSL 8.2.19 Water Meter Chamber……………………………………………………………………………….. Unit: No.
The unit of measurement will be the number of chambers constructed and accepted by the Engineer and the rate will include for all materials, manufacturing, delivery, painting and erection of each unit. The structure and pipework shall be included, as per the drawing. The excavation is measure elsewhere.

PSL 8.2.20 Inlet Chamber………………………………………………………………………………………….. Unit: No.
The unit of measurement will be the number of chambers constructed and accepted by the Engineer and the rate will include for all materials, manufacturing, delivery, painting and erection of each unit. The structure and pipework shall be included, as per the drawing. The excavation is measure elsewhere.

PSL 8.2.21 Outlet Chamber………………………………………………………………………………………….. Unit: No.
The unit of measurement will be the number of chambers constructed and accepted by the Engineer and the rate will include for all materials, manufacturing, delivery, painting and erection of each unit. The structure and pipework shall be included, as per the drawing. The excavation is measure elsewhere.

PSL 8.2.22 Spill Chamber……………………………………………………………………………………………… Unit: No.
The unit of measurement will be the number of chambers constructed and accepted by the Engineer and the rate will include for all materials, manufacturing, delivery, painting and erection of each unit. The structure and pipework shall be included, as per the drawing. The excavation is measure elsewhere.

PSL 8.2.23 Scour Chamber………………………………………………………………………………………….. Unit: No.

PSL 8.2.24 Bypass Chamber………………………………………………………………………………………….. Unit: No.
The unit of measurement will be the number of chambers constructed and accepted by the Engineer and the rate will include for all materials, manufacturing, delivery, painting and erection of each unit. The structure and pipework shall be included, as per the drawing. The excavation is measure elsewhere."
PSLB 3  Materials

PSLB 3.1  Selected Granular Material

Replace with the following:

“Selected granular material shall be regarded as a clean river sand or any other granular, non-cohesive, vegetation free material subject to the approval of the Engineer. The maximum particle size shall be 19 mm. This material may occur in-situ, be imported or selected from trench excavations.”

PSLB 3.2  Selected Fill Material

Replace with the following:

“Selected fill material shall be material that has a PI less than 12 and does not contain vegetation or stones exceeding 20 mm. Selected fill material may occur in-situ, be imported or selected from trench excavations.”

PSLB 3.3  Bedding

Add the following:

“All medium pressure pipes shall be classed as flexible pipes and shall be bedded in accordance with Drawing LB 2 of SANS 1200 LB.

All concrete pipes shall be classed as rigid and shall be bedded in accordance with Drawing LB 3 of SANS 1200 LB.”

PSLB 8  Measurement and Payment

PSLB 8.1.3 Volume of Bedding Materials

Add the following:

“The volume of bedding materials will be computed from dimensions shown on the drawings. The volume occupied by the pipe (measured to the outer diameter) shall be excluded from the bedding volume not be measured.”

C3.5  MANAGEMENT OF THE WORKS

A Resident Engineer will be available on site and will be making use of available Site Quality Control documents.

The Contractor shall implement a project management system that includes the following aspects:

Initiating Project:

- Define scope
- Define risks, assumptions and constraints
- Identify stakeholders
• Compile scoping report

Planning Project:
• Document project requirements
• Identify project team, roles and responsibilities
• Create project schedule and WBS
• Identify risks
• Conduct start up meeting

Executing Project:
• Allocate resources (plant and personnel)
• Execute the construction of the reservoir
• Ensure project team works together

Controlling Project:
• Compile progress reports and hold progress meetings
• Control cost, schedule (time) and quality
• Monitor and control risks
• Establish and manage change control process

DELAY IN COMPLETION
The Contractor shall organise the Works in such a manner that no delays occur. Delay due to faulty organisation or lack or shortage of materials or labour or co-operation with other parties or to any other cause within the control of the Contractor will not be countenanced and full power is reserved by the Engineer to order the Contractor to expedite the work should the work, in the opinion of the Engineer, not progress in a satisfactory way.

