



WATER AND SANITATION DEPARTMENT

CONTRACT NUMBER: A-WS 08-2026

BID DOCUMENT

(IN COMPLIANCE WITH THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, ISSUED IN TERMS OF THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 (ACT NO. 5 OF 2000), AND PUBLISHED IN GOVERNMENT GAZETTE NO. 47452 OF 4 NOVEMBER 2022)

THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

CIDB GRADING: 4CE or 3CEPE or higher.

ISSUED BY:	PREPARED BY:	PREPARED FOR:
Department of Finance Tender Office Golden Heights, 141 Victoria Street, (Corner Victoria and F H Odendaal Streets) Germiston 1400 Use entrance at 65 FH Odendaal Street Email: Sduduzo.Sikhakhane@ekurhuleni.gov.za	WATER AND SANITATION DEPARTMENT Division: Strategic and Functional Planning Pretoria Road and C.R.Swart Road, Kempston Park 1620 Mthokozisi Mlotshwa Email: Mthokozisi.mlotshwa@ekurhuleni.gov.za	WATER AND SANITATION DEPARTMENT Head Office Pretoria Road and C.R.Swart Road, Kempston Park 1620 Mr. T. Maseko Email: Mthokozisi.mlotshwa@ekurhuleni.gov.za

NAME OF BIDDING ENTITY (FULL NAME, i.e. Ltd, Ltd, JV/CONSORTIUM, SOLE PROPRIETOR etc.) :

TELEPHONE NUMBER : _____

EMAIL ADDRESS : _____

FAX NUMBER : _____

NOTICE TO BIDDERS

VERY IMPORTANT NOTICE ON DISQUALIFICATIONS:

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

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

A BID WILL BE REJECTED ON THE FOLLOWING GROUNDS:

1. In the event that bidders are **not compliant** with all applicable legislative requirements, as per CSD. National Treasury in partnership with the Provincial Treasury have developed municipalities and municipal entities with a Central Supplier Database (CSD) for the registration of prospective suppliers in line with Section 14(1) (b) of the Municipal Supply Chain Management Regulations (MSCMR). (Tax compliance will be dealt with in terms of MFMA Circular No. 90)
2. Non-compliance with the Municipal Supply Chain Management Regulations, 2005; i.e. All sections affecting the evaluation of the bid **must be indicated** on the bid document and must be **submitted and completed in full**. All bidder's information **must be accurate and correct**.
3. In the event of a **failure to complete** and **sign in full** the schedule of quantities as required.
4. In the event of there being **scratching out, writing over or painting out** rates or information, affecting the evaluation of the bid, **without initialling** next to the amended rates or information. However, in cases where the total amount (aggregated) has not been affected, the bid will still be acceptable.
5. In the event of the **use of** correction fluid (e.g., tippex), any erasable ink, or any erasable writing instrument (e.g., pencil) on sections affecting the evaluation process of the bid.
6. If the Bid **has not been properly signed** by a person having the authority to do so. (**Refer to Declaration**)
7. If the bidder **attempts to influence** or has in fact **influenced** the evaluation and/or awarding of the contract.
8. If there is any **misrepresentation**, on information, that affects evaluation and / or information or evidence submitted pertaining to specific goals.
9. If the bid has **either** been submitted in the wrong bid box **or** after the relevant closing date and time.
10. Non-submission of municipal account, not older than three months for the bidding entity or signed lease agreement or an Affidavit (in cases where the bidding entity does not own a property).
11. If any municipal rates and taxes or municipal service charges **owed** by the bidder or any of its directors/members to the municipality or municipal entity, or to any other municipality or municipal entity, **are in arrears for three months (if the value of the transaction is expected not to exceed R10 million (VAT included))** (unless if the bidder has attached proof of the payment arrangement of the arrears to the bid document as at the closing date of the submission of bids)

12. If any municipal rates and taxes or municipal service charges **owed** by the bidder or any of its directors/members to the municipality or municipal entity, or to any other municipality or municipal entity, **are in arrears for more than 30 days (if the value of the transaction is expected to exceed R10 million (VAT included))** (unless if the bidder has attached proof of the payment arrangement of the arrears to the bid document as at the closing date of the submission of bids)
13. If any bidder who during the last five years has **failed to perform satisfactorily** on a previous contract with the municipality, municipal entity or any other organ of state **after** written notice was given to that bidder that performance was unsatisfactory.
14. The accounting officer must ensure that irrespective of the procurement process followed, **no** award may be given to a person –
 - a) who is in the service of the state, or;
 - b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder, is a person in the service of the state; or;
 - c) who is an advisor or consultant contracted with the municipality in respect of a contract that would cause a conflict of interest.
15. If the bidder **is not registered** in the required CIDB contractor grading designation (category) or higher, **if required** in this bid documentation.
16. If the bidder or any of its directors **is listed** on the Register of Bid Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person **prohibited** from doing business with the public sector.
17. If the bidder **has abused** the COE's Supply Chain Management System **and** action was taken in terms of paragraph 38 of the COE SCM Policy.
18. In the event of **non-submission of three (03) Annual Financial Statements** if the value of the transaction is expected to exceed R10 million (VAT included). In this regard, please note that:
 - 18.1. If a bidder is a registered company required by law to have its annual financial statements audited or independently reviewed in compliance with the requirements of the Companies Act ,Act No.71 of 2008, or any other law, audited or independently reviewed annual financial statements, as the case may be, prepared within six (6) months of the end of the bidders **most recent** financial year **together with** the audited or independently reviewed annual financial statements **for the two immediately preceding financial years**, unless the bidder was only established within the past three (3) years in which case **all** of its annual financial statements must be submitted.
 - 18.2. If a bidder is a registered close corporation, annual financial statements in compliance with the provisions of the Close Corporations Act, Act No. 69 of 1984, prepared within nine (9) months of the end of the bidders **most recent** financial year **together with** the annual financial statements **for the two immediately preceding financial years**, unless the bidder was only established within the past three (3) years in which case **all** of its annual financial statements must be submitted.
 - 18.3. If the bidder only commenced business within the past three years, the bidder **is required to submit** annual financial statements in compliance with the provisions of **(18.1)** and **(18.2)** above for each of its financial years since commencing business.

- 18.4. If a bidder **is not required** by law to have its annual financial statements audited or independently reviewed, or is not a Close Corporation, then non-audited annual financial statements for the periods referred to above **must be submitted**. Further that if no Annual Financial Statements are attached as requested above, the bid will be rejected.
19. If the bidder has failed to submit ALL required documents as specified on the bid document.
20. If the following have not been **fully completed** and **signed**:

FORM 2.2.2	- GENERAL DECLARATION
FORM 2.2.3	-DECLARATION OF INTEREST
FORM 2.2.4	- DECLARATION OF BIDDER'S PAST SCM PRACTICES
FORM 2.2.5	- DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (IF APPLICABLE)
FORM 2.2.6	- CERTIFICATE OF INDEPENDENT BID DETERMINATION
FORM 2.2.7	-DECLARATION FOR MUNICIPAL ACCOUNTS
FORM 2.2.8	-DECLARATION FOR MUNICIPAL ACCOUNTS WHERE BIDS ARE EXPECTED TO EXCEED R10 MILLION

NOTE:

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

- 1.1. CLIENT, EMPLOYER, CITY OF EKURHULENI (CoE).
- 1.2. BID, TENDER AND VARIATIONS THEREOF
- 1.3. JOINT VENTURE / CONSORTIUM

- 2. **Very important notice:** Bidders must note that only information filled in at the spaces provided therefore in the bid document will be considered for evaluation purposes unless additional space is required and then only if the location of the additional information in the attachments is properly referred to by page number and section heading. Information supplied anywhere else will be disregarded which **may** lead to the rejection of the bid.
- 3. **The attachment or inclusion of information not specifically asked for is not desirable and lead to delays in the awarding of bids. This includes Company Profiles and CV's if not specifically requested.**

PLEASE NOTE POSSIBLE AMENDMENTS/ADDENDUM MAY BE ADVERTISED ON THE CoE WEBSITE. IT REMAINS THE RESPONSIBILITY OF THE BIDDER TO CHECK THE COE WEBSITE DAILY AND TO RAISE ANY ENQUIRIES REGARDING THE BID TO THE RELEVANT CONTACT PERSON BEFORE THE CLOSING DATE. NO COMMUNICATION WILL BE ALLOWED AFTER THE CLOSING OF THE BID

THE LIST OF SUCCESSFUL AND UNSUCCESSFUL BIDDERS WILL BE PUBLISHED ON THE CITY'S WEBSITE.

PLEASE NOTE THAT ALL BID DOCUMENTS ARE ALSO AVAILABLE FOR DOWNLOAD ON OUR WEBSITE FOR FREE IN ANY COLOUR PAPER.

PLEASE NOTE EXTENSION OF VALIDITY (IF APPLICABLE) WILL BE ADVERTISED ON THE CoE WEBSITE.

IT REMAINS THE RESPONSIBILITY OF THE BIDDER TO CHECK THE CoE WEBSITE DAILY FOR ANY EXTENSION OF VALIDITY PUBLISHED.

CITY OF EKURHULENI

DEPARTMENT NAME: **WATER AND SANITATION**

CONTRACT NO: **A-WS 08-2026**

FOR **THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029**

SUMMARY FOR BID OPENING PURPOSES

NAME OF BIDDING ENTITY:.....

.....

PHYSICAL STREET ADDRESS:	POSTAL ADDRESS:

TELEPHONE NUMBER :

FAX NUMBER :

E-mail ADDRESS :

CONTRACT PRICE : R.....

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

Signed by authorised representative of the Bidding Entity:

DATE:

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

CITY OF EKURHULENI

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CITY OF EKURHULENI

DEPARTMENT NAME: WATER AND SANITATION

CONTRACT NO: A-WS 08-2026

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PART T1 BIDDING PROCEDURES

- T1.1 BID NOTICE AND INVITATION TO BID
- T1.2 BID DATA

T1.1 BID NOTICE AND INVITATION TO BID

ADVERTISED IN: SOWETAN
PUBLISHING DATE: 09 OCTOBER 2026

CITY OF EKURHULENI

Bids are hereby invited for the following:
WATER AND SANITATION DEPARTMENT
Strategic and Functional Planning

CONTRACT NO.:
A-WS 08-2026

DESCRIPTION:
The appointment of contractors for Pressure Management, Leak Detection, Valve Replacement and Remedial Works in the City of Ekurhuleni on an as and when required basis from date of award until 30 June 2029

CLOSING DATE:
30 NOVEMBER 2026

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

Bidders must be registered with the Construction Industry Development Board (CIDB) in a contractor grading designation determined in accordance with the sum tendered for a 4CE class of construction work. Enterprises who have a 3CEPE grading may also submit bids or higher

Acceptable bids will be evaluated by using a system that awards points on the basis of **90 points** for bid price and a maximum of **10 points** for Specific Goal/s.

Tax compliance will be dealt with in terms of MFMA Circular No. 90

Please note that all bid documents are available for download on our website for free in any colour paper

An information session will be held at **11:00 am** on **21 OCTOBER 2026**. Prospective bidders are requested to meet on the said date and time: **KEMPTON PARK CIVIC CENTRE, SECOND FLOOR, COUNCIL CHAMBER, CORNER C R SWART DRIVE AND PRETORIA ROAD, KEMPTON PARK**. Bid documentation will not be available at the information session.

Bids are to be completed in accordance with the conditions and bid rules contained in the bid documents and supporting documents must be sealed and externally endorsed with the **CONTRACT NUMBER AND DESCRIPTION** and placed in bid **box number FOUR (04)**, on the Ground Floor, Golden Heights, 141 Victoria Street, (Corner Victoria and F H Odendaal Streets) Germiston 1400, Use entrance at 65 FH Odendaal street, not later than **10:00** on **30 NOVEMBER 2026**. Bids will be opened immediately thereafter, in public, in the Conference Room, Ground Floor, at above-mentioned address. **All bids shall hold good for 120 days as from the closing date of bids.**

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

Enquiries must be directed to Mthokozisi Mlotshwa at e-mail address: Mthokozisi.mlotshwa@ekurhuleni.gov.za

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

TELEFAX OR E-MAIL BIDS ARE NOT ACCEPTABLE

MR. K. LERUTLA
CITY MANAGER
COE

MBD 1: PART A: INVITATION TO BID					
YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE CITY OF EKURHULENI					
BID NUMBER:	A-WS 08-2026	CLOSING DATE:	30 NOVEMBER 2026	CLOSING TIME:	10:00 am
DESCRIPTION	The appointment of contractors for Pressure Management, Leak Detection, Valve Replacement and Remedial Works in the City of Ekurhuleni on an as and when required basis from date of award until 30 June 2029				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).					
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)					
GOLDEN HEIGHTS					
141 VICTORIA STREET (CORNER VICTORIA AND F H ODENDAAL STREETS) Use entrance at 65 FH Odendaal Street					
GERMISTON					
1400					
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
TAX COMPLIANCE STATUS	TCS PIN:		OR	CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No		B-BBEE STATUS LEVEL ORIGINAL SWORN AFFIDAVIT	☐ Yes ☐ No	
[A B-BBEE STATUS VERIFICATION CERTIFICATE/ ORIGINAL SWORN AFFIDAVIT OR CERTIFIED COPY OF THE SWORN AFFIDAVIT OR A CERTIFIED COPY THEREOF (FOR EMES& QSEs) OR A CERTIFICATE FROM THE COMPANIES AND INTELLECTUAL PROPERTY COMMISSION (CIPC) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS (if applicable)]					
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES, ANSWER PART B:3]	
TOTAL NUMBER OF ITEMS OFFERED			TOTAL BID PRICE	R	
SIGNATURE OF BIDDER			DATE		
CAPACITY UNDER WHICH THIS BID IS SIGNED					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:			TECHNICAL INFORMATION MAY BE DIRECTED TO:		
DEPARTMENT	Finance		CONTACT PERSON	Mthokozisi Mlotshwa	
CONTACT PERSON	Sduduzo Sikhakhane		TELEPHONE NUMBER	N/A	
TELEPHONE NUMBER	N/A		FACSIMILE NUMBER	N/A	
FACSIMILE NUMBER	N/A		E-MAIL ADDRESS		
E-MAIL ADDRESS	Sduduzo.Sikhakhane@ekurhuleni.gov.za		Mthokozisi.mlotshwa@ekurhuleni.gov.za		

MBD 1: PART B: TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION. 1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED– (NOT TO BE RE-TYPED) OR ONLINE 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
2. TAX COMPLIANCE REQUIREMENTS
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS. 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS. 2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA. 2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3. 2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID. 2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER. 2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS
3.1. IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? ☐ YES ☐ NO 3.2. DOES THE ENTITY HAVE A BRANCH IN THE RSA? ☐ YES ☐ NO 3.3. DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? ☐ YES ☐ NO 3.4. DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? ☐ YES ☐ NO 3.5. IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? ☐ YES ☐ NO IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.

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

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

DATE:

T1.2 BID DATA

The conditions of bid are the **Standard Conditions of Tender** as contained in Annex F of the CIDB Standard for Uniformity for construction Procurement, Board Notice 136 Government Gazette No 38960 of 10 July 2015. A copy is attached hereto, immediately after page 13.

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

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

Clause number	Data
F.1.1 ACTIONS	The Employer is: The City Manager CITY OF EKURHULENI Private Bag 1069 Germiston 1400
F.1.2 TENDER DOCUMENTS	The bid documents issued by the Employer comprise: THE BID Part T1 Bidding procedures. Part T1.1 Bid notice and invitation to bid Part T1.2 Bid data Part T2 Returnable documents Part T2.1 List of returnable documents Part T2.2 Returnable schedules THE CONTRACT Part C1 Agreements and contract data C1.1 Form of offer and acceptance C1.2 Contract data C1.3 Form of Guarantee C1.4 Agreement in terms of Occupational Health and Safety Act, 1993 Part C2 Pricing Data C2.1 Pricing Instructions C2.2 Bill of Quantity Part C3 Scope of Works C3 Scope of Works Part C4 Site Information C4 Site Information
F.1.4 COMMUNICATION	The Employer's agent is: Name:

Clause number	Data
AND EMPLOYER'S AGENT	Address: Tel: Fax: E-mail:
F.2.1 ELIGIBILITY	Only those bidders who have in their employ management and supervisory staff satisfying the requirements of the scope of work for labour intensive competencies for supervisory and management staff are eligible to submit bids. Only those bidders who are registered with the CIDB in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 4CE class of construction work, or by a contractor who is registered as a potential emerging enterprise in terms of these regulations at a contractor grading designation one level lower than the required class as specified above are eligible to submit bids, provided that the employer: (a) is satisfied that such a contractor has the potential to develop and qualify to be registered in that higher grade; and (b) ensures that financial, management or other support is provided to that contractor to enable the contractor to successfully execute that contract. Joint Ventures are eligible to submit bids provided that: (1) each member of the joint venture is registered with the CIDB, (2) the lead partner has a contractor grading designation in the 3CE class of construction work; and (3) the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations (according to the CIDB website Joint Venture Grading Designation Calculator) is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 4CE class of construction work.
F.2.7 CLARIFICATION MEETING	The arrangements for an information session are: Location: Kempton Park Civic Centre, Second Floor, Council Chamber, Corner C R Swart Drive and Pretoria Road, Kempton Park. Date: 21 OCTOBER 2026 Starting time: 11:00 am.
F.2.12 ALTERNATIVE TENDER OFFERS	If a bidder wishes to submit an alternative bid offer, the only criteria permitted for such alternative bid offer is that it demonstrably satisfies the Employer's standards and requirements, the details of which may be obtained from the Employer's Engineer. Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative bid offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative satisfies the Employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal. Acceptance of an alternative bid offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the bidder, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements. The modified Bid Data must include an amount equal to 5% of the amount bid for the alternative offer to cover the Employer's costs of confirming the acceptability of the detailed design before it is

Clause number	Data
	constructed.
F.2.13.1 SUBMITTING A TENDER OFFER	Bidders may offer to provide any of the parts, or combinations thereof, of the works, services or supply identified in the contract data.
F.2.13.3 SUBMITTING A TENDER OFFER	The <i>whole original</i> bid document, <i>as issued by the COE</i>, shall be submitted. THE BIDDER TO SUBMIT, TOGETHER WITH THE FULLY COMPLETED BID DOCUMENT, A USB WITH A COPY IN PDF FORMAT OF THE ORIGINAL COMPLETED BILL OF QUANTITIES/PRICING SCHEDULE. THIS USB MAY BE USED WHENEVER THERE IS A DISPUTE BETWEEN THE BIDDER AND COE. Bids may only be submitted on the Bid documentation issued by the COE.
F.2.13.5 SUBMITTING A TENDER OFFER	The Employer's address for delivery of bid offers and identification details to be shown on each bid offer package are: Location of bid box: Bid box number FOUR (04) Physical address: Golden Heights, 141 Victoria Street, (Corner Victoria and F H Odendaal Streets) Germiston 1400 Use entrance at 65 FH Odendaal street Identification details: Contract Number: A-WS 08-2026 THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029.
F.2.15 CLOSING TIME	The closing time for submission of bid offers is: 10:00 am on 30 NOVEMBER 2026 Telephonic, telegraphic, telex, facsimile or e-mailed bid offers will not be accepted.
F.2.16 TENDER OFFER VALIDITY	The bid offer validity period is 120 days

Clause number	Data
F.2.18 PROVIDE OTHER MATERIAL	The bidder shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.
F.2.19 INSPECTIONS, TESTS AND ANALYSIS	Not Applicable
F.2.23 CERTIFICATES	The bidder is required to submit with his bid. (1) In order to obtain Specific Goal/s points in terms of the provisions of Regulations 4(2) or 5(2) of the Preferential Procurement Regulations, 2022, the bidder must submit proof of Specific Goal/s claimed. (2) A TCS pin number thereof, issued by the South African Revenue Services; (3) If a bidder is a registered company required by law to have its annual financial statements audited or independently reviewed in compliance with the requirements of the Companies Act, Act No. 71 of 2008, or any other law, audited or independently reviewed annual financial statements, as the case may be, prepared within six (6) months of the end of the bidders most recent financial year together with the audited or independently reviewed annual financial statements for the two immediately preceding financial years, unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted. (4) If a bidder is a registered close corporation, annual financial statements in compliance with the provisions of the Close Corporations Act, Act No. 69 of 1984, prepared within nine (9) months of the end of the bidders most recent financial year together with the annual financial statements for the two immediately preceding financial years, unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted. (5) Immediately preceding financial years, unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted. If the bidder only commenced business within the past three years, the bidder is required to submit annual financial statements in compliance with the provisions of (1) and (2) above for each of its financial years since commencing business. (6) If a bidder is not required by law to have its annual financial statements audited or independently reviewed, or is not a Close Corporation, then non-audited annual financial statements for the periods referred to above must be submitted.
F.3.4 OPENING OF BID SUBMISSIONS	The time and location for opening of the bid offers are: Immediately after the closing time for submission of bid. Location: Golden Heights, 141 Victoria Street, (Corner Victoria and F H Odendaal Streets) Germiston

	1400 Use entrance at 65 FH Odendaal Street
F.3.5 TWO-ENVELOPE SYSTEM	A two-envelope procedure will not be followed.
F.3.9 3.9.1 ARITHMETICAL ERRORS	Replace the contents of the clause with the following: “Check responsive tender offers for arithmetical errors, correcting them in the following manner: a) Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern. 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, <u>the rate shall govern and the line item total shall be corrected.</u> c) Where there is an error in the total of the prices either as a result of corrections required by this checking process or in the tenderer’s addition of prices, the total of the prices shall be adjusted to reflect the arithmetically correct summation of corrected line item totals. Consider the rejection of a tender offer if the tenderer does not accept the correction of the arithmetical errors in the manner described above.”
F.3.11 EVALUATION OF BID OFFERS	The preference procedure for evaluation of responsive bid offers shall be the 90/10-point preference system, being a maximum of 90 points for price and a maximum of 10 points for specific goals, in accordance with the Preferential Procurement Regulations, 2022.
F.3.13.1 ACCEPTANCE OF BID OFFER	Bids containing any one or more of the errors or omissions, or bids not having complied with any one of the peremptory bid conditions as detailed on page 2 of this bid document, shall not be considered and shall automatically be rejected.
F.3.18 PROVIDE COPIES OF THE CONTRACTS	The number of paper copies of the signed contract to be provided by the Employer is one.
ADDITIONAL CONDITIONS APPLICABLE TO THIS BID	The additional conditions of bid are: 1 The Employer/Engineer may also request that the bidder provide written evidence that his financial, labour and other resources are adequate for carrying out the contract. 2 The Employer reserves the right to appoint a firm of chartered accountants and/or auditors to execute any financial investigations on the financial resources of any bidder. The bidder shall provide all reasonable assistance in such investigations. 3 It is the intention of CoE to appoint more than one bidder up to a maximum of 04 bidders, maximum of 02 per region. In cases where it is not possible to award a maximum of two per region to a bidder (due to the number of acceptable bidders), then one bidder may be awarded more than one region, and preference will be given to the highest scoring bidder. 4 The bid document shall be submitted as a whole and shall not be taken apart. 5 List of returnable documents (PART T2) must be completed in full. (A bidder’s company profile will not be used by the COE to complete PART T2 on behalf of the bidder) NB: If PART T2 is not completed in full by the bidder, this offer will be rejected.

Annex F

(normative)

Standard Conditions of Tender

As published in Annexure F of the CIDB Standard for Uniformity for construction Procurement, Board Notice 136 Government Gazette No 38960 of 10 July 2015

F.1 General

F.1.1 Actions

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

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

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

F.1.2 Tender Documents

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

F.1.3 Interpretation

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

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

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

- a) **conflict of interest** means any situation in which:
 - i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfill his or her duties impartially;
 - ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
 - iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.
- b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised 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;
- e) **organization** means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body;
- f) **functionality** means the measurement according to the predetermined norms of a service or commodity designed to be practical and useful, working or operating, taking into account quality, reliability, viability and durability of a service and technical capacity and ability of a tenderer.

F.1.4 Communication and employer's agent

Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied and recorded. 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.

F.1.5 Cancellation and Re-Invitation of Tenders

F.1.5.1 An organ of state may, prior to the award of the tender, cancel a tender if-

- (a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or
- (b) funds are no longer available to cover the total envisaged expenditure; or
- (c) no acceptable tenders are received.

F.1.5.2 The decision to cancel a tender must be published in the cidb website, the government Tender Bulletin, eTender Publication Portal and other media in which the original tender invitation was advertised.

F.1.6 Procurement procedures

F.1.6.1 General

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

F.1.6.2 Competitive negotiation procedure

F.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of F.3.4, the employer shall announce only the names of the tenderers who make a

submission. The requirements of F.3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

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

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

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

F.1.6.3 Proposal procedure using the two stage-system

F.1.6.3.1 Option 1

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

F.1.6.3.2 Option 2

F.1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.

F.1.6.3.2.2 The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

F.2 Tenderer's obligations

F.2.1 Eligibility

F.2.1.1 Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.

F.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

F.2.2 Cost of tendering

F.2.2.1 Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.

F2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

F.2.3 Check documents

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

F.2.4 Confidentiality and copyright of documents

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

F.2.5 Reference documents

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

F.2.6 Acknowledge addenda

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

F.2.7 Clarification meeting

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

F.2.8 Seek clarification

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

F.2.9 Insurance

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

F.2.10 Pricing the tender offer

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

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

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

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

F.2.11 Alterations to documents

Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.

F.2.12 Alternative tender offers

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

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

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

F.2.13 Submitting a tender offer

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

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

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

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

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

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

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

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

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

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

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

F.2.15 Closing time

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

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

F.2.16 Tender offer validity

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

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

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

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

F.2.17 Clarification of tender offer after submission

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

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

F.2.18 Provide other material

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

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

F.2.19 Inspections, tests and analysis

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

F.2.20 Submit securities, bonds 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.

F.2.21 Check final draft

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

F.2.22 Return of other tender documents

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

F.2.23 Certificates

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

F.3 The employer's undertakings

F.3.1 Respond to requests from the tenderer

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

F.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:

- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not prequalified in the first instance, 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.

F.3.2 Issue Addenda

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

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

F.3.4 Opening of tender submissions

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

F.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points claimed for specific goal/s and time for completion for the main tender offer only.

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

F.3.5 Two-envelope system

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

F.3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then 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 for specific goal/s. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

F.3.6 Non-disclosure

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

F.3.7 Grounds for rejection and disqualification

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

F.3.8 Test for responsiveness

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

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

F.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be ratified.

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

F.3.9 Arithmetical errors, omissions and discrepancies

F.3.9.1 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 for:

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

F.3.9.2 The employer must correct the arithmetical errors in the following manner:

- a) Where there is a discrepancy between the amounts in words and amounts in figures, the amount in words shall govern.
- b) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the rate shall govern and the line item total shall be corrected.
- c) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices. Consider the rejection of a tender offer if the tenderer does not correct or accept the correction of the arithmetical error in the manner described above.

F.3.10 Clarification of a tender offer

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

F.3.11 Evaluation of tender offers

F.3.11.1 General

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

F.3.11.2 Method 1: Price and Preference

In the case of a price and preference:

- 1) Score tender evaluation points for price
- 2) Score points for specific goal/s
- 3) Add the points scored for price and specific goal/s.

F.3.11.3 Method 2: Functionality, Price and Preference

In the case of a functionality, price and preference:

- 1) Score functionality, rejecting all tender offers that fail to achieve the minimum number of points for functionality as stated in the Tender Data.

- 2) No tender must be regarded as an acceptable tender if it fails to achieve the minimum qualifying score for functionality as indicated in the tender invitation.
- 3) Tenders that have achieved the minimum qualification score for functionality must be evaluated further in terms of the preference points system prescribed in paragraphs 4 and 4 and 5 below.

The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R50 million

- 4) (a)(i) The following formula must be used to calculate the points for price in respect of tenders(including price quotation) with a rand value equal to, or above R 2 000 and up to Rand value of R 50 million (all applicable taxes included):

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

Where

P_s = Points scored for comparative price of tender or offer under consideration;

P_t = Comparative price of tender or offer under consideration; and

$P_{\min}$ = Comparative price of lowest acceptable tender or offer.

- (4)(a)(ii) An employer of state may apply the formula in paragraph (i) for price quotations with a value less than R30 000, if and when appropriate:
- (4)(b) Subject to subparagraph(4)(c), points must be awarded to a tender for attaining the specific goal/s in accordance with the table below:
- (4)(c) A maximum of 20 points may be allocated in accordance with subparagraph (4)(b)
- (4)(d) The points scored by tender in respect of specific goal/s contemplated in contemplated in subparagraph (4) (b) must be added to the points scored for price as calculated in accordance with subparagraph (4)(a).
- (4)(e) Subject to paragraph 4.3.8 the contract must be awarded to the tender who scores the highest total number of points. (See Specific Goals under Specification)

The 90/ 10 preference points system for acquisition of services, works or goods with a Rand value above R 50 million

- (5)(a) The following formula must be used to calculate the points for price in respect of tenders with a Rand value above R50 million (all applicable taxes included):

90/10

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

Where

P_s = Points scored for comparative price of tender or offer under consideration;

P_t = Comparative price of tender or offer under consideration; and

$P_{\min}$ = Comparative price of lowest acceptable tender or offer.

- (5)(b) Subject to subparagraph(5)(c), points must be awarded to a tender for attaining the specific goal/s in accordance with the table below:

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

(5)(d) The points scored by tender in respect of specific goal/s contemplated in subparagraph (5) (b) must be added to the points scored for price as calculated in accordance with subparagraph (5)(a).

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

F.3.11.6 Decimal places

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

F.3.11.7 Scoring Price

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

$$N_{FO} = W_1 \times A$$

where: N_{FO} is the number of tender evaluation points awarded for price.

W_1 is the maximum possible number of tender evaluation points awarded for price as stated in the Tender Data.

A is a number calculated using the formula and option described in Table F.1 as stated in the Tender Data.

Table F.1: Formulae for calculating the value of A

Formula	Comparison aimed at achieving	Option 1 ^a	Option 2 ^a
1	Highest price or discount	$A = (1 + \frac{(P - P_m)}{P_m})$	$A = P / P_m$
2	Lowest price or percentage commission/fee	$A = (1 - \frac{(P - P_m)}{P_m})$	$A = P_m / P$
^a P_m is the comparative offer of the most favourable tender offer. P is the comparative offer of tender offer under consideration.			

F.3.11.8 Scoring preferences

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

Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the tender data.

F.3.11.9 Scoring functionality

Score each of the criteria and sub-criteria for quality in accordance with the provisions of the Tender Data.

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

$$N_Q = W_2 \times S_Q / M_S$$

where: S_Q is the score for quality allocated to the submission under consideration;

M_S is the maximum possible score for quality in respect of a submission; and

W_2 is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

F.3.12 Insurance provided by the employer

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

F.3.13 Acceptance of tender offer

Accept 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 restriction, or has principals who are under restriction preventing participation 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, 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
- e) complies with the legal requirements, if any, stated in the tender data, and
- f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

F.3.14 Prepare contract documents

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

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents, and
- c) other revisions agreed between the employer and the successful tenderer.

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

F.3.15 Complete adjudicator's contract

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

F.3.16 Notice to unsuccessful tenderers

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

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

F.3.17 Provide copies of the contracts

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

F.3.18 Provide written reasons for actions taken

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

F3.19 Transparency in the procurement process

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

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

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

F3.19.4 The client must publish the information on a quarterly basis which contains the following information:

- Procurement planning process
- Procurement method and evaluation process
- Contract type
- Contract status
- Number of firms tendering
- Cost estimate
- Contract title
- Contract firm(s)
- Contract price
- Contract scope of work
- Contract start date and duration
- Contract evaluation reports

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

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

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

F 3.19.8 Records of such disclosed information must be retained for audit purposes.

CITY OF EKURHULENI

DEPARTMENT NAME: WATER AND SANITATION

CONTRACT NO: A-WS 08-2026

FOR THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

PART T2 LIST OF RETURNABLE DOCUMENTS

The bidder must complete the following returnable documents.

- T2.1 RETURNABLE SCHEDULES REQUIRED FOR BID EVALUATION PURPOSES
- T2.2 OTHER DOCUMENTS REQUIRED FOR BID EVALUATION PURPOSES
- T2.3 RETURNABLE SCHEDULES THAT WILL BE INCORPORATED IN THE CONTRACT
- T2.4 OTHER DOCUMENTS THAT WILL BE INCLUDED IN THE CONTRACT

NOTE:

Although the documents under Part T2 is headed "Returnable Documents" in line with the CIDB model, these are not the only documents to be returned together with the bid.

All the documents indicated on Part T1, must be completed and signed where applicable and submitted as a complete set of documents.

