



# UNIVERSITY OF VENDA

## UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)

**BID NO : IN/022/2020**

**Grading : 4 CE or Higher**

<b>University of Venda</b> PRIVATE BAG X5050 <b>THOHOYANDOU</b> LIMPOPO PROVINCE Contact: Name: Mr. CXS Ben-Mazwi Email: <a href="mailto:xhanti.benmazwi@univen.ac.za">xhanti.benmazwi@univen.ac.za</a>			
<b>Bidder:</b> .....			
<b>CIDB Grading.</b> .....			
<b>CIDB Registration Number:</b> .....			
<b>Total of the prices inclusive of value added tax: R</b> .....			
<b>Amount in words:</b> .....			
.....			
	B-BBEE status level of contributor	80/20 Number of points	Tick Relevant Box
	1	20	
	2	18	
	3	14	
	4	12	
	5	8	
	6	6	
	7	4	
	8	2	
	Non-compliant contributor	0	
	<b>Maximum point to be allocated</b>	<b>20</b>	

# UNIVERSITY OF VENDA

## UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)

BID NO: IN/022/2020

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# UNIVERSITY OF VENDA

## UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)

TENDER NO: IN/022/2020

### PART T1: TENDERING PROCEDURES

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



University of Venda

### UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)

The University of Venda, Limpopo, invites Tenders for the UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)

Tenderers should have a CIDB contractor grading designation of **Grade 4 CE or Higher**

Tenderers must be registered with the CIDB in a **Civil Engineering** class of construction works.

Preferences are offered to Tenderers who have a B-BBEE Status Level of Contribution.

Tender documents can be downloaded from the University website as of the **28 September 2021**.

Bidders must e-mail the proof of payment bearing their company name as reference to [xhanti.benmazwi@univen.ac.za](mailto:xhanti.benmazwi@univen.ac.za) when requesting tender document.

**Tender documents to be submitted at the tender box situated at the University of Venda Main Entrance Gate.**

A non-refundable mandatory tender deposit as per advert is **Payable**, proof of deposit is required on collection of the tender documents.

Account details are as follows:

Bank : ABSA  
Account Name : UNIVEN Tender Deposits  
Account Number : 1 000 000 538  
Reference : 00015615

Administrative, tender document and procurement enquiries can be directed to **Mr. CXS Ben-Mazwi** (HOD: Supply Chain Management) at [xhanti.benmazwi@univen.ac.za](mailto:xhanti.benmazwi@univen.ac.za).

The closing time for receipt of tenders is as per the tender advert. No late, faxed or telephonic bids will be accepted.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

No enquiries will be entertained after the 13 October 2021 @ 16H30



**University of Venda**  
Creating Future Leaders

University Road, Thohoyandou, Limpopo  
Private Bag X5050, Thohoyandou, 0950  
Limpopo, South Africa

[www.univen.ac.za](http://www.univen.ac.za)

## INVITATION TO TENDER

BID NO.	PROJECT DESCRIPTION	MIN. REQ.	DEPOSIT	CLOSING DATE
IN/03/2021	NEC3 Framework Contract on Construction of the Simulation Laboratory Building at Univen	CIDB 5GB or higher	R998.00	20/10/2021 at 12h00

**COMPULSARY BRIEFING SESSION: 30/09/2021 on provided zoom link at 11h00.**  
<https://zoom.us/j/91936084980?pwd=MGYraHhVjR6ZlV0c3FFSHJseVhNQTO9>  
**Meeting ID: 919 3608 4980 Passcode: 495552**

No enquiries will be entertained after 12/10/2021 at 16h30

IN/07/2021	Renovation and Upgrading of Mango Groove Residence at Univen	CIDB 4GB or higher	R474.00	20/10/2021 at 12h00
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**COMPULSARY BRIEFING SESSION: 30/09/2021 on provided zoom link at 10h00.**  
<https://zoom.us/j/95035795968?pwd=SHkvKzJoWV2SytIU0dPTXFnVnd0Zz09>  
**Meeting ID: 950 3579 5968 Passcode: 509857**

No enquiries will be entertained after 12/10/2021 at 16h30

IN/015/2020	Supply and installation of the perimeter fence (Clearvu) at Univen	CIDB 6SQ or higher	R1377.00	21/10/2021 at 12h00
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**COMPULSARY BRIEFING SESSION: 29/09/2021 on provided zoom link at 10h00.**  
<https://zoom.us/j/99003124851?pwd=aUfNMXkzaCsrSkIrMONNZzR4UFFTz09>  
**Meeting ID: 990 0312 4851 Passcode: 623198**

No enquiries will be entertained after 13/10/2021 at 16h30

IN/022/2020	Water upgrade phase 2 at Univen (including installation of tanks per student residence)	CIDB 4CE or higher	R998.00	21/10/2021 at 12h00
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**COMPULSARY BRIEFING SESSION: 29/09/2021 on provided zoom link at 11h00.**  
<https://zoom.us/j/95074484408?pwd=QUEzMTBPSHRKRitVZDJ1ckRQQUc2QT09>  
**Meeting ID: 950 7448 4408 Passcode: 301107**

No enquiries will be entertained after 13/10/2021 at 16h30

**Tender documents are downloadable at [www.univen.ac.za](http://www.univen.ac.za) from 28 September 2021.** A non-refundable tender deposit is a mandatory requirement and deposit slip must be attached with the tender document. **Banking details:** are ABSA Bank, Branch Code 632005, Account number 1000000538, with beneficiary reference number 00015615 and company name. **Tender opening registers will be uploaded on the University website.**

Bids sealed in an envelope clearly indicating the bid number and the project name should be deposited in the tender box located at the University of Venda main gate not later than 12h00 midday.

Univen discloses to bidders that all contracts shall be rotated amongst suppliers. Univen is not compelled to accept the lowest or any bid. No late, faxed, or telephonic bids will be accepted. Bids submitted shall remain valid for a period of 120 (One hundred and twenty) days after the closing date.

**Administrative, procurement and technical enquiries can be directed to Mr CXS Ben-Mazwi (HOD: Supply Chain Management) at [xhanti.benmazwi@univen.ac.za](mailto:xhanti.benmazwi@univen.ac.za).**

**The tender box is visibly located at the Main Gate entrance.**

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year 6/3/205

# UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)

**TENDER NO: IN/022/2020**

## **T1.2: TENDER DATA**

This standard is issued in terms of sections 4(f), 5(3)(c) and 5(4)(b) of the Construction Industry Development Board Act 38 of 2000 read with Regulation 24 of the Construction Industry Development Regulations, (as amended) issued in terms of section 33.

The Standard for Uniformity in Construction Procurement was first published in Board Notice 62 of 2004 in Government Gazette No 26427 of 9 June 2004. It was subsequently amended in Board Notice 67 of 2005 in Government Gazette No 27831 of 22 July 2005, Board Notice 99 of 2005 in Government Gazette No 28127 of 14 October 2005, Board Notice 93 of 2006 in Government Gazette No 29138 of 18 August 2006, Board Notice 9 of 2008 in Government Gazette No 30692 of 1 February 2008, Board Notice 11 of 2009 in Government Gazette No 31823 of 30 January 2009, Board Notice 86 of 2010 in Government Gazette No 33239 of 28 May 2010 and Board Notice 136 of 2015 in Government Gazette 38960 of 10 July 2015 and August 2019, Vol. 650 of 2019 in Government Gazette No 42622 of 08 August 2019 - See [www.cidb.org.za](http://www.cidb.org.za).

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

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

Clause number	Tender Data
<b><u>EMPLOYER</u></b> <b>C.1.1</b>	<p>The "Employer" for this Contract is: <b>The UNIVERSITY OF VENDA.</b></p> <p>The Employer's domicilium citandi et executandi (permanent physical business address) is:</p> <p>University of Venda, <b>Main Administration Building, Mphephu drive, Thohoyandou, 0950.</b>  <b>Contact Name: Mr. X. Ben-Mazwi</b>  <b>Email: <a href="mailto:xhanti.benmazwi@univen.ac.za">xhanti.benmazwi@univen.ac.za</a></b></p> <p>The Employer's address for communication relating to this project is:  <b>Main Administration Building, Mphephu drive, Thohoyandou, 0950.</b></p>
<b><u>TENDER DOCUMENTS</u></b> <b>C.1.2</b>	<p><b>"The following documents form part of this Tender:</b></p> <p><b><u>TENDER</u></b></p> <p>Part T1: Tendering Procedures</p> <p>Part T2: Returnable Documents</p> <p><b><u>CONTRACT</u></b></p> <p>Part C1: Agreements and Contract Data</p> <p>Part C2: Pricing Data</p> <p>Part C3: Scope of Work</p>

Clause number	Tender Data
	<p>Part C4: Procurement Policy and House Rules</p> <p>Part C5: Site Information</p> <p><b><u>DRAWINGS</u></b></p> <p>The book of drawings is attached at the back of this document.</p> <p>The Tender document with the drawings shall be obtained from the Employer stated in the Tender notice, upon payment of the deposit stated.</p>
<p><b><u>EMPLOYER'S AGENT</u></b> <b><u>C1.4</u></b></p>	<p><b>Communication and the Employer's agent is:</b></p> <p>Any enquiry regarding this Tender invitation and specification shall be submitted in writing to <a href="mailto:xhanti.benmazwi@univen.ac.za">xhanti.benmazwi@univen.ac.za</a> with Tender number as reference or subject. Writing shall be in the English language</p>
<p><b>C.1.5</b></p>	<p><b>The Employer's right to accept or reject any Tender offer</b></p> <ul style="list-style-type: none"> <li>• The Employer reserves the right to award the Tender on the basis of Tenders submitted, or to negotiate a contract price with a particular Tender, alternatively to call for fresh Tenders.</li> <li>• The successful tenderer will be required to allow University personnel to carry out reference checks about his/her performance elsewhere before a tender is awarded.</li> <li>• Univen discloses to Tenderers that all contracts shall have rotation of contracts amongst suppliers</li> <li>• The Employer further reserves the rights to: <ul style="list-style-type: none"> <li>○ Extend the closing date through the same medium of communication used for invitation</li> <li>○ Extend Tender validity period before the expiry date of the original validity period. This will be done in writing to all Tenderers.</li> <li>○ Verify any information contained in the Tender proposal/submission</li> <li>○ Request any further documentary proof regarding any declaration</li> <li>○ Award this Tender as a whole or in part</li> <li>○ Cancel or withdraw this Tender as a whole or in part at any time without giving rise to any Obligation to be responsible for any loss or financial damage which may be incurred or suffered by any Tenderer</li> <li>○ Reduce or increase the total quantity of items required in the Tender</li> <li>○ Reject incomplete Tenders; Tenders received late or conditional Tenders.</li> <li>○ Reject tenders that are in default or found to be listed National list of defaulters.</li> </ul> </li> </ul>
<p><b><u>TENDERER'S OBLIGATIONS</u></b></p> <p><b><u>Eligibility</u></b> <b><u>C.2.1</u></b></p>	<p>Only those Tenderers who are registered with the CIDB or are capable of being so prior to the evaluation of submission, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with regulation 25 (1B) OR 25(7A) of the Construction Industry Development Regulations, for a 4 CE or Higher Class of construction work, are eligible to have their Tender evaluated.</p> <p>Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> <li>1. Every member of the joint venture is registered with the CIDB;</li> <li>2. The lead partner has a contractor grading designation in the <b>Grade 4 CE or Higher</b> class of construction work; or not lower than one level below the required grading designation in the</li> </ol>



Clause number	Tender Data
	<p>class of construction works under considerations and possess the required recognition status.</p> <p>3. The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a <b>Grade 4 CE or Higher</b> class of construction work or value determined in accordance with regulation 25 (1B) OR 25(7A) of the Construction Industry Development Regulations.</p>
<b><u>Site Visit and Clarification Meeting</u></b> <b>C.2.7</b>	Refer to the Tender notice
<b><u>Insurance</u></b> <b>C.2.9</b>	No insurance cover will be provided by the Employer
<b>C.2.10</b>	<p><b>Pricing the Tender offer</b></p> <p>(a) <u>Value Added Tax</u></p> <ul style="list-style-type: none"> <li>• The Valued Added Tax (VAT) rate shall be 15% or as otherwise provided for by legislation.</li> <li>• The successful Tenderer shall be required to produce a VAT invoice that shall only be prepared once measurements and valuations for work done in terms of the contract offer have been agreed with the Employers agent and a certificate of payment issued.</li> <li>• Payment of VAT to non-VAT vendors shall be processed from the month in which the Tenderer's liability with the South African Revenue Services is effective.</li> </ul>
<b>C.2.11</b>	<p><b>Alterations to document</b></p> <p>A Tender offer shall not be considered if alterations have been made to the forms of Tender data or contract data (unless such alterations have been duly authenticated by the Tenderer) or if any particulars required therein have not been completed in all respects.</p> <p>If the Tenderer considers that any of the Tender documents are deficient in any respect and require clarification, or if any words or figures are indistinct or ambiguous, or should Tenderers have any queries regarding this document they may contact by e-mail only to the Employer indicated in C1.1 above.</p> <p>Telephone discussions shall only be permitted in order to clarify written queries.</p> <p>No unauthorized alteration, addition or note entered by Tenderer in Tender documents shall modify the printed text.</p>
<b><u>Alternative Tender Offers</u></b> <b>C. 2.12</b>	No alternative offers will be considered.
<b><u>Submitting a Tender Offer</u></b> <b>C2.13</b>	
<b>C.2.13.1</b>	<p><u>Whole of the Works</u></p> <p>Tenderers shall offer to provide for the whole of the Works identified</p>
<b>C.2.13.2</b>	<p><u>Original Tender documents</u></p> <p>The original Tender document, issued to the Tenderer, shall be submitted in its entirety. No copies are required.</p> <p>All returnable documents clearly marked with the Project number and the name of the Tenderer must be in a separate file, clearly indexed and separated by marked sheets.</p>
<b>C.2.13.5</b>	<u>Marking of Tender Submissions</u>



Clause number	Tender Data
	<p>The complete Tender documents shall be enclosed and sealed in a single envelope, marked:  <b>“TENDER NO: IN/022/2020: UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE).”</b></p> <p>The Employer's address for delivery of Tender offers to be shown on each tender submission package is the Tender box located at:</p> <p><b>University of Venda: Main Entrance Gate, Mphephu drive, Thohoyandou, 0950.</b></p>
<b>C.2.13.6</b>	<p><u>Two envelope system</u></p> <p>A two-envelope procedure will not be followed</p>
<b>C.2.15</b>	<p><u>Closing Time</u></p> <p>The closing time for submission of Tender Offers is as stated on the Tender notice. No late, faxed or telephonic bids will be accepted.</p> <p>No tender will be considered after the closing date and time.</p>
<b>C.2.16</b>	<p><u>Tender offer validity</u></p> <p>The Tender Offer validity period is 120 (One hundred and twenty days) days from the closing time for submission of Tenders.</p>
<b>C.2.18.1</b>	<p><u>Provide other Material</u></p> <p>Upon request by the Employer, the Tender shall promptly supply any other material that has a bearing on the tender offer, the Tenderer's commercial position (including, where applicable, notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the Employer for the purpose of a full and fair assessment. Should the Tenderer not provide the information or material called for, by the time for submission stated in the Employer's request, the Employer will regard the tender offer as being non-responsive.</p>
<b>C.2.19</b>	<p><u>Inspections, tests and analysis</u></p> <p>Access shall be provided for inspections and testing by personnel acting on behalf of the Employer.</p>
<b>C.2.22</b>	<p><u>Return of Tender documents</u></p> <p>Not applicable.</p>
<b>C.2.23</b>	<p><u>Certificates</u></p> <p>The Tenderer is required to submit with his Tender an original valid Tax Clearance Certificate issued by the South African Revenue Services ("SARS"), certifying that the Tenderer's taxes are in order. <u>This must be submitted with the Tender in order to be considered. The tenderer must also submit with the Tender a letter of good standing from Compensation Commissioner or FEMA and any other documents mentioned in these Tender data.</u></p>
<b><u>EMPLOYER'S UNDERTAKING</u></b>	
<b>C.3.1</b>	<p><u>Respond to clarification</u></p> <p>Enquiries shall only be entertained until 5 working days before the closing date of the tender.</p>
<b><u>Opening of Tender Submissions</u></b>	<p>Properly sealed Tenders shall be addressed and hand delivered as stated in the Tender advert. Due to Covid 19 regulation there will be no opening of tender to public. Tender opening registers will be uploaded on the Univen website www.univen.ac.za after the closing date the tender.</p>

Clause number	Tender Data
<b>C.3.4</b>	
<b>C.3.5</b>	<p><b>Two-envelope system</b></p> <p>The two-envelope system will not apply to this Tender</p>
<p><b><u>Arithmetical Errors</u></b></p> <p><b>C.3.9.1</b></p>	<p>Delete paragraphs (b) and (c) of C.3.9.1 and replace with:</p> <ul style="list-style-type: none"> <li>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 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.</li> <li>c) Where there is an error in addition, either as a result of other corrections required by this checking process or in the Tenderer's addition of prices, such error will be corrected by the Employer in determining the Contract Price.</li> <li>d) The Contract Price for the completed Contract shall be computed from the actual quantities of authorized work done and compliant with the Contract Data, valued at rates contracted against the respective items in the bill of quantities, schedule of Quantities or schedule of rates and shall include such authorized Provisional Sums and items of extra work as have become payable in terms of the Contract Data.</li> </ul>
<b>C.3.11</b>	<p><b><u>Evaluation of Tender Offers</u></b></p> <p>Tenders will be evaluated on quality, price and preference It is important that the relevant information is included to enable the Tender to be evaluated in accordance with the procedure outlined below. All information must be submitted in a separate file. Tampering with the original Tender document will render the Tender non-responsive. Failure to comply with the requirements will result in the Tender being disqualified.</p> <p><b>The Tender evaluation will be conducted as follows:</b></p> <p><b>1(a) First (Administrative/ Mandatory Requirements)</b> Tenderers will be checked for compliance with Tender conditions and administrative responsiveness. Non-compliance with any of the requirements will render the Tender non- responsive and it will not be carried forward to the next stage. (refer to 2(a) in the Page that follows).</p> <p><b>1(b) Second (Functionality)</b> The Tenderer's experience, staffing and methodology will be evaluated. Each Tender will be assessed and awarded points for Functionality. Failure to achieve 70 percent out of the 100 percent for Functionality will render the tender non-responsive.</p> <p>Only Tenderers that score the specified minimum number of percentage points for Functionality will be deemed to be acceptable and carried forward to the next stage. The rest will be disqualified. The points for functionality will not be carried forward to the remainder of the evaluation. (refer to 2(b) in the page that follows).</p> <p><b>1(c) Third</b> Points will be calculated for price on the relevant prices in accordance with the preference point system, 80/20. (refer to 2(c) in the page that follows).</p> <p><b>1(d) Fourth</b> Points for BBEE will be awarded in accordance with the status level of contribution. refer to 2(d) in the page that follows).</p>

Clause number	Tender Data
	<p><b>1(e) Final</b></p> <p>The Tenderer will be awarded to the short-listed Tenderer who has scored the highest points for price, Quality/Functionality and BBEE status. However, the highest Tenderer would not necessarily have to be appointed by Univen and Univen as such reserves the right to appoint any or no one at all. Refer to (2e) in the page that follows)</p> <p><b>2(a) Compliance with Tender Conditions and other Requirements</b></p> <p>The Tenderer will be checked to ensure that they comply with the Tender Conditions and all other requirements of the project document. In particular, the following Mandatory documentation must be included in the Tender:</p> <ul style="list-style-type: none"> <li>○ Record of Addenda to tender documents (If Applicable)</li> <li>○ Compulsory Supplier Questionnaire - Contractors</li> <li>○ Certificate of Authority for Signature (Board Resolution letter or Proxy letter)</li> <li>○ Certified Copies of Qualifications, ID and CVs of Key Personnel (Contracts Manager, Site Agent, General Foreman and Health and Safety Officer) not older than three (03) Months</li> <li>○ Proposed Amendments and Qualifications (Where Applicable)</li> <li>○ Signed Joint Venture Agreement where applicable</li> <li>○ Copy of proof of registration with the Construction Industry Development Board (CIDB)</li> <li>○ Certified Company Registration documents and Identity documents of Owners / Directors / Members / Shareholders (Certified Copies not older than three (03) months</li> <li>○ Audited Annual Financial Statements within 12 months of the current year</li> <li>○ Bank rating letter signed by the bank</li> <li>○ Valid Tax Clearance Certificate and Pin issued by the South African Revenue Services</li> <li>○ Copy of COIDA (Compensation for Occupational Injuries and Diseases) registration certificate, e.g. Letter of Good Standing</li> <li>○ Preference claim form in terms of preferential procurement regulation 2017 (SBD6.1)</li> <li>○ Contractor's Health and Safety Declaration</li> <li>○ Original Receipt as Proof of Valid Certificate for Purchasing the Tender Document</li> <li>○ Signed declaration of interest (Conflict of Interest)</li> <li>○ Initial all pages of tender document</li> <li>○ Complete and sign all relevant pages</li> </ul> <p>Failure to comply with the Tender Conditions or to supply the necessary information at Tender closure <b><u>WILL</u></b> result in the Tender being rejected. Non submission of any of the forms listed above will result in the Tender being rejected as non-responsive.</p> <p><b>2(b) Second Stage in Evaluation: Quality or Functionality: Points System</b></p> <p>A brief description of the scoring system is given below. A tabulated score sheet which will be used in the evaluation is as shown below.</p> <p>The tenderer must be able to demonstrate that he understands the project and the various tasks required. Innovative solutions will be viewed favorably. For a definition of all terms, refer to Scope of Works. Tenderers' submissions will be evaluated based on compliance with the following criteria to determine the responsiveness to the Tender requirements:</p> <ol style="list-style-type: none"> <li>I. Organogram and CV's for key personnel</li> <li>II. Project Programme, indicating the work to be done, how it will be executed and managed. It is a requirement that the same personnel provided during tender stage be provided during construction. Where the identified personnel are no longer in the employ of the tenderer, University of Venda reserves the right to request personnel with similar experience or more. In case of failure to provide, University of Venda reserves the right to terminate the contract.</li> <li>III. Capability statement of the company with regard to this type of work in general, and the specifications of this Tender in particular. Provide project descriptions of similar completed projects, highlighting similarities between the completed projects and the specifications of this project. Highlight experience with similar projects in South Africa for similar Water authorities in</li> </ol>

Clause number	Tender Data																																																																																																
	<p>the past 5 years. Provide contact details of employers for these projects. Points will be awarded for each project completed that is at least one grading lower than the CIDB grading called for this project. Only reference letter in the letter head of the institution providing reference will be accepted.</p> <p>IV. Plant and equipment: Indicate own and hired equipment, clearly indicating equipment to be used specifically for this project.</p> <p>It is important that the tenderer provides information as requested as this information will be used for functionality in which a minimum of 70 percent must be scored to move to the next stage of evaluation. The scoring will be according to the table below:</p>																																																																																																
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Clause number	Tender Data		
	<b>Construction Manager</b>		
	No relevant Qualification		0
	Technical Certificate (N6 Electrical/Mechanical Engineering)		5
	National Diploma in Civil Engineering or Higher with no professional registration		10
	National Diploma in Civil Engineering with professional registration (Pr. Techni)		15
	<b>SUB TOTAL</b>		<b>50</b>
	<b>Available Plant</b> <i>(Registration documents of Plant or Letter of intent to rent out relevant Plant from a reputable Plant Hire Company)</i>	<b>Number of Relevant plant available</b>	<b>Maximum number of points</b>
	1. TLB (x1)	Less than 1 relevant plant available	0
	2. Excavator (x1)	1 to 4 relevant plant Available	4
	3. Vibratory Roller (x1)	5 to 6 relevant plant Available	8
	4. Dumpy level (x1)	7 and above relevant plant available	10
	5. Concrete Mixer (x2)		
	6. 10m³ tipper Truck (x2)		
	<b>SUB TOTAL</b>		<b>10</b>
	<b>Programme of Works</b>		<b>Maximum number of points</b>
	Rational with relevant activities with clear Milestones		5
	Cashflow projections follow a typical Construction Project		5
	<b>SUB TOTAL</b>		<b>10</b>
	<b>TOTAL</b>		<b>100</b>
<b>2(c) Fourth Stage in Evaluation: Price</b>			
<b>The following must be completed in full</b>			
<ul style="list-style-type: none"><li>* The pricing schedules</li><li>* The form of offer. No alterations, subtractions or additions may be made to the items in the pricing schedule. All items must be priced or calculated.</li></ul>			
A total of 80 points will be awarded to the Tender with the lowest balanced price. The other Tenderers will be awarded points based on the ratio of the price under consideration to the lowest price.			
$P_s = 80 \left( 1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$			
where			
P <sub>s</sub>	=	Points scored for comparative price of Tender under consideration	
P <sub>t</sub>	=	Comparative price of Tender under consideration	
P <sub>min</sub>	=	Comparative price of lowest acceptable Tender	
<b>2(d) Fifth Stage in Evaluation: BBBEE (Ph)</b>			
The Tenderers will then be evaluated in terms of the Construction industry scorecard and the PPPFA regulation 40553 issued on 20 January 2017 with the values of Ph indicated as the number of points shown below.			
FOR BEE EVALUATION: Kindly complete and sign the SBD.6.1 and attach ORIGINAL or CERTIFIED BBBEE certificates or the sworn affidavit.			

Clause number	Tender Data																				
	<table border="1"> <thead> <tr> <th>B-BBEE Status Level of Contributor</th><th>Number of points (80/20 system)</th></tr> </thead> <tbody> <tr><td>1</td><td>20</td></tr> <tr><td>2</td><td>18</td></tr> <tr><td>3</td><td>14</td></tr> <tr><td>4</td><td>12</td></tr> <tr><td>5</td><td>8</td></tr> <tr><td>6</td><td>6</td></tr> <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> <p><b>Tenderers shall provide a certified copy of their B-BBEE certificate to facilitate evaluation (Certificate copies of consolidated B-BBEE certificate in case of JV).</b></p> <p><b>2(e) Final Stage in Evaluation: Calculation of Final Total Points (Financial offer, Quality and Preference)</b></p> <p>The final score or final total points for each tender will be calculated by adding the scores from the calculations using the formula below.</p> $W_m = W_3 \times \frac{(1+(S-S_m))}{S_m}$ <p>where</p> <p>W<sub>3</sub> = the number of tender evaluation points for quality and financial offer and equals 80</p> <p>S = the sum of score for quality and financial offer of the submission under consideration</p> <p>S<sub>m</sub> = sum of the score for quality and financial offer of the submission scoring the highest number of points</p> <p>Formula for combining quality and financial offer</p> $T_{EV} = N_{FO} + N_P$ <p>where</p> <p>N<sub>FO</sub> = the number of tender evaluation points awarded for the financial offer</p> <p>N<sub>P</sub> = is the number of tender evaluation points awarded for preferences claimed</p>	B-BBEE Status Level of Contributor	Number of points (80/20 system)	1	20	2	18	3	14	4	12	5	8	6	6	7	4	8	2	Non-compliant contributor	0
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<b><u>ACCEPTANCE OF TENDER OFFER</u></b> <b>C.3.13</b>	<p><b>Tender offers will only be accepted on condition that:</b></p> <ul style="list-style-type: none"> <li>a) Tenderers have met all Tender conditions and administrative responsiveness requirements. (Refer Clause C3.11 2(a).)</li> <li>b) tenderer has obtained at least sixty (70) percentage points for Functionality. (refer to Clause C3.11. 2(b))</li> <li>c) Parties to the Contract (i.e. Employer and the tenderer) agreeing on mutually acceptable contractual terms and conditions failure which the Employer reserves the right to appoint an alternative tender.</li> </ul>																				
<b><u>PROVIDE COPIES OF THE CONTRACT DOCUMENT</u></b>	<p>The number of paper copies of the signed Contract to be provided by the Employer to the successful Tender is <b>one</b></p>																				

Clause number	Tender Data
<b>C.3.17</b>	
<b>FTM Special No.1 SMME's:</b>	It is a requirement of <b>this contract that participation in the contract must be granted to local SMME companies</b> . Local is defined as "having their head office within the Limpopo Province boundaries Starting from Thulamela, followed by Vhembe District Municipality and the Provincial". A SMME company should be a registered company, but not necessarily be registered with CIDB, although it is preferred. The minimum target for participation is <b>fifteen percent (15%)</b> of the total contract value. This can be achieved through either one or more sub-contractors.
<b>FTM Special No.2 Labour Content:</b>	The minimum Labour content for this project shall be 10% OF THE CONTRACT VALUE.

I/We acknowledge that I/we am/are fully acquainted with the contents of the Condition of Tender and that I/we accept the conditions in all respects.

I/We further confirm that I/we have satisfied myself/ourselves as to the correctness and validity of my/our Tender; that the amount(s) and rate(s) quoted cover all the work item(s) specified in the Tender documents and that the amount(s) and rate(s) cover all my/our obligations under resulting Contract and that I/we accept that any mistakes regarding amount(s) and calculations will be at my/our risk.

I/We agree that the laws of the Republic of South Africa shall be applicable to the contract resulting from acceptance of my/our Tender and that I/we elect domicilium citandi executandi in the Republic at:

.....  
**Company Name**

**Date** ..... **Signature(s) of Tenderer(s)**.....

**NB - If one person is authorized to sign the Tender on behalf of a company or partnership a written authority to do so must accompany the Tender.**



# UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)

TENDER NO: IN/022/2020

## T1.3: STANDARD CONDITIONS OF TENDER

(As contained in Annexure C of the CIDB Standard for Uniformity in Construction Procurement)

### C.1 General

#### C.1.1 Actions

**C.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 C.2 and C.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

**C.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 decisions where such 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 decisions taken.**

**C.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.

#### C.1.2 Tender Documents

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

#### C.1.3 Interpretation

**C.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.

**C.1.3.2** These conditions of tender, the tender data and tender schedules which are required for tender evaluation purposes, shall form part of any contract arising from the invitation to tender.

**C.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 personal interests which make it difficult to fulfil his or her duties impartially;
  - ii) an individual or tenderer is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
  - iii) incompatibility or contradictory interests exist between an employee and the tenderer who employs that employee.

- b) comparative offer means the price after the factors of a non-firm price and all unconditional discounts it can be utilized to have been taken into consideration;
- 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;
- 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;

#### **C.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. Communications 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.

#### **C.1.5 Cancellation and Re-Invitation of Tenders**

**C.1.5.1** An employer 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 engineering and construction works specified in the invitation;
- b) funds are no longer available to cover the total envisaged expenditure; or
- c) no acceptable tenders are received.
- d) there is a material irregularity in the tender process.

**C.1.5.2** The decision to cancel a tender invitation must be published in the same manner in which the original tender invitation was advertised.

**C.1.5.3** An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.

#### **C.1.6 Procurement procedures**

##### **C.1.6.1 General**

Unless otherwise stated in the tender data, a contract will, subject to C.3.13, be concluded with the tenderer who in terms of C.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.

##### **C.1.6.2 Competitive negotiation procedure**

**C.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 C.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of C.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

**C.1.6.2.2** All responsive tenderers or at least a minimum of not less than three responsive tenderers that are highest ranked in terms of the evaluation criteria stated in the tender data shall be invited to enter into competitive negotiations based on the principle of equal treatment, keeping confidential the proposed solutions and associated information.

Notwithstanding the provisions of C.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.

**C.1.6.2.3** At the conclusion of each round of negotiations, tenderers shall be invited by the employer to revise their 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.

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

**C.1.6.3 Proposal procedure using the two stage-system**

**C.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.

**C.1.6.3.2 Option 2**

**C.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.

**C.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.

**C.2 Tenderer's obligations**

**C.2.1 Eligibility**

**C.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.

**C.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.

**C.2.2 Cost of tendering**

**C.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.

**C.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.

**C.2.3 Check documents**

Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.

**C.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.

**C.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.

**C.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.

### **C.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.

### **C.2.8 Seek clarification**

Request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days before the closing time stated in the tender data.

### **C.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.

### **C.2.10 Pricing the tender offer**

**C.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 fourteen (14) days before the closing time stated in the tender data.

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

**C.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.

**C.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.

### **C.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.

### **C.2.12 Alternative tender offers**

**C.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.

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

**C.2.12.3** An alternative tender offer must only be considered if the main tender offer is the winning tender.

### **C.2.13 Submitting a tender offer**

**C.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 identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

**C.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.

**C.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.

**C.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.

- C.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.
- C.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.
- C.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.
- C.2.13.8** Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.
- C.2.13.9** Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.
- C.2.14 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.
- C.2.15 Closing time**
- C.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.
- C.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.
- C.2.16 Tender offer validity**
- C.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.
- C.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.
- C.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. If the validity period stated in C.2.16 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on Consumer Price Index (CPI).
- C.2.16.4** Where a tender submission is to be substituted, a tenderer must submit a substitute tender in accordance with the requirements of C.2.13 with the packages clearly marked as "SUBSTITUTE".
- C.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 C.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.
- C.2.18 Provide other material**
- C.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.

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

**C.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.

**C.2.20 Submit securities, bonds and policies**

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.

**C.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.

**C.2.22 Return of other tender documents**

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

**C.2.23 Certificates**

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

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

**C.3.1 Respond to requests from the tenderer**

**C.3.1.1** Unless otherwise stated in the tender Data, respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who collected tender documents.

**C.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, either 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.

**C.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 (3) working 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 collected tender documents.

**C.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.

**C.3.4 Opening of tender submissions**

**C.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.

**C.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 BBEE status level and time for completion for the main tender offer only.

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

### **C.3.5 Two-envelope system**

**C.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.

**C.3.5.2** Evaluate functionality of the technical proposals offered by tenderers, then advise 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 BBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

### **C.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.

### **C.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.

### **C.3.8 Test for responsiveness**

**C.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.

**C.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.

### **C.3.9 Arithmetical errors, omissions and discrepancies**

**C.3.9.1** Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.



**C.3.9.2** Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.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.

**C.3.9.3** Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

**C.3.9.4** Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

- a) 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.
- b) 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.

**C.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.

**C.3.11 Evaluation of tender offers**

The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project.

Conditions of tender are by definition the document that establishes a tenderer's obligations in submitting a tender and the employer's undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures.

<b>The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:</b>	
<b>Requirement</b>	<b>Quantitative Interpretation of goal</b>
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

The activities associated with evaluating tender offers are as follows:

- a) Open and record tender offers received
- b) Determine whether or not tender offers are complete
- c) Determine whether or not tender offers are responsive

- d) Evaluate tender offers
- e) Determine if there are any grounds for disqualification
- f) Determine acceptability of preferred tenderer
- g) Prepare a tender evaluation report
- h) Confirm the recommendation contained in the tender evaluation report

#### **C.3.11.1 General**

The employer must appoint an evaluation panel of not less than three persons conversant with the proposed scope of works to evaluate each responsive tender offer using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

#### **C.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.

#### **C.3.13 Acceptance of tender offer**

Accept the 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 the Companies Act No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her 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.

#### **C.3.14 Prepare contract documents**

##### **C.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 and
- c) other revisions agreed between the employer and the successful tenderer.

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

#### **C.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.

#### **C.3.16 Registration of the award**

An employer must, within twenty-one (21) working days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the employer, register and publish the award on the CIDB Register of Projects.