C3.6 HEALTH AND SAFETY

C3.6.1 Health and Safety Specifications and Plans
a. Employer’s Health and Safety Specification
   The Employer’s Health and Safety Specification is included in Volume 2 Section C5.2 of the tender documents as part of the Particular Specifications.

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

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

c. Construction Regulations 2014
The Contractor shall be required to comply with the Occupational Health and Safety Act, 1993: Construction Regulations, 2014 (the regulations) as promulgated in Government Gazette No 37307 and Regulation Gazette No 10113 of 7 February 2014. (A copy of the Construction Regulations is included as an Annexure in this Volume). Non-compliance with these regulations, in any way whatsoever, will be adequate reason for suspending the Works.

The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in the Project Specifications, Schedule of Quantity and Drawings, as well as in the Employers' health and safety specifications (regulation 4(1)) of the Construction Regulations 2014, which are bound in the Contract document/will be issued separately by the Employer.

The Contractor shall in terms of regulation 5(1) provide a comprehensive health and safety plan detailing his proposed compliance with the regulations, for approval by the Employer.

The Contractor shall at all times be responsible for full compliance with the approved plan as well as the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.

A payment item is/Payment items are included in the Schedule of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned regulations.

C3.6.2 PROTECTION OF THE PUBLIC

Not Applicable to this project

C3.6.3 BARRICADES AND LIGHTING

Not Applicable to this project

C3.6.4 TRAFFIC CONTROL ON ROADS

The Contractor shall implement and maintain temporary road markings, road signs, safety barriers, traffic cones, delineators, flagmen, lights, drums, and whatever is required according to Road Note 13 from CSRA: Road Traffic Signs Sub-Committee, to assure safety to road users, bait vehicles or pedestrians. All rates and amounts quoted shall include for all cost associated with temporary road markings, road signs, safety barriers, traffic cones, delineators, flagmen, lights, drums, and whatever is required according to Road Note 13 from CSRA: Road Traffic Signs Sub-Committee.

C3.6.5 MEASURES AGAINST DISEASE AND EPIDEMICS

As per Occupational Health & Safety Act.

C3.6.6 AIDS AWARENESS

Not Applicable to this project

C3.7 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Refer to Volume 2 Section 5.3
EKURHULENI METROPOLITAN MUNICIPALITY

DEPARTMENT NAME: WATER & SANITATION DEPARTMENT

CONTRACT NO: WS 01-2017

FOR

THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

PART C4 SITE INFORMATION

CONTENTS

<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>PAGE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C4.1 LOCALITY PLAN AND CO-ORDINATES</td>
<td>240</td>
</tr>
<tr>
<td>C4.2 CONSTRUCTION NOTICE BOARD</td>
<td>240</td>
</tr>
<tr>
<td>C4.3 A GPRS DRAWING INDICATING THE EXISTING SERVICES</td>
<td>240</td>
</tr>
<tr>
<td>C4.4 A TOPOGRAPHICAL SURVEY</td>
<td>240</td>
</tr>
</tbody>
</table>
C4.1 LOCALITY PLAN AND CO-ORDINATES

C4.2 CONSTRUCTION NOTICE BOARD

Please refer to the drawing in Volume 2 section C3.2.2

C4.3 GPRS DRAWING

Please see attached drawing.

C4.4 TOPOGRAPHICAL SURVEY

Please see attached drawing.
EKURHULENI METROPOLITAN MUNICIPALITY

DEPARTMENT NAME: WATER & SANITATION DEPARTMENT

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FOR

THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF THE 5,5 Mℓ ELEVATED WATER TOWER IN NORTHMEAD BENONI

PART C5 ANNEXURES

CONTENTS

C5.1 GEOTECHNICAL REPORT

C5.2 HEALTH AND SAFETY SPECIFICATIONS

C5.3 ENVIRONMENTAL MANAGEMENT PLAN
C5.1 GEOTECHNICAL REPORT

Please refer to the attached detailed Geotechnical Investigation Report.
C5.2 HEALTH AND SAFETY SPECIFICATIONS

Please refer to the attached Health and Safety Specification Report.
C5.3 ENVIRONMENTAL MANAGEMENT PLAN

Please refer to the attached Environmental Management Plan Report.