T2.1 RETURNABLE SCHEDULES REQUIRED FOR BID EVALUATION PURPOSES

CONTENTS

	<u>PAGE(S)</u>
FORM 2.1.1: SCHEDULE OF CONSTRUCTION PLANT	
FORM 2.1.2: SIZE OF ENTERPRISE AND CURRENT WORKLOAD.....	
FORM 2.1.3: STAFFING PROFILE.....	
FORM 2.1.4: PROPOSED KEY PERSONNEL	
FORM 2.1.5: SCHEDULE OF PREVIOUS WORK CARRIED OUT BY BIDDER.....	
FORM 2.1.6: FINANCIAL ABILITY TO EXECUTE THE PROJECT.....	
FORM 2.1.7: JOINT VENTURE/CONSORTIUM AUTHORITY	
FORM 2.1.8: SCHEDULE OF PROPOSED SUB CONTRACTORS.....	
FORM 2.1.9: FINANCIAL REFERENCES (not required if CIDB grading applies)	
FORM 2.1.10 DETAILS OF ALTERNATIVE BIDS SUBMITTED.....	
FORM 2.1.11 AMENDMENTS & QUALIFICATIONS BY BIDDER.....	
FORM 2.1.12 LABOUR-ENHANCED METHODS: PROPOSED PLANNED ACTIONS OF BIDDER RESULTING IN DEVIATIONS FROM SPECIFIED WORK.....	

EVALUATION CRITERIA

EVALUATION ASPECT	MINIMUM REQUIREMENTS
Infrastructure and resources available Plant and Equipment (owned or leased)	One of each of the following: • (x1) Water Tanker – Minimum Tank Capacity: 5,000 litres • (x1) TLB (Tractor Loader Backhoe) – Minimum Operating Weight: 7 900 kg • (x1) Light Delivery Vehicle (LDV) / Bakkie – Minimum GVM: 2 700 kg

REQUIRED DOCUMENTS:

Infrastructure and Resources Available – Plant and Equipment (Owned or Leased)

The bidder must demonstrate that the required plant and equipment listed below will be available for the execution of the contract.

For **each item of plant and equipment**, the bidder must submit:

A. Proof of availability

One of the following must be submitted:

- Proof of ownership; **or**
- A valid lease agreement signed by both the lessor and the lessee; **or**
- A letter of intent to lease signed by both the lessor and the lessee.

Where the plant or equipment is leased or intended to be leased, **proof of ownership by the lessor must also be submitted.**

The proof of ownership, lease agreement or letter of intent to lease must clearly identify the plant or equipment being offered and must correspond with the supporting technical proof submitted under **B** below.

B. Proof of compliance with the minimum technical requirement

In addition to the proof required under **A** above, the bidder must submit the applicable technical proof for each item as follows:

1. Water Tanker (x1) – Minimum Tank Capacity: 5,000 litres

Technical proof: Manufacturer's specification/data sheet or tank certificate confirming that the water tank offered has a minimum capacity of 5,000 litres.

2. TLB (Tractor Loader Backhoe) (x1) – Minimum Operating Weight: 7,900 kg

Technical proof: Manufacturer's technical specification/data sheet **or** brochure clearly indicating the make, model and operating weight of the TLB offered.

3. Light Delivery Vehicle (LDV) / Bakkie (x1) – Minimum GVM: 2,700 kg

Technical proof: Copy of a valid motor vehicle licence disc indicating that the vehicle offered has a minimum GVM of 2,700 kg.

Important: The documents submitted as proof of availability and technical compliance must relate to the same plant or equipment offered by the bidder. The make, model, registration number, VIN/chassis number, serial number or other identifiable information, where applicable, must be used to establish a clear link between the documents.

NB! Failure to submit the above-mentioned documents will result in disqualification.

FOR EVALUATION PURPOSE (MUST BE COMPLETED)

FORM 2.1.1 SCHEDULE OF CONSTRUCTIONAL PLANT

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

Infrastructure and resources available – Plant and Equipment (owned or leased)

DESCRIPTION, SIZE, CAPACITY	NUMBER
Water Tanker	
TLB (Tractor Loader Backhoe)	
Light Delivery Vehicle (LDV) / Bakkie	

FORM 2.1.2 SIZE OF ENTERPRISE AND CURRENT WORKLOAD**APPLICABLE FOR BIDS BELOW R 10 000 000 (including Vat)**

What was your turnover in the previous financial year? **R**
.....

What is the estimated turnover for your current financial year? **R**

SMME STATUS - (COMPULSORY)**TO BE COMPLETED FOR STATISTICAL PURPOSES ONLY AND WILL NOT BE USED FOR EVALUATION PURPOSES**

Provide details on the following.

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

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

Physical facilities

Description	Address	Area (m²)

FORM 2.1.3 STAFFING PROFILE

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

Own staff: gender and race	Number of staff

EVALUATION CRITERIA

EVALUATION ASPECT	MINIMUM REQUIREMENTS
Staffing profile	Project Manager (x1) • Copy of a BSc, BEng, BTech or Advanced Diploma in Civil Engineering (NQF Level 7). • Registration as a Professional Engineer (Pr Eng) or Professional Engineering Technologist (Pr Tech Eng) with the Engineering Council of South Africa (ECSA), OR Registration as a Professional Construction Project Manager (PrCPM) with the South African Council for the Project and Construction Management Professions (SACPCMP). • Five (5) years' experience in in leak detection, pressure control valves or network valves related works Site Agent (x1) • Copy of National Diploma (NQF Level 6) in Civil Engineering • Three (3) years in in leak detection, pressure control valves or network valves related works PRV Technician (x1) • Copy of National Diploma (NQF Level 6) in Civil Engineering OR Trade Test in Certificate in Plumbing/Fitting &Turning issued by the Department of Employment and Labour or the Department of Higher Education or equivalent accredited institution. • Three (3) years' experience working with leak detection, pressure control valves or network valves related works Safety Officer (x1) • Copy of National Diploma (NQF Level 6) in Safety Management / Environmental Health • Registered with SACPCMP as a Safety officer • Three (3) years' experience in water related projects as a Safety Officer

REQUIRED DOCUMENTS:

BIDDER MUST SUBMIT THE FOLLOWING DOCUMENTS WITH THE BID:

Staffing profile

Project Manager (x1)

- Copy of a BSc, BEng, BTech or Advanced Diploma in Civil Engineering (NQF Level 7).
- Copy of a Registration as a Professional Engineer (Pr Eng) or Professional Engineering Technologist (Pr Tech Eng) with the Engineering Council of South Africa (ECSA), OR Registration as a Professional Construction Project Manager (PrCPM) with the South African Council for the Project and Construction Management Professions (SACPCMP).
- CV demonstrating a minimum of five (5) years' experience in leak detection, pressure control valves **or** network valves related works

Site Agent (x1)

- Copy of National Diploma (NQF Level 6) in Civil Engineering
- CV demonstrating a minimum of three (3) years in leak detection, pressure control valves **or** network valves related works

PRV Technician (x1)

- Copy of National Diploma (NQF Level 6) in Civil Engineering **OR** Trade Test in Certificate in Plumbing/Fitting and Turning issued by the Department of Employment and Labour or the Department of Higher Education or equivalent accredited institution.
- CV demonstrating a minimum of three (3) years' experience working with leak detection, pressure control valves or network valves related works

Safety Officer (x1)

- Copy of National Diploma (NQF Level 6) in Safety Management / Environmental Health
- Copy of Registration with SACPCMP as a **Safety officer**
- CV demonstrating a minimum of three (3) years' experience in water related projects as a Safety Officer

Please Note:

- **Certified Copy/ies of Passport(s) with valid working permits for foreign nationals must be submitted with the bid.**
- **All foreign qualifications must be SAQA (South African Qualifications Authority) accredited and proof of such SAQA accreditation must be attached for all foreign qualifications submitted with the bid.**
- **All professional Registrations must be in good standing during the period of tender evaluation (If applicable).**
- **The City of Ekurhuleni reserves the right to verify the submitted documents.**

NB! Failure to submit the above-mentioned documents will result in disqualification.

FOR EVALUATION PURPOSE (MUST BE COMPLETED)**FORM 2.1.4 PROPOSED KEY PERSONNEL**

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

DESIGNATION	NAME & SURNAME	NATIONALITY:	SUMMARY OF			
			QUALIFICATIONS	NQF Level	NUMBER OF YEARS OF EXPERIENCE	PRESENT OCCUPATION
Project Manager						
Site Agent						
PRV Technician						
Safety Officer						

REQUIRED DOCUMENTS:**BIDDER MUST SUBMIT THE FOLLOWING DOCUMENTS WITH THE BID:****Staffing profile****Project Manager (x1)**

- Copy of a BSc, BEng, BTech or Advanced Diploma in Civil Engineering (NQF Level 7).
- Copy of a Registration as a Professional Engineer (Pr Eng) or Professional Engineering Technologist (Pr Tech Eng) with the Engineering Council of South Africa (ECSA), OR Registration as a Professional Construction Project Manager (PrCPM) with the South African Council for the Project and Construction Management Professions (SACPCMP).

DESIGNATION	NAME & SURNAME	NATIONALITY:	SUMMARY OF			
			QUALIFICATIONS	NQF Level	NUMBER OF YEARS OF EXPERIENCE	PRESENT OCCUPATION
CV demonstrating a minimum of five (5) years' experience in leak detection, pressure control valves or network valves related works						
Site Agent (x1) - Copy of National Diploma (NQF Level 6) in Civil Engineering - CV demonstrating a minimum of three (3) years in leak detection, pressure control valves or network valves related works						
PRV Technician (x1) - Copy of National Diploma (NQF Level 6) in Civil Engineering OR Trade Test in Certificate in Plumbing/Fitting and Turning issued by the Department of Employment and Labour or the Department of Higher Education or equivalent accredited institution. - CV demonstrating a minimum of three (3) years' experience working with leak detection, pressure control valves or network valves related works						
Safety Officer (x1) - Copy of National Diploma (NQF Level 6) in Safety Management / Environmental Health - Copy of Registration with SACPCMP as a Safety officer - CV demonstrating a minimum of three (3) years' experience in water related projects as a Safety Officer						
Please Note: - Certified Copy/ies of Passport(s) with valid working permits for foreign nationals must be submitted with the bid. - All foreign qualifications must be SAQA (South African Qualifications Authority) accredited and proof of such SAQA accreditation must be attached for all foreign qualifications submitted with the bid. - All professional Registrations must be in good standing during the period of tender evaluation (If applicable). - The City of Ekurhuleni reserves the right to verify the submitted documents.						
NB! Failure to submit the above-mentioned documents will result in disqualification.						

EVALUATION CRITERIA

EVALUATION ASPECT	MINIMUM REQUIREMENTS
Relevant previous Company Experience – Completed Project	Three (3) references from previous client(s) where bidder completed leak detection and installation, repair, maintenance and commissioning of pressure control valves.
Company Registration	Company registered with ISO 9001:2015

REQUIRED DOCUMENTS:

BIDDER MUST SUBMIT THE FOLLOWING DOCUMENTS WITH THE BID:

Relevant previous Company Experience – Completed Project

- Three (03) appointment letters, each accompanied by a signed reference letter **or** completion certificate on the **Bidder's Client Letter Head** (**The appointment letters and the Signed reference letters or Completion Certificates must be from the client which the bidder provided the services to**), confirming that the bidder has successfully performed leak detection and installation, repair, maintenance and commissioning of pressure control valves. Each reference must include contactable details of the client representative for verification purposes.

Company Registration

- Copy of valid ISO 9001:2015 Certificate

Please note:

In case of a Joint Venture, the Lead Partner should have a Valid ISO 9001:2015 Certificate.

NB! Failure to submit the above-mentioned documents will result in disqualification.

FOR EVALUATION PURPOSE (MUST BE COMPLETED)

FORM 2.1.5 SCHEDULE OF PREVIOUS WORK CARRIED OUT BY BIDDER

Provide the following information on **relevant previous experience**. Indicate comparable projects of similar or larger size. This information is material to the award of the Contract.

Give at least two (2) names and telephone numbers and e-mail address per reference.

Description (of work done)	Value (R, VAT excluded)	Start date	Duration	Completed date.	Reference		
					Name (contact person)	Organisation	Tel no
					Email:		
					Email:		
					Email:		
					Email:		

EVALUATION CRITERIA

EVALUATION ASPECT	MINIMUM REQUIREMENTS
Financial Ability (Ability to Deliver)	R200 000

REQUIRED DOCUMENTS:

BIDDER MUST SUBMIT THE FOLLOWING DOCUMENTS WITH THE BID:

Financial Ability (Ability to Deliver)

1. Proof of Access to Credit or Financing

A letter or statement from a registered financial institution, issued not more than six (6) months before the bid closing date, confirming that the bidder has access to credit or financing of at least **R200 000**, which may include:

- Overdraft facilities; **OR**
- Revolving credit facilities; **OR**
- Approved loan facilities; **OR**
- Confirmation of available cash reserves.

OR

2. Bank Statement(s)

- A stamped bank statement not older than one (1) month from the bid closing date, showing available funds of at least **R200 000**

OR

3. Funding Commitments from Development Finance Institutions (DFIs)

A confirmation or pre-approval letter from SEFA, IDC, NEF, Land Bank, DBSA, **or any other registered** Development Finance Institution (DFI), issued not more than six (6) months before the bid closing date, confirming funding of at least **R200 000**.

NB! Failure to submit the above-mentioned documents will result in disqualification.

FOR EVALUATION PURPOSE (MUST BE COMPLETED)**Financial ability to execute the project.**

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

- **Proof of Access to Credit or Financing or**
- **Bank Statement(s) or**
- **Funding Commitments from Development Finance Institutions (DFIs)**

Indicate with a **tick** next to the relevant block on the below table, the type of proof submitted for financial ability

	<u>Tick (x)</u>
Proof of Access to Credit or Financing	
Bank Statement(s)	
Funding Commitments from Development Finance Institutions (DFIs)	

FOR EVALUATION PURPOSE (MUST BE COMPLETED)

FINANCIAL ABILITY CONSENT FORM

By signing this form, you hereby grant consent to authorize the City of Ekurhuleni to verify all documents submitted for the purposes of evaluating financial ability for **Contract Number [A-WS 08-2026]**, with **Description [THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029]**.

I, NAME OF BIDDING ENTITY / ACCOUNT HOLDER

[.....], hereby confirm that the information provided is true and correct.

I authorize the **financial institution and/or registered credit provider**, namely **[Bank / Financial Institution / Credit Provider Name]**

[.....], to verify and confirm the information as may be requested by the City of Ekurhuleni for bid evaluation purposes.

I acknowledge and understand that:

- This consent shall remain valid until revoked in writing.
- All information will be processed and handled in compliance with the Protection of Personal Information Act (POPIA) and all other applicable banking and credit legislation.
- This authorization is strictly limited to the verification of the following information:

• Account number:

• Bank Balance / Credit Facility as at:

• Eligible Funds / Approved Credit Amount:

Signature of person authorised to sign bid documents

Name in block letters

Designation

Date

NB: Failure to complete the above requirements will result in disqualification.

NAME OF BIDDING ENTITY

FORM 2.1.7 JOINT VENTURE/CONSORTIUM AUTHORITY

JOINT VENTURE/ CONSORTIUM INFORMATION

(Complete only if applicable)

The parties hereto form a Joint Venture/ Consortium for the purpose of jointly bidding and obtaining the award of contract for **THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029** and of jointly performing such contract under joint responsibility.

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

Full Name and address of Lead enterprise

.....%

.....

Full Name and address of 2nd enterprise

.....%

.....

Full Name and address of 3rd enterprise

.....%

.....

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

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

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

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

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

The contract has been awarded to another bidder

or

The work undertaken by the Joint Venture/ Consortium under the contract has been completed and all liabilities and claims incurred by and made by the Joint Venture/ Consortium have been settled, the bid is cancelled or the period of validity of bid extended.

No party to the Agreement shall be entitled to sell, assign or in any manner encumber or transfer its interest or any part thereof in the Joint Venture/ Consortium without obtaining the prior written consent of the other party hereto.

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

Authorised Signature Lead Partner.....

Name

Designation

Signed at..... on

Authorised Signature of 2nd Partner.....

Name

Designation

Signed at..... on

Authorised Signature of 3rd Partner.....

Name

Designation

Signed at..... on

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

In the event that there are more than 3 Joint Venture/Consortium partners, additional page/s may be added in order to furnish the requested information and authorised signatures.

FORM 2.1.8**SCHEDULE OF PROPOSED SUBCONTRACTORS**

A tenderer awarded a contract may not sub-contract more than 30% of the value of the contract to any other enterprise.

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

Type of work to be used for	As a % of contract	Name of sub-contractor
Total % of contract sub-contracted		

DETAILS OF BIDDING ENTITY'S BANK

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

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

DESCRIPTION OF BANK DETAIL	BANK DETAILS APPLICABLE TO BIDDER
Name of bank	
Contact person	
Branch name	
Branch code	
Street address	
Postal address	
Telephone number	()
Fax number	()
Account number	
Type of account, (i.e. cheque account)	

BIDDER'S TAX DETAILS

Bidder's VAT vendor registration number:

Bidder's SARS tax reference number:

FORM 2.1.10 DETAILS OF ALTERNATIVE BIDS SUBMITTED

See condition of bid.

DESCRIPTION

FORM 2.1.11 AMENDMENTS AND QUALIFICATIONS BY BIDDER

See condition of bid

PAGE	DESCRIPTION

ACTIVITY OR PAY ITEM	DESCRIPTION OF PLANNED ACTION RESULTING IN DEVIATION FROM SPECIFIED WORK

CITY OF EKURHULENI

DEPARTMENT NAME: **WATER AND SANITATION**

CONTRACT NO: **A-WS 08-2026**

FOR

THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

T2.2 OTHER DOCUMENTS REQUIRED FOR BID EVALUATION PURPOSES

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	<u>PAGE(S)</u>
FORM 2.2.1 TAX COMPLIANCE	
FORM 2.2.2 GENERAL DECLARATION	
FORM 2.2.3 DECLARATION OF INTEREST.....	
FORM 2.2.4 DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES	
FORM 2.2.5 DECLARATION FOR PROCUREMENT ABOVE R10 MILLION.....	
FORM 2.2.6 CERTIFICATE OF INDEPENDENT BID DETERMINATION	
FORM 2.2.7 DECLARATION FOR MUNICIPAL ACCOUNTS	
FORM 2.2.8 DECLARATION FOR MUNICIPAL ACCOUNTS WHERE BIDS ARE EXPECTED TO EXCEED R10 MILLION	
FORM 2.2.9 DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS.....	

FORM 2.2.1 TAX COMPLIANCE

TCS PIN NUMBER OBTAINED FROM SARS TO BE INDICATED ON BID DOCUMENTS.

FOR EVALUATION PURPOSE (MUST BE COMPLETED)

NAME OF BIDDING ENTITY

FORM 2.2.2 GENERAL DECLARATION:

I/We, the undersigned:

- (a) *bid to supply and deliver to the CITY OF EKURHULENI [hereafter "COE"] all or any of the supplies and to render all or any of the articles, goods, materials, services or the like described both in this and the other Schedules to this Contract;*
- (b) *agree that we will be bound by the specifications, prices, terms and conditions stipulated in those Schedules attached to this bid document, regarding delivery and execution;*
- (c) *further agree to be bound by those conditions, set out in, "PARTS T1; T2; C1; C2; C3 and C4", attached hereto, should this bid be accepted in whole or in part;*
- (d) *confirm that this bid may only be accepted by the COE by way of a duly authorised Letter of Acceptance;*
- (e) *declare that we are fully acquainted with the Bid document and Schedules, and the contents thereof and that we have signed the Bill of Quantities and completed the Returnable Schedules and declarations, attached hereto;*
- (f) *declare that all amendments to the bid document have been initialled by the relevant authorised person and that the document constitutes a proper contract between the COE and the undersigned;*
- (g) *certify that the item/s mentioned in the bid document, qualifies/qualify for the preference(s) shown.;*
- (h) *acknowledge that the information furnished is true and correct;*
- (i) *accept that in the event of the contract being awarded as a result of preference claimed in this bid document, I may be required to furnish documentary proof to the satisfaction of the COE that the claims are correct. If the claims are found to be inflated, the COE may, in addition to any other remedy it may have, recover from me all cost, losses or damages incurred or sustained by the COE as a result of the award of the contract and/or cancel the contract and claim any damages which the COE may suffer by having to make less favourable arrangements after such cancellation;*
declare that no municipal rates and taxes or municipal service charges owed by the bidder or any of its directors to the municipality, or to any other municipality or municipal entity, are in arrears for more than three (3) months; and
- (k) *declare that I have not failed to perform satisfactorily during the last five (5) years on a previous contract with the Municipality, Municipal entity or any other organ of state, after written notice was given to me that my performance was unsatisfactory.*
- (l) *declare that the signatory to the bid document is duly authorised; and*
- (m) *agree that documentary proof regarding any tendering issue will, when required, be submitted to the satisfaction of the COE.*
- (n) *declare that the Broad-Based Black Economic Empowerment Certificate submitted herewith is based on true and accurate information and has been obtained from a duly accredited verification agency (or, in the case of an Exempted Micro-Enterprise(EME) and a Qualifying Small Enterprise (QSE) declare that the submitted Original Sworn Affidavit/ Certified copy of the sworn affidavit or a certified copy*

thereof or a certificate from the Companies and Intellectual Property Commission (CIPC) confirming their annual total revenue is true and correct)

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

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

YES	NO

If YES the following information must be supplied:

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

.....

.....

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

.....

.....

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

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

Name of Authorised Person:

Authorised Signature:

Name of Bidding Entity:

Date:

As witness:

FOR EVALUATION PURPOSE (MUST BE COMPLETED)

NAME OF BIDDING ENTITY

FORM 2.2.3 DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their relationship to the person/s in the service of the state.

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

- 3.1 Full Name of Owner of the Bidding Entity:
- 3.2 Identity Number if applicable:
- 3.3 Position occupied in the Company (director, trustee, shareholder²):
- 3.4 Company Registration Number:
- 3.5 Tax Reference Number:.....
- 3.6 VAT Registration Number:

¹MSCM Regulations: "in the service of the state" means to be –

(a) a member of –

- (i) any municipal council;
- (ii) any provincial legislature; or
- (iii) the national Assembly or the national Council of provinces;

(b) a member of the board of directors of any municipal entity;

(c) an official of any municipality or municipal entity;

(d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);

(e) an executive member of the accounting authority of any national or provincial public entity; or

(f) an employee of Parliament or a provincial legislature.

² Shareholder" means a person who owns shares in the company or business entity, exercises control and is actively involved in its management.

- 3.7 The names of all directors / trustees / shareholders/ members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

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

YES	NO

3.8.1 If yes, furnish particulars.
.....

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

YES	NO

3.9.1 If yes, furnish particulars.....
.....

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

YES	NO

3.10.1 If yes, furnish particulars.
.....
.....

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

YES	NO

3.11.1 If yes, furnish particulars
.....
.....

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

YES	NO

3.12.1 If yes, furnish particulars.
.....
.....

3.13 Are any spouse, child or parent of the company's directors,
trustees, managers, shareholders or stakeholders
in service of the state?
(Tick applicable box)

YES	NO

3.13.1 If yes, furnish particulars.

.....

.....

3.14 Do you or any of the directors, trustees, managers,
shareholders, or stakeholders of this company

have any interest in any other company or
business entity whether or not the latter is bidding for this contract.
(Tick applicable box)

YES	NO
☐	☐

3.14.1 If yes, furnish particulars:

.....

.....

4. Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	Employee Number

CERTIFICATION

I, THE UNDERSIGNED (NAME)

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

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

.....
Signature

.....
Date

.....
Capacity

.....
Name of Bidding Entity

FOR EVALUATION PURPOSE (MUST BE COMPLETED)

NAME OF BIDDING ENTITY

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

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

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's database as a company or person prohibited from doing business with the public sector? (Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the <i>audi alteram partem</i> rule was applied).	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? (To access this Register enter the National Treasury's website, www.treasury.gov.za, click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012) 3265445).	Yes ☐	No ☐
4.2.1	If so, furnish particulars:		

Item	Question	Yes	No
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐
4.3.1	If so, furnish particulars:		
Item	Question	Yes	No
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes ☐	No ☐
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes ☐	No ☐
4.5.1	If so, furnish particulars:		

CERTIFICATION

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

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

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

FOR EVALUATION PURPOSE (MUST BE COMPLETED)

NAME OF BIDDING ENTITY

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

MUST BE COMPLETED FOR THIS BID

BIDDERS MUST COMPLETE THE FOLLOWING QUESTIONNAIRE:

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

YES	NO

If yes:

- 1.1.1 If a bidder is a registered company required by law to have its annual financial statements audited or independently reviewed in compliance with the requirements of the Companies Act ,Act No.71 of 2008, or any other law, audited or independently reviewed annual financial statements, as the case may be, prepared within six (6) months of the end of the bidders most recent financial year together with the audited or independently reviewed annual financial statements for the two immediately preceding financial years must be submitted, (unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted).
- 1.1.2 If a bidder is a registered close corporation, annual financial statements in compliance with the provisions of the Close Corporations Act, Act No. 69 of 1984 , prepared within nine (9) months of the end of the bidders most recent financial year together with the annual financial statements for the two immediately preceding financial years must be submitted,(unless the bidder was only established within the past three (3) years in which case all of its annual financial statements must be submitted).
- 1.1.3 If the bidder only commenced business within the past three years, the bidder is required to submit annual financial statements in compliance with the provisions of (1.1.1) and (1.1.2) above for each of its financial years since commencing business.
- 1.1.4 If a bidder is not required by law to have its annual financial statements audited or independently reviewed or is not a Close Corporation, then non-audited annual financial statements for the periods referred to above must be submitted.

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

YES	NO

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

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

.....

- 2. Do you have any outstanding undisputed commitments for municipal services towards a municipality or any other service provider in respect of which payment is overdue for more than 30 days?**
(Tick applicable box)

YES	NO

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

2.2 If yes, provide particulars.

.....

.....

.....

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

3.1 If yes, furnish particulars.

.....

.....

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

4.1 If yes, furnish particulars

.....

.....

YES	NO

YES	NO

CERTIFICATION

I, THE UNDERSIGNED (NAME)

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

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

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

FOR EVALUATION PURPOSE (MUST BE COMPLETED)

NAME OF BIDDING ENTITY

FORM 2.2.6 CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Form “2.2.6” must form part of all bids¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
4. This Form “2.2.6” serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (Form “2.2.6”) must be completed and submitted with the bid:

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

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

A-WS 08-2026

***THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION,
VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND
WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029***

(Bid Number and Description)

in response to the invitation for the bid made by:

CITY OF EKURHULENI

(Name of Municipality / Municipal Entity)

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

I certify, on behalf of: _____ that:
(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.

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

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

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

FOR EVALUATION PURPOSE (MUST BE COMPLETED

NAME OF BIDDING ENTITY

FORM 2.2.7: DECLARATION FOR MUNICIPAL ACCOUNTS

MUST BE COMPLETED FOR THIS BID

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

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

- (i). I, the undersigned, hereby declare that the signatory to this tender documents duly authorised and further declare:
- (ii) That at the closing date of the bid, no municipal rates and taxes or municipal service charges owed by **the bidder** to the COE, or to any other municipality or municipal entity, are in arrears for more than three (3) months.
- (iii) That at the closing date of the bid, no municipal rates and taxes or municipal service charges owed by **any of the directors/members** to the COE, or to any other municipality or municipal entity, are in arrears for more than three (3) months.
- (iv). I acknowledge that should it be found that any municipal rates and taxes or municipal charges as set out in (i) above are in arrears for more than three (3) months, the bid will be rejected and the COE may take such remedial action as is required, including the rejection of the bid and/or termination of the contract (unless if the bidder has attached proof of the payment arrangement of the arrears to the bid document as at the closing date of the submission of bids)

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

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

Authorised Signature:

As witness: 1.

2.

PLEASE NOTE further that if no municipal rates and taxes or municipal charges are payable by the bidding entity, indicate the reason/s for that in the space below by means of a tick next in the relevant block,

Bidding entities who operate from informal settlements		
Bidding entities who operate from a property owned by a director / member / partner		
Bidding entities who operate from somebody else's property		
Bidding entities who rent premises from a landlord		
Other (Please specify)		

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

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

Authorised Signature:

As witness: 1.

2.

FOR EVALUATION PURPOSE (MUST BE COMPLETED)

NAME OF BIDDING ENTITY

FORM 2.2.8: DECLARATION FOR MUNICIPAL ACCOUNTS WHERE BIDS ARE EXPECTED TO EXCEED R10 MILLION

MUST BE COMPLETED FOR THIS BID

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

- (i). I, the undersigned, hereby declare that the signatory to this tender document is duly authorised and further declare:
- (ii). That at the closing date of the bid, the **bidder** had no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days.
- (iii). That at the closing date of the bid, any of **the directors/members** had no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days.
- (iv). I acknowledge that should it be found that any undisputed commitments for municipal services charges towards a municipality or other service provider in respect of which payment is overdue for more than 30 days, the COE may take such remedial action as is required (unless if the bidder has attached proof of the payment arrangement of the arrears to the bid document as at the closing date of the submission of bids).

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

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

Authorised Signature:

As witness: 1.

2.

PLEASE NOTE further that if no municipal rates and taxes or municipal charges are payable by the bidding entity, indicate the reason/s for that in the space below by means of a tick next in the relevant block,

Bidding entities who operate from informal settlements		
Bidding entities who operate from a property owned by a director / member / partner		
Bidding entities who operate from somebody else's property		
Bidding entities who rent premises from a landlord		
Other (Please specify)		

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

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

Authorised Signature:

As witness: 1.

2.

NAME OF BIDDING ENTITY

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

This declaration must form part of all bids where local production and content has been included as a specific goal in terms of the Preferential Procurement Regulations, 2022. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

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

1. General Conditions

- 1.1. Where necessary, a two stage bidding process may be followed for bids in which local production and content has been included as a specific goal, where the first stage involves assessment against the stipulated minimum threshold for local production and content and the second stage evaluates price and the applicable specific goal(s).
- 1.2. A person awarded a contract in which local production and content has been included as a specific goal, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.3. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

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

Where

x is the imported content in Rand

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

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by the South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as required in paragraph 4.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on <https://www.thedtic.gov.za> at no cost.

- 1.4. A bid may not be given points for specific goals if –
 - (a) this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation; and
 - (b) the bidder fails to declare that the Local Content Declaration Templates (Annex C, D and E) have been audited and certified as correct.

2. Definitions

- 2.1. **“bid”** includes written price quotations, advertised competitive bids or proposals;
- 2.2. **“bid price”** price offered by the bidder, excluding value added tax (VAT);
- 2.3. **“contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- 2.4. **“designated sector”** means a sector, sub-sector or industry identified by the Municipality, having regard to any sector designations or guidelines published by the Department of Trade, Industry and Competition (the dtic), in line with national development and industrial policies for local production, where local production and content has been included as a specific goal and only locally produced services, works or goods or locally manufactured goods meeting the stipulated minimum threshold will be awarded points for that specific goal;
- 2.5. **“duly sign”** means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility (close corporation, partnership or individual).
- 2.6. **“imported content”** means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour and intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;
- 2.7. **“local content”** means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;
- 2.8. **“stipulated minimum threshold”** means that portion of local production and content, expressed as a percentage, required to qualify for the maximum points allocated to the specific goal, as determined by the Municipality having regard to any guidelines issued by the Department of Trade, Industry and Competition (the dtic); and
- 2.9. **“sub-contract”** means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.

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

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
Valves products and actuators	70%
Cement	100%
Polyvinyl chloride (PVC) Pipes	100%
High density polyethylene (HDPE) Pipes	100%

4. Does any portion of the services, works or goods offered
have any imported content?
(Tick applicable box)

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

- 4.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.3 of the general conditions must be the rate(s) published by the SARB for the specific currency at 12:00 on the date of advertisement of the bid.

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

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

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

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

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

(Tick applicable box)

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

- 5.1. If yes, provide the following particulars:

- (a) Full name of auditor:
- (b) Practice number:
- (c) Telephone and cell number:
- (d) Email address:

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

6. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content, the Department of Trade, Industry and Competition (the dtic) must be informed accordingly in order for the dtic to verify and, in consultation with the Accounting Officer / Accounting Authority, provide directives in this regard.

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

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

IN RESPECT OF BID NO.

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

NB

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

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

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

(a) The facts contained herein are within my own personal knowledge.

(b) I have satisfied myself that

(i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and

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

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

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

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above. The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange

indicated in paragraph 4.1 above and the information contained in Declaration D and E.

(d) I accept that the Procurement Authority / Municipality /Municipal Entity has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.

(e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Municipality / Municipal Entity imposing any or all of the remedies available to it in terms of the Municipality's Supply Chain Management Policy, the applicable General Conditions of Contract, and any other applicable law, including the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000) and the Preferential Procurement Regulations, 2022 made thereunder.

SIGNATURE: _____

DATE: _____

WITNESS No. 1 _____

DATE: _____

WITNESS No. 2 _____

DATE: _____

PLEASE NOTE:

ANNEXURE C MUST BE COMPLETED TO QUALIFY FOR POINTS ALLOCATED TO SPECIFIC GOALS.