#### **C.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.

#### **C.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 prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

**UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION  
OF TANKS PER STUDENT RESIDENCE)**

**TENDER NO: IN/022/2020**

**PART T2: RETURNABLE SCHEDULES**

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## **T2.1: LIST OF RETURNABLE DOCUMENTS**

The Tenderer must complete the following returnable documents:

### **1. Returnable Schedules required only for Tender evaluation purposes**

- A. Record of Addenda to Tender Documents
- B. Certificate of attendance at a tender site meeting
- C. Compulsory Supplier Questionnaire - Contractors
- D. Certificate of Authority for Signature
- E. Schedule of Plant and Equipment
- F. Schedule of Tenderers Similar References
- G. Schedule of Subcontractors
- H. Certified Qualifications, ID Copies and CVs of Key Personnel (Contracts Manager, Site Agent, General Foreman and Health and Safety Officer)
- I. Preliminary Construction Programme (in acceptable programme software, e.g. MS Projects, CCS)
- J. Proposed Amendments and Qualifications (Where applicable)
- K. Signed Joint Venture Agreement where applicable
- L. Copy of proof of registration with the Construction Industry Development Board (CIDB)
- M. Identity documents of Owners / Directors / Members / Shareholders (Certified Copies not older than three (3) months)
- N. Certified copy of contractor Registration for Incorporation or of Company Registration Document
- O. Closed Corporations to attach an Association Agreement
- P. Shareholders' Agreements / Share Certificates / Memorandum of Association for companies
- Q. Tenderer's Financial Standing
- R. Bank rating letter signed by the bank
- S. Valid Tax Clearance Certificate and Pin issued by the South African Revenue Services
- T. Copy of COIDA (Compensation for Occupational Injuries and Diseases) registration certificate, e.g. Letter of Good Standing
- U. Preference Claim Form in Terms of Preferential Procurement Regulation 2017 (SBD6.1)
- V. Contractor's Health and Safety Declaration
- W. Pro Forma Notification Form in Terms of The Occupational Health and Safety Act 1993, Construction Regulations 2014.
- X. Original Receipt as Proof of Valid Certificate for Purchasing the Tender Document
- Y. Conflict of Interest
- Z. B-BBEE Certificate issued by verification agency accredited by SANAS or Certified Accountants (A combined B-BBEE certificate is to be issued in the case of a Joint Venture)

### **2. Other documents that will be incorporated into the contract**

AA. Priced bill of quantities

### **3. The offer portions**

Part C1 Agreements and Contract Data

Part C2 Pricing Data

**UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS  
PER STUDENT RESIDENCE)**

**TENDER NO: IN/022/2020**

**T2.2: RETURNABLE SCHEDULES TO BE COMPLETED BY TENDERER**

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### Tick sheet of returnable schedules: Mandatory

	Tick
Record of Addenda to Tender Documents (If Applicable)	
Certificate of Attendance of Compulsory Briefing (To be provided and kept by the University)	
Compulsory Supplier Questionnaire - Contractors	
Certificate of Authority for Signature (Board Resolution letter or Proxy letter)	
Certified Qualifications, ID Copies and CVs of Key Personnel (Contracts Manager, Site Agent, General Foreman and Health and Safety Officer)	
Proposed Amendments and Qualifications (Where Applicable)	
Signed Joint Venture Agreement where applicable	
Copy of proof of registration with the Construction Industry Development Board (CIDB)	
Identity documents of Owners / Directors / Members / Shareholders (Certified Copies not older than three (3) months)	
Certified copy of contractor Registration for Incorporation or of Company Registration Document Closed Corporations to attach an Association Agreement Shareholders' Agreements / Share Certificates / Memorandum of Association for companies	
Audited Annual Financial Statements within 12 months of the current year	
Bank rating letter signed by the bank	
Valid Tax Clearance Certificate and Pin issued by the South African Revenue Services	
Copy of COIDA (Compensation for Occupational Injuries and Diseases) registration certificate, e.g., Letter of Good Standing	
Preferencing Schedule (Direct Preference)	
Contractor's Health and Safety Declaration	
Original Receipt as Proof of Valid Certificate for Purchasing the Tender Document	
Signed declaration of interest (Conflict of Interest)	
Initial all pages of tender document	
Complete and sign all relevant pages	

## A. RECORD OF ADDENDA TO TENDER DOCUMENTS

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

No	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

\* Attach additional pages if more space is required.

SIGNATURE: ..... IDENTITY NUMBER: .....

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

DATE:.....



## B. CERTIFICATE OF ATTENDANCE AT A TENDER SITE MEETING

I .....of..... (Tenderer); Hereby confirm that we will be attending the briefing Session scheduled as per the Closed invitation received by our Company referenced **Tender Number IN/022/2020: Re-advert**.

I / We acknowledge that the purpose of the meeting will be to acquaint myself / ourselves with the site works 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.

### Particulars of Nominated person(s) who will be attending the meeting:

Name: ..... Signature: .....

Capacity: .....

Name: ..... Signature: .....

I further confirm that should my/Our Company name be called during the roll call time and none of My/Our representative indicate his/her availability, it will then be regarded that the Company failed to attend to the Compulsory briefing session.

Signature by Company Authorised Rep: .....Date.....

**By signing below, attendance of the above person(s)/Company at the meeting is confirmed by the Employer's representative, namely:**

Name: ..... Signature: .....

Capacity: ..... Date and Time: .....

## C. COMPULSORY SUPPLIER QUESTIONNAIRE – CONTRACTORS

***All supplier information will be treated strictly confidential.***

**NOTE:**

- a) The information required is mandatory.
- b) University of Venda reserves the right to conduct audits and investigations on any applicant or information supplied in this questionnaire.

### **BLACK ENTERPRISES**

The following is a guide on how University of Venda defines Black Enterprise Companies:

Definition:

**‘Black’** means South African citizens who are Black, Indian or Coloured persons and EXCLUDES individuals belonging to such communities from any other country.

#### **Black Women-owned Enterprises (BWO):**

- At least 50% of the voting shares or interests are held and controlled by Black Women, and
- Black Women have contributed at least 50% of the required capital, and
- Black Women in the enterprise have not been given voting shares or interest just to capture or retain contracts, and
- Black Women participate in the day-to-day management and decision making of the enterprise. They necessarily have the aptitude and potential to understand all issues involved in the running of the enterprise including knowledge of the product and market within which their enterprise operates.
- In a joint venture, skill must be transferable to the Black Women entrepreneur, which means that the Black Women entrepreneur must have the required educational level and/or aptitude.

## SECTION A

### A1. BUSINESS INFORMATION

Title (Prof. / Dr / Mr. / Mrs. / Ms/) and Surname: \_\_\_\_\_  
(if sole proprietor)

**'Trading as' name of business:** \_\_\_\_\_  
(Contracts/order will be placed on this name and invoices must reflect it)

Previous name of the business (if applicable) \_\_\_\_\_

**Physical address of business:**

Building / complex name: \_\_\_\_\_

Street name and number: \_\_\_\_\_

Suburb: \_\_\_\_\_ City: \_\_\_\_\_

Code: \_\_\_\_\_ Country: \_\_\_\_\_

**Postal address of business:** (This is the address to which an Invitation to render services and orders/contracts must be sent to)

P O Box / Private Bag: \_\_\_\_\_ City/Town: \_\_\_\_\_ Code: \_\_\_\_\_

Telephone numbers of business: Code: \_\_\_\_\_ Number: \_\_\_\_\_

Accounts department (Tel no) Code: \_\_\_\_\_ Number: \_\_\_\_\_

Contact person fax number: Code: \_\_\_\_\_ Number: \_\_\_\_\_  
(Will be used by for electronic faxing of Request for Services, Contracts and Purchase Orders)

Business e-mail: \_\_\_\_\_

Your own business contact person/marketing representative name and telephone number:

\_\_\_\_\_

Business registration number (if applicable)

\_\_\_\_\_  
(In case of sole proprietor, please furnish identity number plus certified copy of identity documents)

Tax number of business: (if applicable) \_\_\_\_\_

VAT Registration number: (if applicable) \_\_\_\_\_

## A2. BANK INFORMATION:

Please attach an original cancelled Cheque or an original bank verification letter.

Bank: \_\_\_\_\_ Branch code: \_\_\_\_\_

Branch Location: \_\_\_\_\_

Account Holder: \_\_\_\_\_

Bank Account number: \_\_\_\_\_ Account type: \_\_\_\_\_

**All payments will be made electronically directly to your bank account.**

Kindly note that it will be your responsibility to inform the UNIVEN, in writing, of any changes in your banking details.

**(Kindly ensure that all the sections below are fully furnished)**

## SECTION B: EMPOWERMENT

### 1. EMPLOYMENT EQUITY

<b>B1. MANAGEMENT STRUCTURE</b>			
(Percentage of management on executive level in each of the following groups)			
<b>% Black</b>	<b>% Asian</b>	<b>% Coloured</b>	<b>% White</b>

<b>B2. PERCENTAGE OF TOTAL SHARES OWNED BY EACH OF THE FOLLOWING GROUPS</b> (Attach shareholders' Certificate)			
<b>% Black</b>	<b>% Asian</b>	<b>% Coloured</b>	<b>% White</b>
%	%	%	%
<b>% Black Female</b>	<b>% Asian Female</b>	<b>% Coloured Female</b>	<b>% White Female</b>
%	%	%	%
<b>% Black Disabled</b>	<b>% Asian Disabled</b>	<b>% Coloured Disabled</b>	<b>% White Disabled</b>
%	%	%	%

<b>B3. LIST OF ALL PARTNERS, PROPRIETORS AND SHAREHOLDERS.</b>					
(Attach shareholders' Certificate)					

<b>B4. COMPLETE THE FOLLOWING INFORMATION FOR EACH PARTNER, PROPRIETOR, SHAREHOLDER, DIRECTOR AND OFFICER OF THE FIRM</b> (e.g. Chairman, Secretary, Director, etc.)					
<b>Name</b>	<b>Race</b>	<b>Gender M/F</b>	<b>Disabled Yes/No</b>	<b>% of time devoted to firm</b>	<b>Home Address</b>

**(PLEASE ATTACH THE COMPANY'S EMPLOYMENT EQUITY TARGET FOR NEXT FIVE YEARS)**

**WHAT IS THE FIRM'S AVERAGE ANNUAL TURNOVER (EXCLUDING VAT)?****B5.**

R \_\_\_\_\_

**B6.****IDENTIFY BY NAME, RACE, GENDER, DISABILITY AND LENGTH OF SERVICE, THOSE INDIVIDUALS IN THE FIRM (INCLUDING OWNERS AND NON-OWNERS) RESPONSIBLE FOR DAY-TO-DAY MANAGEMENT AND BUSINESS DECISIONS**

Activity	Name	Race	Gender M/F	Disabled Yes/No	Length of Service (Years)
<b>Financial Decisions</b>					
Cheque Signing					
Acquisition of Lines Credit					
Sureties					
Major Purchase or Acquisitions					
Signing Contracts					
<b>Management Decisions</b>					
Costing					
Marketing and Sales Operations					
Hiring and firing of Management Personnel					
Supervision of Office Personnel					
Supervision of Field / Production Activities					

**B7. TOTAL NUMBER OF EMPLOYEES?**

Full time	
Part time	

**B8. INDICATE COMPANY CIDB RATING: \_\_\_\_\_**

**B9. LOCALITY**

PLEASE INDICATE WITH (X) AREAS WHERE YOUR BUSINESS CURRENTLY OPERATES/ AREAS OF REPRESENTATION:

Region	Description	HO	Branch	Rep
EC	Eastern Cape			
FS	Free State			
GP	Gauteng			
KZN	KwaZulu Natal			
L	Limpopo			
MP	Gauteng			
NC	Northern Cape			
NW	North West			
WC	Western Cape			

Kindly indicate: Head Office, Branch Office (s) and where represented only.

Please attach proof of residence (levies account, water/lights account, Rates & Taxes account, etc.)

Physical address: .....	Physical address: .....
.....	.....
Tel no.....	Tel no.....
Fax no.....	Fax no.....
PO Box/Private Bag.....	PO Box/Private Bag.....
City:.....	City:.....
Code:.....	Code:.....
Registered Professional name.....	Registered Professional name.....
Physical address: .....	Physical address: .....
.....	.....
Tel no:.....	Tel no:.....
Fax no:.....	Fax no:.....
PO Box/Private Bag.....	PO Box/Private Bag.....
City:.....	City:.....
Code:.....	Code:.....
Registered Professional name.....	Registered Professional name.....
Attach list if space provided is inadequate	



## SECTION C: CAPACITY

### 1. CAPACITY AND PAST PERFORMANCE

LIST THE FIVE LARGEST SIMILAR PROJECTS COMPLETED BY YOUR FIRM IN THE LAST FIVE YEARS			
Name of Project Completed	Name of Project Manager & Telephone no.	Name of Client & Telephone no.	Value of Project

C2. LIST THE CURRENT PROJECTS THAT YOUR FIRM IS INVOLVED IN			
Name of Current Project	Name of Project Manager & Telephone no.	Name of Client & Telephone no.	Value of Project

The Tenderer is to specifically complete this form and not refer to any other document.  
Failure to complete this form might result in Tender disqualification.

**C3. PREVIOUS APPOINTMENTS BY UNIVERSITY OF VENDA**

Project/Programme Name	Type of project	Contract period	Contract Value	Financial year	University of Venda Contact Person & Tel no.

**C4. DID THE FIRM EXIST UNDER A PREVIOUS NAME? YES / NO**

IF YES, WHAT WAS THE NAME:

---

**C4.1 WHO WERE OWNERS/ PARTNERS/ DIRECTORS:**

---

---

---

---

## SECTION D: QUALITY

### 1. TYPE OF BUSINESS

D1. TYPE OF FIRM	(Tick applicable box)
Joint Venture	<input type="checkbox"/>
Partnership	<input type="checkbox"/>
Company	<input type="checkbox"/>
Close Corporation	<input type="checkbox"/>
One Person Business / Sole Trader	<input type="checkbox"/>
Other (specify) .....	<input type="checkbox"/> <input type="checkbox"/>

D2. PARTICIPATION CAPACITY	(Tick applicable box)
Main Contractor	<input type="checkbox"/>
Sub-Contractor	<input type="checkbox"/>
Specialist Sub-Contractor	<input type="checkbox"/>
Electrical/Mechanical Contractor	<input type="checkbox"/>
Other (specify) .....	

D3. SERVICE CAPACITY	(Tick applicable box)
Building Construction	<input type="checkbox"/>
Civil Construction	<input type="checkbox"/>
Marine Construction	<input type="checkbox"/>
Electrical Engineering Works	<input type="checkbox"/>
Mechanical Engineering Works	<input type="checkbox"/>
Other (specify) .....	

**D4. SAFETY***(Tick applicable box)*

1. Does your business have an Occupational Health Policy complying to the Occupational Health and Safety Act (OHSA) **Yes/No**

2. Are you registered with Compensation for Occupational Injuries and Diseases Act (COIDA) **Yes/No**

COIDA registration number \_\_\_\_\_

## SECTION E: SWORN STATEMENT

I/we, the undersigned, who warrant that I/we am/are duly, authorized to do so, on behalf of the enterprise, certify that:

- a) The information furnished is true and correct.
- b) If misrepresentation to gain any benefit is established, University of Venda may in addition to any other remedy it may have
  - disqualify the applicant;
  - restrict the applicant, its shareholders and directors from obtaining business from University of Venda for a period not exceeding 5 years;
  - in the event that a contract has been concluded, recover from the contractor all costs, losses or damages incurred or sustained because of the award of the contract;
  - cancel the contract and claim any damages suffered by having to make less favorable arrangements after such cancellation; and
- c) University of Venda is hereby empowered to take such steps as it may require verifying information submitted, including, but not limited to, the use of independent auditors or other experts.
- d) If there are any changes to the information supplied on this form, I/We will inform University of Venda Supply Chain Management Unit immediately.

Name of Enterprise.....

Signature of Enterprise Representative:

.....

Address .....

Telephone no: .....Date: .....

-----  
For and on behalf of the company

-----  
Date

-----  
Capacity of signatory (Position held in Company)

## D. CERTIFICATE OF AUTHORITY OF AN ENTITY

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

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

### (I) CERTIFICATE FOR COMPANY

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

**Signature of Chairman:** .....

**Signature of Signatory:** .....

#### As Witnesses:

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

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

**Date:** .....

(II) **CERTIFICATE FOR CLOSE CORPORATION**

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

**Signature of Signatory:** .....

**As Witnesses:**

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

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

**Date:** .....

NAME	ADDRESS	SIGNATURE	DATE

\* Attach additional pages if more space is required.

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

(III) **CERTIFICATE FOR PARTNERSHIP**

We, the undersigned, being the key 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 Contract No..... and any contract resulting from it on our behalf.

**Signature of Signatory:** .....

**As Witnesses:**

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

**Date:** .....

NAME	ADDRESS	SIGNATURE	DATE

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



(IV) **CERTIFICATE FOR JOINT VENTURE**

We, the undersigned, are submitting this Tender offer in Joint Venture and hereby authorize Mr./Ms.

.....

....., authorized signatory of the company, ..... acting in the capacity of lead partner, to sign all documents in connection with the Tender offer for Contract No

.....

.....and any contract resulting from it on our behalf.

**Signature of Signatory:** .....

**As Witnesses:**

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

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

**Date:** .....

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

\* Attach additional pages if more space is required.

**Note:** *This certificate is to be completed and signed by all of the joint venture partners upon who 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:** .....

**As Witnesses:**

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

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

**Date:** .....

## E. SCHEDULE OF PLANT AND EQUIPMENT

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

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

Quantity	Description, size, capacity, etc.	Year of Manufacture

\* Attach additional pages if more space is required.

- (b) Details of major equipment that will be hired, or acquired for this contract if my / our Tender is accepted.

Quantity	Description, size, capacity, etc.	HOW ACQUIRED	
		HIRE/ BUY	SOURCE

\* Attach additional pages if more space is required.

The Tenderer undertakes to bring onto site without additional cost to the Employer any additional plant not listed but which may be necessary to complete the contract within the specified contract period.

**Failure to complete this form properly and correctly, will lead to the conclusion that the Tenderer does not have the necessary plant and equipment resources at his disposal, which will prejudice his tender.**

SIGNATURE: ..... IDENTITY NUMBER: .....

(of person authorized to sign on behalf of the Tenderer)

DATE: .....

#### F. SCHEDULE OF TENDERERS SIMILAR REFERENCE

**The following is a statement of traceable, current and similar References:**

[illegible]

SIGNATURE: ..... IDENTITY NUMBER: .....

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

DATE.....

## G. SCHEDULE OF PROPOSED SUB-CONTRACTORS

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

No	Name and address of proposed Subcontractor	Company Registration No and CIDB Classification	Nature and extent of work to be Subcontracted	Previous experience with Subcontractor.
1.				
2.				
3.				
4.				
5.				

\* Attach additional pages if more space is required.

Note: If the Tenderer is to sub contract the trenchless method, he should include the full details of the sub-contractor and the reference as required under the functionally section and this is visa versa.

SIGNATURE: ..... IDENTITY NUMBER: .....

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

DATE:.....

## H. KEY PERSONNEL

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

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

CATEGORY OF EMPLOYEE	NUMBER OF PERSONS					
	KEY PERSONNEL, PART OF THE CONTRACTOR'S ORGANISATION		KEY PERSONNEL TO BE IMPORTED IF NOT AVAILABLE LOCALLY		UNSKILLED PERSONNEL TO BE RECRUITED FROM LOCAL COMMUNITY	
	HDI	NON-HDI	HDI	NON-HDI	HDI	NON-HDI
Construction Manager, Contract Managers						
Foremen, Quality Control and Safety Personnel						
Technicians, Surveyors, etc.						
Artisans and other Skilled workers						
Plant Operators						
Others: ..... ..... .....						

The Tenderer shall attach hereto the *curricula vitae*, in the form included hereafter, of at least the contracts manager, site agent, general foreman and the safety officer. The information is necessary for evaluation of the Tender.

SIGNATURE: ..... IDENTITY NUMBER: .....

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

DATE:.....

**CURRICULUM VITAE OF KEY PERSONNEL (COMPULSORY)**

*(CVs are required only for contract manager, site agent, general foreman and safety officer)*

**CV FOR CONTRACT OR PROJECT MANAGER**

<b>Name:</b>	<b>Date of birth:</b>
<b>Profession:</b>	<b>Nationality:</b>
<b>Qualifications:</b>	
<b>Professional Registration Number:</b>	
<b>Name of Employer (firm):</b>	
<b>Current position:</b>	<b>Years with firm:</b>
<b><u>Employment Record:</u></b>	
<b><u>Experience Record Pertinent to Required service:</u></b>	

**Certification:**

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

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE: .....

**CV FOR CONSTRUCTION MANAGER (previously known as Site Agent)**

<b>Name:</b>	<b>Date of birth:</b>
<b>Profession:</b>	<b>Nationality:</b>
<b>Qualifications:</b>	
<b>Professional Registration Number:</b>	
<b>Name of Employer (firm):</b>	
<b>Current position:</b>	<b>Years with firm:</b>
<b><u>Employment Record:</u></b>	
<b><u>Experience Record Pertinent to Required service:</u></b>	

**Certification:**

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

.....  
SIGNATURE OF THE INCUMBANT IN THE SCHEDULE

.....  
DATE

.....  
INCUMBANT'S IDENTITY NUMBER



**CV FOR FOREMAN – EARTHWORKS AND PLUMBING**

<b>Name:</b>	<b>Date of birth:</b>
<b>Profession:</b>	<b>Nationality:</b>
<b>Qualifications:</b>	
<b>Professional Registration Number:</b>	
<b>Name of Employer (firm):</b>	
<b>Current position:</b>	<b>Years with firm:</b>
<b><u>Employment Record:</u></b>	
<b><u>Experience Record Pertinent to Required service:</u></b>	

**Certification:**

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

.....  
SIGNATURE OF THE INCUMBANT IN THE SCHEDULE

.....  
DATE

.....  
INCUMBANT'S IDENTITY NUMBER

**CV FOR HEALTH AND SAFETY OFFICER**

<b>Name:</b>	<b>Date of birth:</b>
<b>Profession:</b>	<b>Nationality:</b>
<b>Qualifications:</b>	
<b>Professional Registration Number:</b>	
<b>Name of Employer (firm):</b>	
<b>Current position:</b>	<b>Years with firm:</b>
<b><u>Employment Record:</u></b>	
<b><u>Experience Record Pertinent to Required service:</u></b>	

**Certification:**

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

.....  
SIGNATURE OF THE INCUMBANT IN THE SCHEDULE

.....  
DATE

.....  
INCUMBANT'S IDENTITY NUMBER

## I. PRELIMINARY CONSTRUCTION PROGRAMME

The Tenderer shall attach a preliminary Gantt chart programme reflecting the proposed sequence and tempo of execution of the various activities comprising the work for this Contract. The programme shall be in accordance with the information supplied in the Contract, requirements of the Project Specifications and with all other aspects of his Tender. The programme shall also demonstrate the Tender's clear understanding of the project scope of works and planning capability for the works.

*[Note: The programme must be based on the completion time as specified in the Contract Data. No other completion time that may be indicated on this programme will be regarded as an alternative offer, unless it is listed in Table (b) of Form I hereafter and supported by a detailed statement to that effect, all as specified in the Tender Data]*

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE:.....

## J. AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

*(This is not an invitation for amendments, deviations or alternatives but should the Tenderer desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder. The Employer will not consider any amendment, unless form (a), has been completed to the satisfaction of the Employer). The Tenderer is referred to Tender Data paragraph F.2.12, where it is clearly stated that no alternative offers will be accepted.*

I / We herewith propose the amendments, as set out in the table below:

### (a) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

\* Attach additional pages if more space is required.

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

### (b) ALTERNATIVES

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

- [Notes: (1) Individual alternative items that do not justify an alternative tender, and an alternative offer for time for completion should be listed here.
- (2) In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc., and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.
  - (3) Alternative tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main tender offer.]

(c) DISCOUNTS

ITEM ON WHICH DISCOUNT IS OFFERED	DESCRIPTION OF DISCOUNT OFFERED

***[Note: The Tenderer must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer for a discount may have to be disregarded. Only unconditional discounts will be considered]***

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE:.....

**K. JOINT VENTURE AGREEMENT BETWEEN PARTIES**

**Attached hereto is my / our duly signed, notarized Joint Venture Agreement. My / our failure to submit the agreement with my / our tender document will lead to the conclusion that the joint venture has not been formally formed and all parties were not involved in the Tender process.**

SIGNATURE: ..... IDENTITY NUMBER: .....  
*(of person authorised to sign on behalf of the Tenderer)* DATE:.....

## L. COPY OF REGISTRATION CERTIFICATE WITH CIDB

Attached hereto is my / our copy of registration certificate pertaining to my / our relevant industry. My / our failure to submit the registration certificate with my / our Tender document will lead to the conclusion that my / our company is not registered in a relevant industry.

SIGNATURE: ..... IDENTITY NUMBER: .....

(of person authorised to sign on behalf of the Tenderer ) DATE:.....

## M. IDENTITY DOCUMENTS OF OWNERS/DIRECTORS/MEMBERS/SHAREHOLDERS

Attached hereto are my / our certified copies of my / all owners / directors / members / shareholders identity documents.

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE:.....



## N. REGISTRATION CERTIFICATE OF AN ENTITY

Attached hereto is a certified copy of my / our company registration of incorporation or company registration documents. My failure to submit the copy with my / our Tender document will lead to the conclusion that I am / we are not registered as claimed.

**Important note to Tenderer:**

***Insert here the applicable Registration Certificates for:***

- ***Companies (attach company registration and copies of share certificates) or;***
- ***Close Corporations (attach CK2 registration form from CIPRO) or;***
- ***Partnerships or;***
- ***ID documents for Sole Proprietors or;***
- ***In the case of a Joint Venture, a copy of a duly signed Joint Venture Agreement must be included (attach registration certificates for each partner as applicable).***

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE:.....

**O. COPY OF ASSOCIATION AGREEMENT FOR CLOSED CORPORATIONS**

**Attached hereto is my / our duly signed, certified copy of Association Agreement. My / our failure to submit the agreement with our Tender document will lead to the conclusion that the agreement does not exist.**

SIGNATURE: ..... IDENTITY NUMBER: .....  
*(of person authorised to sign on behalf of the Tenderer)* DATE:.....

## P. SHARE CERTIFICATES AND MEMORANDUM OF ASSOCIATION FOR COMPANIES

Attached hereto is our duly signed, share certificates and memorandum of association. Our failure to submit the above documents with our Tender document will lead to the conclusion that these documents do not exist.

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE:.....

## Q. TENDERER'S FINANCIAL STANDING

In terms of Clause F.2.18.1 of the Contract-specific Tender Data the Tenderer shall provide information about his commercial position, which includes information necessary for the Employer to evaluate the Tenderer's financial standing.

To that end the Tenderer must provide 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.

The Tenderer shall also provide the audited annual financial statements for the recent past two years.

***Failure to provide a certified bank rating with his Tender and the audited annual financial statements, will lead to the conclusion that the Tenderer does not have the necessary financial resources at his disposal to complete the contract successfully within the specified time for completion.***

The Employer undertakes to treat the information thus obtained as confidential, strictly for the use of evaluation of the tender submitted by the Tenderer.

SIGNATURE: ..... IDENTITY NUMBER: .....

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

DATE:.....

## R. LETTER FROM THE BANK WITH RATING

Attached hereto is my / our letter from my / our bank with banking details of the company. My / our failure to submit the letter with my / our Tender document will lead to the conclusion that the company does not have banking details.

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE:.....

## S. VALID TAX CLEARANCE CERTIFICATE AND SARS PIN

Attached hereto is my / our certified copy of my / our VAT registration certificate. My / our failure to submit the certificate with my / our Tender document will lead to the conclusion that my / our company is not registered for VAT.

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE:.....

## T. COPY OF COIDA REGISTRATION CERTIFICATE

***Attached hereto is my / our certified copy of registration certificate with the Compensation for Occupational Injuries and Diseases, e.g. letter of good standing. My / our failure to submit the certificate with my / our Tender document will lead to the conclusion that my / our company is not registered with COIDA.***

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE:.....

## U. PREFERENCE CLAIM FORM INTERMS OF PREFERENTIAL PROCUREMENT REGULATION 2017 (SBD6.1)

### 1 Definitions

The following definitions shall apply to this schedule:

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

**B-BBEE status level of contributor:** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;

**Bid:** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;

**Broad-Based Black Economic Empowerment Act:** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

**EME:** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-based Black Economic Empowerment Act;  
functionality means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.

**Prices:** includes all applicable taxes less all unconditional discounts;  
proof of B-BBEE status level of contributor" means:

- 1) B-BBEE Status level certificate issued by an authorized body or person;
- 2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
- 3) Any other requirement prescribed in terms of the B-BBEE Act;

**QSE:** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;

**rand value:** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

1. Tenderers who qualify as EME's 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 EME's with B-BBEE Status Level Certificates.
2. Tenderers other than EME's 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.
3. 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 Tender.
4. A person will 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 EME that has the capability and ability to execute the sub-contract.
5. 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. 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.
7. Sanctions relating to breaches of preferencing conditions  
The sanctions for breaching the preferencing conditions are:
- 1) termination of the Contract; or
  - 2) a financial penalty payable to the Employer equal to 1,25 times the number of tender evaluation points awarded in respect of the preference claimed, multiplied by the Contract Price exclusive of VAT, divided by 100.

## 8 Tender preference claims in respect of B-BBEE

8.1 For projects below R50 000 000, 80/20 the points are allocated as follows:

- 70 Percentage points – Quality
  - 30 points – Experience on similar scale projects
  - 20 points – Management and Key Staff
  - 30 points – Key Personnel Qualifications
  - 10 points – Available Plant
  - 10 points – Programme of Works
- 20 points – B-BBEE Status level contributor
  - 20 points – Level 1
  - 18 points – Level 2
  - 14 points – Level 3
  - 12 points – Level 4
  - 08 points – Level 5
  - 06 points – Level 6
  - 04 points – Level 7
  - 02 points – Level 8
  - 00 Points – Non- Compliant Contributor
- 80 points – Price

SIGNATURE: ..... IDENTITY NUMBER: .....

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

DATE:.....

## V. CONTRACTOR'S HEALTH AND SAFETY DECLARATION

In terms of Clause 5(h) of the Occupational Health and Safety Act (OHSA) 1993 Construction Regulations, 2014 (referred to as "the Regulations" hereafter), a Contractor may only be appointed to perform construction work if the Employer is satisfied that the Principal Contractor has the necessary competencies and resources to carry out the work safely in accordance with the Occupational Health and Safety Act No 85 of 1993 and the OHSA 1993 Construction Regulations, 2014 as amended.

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

### Declaration by Tenderer

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHSA 1993 Construction Regulations, 2014.
2. I hereby declare that my company has the competence and the necessary resources to safely carry out the construction work under this contract in compliance with the Construction Regulations and the Employer's Health and Safety Specifications.
3. I propose to achieve compliance with the Regulations by one of the following:
  - (a) From my own competent resources as detailed in 4(a) hereafter: ..... **\*Yes / No**
  - (b) From my own resources still to be appointed or trained until competency is achieved, as detailed in 4(b) hereafter: ..... **\*Yes / No**
  - (c) From outside sources by appointment of competent specialist subcontractors as detailed in 4(c) hereafter: ..... **\*Yes / No**

(\* = delete whatever is not applicable)

4. Details of resources I propose:

*(Note: Competent resources shall include safety personnel such as a construction supervisor and construction safety officer as defined in Regulation 8, and competent persons as defined in Regulations 8, 10, 11, 12, 14, 16, 17, 18, 21(1), 22, 26 and 27, as applicable to this contract)*

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

NAMES OF COMPETENT PERSONS	POSITIONS TO BE FILLED BY COMPETENT PERSONS

- (b) Details of training of persons from my company's own resources (or to be hired) who still have to be trained to achieve the necessary competency:
      - (i) By whom will training be provided? .....
      - (ii) When will training be undertaken? .....

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

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

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

Name of proposed subcontractor: .....

Qualifications or details of competency of the subcontractor: .....

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

5. I hereby undertake, if my Tender is accepted, to provide, before commencement of the works under the contract, a suitable and sufficiently documented Health and Safety Plan in accordance with Regulation 7(1)(a) of the Construction Regulations, which plan shall be subject to approval by the Employer.
6. I confirm that copies of my company's approved Health and Safety Plan, the Employer's Safety Specifications as well as the OHSA 1993 Construction Regulations 2014 will be provided on site and will at all times be available for inspection by the Contractor's personnel, the Employer's personnel, the Engineer, visitors, and officials and inspectors of the Department of Labour.
7. I hereby confirm that adequate provision has been made in my Tender rates and prices in the schedule of quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHSA 1993 Construction Regulations 2014, and that I will be liable for any penalties that may be applied by the Employer in terms of the said Regulations (Regulation 33) for failure on the Contractor's part to comply with the provisions of the Act and the Regulations.
8. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer will mean that I am unable to comply with the requirements of the OHSA 1993 Construction Regulations 2014, and accept that my Tender will be prejudiced and may be rejected at the discretion of the Employer.

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE:.....

**W. PRO FORMA NOTIFICATION FORM IN TERMS OF THE OCCUPATIONAL HEALTH AND  
SAFETY ACT 1993, REGULATION 4 OF THE CONSTRUCTION REGULATIONS 2014**

*[This form must be completed and forwarded, prior to commencement of work on site, by all Contractors that qualify in terms of Regulation 4 of the Construction Regulations 2014, to the office of the Department of Labour]*

1. (a) Name and postal address of Contractor.....  
.....  
(b) Name of tel. no of principal Contractor's contact person: .....  
.....
2. Principal Contractor's workman's compensation registration number: .....
3. (a) Name and postal address of client: .....  
.....  
(b) Name and tel. no of client's contact person or agent: .....
4. (a) Name and postal address of designer(s) for the project: .....  
.....  
(b) Name and tel. no of designer's contact person: .....
5. Name and telephone number of Principal Contractor's construction supervisor on site appointed in terms of Regulation 8(1): .....
6. Name/s of Principal Contractor's sub-ordinate supervisors on site appointed in terms of regulation 8(2).  
.....
7. Exact physical address of the construction site or site office:.....  
.....
8. Nature of the construction work: .....  
.....  
.....
9. Expected commencement date: .....
10. Expected completion date: .....
11. Estimated maximum number of persons on the construction site: .....  
Total..... Male:....Female:.....
12. Planned number of Contractors on the construction site accountable to Contractor: .....
13. Name(s) of Contractors already selected: .....  
.....  
.....  
.....

SIGNED BY:

PRINCIPAL CONTRACTOR: ..... DATE: .....

CLIENT AGENT (where applicable) ..... DATE: .....

CLIENT: ..... DATE: .....

**X. ORIGINAL RECEIPT AS PROOF OF VALID CERTIFICATE FOR PURCHASING THE TENDER DOCUMENT**

*A Valid receipt for purchasing the Tender document to be attached to this page.*

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE:.....

## Y. CONFLICT OF INTEREST

### DECLARATION BY SUPPLIERS/CONTRACTORS/SERVICE PROVIDER/CONSULTANT

I/We \_\_\_\_\_  
being a Supplier/Contractor to the University of Venda hereby declare that I have not tried to influence any party at the University of Venda with any financial and/or other interests, either directly or indirectly, in connection with this order/contract. I/We declare further that no individual or group stand to benefit materially, directly or indirectly, from the award of this contract/order and/or for the duration of this contract/order and that no approaches of benefits, bribes, backhanders or any other form of unauthorized benefit were either received or made or promised and will not be entertained for the duration of the contract/order.

In the event that any approach was or will be made, we undertake that no such approach will be entertained and that it will be reported immediately to the Registrar at (015) 962-8000 or the DVC: Operations at (015) 962-8105. Any requests for sponsorships and/or any other approach will not be entertained and will also be reported to these offices immediately. It will only be permissible once a request has been made on the official letterhead of the University of Venda and signed by a member of the Executive Management of the University or by the Director: Communications and Marketing.

Our company hereby consent that any breach of the above will be dealt with decisively by the University in terms of its rules and will lead to the immediate termination of the agreement and recovery of costs by the University of Venda.

Signed by \_\_\_\_\_ on this the \_\_\_\_\_ day  
of \_\_\_\_\_ 20\_\_\_\_

\_\_\_\_\_  
Signature

Duly authorized by the Supplier/Contractor/Service Provider/ Consultant to sign this declaration.

### DECLARATION

**I/We, THE UNDERSIGNED** (name) ..... hereby certify  
that the information furnished is correct.

I accept that the University of Venda as representative of the university may act against me should this declaration prove to be false.

**Signature:** ..... **Date:** .....

**Identity number:** .....

**Position:** ..... **Name of Tenderer:** .....

**SIGNATURE:** ..... **IDENTITY NUMBER:** .....  
(of person authorised to sign on behalf of the Tenderer)  
**DATE:** .....

## Z. B-BBEE CERTIFICATE

*Attached hereto is my / our B-BBEE Certificate or sworn in Affidavit.*

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE:.....

## **THE CONTRACT**

**PART C1: AGREEMENTS AND CONTRACT DATA**

**PART C2: PRICING DATA**

**PART C3: SCOPE OF WORK**

**PART C4: POLICY ON SUPPLY CHAIN MANAGEMENT  
AND HOUSE RULES**

**PART C5: SITE INFORMATION**



**UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER  
STUDENT RESIDENCE)**

**TENDER NO: IN/022/2020**

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**UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER  
STUDENT RESIDENCE)**

**TENDER NO: IN/022/2020**

**C1.1 Form of Offer and Acceptance**

**Offer**

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

**UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER  
STUDENT RESIDENCE)**

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

By the representative of the tenderer, deemed to be duly authorized, signing this part of this form of offer and acceptance, the tenderer offers to perform all of the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

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

.....

..... Rand (in words);

**R** ..... (in figures)

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Signature (s)			
Name (s)			
Capacity			
For the Tenderer			
	(Name and Adress of tenderer)	Date:	
Name and Signature of Witness		Date:	

## Acceptance

By signing this part of this form of offer and acceptance, the employer identified below accepts the tenderer's offer. In consideration thereof, the employer shall pay the contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the tenderer's offer shall form an agreement between the employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- Part C1: Agreements and contract data, (which includes this agreement)
- Part C2: Pricing data
- Part C3: Scope of work.
- Part C4: Procurement Policy and House Rules.
- Part C5: 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 tender data and any addenda thereto as listed in the returnable schedules as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this form of offer and acceptance. No amendments to or deviations from said documents are valid unless contained in this schedule.

The tenderer 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 securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the tenderer (now contractor) within five (5) working days of the date of such receipt notifies the employer in writing of any reason why he/she cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

Signature (s)			
Name (s)			
Capacity			
For the Employer			
	(Name and Address of the Employer)	Date:	
Name and Signature of Witness		Date:	

## Schedule of Deviations

1	Subject .....
	Details .....
	.....
	.....
2	Subject .....
	Details .....
	.....
	.....
3	Subject .....
	Details .....
	.....
	.....
4	Subject .....
	Details .....
	.....
	.....
5	Subject .....
	Details .....
	.....
	.....