Annex C

Local Content Declaration - Summary Schedule

(C1) Tender No. A-WS 08-2029

(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

Note: VAT to be excluded from all calculations

(C3) Designated product(s)

(C4) Tender Authority:

(C5) Tendering Entity name:

(C6) Tender Exchange Rate:

Pula

EU

GBP

USD

X

(C7) Specified local content %

Calculation of local content

Tender summary

	Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value- net of exempted imported content	Imported value	Local value	Local content % (per item)		Tender Qty	Total tender value	Total exempted imported content	Total Imported content
	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2.1.4.1	Installation of saddles for temporary pressure measuring points for the Pressure Tests								250			
	2..2.1	Install a suitable approved saddle (uPVC/HDPE compatible) with 20 mm outlet								10			
	2..2.2	Install an approved AC saddle with full wrap sealing and 20 mm outlet, including all fasteners and sealing components.								10			
	2..2.3	Provide and install a welded saddle or pressure port connection onto the existing steel pipeline, including all welding works, fittings, and corrosion protection.								4			
	2..2.4	Install a 20 mm connection on an existing pipeline, including supply and installation of all fittings, valves, and accessories, complete and operational and installation of a 20 mm ball stop valve to suit 150mm to 400mm OD pipe (class 12) , in accordance with pipe material as specified below.								5			
	2..2.5	Install a suitable approved saddle (uPVC/HDPE compatible) with 20 mm outlet								5			

Annex C

Local Content Declaration - Summary Schedule

(C1) Tender No. A-WS 08-2029

(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

Note: VAT to be excluded from all calculations

(C3) Designated product(s)

(C4) Tender Authority:

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2..2.6	Install an approved AC saddle with full wrap sealing and 20 mm outlet, including all fasteners and sealing components.								5			
	2..2.7	Provide and install a welded saddle or pressure port connection onto the existing steel pipeline, including all welding works, fittings, and corrosion protection.								5			
	2.3.2	DN 50mm (Including DN 40mm)								1			
	2.3.3	DN 80mm								35			
	2.3.4	DN 100mm								10			
	2.3.5	DN 150mm								1			
	2.3.6	DN 200mm								2			
	2.3.7	DN 250mm								4			
	2.3.8	DN 300mm								4			
	2.3.9	DN 350mm								4			
	2.3.10	DN 400mm								4			
	2.4.1	PRV & Pressure Relief - Pilot Valves								4			
	2.4.2	Altitude & Rate of Flow Control - Pilot Valves								4			
	2.4.3	Float valves								4			

Annex C

Local Content Declaration - Summary Schedule

(C1) Tender No. A-WS 08-2029

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Note: VAT to be excluded from all calculations

(C3) Designated product(s)

(C4) Tender Authority:

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Calculation of local content

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2.4.4	Gunzenhauser IJR Gured 25mm & 50mm								4			
	2.5.2	Cover Bearing								5			
	2.5.3	Diaphragm								5			
	2.5.4	Diaphragm Washer								5			
	2.5.5	Disc Guide								5			
	2.5.6	Disk Retainer								5			
	2.5.7	Sealing Disk								5			
	2.5.8	Seat complete with Seat O-Ring								5			
	2.5.9	Spacer Washer Set (5 in Set)								5			
	2.5.10	Spring								5			
	2.5.11	Stem								5			
	2.5.12	Stem Nut								5			
	2.5.13	Position Indicator (x101)								5			
	2.5.15	Cover Bearing								5			
	2.5.16	Diaphragm								5			
	2.5.17	Diaphragm Washer								5			
	2.5.18	Disc Guide								5			

Annex C

Local Content Declaration - Summary Schedule

(C1) Tender No. A-WS 08-2029

(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

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(C4) Tender Authority:

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Calculation of local content

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2.5.19	Disk Retainer								5			
	2.5.20	Sealing Disk								5			
	2.5.21	Seat complete with Seat O-Ring								5			
	2.5.22	Spacer Washer Set (5 in Set)								5			
	2.5.23	Spring								5			
	2.5.24	Stem								5			
	2.5.25	Stem Nut								5			
	2.5.26	Position Indicator (x101)								5			
	2.5.28	Cover Bearing								5			
	2.5.29	Diaphragm								5			
	2.5.30	Diaphragm Washer								5			
	2.5.31	Disc Guide								5			
	2.5.32	Disk Retainer								5			
	2.5.33	Sealing Disk								5			
	2.5.34	Seat complete with Seat O-Ring								5			
	2.5.35	Spacer Washer Set (5 in Set)								5			
	2.5.36	Spring								5			
	2.5.37	Stem								5			

Annex C

Local Content Declaration - Summary Schedule

(C1) Tender No. A-WS 08-2029

(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

Note: VAT to be excluded from all calculations

(C3) Designated product(s)

(C4) Tender Authority:

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USD

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Calculation of local content

Tender summary

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2.5.38	Stem Nut								5			
	2.5.39	Position Indicator (x101)								5			
	2.5.41	Cover Bearing								5			
	2.5.42	Diaphragm								5			
	2.5.43	Diaphragm Washer								5			
	2.5.44	Disc Guide								5			
	2.5.45	Disk Retainer								5			
	2.5.46	Sealing Disk								5			
	2.5.47	Seat complete with Seat O-Ring								5			
	2.5.48	Spacer Washer Set (6 in Set)								5			
	2.5.49	Spring								5			
	2.5.50	Stem								5			
	2.5.51	Stem Nut								3			
	2.5.52	Position Indicator (x101)								3			
	2.5.54	Cover Bearing								3			
	2.5.55	Diaphragm								3			
	2.5.56	Diaphragm Washer								3			
	2.5.57	Disc Guide								3			

Annex C

Local Content Declaration - Summary Schedule

(C1) Tender No. A-WS 08-2029

(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

Note: VAT to be excluded from all calculations

(C3) Designated product(s)

(C4) Tender Authority:

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GBP

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(C7) Specified local content %

Calculation of local content

Tender summary

	Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value- net of exempted imported content	Imported value	Local value	Local content % (per item)		Tender Qty	Total tender value	Total exempted imported content	Total Imported content
	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2.5.58	Disk Retainer								3			
	2.5.59	Sealing Disk								3			
	2.5.60	Seat complete with Seat 0-Ring and Seat Screws								3			
	2.5.61	Spacer Washer Set (6 in Set)								3			
	2.5.62	Spring								3			
	2.5.63	Stem								5			
	2.5.64	Stem Nut								5			
	2.5.65	Position Indicator (x101)								5			
	2.5.66	Stem Nut								5			
	2.5.67	Position Indicator (x101)								5			
	2.5.69	Cover Bearing								5			
	2.5.70	Diaphragm								5			
	2.5.71	Diaphragm Washer								5			
	2.5.72	Disc Guide								5			
	2.5.73	Disk Retainer								5			
	2.5.74	Sealing Disk								5			
	2.5.75	Seat complete with Seat 0-Ring and Seat Screws								1			

Annex C

Local Content Declaration - Summary Schedule

(C1) Tender No. A-WS 08-2029

(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

Note: VAT to be excluded from all calculations

(C3) Designated product(s)

(C4) Tender Authority:

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USD

X

(C7) Specified local content %

Calculation of local content

Tender summary

	Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value- net of exempted imported content	Imported value	Local value	Local content % (per item)		Tender Qty	Total tender value	Total exempted imported content	Total Imported content
	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2.5.76	Spacer Washer Set (6 in Set)								1			
	2.5.77	Spring								1			
	2.5.78	Stem								1			
	2.5.79	Stem Nut								1			
	2.5.80	Position Indicator (x101)								1			
	2.5.82	Cover Bearing								1			
	2.5.83	Diaphragm								1			
	2.5.84	Diaphragm Washer								1			
	2.5.85	Disc Guide								1			
	2.5.86	Disk Retainer								1			
	2.5.87	Sealing Disk								1			
	2.5.88	Seat complete with Seat O-Ring and Seat Screws								1			
	2.5.89	Spacer Washer Set (6 in Set)								1			
	2.5.90	Spring								1			
	2.5.91	Stem								1			
	2.5.92	Stem Nut								1			
	2.5.93	Position Indicator (x101)								1			

Annex C

Local Content Declaration - Summary Schedule

(C1) Tender No. A-WS 08-2029

(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

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(C3) Designated product(s)

(C4) Tender Authority:

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(C7) Specified local content %

Calculation of local content

Tender summary

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2.5.95	Cover Bearing								1			
	2.5.96	Diaphragm								1			
	2.5.97	Diaphragm Washer								1			
	2.5.98	Disc Guide								1			
	2.5.99	Disk Retainer								1			
	2.5.100	Sealing Disk								10			
	2.5.101	Seat complete with Seat O-Ring and Seat Screws								10			
	2.5.102	Spacer Washer Set (6 in Set)								10			
	2.5.103	Spring								10			
	2.5.104	Stem								10			
	2.5.105	Stem Nut								10			
	2.5.106	Position Indicator (x101)								10			
	2.5.108	Cover Bearing								10			
	2.5.109	Diaphragm								10			
	2.5.110	Diaphragm Washer								10			
	2.5.111	Disc Guide								10			
	2.5.112	Disk Retainer								10			

Annex C

Local Content Declaration - Summary Schedule

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Note: VAT to be excluded from all calculations

(C3) Designated product(s)

(C4) Tender Authority:

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Calculation of local content

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2.5.113	Sealing Disk								10			
	2.5.114	Seat complete with Seat O-Ring and Seat Screws								10			
	2.5.115	Spacer Washer Set (6 in Set)								10			
	2.5.116	Spring								10			
	2.5.117	Stem								10			
	2.5.118	Stem Nut								10			
	2.5.119	Position Indicator (x101)								10			
	2.6.1.1	Cap								5			
	2.6.1.2	Diaphragm								5			
	2.6.1.3	Disk Retainer Assembly								5			
	2.6.1.4	Gasket								5			
	2.6.1.5	Spring complete with Spring Guide (30-300psi)								5			
	2.6.1.6	x58 Restriction Fitting								5			
	2.6.1.7	Yoke								5			
	2.6.1.8	CRD Belleville Washer								5			
	2.6.1.9	CRD Seat								5			
	2.6.1.10	CRD Plug								5			

Annex C

Local Content Declaration - Summary Schedule

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2.6.2.1	Cap								5			
	2.6.2.2	Diaphragm								5			
	2.6.2.3	Disk Retainer Assembly and nut								10			
	2.6.2.4	O-Ring Kit (Set of 5)								10			
	2.6.2.5	Spring complete with 2X Spring Guides (20-200psi)								10			
	2.6.3.1	Cap								10			
	2.6.3.2	Diaphragm								10			
	2.6.3.3	Disk Retainer Assembly								15			
	2.6.3.4	Gasket								15			
	2.6.3.5	Spring complete with Spring Guide (1.5-17.0 psi)								15			
	2.6.3.6	X58 Restrictor Fitting								15			
	2.6.3.7	Yoke								15			
	2.6.4.1	Diaphragm								15			
	2.6.4.2	Hex Bolts and Nuts								15			
	2.6.4.3	O-Ring Kit (Set of S)								15			
	2.6.4.4	Poppet Assembly complete with Spring								15			
	2.6.4.5	Poppet Strainer								15			

Annex C

Local Content Declaration - Summary Schedule

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2.6.4.6	Ring Retainer								10			
	2.6.5.1	Spring								6			
	2.6.5.2	Diaphragm Washer								6			
	2.6.5.3	Diaphragm								6			
	2.6.5.4	Disk Retainer Assembly								6			
	2.6.5.5	Altitude Level Control (CDS 6) & C1 Float Valve								2			
	2.6.5.6	Standard SS Float Rod complete with stop collars								2			
	2.6.5.7	Couterweight								2			
	2.6.5.8	5 3/8" SS Float								2			
	2.6.6.1.1	Pilot Repair Kit - Consisting of: (0-Ring Kit, Pilot Diaphragm (No 10), Bottom Spring (No 3), Top Spring (No 15), Seat 9 (No 7) & Plunger Assembly (No 41)								2			
	2.6.6.1.2	Needle Valve Assembly (No 39)								6			
	2.6.7.1	Pilot Repair Kit - Consisting of (0-Ring Kit, Pilot Diaphragm (No 10), Bottom Spring (No 3), Top Spring (No 15) Seat 9 (No 7) & Plunger Assembly (No 41)								10			
	2.6.8.1	Pilot Repair Kit - Consisting of: (0-Ring Kit, Pilot Diaphragm (No								10			

Annex C

Local Content Declaration - Summary Schedule

(C1) Tender No. A-WS 08-2029

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Tender summary

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
		10), Bottom Spring (No 7), Top Spring (No 24) Seat Assembly (No 44) & Plunger (No 9)											
	2.6.9.1	Pilot Repair Kit - Consisting of: (O-Ring Kit, Pilot Diaphragm (No 10), Bottom Spring (No 7), Top Spring (No 24) Seat Assembly (No 44) & Plunger (No 9)								10			
	2.6.10.1	Rate of Flow Control (No 7)								10			
	2.7.1	3/8" SS Ballcocks								30			
	2.7.2	3/8" X43Y Strainer								30			
	2.7.3	1/4" 0-16 Bar Pressure Gauges								30			
	2.7.4	1/4" 0-25 Bar Pressure Gauges								30			
	2.7.5	1/4" Quick Coupling Set (Socket and Plug)								10			
	2.8.1	Vent-O-Mat, Bermad Air Valves and Other Types								30			
	2.8.2	DN 25 (O-ring kit and gasket's)								30			
	2.8.3	DN 50 (O-ring kit and gasket's)								30			
	2.8.4	DN 80 (O-ring kit and gasket's)								30			
	2.8.5	DN 100 (O-ring kit and gasket's)								10			
	2.8.6	DN 150 (O-ring kit and gasket's)								15			

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(C1) Tender No. A-WS 08-2029

(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

Note: VAT to be excluded from all calculations

(C3) Designated product(s)

(C4) Tender Authority:

(C5) Tendering Entity name:

(C6) Tender Exchange Rate:

Pula

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USD

X

(C7) Specified local content %

Calculation of local content

Tender summary

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2.8.7	DN 200 (O-ring kit and gasket's)								7			
	2.9.1	DN 40 / 50 / 80 mm								6			
	2.9.2	DN 100mm								6			
	2.9.3	DN 125/ 150mm								6			
	2.9.4	DN 200mm								6			
	2.9.5	DN 250mm								6			
	2.9.6	DN 300mm								6			
	2.9.7	DN 350mm								6			
	2.9.8	DN 400mm								6			
	2.9.9	DN 450mm								6			
	2.9.10	DN 500mm								6			
	2.11.2.1	DN 50 mm								1			
	2.11.2.2	DN 80 mm								1			
	2.11.2.3	DN 100 mm								1			
	2.11.2.4	DN 150 mm								1			
	2.11.2.5	DN 200 mm								1			
	2.11.2.6	DN 250 mm								1			
	2.11.2.7	DN 300 mm								1			

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(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	2.11.3.1	DN 50 mm								1			
	2.11.3.2	DN 80 mm								1			
	2.11.3.3	DN 100 mm								1			
	2.11.3.4	DN 150 mm								1			
	2.11.3.5	DN 200 mm								1			
	2.11.3.6	DN 250 mm								1			
	2.11.3.7	DN 300 mm								1			
	3.2.1	Blinding layer in 15 MPa/19mm concrete: 50mm								18			
	3.2.2	Strength concrete Grade 25 MPa/19mm:								15			
	3.3.1	High tensile steel bars 25mm dia, basic price (provisional qty)								1			
	3.3.2	E.O.item 4.2.3.1 (prov qty) for bars of diameter								1			
	3.3.3	10mm								1			
	3.3.4	12mm								1			
	3.3.5	16mm								1			
	3.3.6	20mm								1			
	3.3.7	High tensile welded mesh: Type reference 395								1			

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(C1) Tender No. A-WS 08-2029

(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	4.2.2	Strength concrete Grade 25 MPa/19mm:								0,1			
	4.3.1	High tensile steel bars 25mm dia, basic price (provisional qty)								20			
	4.3.2.1	10mm								40			
	4.3.2.2	12mm								100			
	4.3.2.3	16mm								50			
	4.3.2.4	20mm								2			
	4.3.2.5	High tensile welded mesh: Type reference 395								3			
	4.4.1	Rough (Wood finish)								2			
	4.4.2	Smooth (Steel finish)								2			
	4.4.3	Chamfers : 10mm radius - on all exposed edges.								2			
	4.5.1	230mm thick walls								4			
	4.5.2	115mm thick walls								0			
	4.6.1.1	Pressure Reducing Pilot (CRD) (30-300psi)								4			
	4.6.1.2	Pressure Relief & Sustaining Pilot (CRL) (20-200psi)								4			
	4.6.1.3	Rate of Flow Control Pilot (CDHS 18) (1.5-17.0 psi)								5			
	4.6.1.4	Altitude Level Control Pilot (CDS 6) (69-87psi)								5			

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(C1) Tender No. A-WS 08-2029

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	4.6.1.5	3/8 Hytrol valve (100KR)								5			
	4.6.1.6	Float valve (CF1-C1)								0			
	4.6.2	Supply and install a complete auxiliary control hook up system - Cla-Val Type Excluding price of pilot valves (Price should include all costs i.e. labour, transport, material etc.)								5			
	4.6.3	BERMAD TYPE PILOT VALVES											
	4.6.3.1	Pressure Reducing Pilot (No 2)								2			
	4.6.3.2	Pressure Reducing Pilot (No 2 - PB)								2			
	4.6.3.3	Pressure Relief and Sustaining Pilot (No 3)								2			
	4.6.3.4	Pressure Relief and Sustaining Pilot (No 3 - PB)								2			
	4.6.3.5	Altitude Pilot (No 8: 2m - 14m)								1			
	4.6.3.6	Altitude Pilot (No 8: 15m - 35m)								1			
	4.6.3.7	Rate of Flow Control Pilot (No 7)								1			
	4.6.4	Supply and install a complete auxiliary control hook up system - Bermad Type [Excluding price of pilot valves (Price should include all costs i.e. labour, transport, material etc.)]								1			

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(C1) Tender No. A-WS 08-2029

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	4.7.1.1	DN 50mm (Including ON 40mm)								15			
	4.7.1.2	DN 80mm								8			
	4.7.1.3	DN 100mm								8			
	4.7.1.4	DN 150mm								8			
	4.7.1.5	DN 200mm								8			
	4.7.1.6	DN 250mm								4			
	4.7.1.7	DN 300mm								4			
	4.7.1.8	DN 350mm								4			
	4.7.1.9	DN 400mm								4			
	4.8.1	Multi-stage time- and flow-based PRV controller with integrated data logging and two-way communication, enabling remote monitoring, configuration and control of PRV pressure settings and operating parameters via a web-based platform, using GSM/GPRS/4G with NB-IoT or LoRaWAN communication redundancy, inclusive of connectivity, data hosting, storage and platform access for four (4) years. hosting								20			
	4.8.2	Provision, configuration, hosting and maintenance of a cloud-based Intelligent Pressure Management platform, fully integrated with the PRV								1			

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(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
		controller, providing real-time telemetry, historical data storage, two-way remote set-point configuration and control, alarm management, data analytics and reporting via web and mobile interfaces, inclusive of secure data hosting and platform access for four (4) years											
	4.9.1	2-Channel Flow-Only GSM Data Logger with web-based data monitoring capability, configured to communicate and integrate with the cloud-based hosting platform specified under item 4.8.2, inclusive of four (4) years' data connectivity.								4			
	4.9.2	2 Channel Flow & 1 Channel Pressure GSM Data Logger with web-based data monitoring capability, configured to communicate and integrate with the cloud-based hosting platform specified under item 4.8.2, inclusive of four (4) years' data connectivity.g								4			
	4.9.3	2 Channel Flow & 2 Channel Pressure GSM Data Logger with web-based data monitoring capability, configured to communicate and integrate with the cloud-based hosting platform specified under item 4.8.2,								4			

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	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
		inclusive of four (4) years' data connectivity.											
	4.9.4	Pressure Data Logger with two-way communication to the PRV controller for real-time pressure monitoring and remote pressure set-point control, fully integrated with the specified cloud-based monitoring platform.								4			
		Excavate in all material to expose and remove valve, install approved replacement valve, backfill, dispose of surplus material and site clearance/re-instatement after replacement. (Price should include all costs i.e. materials, labour, transport, equipment, nuts & bolts, gaskets etc.)								4			
	4.10.1.1	DN15 mm up to and including DN100mm								4			
	4.10.1.2	Over DN100 mm up to and including DN200mm								4			
	4.10.1.3	Over DN200 mm up to and including DN300mm								4			
	4.10.1.4	Over DN300 mm up to and including DN400mm								4			
	4.10.1.5	Over DN400 mm up to and including DN500mm								4			
	4.10.1.6	Over DN500 mm up to and including DN600mm								4			
	4.10.2.1	DN200 mm up to and including DN300mm								4			

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	4.10.2.2	Over DN300 mm up to and including DN400mm								4			
	4.10.2.3	Over DN400 mm up to and including DN500mm								4			
	4.10.2.4	Over DN500 mm up to and including DN600mm								5			
	4.11.1	ND 25 (2511) - screwed.								5			
	4.11.2	ND 50 (2511) - screwed.								5			
	4.11.3	ND 80(2501) flanged drilled-SABS1123(1600/3).								5			
	4.11.4	ND 100(2501) flanged drilled-SABS1123(1600/3).								5			
	4.12.1	DN 40 mm								5			
	4.12.2	DN 50 mm								5			
	4.12.3	DN 80 mm								10			
	4.12.4	DN 100 mm								10			
	4.12.5	DN 150 mm								10			
	4.12.6	DN 200 mm								10			
	4.12.7	DN 250 mm								10			
	4.12.8	DN 300 mm								10			
	4.13.1.1	DN 50 mm								10			
	4.13.1.2	DN 80 mm								10			

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	4.13.1.2	DN 100 mm								2			
	4.13.1.3	DN 150 mm								4			
	4.13.1.4	DN 200 mm								4			
	4.13.1.5	DN 250 mm								4			
	4.13.1.6	DN 300 mm								4			
	4.13.2.1	Sensus SPX 220CREED (Reed Switch)								4			
	4.13.2.2	Sensus HRI SENT B4 D1								4			
	4.13.2.3	Sensus HRI MEI B4/10L/32ms/40-125								2			
	4.13.2.4	Sensus HRI-MEI B1/100L/128ms150-250								2			
	4.13.2.5	Sensus RD01 (WPD Reed)								2			
	4.13.2.6	Sensus REED01 (WP Reed)								1			
	4.13.2.7	Elster DOMESTIC REED SWITCH 1/2m CABLE								1			
	4.13.2.8	Elster PR6 INDUCTIVE PULSER								2			
	4.13.2.9	Elster PR7 INDUCTIVE PULSER K10:10								1			
	4.13.2.10	Elster EU000 REED SWITCH PROBE (Old Helix 4000)								2			
	4.14.1.1	DN 40 mm								1			
	4.14.1.2	DN 50 mm								1			

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	4.14.1.3	DN 80 mm								1			
	4.14.1.3	DN 100 mm								2			
	4.14.1.4	DN 150 mm								2			
	4.14.1.5	DN 200 mm								2			
	4.14.1.6	DN 250 mm								4			
	4.14.1.7	DN 300 mm								4			
	4.14.1.8	DN 350 mm								4			
	4.14.1.9	DN 400 mm								2			
	4.14.1.10	DN 500 mm								2			
	4.14.1.11	"Extra-over Item 4.13.1.1 for cutting of the pipe and the supplying and fixing of extra couplings :								2			
	4.14.2.1	DN 40 mm								2			
	4.14.2.2	DN 50 mm								1			
	4.14.2.3	DN 80 mm								1			
	4.14.2.3	DN 100 mm								1			
	4.14.2.4	DN 150 mm								4			
	4.14.2.5	DN 200 mm								4			
	4.14.2.6	DN 250 mm								4			

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	4.14.2.7	DN 300 mm								2			
	4.14.2.7	DN 350 mm								2			
	4.14.2.8	DN 400 mm								1			
	4.14.2.9	DN 500 mm								1			
	4.14.2.10	DN 40 mm Blank flange								1			
	4.14.2.11	DN 50 mm Blank flange								1			
	4.14.2.12	DN 100 mm Blank flange								1			
	4.14.2.13	DN 125 mm Blank flange								2			
	4.14.2.14	DN 150 mm Blank flange								2			
	4.14.2.15	DN 200 mm Blank flange								2			
	4.14.2.16	DN 250 mm Blank flange								2			
	4.14.2.17	DN 300 mm Blank flange								2			
	4.14.2.18	DN 350 mm Blank flange								1			
	4.14.2.19	DN 400 mm Blank flange								1			
	4.14.2.20	DN 500 mm Blank flange								1			
	4.14.3.1	DN 40 mm								1			
	4.14.3.2	DN 50 mm								2			
	4.14.3.3	DN 80 mm								1			

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Local Content Declaration - Summary Schedule

(C1) Tender No. A-WS 08-2029

(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

Note: VAT to be excluded from all calculations

(C3) Designated product(s)

(C4) Tender Authority:

(C5) Tendering Entity name:

(C6) Tender Exchange Rate:

Pula

EU

GBP

USD

X

(C7) Specified local content %

Calculation of local content

Tender summary

	Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value- net of exempted imported content	Imported value	Local value	Local content % (per item)		Tender Qty	Total tender value	Total exempted imported content	Total Imported content
	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
	4.14.3.4	DN 100 mm								1			
	4.14.3.5	DN 150 mm								2			
	4.14.3.6	DN 200 mm								1			
	4.14.3.7	DN 250 mm								2			
	4.14.3.8	DN 300 mm								1			
	4.14.3.9	DN 350 mm								1			
	4.14.3.10	DN 400 mm								1			
										(C20) Total tender value			

Signature of tenderer from Annex B

(C21) Total Exempt imported content

(C22) Total Tender value net of exempt imported content

(C23) Total Imported content

(C24) Total local content

Annex C

Local Content Declaration - Summary Schedule

(C1) Tender No. A-WS 08-2029

(C2) Tender description: THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

Note: VAT to be excluded from all calculations

(C3) Designated product(s)

(C4) Tender Authority:

(C5) Tendering Entity name:

(C6) Tender Exchange Rate:

Pula

EU

GBP

USD

☒

(C7) Specified local content %

Calculation of local content

Tender summary

	Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value- net of exempted imported content	Imported value	Local value	Local content % (per item)		Tender Qty	Total tender value	Total exempted imported content	Total Imported content
	(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)		(C16)	(C17)	(C18)	(C19)
Date												(C25) Average local content % of tender	

CERTIFICATION

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED ON THIS ANNEXURE C IS CORRECT.

**I ACCEPT THAT THE STATE AND/OR THE COE MAY ACT AGAINST ME SHOULD THIS
DECLARATION PROVE TO BE FALSE.**

.....
Signature

.....
Date

.....
Capacity

.....
Name of Bidding Entity

(D1)
(D2)
(D3)
(D4)
(D5)
(D6)

Tender No.	
Tender description:	
Designated Products:	
Tender Authority:	
Tendering Entity name:	
Tender Exchange Rate:	Pula

Note: VAT to be excluded from all calculations

EU	R 9.00	GBP	R 12.00
----	--------	-----	---------

Calculation of imported content

[illegible]

(D19) Total exempt imported value

This total must correspond with
Annex C - C 21

Calculation of imported content

[illegible]

(D32) Total imported value by tenderer

Calculation of imported content

[illegible]

(D45) Total imported value by 3rd party

Calculation of foreign currency payments

[illegible]

Signature of tenderer from Annex B

(D52) Total of foreign currency payments declared by tenderer and/or 3rd party

(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above

This total must correspond with
Annex C - C23

Date: _____

Annex E

Local Content Declaration - Supporting Schedule to Annex C

(E1)	Tender No.	
(E2)	Tender description:	
(E3)	Designated products:	
(E4)	Tender Authority:	
(E5)	Tendering Entity name:	

Note: VAT to be excluded from all calculations

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

(E10) **Manpower costs** (Tenderer's manpower cost)

(E11) **Factory overheads** (Rental, depreciation & amortisation, utility costs, consumables etc.)

(E12) **Administration overheads and mark-up** (Marketing, insurance, financing, interest etc.)

(E13) **Total local content**

This total must correspond with Annex C - C24

Signature of tenderer from Annex B

Date:

CITY OF EKURHULENI

DEPARTMENT NAME: **WATER AND SANITATION**

CONTRACT NO: **A-WS 08-2026**

FOR

THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

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

CONTENTS

	<u>PAGE(S)</u>
FORM 2.3.1 FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2003.....	
FORM 2.3.2 RECORD OF ADDENDA TO BID DOCUMENTS	
FORM 2.3.3 ADJUDICATION OF BIDS.....	
FORM 2.3.4 GENERAL INFORMATION.....	

FORM 2.3.1 FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2003

In terms of regulation 4(3) of the Construction Regulations, 2003 (hereinafter referred to as the Regulations), promulgated on 18 July 2003 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely.

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

YES	☐
NO	☐

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

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

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

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

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

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

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

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

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

YES	☐
NO	☐

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

1 ID NO:

2 ID NO:

FORM 2.3.2 RECORD OF ADDENDA TO BID DOCUMENTS

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

	Date	Title or Details
1		Confirmatory notes of site/clarification meeting
2		
3		
4		
5		
6		
7		
8		
9		
10		

Attach additional pages if more space is required.

.....
Signature of Authorized person:

.....
Date:

Name:

Position:

FORM 2.3.3 ADJUDICATION OF BIDS

PROCUREMENT FORM

ADJUDICATION OF BIDS

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

1. Technical adjudication and Minimum requirement

Bids will be adjudicated in terms of inter alia:

- **Compliance with bid conditions**
- **Technical specifications**

If the bid does not comply with the bid conditions or technical specifications, the bid shall be rejected. **See page 2 to 4 for examples.**

2. Infrastructure and resources available – Plant and Equipment (owned or leased)

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

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

3. Size of enterprise

Evaluation of the bid's position in terms of:

- **Previous and expected current annual turnover**

4. Staffing profile

Evaluation of the bid's position in terms of:

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

5. Previous experience

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

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

6. Financial ability to execute the contract

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

- **Proof of Access to Credit or Financing**
- **Bank Statement(s)**

- **Funding Commitments from Development Finance Institutions (DFIs)**

Bidders must demonstrate adequate financial capacity to execute the contract. As proof of financial ability, bidders may submit **ONE (1)** of the following, issued by a registered financial institution, including but not limited to commercial banks, development finance institutions (DFIs), cooperative banks, or registered credit providers. **Bidders must demonstrate access to a minimum financial capacity**

Registered financial institutions include, but are not limited to, South African commercial banks (e.g., Standard Bank, ABSA, FNB, Nedbank, Capitec), development finance institutions (e.g., IDC, SEFA, NEF, DBSA, Land Bank), cooperative banks registered with the Co-operative Banks Development Agency (CBDA), and duly registered credit providers under the National Credit Act. Bidders may submit proof from any legally registered financial institution of their choice.

The City of Ekurhuleni may, prior to award, request updated financial information and re-verify the bidder's financial ability to confirm access to the required funds

7. Central Supplier Database (CSD)

In the event that bidders are not compliant with all applicable legislative requirements, as per CSD. National Treasury in partnership with the Provincial Treasuries have developed municipalities and municipal entities Central Supplier Database (CSD) for the registration of prospective suppliers in line with Section 14(1) (b) of the Municipal Supply Chain Management Regulations (MSCMR). (Tax compliance will be dealt with in terms of MFMA Circular No. 90)

NB:

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

8. Adjudication using a Points System

Acceptable bids will be evaluated using a system that awards points on the basis of bid price and specific goal/s. Failure on the part of a bidder to submit proof of specific goal/s claim will be interpreted to mean that preference points for specific goal/s are not claimed.

For bids with a bid amount equal to or above R2 000 and up to a Rand value of R 50 million (all applicable taxes included) a maximum of 80 points is allocated for price and a maximum of 20 points for specific goal/s points. For bids with a bid amount above R 50 million (all applicable taxes included) a maximum of 90 points is allocated for price and a maximum of 10 points for specific goal/s points.

The Municipality shall award the Contract to the Bidder obtaining the highest number of points for Price and specific goal/s calculated in accordance with the Preferential Procurement Regulations, 2022, unless there are grounds to justify the award to another bidder, in accordance with the provisions of Section 2 (f) of the Preferential Procurement Policy Framework Act, Act No. 5 of 2000.

9. PREFERENTIAL PROCUREMENT REGULATIONS (PPR) 2022 DEFINATION OF PRICE APPLICATION

The price used for the evaluation of tenders must be inclusive of all applicable taxes, in accordance with Regulations 4(1) and 5(1) of the Preferential Procurement Regulations, 2022. "Price" means an amount of money tendered for goods or services and includes all applicable taxes, less all unconditional discounts.

All applicable taxes include Value Added Tax (VAT), where applicable, and any other taxes that the tenderer is required to pay in terms of applicable tax legislation. Accordingly, all applicable taxes must be included in the tendered price.

With effect from 1 April 2026, compulsory VAT registration applies where the total value of taxable supplies exceeds R2.3 million in any consecutive 12-month period, or where it is reasonably expected to exceed the prescribed threshold. The voluntary VAT registration threshold is R120,000 per annum, subject to the requirements and exceptions prescribed by SARS and applicable legislation.

10. Evaluation on Functionality

10.1 Evaluation on Functionality shall be in accordance with the CoE Supply Chain Management Policy as follows:

When functionality will be evaluated the following shall be clearly specified in the invitation to quote/bid:

- Evaluation criteria for measuring functionality
- Weight of each criterion
- Applicable values
- Minimum qualifying score for functionality.
- Respondents that have achieved the minimum qualification score for functionality shall be evaluated further on price and preference points.
- Respondents that did not achieve the minimum qualification score for functionality shall be eliminated from further evaluation.

10.2 Accordingly, where an invitation to submit a tender indicates that the tender will be evaluated on functionality, all acceptable bids submitted shall be firstly evaluated on functionality and, all acceptable bids that achieve the minimum score for functionality, as indicated in the tender invitation, shall be further evaluated in terms of the points system referred to above.

11. Remedies

The City Manager must act in terms of Regulation 9 of the Preferential Procurement Policy Regulations, 2022, in circumstances contemplated in Regulation 9 (1) which is outlined below;

(9)(1) If an organ of state is of the view that a tenderer submitted false information regarding a specific goal/s, it must—

- (a) inform the tenderer; accordingly, and

- (b) give the tenderer an opportunity to make representations within 14 days as to why the tender may not be disqualified or, if the tender has already been awarded to the tenderer, the contract should not be terminated in whole or in part.
- (2) After considering the representations referred to in subregulation (1) (b), the organ of state may, if it concludes that such information is false—
 - (a) disqualify the tenderer or terminate the contract in whole or in part; and
 - (b) if applicable, claim damages from the tenderer.

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF SPECIFIC GOALS, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022.

1. GENERAL CONDITIONS

- 1.1 The following preference point systems are applicable to all bids:
- the 80/20 system for requirements with a Rand value equal to or above R2 000 and up to R50 million (all applicable taxes included); and
 - the 90/10 system for requirements with a Rand value above R50 million (all applicable taxes included).
 - an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system;
 - or (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system.
- 1.2 The value of this bid is estimated to exceed R50 million (all applicable taxes included) and therefore the (90/10) system shall be applicable.
- 1.3 Preference points for this bid shall be awarded for:
- (a) Price; and
 - (b) Specific goal/s.
- 1.3.1 The maximum points for this bid are allocated as follows:
- | | POINTS |
|---|------------|
| 1.3.1.1 PRICE | (90). |
| 1.3.1.2 SPECIFIC GOAL/S | (10). |
| Total points for Price and Specific Goal/s must not exceed | 100 |
- 1.4 Failure on the part of a bidder to submit proof of specific goal/s claim will be interpreted to mean that preference points for specific goal/s are not claimed.
- 1.5 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

- 2.1. **“all applicable taxes”** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- 2.2. **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- 2.3. **“specific goals”** means specific goals as contemplated in section 2(1) (d) of the Act which may include contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender and disability including the implementation of programmes of the Reconstruction and Development Programme as published in *Government Gazette* No. 16085 dated 23 November 1994;
- 2.4. **“Historically Disadvantaged Individual (HDI)”** means any person, category of persons or community, disadvantaged by unfair discrimination before the Constitution of the Republic of South Africa, 1993 (Act No. 200 of 1993) came into operation. **(Please Note: Historically Disadvantaged Individuals includes women and persons with disabilities)**

- 2.5. **"Youth"** means an individual between the ages of 18 and 35.
- 2.6. **"bid"** means a written offer in a prescribed or stipulated form in response to an invitation by organ of state for the provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals;
- 2.7. **"Broad-Based Black Economic Empowerment Act"** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- 2.8. **"comparative price"** means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;
- 2.9. **"consortium or joint venture"** means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract;
- 2.10. **"contract"** means the agreement that results from the acceptance of a bid by an organ of state;
- 2.11. **"Firm price"** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;
- 2.12. **"functionality"** means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;
- 2.13. **"non-firm prices"** means all prices other than "firm" prices;
- 2.14. **"person"** includes a juristic person;
- 2.15. **"rand value"** means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;
- 2.16. **"sub-contract"** means the primary contractor's assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;
- 2.17. **"total revenue"** bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the *Government Gazette* on 9 February 2007;
- 2.18. **"trust"** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and
- 2.19. **"trustee"** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.
- 2.20. **"Share Certificate"** a physical, written document signed by the Directors of a Company, and serves as legal proof of each Director's shareholding / ownership in the Company.
- 2.21. **Annual turnover: EME** (0 – R 10 000 000), **QSE** (R 10 000 000 – R 50 000 000) and **Generic** (> R 50 000 000) **NB: Indicate which Financial Year was used to determine annual turnover/assess the BBBEE certificate or Sworn Affidavit**

3. ADJUDICATION USING A POINT SYSTEM

- 3.1 The bidder obtaining the highest number of total points may be awarded the contract.
- 3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts.
- 3.3 Points scored must be rounded off to the nearest 2 decimal places.
- 3.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for Specific goal/s.
- 3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for Specific goal/s, the successful bid must be the one scoring the highest score for functionality.

- 3.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

4. POINTS AWARDED FOR PRICE

4.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) & \text{or} & P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) \end{array}$$

Where:

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

4.2 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS FOR TENDERS FOR INCOME-GENERATING CONTRACTS

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ P_s = 80 \left(1 + \frac{P_t - P_{\max}}{P_{\max}} \right) & \text{or} & P_s = 90 \left(1 + \frac{P_t - P_{\max}}{P_{\max}} \right) \end{array}$$

Where:

P_s = Points scored for comparative price of bid under consideration
 P_t = Comparative price of bid under consideration
 $P_{\max}$ = Comparative price of highest acceptable tender.

5. Points awarded for Specific Goal/s

- 5.1 In terms of Regulation 4 (1) and 5 (1) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the Specific Goal/s in accordance with the table below:

SPECIFIC GOAL REQUIREMENT	EVIDENCE REQUIRED	POINTS ALLOCATED
EME	Original Sworn Affidavit /Certified Copy of the Sworn Affidavit or Original / Certified Copy of the BBBEE Certificate	2
Enterprise situated within the Ekurhuleni demarcation.	Municipal Account, Lease Agreement or Affidavit The bidder must submit one (1) of the following, in the name of the enterprise: A municipal account, issued not more	5

SPECIFIC GOAL REQUIREMENT	EVIDENCE REQUIRED	POINTS ALLOCATED
	than three (3) months before the bid closing date; OR - A valid lease agreement; OR - An affidavit from the lessor confirming that the bidder occupies the premises, signed by the lessor.	
Local production and content.	Confirmation letter from the manufacturer - must stipulate local content minimum threshold Exemption letter issued by DTI (in cases where the bidder does not satisfy the minimum thresholds.) (If applicable)	1
An enterprise which is at least 50% owned by Historically Disadvantaged Individuals	Identity document (certified not older than 6 months) Company Share Certificate or Directorship Composition from CIPC or a Member's Interest Certificate for a Registered CC For persons living with disabilities (if applicable) Original/Certified Medical Certificate (certified not older than 6 months) with the following information: a) Name of practitioner, b) Practitioner number, c) Doctor's contact details, d) Details of the condition, e) Date, f) Signature, g) Stamp and h) Patient's name.	2
TOTAL SPECIFIC GOAL POINTS		10

NB: if bidders do not complete information or submit evidence required for the above table, they will not be awarded any specific goals points. All evidence MUST be submitted at bid closure and MUST be valid at the close of bid for point's allocation purposes.

- 5.2 In order to obtain specific goal/s points in terms of the provisions of Regulations 4(2) or 5(2) of the Preferential Procurement Regulations, 2022, the bidder must submit proof of specific goal/s claimed.
- 5.3 A trust, consortium or joint venture will qualify for points for the specific goals selected as a legal entity, provided that the entity meets the specific goals requirement..
- 5.4 A trust, consortium or joint venture, will qualify for points provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.(if applicable)

5.5 Tertiary institutions and public entities will be required to submit their proof of specific goal/s claimed.

5.6 A person awarded a contract may not sub-contract more than 30% of the value of the contract to any other enterprise.

6. BID DECLARATION

6.1 Bidders who claim points in respect of specific goal/s must complete the following:

SPECIFIC GOAL	EVIDENCE	POINTS CLAIMED
1.		
2.		
3.		
4.		

7. SPECIFIC GOAL/S CLAIMED IN TERMS OF PARAGRAPHS 1.3.1.2 AND 5.1

7.1 **SPECIFIC GOAL/S:** = ... (maximum of 10 or 20 points)
(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of submitted proof as indicated above)

8 DECLARATION WITH REGARD TO BIDDING ENTITY

8.1 Name of bidding entity;

8.2 VAT registration number:

8.3 Registration number of bidding entity:

8.4 TYPE OF ENTITY

[TICK APPLICABLE BOX]

☐ Partnership/Joint Venture / Consortium

☐ One-person business/sole proprietor

☐ Close corporation

☐ Company

☐ Trust

☐ Other (specify)

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

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

8.6 CLASSIFICATION

[TICK APPLICABLE BOX]

☐ Manufacturer

☐ Supplier

☐ Professional service provider

☐ Other service providers, e.g. transporter, etc.

8.7 MUNICIPAL INFORMATION

Municipality where business is situated

Consumer Account Number

Stand Number

8.8 TOTAL NUMBER OF YEARS THE FIRM HAS BEEN IN BUSINESS AND REGISTRATION DETAILS?

Date of Registration.....;

Date that commenced business, if different to date of registration.....

8.9 I/we, the undersigned, who is / are duly authorised to do so on behalf of the bidder, certify that the points claimed, based on the Specific goal/s indicated in paragraph 7 of the foregoing certificate, qualifies the bidder for the preference(s) shown and I / we acknowledge that:

(i) The information furnished is true and correct;

(ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form.

(iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 7, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;

(iv) Upon detecting that a tenderer submitted false information regarding its Specific Goal/s, local production and content, or any other matter required, which will affect or has affected the evaluation of a tender, or where a tenderer has failed to declare any subcontracting arrangements, the purchaser must-

(a) inform the tenderer accordingly;

(b) give the tenderer an opportunity to make representations within 14 days as to why-

(i) the tender submitted should not be disqualified or, if the tender has already been awarded to the tenderer, the contract should not be terminated in whole or in part;

(ii) if the successful tenderer subcontracted a portion of the tender to another person without disclosing it, the tenderer should not be penalised up to 10 percent of the value of the contract; and

(iii) the tenderer should not be restricted by the National Treasury from conducting any business for a period not exceeding 10 years with any organ of state; and

(c) if it concludes, after considering the representations referred to in subregulation(1)(b), that-

(i) such false information was submitted by the tenderer-

(aa) disqualify the tenderer or terminate the contract in whole or in part; and

(bb) if applicable, claim damages from the tenderer; or

(ii) the successful tenderer subcontracted a portion of the tender to another person without disclosing, penalise the tenderer up to 10 percent of the value of the contract.

(2)(a) the purchaser must-

(i) inform the National Treasury, in writing, of any actions taken in terms of subregulation (1);

(ii) provide written submissions as to whether the tenderer should be restricted from conducting business with any organ of state; and

(iii) submit written representations from the tenderer as to why that tenderer should not be restricted from conducting business with any organ of state.

(b) The National Treasury may request the purchaser to submit further information pertaining to subregulation (1) within a specified period.

(3) The National Treasury must-

(a) after considering the representations of the tenderer and any other relevant information, decide whether to restrict the tenderer from doing business with any organ of state for a period not exceeding 10 years; and

(b) maintain and publish on its official website a list of restricted suppliers.

WITNESSES:

1.

.....

SIGNATURE(S) OF BIDDER(S)

2.

DATE:

ADDRESS:.....

.....

FORM 2.3.4 **GENERAL INFORMATION:**

1. Details of Bidding Entity

NAME OF BIDDER

POSTAL ADDRESS

STREET ADDRESS

TELEPHONE NUMBER

CODE.....NUMBER.....

CELLPHONE NUMBER

FACSIMILE NUMBER

CODE.....NUMBER.....

E-MAIL ADDRESS

VAT REGISTRATION NUMBER

TCS PIN NUMBER

--

HAS PROOF OF SPECIFIC GOAL/S CLAIMED BEEN SUBMITTED?

(Tick applicable box)

YES	NO
☐	☐

ARE YOU THE ACCREDITED REPRESENTATIVE?

IN SOUTH AFRICA FOR THE GOODS/SERVICES/WORKS OFFERED?

(Tick applicable box)

YES	NO
☐	☐

(IF YES ENCLOSE PROOF)

2. Legal or business entity: Mark with an **X**.

Sole proprietor	
Partnership	
Close corporation	
Company	
Joint venture/ Consortium	

Trust	
Tertiary Institution	
Public Entity	

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

Joint venture/Consortium member	Type of entity (as defined above)

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

_____	_____
_____	_____

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

_____	_____
_____	_____

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

_____	_____
_____	_____

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

8. Details of proprietor, partners, closed corporation members,, company directors, or trustees indicating technical qualifications where applicable (Form on the next page).
9. For joint ventures/ consortiums the following must be attached:
- Written authority **of each JV / consortium partner**, for authorized signatory.
 - The joint venture/ consortium agreement.
10. For Trusts the following must be attached
- a. Certified copy of the trust deed;
 - b. Certified copies of the Letters of Authority issued in terms of S6 of the Trust Property Control Act, Act No.57 of 1988
 - c. Certified copy of the resolution of the trustees of the trust authorising the signatory to sign the bid on behalf of the trust

SIGNATURE OF AUTHORIZED PERSON :

DATE :

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

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

FOR EVALUATION PURPOSE (MUST BE COMPLETED)

NAME OF BIDDING ENTITY

EQUITY OWNERSHIP – (COMPULSORY)

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

Name and Surname	Position occupied in Enterprise	Identity number	Citizen- ship	Gender Male / Female	Race	HDI Status (Y/N)	%Owned by HDI's	% Owned by Women		% Owned by Disabled
								Black	White	

PLEASE NOTE

KINDLY ATTACHED COPIES OF IDENTITY DOCUMENTS OF THE ABOVEMENTIONED MEMBERS

CERTIFICATION

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED ON THIS EQUITY OWNERSHIP IS CORRECT.

**I ACCEPT THAT THE STATE AND/OR THE COE MAY ACT AGAINST ME SHOULD THIS
DECLARATION PROVE TO BE FALSE.**

.....
Signature

.....
Date

.....
Capacity

.....
Name of Bidding Entity

OCCUPATIONAL HEALTH AND SAFETY INFORMATION FOR BIDS

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

1. Proof of Registration with the Compensation Commissioner.
2. Letter of "Good Standing" with Compensation Commissioner.
3. Certified copy of first aid certificate.
4. Physical address where contract is taking place (on Company letterhead).
5. Detailed description of intended work (on Company letterhead).
6. List of all Personal Protective Equipment issued to employees (company letterhead).
7. List of ALL employees on site (on company letterhead).
8. Detailed Health and Safety Plan (on company letterhead).
9. Comprehensive Risk Assessment (Qualification and Contact details of Risk Assessor).
10. Public Liability and Commercial Insurance Certificate.
11. All related statutory appointments.
12. Certificates of relevant Training.

The above list represents the minimum content of a safety file In terms of the Construction Regulations, 2014 (the regulations) as promulgated in Government Gazette No 37307 and Regulation Gazette No 10113 of 7 February 2014.

OHS Act 85 of 1993.

INSURANCE AND INDEMNIFICATION

Without limiting the liability of the Service Provider under this Agreement, the Service Provider shall at its own cost and expense take out insurance in respect of all risks for which it is prudent for the Service Provider to insure against, including any liability it may have as a result of its activities under the Agreement for, liabilities that may arise due to, theft, destruction, death or injury to any person and damage to property.

The Service Provider shall arrange insurance with registered insurers and will produce to CoE written confirmation from its brokers/insurers as evidence of the existence of the policies on an annual basis within 30 (thirty) days after date of policy renewals.

The Service Provider shall for the duration of this Agreement be required to maintain in force such sufficient insurance cover for its performance under this Agreement. The level of insurance will be kept under review by the Service Provider on an annual basis, to ensure its adequacy, provided that any variation to the level of such insurance shall be entirely at the discretion of the Service Provider.

Insurance cover will include relevant applicable insurance policies for risk associated with the scope of work such as Public Liability, Contractors All Risk, Professional Indemnity etc and such Insurance will be determined by CoE. Service Provider will present Certificates of Insurance to CoE (Risk Management Department) prior to the commencement of the works, but not later than 14 days after having been informed of the acceptance of this bid.

Subject to clause above, if the Service Provider fails to effect adequate insurance under this clause it shall notify CoE in writing as soon as it becomes aware of the reduction or inadequate cover. As in when required, the Risk Financing Division may validate the insurance confirmation.

In the event that the Service Provider receives written notice from its insurers advising of the termination of its insurance cover referred to in clause above or if the insurance ceases to be available upon commercially reasonable terms, the Service Provider shall immediately notify CoE in writing of such termination and/or unavailability, where after either the Service Provider or/and CoE may find a resolution regarding the insurance cover. The Service Provider shall within 30 days ensure placement of the applicable insurance cover in place and furnish the City with confirmation of cover.

The Service Provider must insure Employees against injury at work and further ensure that the Employees are fully covered as is required by the Compensation for Occupational Injuries and Diseases Act 130 of 1993 (the COIDA). Documentary proof of such cover must be made available to CoE upon request.

LIMITATION OF LIABILITY

Neither party exclude or limit liability to the other party for:

- a) Death or personal injury due to negligence; or
- b) Fraud

The Service Provider shall indemnify and keep CoE indemnified from and against liability for damage to any CoE property (whether tangible or intangible) or any other loss, costs or damage suffered by CoE to the extent that it results from any act of or omission by the service provider or its personnel in connection with this agreement.

In no event shall either party be liable to the other for indirect or consequential loss or damage or including indirect or consequential loss of profits, business, revenue, goodwill or anticipated savings of an indirect nature or loss or damage incurred by the other party as a result of third party claims. Nothing in this Agreement shall exclude or limit the liability of either Party for death or personal injury caused by its negligence, fraud or willful misconduct or any other liability which cannot lawfully be excluded or limited.

Each party shall, at its own cost, maintain adequate insurance to cover its liability for death or personal injury arising out of or in connection with this Agreement and shall provide proof thereof upon request. Save as provided above, the aggregate liability of either party to the other party in terms of this Agreement whether as result or delict or negligence shall not exceed an amount of fees paid in 12 months preceding the claim.

FORCE MAJEURE

Neither Party shall have any claim against the other Party arising from any failure or delay in the performance of any obligation of either Party under this Agreement caused by an act of *force majeure* such as acts of God, fire, flood, war, strike, lockout, industrial dispute, government action, laws or regulations, riots, terrorism or civil disturbance, defaults, delays or discontinuance on the part of independent contractors, suppliers, or other circumstances or factors beyond the reasonable control of either Party, and to the extent that the performance of obligations of either Party hereunder is delayed by virtue of the foregoing, any period stipulated for any such performance shall be reasonably extended.

Each Party will take all reasonable steps by whatever lawful means that are available, to resume full performance as soon as practicable and will seek agreement to modification of the relevant provisions of this Agreement in order to accommodate the new circumstances caused by the act of *force majeure*. If a Party fails to agree to such modifications proposed by the other Party within 90 (ninety) days of the act of *force majeure* first occurring, either Party may thereafter terminate this Agreement with immediate notice.

It's the responsibility of the Project Manager to ensure and monitor the insurance compliance with regarding to the following:

1. Active and validity of the Insurance Policy throughout the duration of the contract
2. Letter of Good Standing of the supplier

PLEASE REMEMBER:

(1) IN ORDER TO OBTAIN SPECIFIC GOAL/S POINTS IN TERMS OF THE PROVISIONS OF REGULATIONS 4(2) OR 5(2) OF THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE BIDDER MUST SUBMIT PROOF OF SPECIFIC GOAL/S CLAIMED.

(2) TCS PIN NUMBER;

(3) IN THE CASE OF A JOINT VENTURE/CONSORTIUM, THE TCS PIN NUMBER OF EACH ENTITY CONSTITUTING THE JOINT VENTURE/CONSORTIUM, MUST BE SUBMITTED WITH THE BID DOCUMENT;

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

(5) DOCUMENTS SUBMITTED MUST BE LEGIBLE

(6) NO PHOTOCOPIES OF CERTIFIED COPIES WILL BE ALLOWED.

CITY OF EKURHULENI

DEPARTMENT NAME: WATER AND SANITATION

CONTRACT NO: A-WS 08-2026

FOR THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

THE CONTRACT

PART C1 AGREEMENT AND CONTRACT DATA

PART C2 PRICING DATA

PART C3 SCOPE OF WORKS

PART C4 SITE INFORMATION

CITY OF EKURHULENI

DEPARTMENT NAME: WATER AND SANITATION

CONTRACT NO: A-WS 08-2026

FOR THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

PART C1 AGREEMENT AND CONTRACT DATA

C1.1 FORM OF OFFER AND ACCEPTANCE

C1.2 CONTRACT DATA

C1.3 FORM OF GUARANTEE

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

C1.1 FORM OF OFFER AND ACCEPTANCE

FORM OF OFFER AND ACCEPTANCE (AGREEMENT)

OFFER

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

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

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

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

rand (in words);

R (in figures),

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

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

FOR THE BIDDER:

Signature(s)

Name(s)

Capacity

(Name and address of organisation)

Name and signature of Witness _____

Date _____

ACCEPTANCE

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

The terms of the contract, are contained in

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

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

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

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

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

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

FOR THE COE:

Signature(s)

Name(s)

Capacity

_____	_____
_____	_____
_____	_____

CITY OF EKURHULENI

(Name and address of organisation)

Name and signature of witness _____

Date _____

SCHEDULE OF DEVIATIONS

Notes:

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

1	Subject _____
	Details _____
2	Subject _____
	Details _____
3	Subject _____
	Details _____
4	Subject _____
	Details _____
5	Subject _____
	Details _____
6	Subject _____
	Details _____

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

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

FOR THE BIDDER:

Signature(s) _____

Name(s) _____

Capacity _____

(Name and address of organisation)

Name and signature of witness

_____ Date _____

FOR THE CoE:

Signature(s) _____

Name(s) _____

Capacity _____

CITY OF EKURHULENI
(Name and address of organisation)

Name and signature of witness

_____ Date _____

C1.2 CONTRACT DATA

CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works (2015) Third Edition, published by the South African Institution of Civil Engineering is applicable to this Contract and is incorporated herein by reference plus a signed bid document will act as a full legal document. Provisions of the Local Government: Municipal Finance Management Act 56 of 2003 ("the MFMA") and a signed Service Level Agreement will form part of this Contract, in the event that there is a discrepancy between the General Conditions of Contract for Construction Works (2015) Third Edition and the MFMA, provision of the MFMA shall prevail.

Copies of these Conditions of Contract may be obtained from the South African Institution of Civil Engineering, Tel. No. (011) 805-5947/48/53.

PART 1: DATA PROVIDED BY THE EMPLOYER

The following contract specific data are amendments to **The General Conditions of Contract for Construction Works (2015) Third Edition**, published by the **South African Institution of Civil Engineering** and are applicable to this Contract:

Clause													
1.1.1.7	The Principle Agreement of the General Conditions of Contract for Construction Works (2015), plus a signed full bid document will act as a full legal document. Provisions of the Local Government: Municipal Finance Management Act 56 of 2003 ("the MFMA") and a signed Service Level Agreement will form part of this Contract, in the event that there is a discrepancy between the General Conditions of Contract for Construction Works (2015) Third Edition and the MFMA, provision of the MFMA shall prevail.												
1.1.1.13 5.14.5.2	The Defects Liability Period is 365 days after final completion.												
1.1.1.14 5.14.1	The time for achieving Practical Completion shall be determined for each package issued, based on the nature, scope, and extent of the Works from the date of site handover.												
1.1.1.15 1.2.1.2	The Employer is the Ekurhuleni Metropolitan Municipality The Employer's address for receipt of communications is: <table border="0"> <tr> <td>Physical address:</td><td>Postal address:</td></tr> <tr> <td>City of Ekurhuleni</td><td>Private Bag 1069</td></tr> <tr> <td>C/o Cross & Rose Streets</td><td>GERMISTON</td></tr> <tr> <td>GERMISTON</td><td>1400</td></tr> <tr> <td>1400</td><td></td></tr> <tr> <td>Fax: (011) 999-7511</td><td></td></tr> </table>	Physical address:	Postal address:	City of Ekurhuleni	Private Bag 1069	C/o Cross & Rose Streets	GERMISTON	GERMISTON	1400	1400		Fax: (011) 999-7511	
Physical address:	Postal address:												
City of Ekurhuleni	Private Bag 1069												
C/o Cross & Rose Streets	GERMISTON												
GERMISTON	1400												
1400													
Fax: (011) 999-7511													
1.1.1.16 1.2.1.2	Will be notified after the award.												
1.1.1.18	The time for obtaining final completion certificate is 21 calendar days after Practical completion.												
1.1.1.26	The Pricing Strategy is Re-measurement Contract												
3.2.2	DELETE AND REPLACE WITH: "Whenever the Employer's agent intends, in terms of the contract, to exercise any discretion, or make or issue any ruling, contract interpretation or price determination, he shall first consult with the employer and the contractor in an attempt to reach agreement. Failing agreement, the Employer's agent shall advise the Employer on contractual issues where after the Employer will make a final decision based on the advice of the Agent read with the MFMA. Only then will the Agent be allowed to issue a final instruction to the contractor."												

Clause	
3.2.3	ADD THE FOLLOWING: "The Employer's agent shall obtain written permission from the Employer for all variation orders where such variation order may have an impact on the contract duration, project cost, job creation or other legal implications related to the contract."
4.4.1	DELETE AND REPLACE WITH: "The following will be applicable regarding subcontracting for this contract: (a) The successful Bidders must subcontract to local City of Ekurhuleni subcontractors and in accordance to the City of Ekurhuleni EPWP programmes. The City of Ekurhuleni programmes and allocations will be based on contractor CIDB grading. i.e. contractors will only be given project of value within their grading limit etc. and failure to this they will be disqualified. (b) Allocations will be based on grading at the time of tendering, and no work will be allocated based on new higher grading the contractor might obtain after the tender being awarded
4.5	Variations to the Conditions of Contract are: Add the following at the end of subclause 4.5: "4.5.3 The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Amendment Act, 1993 (Act 85 of 1993), hereinafter referred to as 'the Act', that the following arrangements and procedures shall apply between them to ensure compliance by the Contractor with the provisions of the Act: (i) The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all relevant provisions of the Act and the Regulations promulgated in terms of the Act. (ii) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations on the Contractor will be fully complied with. (iii) The Contractor accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from himself being obliged to comply with any of the aforesaid duties, obligations and prohibitions, with the exception of such duties, obligations and prohibitions expressly assigned to the Employer in terms of the Act and its associated Regulations. (iv) The Contractor agrees that any duly authorized officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to monitor that the Contractor has conformed to his undertakings as described in paragraphs (i) and (ii) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or any appropriate records or safety plans held by the Contractor. (v) The Contractor shall be obliged to report forthwith to the Employer and Engineer any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this Contract, and shall, on written demand, provide full details in writing, to the Employer and Engineer, of such investigation, complaint or criminal charge. 4.5.4 The Contractor shall furthermore, in compliance with Constructional Regulations 2014 to the Act: (i) Acquaint himself with the requirements of the Employer's health and safety specification as laid down in regulation 4(1)(a) of the Construction Regulation 2014 and prepare a suitably and sufficiently documented health and safety plan as contemplated in regulation 5(1) of the Construction Regulation 2014 for approval by the Employer or his assigned agent. The Contractor's health and safety plan and risk assessment shall be submitted to the Employer for approval within fourteen (14) days after receiving a completed copy of the Agreement and shall be implemented and maintained from the Commencement of the Works. (ii) The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2014, to ensure that the Contractor is compliant in respect of his obligations. Failure by the Contractor to comply with the requirements of these

Clause	
	Regulations shall entitle the Engineer, at the request of the Employer or his agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, until such time that the Employer or his agents are satisfied that the issues in which the Contractor has been in default have been rectified."
5.2.1	ADD THE FOLLOWING: "The commencement date will be the date on which the site is handed over to the contractor by the Employer's agent, after been instructed by the Employer.
5.3.1	The documentation required before commencing with the Works are: 1. Health and Safety Plan (Refer to Clause 4.3) 2. Initial programme (Refer to Clause 5.6) 3. Security (Refer to Clause 6.2) 4. Insurance (Refer to Clause 8.6) Notwithstanding the above, the Contractor shall commence executing the Works within twenty-eight (28) days of the Commencement Date (site handover) or immediately after such time as the Contractor's health and safety plan has been approved and the initial requirements have been complied with.
5.3.2	Time to Submit the documentation required before commencement of the Works is 14 days.
5.8.1	The special non-working days are: 1. All applicable public holidays. 2. The year-end break commencing on the 15th December and ending on 15th January or as agreed on a yearly basis depending on the yearly calendar.
5.12.2.2	ADD THE FOLLOWING: Adverse Physical conditions: The following will be applicable for extension of time due to climatic conditions: "Extension of time in respect of rainfall conditions shall be calculated in accordance with the method and data given in the Scope of Work."
5.13.1	The penalty for failing to complete the Works is R 4 500,00 per day. If the penalty reaches R 90 000,00 the Employer has the right to invoke Clause 9.0
5.14.1	The requirements for achieving Practical Completion are: 1. PRV is installed, tested, commissioned and confirmed to be operating as intended. 2. Leak detection survey completed, identified leaks repaired and verified, and report submitted. 3. Valve replacement works completed, tested and confirmed to be operational. 4. Chambers, pipelines and affected areas reinstated, backfilled and made safe. 5. Only minor snag items remain, which do not affect the operation, safety or performance of the water distribution system.
5.14.7	The time for achieving Practical Completion shall be determined for each package issued, based on the nature, scope, and extent of the Works from the date of site handover.
5.16.3	The latent defects period is 5 years.
6.1	All payments to bidders will only be made by means of Electronic Fund Transfer (EFT). Successful bidders will be requested to submit within 14 days after appointment, the following documents: An original letter from the banking institution to confirm full details of the bank account to the Council (Company name, account number)

Clause																
	• An original cancelled cheque (if applicable) • An original letter on the bidding entity's letterhead confirming bank account details into which all contract payments must be made, signed by an authorised official of bidding entity															
6.2.1	The type of security required will be a performance guarantee															
6.2.2	DELETE AND REPLACE WITH: "If the contractors fail to submit the selected security within the time period indicated in 5.3.2, or if the performance guarantee differ substantially from the pro forma, the Employer may terminate the contract in terms of clause 9.2.															
6.2.3	ADD THE FOLLOWING: The Performance Guarantee must substantially contain the wording of the document included as "Performance Guarantee" – See Appendix 3. The liability of the Guarantee shall be in accordance with paragraph 21 (1)(f) of the EMM's Supply Chain Management Policy, which reads as follows: (f) where surety is required it shall be in the form of cash, a certified cheque, or a bank guarantee from a banking institution registered in terms of the Banks Act, 1990 (Act No. 94 of 1990) or from an insurer registered in terms of the Insurance Act, 1943 (Act No. 27 of 1943). Where bidders in Category A cannot raise the required surety of 2,5%, and it is feasible to deduct the amount from the first payment certificate, such concessions may be granted; Guarantees will be required as follows: <table><tr><th>CATEGORY</th><th>PROJECT VALUE</th><th>GUARANTEE</th></tr><tr><td>A</td><td>< R500 000</td><td>2,5%</td></tr><tr><td>B</td><td>R500 001 – R1 000 000</td><td>5%</td></tr><tr><td>C</td><td>R1 000 001 – R2 000 000</td><td>7,5%</td></tr><tr><td>D</td><td>>R2 000 000</td><td>10%</td></tr></table>	CATEGORY	PROJECT VALUE	GUARANTEE	A	< R500 000	2,5%	B	R500 001 – R1 000 000	5%	C	R1 000 001 – R2 000 000	7,5%	D	>R2 000 000	10%
CATEGORY	PROJECT VALUE	GUARANTEE														
A	< R500 000	2,5%														
B	R500 001 – R1 000 000	5%														
C	R1 000 001 – R2 000 000	7,5%														
D	>R2 000 000	10%														
6.3.1	ADD THE FOLLOWING: "All variation orders issued by the Employer's agent, must be pre-approved by the Employer."															
6.6.1 and 6.6.2	ADD THE FOLLOWING: In the case of purchases of material or appointment of specialist sub-contractors, the contractor must obtain a minimum of three quotations to be approved by the Employer after the Employer's agent confirmed the market relatedness of the quotations.															
6.8.1	ADD THE FOLLOWING: If it is required to balance the Bill of Quantities, in cases where the non-market relatedness of specific line items poses a risk to the Employer, it will be done in conjunction with the Employer's agent. The final balanced BOQ must be approved by the Employer where after it needs to be included in the contract as the corrected BOQ.															
6.8.2	Consumer Price Index: Is applicable Price adjustment shall be in accordance with the Contract Price Index as follows: • PERIOD ONE (01): BID PRICE(S) MUST BE FIXED FOR THE FIRST 12 MONTHS AFTER THE BASE MONTH WITH BASE MONTH BEING ONE MONTH PRIOR TO CLOSING OF BID															

Clause	
	• PERIOD TWO (02): BID PRICE(S) IS/ARE SUBJECT TO ESCALATION EQUAL TO CPI FOR THE FOLLOWING 12 MONTHS WITH THE BASE MONTH FOR THIS PERIOD BEING THE 12th MONTH OF PERIOD ONE (01). • PERIOD THREE (03): BID PRICE(S) IS/ARE SUBJECT TO ESCALATION EQUAL TO CPI FOR THE REMAINING PERIOD WITH THE BASE MONTH FOR THIS PERIOD BEING THE 12th MONTH OF PERIOD TWO (02).
6.8.3	DELETE AND REPLACE WITH: No variation in the cost of special material will be allowed in this contract
6.10.1.5	ADD THE FOLLOWING: The percentage advance on materials not yet built into the Permanent Works is eighty percent (80%) of the value of material. For material stored off site, proof of all risk insurance must be provided by the contractor
6.10.3	The percentage retention on the amounts due to the Contractor is 10% to be reduced to 5% at works completion upon the issuing of Certificate of Completion. The balance of retention will be payable after final completion or expiry of the defects liability period as stated in 5.14.5.2
6.11	ADD AT END OF PARAGRAPH 6.11: The principle agent together with the contractor, will monitor and ensure that the total value of variation orders does not exceed 10% of the contract value. If, during the execution of the contract, it became obvious that the 10% will be exceeded, written permission must be obtained from the client. It must be noted that a process will have to be followed in line with Council's policy. No guarantee can be given that the request for exceeding the 10%, will be approved. If it is not approved, the client reserves the right to reduce the scope of work to keep the final contract amount within the allowed 10%. If the contractor exceeds the allowed 10% without approval, Council will not entertain any claims for payment more than the contract amount plus 10%.
8.6.1.1.2	The value of Plant and materials supplied by the Employer to be included in the insurance sum is R Nil
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R 500 000.00
8.6.1.2	A Coupon Policy for Special Risks is to be issued. (To be approved by the Employer's Claims Management Services Provider)
8.6.1.3	The limit of indemnity for liability insurance is R5 000 000-00 for any single claim – the number of claims to be unlimited during the construction and Defects Liability period. (To be approved by the Employer's Claims Management Services Provider)
8.6.1.5	The following additional and varied insurances are required: b) Surety Insurance c) Compensation for Injury and Disease Insurance
10.4	Disputes are to be settled in terms of General Conditions of Contract for Construction Works
7.5.1	ADD THE FOLLOWING: "Provided further that if the Works or excavation(s) are not ready for inspection or are incorrect or are not in accordance with the drawings or specifications, the fruitless expenditure so incurred by the Engineer will be for the Contractor's account. In such case a further adequate notice shall be given by the Contractor to the Engineer."