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

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

### For the Tenderer:

Signature(s)	_____
Name(s)	_____
Capacity	_____
	_____
	(Name and address of organisation)
Name & signature of Witness	_____

### For the Employer:

Signature(s)	_____
Name(s)	_____
Capacity	_____
	_____
	(Name and address of organisation)
Name & signature of Witness	_____

# UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)

**TENDER NO: IN/022/2020**

## **C1.2 CONTRACT DATA**

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

The General Conditions of Contract for Construction Works make several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the general conditions of contract.

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

**UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS  
PER STUDENT RESIDENCE)**

**TENDER NO: IN/022/2020**

**C1.2.1: CONDITIONS OF CONTRACT**

**GENERAL CONDITIONS OF CONTRACT**

**SPECIAL CONDITIONS OF CONTRACT**

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

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

**PART B: CONTRACT DATA PROVIDED BY THE CONTRACTOR**

**C1.3: FORM OF GUARANTEE**

**C1.4: AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND  
SAFETY ACT No 85 OF 1993**

**C1.5: AGREEMENT WITH ADJUDICATOR**

## C1.2.1 CONDITIONS OF CONTRACT

### GENERAL CONDITIONS OF CONTRACT

This Contract will be based on the "General Conditions of Contract for Construction Works – 3<sup>rd</sup> edition 2015", issued by the South African Institution of Civil Engineering (Short title: "General Conditions of Contract 2015") and can be obtained from:

#### SAICE

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

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

### SPECIAL CONDITIONS OF CONTRACT

#### 1. GENERAL

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

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

#### 2. AMENDMENTS TO THE GENERAL CONDITIONS OF CONTRACT

Clause	Description
2.5.1	<b>Cession</b> <i>Amend Clause 2.5.1 as follows:</i>  <i>Delete the words "without the written consent of the other"</i>
5.14.5.1	<b>Consequences of Completion</b> <i>Amend Clause 5.14.5.1 as follows:</i>  <i>In the second line, substitute the word 'Guarantor' with 'Contractor'.</i>  <b>Security</b>  <i>Replace Sub-Clauses 6.2.1 and 6.2.2 with:</i>  "The Contractor shall deliver to the Employer within such time as may be stated in the Contract Data, a Demand Guarantee, of an Insurance Company registered in terms of the Short-term Insurance Act (Act 53 of 1998) or of a registered Commercial Bank, in a sum equal to the amount stated in the Contract Data.  The Demand Guarantee shall be issued by an entity subject to the approved of the Employer, and shall conform in all respects to the format contained in the Contract Data."

Clause	Description
	<p>The security to be provided by the Contractor shall be a Demand Guarantee of 10% of the Contract Sum.</p> <p>Wherever a joint venture constitutes the contracting party, the Demand Guarantee shall be issued on behalf of the joint venture.</p> <p>Failure to produce an acceptable Demand Guarantee within the period stated in the Contract Data, is a fundamental breach of Contract, entitling the Employer to cancel the Contract by due notice in terms of Clause 9.2 with specific reference to Sub-clause 9.2.2.2 as amended in the Contract Data."</p>
6.3	<p><b>Variations</b>  <i>Amend Clause 6.3, as follows:</i></p> <p><i>In the first paragraph, third line, after the words "or for any reason appropriate", add the phrase</i>  <i>", including the limiting of contract expenditure so as not to exceed the Employer's budgeted project funding, "</i></p> <p><i>Add the following phrase to the last paragraph of Clause 6.3.1.6, after the words "ascertaining the amount of the Contract Price":</i></p> <p><i>", and no such variation shall give reason for consideration of any claim in terms of Clause 6.11."</i></p>
6.3.2	<p><b>Orders for Variations to be in writing</b>  Omit the words "Provided that" under Clause 6.3.2 and omit Clause 6.3.2.1.</p>
6.9.2	<p><b>Definition of "materials"</b>  <i>Amend Clause 6.9.2, as follows:</i></p> <p><i>Substitute the word 'plant' with 'Plant'.</i></p>
6.10.1	<p><b>Interim Payments</b>  <i>Amend Clause 6.10.1.5 as follows:</i></p> <p><i>In the third line, add the words 'not yet' before the words 'built into'</i></p>
6.10.5	<p><b>Payment of retention money</b>  <i>Amend Clause 6.10.5 as follows:</i></p> <p><i>In the second line, add the words ' , if any, ' after the words 'Defects Liability Period'</i></p>
6.10.6	<p><b>Set-off and delayed payments</b>  <i>Amend Clause 6.10.6.2 as follows:</i></p> <p><i>Delete the words 'Contractor's Bank' and substitute with the words 'Employer's Bank'</i></p>
6.11	<p><b>Variations exceeding 15 per cent</b>  <i>Replace the marginal heading with:</i></p> <p><b>"Variations exceeding 20 per cent"</b></p> <p><i>Replace "15 per cent" with "20 per cent" in the text of this Sub-Clause</i></p>
7.8.2	<p><b>Cost of making good of defects</b>  <i>Amend Clause 7.8.2.1 as follows:</i></p> <p><i>In the first line, correct the spelling of 'therefore'.</i></p>



Clause	Description
8.3.1	<b>Excepted risks</b>
	<p><i>Amend Clause 8.3.1.12 as follows:</i></p> <p><i>In the second line, delete the words 'Employer or any of their' and substitute with 'or any of its'.</i></p>
8.6.6	<p><b>Contractor to produce proof of payment</b></p> <p>"The Contractor shall before commencement of the Works produce to the Employer's Agent:</p> <p>8.6.6.1 The policies by which the insurances are affected,  8.6.6.2 Proof that due payment of all premiums there under, covering the full required period has been made, and  8.6.6.3 Proof of continuity of the policies for the required period.</p> <p>Should, during the currency of the Contract, the required period of insurance be extended for any reason, the Contractor shall timeously extend (so as to maintain) the said insurances for the full extended duration.</p> <p>The Employer's Agent shall be empowered to withhold all payment certificates until the Contractor has complied with his obligations in terms of this Clause 8.6.6."</p>
8.6.7	<p><b>Remedy on Contractor's failure to insure</b></p> <p><i>Delete sub-clause 8.6.7 and substitute with:</i></p> <p>"Failure on the part of the Contractor to effect and keep in force any of the insurances referred to in Clause 8.6.1 and its sub-clauses, is a fundamental breach of Contract, entitling the Employer to cancel the Contract by due notice in terms of Clause 9.2 and with specific reference to sub-clause 9.2.2, as amended in the Contract Data."</p>
9.1.2	<p><b>State of emergency</b></p> <p><i>In the <u>fourth</u> line, delete the words 'supply of' and substitute with 'availability of'.</i></p>
9.2	<p><b>Termination by Employer</b></p> <p><i>Delete the contents of Clause 9.2 and substitute with:</i></p> <p>"9.2.1 The Employer may terminate the Contract by written notice to the Contractor if:</p> <p>9.2.1.1 Sequestration of the Contractor's estate is ordered by a Court with due jurisdiction, or  9.2.1.2 The Contractor publishes a notice of surrender or presents a petition for the surrender of his estate as insolvent, or makes a compromise with his creditors, or assigns in favour of his creditors, or agrees to carry out the Contract under the supervision of a committee representing his creditors, or (being a company) goes into liquidation, whether provisionally or finally (other than a voluntary liquidation for the purpose of amalgamation or reconstruction), or if the Contractor assigns the Contract without having first obtained the Employer's consent in writing, or if execution is levied on his goods, or  9.2.1.3 The Contractor, or anyone on his behalf, or in his employ, offers to any person in the employ of the Employer or the Engineer, a gratuity or reward or commission, or  9.2.1.4 The Contractor furnished materially inaccurate information in his Tender, which had a bearing on the award of the Contract, or  9.2.1.5 The Contractor has abandoned the Contract.</p>

Clause	Description
	<p>9.2.2 If the Contractor:</p> <p>9.2.2.1 Has failed to commence the Works in terms of Clause 10 hereof, or has suspended the progress of the Works for fourteen (14) days after receiving from the Engineer written notice to proceed, or</p> <p>9.2.2.2 Has failed to provide the Guarantee in terms of Clause 6.2 within the time stipulated in the Contract Data, or</p> <p>9.2.2.3 Has failed to proceed with the Works with due diligence, or</p> <p>9.2.2.4 Has failed to remove materials from the Site or to pull down and replace work within fourteen (14) days after receiving from the Engineer written notice that the said materials or work have been condemned and rejected by the Engineer in terms of these conditions, or</p> <p>9.2.2.5 Is not executing the Works in accordance with the Contract, or is neglecting to carry out his obligations under the Contract, or</p> <p>9.2.2.6 Has, to the detriment of good workmanship or in defiance of the Engineer's instructions to the contrary, sublet any part of the Contract, or</p> <p>9.2.2.7 Has assigned the Contract or any part thereof without the Employer's consent in writing,</p> <p>then the Employer may give the Contractor 14 days' notice to rectify the default, and if the Contractor fails to rectify the default in said 14 days, then, without further notice, notify the Contractor in writing of the termination of the Contract and expel the Contractor and order the Contractor to vacate the site within 24 hours of issue of the Notice of Termination and to hand the Site over to the Employer, and the Employer</p> <p>may then enter upon the Site and the Works without affecting the rights and powers conferred on the Employer or the Engineer by the Contract and the Employer may himself complete the Works or may employ another contractor to complete the Works, and the Employer or such other contractor may use for such completion so much of the Construction Equipment, Temporary Works and materials brought onto the Site by the Contractor as the Employer may think proper, and the Employer may at any time sell any of the said Construction Equipment, Temporary Works and unused materials and apply the proceeds of sale towards payment of any sums that may be due or become due to the Employer by the Contractor under the Contract. In such circumstances the Contractor shall forthwith vacate the Site and shall not be entitled to remain on the Site on the grounds that he is entitled to do so on a right of retention until amounts due to him have been paid, neither will the Contractor be entitled to any further payments in terms of this Contract.</p> <p>9.2.3 If the Contractor, having been given notice to rectify a default in terms of 9.2.2 above, rectifies said default, but later repeats the same or substantially the same default, then the Employer may notify the Contractor of the immediate termination of the Contract, and proceed as stated in the paragraph following the word 'writing' in Clause 9.2.2.7 above.</p> <p>9.2.4 Should the amounts that the Employer must pay to complete the Works, exceed the sum that would have been payable to the Contractor on due completion by him, then the Contractor shall upon demand pay to the Employer the difference, and it shall be deemed a debt due by the Contractor to the Employer and shall be recoverable accordingly. Provided that should the Contractor on demand not pay the amount of such excess to the Employer, such sum may be determined and deducted by the Employer from any sum due to or that may become due to the Contractor under this or any previous or subsequent contract between the Contractor and the Employer."</p>

### 3. PRIORITY OF DOCUMENTS

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
- d) within the Contract Data.
- e) the General Conditions of Contract.
- f) 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 Principal Agent shall issue any necessary clarification or instruction.

Certain pro-forma forms and pro-forma agreements contained in the GCC 2015 have been adapted for this particular contract. Those pro-forma forms and pro-forma agreements contained in the GCC 2015 do not apply where replaced by similar pro-forma forms and pro-forma agreements in this document.

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

The following contract specific data are applicable to this contract.

### REFERENCE CONTRACT SPECIFIC DATA BY THE EMPLOYER

Clause	Data																																																																																											
1.1.1.13	The Defects Liability Period is 12 Months.																																																																																											
1.1.1.15	The name of the Employer is <b>University of Venda</b>																																																																																											
1.1.1.26	The Pricing Strategy of a re-measurement Contract shall apply																																																																																											
1.2.1.2	<p>The address of the Employer is:</p> <p><b>Physical address:</b> Main Administration Building Mphephu drive Thohoyandou;0950</p> <p>Contact: Name: Mr. X. Ben-Mazwi Telephone: 015 962 8610</p> <p><b>E-mail address:</b> Xhanti.Benmazwi@univen.ac.za</p>																																																																																											
3.3.1	<p>The Employers Agent shall obtain the specific approval of the Employer before executing any of his functions or duties according to the following table:</p> <table><tr><th>GCC Clause No</th><th>Description</th><th>Requires EWA*</th><th>Delegated to EAR*</th></tr><tr><td>3.3.1</td><td>Employers Agent's Representative appointment and termination</td><td>Y</td><td></td></tr><tr><td>3.2.4</td><td>Employers Agent's Representative acting on Engineer's behalf</td><td>Y</td><td></td></tr><tr><td>4.5.4</td><td>Payment for notices and fees</td><td>Y</td><td></td></tr><tr><td>4.7.1</td><td>Fossils, etc on Site</td><td>Y</td><td></td></tr><tr><td>5.7.2</td><td>Work at night</td><td>Y</td><td></td></tr><tr><td>5.7.3</td><td>Acceleration of rate of progress</td><td>Y</td><td></td></tr><tr><td>5.7.3</td><td>Payment for acceleration</td><td>Y</td><td></td></tr><tr><td>5.9.1</td><td>Instructions and drawings on Commencement Date</td><td></td><td>Y</td></tr><tr><td>5.11.1</td><td>Suspension of the Works</td><td></td><td>Y</td></tr><tr><td>5.11.3</td><td>Proceeding with Works after suspension</td><td>Y</td><td></td></tr><tr><td>5.12.4</td><td>Acceleration instead of extension of time</td><td>Y</td><td></td></tr><tr><td>5.13.2</td><td>Reduction in penalty</td><td></td><td>Y</td></tr><tr><td>6.3.1</td><td>Variation orders</td><td>Y</td><td></td></tr><tr><td>6.3.2.1</td><td>Confirmation of a Variation Order</td><td>Y</td><td></td></tr><tr><td>6.4.1.4</td><td>Dayworks as a Variation Order</td><td>Y</td><td></td></tr><tr><td>6.5.2</td><td>Materials for dayworks</td><td>Y</td><td></td></tr><tr><td>6.8.4</td><td>Costs due to changes in legislation</td><td>Y</td><td></td></tr><tr><td>6.11.1</td><td>Variations exceeding 20%</td><td></td><td>Y</td></tr><tr><td>8.2.2.2</td><td>Damage due to excepted risks</td><td></td><td>Y</td></tr><tr><td>10.1.5</td><td>Consultation on Contractor's claim</td><td>Y</td><td>Y</td></tr><tr><td>10.1.5</td><td>Ruling on Contractor's claim</td><td>Y</td><td>N</td></tr></table>				GCC Clause No	Description	Requires EWA*	Delegated to EAR*	3.3.1	Employers Agent's Representative appointment and termination	Y		3.2.4	Employers Agent's Representative acting on Engineer's behalf	Y		4.5.4	Payment for notices and fees	Y		4.7.1	Fossils, etc on Site	Y		5.7.2	Work at night	Y		5.7.3	Acceleration of rate of progress	Y		5.7.3	Payment for acceleration	Y		5.9.1	Instructions and drawings on Commencement Date		Y	5.11.1	Suspension of the Works		Y	5.11.3	Proceeding with Works after suspension	Y		5.12.4	Acceleration instead of extension of time	Y		5.13.2	Reduction in penalty		Y	6.3.1	Variation orders	Y		6.3.2.1	Confirmation of a Variation Order	Y		6.4.1.4	Dayworks as a Variation Order	Y		6.5.2	Materials for dayworks	Y		6.8.4	Costs due to changes in legislation	Y		6.11.1	Variations exceeding 20%		Y	8.2.2.2	Damage due to excepted risks		Y	10.1.5	Consultation on Contractor's claim	Y	Y	10.1.5	Ruling on Contractor's claim	Y	N
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Clause	Data
	<p>*The following abbreviations apply:</p> <p>EAR Employers Agent's Representative</p> <p>EAWA Employers Agent's Written Action</p> <p>N No</p> <p>NA Not Applicable</p> <p>Y Yes</p>
4.9.1	The Contractor shall deliver to the Employers Agent's, on a monthly basis, a detailed inventory of Construction Equipment kept on Site, full particulars given for each day of the month. Distinction shall be made between Owned Equipment and Hired Equipment as well as Equipment in working order and Equipment out of order. Such inventory shall be submitted by the seventh day of the month following the month to be reported.
4.10.2	The Contractor shall deliver to the Employers Agent's, on a monthly basis, a return in detail of supervisory staff and the number of categorized classes of labour employed each day for the said period by the Contractor for execution of the Contract. Such return shall be submitted by the seventh day of the month following the month to be reported.
5.3.1	<p>The documentation required before commencement with Works execution are:</p> <ul style="list-style-type: none"> <li>◇ Health and Safety Plan (Refer to Clause 4.3)</li> <li>◇ A signed Agreement between the Employer and the Contractor for the Works to be completed by the Contractor in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act (Act No.85 of 1993) and the Construction Regulations promulgated thereunder (Refer to Clause 4.3).</li> <li>◇ Proof of payment to the Employer, that the Contractor has paid all contributions required in terms of the Compensation for Occupational Injuries and Diseases Act, no 130 of 1993 (Refer to Clause 4.3).</li> <li>◇ Initial programme (Refer to Clause 5.6).</li> <li>◇ Security (Refer to Clause 6.2).</li> <li>◇ Insurance (Refer to Clause 8.6).</li> </ul>
5.3.2	The time to submit the documentation required before commencement with Works execution is <b>14 Days</b> .
5.4.2	The access and possession of Site shall not be exclusive to the Contractor but shall be as set out elsewhere in the Contract.
5.8.1	<p>The non-working Days are Sundays.</p> <ul style="list-style-type: none"> <li>◇ The special non-working Days are:</li> <li>◇ Statutory public holidays; and</li> <li>◇ 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.</li> </ul>
5.13.1	The penalty for failing to complete the Works is 0,5 percent of contract price per calendar day.
5.16.3	The latent defect period is 10 years, commencing on the Day after the date of certification of Practical Completion.
6.5.1.2.3	The percentage allowance to cover overhead charges is: 50 per cent for labour; and 15 per cent for materials.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80%. Proof of ownership is required.
6.10.3	The limit of <b>retention money is 10%</b> of the value of the Contract Price.
8.6.1.1.2	The value of Plant and materials supplied by the Employer to be included in the insurance sum is <b>nil</b> .

Clause	Data
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is a maximum of <b>10% (ten percent)</b> of the Contract Sum.
8.6.1.3	The limit of indemnity for liability insurance is equal to the contract amount.
10.5.1	Dispute resolution shall be by standing adjudication, use GCC 2015, Appendix 5.
10.7.1	The determination of disputes shall be by arbitration.

## Additional clauses to the General Conditions of Contract:

Clause	Data
1.1	<p><b>Definitions</b></p> <p><i>Add the following at the end of Sub-Clause 1.1.1:</i></p>
1.1.1.35	<p>“Client”, as used in the Occupational Health and Safety Act - Construction Regulations, means Employer.</p>
1.1.1.36	<p>“Principal Contractor”, as used in the Occupational Health and Safety Act - Construction Regulations, means Contractor.</p>
4.12	<p><b>Contractor’s superintendence</b></p> <p><i>Add the following sub-clause 4.12.4 to Clause 4.12:</i></p> <p>“Where a form is included in the Contract Data for this purpose, the Tenderer shall fill in the name of the person he proposes to entrust with the post of Construction Manager on this Contract in the space provided therefore. Previous experience of this person on work of a similar nature during the past five (5) years is to be entered on the form.</p> <p>The Contractor’s Construction Manager shall be on Site at all times when work is being performed.</p> <p>The person shall be subject to approval of the Employers Agent’s in writing and shall not be replaced or removed from Site without the written approval of the Employers Agent’.</p>
5.6	<p><b>Programme</b></p> <p><i>Add the following sub-clause 5.6.6 to Clause 5.6:</i></p> <p>“Failure on the part of the Contractor to deliver to the Employers Agent, the</p> <ul style="list-style-type: none"> <li>• programme of the Works in terms of Clause 5.6.1 and</li> <li>• supporting documents in terms of Clause 5.6.2</li> </ul> <p>Within the period stated in the Contract Data, shall be sufficient cause for the Employer’s Agent to retain 25 per centum of the value of the Fixed Charge and Value-related items in assessment of amounts due to the Contractor, until the Contractor has submitted aforementioned first Programme of the Works and Supporting Documents”.</p>
5.9.7	<p><b>Employers Agent’s to approve Contractor’s Designs and Drawings</b></p> <p><i>Add the following at the end of Sub-Clause 5.9.7</i></p> <p>“All designs, calculations, drawings and operation and maintenance manuals shall be fully endorsed by a third-party registered engineer, accomplished in such specific field of practice and the cost thereof shall be borne solely by the Contractor.</p> <p>Once the alternative design has been approved, the Contractor shall indemnify and hold harmless the Employers Agent’s, the Employer, their agents and assigns, against all claims howsoever arising out of the said design, whether in contract or delict”.</p>
5.11	<p><b>Suspension of the Works</b></p> <p><i>Add the following sub-clause 5.11.7 to Clause 5.11:</i></p> <p>“If the Contractor does not receive from the Employer the amount due under an Interim Payment Certificate within 28 days after expiry of the time stated in sub-clause 6.10.4 within which</p>
	<p>payment is to be made (except for deductions in accordance with sub-clauses 6.10.1.6 and</p>

Clause	Data																																																											
	<p>6.10.1.7), the Contractor may, after giving 14 days' notice to the Employer, suspend the progress of the Works.</p> <p>The Contractor's action shall not prejudice his entitlements to a claim in terms of Clause 10.1 and to cancellation of the Contract in terms of Clause 9.3.</p> <p>If the Contractor subsequently receives full payment of the amount due under such Interim Payment Certificate before giving a notice of cancellation of the Contract, the Contractor shall resume normal working as soon as is reasonably practicable."</p>																																																											
5.12	<p><b>Extension of Time for Practical Completion</b></p> <p><i>Add the following at the end of Sub-Clause 5.12.2.2:</i></p> <p>"The extension of time to be allowed due to abnormal rainfall shall be calculated separately for each calendar month or part thereof in accordance with the following formula:</p> $V = (Nw - Nn) + \frac{Rw - Rn}{x}$ <p>where</p> <p>V = Extension of time in calendar days for the calendar month under consideration</p> <p>Nw = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded</p> <p>Rw = Actual recorded rainfall for the calendar month</p> <p>Rn = Average rainfall for the calendar month, as derived from existing rainfall records</p> <p>x = 20</p>																																																											
	<p>The rainfall records which shall provisionally be accepted for calculation purposes are:</p> <table><tr><td>+ Y</td><td>=</td><td>10 mm / 24h</td></tr><tr><td>Rw</td><td></td><td></td></tr><tr><td>Rn</td><td>=</td><td>2,5 maximum</td></tr><tr><td rowspan="2">Month</td><td colspan="2">Rainfall</td></tr><tr><td>Nn = Average days &gt; Y mm (No)</td><td>Rn = Average monthly rainfall (mm)</td></tr><tr><td>January</td><td>2.9</td><td>113.5</td></tr><tr><td>February</td><td>3.1</td><td>186.0</td></tr><tr><td>March</td><td>3.2</td><td>112.2</td></tr><tr><td>April</td><td>1.2</td><td>49.0</td></tr><tr><td>May</td><td>0.3</td><td>7.9</td></tr><tr><td>June</td><td>0.2</td><td>9.5</td></tr><tr><td>July</td><td>0.3</td><td>10.2</td></tr><tr><td>August</td><td>0.0</td><td>4.6</td></tr><tr><td>September</td><td>0.4</td><td>20.0</td></tr><tr><td>October</td><td>1.5</td><td>60.4</td></tr><tr><td>November</td><td>2.7</td><td>96.7</td></tr><tr><td>December</td><td>3.6</td><td>123.8</td></tr><tr><td>Source of Information</td><td colspan="2">South African Weather Service</td></tr><tr><td>Rainfall Station</td><td colspan="2">Thohoyandou</td></tr><tr><td>Period</td><td colspan="2">1993 - 2007</td></tr></table>	+ Y	=	10 mm / 24h	Rw			Rn	=	2,5 maximum	Month	Rainfall		Nn = Average days > Y mm (No)	Rn = Average monthly rainfall (mm)	January	2.9	113.5	February	3.1	186.0	March	3.2	112.2	April	1.2	49.0	May	0.3	7.9	June	0.2	9.5	July	0.3	10.2	August	0.0	4.6	September	0.4	20.0	October	1.5	60.4	November	2.7	96.7	December	3.6	123.8	Source of Information	South African Weather Service		Rainfall Station	Thohoyandou		Period	1993 - 2007	
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Clause	Data
	<p>The factor (Nw - Nn) shall be considered to represent a fair allowance for days during which rainfall exceeds 10 mm and the factor (Rw - Rn)/x shall be considered to represent a fair allowance for those days when rainfall does not exceed 10 mm but wet conditions prevent or disrupt work.</p> <p>The total extension of time shall be the algebraic sum of all monthly totals for the contract period, but if the algebraic sum is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for a part of a month shall be calculated using pro rata values of Nn and Rn."</p> <p>For this project the rainfall formula will only apply as background information, or dispute resolution. Extension of time for rainfall will only be granted on Actual Delays experienced; noted and agreed upon by the engineer.</p>
6.10	<p><b>Payments</b></p> <p><i>Add the following at the end of Sub-Clause 6.10.1:</i></p> <p>"The Contractor shall complete the 'Contractor's Monthly Report Schedule', which pro forma documentation is obtainable from the Employer's Agent. Pursuant to Sub-Clause (1), these, duly signed by all concerned, together with the Contractor's statement and a VAT invoice in original format are to be submitted to the Employer's Agent. Issue by the Employer's Agent to the Employer and Contractor of any signed payment certificate is conditional to this information being fully endorsed, accurately and timeously submitted to the Employer's Agent".</p>
9.2.1.3.2	<p>Clause 9.2.1.3.2 is replaced by the following "Has failed to submit documentation or to commence the Works in terms of Clause 5.3, or has suspended the progress of the Works for fourteen (14) consecutive days after receiving from the Engineer written notice to proceed,"</p>
	<p>"All documentary evidence of such materials shall be unambiguous with respect to ownership having fully passed to the Contractor on or before the date of submittal of the Contractor's monthly statement.</p> <p>Should the Contractor fail to supply unambiguous documentary evidence, he shall, prior to submittal of his monthly statement, deliver to the Employer a Guarantor Guarantee in the form contained in the Appendices to the Contract Data."</p>
9.3	<p><b>Termination by the Contractor</b></p> <p><i>Add the following at the end of Sub-Clause 9.3:</i></p> <p>9.3.5 "In addition to, or as an alternative to the rights to termination contained in this Clause 9.3, the Contractor may notify the default to the Employer, with a copy to the Employer's Agent, and if the default is not rectified within 10 days the Contractor may suspend progress of the works until a date 7 days after the default is rectified. The Contractor shall be entitled to extension of time to the extent of delay caused by or resulting from such suspension, and to payment of additional costs caused by or resulting from the suspension. Such extension of time and additional costs shall be promptly ascertained by the Employer's Agent, who shall then grant the extension of time and include the additional costs in all future payment certificates. Such suspension, extension of time and/or payment of additional costs, shall not prejudice the Contractor's rights to cancel the contract."</p>

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

The General Conditions of Contract, as specified in Part 1, shall be used as a basis for this Data which is required to be completed.

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

Clause	CONTRACT SPECIFIC DATA BY THE CONTRACTOR
1.1.1.9	The Name of the Contractor is: ..... .....
1.2.1.2	The address of the Contractor is:  Physical address: ..... ..... .....
1.2.1.2	Postal address: ..... ..... .....  e-mail address: .....
	Contact numbers:  Corporate: .....  Direct: .....  Mobile: .....  Fax: .....
1.1.1.14	Time for achieving Practical completion is.....Months <b>(All Inclusive)</b>

### C1.3 FORM OF GUARANTEE - PRO FORMA

In accordance with clause 6.2.1 of General Conditions of Contract, 3<sup>rd</sup> Edition 2015

Contract No: -----

Description of Contract: -----

#### GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: -----

----- (Please put name of firm)

Physical address: -----

-----

Postal address: -----

-----

Tel:-----

Fax: -----

"Employer" means: **University of Venda.**

"Contractor" means: -----

----- (Please put name of firm)

"Guarantee sum" means: 10% of the contract amount

"Employer's Agent" means: **Endecon Ubuntu Pty Ltd**

"Works" means: Permanent works together with temporary works

"Site" means: The land and other places, made available by the Employer for the purpose of the contract, on under over in or through which the works are to be executed or carried out.

"Contractor" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contractor as may be agreed in writing between the parties.

"Contract Sum" means: The accepted amount inclusive for tax of R-----

Amount in words: -----

----- **"Expiry**

**Date"** This Guarantee shall expire upon the issue of the **Completion Certificate** issued by University of Venda signed by the Director Facilities Management, as such date is advised to the Guarantor in writing confirmed by the Employer.

#### CONTRACT DETAILS

Employer's Agent issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Work as defined in the Contract.

#### PERFORMANCE GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
2. Expiry Date" This Guarantee shall expire upon the issue of the final completion certificate issued by University of Venda signed by the Director Facilities Management, as such date is advised to the Guarantor in writing confirmed by the Employer  
The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on

- the Certificate of the works has been issued.
3. The Guarantor hereby acknowledges that:
    - 3.1. Any reference in this performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a surety ship;
    - 3.2 . Its obligation under this Performance Guarantee is restricted to the payment of money.
  4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
    - 4.1. A copy of a first written demand issues by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent and/ or Employer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
    - 4.2. A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address and / or postal address with a copy to the Contractor stating that period of seven (7) days has elapsed since the first written demand terms of 4.1 and the sum certificate has still not been paid;
    - 4.3. A copy of the aforesaid payment certificate which entails the Employer to receive payment in terms of the Contract sum in 4.
  5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address and/ or postal address calling up this Performance Guarantee, such demand stating that:
    - 5.1. The contractor has been termination due to the Contractor's default and this performance Guarantee is called up in terms of 5; or
    - 5.2. A provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
    - 5.3. The aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional /final sequestration and/or the provisional liquidation court order.
  6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
  7. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the guarantor.
  8. Payment by Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
  9. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from his Performance Guarantee on account alleged to be prejudicial to the Guarantor.

10. The Guarantor chooses the physical address and postal address as stated above for the service of all notices for all purposes in connection herewith.
11. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after on claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
12. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
13. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Court Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Sign at -----

Date -----

Guarantor's signatory (1) -----

Capacity -----

Guarantor's signatory (2) -----

Capacity -----

Witness signatory (1) -----

Witness      signatory      (2)      -----

#### **C1.4: AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT NO 85 OF 1993**

This agreement is mandatory for all contractors appointed by the University of Venda or any other institution that do work for or on behalf of University.

**This agreement is between:**

##### **THE PRINCIPAL CONTRACTOR:**

Herein represented by.....

In his capacity, as .....Being duly authorized hereto hereinafter

referred to as “contractor”.

Compensation Commissioner Number:  
(Attach a copy of the Registration

Certificate to this agreement)

Company : Name:.....

Registration Number: .....

CEO : Name.....

ID Number: .....

Physical Address: .....

.....

**And the University of Venda  
(Hereinafter referred to as “the Employer”)**

## 1. DEFINITIONS

- 1.1 **CONTRACTOR** Means the “Contractor” as defined in the “Principal Contract”.  
Annexed hereto in his capacity as mandatory.
- 1.2 **MANDATORY** Includes an agent, contractor or subcontractor for work to be done or service rendered, but without derogating from his status in his own right as an employer of people or user of equipment, machinery, tools or materials.
- 1.3 **THE PRINCIPAL CONTRACT** Means the contract annexed hereto as annexure “A”.
- 1.4 **EMPLOYER** Means the University of Venda
- 1.5 **RISK CONTROL OFFICER** A person appointed in writing by Employer.
- 1.6 Any definitions contained in any Statute hereinafter mentioned shall have the meaning allocated to it by the specific statute.

## 2. OBJECTIVE

- 2.1 Whereas Employer and the Contractor have entered into a contract for service (work) as fully indicated in the “Principle Contract” and whereas the “Contractor” agreed to indemnify Employer against the risks stated hereunder whether foreseeable or not, and, whereas it is agreed between the parties that it is of cardinal importance to safeguard both Employer and the Contractor’s obligation in terms of relevant legislation as well as to extend the obligation as a company and/or legal person and/or person as an entity concerned with health, safety and the environment.
- 2.2 These rules are applicable to all contractors performing work for Employer within the jurisdictional area of the Employer and on any premises, which are owned, rented or developed by the Employer.
- 2.3 The Employer acts through those officials or persons who are generally or specifically charged with the responsibility, in terms of legislation, as well as any other official or person who is generally or specifically charged with the control and supervision of the project.

### IT IS HEREBY AGREED AS FOLLOWS:

## 3. INDEMNITIES

- 3.1 The “Contractor” hereby indemnifies the “Employer” against any loss in respect of all claims, proceeding, damages, costs and expenses arising out of any claim or proceeding pertaining to the non-compliance by the “Contractor” of any statutory requirements and/or requirements regarding the following Acts in particular pertaining to the provisions of:
- 3.1.1 The Occupational Health and Safety Act 85 of 1993 (as amended), including the Construction Regulations, 2003 as promulgated on 18 July 2003, in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993), in Government Gazette No. 25207 and Regulation Gazette No. 7721. See Annexure B.

- 3.1.2 The Health Act 63 of 1977.
  - 3.1.3 Road Traffic Act 29 of 1989 (as amended).
  - 3.1.4 Environment Conservation Act 73 of 1989.
  - 3.1.5 The National Water Act 36 of 1998.
  - 3.1.6 The Criminal Procedure Act 51 of 1977.
  - 3.1.7 The Explosives Act 26 of 1956.
  - 3.1.8 The Arms and Ammunition Act 75 of 1969.
  - 3.1.9 Compensation for Occupational Injuries and Diseases Act 130 of 1993.
  - 3.1.10 The Labour Relations Act 66 of 1995.
  - 3.1.11 The Unemployment Insurance Act 30 of 1966 (as amended).
  - 3.1.12 The Basic Conditions of Employment Act 75 of 1997 (as amended).
  - 3.1.13 Standards Act 29 of 1993.
  - 3.1.14 any statutory provisions in any act and/or any law or bylaw of any local government and/or any published official standard incorporated into any statute or bylaw relating to the completion of the work set out in the "Principal Contract".
  - 3.1.15 Any other health and safety standard prescribed by the "Employer".
- 3.2 The "Contractor" shall ensure that he familiarizes himself with the requirements of the above legislation and that he, his employees and any subcontractor will comply with all the statutory provisions contained in them.
- 3.3 The "Contractor" shall indemnify the "Employer" in respect of any physical loss or damage to any plant, equipment or other property belonging to the "Contractor" or for which he is responsible and he hereby indemnifies the "Employer" against any loss in respect of all claims, proceedings, damages, costs and expenses consequent upon the loss of or damage to any plant, equipment or other property belonging to, or which is the responsibility of, any subcontractor, agent or employee of the subcontractor.
- 3.4 The "Contractor" shall and hereby indemnifies the "Employer" against any liability, loss, claim or proceedings whatsoever, whether arising in common law or by statute, consequent on personal injuries to or the loss of health or death of any person whosoever arising out of or in the course of or caused by the execution of the "Principal Contract".
- 3.5 The "Contractor" shall and hereby indemnifies the "Employer" against any liability, loss, claim or proceedings consequent on loss of or damage to any movable or immovable property arising out of or in the course of or caused by the execution of the "Principal Contract" and due to any act or omission of the "Contractor", his agents, servants or subcontractors.

#### **4. PERFORMANCE SAFE WORKING PRACTICE**

- 4.1 The "Employer" requires a high standard of safe work performance from all employees and expects that the standard be maintained by the "Contractor" within the "Employer's" jurisdictional area or on its premises.
- 4.2 Irrespective of human considerations, the maintaining of these health and safety rules shall be the execution of the prescribed legal requirements. These rules are not to hinder the "Contractor" in rendering services or indemnify the "Contractor" from any legal responsibility to ensure healthy and safe work circumstances.
- 4.3 The "Employer" shall assist the "Contractor" in any practical considerations to accommodate the healthy and safe execution of work and therefore require co-operation in the execution of these safety rules.



## **5. LOCK OUT PROCEDURE**

- 5.1 When power or air driven machines or equipment, electrical apparatus or pipe lines are examined, repaired, adjusted, cleaned, lubricated or serviced in any other way than normal servicing, then all isolating switches, -levers, valves or appliances must be put in the “off” or “closed” position and locked.
- 5.2 Should more than one team work on a machine, then each person in control of a team, must put a separate lock on the switch, lever, valve or appliance.

## **6. CRANES, VEHICLES AND HOISTING**

- 6.1 For each crane or hoisting equipment used, the “Contractor” must submit a valid and recent test certificate or other form of the last examination of the machine or equipment, to the “Employer”.
- 6.1.1 Only trained personnel with written permission and where determined by Law, with a valid driver’s license, may be allowed to operate any electrical diesel or petrol driver overhead crane, hydraulic or electrical hoisting equipment, self-driven forklift, tractor or any other crane or vehicle. No employee of the “Contractor” may perform any overhead work or work on an overhead crane or hoisting equipment or work near cranes or crane rail, before:
- i) An agreement was concluded with the “Employer”.
  - ii) Approval has been obtained from the “Employer” to perform the work.
  - iii) All applicable danger – and warning symbolic signs are put into position, or exemption, if applied for, is in operation.
- 6.2 The “Contractor” shall be wholly responsible for any loss or damage to cranes, hoisting equipment, plant, machines or equipment brought onto the work site by the “Contractor”.