Clause	
8.6	CLAUSE 8.6 ADD THE FOLLOWING: “Notwithstanding the provisions of the General Conditions of Contract and without limiting the obligations liabilities or responsibilities of the Contractor in any way whatsoever including but not limited to the provision by the Contractor of any insurances, the Contractor will effect and maintain for the duration of the Contract until the date of the Certificate of Completion - (i) Contract Works Insurance; (ii) Public Liability Insurance; (iii) A Coupon for Special Risk Insurance (SASRIA) issued by the South African Special Risk Insurance Association; in the name of the Contractor (including all Sub-Contractors) and Municipality's insurable interest must be noted in the policy. A copy of the Contract Works Insurance, Public Liability Insurance policies and Coupon for Special Risk Insurance as arranged by the Contractor, must be submitted to Municipality. The Insurances will be maintained from the Commencement Date to the date of the Certificate of Completion. The Contractor shall effect and pay for any supplementary insurance, which in its own interest it may deem necessary. The Contractor shall insure that all potential and appointed Sub-contractors are aware of the whole content of this clause, and enforce the compliance by Sub-contractors with this clause where applicable. Any clarification of the scope of cover to be provided by the Policies arranged by the Contractor or the Municipality should be obtained from the Municipality's Broker. The Contractor and its Sub-contractors are deemed to have full knowledge of the terms and conditions under which the required Insurance cover is issued. ” The contractor shall be requested to submit Letter of Good Standing as issued by the department of labor prior commencement of the works.
8.6	ADD THE FOLLOWING: "In the event of any claim arising under the policy or policies held, the Contractor shall without delay take all the necessary steps to lodge his claim on the joint behalf of himself and the Municipality, and the claim submitted shall cover all costs to repair and make good. The Contractor shall submit copies of all claims and related documents to the Engineer. Settlement of claims will be paid to the Municipality who will pay such amounts to the Contractor on certificate of the Engineer as the rectification proceeds. All claims shall be submitted in accordance with the requirements of the policy."
8.6.5	ADD THE FOLLOWING: “The Executive Manager Insurance & Risks will verify the Contractors All Risks insurance cover and issue a letter of confirmation that adequate cover is in place or not.”
10.3.1	Disputes are to be settled in terms of General Conditions of Contract for Construction Works (GCC) 2015. The General Condition of Contract (GCC) 2015 plus a signed full bid document will act as a full legal document and serve as a Service Level Agreement. Where applicable the provisions of Municipal Finance Management Act (MFMA) shall prevail.

PART 2: DATA PROVIDED BY THE CONTRACTOR

Clause	
1(1)(h) 1(2)	The Contractor is The Contractor's address for receipt of communications is: Physical address: Postal address: Telephone: Fax: E-mail:.....
1(1)(m)	The time for completing the works is days
37(2)(b)	The percentage allowances to cover all charges for the Contractor's and subcontractor's profits, timekeeping, clerical work, insurance, establishment, superintendence and the use of hand tools is%
46(3)	The rate for special materials, exclusive of value-added tax (VAT) are:

C1.3 FORM OF GUARANTEE

PRO FORMA

CONTRACT NO. A-WS 08-2026

WHEREAS CITY OF EKURHULENI (hereinafter referred to as "the Employer") entered into, a Contract with _____ (hereinafter called "the Contractor") on the _____ day of _____ 20____ for the construction of _____ at _____

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

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

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

1. The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorized and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Completion Date which the Employer may make, give, concede or agree to under the said Contract.
2. This guarantee shall be limited to the payment of a sum of money
3. The Employer shall be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor.
4. This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.
5. Our total liability hereunder shall not exceed the sum of

_____ (R_____)

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

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

IN WITNESS WHEREOF this guarantee has been executed by us at _____

on this _____ day of _____ 20____

As witnesses:

1. _____ Signature _____

2. _____ Signature _____

Duly authorized to sign on behalf of _____

Address _____

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

THIS AGREEMENT made at _____

on this the _____ day of _____ in the year _____

between **THE CITY OF EKURHULENI** (hereinafter called "the **Employer**") of the one part, herein represented by

in his capacity as _____

and

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

in his capacity as _____

WHEREAS the Employer is desirous that certain works be constructed, viz

THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

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

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 1 The Mandatory shall execute the work in accordance with the Contract Documents pertaining to this Contract.
- 2 This Agreement shall hold good from its Commencement Date, which shall be the date of a written notice from the Employer or Engineer requiring him to commence the execution of the Works, to either
 - (a) the date of the Final Approval Certificate issued in terms of Clause 52.1 of the General Conditions of Contract (hereinafter referred to as "the GCC"),
 - (b) the date of termination of the Contract in terms of Clauses 54, 55 or 56 of the GCC.
- 3 The Mandatory declares himself to be conversant with the following:
 - (a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1993), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act:
 - (i) Section 8 : General duties of employers to their employees;
 - (ii) Section 9 : General duties of employers and self-employed persons to persons other than employees;
 - (iii) Section 37 : Acts or omissions by employees or mandataries, and
 - (iv) Subsection 37(2) relating to the purpose and meaning of this Agreement.
 - (b) The procedures and safety rules of the Employer as pertaining to the Mandatory and to all his subcontractors.

- 4 In addition to the requirements of Clause 33 of the GCC and all relevant requirements of the above-mentioned Volume 3, the Mandatory agrees to execute all the Works forming part of this Contract and to operate and utilise all machinery, plant and equipment in accordance with the Act.
- 5 The Mandatory is responsible for the compliance with the Act by all his subcontractors, whether or not selected and/or approved by the Employer.
- 6 ***The Mandatory warrants that all his and his subcontractors' workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act, 1993 which cover shall remain in force whilst any such workmen are present on site. A letter of good standing from the Compensation Commissioner to this effect must be produced to the Employer upon signature of the agreement.***
- 7 The Mandatory undertakes to ensure that he and/or subcontractors and/or their respective employers will at all times comply with the following conditions:
- (a) The Mandatory shall assume the responsibility in terms of Section 16.1 of the Occupational Health and Safety Act. The Mandatory shall not delegate any duty in terms of Section 16.2 of this Act without the prior written approval of the Employer. If the Mandatory obtains such approval and delegates any duty in terms of section 16.2 a copy of such written delegation shall immediately be forwarded to the Employer.
 - (b) All incidents referred to in the Occupational Health and Safety Act shall be reported by the Mandatory to the Department of Labour as well as to the Employer. The Employer will further be provided with copies of all written documentation relating to any incident.
 - (c) The Employer hereby obtains an interest in the issue of any formal inquiry conducted in terms of section 32 of the Occupational Health and Safety Act into any incident involving the Mandatory and/or his employees and/or his subcontractors.
8. **The contact details of the OH&S Agent for the COE will be advised on date of award**

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

SIGNED FOR AND ON BEHALF OF THE COE:

WITNESS 1

NAME 1
(IN CAPITALS)

SIGNED FOR AND ON BEHALF OF THE MANDATORY:

WITNESS 1

NAME 1
(IN CAPITALS)

CITY OF EKURHULENI

DEPARTMENT NAME: WATER AND SANITATION DEPARTMENT

CONTRACT NO: A-WS 08-2026

THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

PART C2 PRICING DATA

C2.1 PRICING INSTRUCTIONS

C2.2 BILL OF QUANTITY

C2.1 PRICING INSTRUCTIONS

- 1 The General Conditions of Contract, the Contract Data, the Specifications (including the Project Specifications), the Drawings, the Municipal Financial Management Act and the Supply Chain Management Regulations shall be read in conjunction with the Bill of Quantities.

- 2 The Bill comprises items covering the Contractor's profit and costs of general liabilities and of the construction of Temporary and Permanent Works.

Although the Bidder is at liberty to insert a rate of his own choosing for each item in the Bill, he should note the fact that the Contractor is entitled, under various circumstances, to payment for additional work carried out and that the Engineer is obliged to base his assessment of the rates to be paid for such additional work on the rates the Contractor inserted in the Bill.

Clause 8 of each Standardized Specification, and the measurement and payment clause of each Particular Specification, read together with the relevant clauses of the Project Specifications, all set out which ancillary or associated activities are included in the rates for the specified operations.

- 3 Descriptions in the Bill of Quantities are abbreviated and may differ from those in the Standardized and Project Specifications. No consideration will be given to any claim by the Contractor submitted on such a basis. The Bill has been drawn up generally in accordance with the latest issue of Civil Engineering Quantities ¹. Should any requirement of the measurement and payment clause of the appropriate Standardized or Project Specification(s) be contrary to the terms of the Bill or, when relevant, to the Civil Engineering Quantities, the requirement of the appropriate Standardized, Project, or Particular Specification as the case may be, shall prevail.
- 4 Unless stated to the contrary, items are measured net in accordance with the Drawings without any allowance having been made for waste.
- 5 The amounts and rates to be inserted in the Bill of Quantities shall be the full inclusive amounts to the Employer for the work described under the several items. Such amounts shall cover all the costs and expenses that may be required in and for the construction of the work described, and shall cover the costs of all general risks, profits, taxes (but excluding value-added tax), liabilities and obligations set forth or implied in the documents on which the Bid is based.
- 6 The quantities set out in the schedule of quantities are only approximate quantities. The quantities of work finally accepted and certified for payment, and not the quantities given in the schedule of quantities, will be used to determine payments to the contractor.
- 7 A rate shall be entered against each item in the Schedule of Quantities, whether quantities are stated or not. Failure to enter a rate against any item will result in the bid being rejected

The Bidder shall also fill in a rate against the items where the words "rate only" appear in the amount column. Although no work is foreseen under these items and no quantities are consequently given in the quantity column, the bidden rates shall apply should work under these items actually be required.

Should the Bidder group a number of items together and bid one sum for such group of items, the single bidden sum shall apply to that group of items and not to each individual item, or should he indicate against any item that full compensation for such item has been included in another item, the rate for the item included in another item shall be deemed to be nil.

The bidden rates, prices and sums shall, subject only to the provisions of the Conditions of Contract, remain valid irrespective of any change in the quantities during the execution of the Contract.

- 8 The quantities of work as measured and accepted and certified for payment in accordance with the Conditions of Contract, and not the quantities stated in the Bill of Quantities, will be used to determine

¹ The standard system of measurement of civil engineering quantities published by the South African Institution of Civil Engineers.

payments to the Contractor. The validity of the Contract shall in no way be affected by differences between the quantities in the Bill of Quantities and the quantities certified for payment.

Ordering of materials are not to be based on the Bill of Quantities, but only on information issued for construction purposes.

- 9 For the purposes of this Bill of Quantities, the following words shall have the meanings hereby assigned to them:

Unit	:	The unit of measurement for each item of work as defined in the Standardized, Project or Particular Specifications
Quantity	:	The number of units of work for each item
Rate	:	The payment per unit of work at which the Bidder bids to do the work
Amount	:	The quantity of an item multiplied by the bid rate of the (same) item
Sum	:	An amount bid for an item, the extent of which is described in the Bill of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units

- 10 The units of measurement indicated in the Bill of Quantities are metric units. The following abbreviations may appear in the Bill of Quantities:

mm	=	millimetre
m	=	metre
km	=	kilometre
km-pass	=	kilometre-pass
m ²	=	square metre
m ² -pass	=	square metre-pass
ha	=	hectare
m ³	=	cubic metre
m ³ -km	=	cubic metre-kilometre
kW	=	kilowatt
kN	=	kilonewton
kg	=	kilogram
t	=	ton (1 000 kg)
%	=	per cent
MN	=	meganewton
MN-m	=	meganewton-metre
PC Sum	=	Prime Cost Sum
Prov Sum	=	Provisional Sum

11 PRELIMINARY, GENERAL AND SITE ESTABLISHMENT

11.1 Provision

Provision is made in the Bill of Quantities for lump sums to cover the Contractor's cost to supply, erect commission, maintain and eventually demolish and remove site facilities, plant, tools and equipment, and for the Contractor to comply with any other obligations of a preliminary and general nature in terms of the contract. The sum tendered in the Bill of Quantities for any preliminary and general item shall cover the Contractor's direct and overhead costs, profit and all other costs for the provision of the item and/or compliance with the obligations, liabilities, risks and requirements associated with the item.

11.2 Payment for Fixed Cost Items

The sum tendered for these items will be paid in equal instalments over the contract period, the amount remaining after every instalment being re-calculated to arrive at equal instalments per month for the contractual period remaining.

11.3 Payment for Time-related Items

The sum tendered for these items will be paid in equal instalments over the contract period, the amount remaining after every instalment being re-calculated to arrive at equal instalments per month for the contractual period remaining. The total sum subject to recalculation will be adjusted according to the Adjusted Contract Period at the time when Certification of Payment is due.

11.4 Payment for Value-related Items

The sum tendered for these items will be paid in equal instalments over the contract period, the amount remaining after every instalment being re-calculated to arrive at equal instalments per month for the contractual period remaining. The total sum subject to recalculation will be adjusted according to the Adjusted Contract Sum at the time when Certification of Payment is due.

12 DAY LABOUR, PLANT HIRE AND HAULAGE

Tenderers must state their rates, in the relevant section of the Bill of Quantities, for day labour, plant hire and haulage. Plant hire and Day labour rates are to be shown as hourly rates for the various categories of labour set out in the Schedule. Separate rates shall be quoted for work outside normal working hours, "normal working hours" being taken as all weekdays from 07h00 to 17h00.

No work is to be carried out as a charge to day labour, plant hire or haulage without prior written authorisation of the Engineer, and claims for such activities will not be paid without such authorisation.

Rates must include for the use of Contractor's small tools and equipment and must be inclusive of Contractor's overheads and profit.

a) The estimated quantities are for evaluation purposes only.

PLEASE NOTE:

- **THAT ESTIMATED QUANTITIES ARE FOR EVALUATION PURPOSES ONLY.**
- **IT IS THE INTENTION OF COE TO APPOINT MORE THAN ONE BIDDER UP TO A MAXIMUM OF 04 BIDDERS, MAXIMUM OF 02 PER REGION.**
- **WORK PACKAGES WILL BE ISSUED ON AN AS-AND-WHEN-REQUIRED BASIS AND ALLOCATED AMONG THE APPOINTED CONTRACTORS ON A ROTATIONAL BASIS, WITH PREFERENCE GIVEN TO THE HIGHEST-SCORING BIDDERS, WHERE APPLICABLE.**
- **A CONTRACTOR WILL ONLY BE CONSIDERED FOR A FURTHER WORK PACKAGE ONCE THE PREVIOUSLY ALLOCATED WORK PACKAGE HAS BEEN SUCCESSFULLY COMPLETED AND HANDED OVER, SUPPORTED BY A PRACTICAL COMPLETION CERTIFICATE.**
- **EACH WORK PACKAGE WILL BE BASED ON THE APPLICABLE ITEMS AND RATES CONTAINED IN THE BILL OF QUANTITIES (BOQ).**
- **THE CONTRACTOR'S PERFORMANCE ON PREVIOUSLY ALLOCATED WORK PACKAGES WILL BE TAKEN INTO CONSIDERATION WHEN ALLOCATING FURTHER WORK. POOR OR NON-PERFORMANCE MAY RESULT IN THE CONTRACTOR NOT BEING CONSIDERED FOR FURTHER**

WORK PACKAGES UNTIL THE PERFORMANCE ISSUES HAVE BEEN SATISFACTORILY ADDRESSED.

- **IN CASES WHERE IT IS NOT POSSIBLE TO AWARD A MAXIMUM OF 02 PER REGION TO A BIDDER (DUE TO THE NUMBER OF ACCEPTABLE BIDDERS), THEN ONE BIDDER MAY BE AWARDED MORE THAN ONE REGION, AND PREFERENCE WILL BE GIVEN TO THE HIGHEST SCORING BIDDER.**
- **ALL ACCEPTABLE BIDDERS BELOW THE MARKET WILL BE OFFERED THEIR OWN RATES. SUBSEQUENTLY, ALL ACCEPTABLE BIDDERS ABOVE THE MARKET MAY BE OFFERED UNIFORM RATES WHICH ARE DEEMED TO BE MARKET-RELATED AS DEFINED BY THE INDUSTRY.**

PREFERENTIAL PROCUREMENT REGULATIONS (PPR) 2022 DEFINITION OF PRICE APPLICATION

Bidders who are not Vat registered will be required to comply in line with Value Added Tax Act.

The price used for evaluation of tenders is the price inclusive of all applicable taxes as per regulation 4(1) and 5(1). All applicable taxes certainly will include Value Added Tax (VAT), where applicable, and any other taxes as may be imposed through legislation. Whatever the nature of the tax, it should be included in the price submitted.

It is emphasized that mandatory registration for VAT is a legislative requirement once enterprises exceed R2.3 million in sales within a 12-month period (compulsory VAT registration threshold with effect from 1 April 2026). Other enterprises may elect voluntary registration for VAT even if they do not meet the mandatory threshold for registration.

All prices must be inclusive of VAT, whether the bidder is VAT registered or not.
Evaluation will be based on prices inclusive of VAT.

CONSUMER PRICE INDEX

- **PERIOD ONE (01):** BID PRICE(S) MUST BE FIXED FOR THE FIRST 12 MONTHS AFTER THE BASE MONTH WITH BASE MONTH BEING ONE MONTH PRIOR TO CLOSING OF BID
- **PERIOD TWO (02):** BID PRICE(S) IS/ARE SUBJECT TO ESCALATION EQUAL TO CPI FOR THE FOLLOWING 12 MONTHS WITH THE BASE MONTH FOR THIS PERIOD BEING THE 12th MONTH OF PERIOD ONE (01).
- **PERIOD THREE (03):** BID PRICE(S) IS/ARE SUBJECT TO ESCALATION EQUAL TO CPI FOR THE REMAINING PERIOD WITH THE BASE MONTH FOR THIS PERIOD BEING THE 12th MONTH OF PERIOD TWO (02).

Signature of person authorised to sign bid documents

Name in block letters

Designation

Date

CITY OF EKURHULENI

CONTRACT NUMBER: A-WS 08-2026

THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

SCHEDULE OF QUANTITIES

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT							LOCAL CONTENT
	REFERS		DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
1.	1	SABS 1200AA	PRELIMINARY & GENERAL	Sum	1			
1.	2		FIXED CHARGES	Sum	1			
1.		PSAA 8.2.1						
1.	2.1		Contractual Requirements	Sum	1			
1.	2,2	8.3.2	Establishment of Facilities on Site	Sum	1			
Carried Forward								

CITY OF EKURHULENI

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SCHEDULE OF QUANTITIES

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT							LOCAL CONTENT
	REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT		
Brought Forward								
1.	3	8.3.2.1	Facilities for Engineer					
1.		PSAB 3.2						
1.	2.1		Provision of One Office for the Engineer's Representative , including toilet facilities	Sum	1			
1.	2.2		Provision of computer, software and printer.	Sum	1			
Carried Forward								

CITY OF EKURHULENI

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SCHEDULE OF QUANTITIES

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT							LOCAL CONTENT
	REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT		
Brought Forward								
1.	2.3		- Provision of camera	Sum	1			
1.	2.4		- Name Board as shown on drawing	Sum	1			
1.	2.5		- Provision of Cell phone Voucher	No.	1			
Carried Forward								

CITY OF EKURHULENI

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SCHEDULE OF QUANTITIES

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT							LOCAL CONTENT
	REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT		
Brought Forward								
1.	3	8.3.2.2	Facilities for Contractor					
1.	3.1	8.3.2.2 (a)(b)(c)	Offices, storage sheds, fencing, workshops, laboratories, etc.	Sum	1			
1.	3.2	8.3.2.2(e)	Ablution and latrine facilities	Sum	1			
1.	3.3	8.3.2.2(f)	Tools and equipment	Sum	1			
Carried Forward								

CITY OF EKURHULENI

CONTRACT NUMBER: A-WS 08-2026

THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

SCHEDULE OF QUANTITIES

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT							LOCAL CONTENT
	REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT		
Brought Forward								
1.	3.4	8.3.2.2 g)	- Water supplies, electric power and communications	Sum	1			
1.	3.5	8.3.2.2(h,i.) & PSAA 8.5.1	- Dealing with water (clause 5.5), access(clause 5.8)	Sum	1			
1.	3.6	8.3.2.2(j)	- Plant	Sum	1			
1.	3.7	8.3.3	- Other fixed charge obligations, including setting out of works, security of contractor's plant & personnel	Sum	1			
Carried Forward								

CITY OF EKURHULENI

CONTRACT NUMBER: A-WS 08-2026

THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

SCHEDULE OF QUANTITIES

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT							LOCAL CONTENT
	REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT		
Brought Forward								
1.	4	C3:POHSA	OSH Act Obligations					
1.	4.1		i) General Safety obligations (incl. provision of personal protective equipment)	Sum	1			
1.	4.2		ii) Health and Safety plan/file including health and safety training	Sum	1			
1.	4.3		iii) Fulfil legislated and/or specified requirements for blasting (incl. submission of plans)	Sum	1			
Carried Forward								

CITY OF EKURHULENI

CONTRACT NUMBER: A-WS 08-2026

THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

SCHEDULE OF QUANTITIES

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT							LOCAL CONTENT
	REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT		
Brought Forward								
1.	4.4	8.5.3.2	- Environmental Managment Plan Obligations	Sum	1			
1.	4.5	8.3.4	- Remove all site establishment on completion	Sum	1			
1.	5	SABS 1200A	PRELIMINARY & GENERAL TIME RELATED ITEMS					
1.	5.1	PSAA 8.2.2	- Contractual Requirements	Month	30			
Carried Forward								

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SCHEDULE OF QUANTITIES

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO		PAYMENT						LOCAL CONTENT
		REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
Brought Forward								
1.	5.2	8.4.2	Operate and maintain facilities on the Site for duration of Construction:					
1.	5.3	8.4.2.1	Facilities for Engineer for duration of contract (SABS 1200AB)					
1.	5.3.1	8.4.2.1(a)	-Engineers Office	Month	30			
1.	5.3.2	C.3.4.2.2	-Computer ,software and printer	Month	30			
Carried Forward								

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ITEM NO	PAYMENT							LOCAL CONTENT
	REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT		
Brought Forward								
1.	5.3.3	8.4.2.1(b)	- Name board	Sum	1			
1.	5.3.4	PSA8.3.2.1.b)	- Camera	Month	30			
1.	5.3.5	8.4.2.1(d)	- Survey equipment	Month	30			
1.	5.4	8.4.2.2	Facilities for Contractor:					
Carried Forward								

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ITEM NO			PAYMENT						LOCAL CONTENT
			REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
Brought Forward									
1.	5.4.1	8.4.2.2 (a)(b)(c)	- Offices and storage sheds, workshops, laboratories, etc.	Month	30				
1.	5.4.2	8.4.2.2(e)	- Ablution and latrine facilities	Month	30				
1.	5.4.3	8.4.2.2(f)	- Tools and equipment	Month	30				
1.	5.4.4	PSA 8.4.2.2(g)	- Water supplies, electric power and communication	Month	30				
Carried Forward									

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ITEM NO	PAYMENT							LOCAL CONTENT
	REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT		
Brought Forward								
1.	5.4.5	8.4.2.2(h)	- Dealing with water	Month	30			
1.	5.4.6	8.4.2.2.j)	- Plant.	Month	30			
1.	5.4.7	8.4.3	- Other fixed charge obligations, including setting out of works, security of contractor's plant & personnel	Sum	1			
Carried Forward								

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ITEM NO	PAYMENT							LOCAL CONTENT
	REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT		
Brought Forward								
1.	5.5	C3: POHSA	OHS Act Obligations					
1.	5.5.1		i) General Safety obligations	Month	30			
1.	5.5.2		ii) Health and Safety plan/file	Month	30			
1.	5.5.3		(iii) Safety Officer	Month	30			
Carried Forward								

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SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT							LOCAL CONTENT
	REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT		
Brought Forward								
1.	5.5.4		- Security Services	Month	30			
1.	5.5.5		- EMP Obligations	Month	30			
1.	5.5.6		Conforming to requirements of EPWP	Month	30			
1.	5.5.7		Standing time cost due to riot etc for the contractors total operation (provisional quantity)	Sum per working day	15			
Carried Forward								

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SECTION 1: PRELIMINARY AND GENERAL

ITEM NO			PAYMENT					LOCAL CONTENT
			REFERS	DESCRIPTION	UNIT	QTY	RATE	
Brought Forward								
1	5.6	8,5		SUMS STATED PROVISIONALLY BY THE EMPLOYERS AGENT				
1.	5.6.1			Relocation of exisitng services (water mains, electricity cables/poles, etc.) by Services utility	Prov Sum	1	R 50 000,00	R 50 000,00
1.	5.6.2			Contractor's mark-up on item 1.5.6.10	%	R 50 000,00		
1.	5.6.3			Control tests by independent laboratory. Additional tests that may be required by the Engineer over and above normal quality control tests performed by the Contractor.	Prov Sum	1	R 30 000,00	R 30 000,00
Carried Forward								

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ITEM NO		PAYMENT						LOCAL CONTENT
		REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
Brought Forward								
1.	5.6.4		- Contractor's mark-up on item 1.5.6.3	%	R 30 000,00			
1.	5.6.5		- CLO appointed by Employer	Prov Sum	1	R 100 000,00	R 100 000,00	
1.	5.6.6		- Contractor's mark-up on item 1.5.6.5	%	R 100 000,00			
1.	5.6.7		- CoE technical staff and labour training(EPWP)	Prov Sum	1	R200 000,00	200 000,00	
Carried Forward								

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ITEM NO	PAYMENT							LOCAL CONTENT
	REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT		
Brought Forward								
1.	5.6.8		- Contractor's mark-up on item 1.5.6.7	%	R200 000,00			
1.	5.6.8		- Air time for Engineers mobile phone	Prov Sum	1	R 5 000,00	R 5 000,00	
1.	5.6.9		- Contractor's mark-up on item 1.5.6.8	%	R5 000,00			
Total Section 1 Carried Forward to Summary								

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SCHEDULE OF QUANTITIES

SECTION 2: SERVICE/REPAIR PRV"s. BOUNDARY VALVES, METERS, PIPEWORK

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
2. 1	PPA 4. & PPR13	SITE AUDITS AND ZONE ISOLATION					
2. 1,1	PPA 5.2	Provide personnel, transport, and equipment to carry out site audits.	Day	100			
2. 1,2	PPA 4. &	Provide personnel, transport, and equipment to carry out the testing of boundary valves	Hr	800			
2. 1,3	PPA 5.3	Provide personnel, transport, and equipment to carry out the Zero Pressure Test.	No.	10			
2. 1,4	PPA 4. &	NOTE: this will done outside of normal working hours and the contractor is to allow for this in his rate					
2. 1.4.1	PPA 5.4	Installation of saddles for temporary pressure measuring points for the Pressure Tests	No.	250			100%
2. .2	SANS 1200LB &	Install a 20 mm connection on an existing pipeline, including supply and installation of all fittings, valves, and accessories, complete and operational and installation of a 20 mm ball stop valve to suit 400mm to 1000mm OD pipe (class 12) , in accordance with pipe material as specified below.					
2. .2.1	PPA 5.4	Install a suitable approved saddle (uPVC/HDPE compatible) with 20 mm outlet	No.	10			100%
Carried Forward							

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SCHEDULE OF QUANTITIES**SECTION 2: SERVICE/REPAIR PRV's. BOUNDARY VALVES, METERS, PIPEWORK**

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2.	.2.2	PPS 5.1 & PPS 5.2.1	Install an approved AC saddle with full wrap sealing and 20 mm outlet, including all fasteners and sealing components.	No.	10		100%
2.	.2.3	PPS 5.1 & PPS 5.3.1	Provide and install a welded saddle or pressure port connection onto the existing steel pipeline, including all welding works, fittings, and corrosion protection.	no.	4		100%
2.	.2.4	PPS 5.1 & PPS 5.2.2	Install a 20 mm connection on an existing pipeline, including supply and installation of all fittings, valves, and accessories, complete and operational and installation of a 20 mm ball stop valve to suit 150mm to 400mm OD pipe (class 12) , in accordance with pipe material as specified below.	no.	5		100%
2.	.2.5	PPS 5.1 & PPS 5.3.2	Install a suitable approved saddle (uPVC/HDPE compatible) with 20 mm outlet	no.	5		100%
2.	.2.6	PPS 5.1 & PPS 5.3.2	Install an approved AC saddle with full wrap sealing and 20 mm outlet, including all fasteners and sealing components.	no.	5		100%
2.	.2.7	PPS 8.2.1 e)	Provide and install a welded saddle or pressure port connection onto the existing steel pipeline, including all welding works, fittings, and corrosion protection.	no.	5		100%
2.	3	PPS 5.7	<u>SERVICE/REPAIR: PRV's, ALTITUDE VALVES, VALVES, FLOAT VALVE, METERS.</u>				
Carried Forward							

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SECTION 2: SERVICE/REPAIR PRV"s. BOUNDARY VALVES, METERS, PIPEWORK

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2.	3,1	PPS 5.4 & PPS 5.8	SERVICE OF BASIC CONTROL VALVE BODY (Price for Labour, Transport, supervision and equipment necessary for the servicing of a basic control valve body.)				
2.	3.2	PPS 5.5.1	DN 50mm (Including DN 40mm)	no.	1		70%
2.	3,3		DN 80mm	no.	35		70%
2.	3.4		DN 100mm	no.	10		70%
2.	3.5		DN 150mm	no.	1		70%
2.	3.6		DN 200mm	no.	2		70%
2.	3.7		DN 250mm	no.	4		70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 3.8		DN 300mm	no.	4			70%
2. 3.9		DN 350mm	no.	4			70%
2. 3.10		DN 400mm	no.	4			70%
2. 4		SERVICE OF PILOT VALVES AND COMPLETE CONTROL CIRCUITS (Price for Labour, Transport, supervision and equipment necessary for the servicing of pilot valves & complete control circuits.Price should include minor fittings and control tubing not listed separately in the BoQ).					
2. 4.1		PRV & Pressure Relief - Pilot Valves	no.	4			70%
2. 4.2		Altitude & Rate of Flow Control - Pilot Valves	no.	4			70%
2. 4.3		Float valves	no.	4			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 4.4		Gunzenhauser IJR Gured 25mm & 50mm	no.	4			70%
2. 5		SPARES REPLACEMENT ON CLA-VAL TYPE,BERMAD TYPE,BAKER TYPE,SINGER TYPE AND SIMILAR/SUITABLE (Price for Parts,and additional Labour and Transport required to install the parts) Only genuine parts may be used					
2. 5.1		DN 50mm valves					
2. 5.2		Cover Bearing	no.	5			70%
2. 5.3		Diaphragm	no.	5			70%
2. 5.4		Diaphragm Washer	no.	5			70%
2. 5.5		Disc Guide	no.	5			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.6		Disk Retainer	no.	5			70%
2. 5.7		Sealing Disk	no.	5			70%
2. 5.8		Seat complete with Seat O-Ring	no.	5			70%
2. 5.9		Spacer Washer Set (5 in Set)	no.	5			70%
2. 5.10		Spring	no.	5			70%
2. 5.11		Stem	no.	5			70%
2. 5.12		Stem Nut	no.	5			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.13		Position Indicator (x101)	no.	5			70%
2. 5.14		DN 80mm valves					
2. 5.15		Cover Bearing	no.	5			70%
2. 5.16		Diaphragm	no.	5			70%
2. 5.17		Diaphragm Washer	no.	5			70%
2. 5.18		Disc Guide	no.	5			70%
2. 5.19		Disk Retainer	no.	5			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.20		Sealing Disk	no.	5			70%
2. 5.21		Seat complete with Seat O-Ring	no.	5			70%
2. 5.22		Spacer Washer Set (5 in Set)	no.	5			70%
2. 5.23		Spring	no.	5			70%
2. 5.24		Stem	no.	5			70%
2. 5.25		Stem Nut	no.	5			70%
2. 5.26		Position Indicator (x101)	no.	5			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.27		DN 100mm valve					
2. 5.28		Cover Bearing	no.	5			70%
2. 5.29		Diaphragm	no.	5			70%
2. 5.30		Diaphragm Washer	no.	5			70%
2. 5.31		Disc Guide	no.	5			70%
2. 5.32		Disk Retainer	no.	5			70%
2. 5.33		Sealing Disk	no.	5			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.34		Seat complete with Seat O-Ring	no.	5			70%
2. 5.35		Spacer Washer Set (5 in Set)	no.	5			70%
2. 5.36		Spring	no.	5			70%
2. 5.37		Stem	no.	5			70%
2. 5.38		Stem Nut	no.	5			70%
2. 5.39		Position Indicator (x101)	no.	5			70%
2. 5.40		DN 150mm valve					
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.41		Cover Bearing	no.	5			70%
2. 5.42		Diaphragm	no.	5			70%
2. 5.43		Diaphragm Washer	no.	5			70%
2. 5.44		Disc Guide	no.	5			70%
2. 5.45		Disk Retainer	no.	5			70%
2. 5.46		Sealing Disk	no.	5			70%
2. 5.47		Seat complete with Seat O-Ring	no.	5			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.48		Spacer Washer Set (6 in Set)	no.	5			70%
2. 5.49		Spring	no.	5			70%
2. 5.50		Stem	no.	5			70%
2. 5.51		Stem Nut	no.	3			70%
2. 5.52		Position Indicator (x101)	no.	3			70%
2. 5.53		DN 200mm valve					
2. 5.54		Cover Bearing	no.	3			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.55		Diaphragm	no.	3			70%
2. 5.56		Diaphragm Washer	no.	3			70%
2. 5.57		Disc Guide	no.	3			70%
2. 5.58		Disk Retainer	no.	3			70%
2. 5.59		Sealing Disk	no.	3			70%
2. 5.60		Seat complete with Seat O-Ring and Seat Screws	no.	3			70%
2. 5.61		Spacer Washer Set (6 in Set)	no.	3			70%
2. 5.62		Spring	no.	3			70%
2. 5.63		Stem	no.	5			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.64		Stem Nut	no.	5			70%
2. 5.65		Position Indicator (x101)	no.	5			70%
2. 5.66		Stem Nut	no.	5			70%
2. 5.67		Position Indicator (x101)	no.	5			70%
2. 5.68		DN 250mm valve					
2. 5.69		Cover Bearing	no.	5			70%
2. 5.70		Diaphragm	no.	5			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.71		Diaphragm Washer	no.	5			70%
2. 5.72		Disc Guide	no.	5			70%
2. 5.73		Disk Retainer	no.	5			70%
2. 5.74		Sealing Disk	no.	5			70%
2. 5.75		Seat complete with Seat O-Ring and Seat Screws	no.	1			70%
2. 5.76		Spacer Washer Set (6 in Set)	no.	1			70%
2. 5.77		Spring	no.	1			70%
Carried Forward							

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SCHEDULE OF QUANTITIES

SECTION 2: SERVICE/REPAIR PRV"s. BOUNDARY VALVES, METERS, PIPEWORK

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.78		Stem	no.	1			70%
2. 5.79		Stem Nut	no.	1			70%
2. 5.80		Position Indicator (x101)	no.	1			70%
2. 5.81		DN 300mm valve					
2. 5.82		Cover Bearing	no.	1			70%
2. 5.83		Diaphragm	no.	1			70%
2. 5.84		Diaphragm Washer	no.	1			70%
Carried Forward							

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SECTION 2: SERVICE/REPAIR PRV"s. BOUNDARY VALVES, METERS, PIPEWORK

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.85		Disc Guide	no.	1			70%
2. 5.86		Disk Retainer	no.	1			70%
2. 5.87		Sealing Disk	no.	1			70%
2. 5.88		Seat complete with Seat O-Ring and Seat Screws	no.	1			70%
2. 5.89		Spacer Washer Set (6 in Set)	no.	1			70%
2. 5.90		Spring	no.	1			70%
2. 5.91		Stem	no.	1			70%
Carried Forward							

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SECTION 2: SERVICE/REPAIR PRV"s. BOUNDARY VALVES, METERS, PIPEWORK

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.92		Stem Nut	no.	1			70%
2. 5.93		Position Indicator (x101)	no.	1			70%
2. 5.94		DN 350mm valve					
2. 5.95		Cover Bearing	no.	1			70%
2. 5.96		Diaphragm	no.	1			70%
2. 5.97		Diaphragm Washer	no.	1			70%
2. 5.98		Disc Guide	no.	1			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.99		Disk Retainer	no.	1			70%
2. 5.100		Sealing Disk	no.	10			70%
2. 5.101		Seat complete with Seat O-Ring and Seat Screws	no.	10			70%
2. 5.102		Spacer Washer Set (6 in Set)	no.	10			70%
2. 5.103		Spring	no.	10			70%
2. 5.104		Stem	no.	10			70%
2. 5.105		Stem Nut	no.	10			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.106		Position Indicator (x101)	no.	10			70%
2. 5.107		DN 400mm valve					
2. 5.108		Cover Bearing	no.	10			70%
2. 5.109		Diaphragm	no.	10			70%
2. 5.110		Diaphragm Washer	no.	10			70%
2. 5.111		Disc Guide	no.	10			70%
2. 5.112		Disk Retainer	no.	10			70%
Carried Forward							

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SECTION 2: SERVICE/REPAIR PRV"s. BOUNDARY VALVES, METERS, PIPEWORK

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 5.113		Sealing Disk	no.	10			70%
2. 5.114		Seat complete with Seat O-Ring and Seat Screws	no.	10			70%
2. 5.115		Spacer Washer Set (6 in Set)	no.	10			70%
2. 5.116		Spring	no.	10			70%
2. 5.117		Stem	no.	10			70%
2. 5.118		Stem Nut	no.	10			70%
2. 5.119		Position Indicator (x101)	no.	10			70%
2. 6		SPARES REPLACEMENT ON CLA-VAL PILOTS (Price for Parts, and additional Labour and Transport required to install the parts) Only genuine Clayton parts may be used					
2. 6.1		Pressure Reducing Pilot (CRD)					
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 6.1.1		Cap	no.	5			70%
2. 6.1.2		Diaphragm	no.	5			70%
2. 6.1.3		Disk Retainer Assembly	no.	5			70%
2. 6.1.4		Gasket	no.	5			70%
2. 6.1.5		Spring complete with Spring Guide (30-300psi)	no.	5			70%
2. 6.1.6		x58 Restriction Fitting	no.	5			70%
2. 6.1.7		Yoke	no.	5			70%
Carried Forward							

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SECTION 2: SERVICE/REPAIR PRV"s. BOUNDARY VALVES, METERS, PIPEWORK

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 6.1.8		CRD Belleville Washer	no.	5			70%
2. 6.1.9		CRD Seat	no.	5			70%
2. 6.1.10		CRD Plug	no.	5			70%
2. 6.2		Pressure Relief and Sustaining Pilot (CRL)					
2. 6.2.1		Cap	no	5			70%
2. 6.2.2		Diaphragm	no	5			70%
2. 6.2.3		Disk Retainer Assembly and nut	no	10			70%
Carried Forward							

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SECTION 2: SERVICE/REPAIR PRV"s. BOUNDARY VALVES, METERS, PIPEWORK

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 6.2.4		O-Ring Kit (Set of 5)	no	10			70%
2. 6.2.5		Spring complete with 2X Spring Guides (20-200psi)	no	10			40%
2. 6.3		Rate of Flow Control Pilot (CDHS 18)					
2. 6.3.1		Cap	no.	10			70%
2. 6.3.2		Diaphragm	no.	10			70%
2. 6.3.3		Disk Retainer Assembly	no.	15			70%
2. 6.3.4		Gasket	no.	15			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 6.3.5		Spring complete with Spring Guide (1.5-17.0 psi)	no.	15			70%
2. 6.3.6		X58 Restrictor Fitting	No.	15			70%
2. 6.3.7		Yoke	No.	15			70%
2. 6.4		Altitude Level Control (CDS 6)					
2. 6.4.1		Diaphragm	No.	15			70%
2. 6.4.2		Hex Bolts and Nuts	No.	15			70%
2. 6.4.3		O-Ring Kit (Set of S)	No.	15			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 6.4.4		Poppet Assembly complete with Spring	No.	15			70%
2. 6.4.5		Poppet Strainer	No.	15			70%
2. 6.4.6		Ring Retainer	No.	10			70%
2. 6.5		3/8 Hytrol valve (100KR)					
2. 6.5.1		Spring	No.	6			70%
2. 6.5.2		Diaphragm Washer	No.	6			70%
2. 6.5.3		Diaphragm	No.	6			70%
Carried Forward							

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SECTION 2: SERVICE/REPAIR PRV"s. BOUNDARY VALVES, METERS, PIPEWORK

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 6.5.4		Disk Retainer Assembly	No.	6			70%
2. 6.5.5		Altitude Level Control (CDS 6) & C1 Float Valve	No.	2			70%
2. 6.5.6		Standard SS Float Rod complete with stop collars	No.	2			70%
2. 6.5.7		Couterweight	No.	2			70%
2. 6.5.8		5 3/8" SS Float	No.	2			70%
2. 6.6		SPARES REPLACEMENT ON BERMAD CONTROL PILOTS (Price for Parts, and additional Labour and Transport required to install the parts) Only genuine Bermad parts may be used)					
2. 6.6.1		Pressure Reducing Pilot (No 2)					
Carried Forward							

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SCHEDULE OF QUANTITIES**SECTION 2: SERVICE/REPAIR PRV's. BOUNDARY VALVES, METERS, PIPEWORK**

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 6.6.1.1		Pilot Repair Kit - Consisting of: (O-Ring Kit, Pilot Diaphragm (No 10), Bottom Spring (No 3), Top Spring (No 15), Seat 9 (No 7) & Plunger Assembly (No 41)	No.	2			70%
2. 6.6.1.2		Needle Valve Assembly (No 39)	No.	6			70%
2. 6.7		Pressure Reducing Pilot (No 2-PB)					
2. 6.7.1		Pilot Repair Kit - Consisting of: (O-Ring Kit, Pilot Diaphragm (No 10), Bottom Spring (No 3), Top Spring (No 15) Seat 9 (No 7) & Plunger Assembly (No 41)	No.	10			70%
2. 6.8		Altitude Pilot (No 8: 2m - 14m)					
2. 6.8.1		Pilot Repair Kit - Consisting of: (O-Ring Kit, Pilot Diaphragm (No 10), Bottom Spring (No 7), Top Spring (No 24) Seat Assembly (No 44) & Plunger (No 9)	No.	10			70%
2. 6.9		Altitude Pilot (No 6: 15m - 35m)					
2. 6.9.1		Pilot Repair Kit - Consisting of: (O-Ring Kit, Pilot Diaphragm (No 10), Bottom Spring (No 7), Top Spring (No 24) Seat Assembly (No 44) & Plunger (No 9)	No.	10			70%
2. 6.10		Rate of Flow Control (No 7)					
Carried Forward							

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SECTION 2: SERVICE/REPAIR PRV's. BOUNDARY VALVES, METERS, PIPEWORK

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 6.10.1		Rate of Flow Control (No 7)	No.	10			70%
2. 7		GENERAL FITTINGS					
2. 7.1		3/8" SS Ballcocks	No.	30			70%
2. 7.2		3/8" X43Y Strainer	No.	30			70%
2. 7.3		1/4" 0-16 Bar Pressure Gauges	No.	30			70%
2. 7.4		1/4" 0-25 Bar Pressure Gauges	No.	30			70%
2. 7.5		1/4" Quick Coupling Set (Socket and Plug)	No.	10			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 8		ON SITE AIR VALVE MAINTENANCE(Price for all costs i.e. Material, Labour, Transport, supervision and equipment necessary for completion of the works).					
2. 8.1		Vent-O-Mat, Bermad Air Valves and Other Types	No.	30			70%
2. 8.2		DN 25 (O-ring kit and gasket's)	No.	30			70%
2. 8.3		DN 50 (O-ring kit and gasket's)	No.	30			70%
2. 8.4		DN 80 (O-ring kit and gasket's)	No.	30			70%
2. 8.5		DN 100 (O-ring kit and gasket's)	No.	10			70%
2. 8.6		DN 150 (O-ring kit and gasket's)	No.	15			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 8.7		DN 200 (O-ring kit and gasket's)	No.	7			70%
2. 9		ON SITE MAINTENANCE OF GATE VALVES (Repack Gland, replace gland nuts and bolts, and Operate Valve regardless of Type, including any excavation and backfilling required)					
2. 9.1		DN 40 / 50 / 80 mm	No.	6			70%
2. 9.2		DN 100mm	No.	6			70%
2. 9.3		DN 125/ 150mm	No.	6			70%
2. 9.4		DN 200mm	No.	6			70%
2. 9.5		DN 250mm	No.	6			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 9.6		DN 300mm	No.	6			70%
2. 9.7		DN 350mm	No.	6			70%
2. 9.8		DN 400mm	No.	6			70%
2. 9.9		DN 450mm	No.	6			70%
2. 9.10		DN 500mm	No.	6			70%
2. 10		Servicing (Cleaning) Dirt Boxes or Strainers					
2. 10.1		DN 40/ 50/ 80	No.	7			
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2. 10.2		DN 100/ 150	No.	7			
2. 10.3		DN 200	No.	7			
2. 10.4		DN 250	No.	7			
2. 10.5		DN 300 / 350	No.	7			
2. 10.6		DN 400 / 450	No.	7			
2. 11		Water Meters (Price for all costs i.e. Material, Labour, Transport, supervision and equipment necessary for completion of the works).					
2. 11.1		Servicing and Cleaning of all meter types					
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2.	11.1.1		DN 50 mm	No.	1		
2.	11.1.2		DN 80 mm	No.	1		
2.	11.1.3		DN 100 mm	No.	1		
2.	11.1.4		DN 150 mm	No.	1		
2.	11.1.5		DN 200 mm	No.	1		
2.	11.1.6		DN 250 mm	No.	1		
2.	11.1.7		DN 300 mm	No.	1		
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2.	11.2						
		Replacement of meter register of all meter types					
2.	11.2.1	DN 50 mm	No.	1			40%
2.	11.2.2	DN 80 mm	No.	1			40%
2.	11.2.3	DN 100 mm	No.	1			40%
2.	11.2.4	DN 150 mm	No.	1			40%
2.	11.2.5	DN 200 mm	No.	1			40%
2.	11.2.6	DN 250 mm	No.	1			40%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
2.	11.2.7		DN 300 mm	No.	1		40%
2.	11.3		Replacement of meter inserts/mechanism of all meter types				
2.	11.3.1		DN 50 mm	No.	1		40%
2.	11.3.2		DN 80 mm	No.	1		40%
2.	11.3.3		DN 100 mm	No.	1		40%
2.	11.3.4		DN 150 mm	No.	1		40%
2.	11.3.5		DN 200 mm	No.	1		40%
2.	11.3.6		DN 250 mm	No.	1		40%
2.	11.3.7		DN 300 mm	No.	1		40%
Total Section 2 Carried Forward to Summary							

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SCHEDULE OF QUANTITIES

SECTION 3: REPAIR EXISTING CIVIL INFRASTRUCTURE (CHAMBERS, PIPELINES)

ITEM NO		PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
3.	1	SABS 1200 C and DB	EARTHWORK/SITE CLEARANCE					
3.	1.1	8.3.7	Topsoiling and grassing to designated areas	m³	100			
3.	1.2	8.3.1(a)	Clear vegetation and trees of girth up to 1m	m³	500			
3.	1.3	8.3.2	Excavate in all materials and use for embankment or backfill or dispose as ordered :	m³	500			
3.	1.4	SABS 1200G	Machine Excavation	m³	200			
3.	1.5	& PPEC 5 a)	Excavate and stockpile or dispose	m³	200			
Carried Forward								

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SECTION 3: REPAIR EXISTING CIVIL INFRASTRUCTURE (CHAMBERS, PIPELINES)

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
3.	1.6	PPEC 5 b)	Backfill or embankment	m ³	30		
3.	1.7	PPEC 5 e)	Hand Excavation	m ³	30		
3.	1.8		Excavate and stockpile or dispose	m ²	300		
3.	1.9		Backfill or embankment	m ³	150		
3.	1.10		Extra Over 5.3.1 and 5.3.2 for Hard rock excavation (including Concrete)	m ³	9,0		
3.	1.11		Importing of materials from commercial sources or from borrow pits	m ³	12,0		
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
3.	2						
		CONCRETE					
3.	2.1						
		Blinding layer in 15 MPa/19mm concrete: 50mm	m³	18,0			100%
3.	2.2						
		Strength concrete Grade 25 MPa/19mm:	m³	15			100%
3.	3						
		Reinforcement:					
3.	3.1						
		High tensile steel bars 25mm dia, basic price (provisional qty)	t	1			100%
3.	3.2						
		E.O.item 4.2.3.1 (prov qty) for bars of diameter	t	1			100%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
3.	3.3		10mm	t	1		100%
3.	3.4		12mm	t	1		100%
3.	3.5		16mm	t	1		100%
3.	3.6		20mm	t	1		100%
3.	3.7		High tensile welded mesh: Type reference 395	t	1		100%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
3. 4		Formwork					
3. 4.1		Rough (Wood finish)	m ²	200			
3. 4.2		Smooth (Steel finish)	No	50			
3. 4.3		Chamfers : 10mm radius - on all exposed edges.	No	100			
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
3.	4.4						
		Repair of Cracks					
3.	4.5		No	100			
		Non Structural Cracks					
3.	4.6		No	50			
		Structural Cracks					
3.	4.7		No	100			
		Preparation of surfaces for bonding old and new concrete in slabs including dowels					
3.	4.8		m	50			
		Demolition of concrete and removal to an approved site					
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
3. 5		BRICKWORK					
3. 5.1		230mm thick walls	m ²	10			
3. 5.2		115mm thick walls	m ²	10			
3. 5.3		Removal of all loose and damaged brickwork an dispose to an approved site	m ²	10			
Carried Forward							

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SECTION 3: REPAIR EXISTING CIVIL INFRASTRUCTURE (CHAMBERS, PIPELINES)

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
3. 6		CLEANING OF CHAMBERS					
3. 6.1		Cleaning of Chambers shall be paid under dayworks including pumping out of water where instructed					
3. 7		REPAIR/REPLACE SUNDRY ITEMS					
3. 7.1		Remove and replace where items damaged					
3. 7.2		Locks	No.	2			
3. 7.3		Step irons	No.	3			
3. 7.4		Ladders	No.	4			
Carried Forward							

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SECTION 3: REPAIR EXISTING CIVIL INFRASTRUCTURE (CHAMBERS, PIPELINES)

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
3.	7.5		Supply and Installation of Heavy-Duty Lockable Manhole Cover for PRV Chamber.	No.	3		
3.	8		Replace only where items missing				
3.	8.1		Locks	No.	2		
3.	8.2		Step irons	No.	2		
3.	8.3		Ladders	No.	2		
3.	8.4		Supply and Installation of Heavy-Duty Lockable Manhole Cover for PRV Chamber.	No.	2		
Total Section 3 Carried Forward to Summary							

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SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
4.	1	SABS 1200 C and DB	-	EARTHWORK/SITE CLEARANCE			
4.	1,1	8.3.7	-	Topsoiling and grassing to designated areas	No	200	
4.	1,2	8.3.1(a)	-	Clear trees of girth up to 1m	m³	600	
4.	1,3	8.3.2	-	Excavate in all materials and use for embankment or backfill or dispose as ordered :	m³	600	
4.	1,4	SABS 1200G		Machine Excavation	m³	800	
4.	1,5	PPEC 5 b)		Excavate and stockpile or dispose	m³	800	
Carried Forward							

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SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	1.6	PPS 4.3.3 & PPS 8.2.1 f)		Backfill or embankment	m³	120	
4.	1.7	PPS 4.2.3 & PPS 8.2.1 g)		Hand Excavation	m²	200	
4.	1.8	PPS 8.2.1h)		Excavate and stockpile or dispose	m³	100	
4.	1.9	PPGL 2		Backfill or embankment	t	1	
4.	1.10	PSA 4.4.3		Extra Over 4.3.1 and 4.3.2 for Hard rock excavation (including Concrete)	t	0,3	
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	2	PPS 4.7.2	CONCRETE/BRICKWORK				
4.	2,1	PPS 4.4.2	Blinding layer in 15 MPa/19mm concrete: 50mm	t	0,2		
4.	2,2	SABS 1200L 8.2.1	Strength concrete Grade 25 MPa/19mm:	t	0,1		70%
4.	3	PPS 4.9.2	Reinforcement:				
4.	3.1		High tensile steel bars 25mm dia, basic price (provisional qty)	m ²	20		70%
Carried Forward							

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ITEM NO		PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward								
4.	3.2		E.O.item 4.3.1 (prov qty) for bars of diameter					
4.	3.2.1		10mm	m	40			70%
4.	3.2.2		12mm	m²	100			70%
4.	3.2.3		16mm	m²	50			70%
4.	3.2.4		20mm	No.	2			70%
4.	3.2.5		High tensile welded mesh: Type reference 395	No.	3			70%
Carried Forward								

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	4						
		Formwork					
4.	4.1						
		Rough (Wood finish)	No.	2			70%
4.	4.2						
		Smooth (Steel finish)	No.	2			70%
4.	4.3						
		Chamfers : 10mm radius - on all exposed edges.	No.	2			70%
4.	5						
		Brickwork					
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4. 5.1		230mm thick walls	No.	4			70%
4. 5.2		115mm thick walls	No.				70%
4. 6		NEW & REPLACEMENT OF PILOT VALVES (Price should include all costs i.e. labour, pilot, transport etc.)					
4. 6.1		CLA-VAL TYPE PILOT VALVES					
4. 6.1.1		Pressure Reducing Pilot (CRD) (30-300psi)	No.	4			70%
Carried Forward							

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SCHEDULE OF QUANTITIES**SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING**

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	6.1.2		Pressure Relief & Sustaining Pilot (CRL) (20-200psi)	No.	4		70%
4.	6.1.3		Rate of Flow Control Pilot (CDHS 18) (1.5-17.0 psi)	No.	5		70%
4.	6.1.4		Altitude Level Control Pilot (CDS 6) (69-87psi)	No.	5		70%
4.	6.1.5		3/8 Hytrol valve (100KR)	No.	5		70%
4.	6.1.6		Float valve (CF1-C1)	No.			
4.	6.2		Supply and install a complete auxiliary control hook up system - Cla-Val Type Excluding price of pilot valves (Price should include all costs i.e. labour, transport, material etc.)	No.	5		70%
4.	6.3		BERMAD TYPE PILOT VALVES				
Carried Forward							

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ITEM NO		PAYMENT REFERS TO		DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward									
4.	6.3.1			Pressure Reducing Pilot (No 2)	No.	2			70%
4.	6.3.2			Pressure Reducing Pilot (No 2 - PB)	No.	2			70%
4.	6.3.3			Pressure Relief and Sustaining Pilot (No 3)	No.	2			70%
4.	6.3.4			Pressure Relief and Sustaining Pilot (No 3 - PB)	No.	2			70%
Carried Forward									

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	6.3.5	Altitude Pilot (No 8: 2m - 14m)	Site	1			70%
4.	6.3.6	Altitude Pilot (No 8: 15m - 35m)	Site	1			70%
4.	6.3.7	Rate of Flow Control Pilot (No 7)	Site	1			70%
4.	6.4	Supply and install a complete auxiliary control hook up system - Bermad Type [Excluding price of pilot valves (Price should include all costs i.e. labour, transport, material etc.)]	Site	1			70%
4.	7	NEW & REPLACEMENT OF PRESSURE REDUCING VALVES (Price to include for valve, additional Labour and Transport required to install the valves)					
4.	7.1	CLA-VAL TYPE,BERMAD TYPE,BAKER TYPE,SINGER TYPE AND SIMILAR/SUITABLE					
4.	7.1.1	DN 50mm (Including ON 40mm)	No.	15			70%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	7.1.2		DN 80mm	No.	8		70%
4.	7.1.3		DN 100mm	No.	8		70%
4.	7.1.4		DN 150mm	No.	8		70%
4.	7.1.5		DN 200mm	No.	8		70%
4.	7.1.6		DN 250mm	No.	4		70%
Carried Forward							

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ITEM NO		PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward								
4.	7.1.7		DN 300mm	No.	4			70%
4.	7.1.8		DN 350mm	No.	4			70%
4.	7.1.9		DN 400mm	No.	4			70%
4.	8		ADVANCED PRV CONTROLLERS (Supply, handle, install and commission advanced PRV controllers (rate to include for 48-hour post-commissioning field)					
4.	8.1		Multi-stage time- and flow-based PRV controller with integrated data logging and two-way communication, enabling remote monitoring, configuration and control of PRV pressure settings and operating parameters via a web-based platform, using GSM/GPRS/4G with NB-IoT or LoRaWAN communication redundancy, inclusive of connectivity, data hosting, storage and platform access for four (4) years. hosting	No.	20			70%
Carried Forward								

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ITEM NO		PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward								
4.	8.2		Provision, configuration, hosting and maintenance of a cloud-based Intelligent Pressure Management platform, fully integrated with the PRV controller, providing real-time telemetry, historical data storage, two-way remote set-point configuration and control, alarm management, data analytics and reporting via web and mobile interfaces, inclusive of secure data hosting and platform access for four (4) years	No.	1			70%
4.	8.3		Integration of the web-based platform with the existing Control Room/SCADA system, including configuration of real-time data exchange, telemetry, alarms and data export	No.	1			
4.	8.4		Supply, install, configure and commission a lockable, weatherproof and vandal-resistant smart controller kiosk/enclosure, complete with tamper/intrusion detection, GPS location tracking and remote alarm notification, fully integrated with the Intelligent Pressure Management platform.	No.	20			
Carried Forward								

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4. 9		GSM DATA LOGGERS					
4. 9.1		2-Channel Flow-Only GSM Data Logger with web-based data monitoring capability, configured to communicate and integrate with the cloud-based hosting platform specified under item 4.8.2, inclusive of four (4) years' data connectivity.	No.	4			100%
4. 9.2		2 Channel Flow & 1 Channel Pressure GSM Data Logger with web-based data monitoring capability, configured to communicate and integrate with the cloud-based hosting platform specified under item 4.8.2, inclusive of four (4) years' data connectivity.g	No.	4			100%
4. 9.3		2 Channel Flow & 2 Channel Pressure GSM Data Logger with web-based data monitoring capability, configured to communicate and integrate with the cloud-based hosting platform specified under item 4.8.2, inclusive of four (4) years' data connectivity.	No.	4			100%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	9.4						
		Pressure Data Logger with two-way communication to the PRV controller for real-time pressure monitoring and remote pressure set-point control, fully integrated with the specified cloud-based monitoring platform.	No.	4			100%
4.	10						
		SUPPLY AND INSTALLATION OF NEW OR REPLACEMENT VALVES – ALL TYPES AND SIZES					
		Excavate in all material to expose and remove valve, install approved replacement valve, backfill, dispose of surplus material and site clearance/re-instatement after replacement. (Price should include all costs i.e. materials, labour, transport, equipment, nuts & bolts, gaskets etc.)					
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	10.1						
		Resilient seated Valves regardless of type:					
4.	10.1.1	DN15 mm up to and including DN100mm	No.	4			100%
4.	10.1.2	Over DN100 mm up to and including DN200mm	No.	4			100%
4.	10.1.3	Over DN200 mm up to and including DN300mm	No.	4			100%
4.	10.1.4	Over DN300 mm up to and including DN400mm	No.	4			100%
4.	10.1.5	Over DN400 mm up to and including DN500mm	No.	4			100%
4.	10.1.6	Over DN500 mm up to and including DN600mm	No.	4			100%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	10.2						
		Butterfly valves regardless of type					
4.	10.2.1						100%
		DN200 mm up to and including DN300mm	No.	4			
4.	10.2.2						100%
		Over DN300 mm up to and including DN400mm	No.	4			
4.	10.2.3						100%
		Over DN400 mm up to and including DN500mm	No.	4			
4.	10.2.4						100%
		Over DN500 mm up to and including DN600mm	No.	5			
4.	11						
		Air Valves Vent-o-Mat Series RBX:					
4.	11.1						100%
		ND 25 (2511) - screwed.	No.	5			
Carried Forward							

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Brought forward									
4.	11.2			ND 50 (2511) - screwed.	No.	5			100%
4.	11.3			ND 80(2501) flanged drilled-SABS1123(1600/3).	No.	5			100%
4.	11.4			ND 100(2501) flanged drilled-SABS1123(1600/3).	No.	5			100%
4.	12			Non return Valves (Flanged): PN16					
Carried Forward									

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
		Flanges drilled to SABS1123 (1600/3)					
4.	12.1	DN 40 mm	m	5			100%
4.	12.2	DN 50 mm	m	5			100%
4.	12.3	DN 80 mm	m	10			100%
4.	12.4	DN 100 mm	m	10			100%
4.	12.5	DN 150 mm	m	10			100%
4.	12.6	DN 200 mm	m	10			100%
Carried Forward							

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Brought forward								
4.	12.7		DN 250 mm	m	10			100%
4.	12.8		DN 300 mm	m	10			100%
4.	13		Water Meters(Price to include for meter, additional Labour and Transport required to install the meters)					
4.	13.1		Sensus Meters, Elster Kent Meters or Similar					
4.	13.1.1		DN 50 mm	No.	10			100%
4.	13.1.2		DN 80 mm	No.	10			100%
Carried Forward								

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ITEM NO		PAYMENT REFERS TO		DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward									
4.	13.1.2			DN 100 mm	No.	2			100%
4.	13.1.3			DN 150 mm	No.	4			100%
4.	13.1.4			DN 200 mm	No.	4			100%
4.	13.1.5			DN 250 mm	No.	4			100%
Carried Forward									

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	13.1.6		DN 300 mm	No.	4		100%
4.	13.2		Reeds Switches/Pulsars				
4.	13.2.1		Sensus SPX 220CREED (Reed Switch)	No.	4		100%
4.	13.2.2		Sensus HRI SENT B4 D1	No.	4		100%
4.	13.2.3		Sensus HRI MEI B4/10L/32ms/40-125	No.	2		100%
4.	13.2.4		Sensus HRI-MEI B1/100L/128ms150-250	No.	2		100%
4.	13.2.5		Sensus RD01 (WPD Reed)	No.	2		100%
Carried Forward							

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ITEM NO		PAYMENT REFERS TO		DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward									
4.	13.2.6			Sensus REED01 (WP Reed)	No.	1			100%
4.	13.2.7			Elster DOMESTIC REED SWITCH 1/2m CABLE	No.	1			100%
4.	13.2.8			Elster PR6 INDUCTIVE PULSER	No.	2			100%
4.	13.2.9			Elster PR7 INDUCTIVE PULSER K10:10	No.	1			100%
4.	13.2.10			Elster EU000 REED SWITCH PROBE (Old Helix 4000)	No.	2			100%
Carried Forward									

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14						
		MEDIUM PRESSURE PIPELINES					
		All steel pipes and fittings to SABS 719 Medium / Heavy class, minimum wall thickness of 4,5 mm, all flanges to be to SABS 1123 (1600/3) – Flanges measured elsewhere in bill. Fasteners and Flanges to be painted with two liberal					
4.	14.1	Supply and install complete with couplings					
4.	14.1.1	DN 40 mm	No.	1			100%
4.	14.1.2	DN 50 mm	No.	1			100%
4.	14.1.3	DN 80 mm	No.	1			100%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.1.3		DN 100 mm	No.	2		100%
4.	14.1.4		DN 150 mm	No.	2		100%
4.	14.1.5		DN 200 mm	No.	2		100%
4.	14.1.6		DN 250 mm	No.	4		100%
4.	14.1.7		DN 300 mm	No.	4		100%
4.	14.1.8		DN 350 mm	No.	4		100%
4.	14.1.9		DN 400 mm	No.	2		100%
Carried Forward							

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ITEM NO		PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward								
4.	14.1.10		DN 500 mm	No.	2			100%
4.	14.1.11		Extra-over Item 4.13.1.1 for cutting of the pipe and the supplying and fixing of extra couplings : Supply, Install & Finish installation. Minimum wall thickness of 4,5 mm. Complete with bolts, nuts, gaskets, seals &	No.	2			100%
4.	14.2		Flanges complete with all fasteners, gaskets and appurtenances					
4.	14.2.1		DN 40 mm	No.	2			100%
4.	14.2.2		DN 50 mm	No.	1			100%
4.	14.2.3		DN 80 mm	No.	1			100%
Carried Forward								