## **7. MACHINE VALANCES, PROTECTION AND FENDING**

- 7.1 No machine valances, protection or fending may be removed from machines, manholes, etc. without the written permission of “Employer” if applicable exemption procedures were not appropriated.

## **8. SCAFFOLD, LADDERS, TOOLS AND EQUIPMENT**

- 8.1 No equipment or appliance belonging to “Employer” may be used without written permission from “Employer”.
- 8.2 Unless prior arranged, “Contractors” must bring sufficient tools and equipment to the site to finish the contract, including offices and storerooms. The mentioned equipment remains the responsibility of the “Contractor” with respect to loss, damage and theft.
- 1.3 In exceptional cases, where tools and equipment belonging to “Employer” are used to finish the contract, the said equipment and tools are used on own risk and the “Contractor” indemnifies “Employer” from any claims that may arise. The said indemnity must be in writing, as well as information regarding the loan period, identification and condition of tools and equipment. The “Contractor” is responsible for the returning of said tools and equipment in the same condition or better. The “Contractor” is responsible to “Employer” for any damage or excessive wear of such tools or equipment and material.

## **9. EXCAVATIONS**

- 9.1 Before any excavations commence, written permission must be obtained from “Employer” to confirm the location of existing electrical cables, water pipes, etc.
- 9.2 All excavations and obstructions in floor, tar and dirt surfaces must be fenced effectively and safeguarded between sundown and sunup with a sufficient amount of red/yellow warning lights and symbolic signs.
- 9.3 The surrounding area must be kept clean, safe and tidy during excavation. Excess material may not obstruct unnecessarily.
- 9.4 If any property is in danger during excavation, it must be supported and the proposed support work must be submitted to the Department of Labour (OHS) and “Employer” for approval.
- 9.5 Written permission must be obtained from “Employer” to grant admittance to restricted areas as well as areas where dangerous or poisonous gases are present.

## **10. FIRST AID**

- 10.1 The “Contractor” must provide and maintain a first aid box equipped according to legal requirement where more than (5) five persons are employed. The first aid box must be in the care of a person with a competency certificate from one of the following organizations:
- (i) SA Red Cross Association;
  - (ii) St Johns Ambulance;
  - (iii) SA First Aid League; or
  - (iv) A person or organization approved by the Chief inspector for this purpose.
- 10.2 A visible notice must be put up on any work premises with the name of the person responsible for first aid. In an emergency “Employer’s” Ambulance / Fire Department or emergency services may be contacted at (015) 290 2000.

## **11. FLAMMABLE LIQUIDS**

- 11.1 The “Contractor” shall be held responsible for the necessary precautionary fire prevention measures. No smoking signs must be put up where applicable. The “Contractor’s” employees must be informed of “Employer’s” fire prevention measures and evacuation procedures.

## **12. COMPENSATION BY CONTRACTOR**

- 12.1 The “Contractor” shall be held responsible for all loss of and damage to property, the death or injury of persons, the resultant loss or damage suffered as well as all law suits, claims, costs, charges, fines and expenses due to negligence, violation of statutory liability or neglect of the “Contractor” or the “Contractor’s” employees.

## **13. TRANSGRESSION OF RULES AND MISBEHAVIOUR**

- 13.1 The “Contractor” is warned that any act(s) leading to damage or loss of employees of the “Contractor” or the “Employer” shall not be tolerated. The “Employer” may (without any reason) demand that any employee of the “Contractor” be withdrawn from the principal “Contract” or site.

## **14. INCIDENT REPORTING**

- 14.1 All incidents referred to in Section 24 of the Occupational Health and Safety Act and or other incidents shall be reported, by the "Contractor", to the Department of Labour, as well as to the "Employer" and should such an incident take place outside normal working hours, on a Saturday, Sunday or Public holiday provided with a written report relating to any incident.
- 14.2 The "Employer" will obtain an interest in the issue of any formal inquiry conducted in terms of the Occupational Health and Safety Act in any incident involving the "Contractor" and/or his employees and/or his subcontractors.
- 14.3 The "Contractor" undertakes to report to "Employer" anything deemed to be unhealthy and/or unsafe and that he undertakes to verse his employees and/or subcontractors in this regard.

## **15. LIAISON AND SUPERVISION**

- 15.1 The "Contractor" hereby undertakes to liaise on a regular basis with the designated Risk Control Officer and "Employer" representative regarding any hazards or incidents that may be identified or encountered during the performance of the "Principal Contract".

## **16. SERVICE INTERRUPTION**

- 16.1 Should any work done by the "Contractor" cause a possible interruption, written permission must be obtained from "Employer", before such work commences. The "Contractor" may not switch on or off any compressed air, steam, oxygen, vacuum supply or electrical supply without written permission from the "Employer".

## **17. CONFIDENTIALITY**

- 17.1 The "Contractor" and his employees shall regard all data, documentation and information of the contract and related documentation as confidential.
- 17.2 Lost documentation/plans or related documentation shall immediately be reported in writing to the "Employer".
- 17.3 The "Contractor" shall not put up any advertisements or billboard at the site without permission.
- 17.4 The "Contractor" shall not take photographs of the contract site or part thereof or any work process or part thereof, without written permission from the "Employer", or have photographs taken, published or let it be published.

## **18. CONTRACT SITE AND PRESERVATION**

- 18.1 Employees of the "Contractor" shall not be allowed entrance to the site unless a valid identity document, issued by "Employer", is displayed. The mentioned documents shall only be valid for a limited period, where after it must be renewed.

## **19. COMPLETION OF WORK**

- 19.1 The "Contractor" or his employees shall not leave the contract site before the "Employer" is satisfied that the contract is completed according to the requirements and standards set out in the contract and that the working site is left in a satisfactory and safe condition.

## **20. LIQUOR, DRUGS, DANGEROUS WEAPONS AND FIREARMS**

- 20.1 The "Contractor" shall ensure that no liquor, drugs, dangerous weapons or firearms be brought onto the premises.

## **21. SEARCHES**

- 21.1 The "Contractor" and any person engaged in the contract work may at any time be searched by "Employer" appointed security personnel and all packages, suitcases, etc. must be presented to the access control point for examination prior to them being brought onto the property or leaving the property.

## **22. GENERAL CONDITIONS**

- 22.1 Notwithstanding anything to the contrary in this agreement, it is hereby specifically determined that the "Contractor-"

22.1.1 shall have acquainted himself and be conversant with the contents of all statutory provisions applicable to the health and safety of workers and other persons on the site including the execution of the work, and in particular the conditions contained in the Occupational Health and Safety Act, 1993 (Act 85/1993), and the regulations promulgated in terms thereof, and shall comply therewith meticulously and in all aspects and/or take care that it is complied with;

22.1.2 shall be obliged to immediately execute all instructions given to him by an authorized representative of "Employer" in order to ensure and uphold the implementation and enforcement of the provisions referred to in sub-paragraph 1, to the satisfaction of the said representative;

22.1.3 shall indemnify the "Employer" against any or all liability which may be incurred by the "Employer" as a result of the omission of the "Contractor", his employees, sub-contractors and/or representatives to comply with the provisions referred to in sub-paragraph 1, or to ensure that it shall be complied with;

22.1.4 shall undertake to pay upon demand any and/or all legal costs and other expenses which "Employer" may have incurred as a consequence of any criminal charges or other proceedings pending against, or involving the "Employer" as a result of the contravention or non-compliance by the "Contractor", his employees, sub-contractors and/or representative of any of the statutory provisions referred to in sub-paragraph 1.

22.1.5 Should the "Contractor" neglect to immediately execute any health and safety written orders issued to him, or to his employee in charge of the works, in terms of the stipulations of sub-paragraph 2, the "Employer" shall be entitled to suspend the execution of the works and take the necessary steps to execute or have such order executed. Under these circumstances the contractor shall be obliged to pay "Employer", upon demand, all costs and expenses incurred by "Employer", in order to execute or have the said orders executed.

22.1.6 Should the abovementioned steps not establish a healthy and safe work environment the "Employer" will be entitled to terminate the contract without incurring any further costs or claims from the contractor?

## **23. “CONTRACTOR” IDENTIFICATION BOARD**

23.1 The “Contractor” shall provide on any work premises a temporary identification board containing at all worksites the following information:

- Company name on behalf of which division/department the work is being done.
- The contact number and name of the person representing the “Contractor”.
- The contact number and name of the person representing “Employer”

## **24. ACKNOWLEDGEMENT**

24.1 The “Contractor” hereby acknowledges that he has read and received a copy of the “Principal Contract” and agrees to be bound by and undertakes to observe all the terms and conditions of the “Principal Contract”. This appointment is made in terms of Section 37(2) of the Occupational Health and Safety Act, 85 of 1993.

## **25. EXCEPTIONS AND OMISSIONS**

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## **26. REMARKS**

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## THE CONTRACTOR

SIGNED AT ..... ON THIS ..... DAY OF .....

WITNESSES:

.....  
THE CONTRACTOR

1. ....

2. ....

## THE EMPLOYER

SIGNED AT ..... ON THIS ..... DAY OF.....

WITNESSES

.....  
THE EMPLOYER

1. ....

2. ....

## C1.5: Agreement with Adjudicator – Pro Forma

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

**and**  
(name).....  
of (address) .....  
..... (hereinafter called **the Adjudicator**)

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

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

(\* Delete as necessary)

**IT IS NOW AGREED** as follows:

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

**SIGNED by:**

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

**Name:** ..... **Name:** ..... **Name:** .....

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

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

the **Adjudicator** in the  
presence of

<b>Witness:</b>	<b>Witness:</b>	<b>Witness:</b>
(Signature).....	(Signature).....	(Signature).....
<b>Name:</b> .....	<b>Name:</b> .....	<b>Name:</b> .....
Address: .....	Address: .....	Address: .....
.....	.....	.....
.....	.....	.....
 Date: .....	 Date: .....	 Date: ..... .....



## **PART C2: PRICING DATA**

### **C2.1: PRICING INSTRUCTIONS**

### **C2.2: BILL OF QUANTITIES**

# UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)

## C2.1 Pricing Instructions

### 1. GENERAL

The pricing instructions describe the criteria and assumptions which will be assumed in the Contract that the Tenderer has taken into account when developing his prices. The Bills of Quantities record the Contractor's rates for providing supplies, services, engineering and construction works in accordance with the Scope of Work.

The terms of payment and the provisions for price adjustment, if applicable, are established in the Contract Data. These items are not described in the Pricing Data.

The Tenderer's obligations in pricing the Tender offer and the Employer's undertakings in the checking and correction of arithmetical errors are dealt with in the Standard Conditions of Tender contained in Annexure F of SANS 294, as amended in and read in conjunction with the Tender Data.

### 2. DOCUMENTS MUTUALLY EXPLANATORY

The documents forming the Contract are to be taken as mutually explanatory of one another. The Bill of Quantities forms an integral part of the Contract Documents and shall be read in conjunction with the Tender Data, Contract Data, Scope of Work, Site Information General and Special Conditions of Contract, the Specifications and the Drawings.

### 3. DEFINITIONS

For the purpose 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 Scope of Work and Site Information.
Quantity	:	The number of units of work for each item.
Rate	:	The payment per unit of measurement at which the Contractor Contracts to do the work.
Amount	:	The product of the quantity and the rate Tender for an item.
Sum	:	An amount contracted for an item, the extent of which is described in the Bill of Quantities, the specifications or elsewhere but the quantity of work of which is not measured in any units.

### 4. DESCRIPTIONS

Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the Standardised Specifications. Clause 8 of each Standardised Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standardised Specification, or the Scope of Work, conflict with the terms of the Bill, the requirements of the Standardised Specification or Scope of Work, as applicable, shall prevail.

## 5. **REFERENCES**

The clauses in a specification in which further information regarding the schedule item can be obtained appear under "Reference clause" in the Bill. The reference clauses indicated are not necessarily the only sources of information in respect of scheduled items. Further information and specifications may be found elsewhere in the contract documents. Standardised Specifications are identified by the letter or letters which follow SABS in the SABS 1200 series of specifications, e.g. G for SABS 1200 G.

## 6. **UNITS OF MEASUREMENT**

The units of measurement indicated in the Bill of Quantities are metric units.

The following abbreviations are used in the Bill of Quantities:

%	=	per cent
h	=	hour
ha	=	hectare
kg	=	kilogram
kl	=	kilolitre
km	=	kilometre
km-pass	=	kilometre-pass
kW	=	kilowatt
l	=	litre
m	=	metre
mm	=	millimetre
MN	=	meganewton
MN-m	=	meganewton-metre
MPa	=	megapascal
m <sup>2</sup>	=	square metre
m <sup>3</sup>	=	cubic metre
m <sup>3</sup> -km	=	cubic metre-kilometre
m <sup>2</sup> -pass	=	square metre-pass
no	=	number
PC sum	=	Prime Cost sum
Prov Sum	=	Provisional Sum
sum	=	lump sum
t	=	ton (1 000 kg)

## 7. **NET MEASUREMENTS**

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

## 8. **QUANTITIES**

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

The Contract Amount to be determined in accordance with the conditions of contract identified in the Contract Data shall be computed from the actual quantities of authorized work done, value at rates determined in terms of the Contract Data, against the respective items in the Bill of Quantities.

## 9. **CURRENCY**

All rates and sums of money quoted in the Bill of Quantities shall be in Rand and whole cents. Fractions of a cent shall be discounted.

## 10. **VALUE ADDED TAX**

Value Added Tax shall be excluded from the rates and sums contracted for the various items of work included in the Bill of Quantities. VAT will be added as a single entry to the summary.

## 11. **RATES AND PRICES**

### 11.1 **General**

- a) The Contractor must price each item in the Bill of Quantities in BLACK INK. Reproduced computer printouts of the Bills of Quantities will not be acceptable.
- b) The rates and prices to be inserted in the Bill of Quantities shall cover all the services and incidentals for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.
- c) Where the Contractor is required to furnish detailed drawings and designs or other information in terms of the Contract Data, all costs thereof shall be deemed to have been provided for and included in the unit rates and sum amounts contracted for the items scheduled in the Bill of Quantities. Separate additional payments will not be made.
- d) A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill. The Contractor will not be paid for items against which no rate or lump sum has been entered in the Bill of Quantities.
- e) Should the Contractor group a number of items and contract one lump sum for such group of items, this single lump sum shall apply to that group of items and not to each individual item.
- f) Should the Contractor indicate against any item that compensation for such item is included in another item, the rate for the item included in another item shall be deemed nil.
- g) A submission may be regarded as non-responsive if any rates or lump sums in the Bill of Quantities are, in the opinion of the Employer, unreasonable or out of proportion.

### 11.2 **"Rate only" items**

The Contractor shall fill in a rate (in the rate column) against all items where the words "rate only" appear in the Amount column, which rate will constitute payment for work which may be done in terms of this item. Such "rate-only" items are used where it is estimated that little or no work will be required under the item or where the item is to be considered as an alternative to another item for which a quantity is given.

### 11.3 Arithmetic

Excepting where Sum Amounts are required or where Provisional Sums have been indicated, the Contractor shall enter an applicable rate in the Rate Column of the Bill of Quantities for each scheduled item. He shall also enter an appropriate sum in the Amount column for each scheduled item, by determining in the applicable line item the product of the Quantity and the Unit Rate.

Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern.

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 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.

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.

### 11.4 Labour Intensive work

Those parts of the contract to be constructed using labour-intensive methods have been marked in the bill of quantities with the letters LI in a separate column or as a prefix or suffix against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of works, is a deviation from the contract. The items marked with the letters 'LI' are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour-intensive specification in the Scope of Works.

Where minimum labour intensity is specified by the design the contractor is expected to use their initiative to identify additional activities that can be done labour-intensively in order to comply with the set minimum labour intensity target.

Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.

## 12. VARIATION IN TEXT

No alteration, erasure or addition is to be made in the text of the Bill of Quantities. Should any alteration, erasure or addition be made, it will not be recognized; the original wording of the Bill of Quantities will be adhered to.



## **UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)**

**TENDER NO : IN/022/2020**

### **C2.2 Bill of Quantities**

UNIVEN CAMPUS WATER UPGRADE PHASE 2 (including intalation of tanks per student residence)

PROJECT NUMBER: IN/022/2020

SCHEDULE 1 : PRELIMINARY AND GENERAL

					IN/022/2020	
ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1.1	SABS 1200 A	<b>PRELIMINARY AND GENERAL</b>				
1.1.1	8.3	<b>FIXED CHARGE AND VALUE RELATED ITEMS</b>				
1.1.1	PSA 4.1	Contractual Requirements	Sum	1		
1.1.2	8.3.2	<b>Establish facilities on the site</b>				
1.1.2.1	8.3.2.1	i) <u>Facilities for Engineer</u>				
	PSA 4.5	a) Furnished offices (1x) and meeting facility	Sum	1		
		b) Contract Name board	Sum	1		
		c) Survey assistants and material	Sum	1		
1.1.2.2	8.3.2.2	ii) <u>Facilities for Contractor</u>				
		a) Offices and storage sheds	Sum	1		
		b) Workshops	Sum	1		
		c) Laboratories	Sum	1		
		d) Living accommodation	Sum	1		
		e) Ablution and latrine facilities	Sum	1		
		f) Tools and equipment	Sum	1		
		g) Water supplies, electric power & communications	Sum	1		
		h) Dealing with water	Sum	1		
		i) Access	Sum	1		
		j) Plant	Sum	1		
1.1.4	8.3.4	Removal of Employers Agent and Contractor's site establishment from site on completion of works.	Sum	1		
1.2	8.4	<b>TIME RELATED ITEMS</b>				
1.2.1	PSA 4.2	Contractual requirements	Sum	1		
1.2.2	8.4.2	<b>Operations and maintenance of facilities on site</b>				
1.2.2.1	8.4.2.1	Facilities for Employers Agent for duration of construction (SABS 1200 AB)				
	PSA 4.6	a) Employers Agent office (boardroom)	Sum	1		
		b) Telephone	Sum	1		
		c) Name board	Sum	1		
1.2.3	8.4.2	<b>Operations and maintenance of facilities on site</b>				
1.2.3.1	8.4.2.2	<u>Facilities for the Contractor for the duration of the Contract, except where otherwise stated</u>				
		a) Offices and storage sheds	Sum	1		
		b) Workshops	Sum	1		
TOTAL CARRIED FORWARD						

**UNIVEN CAMPUS WATER UPGRADE PHASE 2 (including intalation of tanks per student residence)**
**PROJECT NUMBER: IN/022/2020**
**SCHEDULE 1 : PRELIMINARY AND GENERAL**
**IN/022/2020**

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
<b>TOTAL BROUGHT FORWARD</b>						
		c) Laboratories	Sum	1		
		d) Ablution and latrine facilities	Sum	1		
		e) Tools and equipment	Sum	1		
		f) Water supplies, electric power & communications	Sum	1		
		g) Dealing with water	Sum	1		
		h) Access	Sum	1		
		i) Plant	Sum	1		
1.2.4	8.4.3	Supervision for duration of the construction	Sum	1		
1.2.5	8.4.4	Company and Head Office overhead costs for the duration of the Contract	Sum	1		
1.2.6	8.4.5	Other time related obligations	Sum	1		
1.2.7	<b>PSA 4.3</b>	Excavation by hand in all materials to expose existing services	m³	200		
1.2.8	<b>PSA 4.4</b>	<b><u>Occupational Health and Safety</u></b> Provision for the cost related to the Occupational Health and Safety Act, 85 of 1993, and the relevant Regulations:				
		a) Preparation of a Health & safety Plan	Sum	1		
		b) Compilation of a Risk Assessment prior to Construction	Sum	1		
		c) Health & Safety induction Training of employees	Sum	1		
		d) Compilation and keeping up to date the Health & Safety file which shall include all documentation required in terms of the act	Sum	1		
		e) Implementation of the Health and Safety Plan over the entire construction period	Sum	1		
1.3	8.5	<b><u>SUMS STATED PROVISIONALLY BY THE ENGINEER (NOT SUBJECTED TO ESCALATION OR RETENTION)</u></b>				
		a) Allow provisionnal sum for provission dismantling existngsteel Tank and provide a new side bottom pannel with outlet to be used for conneting with the new tank	Prov. Sum	1	200,000.00	R 200,000.00
	8.5 b) 2)	b) Overheads, charges and profit on 1.3 a)	%	R 200,000.00		
<b>TOTAL SCHEDULE 1 CARRIED FORWARD TO SUMMARY</b>						



**UNIVEN CAMPUS WATER UPGRADE PHASE 2 (including intalation of tanks per student residence)**
**PROJECT NUMBER: IN/022/2020**
**IN/022/2020**
**SCHEDULE 2 : RESERVOIR EARTH WORKS**

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	QUANT.	RATE	AMOUNT
<b>2.1</b>	<b>SABS 1200C</b>	<b><u>SITE CLEARANCE</u></b>				
2.1.1	8.2.1	Clear and grub and spoil to approved areas off site a) Bulk Earthworks area	ha	0.38		
		b) Access road	ha	2.50		
2.1.2	8.2.2	Remove and grub large trees and tree stumps of girth: a) Over 1,0m and up to and including 2,0m	no	15.00		
2.1.3	<b>8.2.10</b>	Remove Topsoil to a nominal depth of 150mm and stockpile a) From Bulk Earthworks area	m <sup>3</sup>	61.60		
<b>2.2</b>	<b>SABS 1200 D</b>	<b><u>BULK EXCAVATION</u></b>				
2.2.1	8.3.2 a)	Excavate in all materials and use for backfill as ordered: (Material from Cut to fill Compacted to 95% Mod AASHTO density)	m <sup>3</sup>	756.00		
2.2.2	PSD 2.2	Excavate from stockpile and backfill to 95% Mod AASHTO density in layers not exceeding 150mm in terrace.	m <sup>3</sup>	0.00		Rate Only
2.2.3	8.3.2 a)	Excavate in all materials and dispose off site identified by the Contractor	m <sup>3</sup>	692.89		
2.2.4		Extra over item 2.2.2 for disposing of spoil material on site provide by the Contractor	m <sup>3</sup>	0.00		Rate only
<b>2.3</b>		<b><u>SOIL RAFT</u></b>				
2.3.1	8.3.4	Extra over for importation of material for use for embankment or backfill as ordered (150mm Layers) from: (G7 Material Compacted to 95% Mod AASHTO density) obtained from:  a) Designated borrow pits (free haul = 8km) identified by the Contractor	m <sup>3</sup>	977.00		Rate Only
		b) Commercial sources (delivered on site)	m <sup>3</sup>	977.00		
2.3.2	8.3.3 b)	<u>Extra-over items 3.2.1 to 3.2.2 for excavation in:</u>  a) Intermediate excavation (Designated borrow pit only)  b) Hard rock excavation (Designated borrow pit only)	m <sup>3</sup>	87.00		Rate Only
			m <sup>3</sup>	24.00		Rate Only
<b>2.4</b>	<b>PSD 2.1</b>	<b><u>RESTRICTED EXCAVATION</u></b>				
		a) Excavate against existing buildings/structures in all materials and dispose of site	m <sup>3</sup>	5.00		
<b>2.5</b>	<b>8.3.6</b>	<b><u>OVERHAUL</u></b>				
2.5.1		Long overhaul in excess of 5km (designated borrow pit)	m <sup>3</sup> .km	15632.00		Rate Only
<b>TOTAL CARRIED FORWARD</b>						

UNIVEN CAMPUS WATER UPGRADE PHASE 2 (including intalation of tanks per student residence)

PROJECT NUMBER: IN/022/2020

**SCHEDULE 2 : RESERVOIR EARTH WORKS**

					IN/022/2020	
ITEM NO.	PAYM. REF.		UNIT	QUANT.	RATE	AMOUNT
<b>TOTAL BROUGHT FORWARD</b>						
2.6	8.3.8	<b><u>EXISTING SERVICES</u></b>				
	8.3.8.2	Dealing with services that are at risk because of the Construction of the earthworks. The rate should include for the relocation or dismantling				
		a) Electrical and Communication Cables (Under ground)	No	3.00		Rate Only
		b) Electrical and Communication Cables (Over head)	No	1.00		Rate Only
		c) sewer and water lines	No	3.00		Rate Only
2.7	<b>SABS 1200 DM</b>	<b><u>TREATMENT OF PLATFORM BED</u></b>				
	8.3.3 a)	a) Platform bed preparation and compaction of material to 90% MOD AASHTO density as ordered	m³	162.00		
2.8	<b>SABS 1200 ME</b>					
	8.3.5 d)	Process Layerworks (150mm C4) by means of stabilisation	m³	977.00		Rate Only
	8.3.8	Stabilizing agent:				
		a) Ordinary Portland Cement (CEM 1)	t	31.00		Rate Only
2.9	<b>SABS 1200 DM</b>	<b><u>EARTHWORKS (ROADS,SUBGRADE)</u></b>				
2.9.1		<b>Treatment of roadbed:</b>				
		a) Roadbed preparation and compaction of material to:				
		i) Minimum of 90% of modified AASHTO maximum density	m³	0		Rate Only
2.9.2	<b>SABS 1200 ME</b>	<b><u>SUBBASE</u></b>				
		a) Construct the 150mm gravel wearing course G7 with material excavated in all materials from borrow pits identified by the Contractor and Compaceted to 93% MOD AASHTO	m³	0		Rate Only
<b>TOTAL SCHEDULE 2 CARRIED FORWARD TO SUMMARY</b>						

## UNIVEN CAMPUS WATER UPGRADE PHASE 2 (including intalation of tanks per student residence)

PROJECT NUMBER: IN/022/2020

IN/022/2020

**SCHEDULE 3 : CONCRETE (STRUCTURAL) FOR RESERVOIR**

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	TENDER	RATE	AMOUNT
<b>3.1</b>	<b>SABS 1200 G</b>	<b><u>CONCRETE WORK</u></b>				
3.1.1		Concrete				
	8.4.2	Blinding layer in class 15MPa/19mm to a minimum thickness of 50mm underneath structures	m <sup>2</sup>	0		Rate Only
3.1.2	8.4.3	<u>Strength concrete - class 35MPa/19mm</u>				
		i) Floor slabs and footings	m <sup>3</sup>	112		
		ii) Walls	m <sup>3</sup>	39		
3.1.3	8.4.3	<u>Strength concrete - class 15MPa/19mm Mass concrete to (provisional):</u>				
		i) All structures at reservoir	m <sup>3</sup>			Rate Only
		ii) Areas too small for backfilling in soil raft to be filled with mass concrete	m <sup>3</sup>			Rate Only
<b>3.2</b>	<b>SABS 1200 G</b>	<b><u>CONCRETE: Formwork</u></b>				
3.2.1	8.2.2	<u>Formwork - Smooth:</u>				
		a) <u>Vertical plane</u>				
		i) Walls	m <sup>2</sup>	410		
3.2.2		b) <u>Normal Narrow widths (up to 300mm wide)</u>				
		i) Floor slabs and footings	m	81		
<b>3.3</b>		<b><u>REINFORCEMENT</u></b>				
3.3.1	8.3.1	Reinforcement, high tensile steel	t	21.00		
3.3.2	8.3.1	<u>Reinforcement, mild steel</u>	t	5.00		
3.3.3	8.3.2	High tensile welded mesh - Ref No 395 (Provisional)	m <sup>2</sup>	20.00		
<b>3.4</b>	8.4.4	<b><u>Unformed surface finish</u></b>				
		a) Wood floated finish	m <sup>2</sup>	294		
		b) Steel floated finish	m <sup>2</sup>			Rate Only
<b>3.5</b>	<b>SABS 1200 HA &amp; PSHA</b>	<b><u>STRUCTURAL STEELWORK (Sundry Items)</u></b>				
3.5.1		<u>Flat bars</u>				
		a) 100 x 8mm thick flat bar	m	266		
<b>TOTAL SCHEDULE 3 CARRIED FORWARD TO SUMMARY</b>						

UNIVEN CAMPUS WATER UPGRADE PHASE 2 (including intalation of tanks per student residence)

PROJECT NUMBER: IN/022/2020

IN/022/2020

SCHEDULE 4 : RESERVOIR INTERCONNECTING PIPEWORK

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	TENDER	RATE	AMOUNT
<b>4.1</b>	<b>SABS</b>	<b><u>EXCAVATION (PIPE LINE)</u></b>				
4.1.1	8.3.2a	<u>Excavate in all materials for trenches for 250 DN pipes and smaller. Rates to include backfill, compact and dispose of surplus material</u> a) Up to 1,0 m deep	m	127		
4.1.2	8.3.2b	<u>Extra-over item 2.2 and 2.3 for:</u> a) Intermediate excavation (Provisional)	m <sup>3</sup>	0		Rate only
		a) Hard rock excavation (Provisional)	m <sup>3</sup>	0		Rate only
4.1.3	8.3.2c	Excavate and dispose of unsuitable material from trench bottom (provisional)	m <sup>3</sup>	23		
4.1.4	8.3.3	<u>Excavation ancillaries:</u>				
4.1.4.1	8.3.3.1	Make up deficiency in backfill material (Provisional) a) By importation from designated borrow pit identified by the Contractor	m <sup>3</sup>	11		
4.1.5	8.3.3.4	<u>Overhaul:</u> a) Limited overhaul (0,5 to 1,0km) (Provisional)	m <sup>3</sup>	19		
		a) Long overhaul (Provisional)	m <sup>3</sup> /km	114		
<b>4.2</b>	<b>SABS</b>	<b><u>PIPE BEDDING</u></b>				
4.2.1	8.2.1	<u>Selected granular material for bedding cradle from:</u> a) Trench excavation	m <sup>3</sup>	114		
4.2.2	8.2.1	<u>Provision of selected fill material from:</u> a) Trench excavation	m <sup>3</sup>	34		
<b>4.3</b>	<b>SABS</b>	<b><u>MEDIUM PRESSURE PIPELINES</u></b>				
<b>4.3.1</b>	<b>1200 L</b>	<b><u>uPVC PRESSURE PIPE</u></b>				
4.3.1.1	8.2.1	<u>Supply, lay, bed, test and sterilize the following uPVC pressure pipes (complete with coupling):</u> a) 250 mm uPVC Class 12 b) 160 mm uPVC Class 12 b) 110 mm uPVC Class 12	m m m	55 35 37		
<b>4.3.2</b>	8.2.2	<b><u>uPVC Specials (class 16)</u></b> Extra over Item 3.1.1 supply, lay and bed specials, including cutting and machining of pipes:				
4.3.2.1		<u>Bends</u> a) 250 mm dia x 90 degrees b) 250mm dia x 22.5 degrees c) 160 mm dia x 90 degrees d) 160 mm dia x 22.5 degrees	no no no no	2 1 1 1		
<b>TOTAL CARRIED FORWARD</b>						

**UNIVEN CAMPUS WATER UPGRADE PHASE 2 (including intalation of tanks per student residence)**
**PROJECT NUMBER: IN/022/2020**
**IN/022/2020**
**SCHEDULE 4 : RESERVOIR INTERCONNECTING PIPEWORK**

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	TENDER	RATE	AMOUNT
<b>TOTAL BROUGHT FORWARD</b>						
4.3.2.2		e) 110 mm dia x 90 degrees	no	2		
		f) 110 mm dia x 22.5 degrees	no	1		
		<b><u>Equal Tee</u></b>				
		a) 250 mm dia	no	1		
		b) 160 mm dia	no	1		
		c) 110 mm dia	no	1		
4.3.3	<b>SABS 1200L</b>	<b><u>CONCRETE THRUST BLOCKS</u></b>				
4.3.3.1	8.2.11	<u>Concrete thrust block configuration</u>				
		a) Concrete thrust block up to 0.5 m³	no	6		
		b) Concrete thrust block up to 1.0 m³	no	2		
4.3.4	<b>SABS 1200 L</b>	<b><u>STEEL PIPES, SPECIALS AND FITTINGS</u></b>				
4.3.4.1	8.2.5	Supply, fabricate, deliver to site and install the following pipes and specials Refer also PSL 4.1:				
	<b>PSL 4.1</b>	Wall thickness of steel pipe to be 4,5 mm minimum. Flanges to be drilled to SANS 1123 Table 1600/3.				
4.3.4.2		<b><u>Top Inlet pipework (Drawing L3142/C/8/003):</u></b>				
		a) Pipe item number 1.1 (150mm Ø MS Flanged Pipe=500mm Long)	no	1		
		Pipe item number 1.2 (150mm Ø MS Flanged Pipe=5000mm Long)	no	1		
		b) Long)	no	1		
		c) Pipe item number 1.3(150mmØ 90° bend)	no	2		
		d) Pipe item number 1.4 (160 x 150mm Ø Reducing Flange adaptor)	no	1		
		e) Pipe item number 1.5(150mm Ø MS Flanged Pipe=1320mm Long)	no	1		
4.3.4.4		<b><u>Scour Outlet pipework (Drawing L3142/C/8/003):</u></b>				
		a) Pipe item number 2.1(100mmØ 90° bend)	no	2		
		b) Pipe item number 2.2 (100mm Ø MS Flanged Pipe=500mm Long)	no	1		
		c) Pipe item number 2.3 (100mm Ø MS Flanged Pipe=600mm long)	no	1		
		d) Pipe item number 2.4 (100mmØ Long Radius bend)	no	1		
		e) Pipe item number 2. 5 (100mm Ø standard Flanged adaptor)	no	1		
		Pipe item number SC 6 (100mmØ Flanged RSV Gate Valve or similar approved)	no	1		
4.3.4.2		<b><u>Bottom Inlet pipework (Drawing L3142/C/8/003):</u></b>				
		Pipe item number 3.1 (150mm Ø Flanged RSV Gate Valve or similar approved)	no	1		
		a)	no	1		
<b>TOTAL CARRIED FORWARD</b>						

**UNIVEN CAMPUS WATER UPGRADE PHASE 2 (including intalation of tanks per student residence)**
**PROJECT NUMBER: IN/022/2020**
**IN/022/2020**
**SCHEDULE 4 : RESERVOIR INTERCONNECTING PIPEWORK**

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	TENDER	RATE	AMOUNT
<b>TOTAL BROUGHT FORWARD</b>						
4.3.4.5		Pipe item number 3.2 (150mm Ø MS Flanged , Length to be determined on site)	no	1		
		c) Pipe item number 3.3 (150mm Ø standard Check Valve)	no	1		
		<b><u>Outlet pipework (Drawing L3142/C/8/003):</u></b>				
		a) Pipe item number 4.1 (250mmØ 90° bend)	no	2		
		b) Pipe item number 4.2 (250mm Ø MS Flanged Pipe=1000mm Long)	no	1		
		c) Pipe item number 4.3 (250mm Ø MS Flanged Pipe=800mm long)	no	1		
		Pipe item number 4.4 (250mmØ Flanged RSV Gate Valve or similar approved)	no	1		
		e) Pipe item number 4.5 (250mm Ø standard Flanged adaptor)	no	1		
		f) Pipe item number 4.6 (250mm Ø MS Y-Junction piece)	no	1		
		g) Pipe item number 4.7 (250mm Ø long radius bend)	no	1		
4.3.4.3		<b><u>Overflow pipework (Drawing L3142/C/8/003):</u></b>				
		a) Pipe item number 5.1 (100mmØ 90° bend)	no	2		
		b) Pipe item number 5.2 (100mm Ø MS Flanged Pipe=650mm Long)	no	1		
		Pipe item number 5.3 (100mm Ø MS Flanged Pipe=6100mm Long)	no	1		
		d) Pipe item number 5.4(100mm Ø MS Flanged Pipe=550mm Long)	no	1		
<b>TOTAL SCHEDULE 4 CARRIED FORWARD TO SUMMARY</b>						

UNIVEN CAMPUS WATER UPGRADE PHASE 2 (including intalation of tanks per student residence)

PROJECT NUMBER: IN/022/2020

IN/022/2020

SCHEDULE 5 : STRUCTURAL STEEL TANK

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	TENDER	RATE	AMOUNT
5		<b>RESERVOIR</b>				
5.1	8.2.5	<b>SECTION STEEL TANK</b>				
5.1.1		Supply, design and erect new 1.5Ml sectional steel tank on concrete standcomplete with inlet, outlet, overflow and scour connections, access ladder (outside and inside) with protection, access cover, air vent and level indicator, complete as detailed. <b>Installed by the sub contractor.Drawing L/3142/C/8/001</b>	Prov Sum	1.00	1,956,531.50	R 1,956,531.50
5.1.2		Contractors mark up on item 5.1.1, for making necessary applications, payments and coordinating with nominated sub--contractor for the supply and installation of the tanks	%	1,956,531.50		
5.2	<b>SABS 1200 G</b>	<b>MISCELLANEOUS</b>				
5.2.1	<b>PSHA 2.1</b>	<b><u>Watertight testing of structures</u></b> i) Structural Steel tank	Sum	1.00		
5.2.2	<b>PSHA 2.2</b>	<b><u>Disinfection of reservoir</u></b> i) Disinfection and cleaning of Structural steel Tank	Sum	1.00		
<b>TOTAL SCHEDULE 5 CARRIED FORWARD TO SUMMARY</b>						

**UNIVERSITY OF VENDA**

**UNIVEN CAMPUS WATER UPGRADE PHASE 2 (including intalation of tanks per student residence)**

**PROJECT NUMBER: IN/022/2020**

**SUMMARY OF SCHEDULE OF QUANTITIES**

<b>SCHEDULE</b>	<b>DESCRIPTION</b>	<b>IN/022/2020</b>
SCHEDULE 1	PRELIMINARY AND GENERAL	R
SCHEDULE 2	RESERVOIR EARTHWORKS	R
SCHEDULE 3	CONCRETE WORKS	R
SCHEDULE 4	RESERVOIR INTERCONNECTING PIPEWORK	R
SCHEDULE 5	STEEL TANK	R
<b>SUB TOTAL A</b>		R
CONTINGENCIES ( 8.0% OF SUBTOTAL A) The sum provided here is under the sole control of the Engineer and may be deducted in whole or in part.		R
<b>SUB TOTAL B</b>		R
VALUE-ADDED TAX ( 15% ON SUBTOTAL B)		R
<b>TOTAL TENDER AMOUNT ( C)</b>		R



## **PART C3: SCOPE OF WORK**

### **C3.1: STANDARD SPECIFICATIONS**

### **C3.2: PROJECT SPECIFICATIONS**

### **C3.3: PARTICULAR SPECIFICATIONS**

# UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)

**BID NO : IN/022/2020**

## **C3: SCOPE OF WORK**

### **C3.1 STANDARD SPECIFICATIONS**

### **C3.2 PROJECT SPECIFICATIONS**

#### **PART A: GENERAL**

PS1	Project Description
PS2	Description of the Site and Access
PS3	Details of the Works
PS4	Construction Management Requirements
PS5	Security Clearance of Personnel
PS6	Supply of Materials
PS7	Execution of Works

#### **PART B: AMENDMENTS TO THE STANDARD SPECIFICATIONS**

PSA	SABS 1200 A: GENERAL
PSAB	SABS 1200 AB: EMPLOYER'S AGENT OFFICE
PSC	SABS 1200 C: SITE CLEARING
PSD	SABS 1200 D: EARTHWORKS
PSDB	SABS 1200 DB: EARTHWORKS (PIPE TRENCHES)
PSG	SABS 1200 G: CONCRETE (STRUCTURAL)
PHA	SABS 1200 HA: STRUCTURAL STEELWORK (SUNDRY ITEMS)
PSL	SABS 1200 L: MEDIUM PRESSURE PIPELINES
PSLB	SABS 1200 LB: BEDDING (PIPES)

### **C3.3 PARTICULAR SPECIFICATIONS**

SECTION EMP : ENVIRONMENTAL MANAGEMENT SPECIFICATION

SECTION OHS: PRE-CONSTRUCTION HEALTH AND SAFETY SPECIFICATION

# UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)

BID NO : IN/022/2020

## C3.1 STANDARD SPECIFICATIONS

The standard specifications on which this contract is based are:

SABS 1200 A 1986	:	General
SABS 1200 AB 1986	:	Employer's Agent 's Office
SABS 1200 C 1980 (Amended 1982)	:	Site Clearance
SABS 1200 D 1988 (Amended 1990)	:	Earthworks
SABS 1200 DB 1989	:	Earthworks (Pipe Trenches)
SABS 1200 DK 1996	:	Gabions and Pitching
SABS 1200 G 1982	:	Concrete (Structural)
SABS 1200 HA 1982	:	Structural Steelwork (Sundry items)
SABS 1200 L 1982	:	Medium Pressure Pipelines
SABS 1200 LB 1983	:	Bedding (Pipes)

(Note: "SABS" has been changed to "SANS"; the SABS 1200 specifications are due to be replaced in the foreseeable future by SANS 1200)

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 1921 – 1 (2004)	:	Construction and Management Requirements for Works Contracts Part 1: <i>General Engineering and Construction Works</i>
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# **UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)**

**BID NO : IN/022/2020**

## **C3.2: PROJECT SPECIFICATIONS**

### **STATUS**

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

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

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

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

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

## **C3.2 PROJECT SPECIFICATIONS**

### **PART A: GENERAL**

#### **PS1 PROJECT DESCRIPTION**

The UNIVERSITY OF VENDA envisaged the UNIVEN CAMPUS WATER UPGRADE PHASE 2 (Including Installation of Tanks Per Student Residence) and this contract comprises the construction of the following work:

- ◇ Construction of Bulk earth works and Soil raft
- ◇ Concrete works for the foundation
- ◇ Construction of 1.5 Mℓ Structural steel tank on concrete plinth/walls
- ◇ Interconnecting pipe works
- ◇ Connection to existing Infrastructure.
- ◇ Access road to the tanks

#### **PS2 DESCRIPTION OF THE SITE AND ACCESS**

##### **2.1 Location of site**

The limits of the project are as shown on the locality plan bound into the book of drawings to be received together with this document.