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.2.3		DN 100 mm	No.	1		100%
4.	14.2.4		DN 150 mm	No.	4		100%
4.	14.2.5		DN 200 mm	No.	4		100%
4.	14.2.6		DN 250 mm	No.	4		100%
4.	14.2.7		DN 300 mm	No.	2		100%
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.2.7		DN 350 mm	No.	2		100%
4.	14.2.8		DN 400 mm	No.	1		100%
4.	14.2.9		DN 500 mm	No.	1		100%
4.	14.2.10		DN 40 mm Blank flange	No.	1		100%
4.	14.2.11		DN 50 mm Blank flange	No.	1		100%
4.	14.2.12		DN 100 mm Blank flange	No.	1		100%
Carried Forward							

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ITEM NO		PAYMENT REFERS TO		DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward									
4.	14.2.13			DN 125 mm Blank flange	No.	2			100%
4.	14.2.14			DN 150 mm Blank flange	No.	2			100%
4.	14.2.15			DN 200 mm Blank flange	No.	2			100%
4.	14.2.16			DN 250 mm Blank flange	No.	2			100%
4.	14.2.17			DN 300 mm Blank flange	No.	2			100%
4.	14.2.18			DN 350 mm Blank flange	No.	1			100%
4.	14.2.19			DN 400 mm Blank flange	No.	1			100%
Carried Forward									

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ITEM NO		PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward								
4.	14.2.20		DN 500 mm Blank flange	No.	1			100%
4.	14.3		Welding of joints complete					
4.	14.3.1		DN 40 mm	No.	1			100%
4.	14.3.2		DN 50 mm	No.	2			100%
4.	14.3.3		DN 80 mm	No.	1			100%
4.	14.3.4		DN 100 mm	No.	1			100%
Carried Forward								

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.3.5		DN 150 mm	No.	2		100%
4.	14.3.6		DN 200 mm	No.	1		100%
4.	14.3.7		DN 250 mm	No.	2		100%
4.	14.3.8		DN 300 mm	No.	1		100%
4.	14.3.9		DN 350 mm	No.	1		100%
4.	14.3.10		DN 400 mm	No.	1		100%
4.	14.3.11		DN 500 mm	No.	1		
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.4		Viking Johnson Type ('MaxiFit') Flange Adaptors: PN16 to SABS 1123 (1600/3) to fit pipe.				
4.	14.4.1		DN 40 mm	No.	1		
4.	14.4.2		DN 50 mm	No.	1		
4.	14.4.3		DN 80 mm	No.	3		
4.	14.4.4		DN 100 mm	No.	3		
4.	14.4.5		DN 150 mm	No.	1		
4.	14.4.6		DN 200 mm	No.	1		
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.4.7		DN 250 mm	No.	1		
4.	14.4.8		DN 300 mm	No.	2		
4.	14.4.9		DN 350 mm	No.	1		
4.	14.4.10		DN 400 mm	No.	3		
4.	14.4.11		DN 500 mm	No.	3		
4.	14.4.12		DN 50mm - restrained	No.	3		
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.4.13			DN 80mm - restrained	No.	2	
4.	14.4.14			DN 100mm - restrained	No.	2	
4.	14.4.15			DN 150mm - restrained	No.	1	
4.	14.4.16			DN 200mm - restrained	No.	1	
4.	14.4.17			DN 250mm - restrained	No.	1	
4.	14.4.18			DN 300mm - restrained	No.	1	
4.	14.4.19			DN 350mm - restrained	No.	2	
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.4.20			DN 400mm - restrained	No.	1	
4.	14.4.21			DN 500mm - restrained	No.	2	
4.	14.5			Viking Johnson Type Step Flange Adaptors : PN 16 to SABS 1123 (1600/3), step pipe and adapt to different types of material (VJ 'MaxiFit')			
4.	14.5.1			80 x 100 (3" x 4")	No.	2	
4.	14.5.2			80 x 100 (3.5" x 4")	No.	1	
4.	14.5.3			100 x 100 (OD to OD varies)	No.	1	
4.	14.5.4			100 x 125	No.	1	
4.	14.5.5			125 x 150	No.	1	
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.5.6			150 x 150 (OD to OD varies)	No.	1	
4.	14.5.7			175 x 200	No.	1	
4.	14.5.8			200 x 200 (OD to OD varies)	No.	1	
4.	14.5.9			200 x 225	No.	1	
4.	14.5.10			225 x 250	No.	2	
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.5.10			250 x 250 (OD to OD varies)	No.	2	
4.	14.5.11			300 x300 (OD to OD varies)	No.	2	
4.	14.5.12			350 x 350 (OD to OD varies)	No.	1	
4.	14.5.13			350 x 400	No.	1	
4.	14.5.14			400 x 400 (OD to OD varies)	No.	1	
4.	14.6			Reducers : (Flanges measured separately)			
				Range of diameters:			
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.6.1			DN 50 mm to 150 mm	No.	1	
4.	14.6.2			DN 150 mm to 300 mm	No.	2	
4.	14.6.3			DN 400 mm to 550 mm	No.	1	
4.	14.7			Tees			
				Equal Tee: (C.I. Flanged / Unflanged)			
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.7.1		DN 40 mm	No.	2		
4.	14.7.2		DN 50 mm	No.	1		
4.	14.7.3		DN 80 mm	No.	1		
4.	14.7.4		DN 100 mm	No.	1		
4.	14.7.5		DN 150 mm	No.	1		
4.	14.7.6		DN 200 mm	No.	1		
4.	14.7.7		DN 250 mm	No.	1		
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.7.8		DN 300 mm	No.	2		
4.	14.7.9		DN 350 mm	No.	4		
4.	14.7.10		DN 400 mm	No.	4		
4.	14.7.11		DN 500 mm	No.	4		
4.	14.8		Unequal Tee:(C.I. Flanged / Unflanged)				
4.	14.8.1		DN 40 mm	No.	1		
4.	14.8.2		DN 50 mm	No.	1		
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.8.3			DN 80 mm	No.	8	
4.	14.8.4			DN 100 mm	No.	8	
4.	14.8.5			DN 150 mm	No.	4	
4.	14.8.6			DN 200 mm	m	8	
4.	14.8.7			DN 250 mm	m	8	
4.	14.8.8			DN 300 mm	m	4	
Carried Forward							

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ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.8.9			DN 350 mm	m	5	
4.	14.8.10			DN 400 mm	No.	5	
4.	14.8.11			DN 500 mm	No.	5	
4.	14.9			Steel bend specials, flanges measured separately			
4.	14.9.1			90 Degrees	No.	10	
4.	14.9.2			DN 40 mm	No.	10	
Carried Forward							

CITY OF EKURHULENI

CONTRACT NUMBER: A-WS 08-2026

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SCHEDULE OF QUANTITIES

SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.9.3			DN 50 mm	No.	10	
4.	14.9.4			DN 80 mm	No.	10	
4.	14.9.5			DN 100 mm	No.	10	
4.	14.9.6			DN 150 mm	No.	4	
Carried Forward							

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SCHEDULE OF QUANTITIES

SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.9.7			DN 200 mm	No.	1	
4.	14.9.8			DN 250 mm	No.	1	
4.	14.9.9			DN 300 mm	No.	1	
4.	14.9.10			DN 350 mm	No.	1	
4.	14.9.11			DN 400 mm	No.	1	
Carried Forward							

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SCHEDULE OF QUANTITIES

SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.9.12		DN 500 mm	No.	1		
4.	14.9.13		0 to 90 Degrees	No.	1		
4.	14.9.14		DN 40 mm	No.	1		
4.	14.9.15		DN 50 mm	No.	1		
4.	14.9.16		DN 80 mm	No.	1		
Carried Forward							

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SCHEDULE OF QUANTITIES

SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.9.17		DN 100 mm	No.	1		
4.	14.9.18		DN 150 mm	No.	1		
4.	14.9.19		DN 200 mm	No.	1		
4.	14.9.20		DN 250 mm	No.	1		
4.	14.9.21		DN 300 mm	No.	1		
4.	14.9.22		DN 350 mm	No.	1		
Carried Forward							

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SCHEDULE OF QUANTITIES

SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.9.22			DN 400 mm	No.	1	
4.	14.9.23			DN 500 mm	No.	1	
4.	14.10			Saddle clamp complete with bolts, nuts, flat gaskets, stiffened ring. Include drilling hole to DN of fitting Ø. Suitable Polypropylene Copolymer Compression fittings and specials for coupling of HDPE pipes: BSP Threaded. Include for painting bolts with bituminous	No.	1	
4.	14.10.1			DN 40 mm	No.	1	
Carried Forward							

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SCHEDULE OF QUANTITIES

SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.10.1			DN 50 mm	No.	1,0	
4.	14.10.2			DN 80 mm	No.	1,0	
4.	14.10.3			DN 100 mm	No.	1,0	
4.	14.10.4			DN 150 mm	No.	1,0	
4.	14.10.5			DN 200 mm	No.	1,0	
Carried Forward							

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SCHEDULE OF QUANTITIES

SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.10.6			DN 250 mm	No.	1,0	
4.	14.10.7			DN 300 mm	No.	1,0	
4.	14.11			Special Wrapping (Denso Lay flat or similar approved in writing). To suppliers specifications			
4.	14.11.1			Buried Flanges	No.	1,0	
4.	14.11.2			DN 50 to DN 150	No.	1,0	
Carried Forward							

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SCHEDULE OF QUANTITIES

SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.11.3			DN 150 to DN 200	No.	1	
4.	14.11.4			DN 300 to DN 600	No.	1	
4.	14.12			Viking Johnson Type coupling: Buried.			
4.	14.12.1			DN 50 to DN 150	No.	1	
4.	14.12.2			DN 150 to DN 200	No.	1	
4.	14.12.3			DN 300 to DN 600	No.	1	
Carried Forward							

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SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.13				Buried steel Pipes: Only where directed by the Engineer in writing.		
4.	14.13.1				DN 50 - DN 100	No.	1
4.	14.13.2				DN 100 - DN 200	No.	1
4.	14.13.3				DN 200 - DN 300	No.	1
Carried Forward							

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SCHEDULE OF QUANTITIES

SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	14.13.4			DN 300 - DN 600	No.	1	
4.	15			Strainers			
				(Price to include for strainer, additional Labour and Transport required to install the strainers)			
4.	15.1			050mm Inline strainer	No.	1	
4.	15.2			080mm Inline strainer	No.	1	
4.	15.3			100mm Inline strainer	No.	1	
Carried Forward							

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SCHEDULE OF QUANTITIES

SECTION 4: NEW PRV, BOUNDARY VALVE, GSM DATA LOGGING

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
Brought forward							
4.	15.4			150mm Inline strainer	No.	1	
4.	15.5			200mm Inline strainer	No.	1	
4.	15.6			250mm Inline strainer	No.	1	
4.	15.7			300mm Inline strainer	No.	1	
Total Section 4 Carried Forward to Summary							

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SCHEDULE OF QUANTITIES

SECTION 5: DAYWORKS

ITEM NO		PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	LOCAL CONTENT
		REFERS						
		TO						
5		SANS	Dayworks					
		1200A	(Executed on instruction of the Engineers only)					
			Allow for dayworks for sundry items not covered by measured items:					
5.	1	8,7	LABOUR					
5.	1.1		- Labourers	hrs	500			
Carried Forward								

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SCHEDULE OF QUANTITIES

SECTION 5: DAYWORKS

Brought forward								
5.	1.2		Semi-skilled Labourer	hrs	500			
5.	1.3		- Construction Hand and Operator	hrs	200			
5.	1.4		- Carpenter	hrs	100			
5.	1.5		- Clerk	hrs	100			
5.	1.6		- Artisans	hrs	200			
Carried Forward								

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SCHEDULE OF QUANTITIES

SECTION 5: DAYWORKS

Brought forward								
5.	1.7		- Qualified artisan with extensive control valve experience. (must have drivers licence)	hrs	300			
5.	1.8		- Foreman	hrs	200			
5.	1.9		- Steel fixer	hrs	100			
5.	1.10		- Bricklayer or Plasterer	hrs	100			
5.	1.11		- Welder	hrs	100			
Carried Forward								

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SCHEDULE OF QUANTITIES

SECTION 5: DAYWORKS

Brought forward							
5.	2		LEAK DETECTION. Locate leak/ service, take GPS Co-ordinates, map on drawings,repair the leak and conduct impact assesment after the leak is repaired:				
5.	2.1		Locate leak/ service, take GPS Co-ordinates, map on drawings,repair the leak and conduct impact assesment after the leak is repaired	km	20		
5.	2.2		Leak detection by correlator,Accoustics logging,listerning stick (including for possible leak position to be verified with ground microphone or radar)	km	20		
5.	2.3		Leak detection using CCTV pipeline inspection (including for possible leak position to be verified by ground microphone or correlator)	km	20		
5.	2.4		Leak detection using gas (including for possible leak position to be verified by ground microphone or correlator)	km	20		
5.	2.5		Location of services with ground penetrating radar/Metal detector	km	20		
Carried Forward							

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SCHEDULE OF QUANTITIES

SECTION 5: DAYWORKS

Brought forward								
5.	3		FLOW AND PRESSURE LOGGING					
5.	3.1		7 days Pressure logging	No	80			
5.	3.2		7 days Flow logging using compatable(meter) data loggers	No	80			
5.	3.4		a					
5.	3.5		7 days Flow logging using Ultrasonic loggers	No	80			
Carried Forward								

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SCHEDULE OF QUANTITIES

SECTION 5: DAYWORKS

Brought forward								
5.	4	8,7	MATERIALS					
5.	4.1		- Provisional sum for cost of material	Prov	1	R 100 000	R 100 000,00	
5.	4.2		- Contractors mark-up on material	%	R 100 000			
5.	5	8,7	PLANT					
5.	5.1		Tenderers to insert the hire rate at which each item will be charged, which is to cover all relevant costs of plant hire, including operating crew					
5.	5.2		- Lowbed transport of plant to and from site	km	500			
Carried Forward								

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SCHEDULE OF QUANTITIES

SECTION 5: DAYWORKS

Brought forward								
5.	5.3		- Front end wheel loaders (Cat 950 or similar)	hrs	100			
5.	5.4		- Back acting excavators (Hitachi EX200 or similar)	hrs	100			
5.	5.5		- T L B	hrs	100			
5.	5.6		- Tractors and drawn trailers and rollers	hrs	100			
5.	5.7		- Compactors (D72Y or equivalent)	hrs	100			
5.	5.8		- Compressors (250CFM or equivalent)	hrs	100			
Carried Forward								

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SCHEDULE OF QUANTITIES

SECTION 5: DAYWORKS

Brought forward								
5.	5.9		- Trucks (7t or equivalent)	hrs	100			
5.	5.10		- Tipper Trucks (10t or equivalent)	hrs	100			
5.	5.11		- Water Tanker	hrs	500			
5.	5.12		- Plate Compactor	hrs	100			
5.	5.13		- Light delivery vehicles (1t or equivalent)	km	100			
5.	5.14		Water Pump	hrs	100			
Carried Forward								

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SCHEDULE OF QUANTITIES

SECTION 5: DAYWORKS

Brought forward								
5.	5.15		- Generator	hrs	100			
5.	6		Unspecified Labour and plant					
5.	6.1		- Labour (unspecified)	Prov	1	R 100 000	R 100 000,00	
5.	6.2		- Percentage adjustment to Item 2.3.1 for contractor's overheads, administration charges and profit	%	R 100 000	15%		
5.	6.3		- Plant/Equipment (unspecified)	Prov	1	R 500 000	R 500 000,00	
5.	6.4		- Percentage adjustment to Item 2.3.5 for contractor's overheads, administration charges and profit	%	R 500 000	15%		
Total Section 5 Carried Forward to Summary								

THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

SUMMARY OF BILL OF QUANTITIES		
SCHEDULE	DESCRIPTION	AMOUNT
1	Preliminary and General	
2	Service, Repair PRV's etc	
3	Repair Existing Civil Infrastructure	
4	New PRV, Boundary Valve GSM data Log	
5	Dayworks	
SUB TOTAL		
ADD 10% CONTINGENCIES		
ADD VAT (15%)		
TOTAL CARRIED TO FORM OF OFFER AND ACCEPTANCE		

CITY OF EKURHULENI

DEPARTMENT NAME: WATER AND SANITATION DEPARTMENT

CONTRACT NO: A-WS 08-2026

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PART C3 SCOPE OF WORKS

CONTENTS

PAGE(S)

C3.1 DESCRIPTION OF WORKS

- C3.1.1 COE's objectives
- C3.1.2 Overview of the Works
- C3.1.3 Extent of Works
- C3.1.4 Location of the Works
- C3.1.5 Temporary Works

C3.2 ENGINEERING

- C3.2.1 Design
- C3.2.2 COE's Design
- C3.2.3 Contractor's Design
- C3.2.4 Drawings
- C3.2.5 Reinstate Surfaces
- C3.2.6 Design procedure

C3.3 PROCUREMENT

- C3.3.1 Subcontracting

C3.4 CONSTRUCTION

- C3.4.1 Works specifications
- C3.4.2 Site establishment
- C3.4.3 Plant & Materials
- C3.4.4 Construction equipment
- C3.4.5 Existing services
- C3.4.6 Variations and additions to SABS 1200 Standardized specifications and particular specifications

C3.5 MANAGEMENT OF THE WORKS

- C3.5.1 Generic Specification
- C3.5.2 Construction Program and Reporting

C3.6 HEALTH AND SAFETY

C3.6.1 Health and Safety requirements and procedures

C3.6.2 Protection of the Public

C3.6.3 Barricades and lighting

C3.6.4 Traffic control on roads

C3.6.5 Measures against disease and epidemics

C3.6.6 Aids awareness

C4 SITE INFORMATION

STATUS

In the event of any discrepancy between the Scope of Works and a part or parts of the SABS 1200 Standardized Specifications, the Bill of Quantities or the Drawings, the Project Specifications shall take precedence and prevail in the Contract.

1. EVALUATION CRITERIA

EVALUATION ASPECT	MINIMUM REQUIREMENTS
CIDB Grading	4CE/3CEPE or Higher
Infrastructure and resources available Plant and Equipment (owned or leased)	One of each of the following: • (x1) Water Tanker – Minimum Tank Capacity: 5,000 litres • (x1) TLB (Tractor Loader Backhoe) – Minimum Operating Weight: 7 900 kg • (x1) Light Delivery Vehicle (LDV) / Bakkie – Minimum GVM: 2 700 kg
Financial Ability (Ability to Deliver)	R200 000
Staffing profile	Project Manager (x1) • Copy of a BSc, BEng, BTech or Advanced Diploma in Civil Engineering (NQF Level 7). • Registration as a Professional Engineer (Pr Eng) or Professional Engineering Technologist (Pr Tech Eng) with the Engineering Council of South Africa (ECSA), OR Registration as a Professional Construction Project Manager (PrCPM) with the South African Council for the Project and Construction Management Professions (SACPCMP). • Five (5) years' experience in in leak detection, pressure control valves or network valves related works Site Agent (x1) • Copy of National Diploma (NQF Level 6) in Civil Engineering • Three (3) years in in leak detection, pressure control valves or network valves related works PRV Technician (x1) • Copy of National Diploma (NQF Level 6) in Civil Engineering OR Trade Test in Certificate in Plumbing/Fitting &Turning issued by the Department of Employment and Labour or the Department of Higher Education or equivalent accredited institution.

EVALUATION ASPECT	MINIMUM REQUIREMENTS
	- Three (3) years' experience working with leak detection, pressure control valves or network valves related works Safety Officer (x1) - Copy of National Diploma (NQF Level 6) in Safety Management / Environmental Health - Registered with SACPCMP as a Safety officer - Three (3) years' experience in water related projects as a Safety Officer
Relevant previous Company Experience – Completed Project	Three (3) references from previous client(s) where bidder completed leak detection and installation, repair, maintenance and commissioning of pressure control valves.
Company Registration	Company registered with ISO 9001:2015

Bidders that do not meet the minimum requirements will be rejected and not evaluated further.

REQUIRED DOCUMENTS:

Infrastructure and Resources Available – Plant and Equipment (Owned or Leased)

The bidder must demonstrate that the required plant and equipment listed below will be available for the execution of the contract.

For **each item of plant and equipment**, the bidder must submit:

A. Proof of availability

One of the following must be submitted:

- Proof of ownership; **or**
- A valid lease agreement signed by both the lessor and the lessee; **or**
- A letter of intent to lease signed by both the lessor and the lessee.

Where the plant or equipment is leased or intended to be leased, **proof of ownership by the lessor must also be submitted.**

The proof of ownership, lease agreement or letter of intent to lease must clearly identify the plant or equipment being offered and must correspond with the supporting technical proof submitted under **B** below.

B. Proof of compliance with the minimum technical requirement

In addition to the proof required under **A** above, the bidder must submit the applicable technical proof for each item as follows:

1. Water Tanker (x1) – Minimum Tank Capacity: 5,000 litres

Technical proof: Manufacturer's specification/data sheet or tank certificate confirming that the water tank offered has a minimum capacity of 5,000 litres.

2. TLB (Tractor Loader Backhoe) (x1) – Minimum Operating Weight: 7,900 kg

Technical proof: Manufacturer's technical specification/data sheet or brochure clearly indicating the make, model and operating weight of the TLB offered.

3. Light Delivery Vehicle (LDV) / Bakkie (x1) – Minimum GVM: 2,700 kg

Technical proof: Copy of a valid motor vehicle licence disc indicating that the vehicle offered has a minimum GVM of 2,700 kg.

Important: The documents submitted as proof of availability and technical compliance must relate to the same plant or equipment offered by the bidder. The make, model, registration number, VIN/chassis number, serial number or other identifiable information, where applicable, must be used to establish a clear link between the documents.

Financial Ability (Ability to Deliver)

1. Proof of Access to Credit or Financing

A letter or statement from a registered financial institution, issued not more than six (6) months before the bid closing date, confirming that the bidder has access to credit or financing of at least **R200 000**, which may include:

- Overdraft facilities; **OR**
- Revolving credit facilities; **OR**
- Approved loan facilities; **OR**
- Confirmation of available cash reserves.

OR

2. Bank Statement(s)

- A stamped bank statement not older than one (1) month from the bid closing date, showing available funds of at least **R200 000**

OR

3. Funding Commitments from Development Finance Institutions (DFIs)

A confirmation or pre-approval letter from SEFA, IDC, NEF, Land Bank, DBSA, **or any other registered** Development Finance Institution (DFI), issued not more than six (6) months before the bid closing date, confirming funding of at least **R200 000**.

Staffing profile

Project Manager (x1)

- Copy of a BSc, BEng, BTech or Advanced Diploma in Civil Engineering (NQF Level 7).
- Copy of a Registration as a Professional Engineer (Pr Eng) or Professional Engineering Technologist (Pr Tech Eng) with the Engineering Council of South Africa (ECSA), OR Registration as a Professional Construction Project Manager (PrCPM) with the South African Council for the Project and Construction Management Professions (SACPCMP).
- CV demonstrating a minimum of five (5) years' experience in leak detection, pressure control valves **or** network valves related works

Site Agent (x1)

- Copy of National Diploma (NQF Level 6) in Civil Engineering
- CV demonstrating a minimum of three (3) years in leak detection, pressure control valves **or** network valves related works

PRV Technician (x1)

- Copy of National Diploma (NQF Level 6) in Civil Engineering **OR** Trade Test in Certificate in Plumbing/Fitting and Turning issued by the Department of Employment and Labour or the Department of Higher Education or equivalent accredited institution.
- CV demonstrating a minimum of three (3) years' experience working with leak detection, pressure control valves **or** network valves related works

Safety Officer (x1)

- Copy of National Diploma (NQF Level 6) in Safety Management / Environmental Health
- Copy of Registration with SACPCMP as **a Safety officer**
- CV demonstrating a minimum of three (3) years' experience in water related projects as a Safety Officer

Please Note:

- **Certified Copy/ies of Passport(s) with valid working permits for foreign nationals must be submitted with the bid.**
- **All foreign qualifications must be SAQA (South African Qualifications Authority) accredited and proof of such SAQA accreditation must be attached for all foreign qualifications submitted with the bid.**
- **All professional Registrations must be in good standing during the period of tender evaluation (If applicable).**
- **The City of Ekurhuleni reserves the right to verify the submitted documents.**

Relevant previous Company Experience – Completed Project

- **Three (03)** appointment letters, each accompanied by a signed reference letter **or** completion certificate on the **Bidder's Client Letter Head** **(The appointment letters and the Signed reference letters or Completion Certificates must be from the client which the bidder provided the services to)**, confirming that the bidder has successfully performed leak detection and installation, repair, maintenance and commissioning of pressure control valves. Each reference must include contactable details of the client representative for verification purposes.

Company Registration

- Copy of valid ISO 9001:2015 Certificate

Please note:

In case of a Joint Venture, the Lead Partner should have a Valid ISO 9001:2015 Certificate.

NB! Failure to submit the above-mentioned documents will result in disqualification.

Points awarded for Specific Goal/s

In terms of Regulation 4 (1) and 5 (1) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the Specific Goal/s in accordance with the table below:

SPECIFIC GOAL REQUIREMENT	EVIDENCE REQUIRED	POINTS ALLOCATED
EME	Original Sworn Affidavit /Certified Copy of the Sworn Affidavit or Original / Certified Copy of the BBBEE Certificate	2
Enterprise situated within the Ekurhuleni demarcation.	Municipal Account, Lease Agreement or Affidavit The bidder must submit one (1) of the following, in the name of the enterprise: • A municipal account, issued not more than three (3) months before the bid closing date; OR • A valid lease agreement; OR • An affidavit from the lessor confirming that the bidder occupies the premises, signed by the lessor.	5
Local production and content.	Confirmation letter from the manufacturer - must stipulate local content minimum threshold Exemption letter issued by DTI (in cases where the bidder does not satisfy the minimum thresholds,) (If applicable)	1

SPECIFIC GOAL REQUIREMENT	EVIDENCE REQUIRED	POINTS ALLOCATED
An enterprise which is at least 50% owned by Historically Disadvantaged Individuals	Identity document (certified not older than 6 months)	2
	Company Share Certificate or Directorship Composition from CIPC or a Member's Interest Certificate for a Registered CC	
	For persons living with disabilities (if applicable) Original/Certified Medical Certificate (certified not older than 6 months) with the following information: a) Name of practitioner, b) Practitioner number, c) Doctor's contact details, d) Details of the condition, e) Date, f) Signature, g) Stamp and h) Patient's name.	
TOTAL SPECIFIC GOAL POINTS		10

NB: if bidders do not complete information or submit evidence required for the above table, they will not be awarded any specific goals points. All evidence MUST be submitted at bid closure and MUST be valid at the close of bid for point's allocation purposes.

SERVICE LEVEL AGREEMENT

- A service level agreement will be entered into with the successful service provider/s.

PUBLIC INDEMNITY INSURANCE

- Successful Bidders will be required to purchase Public Liability Insurance Cover and indemnify the Council against any third-party loss, damage, or injury claims emanating from the use of the property. The Council reserves the right to request proof of the insurance policy's validity at any time during the contract period.
- The successful bidder shall, for the duration of this Agreement, be required to maintain in force such sufficient insurance cover for its performance under this Agreement. The level of insurance will be kept under review by the Successful Provider on an annual basis, to ensure its adequacy, provided that any variation to the level of such insurance shall be entirely at the discretion of the Successful Bidder.
- Insurance Cover will include relevant applicable insurance policies for risks associated with the scope of work, such as Comprehensive Public Liability, and such Insurance will be determined by the City of Ekurhuleni (CoE). The Successful Bidder will present Certificates of Insurance to CoE (Risk Management Department) before the commencement of works, but not later than Fourteen (14) days after having been informed of the acceptance of this bid.

The Service Provider must insure Employees against injury at work and further ensure that the Employees are fully covered as is required by the Compensation for Occupational Injuries and Diseases Act 130 of 1993 (the COIDA). Documentary proof of such cover must be made available to CoE upon request.

C3.1 DESCRIPTION OF THE WORKS

C3.1.1 COES OBJECTIVES

The City of Ekurhuleni is implementing an integrated water demand management programme focused on pressure management, leak detection, and valve replacement to address increasing infrastructure strain, high non-revenue water (NRW), and constrained bulk supply.

The system currently operates approximately 189 pressure reducing valves (PRVs), which are critical in regulating pressures across the network. Ongoing maintenance and optimisation of these assets are required to ensure stable pressures, reduce pipe bursts, and improve overall system efficiency.

Leak detection forms a key proactive component of the programme, targeting early identification and repair of leaks to prevent escalation into major failures and prolonged water losses. This is complemented by the refurbishment and replacement of critical valves, including isolating valves and air valves, to improve zone control, eliminate trapped air, prevent vacuum conditions, and protect pipelines from pressure surges.

These interventions are implemented at a zone level to improve network discreteness, enhance monitoring accuracy, and support effective pressure control. Collectively, the programme aims to reduce water losses, stabilise demand, extend the lifespan of infrastructure, and optimise the use of available bulk water supply within the City's operational and financial constraints

C3.1.2 OVERVIEW OF THE WORKS

The City of Ekurhuleni aims to reduce water losses through pressure management, valve replacement and leak detection.

OBJECTIVE

The primary objective of the project in the City of Ekurhuleni is to implement pressure management, valve replacement and leak detection in order to;

- o Locate and repair visible and hidden leaks within the network
- o Reduce operational pressures within the water distribution network;
- o Comply with national water distribution regulations by not exceeding maximum pressure of 90m within the distribution system;
- o Reduce the frequency of burst pipe occurrences;
- o Reduce water loss through existing municipal infrastructure and end user leakage;
- o Extend the operational life of pipelines (especially AC pipelines);
- o Improve the level of service provided to residents / customers within the City of Ekurhuleni

C3.1.3 EXTENT OF WORKS

The Works to be completed under this Contract comprise comprehensive pressure management, valve replacement and leak detection within the City of Ekurhuleni water distribution network.

1. Leak Detection

- Implementation of structured and proactive leak detection using multiple technologies and methodologies, including:

- Visual inspections of pipelines, fittings, and appurtenances
- Listening sticks and acoustic ground microphones
- Acoustic logging
- Leak noise correlation
- Gas injection detection methods
- Ground Penetrating Radar (GPR)
- Location and tracing of pipelines and services

2. Leak Repairs

- Ad-hoc leak repairs
- Emergency leak repairs
- Trenchless and automated leak repair techniques where applicable

3. Flow and Pressure Logging

- Logging of hydrants
- Installation of pressure monitoring ports
- Protection and securing installed pressure ports
- Installation of GSM-enabled data loggers linked to an online platform approved by the city.
- Continuous monitoring and analysis of logged data
- Sewer flow logging to assess viability for active night-time residential internal leaks

4. Pressure Management

- Servicing and refurbishment of Pressure Reducing Valves (PRVs), including replacement of mechanical components
- Assessment of potential pressure reductions within identified zones
- Validation and performance testing of PRVs in designated areas
- Investigation into the feasibility of installing flow restrictors
- Setting and commissioning of PRVs in accordance with client-defined pressure parameters

5. Metering and Monitoring

- Supply and installation of GSM-enabled bulk and zonal meters connected to a web-based monitoring platform
- Procurement and installation of required bulk metering and telemetry equipment
- Installation of ultrasonic GSM-enabled meters with logging capability
- Civil and Network Infrastructure Works
- Rehabilitation and repair of valve and meter chambers (cleaning, rebuilding, structural repairs)
- Installation and replacement of isolation valves
- Installation and replacement of boundary valves
- Replacement and installation of bulk and zonal water meters.

6. Valve Replacement

- Replacement and installation of valves (RSV, Butterfly, Air valves, etc).

C3.1.4 LOCATION OF THE WORKS

The Works are located within the boundaries of the City of Ekurhuleni:

NORTH-EAST REGION

Tembisa Depot Area

Kempton Park Depot Area

Brakpan Depot Area

Nigel Depot Area

Benoni Depot Area

SOUTH-WEST REGION

Vosloorus Depot Area

Alberton Depot Area

Germiston Depot Area

Edenvale Depot Area

C3.1.5 TEMPORARY WORKS

All temporary works shall be designed, managed and carried out by the Contractor and all costs associated with such temporary works shall be deemed to have been included in the rates of this Contract. Special arrangements must be made with relevant and linked stakeholders including Water and Sanitation Operation Division where services are likely to be affected and where there is a need to temporary re-arrange their current set-ups. The temporary works will be settlement specific and may include the following:

1. Supply and maintain site facilities,
2. Accommodation of traffic throughout the project,
3. The maintenance of the works during construction and for twelve (12) months from the date of certificate of completion.
4. Removal of site facilities after completion.
5. Provide temporary drainage works, temporary pumps and other equipment as might be necessary for the protection, draining and dewatering of the works; and
6. Construct and maintain haulage, temporary access and construction roads, subject to the approval of the Employer, and permit the Employer, other Contractors, statutory bodies or any other person who might require legitimate access to or through the site for the purpose of executing legitimate business, free and unhindered usage of such roads.
7. Temporary water connections, Contractor's offices, storage sheds, latrines, barricading of Works shall be located in an approved position and subject to the approval of all authorities concerned.
8. Safety and security of the Contractors' temporary works shall be at the Contractors' discretion, but always in accordance with stipulated Occupational Health and Safety requirements.
9. The camp shall be adequately guarded during or outside working hours.
10. Include the works required to locate, verify and protect existing services within the works area
11. Be such to ensure no or limited interruption to vehicular and / or pedestrian traffic; and
12. Be such that existing stormwater flow shall not be impeded during survey and construction activities. Further the Contractor shall note that no stockpiling of materials, plant, excavated material or any other construction related infrastructure shall be allowed in locations that may interfere with the operations of the Employer and the public in general.