This project is situated in the University of Venda, Thohoyandou Campus.

##### **2.2 Access to site**

Access to the site can be obtained from the Punda Maria Road.

The contractor shall be responsible for the maintenance and reinstatement of damage caused by him or his Agents/deliveries to vehicular access tracks and rights of way. No damage to fauna and flora located outside the limits of the construction will be permitted on the contract.

The contractor shall take cognizance of the aforementioned items concerning roads and tracks and allow for any costs in his bid under the relevant section in the Bill of Quantities.

#### **PS3 DETAILS OF THE WORKS**

A brief detail of the works for which this specification is applicable is as follows:

##### **3.1 Proposed steel tank**

The proposed steel tank is to be a rectangular structure with a total volume of 1.5 Mℓ. The steel tank is to have inlet, outlet, overflow and scour connection and Access ladder.

Pipe works to this opening is to Constructed as well to ensure functionality of the tank. Interconnecting pipe work to the existing in the form of Upvc pipe work will also be construed.

### 3.2 Bulk Earth works

The works will consist of Clear & grub and layers constructed of G7 materials obtained either from the identified borrow pit or commercial sources. Layer works to be constructed in 150mm thickness.

The table below depicts the minimum required specification on the material and compactions required on the earthworks to be constructed.

MATERIAL REQUIREMENTS							
Layer no.	Layer Thickness	Layer Description	Compaction (% of MOD AASHTO)	P.I. (Max)	G.M. (Min)	CBR at % MOD AASHTO	UCS (kPa) at % MOD AASHTO
1	150mm	G7 Natural Gravel	95%	2GM + 10	1.2	25	-

### 3.2 Nature of ground conditions and subsoil conditions

The site is covered with 300 to 400mm reddish brown clay with roots. The reddish clay overlies Basalt, which is part of the Sibasa Formation of the Beit Bridge Complex.

The area is drained entirely by means of surface flow to the Dzindi River which later drains to the more significant Luvuvhu River. The area falls into the catchment area of the Luvuvhu River. The area is approximately 6.6km north-west of the Luvuvhu River.

### 3.3 Climatic conditions

The area is located in the summer rain fall zone of the Republic of South Africa. The mean annual precipitation of the area is approximately 794 mm according to the weather station at Sibasa. The maximum temperature seldom rises above 36 degrees Celsius and the minimum seldom reach -2 degree Celsius.

### 3.5 Labour recruitment conditions

The recruitment of the local Labour can be done through the University of Venda.

### 3.6 Construction in confined Areas

It may be necessary for the Contractor to work within confined areas. Except where provided for in the specifications, no additional payment shall be made for work done in restricted areas. In certain places the width of the fill material may decrease to zero and the working space may be confined. The method of construction in these confined areas largely depends on the Contractor's constructional plant.

However, the Contractor shall note that, unless provided for in terms of the scheduled payment items in the SABS 1200 Standard Specifications or these project specifications, measurement and payment shall be in accordance with the specified cross sections and dimensions only, irrespective of the method used for achieving these cross sections and dimensions, and that the bid rates and amounts shall include full compensation for all special equipment and construction methods and for all difficulties encountered when working in confined areas and narrow widths, and at or around obstructions, and that no extra payment shall be made nor shall any claim for additional payment be considered in such cases.

## **PS4 CONSTRUCTION AND MANAGEMENT REQUIREMENTS**

### **4.1 General**

The Contractor is referred to **SANS 1921: 2004 parts 1, 2 and 3: Construction and Management Requirements for Works Contracts**. These specifications shall be applicable to the contract under consideration and the Contractor shall comply with all requirements relevant to the project.

Certain aspects however require further attention as described hereafter.

### **4.2 Drawings** *(Read with SANS 1921 – 1: 2004 clauses 4.1.7; 4.1.11 and 4.1.12)*

The reduced drawings form part of the bid documents as mentioned under Part T1 and shall be used for bidding purposes only.

The contractor shall be supplied with three complete paper copies of the construction drawings free of charge. The Contractor shall at his own expense re-produce further paper prints required for the construction of the work.

At the completion of the Contract, the Contractor shall return to the Employer's Agent all drawings, provided or made, during the contract period.

Any information which the Contractor has control over and which is required by the Employer's Agent Representative to complete the as-built drawings shall be made available to the Employer's Agent Representative before the Certificate of Completion is issued.

Only written dimensions may be used. Dimensions are not to be scaled from drawings unless ordered by the Employer's Agent. The Employer's Agent will supply all figures / dimensions which are not shown on the drawings. The levels or dimensions given on the drawings are subject to confirmation on site. The Contractor shall submit all levels and dimensions to the Employer's Agent for confirmation before he commences with any structural construction work. The Contractor shall also check all dimensions which are given on the drawings and inform the Employer's Agent of any conflicting dimensions.

### **4.3 Responsibilities for design and construction** *(Read with SANS 1921 – 1:2004 Clause 4.2)*

**4.3.1** The responsibility strategy followed in this contract shall be A.

**4.3.2** The structural and civil Employer's Agent responsible for the design in accordance with the specification is: Endecon Ubuntu (Pty) Ltd

### **4.4 Planning, Programme and Method Statements** *(Read with SANS 1921-1:2004 clause 4.3)*

#### **4.4.1 Preliminary programme**

The Contractor shall include with his bid a preliminary programme on the prescribed form to be completed by all Tenderers. The programme shall be in the form of a simplified bar chart with sufficient details to show clearly how the works will be performed within the time for completion as stated in the Contract Data.

Tenderers may submit bids for an alternative Time for Completion in addition to a bid based on the initial bided Time for Completion. Each such alternative bid shall include a preliminary programme similar to the programme above for the execution of the works, and shall motivate his proposal clearly by stating all the financial implications of the alternative completion time.

The Contractor shall be deemed to have allowed fully in his bided rates and prices as well as in his programme for all possible delays due to normal adverse weather conditions and special non-working days as specified in the Special Conditions of Contract, in the Project Specifications and in the Contract Data.

#### **4.4.2 Programme in terms of Clause 5.6 of the General Conditions of Contract**

It is essential that the construction programme, which shall conform in all respects to Clause 5.6 of the General Conditions of Contract, be furnished within the time stated in the Contract Data. The preliminary programme to be submitted with the bid shall be used as basis for this programme.

The following must be stated on the programme:

- (a) The quantity of work applicable to each bar item as well as the rate at which the work will be completed.
- (b) A budget of the value of completed work, month by month, for the full contract period.
- (c) The critical path.
- (d) Work to be undertaken by Local Contractor (if applicable)
- (e) Training Courses
- (f) Schedule of plant and resources to be utilized

The Contractor's attention is also drawn to clause 40.3 of the General Conditions of Contract 2004.

#### **4.4.3 Time for Completion**

The Tenderer shall indicate under section C1.2.2: **Data provided by Contractor** the time within which the contract shall be completed.

#### **4.4.4 Delay in Completion**

The Contractor shall organise the Works in such a manner that no delays occur. Delays 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 Employer's Agent to order the Contractor to expedite the work should the work, in the opinion of the Employer's Agent, not progress in a satisfactory way.

#### **4.5 Quality Assurance (QA)** *(Read with SANS 1921 – 1: 2004 clause 4.4)*

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

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

#### **4.6 Management and disposal of water** *(Read with SANS 1921 - 1: 2004 clause 4.6)*

The Contractor shall pay special attention to the management and disposal of water and stormwater on the site. It is essential that all completed works or parts thereof are kept dry and properly drained. Claims for delay and for repair of damage caused to the works as a result of the Contractor's failure to properly manage rain and surface water, will not be considered.

#### **4.7 Earthworks** *(Read with SANS 1921 - 1: 2004 clause 4.10)*

##### **4.7.1 Borrow pits and spoil areas**

It is not foreseen that borrow pits will be made available to the Contractor and allowance is to be made for the importation of material from commercial sources if required.

The spoil sites shall be determined on site in conjunction with the Employer's Agent and the Employer. The Contractor shall be permitted to use only those spoil areas approved by the Employer's Agent.

Should the Contractor wish to use any other spoil area for the disposal of soil, rubble, vegetation, etc, its use shall be subject to the approval of the Employer's Agent and the landowner.



## **4.8 Testing** *(Read with SANS 1921 – 1: 2004 clause 4.11)*

### **4.8.1 Process control**

The Contractor shall arrange for his own process control tests. The Contractor will be expected to employ the services of an accredited laboratory to perform the control testing. The Contractor must submit the results of tests carried out on materials and workmanship when submitting work for acceptance by the Employer's Agent. The costs for these tests shall be deemed to be included in the relevant rates and no additional payment will be made for testing as required.

### **4.8.2 Acceptance control**

The process control test results submitted by the Contractor for approval of materials and workmanship may be used by the Employer's Agent for acceptance control. However, before accepting any work, the Employer's Agent may have his own acceptance control tests carried out by an independent laboratory. The cost of additional tests for acceptance testing shall be to the account of the client.

## **4.9 Site Establishment** *(Read with SANS 1921 - 1: 2004 clause 4.14)*

### **4.9.1 Contractor's camp site and depot**

The Contractor is responsible to provide a suitable site for his camp and to provide accommodation for his personnel, labourers, clerk of works and contracts manager.

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

The area available for the Contractor's will be indicated during the site inspection. The Contractor must take note that the other Contractor's as well as the Employer's Agent's facilities will also be in the same area. The Contractor shall conform to all local authority, environmental and industrial regulations.

### **4.9.2 Power Supply**

The Contractor shall make his own arrangements concerning the supply of electrical power at the contractor's campsite. No direct payment shall be made for the provision of electrical services. Electrical power cannot be guaranteed by the service provider. During power failures and shortages, the Contractor must make his own arrangements for the provision of electricity.

The rates bided for the relevant items in the Preliminary and General Section of the schedule shall include all costs for the establishment and maintenance of a power supply to the works.

### **4.9.3 Water Supply and Sewer**

The Contractor shall erect and maintain on the site proper ablution facilities. The Contractor shall service and maintain the facilities in a clean and hygienic state for the duration of the contract period and on completion of the works from the site.

The Contractor shall make his own arrangements concerning the supply of water and sewer disposal at the contractor's campsite. No direct payment shall be made for the provision of water or sewer disposal.

The Contractor must supply all necessary materials for the water connection at a position pointed out by the Employer's Agent. The availability of water cannot be guaranteed by the Employer and in the event of water no longer being freely available, the Contractor must make his own arrangements to acquire it. The rates bided for the relevant items in the Preliminary and General Section of the schedule shall include all costs for the establishment and maintenance of water supply to the works and the Contractor shall make his own arrangements for the possible conveyance and storage of water if necessary. The Contractor will be held responsible for any wastage of water due to negligence.

#### 4.9.4 Accommodation of Employees

No employees except for security guards will be allowed to sleep or be accommodated on the site.

No housing is available for the Contractor's employees and the Contractor shall make his own arrangements to house his employees and to transport them to site.

No informal housing or squatting will be allowed.

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

#### 4.9.5 Water for construction

The availability of water cannot be guaranteed by the Employer and in the event of water no longer being freely available, the Contractor must make his own arrangements to acquire it.

The rates bided for the relevant items in the schedule of quantities shall include all costs for the establishment and maintenance of water supply for the works and the Contractor shall make his own arrangements for the possible conveyance and storage of water if necessary. The Contractor will be held responsible for any wastage of water due to negligence.

#### 4.9.6 Facilities for the Employer's Agent

One site office as well as a meeting facility, as described under Clause PSAB1.1, is required for the Employer's Agent.

No housing is required for the Employer's Agent or his Representative.

#### 4.9.7 Telephone Facilities

Telephone and facsimile facilities are needed on the site (refer Clause PSAB2.1).

#### 4.9.8 Survey beacons *(Read with SANS 1921 - 1: 2004 clause 4.15)*

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

#### 4.10 Existing Services *(Read with SANS 1921 - 1: 2004 clause 4.17)*

The Contractor shall make himself acquainted with the position of all existing services before any excavation or other work likely to affect the existing services is commenced.

The Contractor will be held responsible for any damage to known existing services caused by or arising out of his operations and any damage shall be made good at his own expense. Damage to unknown services shall be repaired as soon as possible and liability shall be determined on site when such damage should occur.

Services belonging to the following service owners will be encountered:

SERVICE OWNER	TYPE OF SERVICE
University of Venda	Electrical/Power lines Communication cables Waterlines and reticulation within the university

Two weeks prior to commencing construction activities in a particular area, the Contractor shall also diligently enquire of University as to whether there are any other known services which have not been shown on the drawings but which may be affected by the construction activities in that area, and any such services shall be brought to the attention of the Employer's Agent immediately. The contractor shall make provision in his programme for the location and/or shifting of services.

Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to obtain approval/ Sub contractors for the relocation of the Known service requiring relocation, shall not be used as a reason to claim for extension of time or standing time and related costs.

#### **4.11 Health and Safety** (Read with SANS 1921 - 1: 2004 clause 4.18)

##### **4.11.1 General statement**

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act (OHSA) No 85 and Amendment Act No 181 of 1993, and the OHSA 1993 Construction Regulations 2014 issued on 7 February 2014 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act in the form as included in section C1.4.

##### **4.11.2 Health and Safety Specifications and Plans**

###### **(a) Employer's Health and Safety Specification**

A Health and Safety Specification is included in Section C3.3, Part PE of the bid documents as part of the Particular Specifications.

###### **(b) Tenderer's Health and Safety Plan**

The Tenderer shall submit within 14 days after award of Bid, his own documented Health and Safety Plan proposed to be implemented for the execution of the work under the contract. The Health and Safety Plan must at least cover the following:

- (i) a proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 9 to 30;
- (ii) Pro-active identification of potential hazards and unsafe working conditions;
- (iii) Provision of a safe working environment and equipment;
- (iv) Statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (*Regulation 7*);
- (v) monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided for in the Construction Regulations;
- (vi) details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 8 and other applicable regulations; and
- (vii) details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2014.

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.

#### **4.11.3 Cost of compliance with the OHS Construction Regulations**

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

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

#### **4.12 Management of the environment** (Read with SANS 1921 - 1 : 2004 clause 4.19)

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

##### **4.12.1 Natural Vegetation**

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

##### **4.12.2 Fires**

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

##### **4.12.3 Environmental Management Plan**

In addition to the above all requirements according to the Environmental Management Plan as detailed in C3.3, Particular Specifications Part C, will be adhered to.

#### **4.13 Contract Name board**

One official contract name board, as per C4.2 *Site Information: Construction Notice Board*, is required for this contract.

#### **PS5 SECURITY CLEARANCE OF PERSONNEL**

Tenderers should note that the Employer may require that Security Clearance investigations be conducted on any number of the Tenderer's personnel.

If so required, the Tenderer must remove personnel as indicated immediately and ensure that they have no access to the works or documentation or any other information pertaining the site.

The Employer shall not be liable for any cost concerning the removal of personnel or the effect thereof on the execution of the work.

#### **PS6 SUPPLY OF MATERIALS**

All material to be used in the Works is to be supplied by the Contractor.

The Contractor shall ensure that the work is not delayed due to the lack of materials on Site, by placing orders for material required under this Contract as soon as possible. No extension of time will be allowed for any delay due to the supply of materials.

Although the quantities have been carefully calculated, it must be considered as approximate only and the Contractor, before ordering any materials, should check the quantities required. The bill of quantities is provisional.

## **PS7    EXECUTION OF THE WORKS**

### **7.1    Inspection by the Employer's Agent**

No portion of the work shall be proceeded with until the Employer's Agent or his representative has examined and approved the previous stage. If any work is covered or hidden from view before the Employer's Agent or his representative has inspected the work, the Contractor shall at his own cost expose the covered or hidden work for inspection. The Contractor shall also be responsible for making good any work damaged during the uncovering.

## C3.2 PROJECT SPECIFICATIONS

### PART B: AMENDMENTS TO THE STANDARD SPECIFICATIONS

#### PSA **GENERAL (SABS 1200 A)**

#### PSA 1 **MATERIALS (Clause 3)**

##### PSA 1.1 **Standardisation mark (Clause 3.1)**

*Add the following to the Clause:*

All material delivered to the site shall bear the Official Standardisation Mark.

#### PSA 2 **PLANT (Clause 4)**

##### PSA 2.1 **Restrictions on employee accommodation (Sub-clause 4.2)**

No housing is available for the Contractor's employees. The Contractor shall make his own arrangements to house his employees.

The Employer shall place an area at the disposal of the Contractor to enable him to erect his site offices, workshops and stores. Any facilities shall comply with the requirements of the local authority. The Contractor shall provide his own fencing and site security.

#### PSA 3 **CONSTRUCTION (Clause 5)**

##### PSA 3.1 **Dealing with water (Sub-clause 5.5)**

In addition to the items as set out in Subclause 5.5, the Contractor shall also provide pumping equipment, pipes and other equipment as may be necessary.

#### PSA 4 **MEASUREMENT AND PAYMENT (Clause 8)**

##### PSA 4.1 **Fixed charge and Value Related Items (Sub-clause 8.2.1)**

*Replace the sub-clause with the following:*

"Payment shall be a lump sum to provide for the Contractor's expenses in connection with:

- (a) setting up and maintaining his organisation, camps and plant on the site;
- (b) effecting the insurance's and indemnities required in terms of the General Conditions of Contract
- (c) meeting all other general obligations and liabilities which are not specifically measured for payment in these contract documents.

The lump sum total of items (a), (b) and (c) as measured and Fixed Charge Items and time Related Items shall not exceed 15% of the nett total Bid Amount. If the Tenderer should bid a higher amount for this item it shall be reduced to the amount allowed above and all other bided prices increased in the proportion required to retain the same Nett Total Bid Amount.

The bided lump sum shall not be subject to any variation if the actual value of work done under the Contract exceeds, or falls short of, the Bid Amount, or as a result of an extension of time for completion in terms of Clause 10 of the General Conditions of Contract.

Any payment made under this item shall not be taken into account when determining whether the value of a certificate complies with the "minimum amount of monthly certificate" laid down in the Appendix.

Before any payment is made under this item the Contractor shall satisfy the Employer's Agent that he has provided on site an establishment and plant of good quality and in value exceeding that of the first instalment. The Contractor may be asked to furnish documented proof that he owns the offices and plant on site, the value of which should exceed the amount claimed in the first certificate. In the event that the Contractor cannot satisfy the Employer's Agent as to the value or ownership, the Employer's Agent shall have the right to withhold part of any payments to be made under this item, until the Works have been completed.

Payment of the lump sum shall be made in three separate instalments as follows:

- (a) The first instalment, 50% of the lump sum, will be paid in the first payment certificate after the Contractor has met all his obligations under this sub-clause and has made a substantial start on construction in accordance with the approved programme.
- (b) The second instalment, 35% of the lump sum, will be paid when the value of the work done reaches one half of the Nett Total Bid Amount.
- (c) The third and final instalment, 15% of the lump sum, will be paid when the works have been completed and the Contractor has fulfilled all requirements of this sub-clause. No payment for the scheduled Fixed Charge Items for this contract will not be made until the requirements regarding and the erection of name boards have been met."

#### **PSA 4.2      Time-Related Items (Sub-clause 8.2.2)**

*Replace this sub-clause with the following:*

Subject to the provisions of 8.2.3 and 8.2.4, payment of item 8.4 (time-related item) will take place in equal monthly amounts, calculated on the bided amount for the item, divided by the contract period in months, with the understanding that the total of the monthly payments which was paid for this specific item does not exceed the proportion that the progress of the works to date bears in relation to the works as a whole.

Should the Employer's Agent grant an extension of time, the Contractor is entitled to an increase in the amount bided for time related items, and this increase must be kept in the same proportion to the original bid amount as the extension of time is to the original time of the completion of the works.

Payment for such increased amounts will be considered as full compensation for all time related, provisional and general costs which arise as a result of the extension of time.

#### **PSA 4.3      Exposing of existing services (add the following Sub-clause 8.9)**

*Add the following new pay item:*

##### **Item:**

Excavation by hand in all materials to expose existing services Unit: m<sup>3</sup>

The bided sum must include full compensation for all hand excavation as per the dimension approved by the Employer's Agent for the locating, exposing and moving of existing services. Excavation outside of approved dimensions will not be paid. The rate must also include for backfill and compaction to 90% of mod AASHTO density and, if applicable, the removal of excess material not used for backfill, the securing of excavations, for handling surface and subsurface water, for protection of existing services and for any other activity necessary to complete the work. Free haul of 1,0 km will be applicable on the transport of excess material.

No distinction will be made between classes of material or types of services.

Note: The Contractor must provide sufficient supervision over labourers when services are exposed.

**PSA 4.4      Occupational Health and Safety (add the following Sub-clause 8.10)**

*Add the following new pay items:*

**Item:**

Provision for the cost related to the Occupational Health and Safety Act, 85 of 1993, and the relevant Regulations:

- |    |  |           |
|----|--|-----------|
| a) | Preparation of a Health & Safety Plan  | Unit: Sum |
| b) | Compilation of a Risk Assessment prior to Construction   | Unit: Sum |
| c) | Health & Safety induction Training of employees  | Unit: Sum |
| d) | Compilation and keeping up to date the Health & Safety file which shall include all documentation required in terms of the act | Unit: Sum |
| e) | Implementation of the Health and Safety Plan over the entire construction period   | Unit: Sum |

The bided sum shall include full compensation for providing the above services as required from the Occupational Health & Safety Act. The rate shall include all related costs incurred by the Act, remuneration of personnel, trainers, etc. and equipment required for the execution of the required services as depicted by the Act. The bided amount for items a, b, c and d shall only be paid on the successful completion of the task as approved by the client. The bided amount for item e shall be paid on a monthly basis.

**PSA 4.5      Facilities for Employer's Agent (Fixed Charge) (Sub-clause 8.3.2.1)**

**PSA 4.5.1      Furnished office (Sub-clause 8.3.2.1 a)**

*Add the following to the pay item:*

The rate shall include for all costs to provide one office and a meeting facility as described under PSAB 1.1 and PSAB .2.2.

**PSA 4.5.2      Telephone (Sub-clause 8.3.2.1 b)**

*Add the following to the pay item:*

The rate shall include for all costs to provide telephone and fax facilities as described under PSAB 2.1.

**PSA 4.6      Facilities for Employer's Agent (Time Related) (Sub-clause 8.4.2.1)**

**PSA 4.6.1      Furnished office (Sub-clause 8.4.2.1 a)**

*Add the following to the pay item:*

The rate shall include for all costs to maintain one office and a meeting facility as described under PSAB 1.1 and PSAB .2.2.

**PSA 4.6.2      Telephone (Sub-clause 8.4.2.1 b)**

*Add the following to the pay item:*

The rate shall include for all costs to maintain the telephone and fax facilities as described under PSAB 2.1.

**PSA 4.6.3      Survey assistant and materials (Sub-clause 8.4.2.1 d)**

*Add the following to the pay item:*

The Contractor shall make available for the duration of the contract period, when required by the Employer's Agent, one skilled and one unskilled survey labourers.



**PSAB                    EMPLOYER'S AGENT 'S OFFICE (SABS 1200 AB)**

**PSAB 1                MATERIALS (Clause 3)**

**PSAB 1.1            Office building(s) (Sub-clause 3.2)**

*Add the following to the Clause:*

In addition to the requirements of Sub-clause 3.2 the following is required:

**OFFICE BUILDING:**

One (1) office as well as a meeting facility is required for the Employer's Agent on site. The meeting facility to be of sufficient size and to have a table and chairs to house twelve (12) people comfortably.

**CARPORTS:**

A carport to provide for two motor vehicles shall be provided adjacent to the Employer's Agent 's office for his exclusive use. The carport shall have side cladding and shall be constructed in such a way as to shelter the parked vehicles from the prevailing winds and rain.

**ABLUTION AND LATRINE FACILITIES:**

The Contractor shall, in addition to catering for his own staff, provide ablution and latrine facilities adjacent to the Employer's Agent 's office for the exclusive use of the Employer's Agent and his staff. The facilities shall consist of a shower with locker room, hand washbasin and a latrine. The facility shall be maintained in a clean and hygienic condition.

**HEATING AND COOLING FACILITIES: (Sub-clause 3.2(j))**

The Contractor shall supply and install in the offices and meeting facility an air-conditioning unit with cooling and heating capacity of at least 2 500 k/cal.

**REFRESHMENTS FOR THE EMPLOYER'S AGENT AND HIS STAFF:**

Tea and/or coffee shall be provided by the Contractor for the Employer's Agent, and the Employer's Agent 's staff, at reasonable intervals throughout any working day for the duration of the construction period.

**PSAB 2                PLANT (Clause 4)**

**PSAB 2.1            Telephone (Sub-clause 4.1 and 5.4)**

*Add the following to the Clause:*

In terms of Sub-clause 4.1 a telephone, if possible, shall be installed in the Employer's Agent 's Office.

The Contractor shall provide the Employer's Agent with a cellular phone for the duration of the Contract.

The Contractor shall arrange for the installation of the telephone and/or provision of cellular phone and the full amount of telephone accounts shall be payable by the Contractor for the duration of the construction period. The Contractor will be required to bear the cost of the telephone calls made by the Employer's Agent.

A facsimile facility, which can transmit and receive must be installed in the Employer's Agent 's Office and shall be linked to an individual telephone line (cellular line, if required). The Contractor shall arrange for the supply and installation of the fax machine. The cost of the supply of the fax facility shall be included in his bided rate. The Contractor will be required to bear the cost of transmissions and printing paper.

Upon completion of the Works the ownership of the facsimile facility shall revert to the Contractor.

**PSAB 2.2      First Aid Kit and Protective Clothing (additional Sub-clause 4.2)**

*Add the following Clause:*

The Contractor shall provide to the Employer's Agent a first-aid kits to deal with accidents, illnesses and snakebite which may occur during the normal course of Site operations.  
The Contractor shall provide two sets of safety helmets and rubber boots for the exclusive use of the Employer's Agent and his staff.

**PSC                    SITE CLEARING (SABS 1200 C)**

**PSC 1                CONSTRUCTION (Clause 5)**

**PSC 1.1            General (add the following sub-clause 5.9)**

The areas where work is to be carried out must be kept clean for the duration of the contract. All rubbish must be removed without delay and the site must be left clean and tidy on completion of the service.

**PSC 1.2            Dumping site (add the following sub-clause 5.10)**

No dumping is allowed on site other than at the designated and approved fill areas.

**PSC 1.3            Cutting of trees (sub-clause 5.2)**

*Add the following to the clause:*

No trees may be removed without prior permission from the Employer's Agent.

**PSC 1.4            Demolition of structures (add the following sub-clause 5.11)**

**PSC 1.4.1        Demolition of concrete**

The Contractor is to ensure that forces caused by the demolition process do not induce stress on the remaining parts of the structures or on other existing structures that may cause cracking. Use is to be made of suitable energy absorbing materials during the demolition process. The structures/sections of structures to be demolished will be indicated by the Employer's Agent or on drawings. The strength of the existing reinforced concrete is to be expected to be in excess of 30 MPa.

The Contractor may only proceed to cut reinforcing upon written instruction of the Employer's Agent.

The Contractor is to submit a proposed work method and planning schedule for each type of demolition to the Employer's Agent for approval before work commences.

The following types of structures are to be demolished:

- Mass concrete
- Reinforced concrete demolition
- Brickwork.

The breaking of concrete will be to lines as indicated on the drawings.

Where pipe work cast into existing concrete is to be removed, the section removed is to be done in a neat manner and to straight lines.

The following methods of demolition will not be allowed:

- The use of thermal lancing
- The use of any explosion method
- The use of poisonous chemicals
- The following methods of demolition may be acceptable:
  - Diamond impregnated wire or blade sawing
  - Jack hammers
  - Wood peckers or nibblers
  - Hydro cutting
  - Air cutting
  - Any other method as indicated by the Engineer

## **PSC 1.4.2      Demolition of Building Work**

The Contractor is to ensure that the demolition process does not induce stresses on the existing structure that may cause cracking of the concrete or brickwork. Use is to be made of energy absorbing materials under the demolition area to protect existing surfaces. The building work to be demolished will be indicated by the Engineer or on the drawings. All material to be stored in a designated store and no materials shall be taken off site without consent from the Engineer or Employer.

## **PSC 2              MEASUREMENT AND PAYMENT**

### **PSC 2.1          Clear & Grub (Clause 8.2.1)**

*Add the following to the clause:*

**Item:**

Clear site.

Unit: m<sup>2</sup>

“The rate shall include for transport and disposal of material and debris to unspecified site and disposal thereof.”

### **PSC 2.2          Demolition of structures (add the following sub-clause 8.2.11)**

#### **Demolition of concrete**

*Add the following new pay items:*

**Item:**

Bulk reinforced concrete demolition:

- a) Demolition of complete structure
- b) Demolition of section of structure

Unit: m<sup>3</sup>

Unit: m<sup>3</sup>

Mass concrete demolition:

- a) Mass concrete demolition
- b) Removal of pipe work cast into concrete

Unit: m<sup>3</sup>

Unit: m<sup>3</sup>

Separate items will be scheduled for different pipe diameters.

The rates for the above shall include, where applicable, all plant, labour, the protection of the structures and equipment, the trimming of the concrete to the lines as indicated on the drawings, scaffolding as may be necessary to prop floors, propping of walls, demolition and removal of concrete, the cutting and removal of reinforcement, the removal of pipe work, the disposal of all concrete, pipe work, rubble and waste material to an approved disposal site and everything else that may be necessary to complete the works.

#### **Demolition of Building Work**

*Add the following new pay items:*

**Item:**

- a) Demolition of brick work

Unit: m<sup>3</sup>

The rates for the above shall include, where applicable, all plant, labour, protection of the existing structures, scaffolding, demolition and removal of building work, removal of windows/doors, delivery to the Client's stores, the disposal of all rubble and waste material to an approved disposal site and everything else that may be necessary to complete the works.

**PSD                    SABS 1200 D: EARTHWORKS**

**PSD 1                CONSTRUCTION (Clause 5)**

**PSD 1.1            Excavation for working space (Sub-clause 5.2.2.1 b) and c))**

*Add the following to the clause:*

Other than for the sides of strip or pad footings or where specifically authorized by the Engineer, no concrete shall be placed against the sides of excavations.

For external concrete faces of manholes below ground level, (other than concrete placed against the sides of excavations as above) the Contractor shall over-excavate to provide sufficient working space for the erection of formwork.

Tenderers shall allow in their rates for excavation for any over-excavation required for working space.

Excavation volumes for manhole and valve chamber structures will be calculated as the nett volume of the structure below ground level after general site excavations have been completed. No additional payment shall be made for working space.

**PSD 1.2            Inspection (Sub-clause 5.2.2.1 d))**

*Add the following to the clause:*

Excavation to final level, ready to achieve a binding layer or concrete footing, shall be completed less than 24 hours before such layer or footing is cast.

The Contractor shall arrange for the inspection by the Employer's representative or his Representative of all surfaces immediately before casting concrete.

**PSD 1.3            Over-excavation to sides of excavation (Sub-clause 5.2.2.1 e))**

*Add the following to the clause:*

Where the sides of excavations are over-excavated to establish safe slopes, provide access to excavations, or for other purposes not specifically required by the Employer's representative, such over-excavation shall be backfilled with material as required by the Employer's representative and compacted to a minimum density of 93% Mod AASHTO.

No separate payment will be made for this work.

**PSD 1.4            Over-excavation (Sub-clause 5.2.2.1 e))**

*Add the following to the clause:*

If the material in the bottom of an excavation is loosened, or if there is any over-excavation, any loose or disturbed soil shall be removed, and the over-excavation shall be replaced by mass concrete mix 15 MPa.

No separate payment will be made to replace over-excavation with concrete. No separate payment will be made for over excavation as defined in PSD 1.3 and PSD 1.4.

**PSD 1.5            Trimming of surface of bulk earthworks (add the following sub-clause 5.2.2.1 f))**

Where blinding, mass or structural concrete is to be cast or where precast elements are to be placed on surfaces established by bulk earthworks, the Contractor shall:

- a) Arrange his bulk excavation operation so that over-excavation is avoided, taking into account the requirements in PSD 1.3.

- b) Over-fill embankments while placing fills as necessary to allow for trimming and arrange his compaction operations to ensure that the specified density is achieved throughout the finally trimmed embankment; and
- c) Shortly before casting concrete or placing precast elements, carefully remove the final layer and trim such surfaces to the design levels and profiles within Grade II degree of accuracy.

**PSD 1.6      Disposal of surplus material (Sub-clause 5.2.2.3)**

*Add the following to the clause:*

All surplus material from bulk excavation for concrete units and for pipework shall be dumped, levelled and spread on site at the areas as indicated by the Employer's representative.

**PSD 1.7      Free haul (Sub-clause 5.2.5.1)**

*Replace the following:*

".... without separate compensation shall be **0,5 km**"

*With the following:*

".... without separate compensation shall be **1,0 km**"

The implication of this is that limited overhaul is no longer applicable and is regarded as free haul.

**PSD 2      MEASUREMENT AND PAYMENT (Clause 8)**

**PSD 2.1      Restricted excavation (add the following to sub-clause 8.3.3)**

*Add the following to this item:*

The volume of restricted excavation will be calculated from the net plan dimensions and the difference between the original ground profiles (or terraces), and the blinding layer (or no-fines) levels shown on the drawings. On the sides, the volume will only be calculated to the outside dimensions of the concrete structures. No additional payment will be made for the provision of working space, although it will be provided. As the rate for restricted excavation (as described under sub-clause 8.3.3) includes for the backfilling and compaction of the material, this rate will subsequently also include for the backfilling and compaction of the working space.

**PSD 2.2      Excavate (obtain from stockpile) in all materials and backfill to 95% Mod AASHTO density (add the following to sub-clause 8.3.3)**

*Add the following to this item:*

In addition to the requirements of sub-clause 8.3.3 of SANS 1200 D, this additional clause is only for purposes of backfilling excavations using the material obtain from the stock pile on site.

The Contractor is to obtain material from the stockpile already on site and all other requirements of sub-clause 8.3.3 are still applicable (selection, loading, transportation, offloading, watering, compaction, etc.). Only material regarded as selected fill is to be used as backfill. The quantity, for payment purposes, will be calculated as the volume backfilled (on the fill section of the bulk earthworks) and not the volume excavated from the stockpile.

**PSDB                    SABS 1200 DB: EARTHWORKS (PIPE TRENCHES)**

**PSDB 1                SCOPE**

The scope of work specified under this section covers the excavation for trenches for the installation of water pipes and sewer pipes to specific depths and gradients as specified by the Employer's Agent.

**PSDB 2                CONSTRUCTION (Clause 5)**

**PSDB 2.1            Long-sections for quantities for all pipelines (add the following Sub-clause 5.11)**

After clearing, grubbing and removal of topsoil the Contractor shall co-ordinate, take levels and prepare long sections along the centre line of the entire pipeline route at intervals not exceeding 10 metres.

These he shall present to the Employer's Agent before commencing any further excavation.

On approval by the Employer's Agent, these measurements shall form the sole basis for the computation of earthwork quantities. Only on approval may the contractor commence with the excavation of the pipeline in question.

The setting out of the pipeline and taking of cross section levels will be deemed to be included in the bided rates and no extra payment will be made for it.

**PSG**                    **SABS 1200 G: CONCRETE (STRUCTURAL)**

**PSG 1**                **SCOPE OF WORKS**

This specification covers the construction of all structural concrete elements.

**PSG 2**                **CONSTRUCTION**

**PSG 2.1**            **Classification of finishes (Sub-clause 5.2.1)**

*Add the following to the sub-clause:*

Concrete surfaces which will be in contact with the natural ground or which will otherwise be covered on completion of the works, shall have a rough finish as specified in sub clause 5.2.1 (a).

Horizontal surfaces and surfaces with a slope not exceeding one vertical to two horizontals shall be finished to a wood float finish. For this finish the surface must be given a finish as specified in sub-clause 5.5.10.1 and after the concrete has hardened sufficiently, it shall be floated to a uniform surface free of trowel marks.

The finished surface shall be accurate to degree 1 as defined in sub-clause 6.2.

The visible vertical or near vertical surfaces of valve chambers, and culvert head walls or parapets shall be finished to a smooth surface, repaired and rubbed to remove projections.

The bagging of concrete surfaces to repair defects will not be permitted.

All concrete edges shall be provided with 25 mm x 25 mm chamfers.

**PSG 2.2**            **Cover (Sub-clause 5.1.3 and 5.5.1.5)**

*Add the following to the sub-clauses:*

The exposure conditions for all structures in the works shall be deemed to be “severe”. The minimum cover to reinforcement shall be 40 mm for water retaining concrete and 25 mm for all other concrete, unless otherwise specified on the Engineers drawings and bending schedules.

**PSG 2.2.1**        **Spacers for reinforcement (sub-clause 5.1.3)**

*Add the following to the sub-clause:*

Spacers of approved design include purpose made precast mortar blocks. No plastic spacer blocks will be allowed.

Where mortar blocks are used, 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 to result in blocks with a density of at least 2 300 kg/m<sup>3</sup>; and which are free from honeycombing. They shall be cured in water for at least seven days. Mortar blocks which have not been manufactured and cured strictly in accordance with these requirements or which are in any other way considered unsatisfactory by the Engineer, will be rejected and shall be removed from the Site.

**PSG 2.3**            **Strength concrete (Sub-clause 5.5.1.7)**

*Add the following sub-clause:*

The grade of strength concrete for each portion of the works will be indicated on the drawings and/or specified in the Schedule of Quantities. The grade of concrete will be designated as “Class S/A”, where “S” is the characteristic strength in Mpa and “A” is the maximum nominal size of coarse aggregate in mm.



With the exception of mixes weaker than 15 Mpa, all concrete for the Works shall be considered to be strength concrete in terms of Sub-clause 5.5.1.7.

No concrete shall be cast until the mix designs have been approved by the Engineer. The Engineer may call for revised mix designs at any stage during the contract.

Contractor to supply and test 6 No. cube test results for approval prior to commencement of the works.

Unless otherwise specified on the drawings or in the Schedule all structural concrete shall have a strength of 35 MPa.

The concrete to be used on this contract shall be as follows:

- (a) For all water retaining structures, 35/19 MPa with a minimum cement content of 360 kg/m<sup>3</sup> and a maximum of 420 kg/m<sup>3</sup>. The maximum water content shall not exceed 210 litre/ m<sup>3</sup>. The slump limits shall be 10-60mm. The water/cement ratio shall not be greater than 0,53.
- (b) For other structures not in contact with water 25/19 MPa concrete.
- (c) For anchor blocks, benching and mass concrete, 15/19 MPa concrete.
- (d) For no-fines concrete 15/19 MPa concrete

These mixes shall be designed for vibration. All data reports prepared by the Institute shall be submitted to the Engineer for information and approval.

#### ***DESIGN OF CONCRETE MIX***

The concrete mix design shall be prepared by an approved independent laboratory and submitted to the Engineer for approval.

The successful Tenderer will be required to submit samples of the fine and coarse aggregate which he proposes using, to an approved laboratory for tests regarding the suitability of such aggregates. The laboratory shall prepare trial mixes of the two stronger grades of concrete required for the contract to establish acceptable design mixes.

### **PSG 2.4      Formwork and finishes (Sub-clause 5.2)**

*Add the following to the sub-clause:*

#### ***FORMWORK TIES***

The use of sleeves through the concrete for formwork ties will not be permitted. Ties, when cast in, shall have some form of positive shear key to prevent any rotation when loosening formwork.

The formwork ties and bolt holes shall be placed with regularity and precision.

The finish of exposed concrete surfaces of concrete structures shall be "smooth" as detailed in (b) of sub-clause 5.2.1.

#### ***FILLETS AND CHAMFERS***

All internal and external angles in concrete works shall have 25 mm x 25 mm fillets and chamfers unless shown otherwise on the drawings.

The units rate tendered for formwork shall cover the cost of forming these chamfers and fillets.

### **PSG 2.5      Joints (Clause 5.5.7)**

*Add the following to the sub-clauses:*

#### **PSG 2.5.1      General**

Notwithstanding Sub-clause 2.4.3 “designated joints” shall only be joints shown on the drawings and in the Schedule. Further joints required by the Contractor because of construction limitations or any other reason, shall be deemed to be “undesignated joints”.  
The position and pattern of all joints (designated or undesignated) shall be to the Engineer’s approval.

All joints (designated or undesignated) except expansion and contraction joints shall be treated in accordance with Sub-clause 5.5.7.3.

The Contractor shall further note that the position and the type (where no identical designated joints exist) of undesignated joints shall be subject to the Engineer’s approval.

#### **PSG 2.5.2      Construction joints (Sub-clause 2.4.3 and 5.5.7)**

All joints other than expansion, contraction or other movement joints, shall be treated as follows:

As soon as practical, but not before 15 hours after placing, the joint surface shall be prepared to receive fresh concrete.

This preparation, as specified in Sub-clause 5.5.7.3 (a) to (d) shall be such as to remove all laitance or inert and strengthless material which may have formed and the specified chipping and sand blasting shall be such as to produce a roughened surface all over.

Concrete surfaces, where concreting is interrupted, shall be protected from the sun as specified in Sub-clause 5.5.8 (d).

#### **PSG 2.5.3      Construction joints (Sub-clause 5.5.7.3)**

No vertical construction joints other than those shown on the Drawings may be formed. Horizontal construction joints may be formed if the method of construction does not allow for one continuous pour. However, these construction joint will be indicated to and approved by the Engineer. It must be noted that should the Contractor wish to form a construction joint in water retaining concrete, the water tightness of this joint will remain the responsibility of the Contractor. In addition to the precautions to be taken as prescribed under clause 5.5.7.3, the Contractor may ensure water tightness by providing additional means (such as a bandage on the joints or wet to dry epoxy) to the approval of the Engineer. No additional payment will be made to the Contractor for ensuring that construction joints are watertight and the Contractor will have to include such costs in the rate for the concrete.

#### **PSG 2.5.4      Expansion and construction joints**

Expansion and contraction joints shall be made in the position and to the details shown on the drawings.

The specified filler strips shall be attached to the complete side of the straight or grooved concrete joint by means of an approved adhesive.

#### **PSG 2.5.5      Joint sealant**

All joints to be formed to the specified dimensions, properly prepared, primed and sealed with Flexothane two component polyurethane sealant obtained from African Bitumen Emulsions or similar approved and used strictly in accordance with the manufacturer’s instructions.

#### **PSG 2.6      Items to be casted in or grouted into concrete (sub-clause 5.4)**

*Add the following to the sub-clauses:*

**PSG 2.6.1      Fixing for equipment supplied by others (mechanical/electrical)**

- a) The Contractor will be responsible for the forming of pockets and grouting in of pipe items and/or holding down bolts for equipment supplied by others.
- b) Upon completion of the positioning and alignment of equipment, the Contractor shall, in collaboration with the Mechanical Contractor, grout up pipe items, pockets and base plates (subject to (c) below) necessary for the permanent installation of the equipment.
- c) Only after the Engineer is satisfied with the alignment and the level of each item of plant shall the Contractor grout up the base plate with an approved non-shrink grout.

**PSG 2.6.2      Fixing for equipment supplied under this contract**

Holding down bolts or other fixings required for the installation of hand stops, crane beams, ladders, handrails and other items supplied under the Contract, shall be provided by the Contractor. These fixings shall be cast in or grouted into pockets or installed by other means as approved by the Engineer.

Where anchor bolts are used which are installed into holes drilled into concrete or masonry, these shall be a type approved by the Engineer.

Anchor Bolts - hot dipped galvanised (mild steel). No electro plating will be allowed.

**PSG 2.6.3      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 reinforcement 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 2.6.4      Casting/Grouting in of pipes and specials**

Where indicated on the drawings, the Contractor shall provide a box-out in the wall and grout the pipe special in at a later stage. When constructing such a box-outs, reinforcement shall not be cut, but shall run through the opening. Reinforcement shall be cut and/or bent out at a later stage to suit the item being cast in. After installation of the item the remaining reinforcement shall be bent back in position.

Where box-outs for pipes/specials have been provided in the 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.

An approved non-shrink grout shall be used for the grouting in of pipes and specials after they have been positioned. The details and method statement is to be submitted to the Engineer for approval prior to the commencement of any grouting. The approval by the Engineer shall not relieve the Contractor from his obligation to provide a watertight joint between the concrete and grout used.

**PSG 2.7      Curing and protection (Sub-clause 5.5.8)**

*Add the following to the sub-clauses:*

Level or gently sloping surfaces shall be cured by one of the methods described in Sub-clause 5.5.8 (a) or (b) and vertical surfaces by the methods described in Sub-clause 5.5.8 (e) for a period of five days after casting for an ambient temperature of 5°C or above and for eight days for an ambient temperature of below 5°C.

**PSG 2.8      Concrete surfaces (Sub-clause 5.5.10)**

*Add the following to the sub-clauses:*

**PSG 2.8.1      Screed finish**

After placing and compacting, the concrete on a top (unformed) surface shall be struck off with a template to the designated grades and tamped with a tamping board to compact the surface thoroughly and to bring mortar to the surface, leaving the surface slightly ridged but generally at the required elevation. No mortar shall be added, and noticeable surface irregularities caused by the displacement of coarse aggregate shall be made good by re-screeding after the interfering aggregate has been removed or tamped.

**PSG 2.8.2      Wood float finish**

Where wood floating is ordered or scheduled, the surface shall first be given a finish as specified in PSG 2.5. and, after the concrete has hardened sufficiently, it shall be wood-floated, either by hand or machine, only sufficiently to produce a uniform surface free from screed marks.

**PSG 2.8.3      Steel float finish**

The surface of tank bottoms, floors and roof slabs, etc. shall be given a steel float finish in accordance with Sub-clause 5.5.10. To Degree 1 accuracy.

**PSG 2.8.4      Power floated finish**

Where power floating is required the surface shall be treated as specified in PSG 3.11.2 to a degree necessary.

**PSG 2.9      Screeds (add the following sub-clause 5.5.16)**

**GRANOLITHIC SCREED**

Granolithic screed shall consist of: Cement - 1 part; Sand - 1.25 part; Coarse aggregate - 2 parts.

The coarse aggregate shall consist of granite or other approved chips which shall pass a 10 mm sieve and be retained on a 5mm sieve.

The cement/water ration of the mix shall be at least 2,0 mass.

**PSG 2.10      Repairs and defects (add the following sub-clause 5.5.17)**

All defects to the concrete shall be attended to, in full, as soon as possible after the formwork is removed. Further concreting of the element concerned may be prohibited by the engineer until he is satisfied that this remedial work has been satisfactorily attended to.

**PSG 2.11      Porous Concrete (add the following sub-clause 5.5.1.8)**

Porous concrete shall be laid under foundations and floor slabs, and behind walls, etc., where shown on the drawings and where directed by the Engineer.

Porous concrete shall be placed behind shuttering to form a vertical layer against the external face of foundations, etc. where shown on drawings and where directed by the Engineer.

The thickness of the horizontal, sloping and vertical layers shall not be less than that shown on the drawings.

The exposed faces, both horizontal and vertical, of the porous concrete shall be finished with a

cement mortar seal, as specified in Clause PSG2.11.3, where reinforced concrete is to be cast against it.

The schedule rates for porous concrete shall include the cost of the mortar seal and steel float finish.

Porous concrete shall comprise water, cement, coarse aggregate and not more than 5 % by mass of fine sand. Every size of aggregate shall be a single size aggregate, graded in accordance with SABS 1083.

The voids ratio of porous concrete shall not be less than 27,5 %.

No-fines concrete shall be classified by the prefix NF and the size of the aggregate to be used. Class NF19 means a no-fines concrete with a 19 mm nominal size. The volume of aggregate per 50 kg of cement is to be as follows:

Class	Aggregate Size	Aggregate per 50kg cement	Minimum Average Strength of a set of three test cubes after 28 days (Mpa)
<b>NF38</b>	<b>38</b>	<b>0.33 m<sup>3</sup></b>	<b>5.5</b>
<b>NF19</b>	<b>19</b>	<b>0.30 m<sup>3</sup></b>	<b>5.5</b>
<b>NF13</b>	<b>13</b>	<b>0.27 m<sup>3</sup></b>	<b>5.5</b>

#### **PSG 2.11.1    Batching and Mixing**

The quantity of water to be added shall be just sufficient to form a smooth grout which will adhere to and coat completely each and every particle of aggregate, and which is just wet enough to ensure that at points of contact of aggregate the grout will run together to form a small fillet to bond the aggregate together. The mix shall contain no more than 20 litres of water per 50 kg of cement.

Mixing shall be carried out in an approved batch type mechanical mixer. The whole batch of aggregate together with half of the water shall be placed into the mixer and mixed together for at least half a minute. The cement, followed by the balance of water, shall subsequently be added and the mixing shall continue for at least 1,5 minutes or as much longer as is necessary to ensure that all aggregates are uniformly coated with cement grout.

Testing of porous concrete shall be carried out in accordance with test method 3 of BS 1881 Part 3: 1970.

#### **PSG 2.11.2    Placing**

The Engineer shall be timeously advised to enable him to inspect the excavations or form work before no-fines concrete is placed.

After the placing of the concrete has commenced, it shall be continued uninterrupted and may only be halted at the construction joints approved by the Engineer. Control shall be exercised to ensure that no placed green concrete lies for longer than 30 minutes before being covered with fresh concrete and that the concrete is placed in its final position within 20 minutes after the cement has been loaded into the mixer.

The concrete shall be worked sufficiently to ensure that it completely fills the space to be concreted and that adjacent aggregate particles are in contact with one another. Excessive tamping or ramming shall be avoided and under no circumstances shall the concrete be vibrated.

#### **PSG 2.11.3    Mortar seal over porous concrete**

Where concrete is to be cast against previously cast porous concrete, the surface of the porous

concrete shall be sealed with a 5 mm thick layer of mortar composed of one part normal Portland cement to two parts of fine aggregate by mass, trowelled on before screed to provide a dense, smooth, uniform plane surface without filling any of the internal voids of the porous concrete. The surface of the seal shall have a steel float finish.

**PSG 2.11.4      Protection**

All no-fines concrete shall be protected from the elements, particularly from strong wind, flowing water, damage to the surface and loss of moisture. Protection against loss of moisture shall be accomplished by one or more of the following methods: -

- (a)    Keeping form work in place.
- (b)    Covering exposed surfaces with sacking or other approved material that is kept continuously wet.
- (c)    Covering exposed surfaces with plastic sheeting.

**PSG 2.11.5      Sealing of surface of no-fines concrete**

Where indicated on the drawings or instructed by the Engineer, the surface of the no-fines concrete shall be sealed with a layer of 1:8 cement mortar to prevent loss of moisture from the structural concrete.

This seal shall be placed after the no-fines concrete has hardened and must be levelled off to the same level as the top of the no-fines concrete.

**PSG 3            MATERIALS (Clause 3)**

**PSG 3.1        Concrete**

**PSG 3.1.1      Cement (Sub-clause 3.2.1)**

*Add the following to the sub-clause:*

The type of cement to be used for concrete structures shall be approved by the Engineer.

**PSG 3.1.2      Storage of cement (Sub-clause 3.2.3)**

*Add the following to the sub-clause:*

Cement shall not be kept in storage for longer than eight weeks without the Engineer's permission.

Cement which has been damaged in any way or which has been stored on site for a period exceeding three months shall be condemned and removed from site.

**PSG 3.1.3      Aggregates (Sub-clause 3.4)**

*Add the following to the sub-clause:*

Concrete with reactive aggregates:

The Contractor shall supply a test certificate for the aggregate confirming that it is not reactive.

With each delivery of materials under this clause the Contractor shall supply acceptable written evidence that this clause is being complied with.

- PSG 3.1.5**      **Use of plumbs (Sub-clause 3.4.2)**  
*Add the following to the sub-clause:*
- The use of plumbs shall not be permitted.
- PSG 3.1.6**      **Admixtures (Sub-clause 3.5)**
- Replace this sub-clause with the following*  
Admixtures may only be used with the prior approval of the Engineer. Super plasticizers of the sulphenated naphthalene formaldehyde condensates are preferred. No air-retaining properties will be tolerated.
- PSG 3.2**      **Joint materials (add the following new sub-clause 3.9)**
- PSG 3.2.1**      **Primer**
- An approved primer, fully compatible with and/or manufactured for the specified jointing and sealing materials shall be applied to the joint surfaces.
- PSG 3.2.2**      **Filler**
- Fillers shall be closed-cell expanded polyethylene.
- Fillers shall be pre-cut to suit the application with a tear-out strip for forming the specified recess for the bond breaker and sealant.
- PSG 3.2.3**      **Sealer and breaker**
- The elastomeric sealant shall be a two-pack polyurethane type (gun grade for vertical joints) generally conforming with the physical properties specified in SABS 110, and used with primers as specified above.
- The bond breaker placed immediately prior to application of the sealant shall be a self-adhesive vinyl type (or similar approved material) with a width the same as the joint recess into which it is to be applied.
- PSG 4**      **TESTING (Clause 7)**
- PSG 4.1**      **Grouting (add the following new sub-clause 7.4)**
- The Contractor shall, where so ordered, carry out a site test for each grouting procedure and each grouting gang to be used. The tests shall be carried out on a dummy bedplate similar in configuration to that which is to be grouted, but not exceeding 1 m<sup>2</sup> in area unless otherwise ordered.
- When the dummy bedplate is dismantled, the underside shall show a minimum grout contact area of 80 % with reasonably even distribution of the grout over the surface grouted except that, in the case of expanding grout, the minimum grout contact area shall be 95 %. The test shall show evidence of good workmanship and materials and the results shall be to the satisfaction of the Engineer.
- The Contractor shall, when so ordered, make standard test cubes from various grout mixtures and also subject them to compression tests to determine whether the specified strength has been achieved.
- Test procedures shall comply with the relevant requirements of Sub-clause 7.2.1 to 7.2.3.

**PSG 5 TOLERANCES (Clause 6)**

**PSG 5.1 Premissible deviations (Sub-clause 6.2)**

*Add the following to the sub-clause:*

The degrees of accuracy of construction shall be as follows:

- (a) All structures (including water retaining structures) – Degree II accuracy.
- (b) All weirs (concrete) and weir plates shall have a tolerance of +1/-1 mm

**PSG 6 MEASUREMENT AND PAYMENT (Clause 8)**

**PSG 6.1 Subsoil drainage (add the following sub-clause 8.9)**

*Add the following pay item:*

**Item:**

Subsoil drainage as detailed on drawings

Unit:m

Add the following:

The rate tendered shall include the following items:

- a) Excavation for the filter drain (.25m<sup>3</sup>/m)
- b) Backfill around filter.
- c) Non-woven geofabric (u-24 or similar approved) – 900mm/m
- d) 19mm stone wrapped in geofabric (.14m<sup>3</sup>/m)
- e) 100mm Dia. Slotted PVC drain pipe

The rate tendered shall include for the delivery to site and the installation of the filter to the satisfaction of the Engineer.

**PSG 6.2 Grouting / casting in of pipe specials (add the following sub-clause 8.10)**

*Add the following pay item:*

**Item:**

Grouting / casting in of pipe pieces in the following diameters (Refer to PSG 2.6.4)

- |  |           |
|--|-----------|
| i) Grouting in of 100 dia flanged steel pipe                                     | Unit (No) |
| ii) Grouting in of 200 dia flanged steel pipe                                    | Unit (No) |
| iii) Casting in mass concrete of 200 dia scour pipe<br>(underneath wall footing) | Unit (No) |
| iv) Casting in mass concrete of 200 dia overflow (underneath wall footing)       | Unit (No) |
| v) Casting in of 110 dia uPVC telemetry pipe (reservoir roof)                    | Unit (No) |
| vi) Casting in of 40mm dia HDPE sleeve (reservoir roof)                          | Unit (No) |
| vii) Casting in of 40mm dia HDPE sleeve (reservoir wall)                         | Unit (No) |



The rate shall include all labour, plant and material for the grouting in of pipes of the above items as per PSG 2.6.4. Alternatively, the items can be cast directly into the concrete and the rates shall then include for all labour, plant and materials to cast the items into the concrete. Whatever procedure the Contractor wishes to follow, it will remain his responsibility to ensure a watertight cast-in item.

**PSG 6.3      No-fines concrete (add the following sub-clause 8.12)**

*Add the following pay item:*

**Item:**

No fines concrete (NF19) to a minimum thickness of 80mm underneath structures,  
complete with mortar seal Unit (m<sup>2</sup>)

The rate shall include all labour, material, plant and resources to provide a no-fines concrete layer complete with mortar seal as specified in clause PSG2.11 (porous concrete).

**PSG 6.4      Chamfers and Fillets (add the following sub-clause 8.13)**

No additional payment will be made for chamfers and fillets up to 40 mm wide. Larger fillets and chamfers (e.g. weirs) will be measured by length in accordance with Sub-clause 8.2.5

**PSG 6.5      Step irons (add the following sub-clause 8.14)**

*Add the following pay item:*

**Item:**

Access manhole step irons Unit (No)

The rate shall include all labour, material, plant and resources to provide step irons inside the access manholes as indicated on the drawings. The rate shall include for the supply and delivery of step irons (calcamite or similar approved), the drilling into the concrete and the fastening of the concrete with an approved epoxy.

**PSHA SABS 1200 HA: STRUCTURAL STEELWORK (Sundry Items)**

**PSHA 1 TESTING (CLAUSE 7)**

**PSHA 1.1 Water tightness testing (add the following new sub-clause 7.4)**

The following structures shall be defined as water retaining structures and shall be subject to water tightness testing:

a) Structural Steel Tank

Water for testing shall be taken from the Employer's water connection and pipes of a suitable size shall be provided by the Contractor to allow filling of the structures within a period of four days. The cost of water for the testing of water tightness will be for the Contractor's account. The availability of the water for testing is not guaranteed and if not available, the Contractor is to make arrangement for the supply for testing.

Prior to the filling of structures, the Contractor shall seal all pipes and openings below the top water level.

The structure to be tested shall be filled with water, and shall remain full for a period of seven days, sufficient water being added. The water level shall then be recorded and the structure allowed to stand for a further seven days without the addition of water. At the end of this period, the level shall again be recorded. If the difference in level, less the drop-in level due to evaporation, is less than 10 mm during the second period of seven days, the structure shall be considered watertight.

The evaporation shall be measured by recording the mean drop in level due to evaporation of water in three flat dishes floating in the water.

In the event of appreciable leakage being evident at any stage of the filling or testing or in the event of the Employer's Agent considering the final degree of water tightness to be unsatisfactory, the Contractor when ordered by the Employer's Agent, shall discontinue such filling or testing and shall, at his own expense, take steps immediately to rectify the leakage, and to make the work thoroughly sound to the complete satisfaction of the Employer's Agent and all such work of rectification shall be continued assiduously until a satisfactory test is obtained, which shall prove to the Employer's Agent that a sufficient degree of water tightness has been obtained.

No structure will be considered complete until it has been proved watertight in terms of the requirements of this clause.

Throughout the test and afterwards, whilst emptying the tank, the water level in the underdrainage sump shall be kept below the level of the tank floor.

When emptying the structure, the rate of flow shall be controlled such that the water-level in the structure does not drop faster than 100 mm per hour.

**PSHA 2 MEASUREMENT AND PAYMENT (Clause 8)**

**PSHA 2.1 Water tight testing (add the following sub-clause 8.3.7)**

*Add the following pay item:*

**Item:**

Water tight testing of structures

i) Structural steel Tank

Unit (No)

The rate shall include all labour, material, plant and resources to secure water tight structures as per PSHA 1.1.

**PSHA 2.2      Disinfection and cleaning of Structural Steel Tank (add the following new sub-clause 8.3.8)**

*Add the following pay items:*

**Item:**

Disinfection and cleaning of Structural steel tank Unit: Sum

The rate shall cover all costs to disinfect and clean the Structural steel tank as prescribed below.

On completion of the cleaning process the tank must be assessed in order to check the quality of the cleaning by the Employer’s Agent. Once it has been cleaned to the satisfaction of the Employer’s Agent, the reservoir be filled with mains water, chlorinated to give a residual in the range of 0.4 – 0.6 mg/l free chlorine or 0.8 and 1.2 mg/l total chlorine and after the normal maximum operating level has been achieved, allowed to stand for a minimum of 16 hours. Once sampling has taken place no human should enter the Tank. The cost for cleaning, disinfection (including water and chlorine for disinfection) as well as sampling will be for the contractors account and deemed to be included in this rate.

**PSL**            **SABS 1200 L: MEDIUM PRESSURE PIPELINE**

**PSL 1**            **SCOPE**

The pump main section in this contract shall be deemed to be medium pressure pipelines.

**PSL 2**            **MATERIALS (Sub-clause 3.1)**

**PSL 2.1**          **General (sub-clause 3.1)**

*Add the following to this sub-clause:*

**a)       Pipes**

Pipelines for the water mains shall be uPVC, sizes and classes shown on the drawings and / or Schedule of Quantities. All pipe joints shall be of approved rubber ring flexible couplings.

**b)       Valves (Gate valves)**

Except where otherwise specified, isolating valves shall be flanged ended, with a non-rising spindle and valve cap, shall be arranged for clockwise closing and shall be fitted with Type B trim.

**c)       Fittings**

Generally, fittings are to be manufactured in uPVC, cast iron and mild steel as applicable. Fittings shall be compatible in respect of working and test pressure to those of the pipelines. All necessary fittings and adaptors to suit the water mains must be provided and fitted."

**PSL 2.2**          **Marking of valves**

The design pressure in Mega pascal (MPa) shall be engraved on the side of the valve where it is legible. Valves shall be marked with the item number of the schedules when delivered to site.

**PSL 2.3**          **Hand wheels and closure**

Where hand wheels are specified edges shall be machined to a smooth surface. Wording "OPEN" and "CLOSE" will be casted into hand wheels. Valves will close clockwise except where it is otherwise specified. Spindles will be of the non-rising type.

**PSL 2.4**          **Protection of valves**

Valves shall be painted externally with a zinc chromate primer according to SABS 679 Type 1. (Dry film thickness of 50 mnc) After installation damaged primer shall be made good with compatible primer in accordance with valve suppliers' specifications.

Subsequently to making good of the primer the valve shall be painted with two layers of alkide based enamel according to SABS 630 Grade 1 (dry film thickness of 250 micro metre per layer) to match the colour of adjoining pipe work.

**PSL 2.5**          **Handling, delivery and installation**

All valves and related items shall be handled with the necessary care throughout all processes of manufacture, testing, delivery and installation. Valves furnished with lifting eyes shall be handled only by those eyes and other valves shall be handled solely with slings that will cause no damage.

In particular the inlet and escape orifices of air valves and special valves shall be effectively sealed after manufacture until completion of installation and this sealing shall be examined regularly to ensure that it is still effective.

Valves shall be effectively supported, packed or fastened down for transporting and care taken to avoid valves knocking together during transport.

Valves shall be stored in a safe place above ground and shall be protected against the ingress of foreign matter.

### **PSL 3            CONSTRUCTION**

#### **PSL 3.1        Laying depths and cover (Sub-clause 5.1.4)**

*Add the following to this sub-clause:*

Water mains shall be laid to follow the grades of the existing adjoining roads, except where otherwise instructed by the Employer's Agent. The depth from finished sidewalk level to the top of the pipe barrel shall be as follows, except where otherwise directed:

- a)        on sidewalks = 800 mm
- b)        below carriageways = 1 000 mm
- c)        outside road reserves = 700 mm

#### **PSL 3.2        Anchor / thrust blocks and pedestals (Sub-clause 5.5)**

*Add the following to this sub-clause.*

Dimensions at all anchor / thrust blocks shall be supplied by the Employer's Agent as and when required. The Contractor shall request such information not less than 7 (seven) calendar days in advance.

#### **PSL 3.3        Liaison with other contractors (Sub-clause 5.11)**

*Add the following to this sub-clause.*

"Other contractors could also execute works on the same site during the same construction period. All other contractors shall be liaised with each other on a regular basis in order to achieve progress.

The Contractor shall have the sole responsibility of liaising closely with other Contractors in respect of the matching and linking of adjoining pipe systems. No claims for delays or mismatching of levels in this regard will be entertained by the Employer's Agent."

#### **PSL 3.4        Crossing existing services (Sub-clause 5.1.4.3)**

There will be existing services that will be crossed. Generally, these areas can be identified and careful hand excavation will be required to expose these services.

#### **PSL 3.5        Pipe laying personnel (Sub-clause 5.1.1)**

The laying of pipes and ancillary fittings shall be performed only by a qualified person who is registered as an artisan in the pipe fitting or drain laying trades, or is qualified by reason of having attended and passed the course on pipelaying of the Civil Engineering Industry Training Board.

#### **PSL 3.6        Steel pipes, specials and fittings scope**

This specification covers the manufacture, corrosion protection, delivery, erection, installation, making good of corrosion protection as well as over-coating as may be required, site-testing and commissioning of steel pipes, specials and fittings mostly for the conveyance of water, but also for

air, at normal ambient temperatures between 5°C and +70°C.  
Standards referred to in the Specification are listed in the Annexure to this Specification.

#### **PSL 3.6.1      Manufacture of steel pipes**

Steel pipes with normal bore up to 150mm diameter shall be manufactured to conform to all the requirements of SABS 62 whereas steel piping of larger diameter shall be manufactured to conform to all the requirements of SABS 719, all as may be amplified or amended below.

The requirements regarding pipe sizes and grades, wall thicknesses, pipe lengths and pipe and requirements are specified in the Pipe Schedule and / or stated in the Schedule of Quantities.

The following minimum wall thicknesses shall apply:

External Diameter (mm) . . . . .	Minimum wall thickness (mm)
168 – 406 . . . . .	4,5mm
419 – 508 . . . . .	5,9mm
570 – 864 . . . . .	6,0mm

With regard to Sub-clause 4.2.2.1 in SABS 719 the Contractor shall, before commencing with pipe manufacture, satisfy the Employer's Agent that the welding methods to be used in the pipe manufacture are adequate by:

- a. The preparation of a weld sample employing precisely the same welding process, equipment and artisans by which the pipe shall be manufactured.
- b. The preparation and destructive testing of the sample in (a) above, as laid down in Clause 7.2 of SABS 719.

The results of the tests on the test pieces shall comply with the requirements of Clause 7.2 of SABS 719 in all aspects.

Such destructive testing shall be carried out for each grade of steel and for each thickness of steel in that grade.

With regard to sub-clause 4.2.2.2 and 4.2.2.3 in SABS 719 the height of the inner weld reinforcement shall not exceed 1mm.

#### **PSL 3.6.2      Manufacture of pipe specials**

Only pipe conforming to the requirements of Clause PSL 3.6.1 above, may be used for the manufacture of pipe specials.

For pipes of nominal bore, up to 150mm diameter T-pieces shall be heavy class pipe only, with the same wall thickness for both main and branch pipes. The manufacturing process and quality requirements are as specified in the relevant section of BS 806 (Section 3).

Dimensions and joint types for pipes specials are specified in the Pipe Schedule and / or stated in the Schedule of Quantities.

Welding shall be done by a welder holding a valid competence certificate (Grade 1) in terms of SABS 044 – Part V. Butt-welded joints shall conform to the requirements for welding for pipes under Clause PSL 4.2 above, and the Contractor shall prove all butt and fillet welded joints to be crack-free by carrying out dye penetrant tests, following the procedure laid down in BS 4416.

If at all practicable, pipe specials shall be subjected to hydraulic pressure tests as specified for pipe under Clause PSL 3.6.1 above. Where this is not feasible, butt-welds must be subjected to radiographic inspection over their full length, with inspection procedure and acceptability limits for defects as specified in API 1104, keeping a record of all weld inspection and repair.

Where working pressures allow the use of malleable cast iron fittings for nominal bore up to 150mm diameter, these shall conform to the requirements of SABS 509.

### **PSL 3.6.3     Pipe flanges, bolts and jointing**

#### **PSL 3.6.3.1    Material and dimensions for flanges**

The requirements for the materials and dimensions for flanges are in all respects as specified in SABS 1123.

A raised joint face shall be provided on all flanges of pressure rating higher than 2,5 MPa unless otherwise agreed to by the Employer's Agent or as stated in the Schedule of Quantities, and the backs of cast or forged flanges shall be machined.

The machined surfaces of flanges shall be covered immediately after machining by a temporary rust preventative film of a suitable type as specified in BS 1133 (Section 6).

All flanges shall be drilled to SABS 1123 (Table 1600/3) or otherwise to the class as stated in the Schedule of Quantities or on drawings.

#### **PSL 3.6.3.2    Welding on of flanges**

The procedure for the welding-on of flanges, shall comply with the requirements of BS 806 (Section 3).

The proficiency of the welder and the quality requirements for the weld are the same as those specified in Clause PSL 3.6.2 above.

As a rule, the bolt holes in flanges for pipe specials shall not be on the vertical centre line.

When so specified in the Schedule of Quantities, flanged pipes shall be hydraulically tested after the welding-on of the flanges to a test pressure of 1,5 times the pressure rating of the respective flange.

### **PSL 3.6.4     Bolts**

Materials and dimensional requirements of bolts and nuts are specified in SABS 135 or 136. These requirements shall correspondingly be prescribed by the Contractor when ordering.

The threaded length shall be adequate to allow two full threads to protrude beyond the nut after the latter is fully tightened.

Each bolt shall be fitted with a nut and steel washer and bolts, nuts and washers shall be cadmium plated in accordance with and to a thickness specified for Class A in BS 1706.

Unless otherwise indicated in the Pipe Schedule, the number of bolts to be supplied shall be determined on the basis that each flange is to be supplied with half the number of bolts required for that flange.

### **PSL 3.6.5     Jointing**

Insertion for flanges shall be of compressed asbestos fibre jointing and shall have a uniform thickness between 1,5mm and 3mm and the material shall comply with BS 2815 for the specific pressure rating.

### **PSL 3.6.6     Pipe joints and coupling other than flanges**

Pipe ends shall be prepared for the type of jointing and coupling as specified in the pipe schedule and / or stated in the Schedule of Quantities with the requirements for and preparations as specified

in SABS 62 and 719 as applicable.

Standard couplings and flange adapters shall be of the Viking Johnson type or equivalent and all loose bolts with nuts and washers shall be cadmium plated in accordance with and to a thickness specified for Class A in BS 1706 and shall be lined and coated as specified in Clause PSL 3.6.7 below.

**PSL 3.6.7     Lining and coating of steel pipes, specials and fittings**

Corrosion protection onto the inside of pipework

Pipework with diameters up to 150mm (Type A)

Hot dip galvanised in accordance with the relevant SANS standards.

Pipework with diameters greater than 150mm (Type B)

All pipes, specials and fittings, including couplings and flange adapters, shall be fully lined and coated by COPON 2300 with a minimum of three coats to a minimum total dry film thickness of 250 micrometres on a steel surface that has been prepared by sandblasting to Grade SA 2.5 as specified in SIS 055900, with a delay of not more than four hours between sandblasting and the application of the first paint coat.

Successive paint coats shall be of different colours, and the colour of the final coat shall be approved by the Employer's Agent prior to painting. Over-coating time between the application of successive coats, shall not exceed 24 hours.

Corrosion protection onto the outside of pipework Exposed pipework (Type C)

The surface should be prepared by sandblasting to Grade SA 2.5 as specified in SIS 055900, with a delay of not more than four hours between sandblasting and the application of the primer.

Primer: one coat zinc chromate plus one coat universal undercoat with dry film thickness of minimum 15 microns.

Thereafter two finishing coats of gloss enamel structural paint of approved manufacture of different colours to a total film thickness of 38 microns per coat.

The colour of the final coats shall be in accordance with SABS 1091.

Pipework with diameters greater than 150mm (Type D)

All pipes, specials and fittings, including couplings and flange adapters, shall be fully lined and coated by COPON 2300 with a minimum of three coats to a minimum total dry film thickness of 250 micrometres on a steel surface that has been prepared by sandblasting to Grade SA 2.5 as specified in SIS 055900, with a delay of not more than four hours between sandblasting and the application of the first paint coat.

Successive paint coats shall be of different colours, and the colour of the final coat shall be approved by the Employer's Agent prior to painting. Over-coating time between the applications of successive coats, shall not exceed 24 hours.

Tape wrapping

All underground steel pipes joints (flanged, flexible coupling, etc.) shall be tape wrapped in accordance with this specification. No additional payment shall be made as the rate for the coupling shall include for the tape wrapping.



### External steel pipe coating and wrapping specification:

#### External steel pipe coating and wrapping specification

A Denso Corroklad 750 tape or equivalent should be applied to the external surface of the steel pipeline.

The tape consists essentially of a specially formulated polyethylene film laminated to a pressure sensitive, non-hardening thermoplastic adhesive. The adhesive layer is generally one and a half times thicker than the polyethylene film.

The composite wrapping system provides a durable impact and cut resistant rockshiled for normal and rugged service conditions.

#### Technical Data

The following information pertains to the Corroklad 750 tape:

- The base layer is made of polyethylene and is 0,3mm thick.
- The adhesive layer consists of rubber modified bitumen and is 0,45mm thick.
- The product thickness is 0,75mm.
- The tape has a minimum tensile strength of 15 MPa.
- The minimum elongation at failure is 300%.
- The adhesive and peel strength of the tape at 25°C is 2,2N/mm and 1,65N/mm respectively.
- The minimum dielectric strength of the tape is 25 KV.
- Cathodic disbondment by ASTM G8 Method B is 425mm².
- The service temperature of the tape is –10°C to 65°C.

#### Application Procedure

Corroklad tape can be successfully wrapped by hand (maximum tape width 100mm) and by machine. The general application is detailed below.

#### Surface Preparation

- All dirt, loose rust/mill scale and grease must be removed from the pipe surface.
- The minimum surface preparation acceptable for tape wrapping with Corroklad is ST2 (Swedish Standard SIS 055900-1967, Mechanical wire brushing).

#### Priming the Pipe Surface

- The primer to be used is Denso Primer D or equivalent Polymer Bitumen Solution, and is to be applied by means of a medium pressure cop gun.
- The primer may be thinned for application with white spirits or toluene.
- The primer should nominally cover 9m² litre.
- The minimum drying period at 20°C is 20 minutes.
- The flash point occurs above 23°C.
- If the pipes are prepared and primed off site, it may be necessary to apply a second coat of primer on site in order to rejuvenate the first application. This is only required if the pipe is being wrapped on site.
- The primer should be dust free prior to the application of the tape wrap system. Should the primer be contaminated, the surface must be reprimed.
- The primer should be allowed to dry for approximately 30 minutes at 20°C to 25°C prior to the application of the tape system.

#### Tape Application

- The Corroklad tape or equivalent should be spirally wrapped onto the primed pipe, utilising a 55% overlap.  
55% Overlap will ensure a minimum of two layers of tape at any point.
- Ensure that a constant web tension of 10 to 15kg/100mm is maintained during wrapping.
- At no time is the shrinkage of the total width of tape to exceed 2%.

#### Pipe Handling

- Non-metallic slings are to be utilised when handling the wrapped pipe sections or pipe, in order to ensure that no mechanical damage occurs to the tape.

### **PSL 3.6.8     Making good and over-coating of steel pipes, specials and fittings**

#### **PSL 3.6.8.1   Steel pipes, specials and fittings**

After erection, all damage to the COPON coatings, shall be made good strictly in accordance with the paint supplier's detail specification. Prior to making good, a copy of these specifications shall be submitted to the Employer's Agent .

Subsequent to the repair of COPON painted areas, all exposed pipework, as listed in the Schedule of Quantities, shall be cleaned of dirt, oil and such substances. These exposed pipe surfaces shall then be over-coated with two coats of polyurethane paint compatible with the COPON coating and in accordance with the paint supplier's detail specification including abrasion as may be necessary.

#### **PSL 3.6.8.2 Handling, delivery and installation**

All pipes, pipe specials and fittings shall be handled throughout the processes of manufacturing, corrosion protection, delivery and installation with all care necessary to prevent any damage.

After the corrosion protection of the outside of pipes and specials has been carried out, these items must be handled only by means of straps that will in no way damage the protection.

After completion of corrosion protection at the place of manufacture, all pipe ends shall be effectively closed off by at least a sheet of plastic held fast to the pipe and by binding wire.

This seal shall be checked specifically during delivery and after off-loading on site to confirm that it is still fully effective and shall immediately be repaired or replaced if damaged. Should there be the slightest danger of the ingress of foreign matter into the pipework during installation, the ends shall be kept sealed off all the time.

Pipes shall be supported during travelling on shaped and padded cradles while pipe specials shall be adequately supported and separated from each other to prevent any damage.

At the delivery points on site, pipes, pipe specials and fittings shall be supported by plastic sandbags of sufficient strength, such that the under sides of the pipes and pipe specials are at least 200mm off the ground. The number and positioning of supports under the pipes, shall be such as to prevent any undue pipe deflection.

Bolts, nuts, washers and jointing, shall be packed in strong metal or wooden containers with effective lids, with each different sizes of bolts grouped separately in hessian bags all clearly labelled as to their contents.

Pipe work shall be securely clamped in its final position by means of galvanised fittings.

### **PSL 3.7     Flexible couplings at structures**

Flexible couplings shall be provided at the point where pipelines enter all structures.

### **PSL 3.8     Valves (Sub-clause 3.10)**

#### **PSL 3.8.1   Scope**

This specification covers the requirements for material, manufacture, delivery, installation, over-coating as may be required, site-testing and commissioning for gate valves for use in pipe work, mainly for the delivery of raw and purified water, but also for air supply, at ambient temperatures up to 70°C.

### **PSL 3.9     Break into main**

The Contractor shall break into and connect up to the existing water pipeline after all the work on the water main has been completed and tested. The Contractor shall arrange in co-operation with the

local authority for the emptying of pipes and canal, excavations, etc. complete as required for the connection.

**PSL 3.10 Testing of pipelines (Sub-clause 7.3)**

**PSL 3.10.1 Test pressure (Sub-clause 7.3.1(a))**

*Replace the Sub-clause 7.3.1 with the following:*

All pipes shall be tested at 1.25 the working pressure at the specific point where the pressure test be executed. The Contractor shall identify the points on the pipeline where the hydrostatic pressure test be executed and shall notify the Employer's Agent in advance in order for the Employer's Agent to be able to furnish the Contractor with the required test pressure at the specific test point.

**PSL 3.10.2 Method of testing (Sub-clause 7.3.1(b))**

*Add the following new clauses:*

- a) The Contractor shall provide an approved test pump, an accurate water meter, sealed pressure gauge, tested and certified by an independent testing organisation, and all other equipment, materials and labour required for the test.
- b) The section of pipeline to be tested shall be clean and closed off at the ends by isolating valves, end caps or approved end-closure pieces
- c) During the initial filling stage, the pipe section joints and all specials, fittings and valves shall be visually inspected for visible leaks and same rectified before proceeding with the test.
- d) The pressure shall be maintained for one hour and if a pressure drop occurs, more water shall be added to reinstate the test pressure and the valve closed again. The quantity of water added shall be measured by recording the readings before and after pumping. This procedure shall be repeated for a period of 24 hours, with water added at hourly intervals where necessary to reinstate pressure and water meter reading recorded. At the end of the 24-hour period, the aggregate quantity of water required to reinstate pressure over 24 hours shall be determined.
- e) The Contractor shall give the Employer's Agent 48 hours written notice of his intention to commence pressure testing and the Employer's Agent may attend and supervise all or any part of tests. All records and recording charts shall be handed to the Employer's Agent as soon as tests over any section have been completed.
- f) All valves, specials, fittings and exposed joints, shall be inspected visually during the 24 hours pipeline test and all visible signs of leaks, sweating and distress shall be reported and attended to without delay.
- g) Immediately after completion of the prescribed 24 hours hydrostatic test, all air valves shall be tested in turn before test pressure in the pipeline is released. Each air valve shall be isolated and the drain plug removed. The air valve shall work freely without restraint. The isolating valve shall be checked for leakage before replacing the plug. Finally, the automatic resealing of the air valves shall be checked by re-opening the isolating valve.
- h) After completion of tests on air valves, the section of pipeline under test shall be completely refilled with water, if necessary, and pressured to the static head shown on the drawings or indicated by the Employer's Agent. Each scour valve shall be checked by opening isolating valves where applicable for a duration sufficient to check the complete opening and closing cycles. If necessary, the pipeline shall be refilled after each individual test and re-pressurised to the prescribed static pipeline head in order to test all scours within the section under test.

### PSL 3.10.3 Remedial measures (Sub-clause 7.3.1 (c))

*Add the following new clauses:*

- a) Should the maximum leakage limits as specified be exceeded, the Contractor shall determine the position and cause of the leaks and shall take remedial measures at his own expense and to the satisfaction of the Employer's Agent to stop such leaks and ensure the specified degree of water tightness.
- b) If during the contract period of maintenance, the number of leaks and other defects is considered by the Employer's Agent to be more than could reasonably be expected from a well laid pipeline operating under normal conditions, he may order the Contractor to re-test parts or the whole of the pipeline at the Contractor's own expense and no claims for escalation in costs or for whatever other reasons the Contractor might consider to submit claims shall be considered, except where such re-tests are the result from damages caused to the pipeline by the Employer.

### PSL 3.11 Concrete work (New Sub-clause 5.11)

*Add the following new clauses:*

#### PSL 3.11.1 General

- a) All concrete work shall be finished to the lines, levels, slopes and outlines shown on the drawings or as otherwise directed.
- b) All exposed concrete surfaces shall be finished such that surface irregularities shall not exceed a tolerance of 8 mm and shall be rubbed down with a carborundum stone to present a surface of even colour and a smooth and pleasing appearance. All exposed edges shall be chamfered by a 40 mm chamfers fixed to shuttering. Unless otherwise specified all floors shall have a wood-float finish.
- c) Surfaces shall be free from honeycombing and excrescences. Honeycombing to the extent that in the opinion of the Employer's Agent the strength of the structure is impaired or the reinforcement is subject to corrosion or lack of bond, shall be removed and replaced with satisfactory concrete at the Contractor's expense within 72 hours of the concrete originally being placed.
- d) The minimum concrete cover to reinforcement of concrete surfaces permanently in contact with ground shall be 50 mm and for all other surfaces shall be 40 mm.
- e) All pre-cast units shall be steel-trowel led on upper surfaces to present a dense, homogenous surface.
- f) Slight spalling of top edges of manholes to be covered by precast or cast-in-situ cover slabs shall be permitted, provided the maximum dimension of the spall measured along any face shall not exceed 10 mm and provided further that no reinforcement is exposed. The maximum permissible difference in any of the two measurements taken to opposite corners diagonally across rectangular or square structures shall not exceed 2 % of that measurement calculated from the drawing. The tolerance in thickness of walls or cover slabs shall be  $\pm 15$  mm. All top edges of manholes shall be provided with 25 mm x 25 mm chamfering.

#### PSL 3.11.2 Valve chambers

- a) Chambers for isolating valves, air valves, scour valves, meters, access manholes etc. shall be constructed in accordance with approved drawings.
- b) Care shall be taken that the elevation of air bricks and tops is such that no ingress of surface run-off or ground water into chambers can occur.

### PSL 3.11.3 Encased pipe work

- a) Where pipes and / or specials are permanently encased in concrete, e.g. in thrust blocks, walls of concrete valve chambers, stream crossings, etc., the coating over the portion to be so encased shall be to the same standard as the rest of the pipeline, except where indicated to the contrary in the Schedule of Quantities or on the drawings.
- b) Whenever it is necessary to encase pipes in concrete, the flexible joints shall not be encased and the concrete shall terminate 300 mm from the flexible joint.
- c) All specials encased in concrete shall be painted with one coat of bitumen primer and two coats of bit mastic paint to a dry film thickness of 180 micrometers.

### PSL 3.12 **Brickwork** (New Sub-clause 5.12)

*Add the following new clauses:*

- a) Brickwork is to be built to the dimensions, thicknesses and heights as shown on the drawings.
- b) All exposed brickwork shall be plastered and shall have joints raked out to a depth of 12 mm to ensure good plaster bond.
- c) Mortar shall consist of one-part cement to four parts approved sand by volume and shall be used within one hour of mixing.
- d) Brickwork shall be built in stretcher bond and all common bricks shall be well wetted before being laid.

### PSL 3.13 **Fabricated steelwork** (New Sub-clause 5.13)

*Add the following new clauses:*

- a) All fabricated steelwork for covers, locking bars, etc., shall be manufactured from mild steel plate, chequer plate and / or bar as detailed on the drawings.
- b) All welding shall be carried out in accordance with SABS 044 – “Code of Practice for Welding.”

### PSL 3.14 **Applicable standards**

The latest revisions of the following standard specifications shall apply:

SABS 144. .... Single Door Reflux Valves  
SABS 191. .... Cast Steel Gate Valves  
SABS 192. .... Cast Steel Single Door Reflux Valves  
SABS 664. .... Cast Iron Valves for waterworks and Heavy Industrial applications.  
SABS 5155..... Cast Iron and Carbon Steel Butterfly Valves  
SABS 1123..... Steel flanges for pipes (Back of flanges spot faced)

**PSL 4            MEASUREMENT AND PAYMENT**

**PSL 4.1        Steel specials and fittings (sub-clause 8.2.2)**

*Add the following payment item:*

**Item:**

Fabrication, supply, transport and install and test the following pipe fittings. All items to be approved by Employer's Agent prior to ordering.

Unit: No

The unit of measurement for payment for the manufacture, corrosion protection and final over-coating as may be required, delivery, installation of pipes, site-testing and commissioning of pipes, pipe specials and fittings conforming with this Specification shall be measured by number for each type, class and size as stated in the Schedule of Quantities.

The rates bided and paid for valves and fittings must include the cost of the provision of an approved coating and the cost of any additional couplings other than those listed in the Schedule of Quantities to connect to the water mains.

All adapters and distance pieces required for the extension to the specified level and length as shown on the drawings for air and scour valves must be included in the rates for the units.

The cost of providing couplings, cutting pieces, etc. shall be allowed for in the rate bided for pipe work.

## **PSLB SABS 1200 LB: BEDDING (PIPES)**

### **PSLB 1 MATERIALS**

#### **PSLB 1.1 Selected granular material (Sub-clause 3.1)**

*Add the following to this sub-clause:*

Granular materials shall be selected from trench and reservoir excavations. If the contractor elects not to apply selection of material from excavations, he shall provide suitable material from any other approved source at his own expense. The Contractor will be expected to first pursue the possibility of utilising insitu material for bedding. The option and relevant test and results shall be presented to the Employer's Agent. The Employer's Agent will indicate to the Contractor what material to use in terms of insitu or imported materials. Should the Employer's Agent indicate that insitu materials must be sieved and used, and the contractor decide to rather import material, then the rate for insitu material will be paid.

Bedding material shall be either of the following type:

- a) Type A: Finally graded, composed of material with the following properties:
  - i) Percentage by mass passing:  
4,75 mm screen - 100 %  
0,425 mm screen - 80 to 100 %  
0,002 mm screen - 0 to 45 %
  - ii) Liquid limit (LL) as determined in accordance with SABS Method 852 shall not be more than 15, when performed on all the material passing the 0,425 mm sieve.
  - iii) Plasticity index (PI) as determined in accordance with SABS Method 852 shall not be more than 15, when performed on all the material passing the 0,425 mm sieve.
  - iv) Linear shrinkage (LS) as determined in accordance with SABS Method 853 shall not exceed 5 %, when performed on all the material passing the 0,425 mm sieve.
- b) Type B: Medium graded, composed of material with the following properties:
  - i) Percentage by mass passing:  
4,75 mm screen - 80 to 100 %  
0,425 mm screen - 60 to 80 %  
0,002 mm screen - 0 to 40 %
  - ii) Liquid limit (LL) as determined in accordance with SABS Method 852 shall not be more than 35 %, when performed on all the material passing the 0,425 mm sieve.
  - iii) Plasticity index (PI) as determined in accordance with SABS Method 852 shall not be more than 18, when performed on all the material passing the 0,425 mm sieve.
  - iv) Linear shrinkage (LS) as determined in accordance with SABS Method 853 shall not exceed 7 %, when performed on all the material passing the 0,425 mm sieve.
- c) Type C: Granular, composed of material with the following properties:
  - i) Percentage by mass passing:  
9,5 mm screen - 100 %

4,75 mm screen - 70 to 100 %  
0,425 mm screen - 30 to 60 %  
0,002 mm screen - 0 to 45 %

- ii) Liquid limit (LL) as determined in accordance with SABS Method 852 shall not be more than 40 %, when performed on all the material passing the 0,425 mm sieve.
- iii) Plasticity index (PI) as determined in accordance with SABS Method 852 shall not be more than 20, when performed on all the material passing the 0,425 mm sieve.
- iv) Linear shrinkage (LS) as determined in accordance with SABS Method 853 shall not exceed 10 %, when performed on all the material passing the 0,425 mm sieve.

Items a), b) and c) are conveniently summarised in the following table:

Material	PERCENTAGE BY MASS PASSING SCREENS				ATTERBERG LIMITS SHALL NOT EXCEED		
	9,5 mm	4,75 mm	0,425 mm	0,002 mm	Liquid Limit (LL) %	Plasticity Index (PI)	Linear Shrinkage (LS) %
Finely graded / A	100	100	80 - 100	0 - 45	30	15	5
Medium graded / B	100	80 - 100	60 - 80	0 - 40	35	18	7,5
Granular / C	100	70 - 100	30 - 60	0 - 35	40	20	10

## PSLB 1.2 **Bedding** (Sub-clause 3.3)

*Add the following to this sub-clause:*

All steel pipes in the works shall be classed as “rigid” with flanged joints and shall be bedded on Class C bedding as described in sub-clause 5.2 of SABS 1200 LB, unless otherwise specified or instructed by the Employer’s Agent.

## PSLB 1.3 **Backfilling of pipe trenches** (add the following Sub-clause 3.5)

*Add sub-clause 3.5 as follows:*

No backfilling of pipe trenches on top of the selected fill layer may commence without the written consent of the Employer’s Agent or his Representative.

## PSLB 2 **CONSTRUCTION**

### PSLB 2.1 **Waterlogged trench bottoms** (add the following Sub-clause 5.5)

*Add sub-clause 5.5 as follows:*

- “a) Where trench bottoms are too soft and water logged to permit placement and compaction of bedding material in the normal manner, such trench bottoms shall be excavated to a depth of at least 300 mm below the underside of pipes and specials for the full width and length of the trench affected.
- b) The full width and length of the trench bottom and at least 500 mm height of both sides of trench walls shall be covered by an unwoven approved geotextile, similar to Kaymat U24.



The full width and length of the trench shall thereupon be covered by a 300 mm thick layer of coarse gravel, coarse sand or 19 mm nominal size crushed stone, fully compacted within the confines of the geotextile to take the mass of the pipe filled with water and all loads on the pipe without settlement.

The free drainage layer shall be covered over the full width of the trench by a single layer of geotextile with the cloth on trench walls folded over and overlapping to completely seal off the free drainage layer against ingress of sand or fine soil particle.

Pipes shall be laid directly on the bed prepared as above and pipe bedding and selected backfill completed as specified.

**PSLB 3 MEASUREMENT AND PAYMENT (Clause 8)**

**PSLB 3.1 Volume of bedding material (Sub-clause 8.2)**

*Add the following general description:*

The volume of bedding material will be determined from the dimensions of the pipe and the specified trench width according to the dimensions of drawing B-2. The volume occupied by the pipe barrel will not be measured as part of the bedding material quantities.

# **UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)**

**TENDER NO : IN/022/2020**

## **C3.3 PARTICULAR SPECIFICATIONS**

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

**SECTION EMP ENVIRONMENTAL MANAGEMENT SPECIFICATION**

**SECTION OHS OHSA 1993 SAFETY SPECIFICATION**

# UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION OF TANKS PER STUDENT RESIDENCE)

**TENDER NO : IN/022/2020**

## **PARTICULAR SPECIFICATIONS**

### **SECTION EMP: ENVIRONMENTAL MANAGEMENT SPECIFICATION**

#### **EMP.1 General**

In order to ensure that the construction works is carried out in an environmentally sensitive matter, strict compliance to the Environmental Management Plan (EMP) guidelines is required. The EMP will be bounded to this document under Part C4 (Post tender inclusion). The purpose of the EMP is to:

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

#### **EMP.2 Training and Induction of Employees**

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

#### **EMP.3 Complaints Register and Environmental Incident Book**

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

The following information must be recorded:

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

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

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

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

#### **EMP.4 Site Cleanliness and Neatness**

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

#### **EMP.5 Access**

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

#### **EMP.6 Borrow Pits**

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

#### **EMP.7 Dust Control / Air Quality**

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

#### **EMP.8 Fauna**

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

#### **EMP.9 Fire Prevention and Control**

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

#### **EMP.10 Grave Sites**

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

#### **EMP.11 Materials Handling and Spills Management**

- Any hazardous materials to be used during construction (e.g. lime, fuel, paint, etc) are to be stored in a designated area at the campsite.
- The storage containers/facilities (including any diesel/petrol tanks) must be placed on an impermeable surface and surrounded by a bund wall, in order to ensure that accidental

spillage does not pollute the environment.

- Workers must at all times be made aware of the health and safety risks associated with any hazardous substances used (e.g. smoking near fuel tanks), and must be provided with appropriate protective clothing/equipment in case of spillages or accidents.
- Ensure all staff and contractors undergo relevant training in the maintenance of equipment to prevent the accidental discharge or spill of fuel, oil, lubricants and other chemicals.
- Any spill of potentially hazardous materials must be cleaned up immediately (Potentially hazardous materials on site include paint, oil, grease, fuel, turpentine, etc).
- The area of contaminated soil or spill must be deposited into the hazardous waste container(s).
- The contractor should keep Peat, Sorb or a similar absorbent on site to clean up any spills. The absorbent must be stored in a designated area and be available for inspection.
- All spills are to be recorded in the environmental incident book.

#### **EMP.12 Noise**

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

#### **EMP.13 Pollution Control**

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

#### **EMP.14 Rivers and Streams**

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

#### **EMP.15 Safety**

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

#### **EMP.16 Soil Management**

- Stormwater drainage pipes must be installed alongside the road in all areas susceptible to soil erosion.
- Erosion should be minimised by the construction of meadow drains and the planting of indigenous vegetation on the side slopes and drains to reduce flow velocity of stormwater.
- Spoil from cuts may be used in existing erosion galleys.

- Stone pitching and gabions should be constructed at pipe culvert outlets.
- Accidental spills of contaminants onto the ground e.g. oil, concrete, fuel and chemicals should be removed together with the contaminated soil.
- If necessary, an absorbent such as Peat Sorb should be used the aid in cleaning up the spill. The contaminated soil should be disposed of in an appropriate container, depending on its classification.
- Servicing and re-fuelling of vehicles must only be carried out at construction camp.

#### **EMP.17 Worker Conduct**

Code of Conduct for Construction Personnel:

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

#### **EMP.18 Traffic Disturbances and Diversions**

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

#### **EMP.19 Vegetation**

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

#### **EMP.20 Waste Management**

- All general, non-hazardous waste must be placed in a skip container and disposed of at a registered waste disposal site.
- The contractor is to ensure that the portable toilet facilities at the campsite are properly maintained and in working order.
- No disposal, or leakage, of sewage must occur on or near the site.
- All hazardous waste (e.g. oil, paint, empty lime bags, contaminated wash water, etc) must be stored in leakproof containers and disposed of at a registered hazardous waste disposal site.
- The contents of waste storage containers must, under no circumstances, be emptied to the surrounding area. In general, littering, discarding or burying of any materials is not allowed on site or along the route.
- Adequate waste receptacles must be available at strategic points around the construction camp and site for all domestic refuse and to minimise the occurrence of littering.
- Concrete rubble must be collected and disposed of as directed by the Project Manager.
- Each working area must be cleared of litter and building waste (e.g. rubble, wood, concrete packets etc) on completion of the day's work.
- Any spill around the container(s) should be treated as per Section EMP11 and EMP16.

## SECTION OHS : OHSA 1993 HEALTH AND SAFETY SPECIFICATION

### OHS.1 SCOPE

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

This specification shall be read with the Occupational Health and Safety Act (Act No 85 and amendment Act No 181) 1993, and the corresponding Construction Regulations 2014, and all other safety codes and specifications referred to in the said Construction Regulations.

In terms of the OHSA Agreement in Section C1.2.4 of the Contract document, the status of the Contractor as mandatory to the Employer (client) is that of an employer in his own right, responsible to comply with all provisions of OHSA 1993 and the Construction Regulations 2014.

This safety specification and the Contractor's own Safety Plan as well as the Construction Regulations 2014, shall be displayed on site or made available for inspection by all workers, employees, inspectors and any other persons entering the site of works.

The following are possible risks associated with this project:

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

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

### OHS.2 DEFINITIONS

For the purpose of this contract the following shall apply:

- (a) **Employer** where used in the contract documents and in this specification, means the Employer as defined in the General Conditions of Contract and it shall have the exact same meaning as **client** as defined in the Construction Regulations 2014. **Employer** and **client** is therefore interchangeable and shall be read in the context of the relevant document.
- (b) **Contractor** wherever used in the contract documents and in this specification, shall have the same meaning as **Contractor** as defined in the General Conditions of Contract.

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

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

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

### **OHS.3 TENDERS**

The Contractor shall submit the following with his tender:

- (a) a documented Health and Safety Plan as stipulated in Regulation 5 of the Construction Regulations. The Safety Plan must be based on the Construction Regulations 2014 and will be subject to approval by the Employer;
- (b) a declaration to the effect that he has the competence and necessary resources to carry out the work safely in compliance with the Construction Regulations 2014;
- (c) a declaration to the effect that he made provision in his tender for the cost of the health and safety measures envisaged in the Construction Regulations.
- (d) Failure to submit the foregoing with his tender, will lead to the conclusion that the Contractor will not be able to carry out the work under the contract safely in accordance with the Construction Regulations.

### **OHS.4 NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION WORK**

After award of the contract, but before commencement of construction work, the Contractor shall, in terms of Regulation 4, notify the Provincial Director of the Department of Labour in writing if the following work is involved:

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

The notification must be done in the form of the pro forma included under Section 9 (Forms to be Completed by Successful Tenderer) of the tender document.

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

### **OHS.5 RISK ASSESSMENT**

Before commencement of any construction work during the construction period, the Contractor shall have a risk assessment performed and recorded in writing by a competent person. (Refer Regulation 9 of the Construction Regulations 2014).

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

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

### **OHS.6 APPOINTMENT OF EMPLOYEES AND SUBCONTRACTORS**

#### **6.1 Health and Safety plan**

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



## 6.2 Health and safety induction training

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

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

## OHS.7 APPOINTMENT OF SAFETY PERSONNEL

### 7.1 Construction Supervisor

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

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

### 7.2 Construction safety officer

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

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

### 7.3 Health and safety representatives

In terms of **Section 17 and 18 of the Act (OHSA 1993)** the Contractor, being the employer in terms of the Act for the execution of the contract, shall appoint a **health and safety representative** whenever he has more than 20 employees in his employment on the site of the works. The health and safety representative must be selected from employees who are employed in a full-time capacity at a specific workplace.

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

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

### 7.4 Health and safety committee

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

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

## 7.5 Competent persons

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

- (a) Risk assessment and induction training as described in Regulation 9 of the Construction Regulations;
- (b) Fall protection as described in Regulation 10;
- (c) Excavation work as described in Regulation 13;
- (d) Demolition work as described in Regulation 14;
- (e) Scaffolding work as described in Regulation 16;
- (f) Suspended platform operations as described in Regulation 17;
- (g) Material hoists as described in Regulation 19;
- (h) Bulk Mixing plant operations as described in Regulation 20;
- (i) Explosive actuated fastening device as described in Regulation 21;
- (j) Cranes as described in Regulation 22;
- (k) Construction vehicle and mobile plant inspections on a daily basis by a competent person as described in Regulation 23(1);
- (l) Control of all temporary electrical installation on the construction site as described in Regulation 24;
- (m) Stacking and storage on construction sites as described in Regulation 28; and
- (n) Fire precautions on construction sites as described in Regulation 29.

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

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

## OHS.8 RECORDS AND REGISTERS

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

- (a) A copy of the OHSA 1993 Construction Regulations 2014;
- (b) A copy of this Health and Safety Specification;
- (c) A copy of the Contractor's Health and Safety Plan (Regulation 7);
- (d) A copy of the Notification of Construction Work (Regulation 4);
- (e) A health and safety file in terms of Regulation 7(1b) with inputs by the Construction Safety Officer (Regulation 8(5));
- (f) A copy of the risk assessment described in Regulation 9;
- (g) A full protection plan and the corresponding records of evaluation and training of employees working from elevated positions as described in Regulation 10;
- (h) Drawings pertaining to the design of structures (Regulation 11(1c)) and temporary works (Regulation 10) must be kept on site;
- (i) Pronouncement of the safety of excavations must be recorded in a register to be kept on site (Regulation 13(2)(h));
- (j) A copy of the certificate of the system design for suspended platforms (Regulation 17(3));
- (k) A notice must be affixed around the base towers of material hoists to indicate the maximum mass load, which may be carried at any one time by material hoists (Regulation 11(2));
- (l) Maintenance records of material hoists and inspection results must be kept in a record book to be kept on site (Regulation 19(8));
- (m) A record of any repairs to or maintenance of a batch plant must be kept on site (Regulations 19(8));
- (n) A warning notice must be displayed in a conspicuous manner when and wherever an explosive powered tool is used (Regulation 21(2));
- (o) A register for recording of findings by the competent person appointed to inspect construction vehicles and mobile plant (Regulation 23(1) (k)).

## OHS.9 CONTRACTORS RESPONSIBILITIES

For this contract the Contractor will be the mandatory of the Employer (Client), as defined in the Act (OHS 1993), which means that the Contractor has the status of employer in his own right in respect of the contract. The Contractor is therefore responsible for all the duties and obligations of an employer as set out in the Act (OHS 1993) and the Construction Regulations 2014.

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

The Contractor's duties and responsibilities are clearly set out in the Construction Regulations 2014, and are not repeated in detail but some important aspects are highlighted hereafter, without relieving the Contractor of any of his duties and responsibilities in terms of the Construction Regulations.

(a) Contractor's position in relation to the Employer (Client) (Regulation 5)

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

(b) The Principal Contractor and Contractor (Regulation 7)

The Contractor is in terms of the definition in Regulation 2(b) the equivalent of Principle Contractor as defined in the Construction Regulations, and he shall comply with all the provisions of Regulation 7.

Any subcontractors employed by the Contractor must be appointed in writing, setting out the terms of the appointment in respect of health and safety. An independent subcontractor shall however provide and demonstrate to the Contractor a suitable, acceptable and sufficiently documented health and safety plan before commencement of the subcontract. In the absence of such a health and safety plan the subcontractor shall undertake in writing that he will comply with the Contractor's safety plan, the health and safety specifications of the Employer and the Construction Regulations 2014.

(c) Management Supervision of construction work (Regulation 8)

The Contractor shall appoint the safety and other personnel and employees as required in terms of Regulation 8 and as set out in paragraph 7 above. Appointment of those personnel and employees does not relieve the Contractor from any of the obligations under Regulation 8.

(d) Risk assessment for construction works (Regulation 9)

The Contractor shall have the risk assessment made as set out in paragraph 3 above before commencement of the work and it must be available on site for inspection at all times. The Contractor shall consult with the health and safety committee or health and safety representative(s) etc. on a regular basis to ensure that all employees, including subcontractors under his control, are informed and trained by a competent person regarding health hazards and related work procedures.

No subcontractor, employee or visitor shall be allowed to enter the site of works without prior health and safety induction training, all as specified in Regulation 9.

(e) Fall protection (Regulation 10)

Fall protection, if applicable to this contract shall comply in all respects with Regulation 10 of the Construction Regulations.

(f) Structures (Regulation 11)

The Contractor will be liable for all claims arising from collapse or failure of structures if he failed to comply with all the specifications, project specifications and drawings related to the structures, unless it can be proved that such collapse or failure can be attributed to faulty design or insufficient design standards on which the specifications and the drawings are based.

In addition, the Contractor shall comply with all aspects of Regulation 11 of the Construction Regulations.

(g) Temporary works (Regulation 12)

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

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

The provisions of Regulation 12 of the Construction Regulations shall be followed in every detail.

(h) Excavation (Regulation 13)

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

Supervision by a competent person will not relieve the Contractor from any of his duties and responsibilities under Regulation 13 of the Construction Regulations.

(i) Demolition work (Regulation 14)

Whenever demolition work is included in a contract, the Contractor shall comply with all the requirements of Regulation 14 of the Construction Regulations. The fact that a competent person has to be appointed by the Contractor does not relieve the Contractor from any of his responsibilities in respect of safety of demolition work.

(j) Tunneling (Regulation 15)

The Contractor shall comply with Regulation 15 wherever tunneling of any kind is involved.

(k) Scaffolding (Regulation 16)

The Contractor shall ensure that all the provisions of Regulation 16 of the Construction Regulations are complied with. [Note: Reference in the Regulations to "Section 44 of the Act" should read "Section 43 of the Act"].

(l) Suspended platforms (Regulation 17)

Wherever suspended platforms will be necessary on any contract, the Contractor shall ensure that copies of the system design issued by a Professional Engineer are submitted to the Engineer for inspection and approval. The Contractor shall appoint competent persons as supervisors and competent scaffold erectors, operators and inspectors and ensure that all work related to suspended platforms are done in accordance with Regulation 17 of the Construction Regulations.

(m) Rope Access (Regulation 18)

Where rope accesses are required on the construction site, the Contractor shall comply with Regulation 18.

(n) Material Hoists (Regulation 19)

Wherever applicable, the Contractor shall comply with the provisions of Regulation 19 to the letter.

(o) Bulk Mixing plants (Regulation 20)

Wherever applicable, the Contractor shall ensure that all lifting machines, lifting tackle, conveyors,

etc. used in the operation of a batch plant shall comply with, and that all operators, supervisors and employees are strictly held to the provisions of Regulation 20. The Contractor shall ensure that the General Safety Regulations (Government Notice R1031 of 30 May 1986), the Driven Machinery Regulations (Government Notice R295 of 26/2/1988) and the Electrical Installation Regulations (Government Notice R2271 of 11/10/1995) are adhered to by all involved.

In terms of the Regulations, records of repairs and maintenance shall be kept on site.

(p) Explosive actuated fastening devices (Regulation 21)

The Contractor shall ensure that, wherever explosive-powered tools are required to be used, all safety provisions of Regulation 21 are complied with.

It is especially important that warning notices are displayed and that the issue and return of cartridges and spent cartridges be recorded in a register to be kept on site.

(q) Cranes (Regulation 22)

Wherever the use of tower cranes becomes necessary, the provisions of Regulation 22 shall be complied with.

(r) Construction vehicles and mobile plant (Regulation 23)

The Contractor shall ensure that all construction vehicles and plant are in good working condition and safe for use, and that they are used in accordance with their design and intended use. The vehicles and plant shall only be operated by workers or operators who have received appropriate training, all in accordance with all the requirements of Regulation 23.

All vehicles and plant must be inspected on a daily basis, prior to use, by a competent person and the findings must be recorded in a register to be kept on site.

(s) Electrical installation and machinery on construction sites (Regulation 24)

The Contractor shall comply with the Electrical Installation Regulations (Government Notice R2920 of 23 October 1992) and the Electrical Machinery Regulations (Government Notice R1953 of 12 August 1993). Before commencement of construction, the Contractor shall take adequate steps to ascertain the presence of, and guard against dangers and hazards due to electrical cables and apparatus under, over or on the site.

All temporary electrical installations on the site shall be under the control of a competent person, without relieving the Contractor of his responsibility for the health and safety of all workers and persons on site in terms of Regulation 24.

(t) Use of temporary storage of flammable liquids on construction sites (Regulation 25)

The Contractor shall comply with the provisions of the General Safety Regulations (Government Notice R1031 of 30 May 1986) and all the provisions of Regulation 25 of the Construction Regulations to ensure a safe and hazard-free environment to all workers and other persons on site.

(u) Water environments (Regulation 26)

Where construction work is done over or in close proximity to water, the provisions of Regulation 26 shall apply.

(v) Housekeeping and general safeguarding on construction sites (Regulation 27)

Housekeeping on all construction sites shall be in accordance with the provisions of the environment Regulations for workplaces (Government Notice R2281 of 16 October 1987) and all the provisions of Regulation 27 of the Construction Regulations.

(w) Stacking and storage on construction sites (Regulation 28)

The provisions for the stacking of articles contained in the General Safety Regulations (Government Notice R1031 of 30 May 1986) as well as all the provisions Regulation 28 of the Construction Regulations shall apply.

(x) Fire precautions on construction sites (Regulation 29)

The provisions of the Environmental Regulations for Workplaces (Government Notice R2281 of 16 October 1987) shall apply.

In addition, the necessary precautions shall be taken to prevent the incidence of fires, to provide adequate and sufficient fire protection equipment, sirens, escape routes etc. all in accordance with Regulation 29 of the Construction Regulations.

(y) Construction welfare facilities (Regulation 30)

The Contractor shall comply with the construction site provisions as in the Facilities Regulations (Government Notice R1593 of 12 August 1988) and the provisions of Regulation 30 of the Construction Regulations.

(z) Non-compliance with the Construction Regulations 2014

The foregoing is a summary of parts of the Construction Regulations applicable to all construction projects.

The Contractor, as employer for the execution of the contract, shall ensure that all provisions of the Construction Regulations applicable to the contract under consideration are complied with to the letter.

Should the Contractor fail to comply with the provisions of the Regulations 4 to 30 as listed in Regulation 33, he will be guilty of an offence and will be liable, upon conviction, to the fines or imprisonment as set out in Regulation 33.

***The Contractor is advised in his own interest to make a careful study of the Act and the Construction Regulations as ignorance of the Act and the Regulations will not be accepted in any proceedings related to non-conformance to the Act and the Regulations.***

## **OHS.10 SARS-COV2-COVID 19**

The Client committed to managing COVID 19 issues as an integral part of our business in compliance with national laws, regulations and international standards. It is our policy to assure the compliance of COVID 19 in the workplace and keep employees safe as far as is reasonably practicable. We are committed to strive for a safe work environment for the benefit of the company and the public.

### **10.1 OBJECTIVES**

- Keep and maintain a safe work environment that is hygienic for the benefit of employees, visitors and the general public.
- Implement measures to keep a 1.5m social distance as required by the current risk adjustment strategy.
- To provide the necessary PPE to employees to ensure they are both protected from the spread of the virus and do not spread the virus themselves. This is to ensure we do our part in fighting this pandemic.
- Provide employees with information about the spread of the virus and symptoms that can develop.
- Establish access points that can be controlled to ensure employees are screened before each shift and at the end of each shift.
- Establish hand sanitize points or stations where employees and visitors can disinfect their hands.
- Minimise meetings on site, rather use email and telephonic communication.
- Provide information on what to do if symptoms are showing and encourage employees to disclose

- when they develop symptoms.
- COVID 19 Helpline: 0800 02 9999 will be conspicuously displayed on site.
- Employees who are travelling must do so with a permit and have face masks available.
- Limit number of employees travelling together i.e. only 3 employees in a vehicle.
- COVID 19 Manager will be identified and appointed in writing.

The Principal Contractor must strive for continuous improvement and review of requirements.

## **OHS.11 MEASUREMENT AND PAYMENT**

### **11.1 Principles**

It is a condition of this contract that Contractors, who submit tenders for this contract, shall make provision in their tenders for the cost of all health and safety measures during the construction process. All associated activities and expenditure are deemed to be included in the Contractor's tendered rates and prices.

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

The Construction Supervisor, the Construction Safety Officer, Health and Safety Representatives, Health and Safety Committee and Competent Persons referred to in clauses 9.1 to 9.5 shall be members of the Contractor's personnel, and no additional payment will be made for the appointment of such safety personnel.

#### **(b) Records and Registers**

The keeping of health and safety-related records and registers as described in 8 is regarded as a normal duty of the Contractor for which no additional payment will be considered, and which is deemed to be included in the Contractor's tendered rates and prices.

## **C4. POLICY ON SUPPLY CHAIN MANAGEMENT AND HOUSE RULES**

### **C4.1. Policy on Supply Chain Management**

The procurement policy can be obtained from the University of Venda upon request.

### **C4.2. House Rules**

#### **Rules**

1. All deliveries that will occur during the university operating hours must be coordinated so as not to obstruct the roadways or public routes in any form for any period of time. Failing this, deliveries must be restricted to between 22h00 and 04h00.
2. No construction or construction related vehicles are allowed to be parked alongside the roads or university buildings. No queuing of delivery vehicles will be permitted on any part of the route to your site and /or site establishment.
3. All work resulting in high levels of noise or disruption to University operations will be restricted to hours between 22h00 and 04h00 or coordinated with University contact person.
4. All dust and debris resulting from grounds and landscaping work is to be contained within the site. Any materials and rubble outside the applicable site will be removed by Univen from the campus without notice to yourselves and will be for your account.
5. All operating services are to be protected at all times.
6. Work will be allowed at night provided that the site is adequately illuminated and security is fully coordinated and documented.
7. All vehicles related to your works are to be parked within your site or in public parking with costs for your account. Any contractor vehicle towed or clamped due to illegal parking will be for your account.
8. The site is to be maintained in a reasonable state of tidiness at all times.
9. Rubble may not be accumulated on site. Suitable skips are to be provided for the works.



**Behavior on site**

1. No worker may use any of the facilities on campus and they are limited to the applicable site.
2. No worker may mingle or be seen to contact any student or stay overnight on campus
3. No worker may enter the student bar
4. No worker may enter any of the student residences
5. No worker may enter the student/staff cafeteria or tuck shop
6. No worker may enter any of the university buildings for any reason whatsoever prior to arrangement with University contact person.
7. When work is done, no worker will be allowed to loiter in the campus
8. Campus security has very strict instruction to enforce any of these house rules and Univen reserves the right to request contractor to remove such employee from site permanently.

**Spot fines**

1. Under no circumstances will the service provider be allowed to make use of any University equipment. Should the service provider or his sub-contractors be seen making use of the aforementioned equipment, an immediate spot fine of R 3 000.00 per occurrence will apply and such monies will automatically be deducted off any payment invoice due.
2. Similarly, the service provider and sub-contractors are limited to their actual site areas and places of work and under no circumstances will materials, equipment, tools, cooking or any other disturbance be allowed in public areas and delivery of materials via the normal University traffic routes is strictly prohibited without proper coordination. The service provider is to respect the operational environment in which their work will be performed. A spot fine of R2 000.00 per occurrence will apply and be deducted off any payment invoice due should the above not be adhered to.

**UNIVEN CAMPUS WATER UPGRADE PHASE 2 (INCLUDING INSTALATION  
OF TANKS PER STUDENT RESIDENCE)**

**TENDER NO : IN/022/2020**

**PART C 5: SITE INFORMATION**

**C5.1: LOCALITY PLAN**

**C5.2: TENDER DRAWINGS**



This is a detailed topographical map of the Limpopo Province in South Africa. The map shows the province's borders with Zimbabwe to the north, Botswana to the west, and Mozambique to the east. Key features include:

- Major Cities and Towns:** Polokwane, Tlokweng, Mopani, and various smaller towns like Mankgodi, Mankgodi, and Mankgodi.
- Geographical Features:** The Kruger National Park is visible in the north, and the University of Venda is located near Mopani. The map also shows numerous rivers, lakes, and dams.
- Infrastructure:** Major roads and highways are marked with numbers, and the map includes a grid system for location finding.
- Administrative Divisions:** The map is divided into various districts and municipalities, each labeled with its name.
- Topography:** The map uses color shading to represent different elevations and terrain types.

The map is a comprehensive resource for understanding the geography and administrative structure of the Limpopo Province.



## C5.2 TENDER DRAWINGS

The following Tender drawings are included in the Tender document for Tender purposes only.

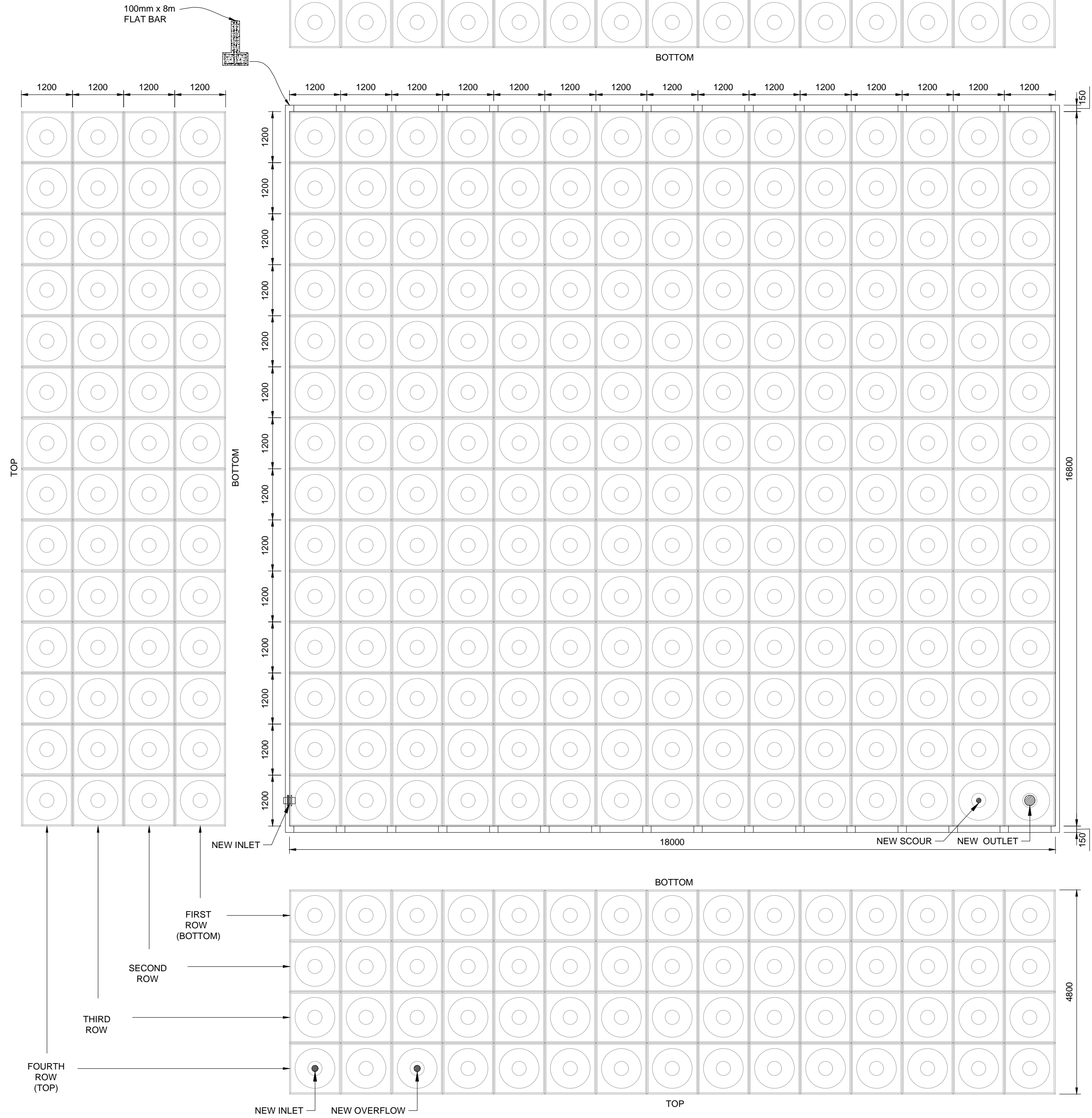
Drawing no.	Description
L/3142/G/7/001	Bulk Earthworks, Layout, Sections & Details
L/3142/C/8/001	Proposed New Water Tank, Stand Slab Layout & Details
L/3142/C/8/002	New Proposed Water Tank Connecting to Existing Water Tank Layout & Sections
L/3142/C/8/003	New Proposed Water Tank Pipes Lists
L/3142/W/3/001	Typical General & Bedding Details



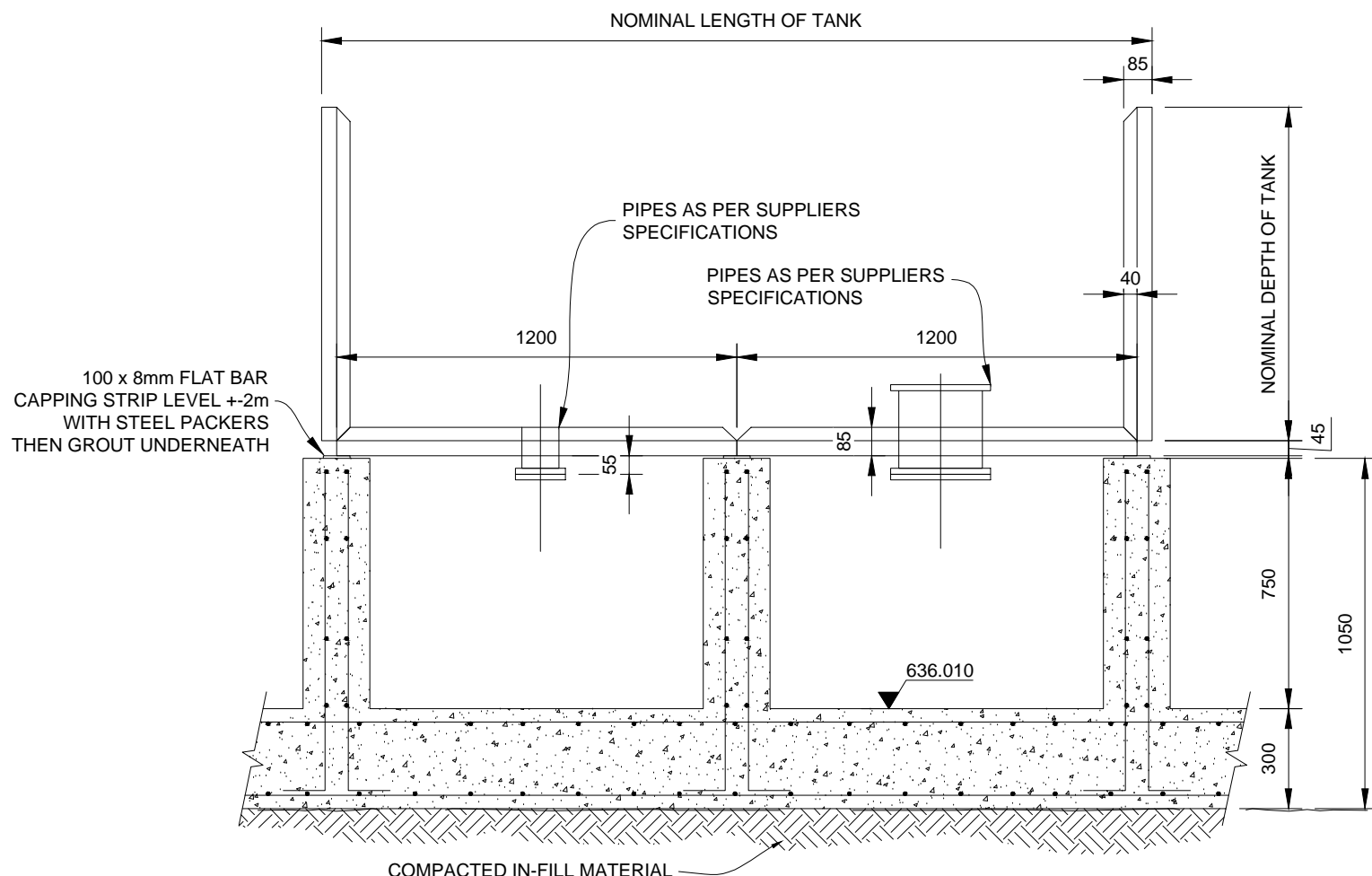




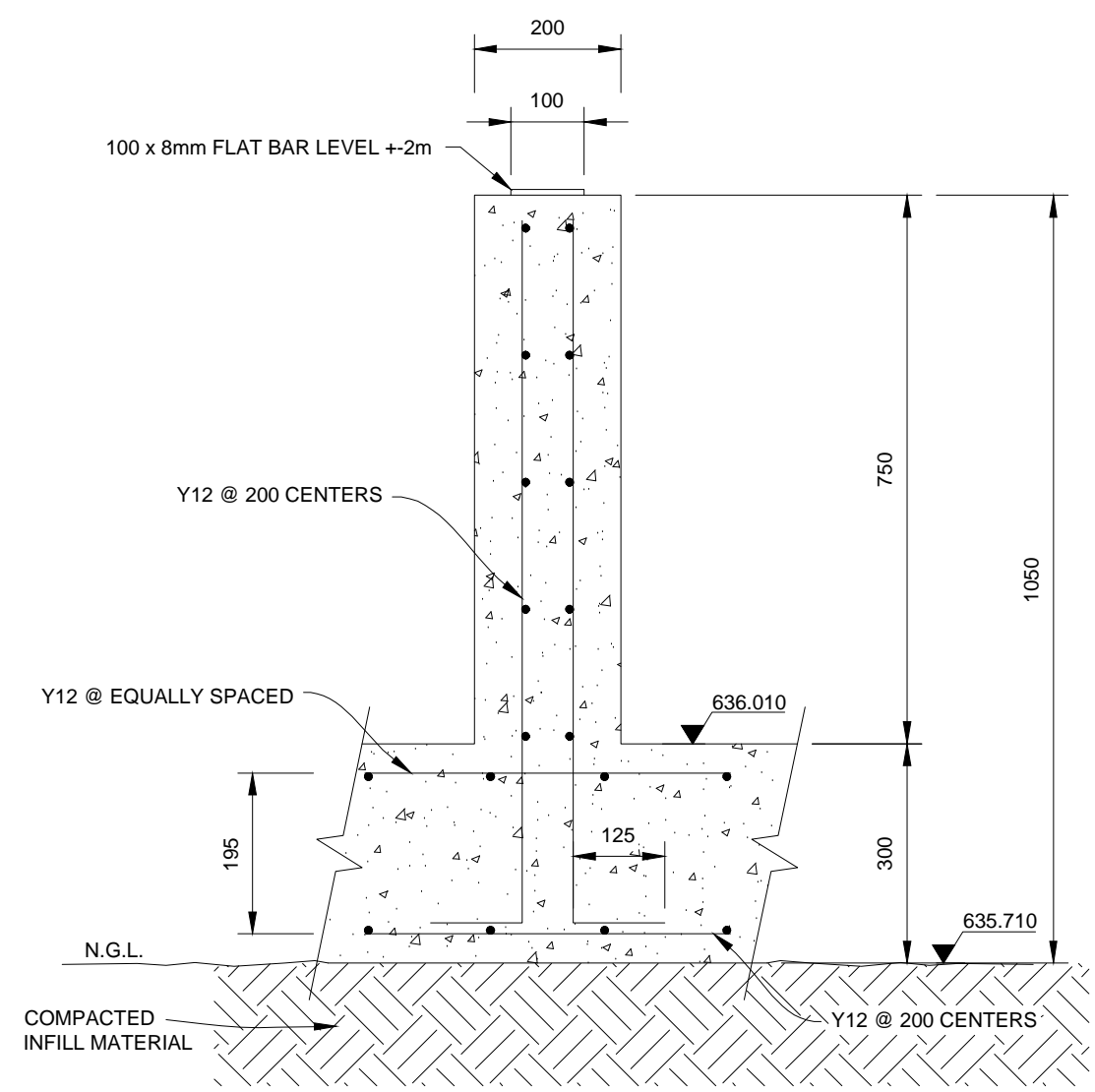
NOTE:  
THE LENGTH OF THE DWARF WALLS MUST PROTRUDE BY 150mm ON EITHER SIDE OF THE TANK. THE TOTAL LENGTH MUST BE TANK LENGTH + 300mm WITH REINFORCEMENTS. CONCRETE TO BE 25MPa.



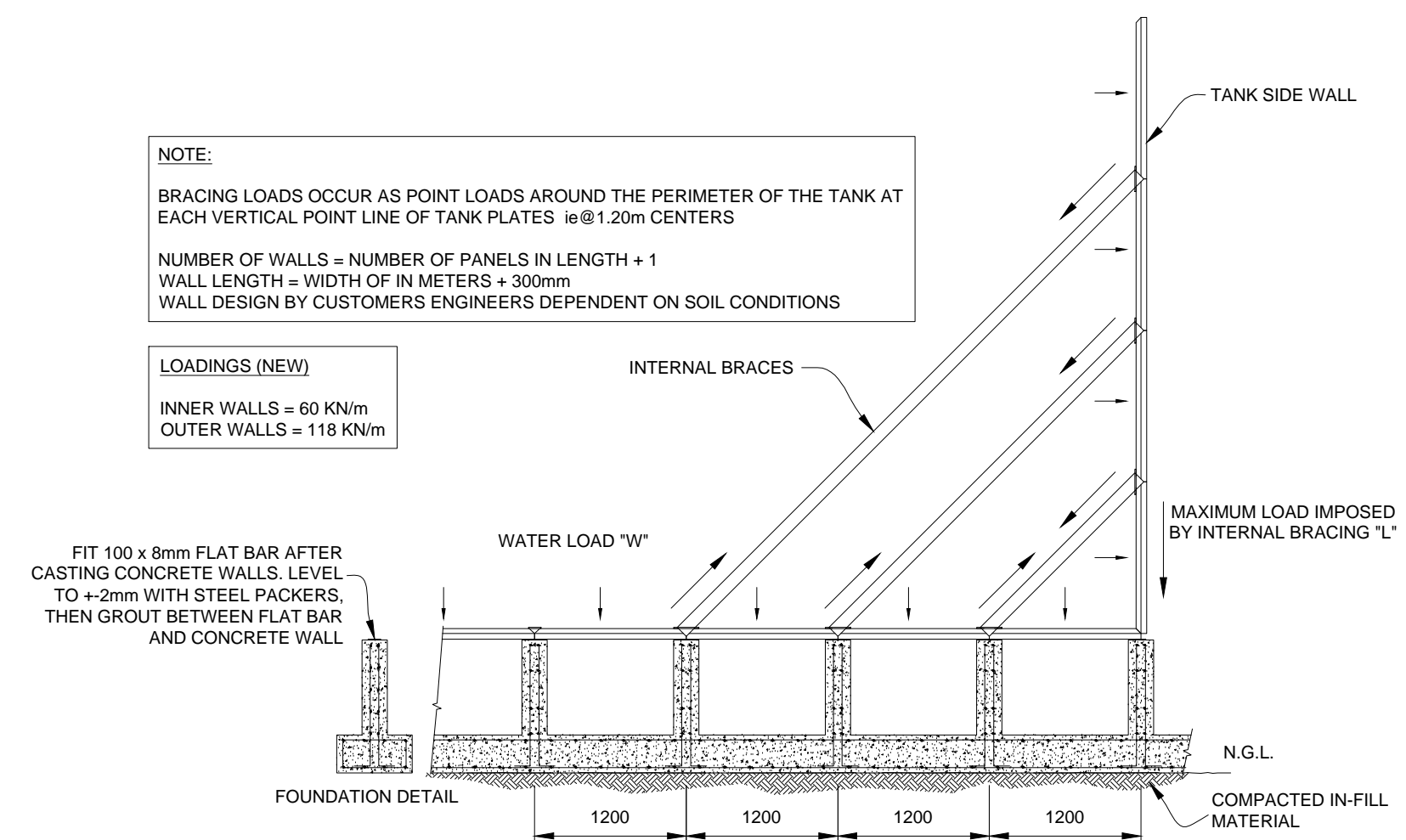
NEW TANK LAYOUT  
SCALE 1:75



TYPICAL FOUNDATION DETAILS FOR GROUND LEVEL TANKS  
SCALE 1:20



TYPICAL FOUNDATION DETAILS FOR GROUND LEVEL TANKS  
SCALE 1:10



FOUNDATION DETAIL AND LOADS FOR GROUND LEVEL TANKS  
SCALE 1:50

NOTES / LEGEND:

FOR TENDER PURPOSES

COPYRIGHT RESERVED

Rev	Description	Date	By
AMENDMENTS			
SERVICE			
STRUCTURES			
DESIGNED	L. MUKWEVHO		
DRAWN	Q. GALANE		
CAD FILE NAME	L3142C8001 Stand Slab Layout & Details.dwg		
CHECKED	L. MUKWEVHO		
APPROVED	L. MUKWEVHO		

**ENDECON**  
**UBUNTU (PTY) LTD**  
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128 SUID STREET - POLOKWANE - TEL : (015) 291 3363  
P O BOX 477, FAUNA PARK, POLOKWANE - 0787 - FAX : (015) 291 3403

CLIENT

University of Venda

PROJECT

PROPOSED NEW WATER TANK

TITLE

PROPOSED NEW WATER TANK,  
STAND SLAB LAYOUT & DETAILS

DATE	OCTOBER 2020
SCALE	AS SHOWN
PAPER SIZE	A1
SCALE REF.	
CONSULTANT DWG. NO.	
L/3142/C/8/001	
CLIENT DWG. NO.	
-	









The top graph is a design chart for thrust blocks. The vertical axis represents the Pipe Diameter in millimeters (mm), ranging from 100 to 500. The horizontal axis represents the Thrust Block Dimension W in meters (m), ranging from 0 to 10. The chart is divided into three sections based on pipe class: CLASS 30 (0 to 30 mm), CLASS 60 (30 to 60 mm), and CLASS 90 (60 to 90 mm). Curves are plotted for working pressures of 90, 105, 120, 140, 160, 180, 200, and 220 m. The bottom graph shows the Volume (V) of concrete in the thrust block in cubic meters (m³) on the vertical axis (0 to 5.0) against the Thrust Block Dimension W in meters (m) on the horizontal axis (0 to 10). The volume decreases as the dimension W increases.

The top graph is a design chart for thrust blocks. The vertical axis represents the Pipe Diameter in millimeters (mm), ranging from 100 to 500. The horizontal axis represents the Working Pressure in meters (m), ranging from 0 to 4. The chart is divided into four sections based on pipe classes: CLASS 30, CLASS 60, CLASS 90, and CLASS 120. Each section contains a series of curves that relate the pipe diameter to the working pressure for different thrust block dimensions (W). The curves are labeled with values for W: 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0, 10.5, 11.0, 11.5, 12.0, 12.5, 13.0, 13.5, 14.0, 14.5, 15.0, 15.5, 16.0, 16.5, 17.0, 17.5, 18.0, 18.5, 19.0, 19.5, 20.0, 20.5, 21.0, 21.5, 22.0, 22.5, 23.0, 23.5, 24.0, 24.5, 25.0, 25.5, 26.0, 26.5, 27.0, 27.5, 28.0, 28.5, 29.0, 29.5, 30.0, 30.5, 31.0, 31.5, 32.0, 32.5, 33.0, 33.5, 34.0, 34.5, 35.0, 35.5, 36.0, 36.5, 37.0, 37.5, 38.0, 38.5, 39.0, 39.5, 40.0, 40.5, 41.0, 41.5, 42.0, 42.5, 43.0, 43.5, 44.0, 44.5, 45.0, 45.5, 46.0, 46.5, 47.0, 47.5, 48.0, 48.5, 49.0, 49.5, 50.0, 50.5, 51.0, 51.5, 52.0, 52.5, 53.0, 53.5, 54.0, 54.5, 55.0, 55.5, 56.0, 56.5, 57.0, 57.5, 58.0, 58.5, 59.0, 59.5, 60.0, 60.5, 61.0, 61.5, 62.0, 62.5, 63.0, 63.5, 64.0, 64.5, 65.0, 65.5, 66.0, 66.5, 67.0, 67.5, 68.0, 68.5, 69.0, 69.5, 70.0, 70.5, 71.0, 71.5, 72.0, 72.5, 73.0, 73.5, 74.0, 74.5, 75.0, 75.5, 76.0, 76.5, 77.0, 77.5, 78.0, 78.5, 79.0, 79.5, 80.0, 80.5, 81.0, 81.5, 82.0, 82.5, 83.0, 83.5, 84.0, 84.5, 85.0, 85.5, 86.0, 86.5, 87.0, 87.5, 88.0, 88.5, 89.0, 89.5, 90.0, 90.5, 91.0, 91.5, 92.0, 92.5, 93.0, 93.5, 94.0, 94.5, 95.0, 95.5, 96.0, 96.5, 97.0, 97.5, 98.0, 98.5, 99.0, 99.5, 100.0, 100.5, 101.0, 101.5, 102.0, 102.5, 103.0, 103.5, 104.0, 104.5, 105.0, 105.5, 106.0, 106.5, 107.0, 107.5, 108.0, 108.5, 109.0, 109.5, 110.0, 110.5, 111.0, 111.5, 112.0, 112.5, 113.0, 113.5, 114.0, 114.5, 115.0, 115.5, 116.0, 116.5, 117.0, 117.5, 118.0, 118.5, 119.0, 119.5, 120.0, 120.5, 121.0, 121.5, 122.0, 122.5, 123.0, 123.5, 124.0, 124.5, 125.0, 125.5, 126.0, 126.5, 127.0, 127.5, 128.0, 128.5, 129.0, 129.5, 130.0, 130.5, 131.0, 131.5, 132.0, 132.5, 133.0, 133.5, 134.0, 134.5, 135.0, 135.5, 136.0, 136.5, 137.0, 137.5, 138.0, 138.5, 139.0, 139.5, 140.0, 140.5, 141.0, 141.5, 142.0, 142.5, 143.0, 143.5, 144.0, 144.5, 145.0, 145.5, 146.0, 146.5, 147.0, 147.5, 148.0, 148.5, 149.0, 149.5, 150.0, 150.5, 151.0, 151.5, 152.0, 152.5, 153.0, 153.5, 154.0, 154.5, 155.0, 155.5, 156.0, 156.5, 157.0, 157.5, 158.0, 158.5, 159.0, 159.5, 160.0, 160.5, 161.0, 161.5, 162.0, 162.5, 163.0, 163.5, 164.0, 164.5, 165.0, 165.5, 166.0, 166.5, 167.0, 167.5, 168.0, 168.5, 169.0, 169.5, 170.0, 170.5, 171.0, 171.5, 172.0, 172.5, 173.0, 173.5, 174.0, 174.5, 175.0, 175.5, 176.0, 176.5, 177.0, 177.5, 178.0, 178.5, 179.0, 179.5, 180.0, 180.5, 181.0, 181.5, 182.0, 182.5, 183.0, 183.5, 184.0, 184.5, 185.0, 185.5, 186.0, 186.5, 187.0, 187.5, 188.0, 188.5, 189.0, 189.5, 190.0, 190.5, 191.0, 191.5, 192.0, 192.5, 193.0, 193.5, 194.0, 194.5, 195.0, 195.5, 196.0, 196.5, 197.0, 197.5, 198.0, 198.5, 199.0, 199.5, 200.0, 200.5, 201.0, 201.5, 202.0, 202.5, 203.0, 203.5, 204.0, 204.5, 205.0, 205.5, 206.0, 206.5, 207.0, 207.5, 208.0, 208.5, 209.0, 209.5, 210.0, 210.5, 211.0, 211.5, 212.0, 212.5, 213.0, 213.5, 214.0, 214.5, 215.0, 215.5, 216.0, 216.5, 217.0, 217.5, 218.0, 218.5, 219.0, 219.5, 220.0, 220.5, 221.0, 221.5, 222.0, 222.5, 223.0, 223.5, 224.0, 224.5, 225.0, 225.5, 226.0, 226.5, 227.0, 227.5, 228.0, 228.5, 229.0, 229.5, 230.0, 230.5, 231.0, 231.5, 232.0, 232.5, 233.0, 233.5, 234.0, 234.5, 235.0, 235.5, 236.0, 236.5, 237.0, 237.5, 238.0, 238.5, 239.0, 239.5, 240.0, 240.5, 241.0, 241.5, 242.0, 242.5, 243.0, 243.5, 244.0, 244.5, 245.0, 245.5, 246.0, 246.5, 247.0, 247.5, 248.0, 248.5, 249.0, 249.5, 250.0, 250.5, 251.0, 251.5, 252.0, 252.5, 253.0, 253.5, 254.0, 254.5, 255.0, 255.5, 256.0, 256.5, 257.0, 257.5, 258.0, 258.5, 259.0, 259.5, 260.0, 260.5, 261.0, 261.5, 262.0, 262.5, 263.0, 263.5, 264.0, 264.5, 265.0, 265.5, 266.0, 266.5, 267.0, 267.5, 268.0, 268.5, 269.0, 269.5, 270.0, 270.5, 271.0, 271.5, 272.0, 272.5, 273.0, 273.5, 274.0, 274.5, 275.0, 275.5, 276.0, 276.5, 277.0, 277.5, 278.0, 278.5, 279.0, 279.5, 280.0, 280.5, 281.0, 281.5, 282.0, 282.5, 283.0, 283.5, 284.0, 284.5, 285.0, 285.5, 286.0, 286.5, 287.0, 287.5, 288.0, 288.5, 289.0, 289.5, 290.0, 290.5, 291.0, 291.5, 292.0, 292.5, 293.0, 293.5, 294.0,

The top graph shows the relationship between Pipe Diameter (mm) and Working Pressure (m) for different pipe classes. The y-axis ranges from 100 to 500 mm, and the x-axis ranges from 0 to 3 m. The curves represent pipe classes 0, 30, 45, 60, 75, 90, 105, and 120.

The bottom graph shows the relationship between Dimension W (m) and Volume (V) of concrete in thrust block (m³). The y-axis ranges from 0 to 2.0 m, and the x-axis ranges from 0 to 3 m³. The curve represents the required volume of concrete for a given dimension W.

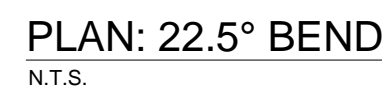


1. ALL SERVICES TO BE TYPICALLY ALLOCATED WITHIN THE ROAD SERVICE AS SHOWN ON THIS DRAWING UNLESS OTHERWISE SPECIFIED BY ENGINEER OR AS INSTRUCTED BY ENGINEER.
2. SERVICES THAT RUN BETWEEN 2 ERVEN TO BE TYPICALLY ALLOCATED AS SHOWN ON THIS DRAWING WITHIN THE 2m BUILDING LINE OR UNLESS OTHERWISE SPECIFIED BY ENGINEER OR AS INSTRUCTED BY ENGINEER.
3. THE MINIMUM DISTANCE BETWEEN SERVICES TO BE 300mm.

Diagram illustrating a trench cross-section with an anchor block cast against an undisturbed excavation. The diagram shows the trench walls, the anchor block, and the dimensions X, X2, Z, and D. The text "ANCHOR BLOCK CAST AGAINST UNDISTURBED EXCAVATION." is present. The text "SIDE OF TRENCH" is repeated three times. The text "D = DEPTH OF BLOCK." is also present.

## SCALE 1:10

N.T.S.



TYPICAL SECTION THROUGH  
THRUST BLOCK  
N.T.S.



## TYPICAL BEDDING DETAILS



1. ALL CONCRETE THRUST BLOCKS AND ANCHOR BLOCKS TO BE CLASS 25MPa, 19mm STONE.

90° BEND & END CAP  
75MM DIA: 'W' = 0.5m MINIMUM  
110MM DIA: 'W' = 0.6m MINIMUM  
160MM DIA: 'W' = 0.75m MINIMUM  
200MM DIA: 'W' = 0.8m MINIMUM  
250MM DIA: 'W' = 0.85m MINIMUM

250MM DIA: "W" = 0.85m MINIMUM

250MM DIA: "W" = 0.85m MINIMUM

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-	-	-	-
Rev	Description	Date	By

# WATER

DESIGNED	L. MUKWEVHU
DRAWN	R. CROUSE
CAD FILE NAME	L3142W3001 General & Bedding Details.dwg
CHECKED	L. MUKWEVHU
APPROVED	-

**ENDECON**  
**UBUNTU (PTY) LTD**  
**ENGINEERING CONSULTANTS**  
P.O. BOX 477  
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0787  
Tel: (015) 291 3363  
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### PROPOSED NEW WATER TANK

## TYPICAL GENERAL & BEDDING DETAILS

DATE		OCTOBER 2020	
SCALE	AS SHOWN	PAPER SIZE	A1

L/3142/W/3/001