C3.2 ENGINEERING

C3.2.1 DESIGN

Works designed by, per design stage:

Concept, feasibility and overall process	:	Employer or Engineer
Basic engineering and detail layouts to bid stage	:	Employer or Engineer
Final design to approved for construction stage	:	Employer or Engineer
Temporary works	:	Contractor
Preparation of as-built drawings	:	Employer or Engineer

- (a) The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.
- (b) The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works.
- (c) The Contractor shall supply all details necessary to assist the Engineer in the compilation of the as-built drawings.

C3.2.2 COE'S DESIGN

All designs and work for this contract to be designed by the employer appointed engineers and in accordance with the COE Design Guidelines and standards, SANS 1200 Specification and the Department of Water and Sanitation Standards and scientific demonstration reports certified and endorsed by either Water Research Commission (WRC) or CSIR.

C3.2.3 CONTRACTOR'S DESIGN

Where contractor is to supply the design of designated parts of the permanent Works or temporary Works he shall supply full working drawings supported by a professional engineer's design certificate.

C3.2.4 DRAWINGS

The Contractor shall use only the dimensions stated in figures on the Drawings in setting out the Works, and dimensions shall not be scaled from the Drawings, unless required by the Engineer. The Engineer will, on the request of the Contractor in accordance with the provisions of the Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract. The underground infrastructure shall be given by either co-ordinates, or stake value and offset. Where necessary, levels shall also be given. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Engineer's Representative on a regular basis.

All information in possession of the Contractor, required by the Engineer and/or the Engineer's Representative to complete the as-built/record drawings, must be submitted to the Engineer's Representative before a Certificate of Completion will be issued.

The Drawings prepared by the Employer for the permanent Works are listed and bound in a separate volume/bound at the back of this volume⁽¹⁾. The Employer reserves the right to issue amended and/or additional drawings during the Contract.

shop drawings

Where an item to be supplied in conformance with this Contract specification has not been designed by the Engineer or Employer, the Contractor shall be required to supply the Engineer with 3 copies of detailed shop drawings prior to delivery of materials, including an electronic copy in drawing format that is compatible with the software packages (AutoCAD or DXF) used by the Engineer and/or Employer.

NB: Only on approval of such shop drawings or an amended version thereof, shall the Contractor proceed with the manufacturing, supply and installation of the designed item.

C3.2.5 DESIGN PROCEDURES

The Contractor must take into consideration that the following works may only be constructed using labour-based construction methods:

- (a) Excavation to expose existing services
- (b) Hand excavation for manholes
- (c) Backfilling of excavation
- (d) Reinstatement of all surfaces

Where Contractors propose to use additional labour-based methods, the methods must be stated as well as the activities. It will reflect positively on the Contractor's tender if he should use more labour-based methods

C3.3 PROCUREMENT

C3.3.1 SUBCONTRACTING

C3.3.1.1 Scope of mandatory subcontract works

Joint venturing job allocations will be based on contractor CIDB grading. i.e. contractors will only be given project of value within their grading limit etc.

The Contractor shall sub-let to local sub-contractor's appropriate portions of the works as being reserved for labour intensive construction methods.

C3.3.1.2 Preferred subcontractors/suppliers

The Contractor shall be responsible for all work carried out by subcontractors on his behalf. The Engineer will not liaise directly with any such sub-contractor, nor will he become involved in any problems and/or disputes related to payments, programming, workmanship, etc., unless provided for in the Conditions of Contract. Such problems and/or disputes shall remain the sole concern of the Contractor and his subcontractors.

C3.3.1.3 Subcontracting procedures

The Engineer may at his discretion, upon receipt of a written and fully motivated application from the Contractor, and where he deems the circumstances so warrant, and provided always that the Contractor has complied fully and in all respects with the provisions of the Contract pertaining to subletting to local sub-contractors or has utilized his best endeavours to comply therewith, authorize in writing that the Contractor may employ local residents in terms of clause C3.3.1.1 with the sole intent of executing on-the-job training of such local residents to suitable levels of skill that will enable the Contractor to sub-let appropriate portions of the Works as specified in clause C3.3.1.1 to such local residents.

Without limiting the generality of application of this sub-clause, circumstances which may be considered by the Engineer to warrant such authorization include:

- a) non-receipt of valid or acceptable tenders/quotations from local sub-contractors;

- b) serious default or failure of appointed local sub-contractors;

The Engineer shall not grant such authority in cases where it may reasonably be concluded on the available evidence that the invitation of further tenders/quotations for subletting to local subcontractors in accordance with the terms of the Contract, is likely to result in the successful completion of the portions of the Works concerned by local sub-contractors.

Should the Contractor, after suitable due endeavour, be unable to identify local residents suitable for and desiring to train as sub-contractors for portions of the Works as specified in clause C3.3.1.1, then the Contractor shall be permitted to undertake the Works in question with his own workforce.

C3.3.1.4 Attendance on subcontractors

The Contractor shall approach the Labour Desk that is established for the purposes of the Contract for assistance and advice regarding conditions of employment, minimum wages, disputes and disciplinary procedures in respect of local sub-contractors

C3.4 CONSTRUCTION

C3.4.1 WORKS SPECIFICATIONS

C3.4.1.1 Applicable SABS 1200 Standardized Specifications

The following SABS 1200 Standardized Specifications for civil engineering construction are applicable:

SABS 1200 A	:	GENERAL
SABS 1200 C	:	SITE CLEARANCE
SABS 1200 D	:	EARTHWORKS
SABS 1200 DB	:	EARTHWORKS (PIPE TRENCHES)
SABS 1200 G	:	CONCRETE (STRUCTURAL)
SABS 1200 GE	:	PRECAST CONCRETE (STRUCTURAL)
SABS 1200 H	:	STRUCTURAL STEELWORK
SABS 1200 HA	:	STRUCTURAL STEELWORK (SUNDRY ITEMS)
SABS 1200 HC	:	CORROSION PROTECTION OF STRUCTURAL STEELWORK
SABS 1200 L	:	MEDIUM-PRESSURE PIPELINES
SABS 1200 LB	:	BEDDING (PIPES)
SABS 1200 LF	:	ERF CONNECTIONS (WATER)

All standards shall be read together with the latest applicable amendments, municipal standard drawings, project specifications and the Employer's requirements.

The term "project specification" must be replaced by "scope of works" wherever it appears in these standardized specifications.

C3.4.1.2 Particular Specifications

The following Particular Specifications for work not covered by the SABS 1200 Standardized Specifications are also included hereunder:

PLI : Particular specification for generic labour-intensive specification

OHS : Occupational Health and Safety (To be supplied as Annexures)

C3.4.1.3 Variations and Additions to the SABS 1200 Standardized Specifications

Variations and additions to the following SANS 1200 Standardized Specifications listed in C3.4.1. are given in section C3.4.6.

C3.4.2 SITE ESTABLISHMENT

C3.4.2.1 Services and facilities provided by the Employer

(a) Water sources

Potable water for construction and domestic purposes

A reticulated potable water supply is not available in the vicinity of the Construction Site. The responsible water supply authority in the area of the construction site is Water Services. Should the Contractor, in complying with his obligations in terms of sub clause C3.4.2.2 (B): Water make arrangements with relevant authorities to apply for a potable water connection on his behalf for the supply of all water that he/she may require from such reticulation network for construction purposes as well as for domestic consumption.

The Engineer will prepare an Application on the relevant standard forms applicable at the time, together with a Fire Reticulation Plan approved by the Fire Department of the Employer indicating the size of connection required as well as the position and other relevant information such as site location, stand lay-out etc.

The Engineer will submit the completed forms and Approved Fire Plan to Chief Area Engineer for further internal completion and submission to the Water & Sanitation Department for approval and installation.

The Contractor will be responsible for the following costs in terms of the prevalent Fees and Rates as applicable at the time of usage which will be deducted from any payment due to the Contractor:

- Installation costs determined by the Water & Sanitation Department.
- Cost of all water consumed during contract period until Contractor's site de-establishment including any water loss which may be encountered during construction
- De-installation of water connection if required

The Contractor will at all times be responsible for the safe guarding of the water connection as well as the water meter and ensure that there will be no wastage, damage or un-lawful use of water during the construction and Contractor's use of the connection.

If so required by the responsible water supply authority, the Contractor shall further be responsible, at his own cost, for making or otherwise providing metered connections to the available services at the positions specified by the water authority, as well as for the removal of such connections on completion of the Contract.

No warranty is offered or given by the Employer that the existing available reticulated water supply will necessarily be adequate for the Contractor's purposes nor that such supply is in any way guaranteed.

(b) Electricity supply

The Contractor shall make his own arrangement for obtaining power he may require, and be responsible for all costs involved. Any extension of time due to delays of power facilities will not be granted.

The Contractor shall, in accordance with the provisions of subclause C3.4.2.2(c), and at his own cost, make all arrangements necessary for the supply and distribution of electrical power required for construction purposes as well as for use in and about his site establishment.

The Contractor shall comply with all prevailing legislation in respect of the generation and distribution of electricity and shall, when required by the Engineer, produce proof of such compliance.

((i)ALTERNATIVE 1 – Reticulated electrical supply available

A reticulated electrical power supply is available in the vicinity of the Site.

The responsible electricity supply authority in the area of the Site is:

Should the Contractor, in complying with his obligations in terms of subclause C3.4.2.2(c): Electricity, wish to avail himself of such supply, he shall, in accordance with the provisions of subclause C3.4.2.2(c), and at his own cost, be responsible for making his own arrangements with the responsible electricity supply authority for the supply of all electrical power he may require from such reticulation network for construction purposes as well as for domestic consumption.

If so required by the responsible electricity supply authority, the Contractor shall, at his own cost, be responsible for making metered connections to the available services at the positions specified by the electricity supply authority, as well as for the removal of such connections on completion of the Contract.

No warranty is offered or given by the Employer that the existing available reticulated electrical power supply will necessarily be adequate for the Contractor's purposes nor that its supply is in any way guaranteed.

(c) Excrement disposal

The Contractor shall provide portable toilet facilities for all his employees and shall maintain them in a clean and hygienic state at all times to the satisfaction of the Council's Medical Officer of Health. The cost of establishing and maintaining of portable toilets is provided for in the Bills of Quantities. The requirements of the Construction Environmental Management Plan (CEMP) must also be followed.

(i) ALTERNATIVE 1 - Water-borne sewage disposal available

A reticulated water-borne sewage disposal system exists in the vicinity of the Site.

The responsible sewage disposal authority is:

Should the Contractor, in complying with his obligations in terms of subclause C3.4.2.2(d): Excrement disposal, wish to avail himself of such facility, he shall, in accordance with the provisions of subclause C3.4.2.2(d), and at his own cost, be responsible for making his own arrangements with the responsible disposal authority, and for making such connections he may require to the available services.

If so required by the responsible sewage disposal authority, the Contractor shall, at his own cost, be responsible for making connections to the available services at the positions specified by the sewage disposal authority, as well as for the removal of such connections on completion of the Contract.

No warranty is offered or given by the Employer that the existing available reticulated water-borne sewage disposal will necessarily be adequate for the Contractor's purposes nor that its operation is in any way guaranteed.

(d) Area for contractor's site establishment

A specific area in close proximity to or on the Site of the Works will be made available by the Employer to the Contractor for the Contractor's site establishment. The specific area for the Contractor's site establishment will be identified to the Contractor by the Engineer and the Contractor shall have sole use of such area, free of charge, for the duration of the Contract. The Contractor shall use this area only for the purposes of erecting his site offices,

workshops, stores and other facilities required for the execution of the Contract. The Contractor shall not use the area nor allow it to be used for any purposes not directly associated with the execution of the Contract.

The Contractor shall be responsible for arranging, at his own cost, for the provision of all services he may require in the area, as well as elsewhere on the Site.

Should the Contractor deem the area made available by the Employer to be inadequate or unsuitable for the Contractor's particular needs, then the Contractor shall be at liberty to make his own arrangements with the owners of other sites which he considers are better suited to his needs; provided always that the use by the Contractor of any area other than that made available to him by the Employer shall be subject to the prior written approval of the Engineer, which approval shall not be unreasonably withheld; and provided further that the Contractor shall have no claim against the Employer in respect of any costs incurred by him, either directly or indirectly in consequence of utilising any area other than that made available to him by the Employer, and which costs exceed those costs allowed for by the Contractor in his Bid.

C3.4.2.2 Facilities provided by the Contractor

(a) Facilities for the Engineer

The Contractor shall provide on the Site, for the duration of the Contract and for the exclusive use of the Engineer and/or his Representative (as applicable), the various facilities described hereunder. All such facilities shall be provided promptly on the commencement of the Contract and failure on the part of the Contractor to provide any facility required in terms of this specification shall constitute grounds for the Engineer to withhold payment of the Contractor's bidden Preliminary and General items until the facility has been provided or restored as the case may be..

(i) Office accommodation

The Contractor shall provide on the Site one (1) office for the exclusive use of the Engineer. Such office(s) shall comply with and be furnished in accordance with the requirements of sub clause 3.2 of SABS 1200 AB. The Contractor shall maintain the office(s) in accordance with the requirements of sub clause 5.2 of SABS 1200 AB.

Such office accommodation shall be provided within the Contractor's site establishment facilities.

(ii) Site meeting venue

The Contractor shall provide within his own site establishment facilities, a suitably furnished office or other venue capable of comfortably accommodating a minimum of fifteen (15) persons at site meetings. The Engineer shall be allowed free use of such venue for conducting any other meetings concerning the Contract at all reasonable times.

(iii) Contract Name boards

The Contractor shall provide, erect and maintain two (2) contract name boards at such positions and locations as are directed by the Engineer, in accordance with the requirements set out in SABS 1200 AB (as amended).

The Contractor shall before ordering or manufacturing any such contract name boards, obtain the Engineer's written approval in respect of all names and wording to appear on the contract name boards.

All name boards shall be removed 14 days prior to the date of Final Approval Certificate.

(iv) Survey equipment and assistants

Survey equipment

The Contractor shall, in accordance with the requirements of SABS 1200 AB (as amended) provide the following survey equipment for the exclusive use of the Engineer and his staff:

- 1 upright reading automatic level with tripod;
- 1 metric levelling staff with protective cover bag;
- 6 ranging rods;
- 1 100 metre Stilon tape measure;
- 1 +/- 2 kg hammer.

Whenever reasonably required by the Engineer, the Contractor shall, in accordance with the requirements of SABS 1200 AB (as amended), make available to the Engineer or his representative, the following additional survey equipment:

- 1 tacheometer with tripod;
- 1 survey staff for tacheometer;
- 1 Distomat, complete with tripod, fully charged battery and all appurtenant accessories.

Survey assistants

The Contractor shall, in accordance with the requirements of sub clause 5.5 of SABS 1200 AB, make available to the Engineer, two (2) survey assistants.

(v) Telephone facilities

The Contractor shall, in accordance with the requirements of sub clauses PSAB 4.1 and PSAB 5.4 of the Project Specifications, provide on Site for the duration of the Contract, the following telephone facilities for the use of the Engineer and his Representative:

Cell phones

Number of cell phones required: one (1)

(vi) Computer facilities

The Contractor shall provide the following computer facilities together with the specified software installed, for the exclusive use of the Engineer and his staff, in accordance with the requirements of SABS 1200 AB (as amended):

- 1 computer
- 1 printer.

All computer hardware shall be provided complete with the requisite connecting cables and all interfacing devices and software necessary for its efficient operation as an integral system.

The following software shall be properly installed on the computer, and the original licence agreements and disks shall be provided to the Engineer for safekeeping:

- Microsoft Windows 2000 / XP
- MS-Office 2000 / XP

(vii) Electricity supply for the Engineer

All electricity supply to the Engineer office(s) and laboratory (if applicable), whether provided by the Contractor by way of a reticulated supply from a local authority or other authorised electricity supply, or by way of on-site generators, shall be regulated by the Contractor to within limits such as to prevent damage due to fluctuations in the electrical current supply that may occur to any electrical plant and equipment provided by the Contractor or the Engineer.

The Contractor shall be liable for and pay to the Engineer on demand, all costs that the Engineer may incur in the repair or replacement of any electrical equipment provided by the Engineer on the Site. Reliance by the Contractor on the regulation of the electrical supply by the supplier or on current regulators fitted to generators shall not absolve the Contractor of his liabilities in terms of this Sub clause and, where appropriate, the Contractor shall provide and install at his own cost, all such electrical current-regulating equipment as is necessary to prevent damage to the said equipment.

(viii) Site instruction book

The Contractor shall keep a triplicate book for site instructions on the Site at all times.

(b) Water

Potable water for construction and domestic purposes

A reticulated potable water supply is not available in the vicinity of the Construction Site. The responsible water supply authority in the area of the construction site is Water Services: North-Eastern/South-West District represented by CoE representative to be contacted on (011) 999 3783

Should the Contractor, in complying with his obligations in terms of sub clause C3.4.2.2 (B): Water Sources, wish to utilise such water supply, he/she shall make contact with the Engineer who will make arrangements with relevant authorities to apply for a potable water connection on his behalf for the supply of all water that he/she may require from such reticulation network for construction purposes as well as domestic consumption. The Engineer will prepare an Application on the relevant standard forms applicable at the time, together with a Fire Reticulation Plan approved by the Fire Department of the Employer indicating the size of connection required as well as the position and other relevant information such as site location, stand lay-out etc.

The Engineer will submit the completed forms and Approved Fire Plan to Chief Area Engineer for further internal completion and submission to the Water & Sanitation Department for approval and installation.

The Contractor will be responsible for the following costs in terms of the prevalent Fees and Rates as applicable at the time of usage which will be deducted from any payment due to the Contractor:

- Installation costs determined by the Water & Sanitation Department
- Cost of all water consumed during contract period until Contractor's site de-establishment including any water loss which may be encountered during construction
- De-installation of water connection if required

The Contractor will at all times be responsible for the safe guarding of the water connection as well as the water meter and ensure that there will be no wastage, damage or un-lawful use of water during the construction and Contractor's use of the connection.

If so required by the responsible water supply authority, the Contractor shall further be responsible, at his own cost, for making or otherwise providing metered connections to the available services at the positions specified by the water authority, as well as for the removal of such connections on completion of the Contract.

No warranty is offered or given by the Employer that the existing available reticulated water supply will necessarily be adequate for the Contractor's purposes nor that such supply is in any way guaranteed.

(c) Electricity

The Contractor shall, at his own expense, be responsible for obtaining and providing all electricity as he may require for the purposes of executing the Contract, including electricity for both construction purposes and domestic use, as well as for making all arrangements in connection therewith.

The distribution of electricity shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

No separate payment will be made to the Contractor for the obtainment, providing and consumption of electricity, the costs of which will be deemed to be in the Contractor's bidden rates and prices.

(d) Excrement disposal

The Contractor shall, at his own expense, be responsible for safely and hygienically dealing with and disposing of all human excrement and similar matter generated on the Site during the course of the Contract, to the satisfaction of the responsible health authorities in the area of the Site and the Engineer. All such excrement shall be removed from the Site and shall not be disposed of by the Contractor on the Site.

The Contractor shall further comply with any other requirements in this regard as may be stated in the Contract.

No separate payment will be made to the Contractor in respect of discharging his obligations in terms of this subclause and the costs thereof shall be deemed to be included within the Contractor's bidden Preliminary and General items.

C3.4.2.3 Site usage

The usage of the site is reserved for this contract as well as CoE officials for operation and maintenance.

C3.4.2.4 Permits and wayleaves

The contractor, with the assistance of the engineer, shall be responsible to obtain all the wayleaves required under this Contract. The contractor shall comply with the conditions (if any) of the following possible affected service owners/authorities:

- City of Ekurhuleni Water and Sanitation Department
- City of Ekurhuleni Electricity Department
- City of Ekurhuleni Roads and Stormwater Department
- Eskom
- Telkom
- Rand Water
- Sasol
- SARCC/Spoornet/Transnet
- Gascor
- Gautrans (if affected)
- All other independent telecommunication services authorities (Neotel, Vodacom, etc.)

C3.4.2.5 Features requiring special attention

(a) Safety Regulations

The Contractor shall apply suitable proven methods for construction complying with the OHS Act so that his activities will not constitute a hazard to his work force, the public or any adjacent property. All excavations shall be suitable safeguarded and barricaded especially during night-time, weekends or holidays and any other day of inactivity by the Contractor. The Contractor shall also ensure that excavations are shored or otherwise made safe. The camp and construction site will be locked after hours to ensure safety of passers-by. No additional payment will be made to the Contractor for complying with these requirements.

(b) Safety

Since the construction occurs in all the areas of the City of Ekurhuleni, the Contractor must take the safety of the public into account during the planning and execution of the works. All open trenches, services, material and machines must be protected and clearly marked.

(c) Finishing and Trimming

Progressive and systematic finishing and trimming will form an essential part of this contract. Under no circumstances shall spoil, rubble, materials, equipment or unfinished operations be allowed to accumulate unnecessarily and in the event of this occurring, the Engineer shall have the right to withhold payment for as long as deemed.

(d) Known Services

The position of existing services, insofar as it will be known, are shown on the drawings. The Contractor shall note that although the drawings have been prepared using available information, they show only the approximate positions of existing services and shall be a guide only. The Contractor's attention is drawn to clause 5.4 of SANS 1200A. Items have been allowed in the Bill of Quantities for dealing with and protecting existing services.

(e) Dealing with Water

The Contractor is responsible for the control of storm water from adjoining areas, the site and groundwater, water as a result of a burst water pipe in the vicinity of the works. No additional payment will be made and it will be deemed to be included in the rates of the relevant items.

(f) Survey Beacons

Reference marks with levels and coordinates will be indicated on the drawings and have been placed on site. The Contractor's attention is drawn to clause 5.1.2 of SANS 1200 A.

(g) The Local Community

The local community from which the local labour is to be recruited is the community where the site is located.

(h) Site maintenance

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner, and shall keep the Site free from debris and obstructions.

(i) Testing and quality control

(i) CONTRACTOR TO ENGAGE SERVICES OF AN INDEPENDENT LABORATORY

Notwithstanding the requirements of the Specifications pertaining to testing and quality control, the Contractor shall engage the services of an approved independent

laboratory to undertake all testing of materials, the results of which are specified in, or may reasonably be inferred from, the Contract. These results will be taken into consideration by the Engineer in deciding whether the quality of materials utilised and workmanship achieved by the Contractor comply with the requirements of the Specifications. The foregoing shall apply irrespective of whether the specifications indicate that the said testing is to be carried out by the Engineer or by the Contractor.

The Contractor shall be responsible for arranging with the independent testing laboratory for the timeous carrying out of all such testing specified in the Contract, at not less than the frequencies and in the manner specified. The Contractor shall promptly provide the Engineer with copies of the results of all such testing carried out by the independent laboratory.

For the purposes of this clause, an "independent laboratory" shall mean an "approved laboratory" (as defined in subclause PSA 7.2) which is not under the management or control of the Contractor and in which the Contractor has no financial interest, nor which has any control or financial interest in the Contractor.

(II) **ADDITIONAL TESTING REQUIRED BY THE ENGINEER**

In addition to the provisions of subclause C3.4.2.5(b)(i): Contractor to engage services of an independent laboratory, the Engineer shall be entitled at times during the Contract to require that the Contractor arrange with the independent laboratory to carry out any such tests, additional to those described in subclause C3.4.2.5(b)(i), at such times and at such locations in the Works as the Engineer shall prescribe. The Contractor shall promptly and without delay arrange with the independent laboratory for carrying out all such additional testing as required by the Engineer, and copies of the test results shall be promptly submitted to the Engineer.

(III) **COSTS OF TESTING**

(a) **Tests in terms of subclause C3.4.2.5(c)(i)**

The costs of all testing carried out by the independent laboratory in accordance with the requirements of subclause C3.4.2.5(c)(i), above shall be borne by the Contractor and shall be deemed to be included in the bidded rates and prices for the respective items of work as listed in the Schedule of Quantities and which require testing in terms of the Specifications. No separate payments will be made by the Employer to the Contractor in respect of any testing carried out in terms of subclause C3.4.2.5(c)(i).

Where, as a result of the consistency of the materials varying or as a result of failure to meet the required specifications for the work, it becomes necessary to carry out additional tests (eg re-tests on rectified work and/or replacement materials), the costs of such additional testing shall be for the Contractor's account.

(b) **Additional tests required by the Engineer**

The costs of any additional tests required by the Engineer in terms of subclause C3.4.2.5(b)(i): Additional testing required by the Engineer, shall be reimbursed to the Contractor against substitution of the Provisional Sum allowed therefore in the Schedule of Quantities; provided always that the costs of any such additional tests ordered by the Engineer, the results of which indicate that the quality of the materials utilised and/or the standard of workmanship achieved are/is not in accordance with the specifications, shall not be reimbursable to the Contractor.

(j) Subcontractors

All matters pertaining to subcontractors (including Nominated Subcontractors) and the work executed by them shall be dealt with directly between the Engineer and the Contractor in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.

The Engineer will not liaise directly with any subcontractors nor will he issue instructions concerning the subcontract works directly to any subcontractor.

All matters arising from the subcontract agreements shall be dealt with directly between the Contractor and the subcontractors and the Engineer will not become involved.

(k) Opening up and closing down of designated borrow pits

Measurement and payment for opening up and closing down designated borrow pits, including removing and stockpiling overburden and restoring the Site, shall be made under item 8.3.4 of SABS 1200 D. This item applies to all borrow material required under this Contract.

The requirements of subclause 5.2.2.2 of SABS 1200 D regarding the opening up, maintenance and closing down of borrow pits shall be adhered to.

(l) Access to properties

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. In this respect the Contractor's attention is drawn to Clause 17.1 of the Conditions of Contract.

If, as a result of restricted road reserve widths and the nature of the work, the construction of bypasses is not feasible, construction shall be carried out under traffic conditions to provide access to erven and properties.

Notwithstanding the foregoing, the Contractor may, with the prior approval of the Engineer (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the occupiers of erven and properties to close off part of a street, road, footpath or entrance temporarily, provided that the Contractor duly notifies the occupiers of the intended closure and its probable duration, and reopens the route as punctually as possible. Where possible, such streets, roads, footpaths and entrances shall be made safe and reopened to traffic overnight. Such closure shall not absolve the Contractor from his obligations under the Contract to provide access at all times. Barricades, traffic signs, drums and other safety measures appropriate to the circumstances shall be provided by the Contractor to suit the specific conditions.

(m) Existing residential areas

Electricity and water supply interruptions in existing residential areas shall be kept to a minimum. The Contractor shall notify the City of Ekurhuleni at least seven (7) days prior to any planned shutdown to allow the City to notify affected residents in writing at least 24 hours, but not more than 48 hours, prior to the interruption. Supplies shall be normalised by 16:00 on the same day.

(n) Labour-intensive competencies of supervisory and management staff

Contractor having a CIDB contractor grading designation of 5CE and higher shall only engage supervisory and management staff in labour intensive works who have either completed, or for the period 1 April 2004 to 30 June 2006, are registered for training towards, the skills programme outlined in Table 1.

The managing principal of the contractor, namely, a sole proprietor, the senior partner, the managing director or managing member of a close corporation, as relevant, having a contractor grading designation of 1CE, 2CE, 3CE and 4CE shall have personally completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme for the NQF level 2. All other site supervisory staff in the employ of such contractors must have completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme, for the NQF level 2 unit standards or NQF level 4 unit standards.

Table 1: Skills programme for supervisory and management staff

Personnel	NQF level	Unit standard titles	Skills programme description
Team leader / supervisor	2	Apply Labour-intensive Construction systems and Techniques to Work Activities	This unit standard must be completed, and
		Use Labour-intensive Construction Methods to Construct and Maintain roads and Stormwater Drainage	one of these 3 unit standards be used
		Use Labour -intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour-intensive Construction methods to Construct, Repair and Maintain Structures	
Foreman / supervisor	4	Implement Labour-intensive Construction systems and Techniques	This unit standard must be completed, and
		Use Labour-intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	any one of these 3 unit standards be used
		Use Labour-intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent / Manager (ie	5	Manage Labour-intensive	Skills Programme

Personnel	NQF level	Unit standard titles	Skills programme description
the contractor's most senior representative who is resident on the site)		Construction Processes	against this single unit standard

A. Employment of unskilled and semi-skilled workers in labour-intensive works

(i) REQUIREMENTS FOR THE SOURCING AND ENGAGEMENT OF LABOUR

- (a) Unskilled and semi-skilled labour required for the execution of all labour-intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.
- (b) The rate of pay set for the SPWP will be issued to the contractor by the Employer on a written notice with an increment to be implemented annual basis on the 1st of July per day.
- (c) Labour Social and Environmental Sector will be issued to the Contractor by the Employer during site hand over on a written notice with an increment to be implemented annual basis on the 1st of July per day.
- (d) Team Leaders/Skilled Supervisors will be issued to the Contractor by the Employer on a written notice with an increment to be implemented annual basis on the 1st of July per day.
- (e) CLO will be issued to the Contractor by the Employer during site hand over on a written notice with an increment to be implemented annual basis on the 1st of July per day.

Infrastructure Projects under the Expanded Public Works Programme (EPWP), which is repeated here for ease of use.

"In accordance with the Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes (clause 10.4), the public body must set a rate of pay (task-rate) for workers to be employed on the labour-intensive projects.

Clause 10.4 requires that the following should be considered when setting rates of pay for workers:

10.4.1 The rate set should take into account wages paid for comparable unskilled work in the local area per sector, if necessary.

10.4.2 The rate should be an appropriate wage to offer an incentive for work, to reward effort provided and to ensure a reasonable quality of work. It should not be more than the average local rate to ensure people are not recruited away from other employment and jobs with longer-term prospects.

10.4.3 Men, women, youth, disabled persons and the aged must receive the same pay for work of equal value."

- (c) Tasks established by the contractor must be such that:
 - I. the average worker completes 5 tasks per week in 40 hours or less; and
 - II. the weakest worker completes 5 tasks per week in 55 hours or less.
- (d) The Contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 1.1.3.

- (e) The Contractor shall, through all available community structures, inform the local community of the labour-intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and/or who come from households:
 - I. where the head of the household has less than a primary school education;
 - II. that have less than one full-time person earning an income;
 - III. where subsistence agriculture is the source of income;
 - IV. those who are not in receipt of any social security pension income.
- (f) The contractor must provide monthly statistics to the COE indicating the number of new jobs created through this contract. This statistic must be provided with each monthly payment certificate using Councils electronic prescribed format, which will be provided by the Project Manager of this project to the successful bidder. Failure to provide the required statistics Council may withhold payment.

(II) SPECIFIC PROVISIONS PERTAINING TO SANS 1914-5

(1) **Definition**

Targeted labour: Unemployed persons who are employed as local labour on the project.

(2) **Contract participation goals**

- I. There is no specified contract participation goal for the contract. The contract participation goal shall be measured in the performance of the contract to enable the employment provided to targeted labour to be quantified.
- II. The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task-rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

(3) **Terms and conditions for the engagement of targeted labour**

Further to the provisions of clause 3.3.2 of SANS 1914-5, written contracts shall be entered into with targeted labour.

(4) **Variations to SANS 1914-5**

The definition for net amount shall be amended as follows:

- i. Financial value of the contract upon completion, exclusive of any value-added tax or sales tax which the law requires the employer to pay the contractor.
- ii. The schedule referred to in 5.2 shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of days of formal training provided to targeted labour.

(III) TRAINING OF TARGETED LABOUR

- (1) The Contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.
- (2) The cost of the formal training of targeted labour, will be funded under Schedule 1 of the BoQ.
- (3) The contractor shall be responsible for scheduling the training of workers and shall take all reasonable steps to ensure that each beneficiary is provided with a minimum of six (6) days of formal training if he/she is employed for 3 months or less and a minimum of ten (10) days if he/she is employed for 4 months or more.
- (4) The Contractor shall do nothing to dissuade targeted labour from participating in training programmes.
- (5) An allowance equal to 100% of the task rate or daily rate shall be paid by the Contractor to workers who attend formal training, in terms of 1.3.4 above.
- (6) Proof of compliance with the requirements of 1.3.2 to 1.3.6 must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

B. Employment of local labour

It is the intention that this Contract should make maximum use of the local labour force that is presently underemployed. To this end the Contractor shall limit the utilisation on the Contract of non-local employees to that of key personnel only and to employ and train local labour to the extent necessary for the execution and completion of this Contract.

The Contractor shall fill in the form entitled Key Personnel in the Forms to be completed by the Bidder. The data stated on the above-mentioned form will be strictly monitored during the Contract period and any deviations therefrom shall be subject to the prior approval of the Engineer, which approval shall not be unreasonably withheld.

The employment of casual labour will be done in co-operation with community leaders and local structures. The bidder shall ensure that all remuneration paid to employees is in line with the relevant sectorial determination in terms of the Basic Conditions of Employment Act, No 75 of 1997, as determined by the Department of Labour.

C. Monthly statements and payment certificates

The statement to be submitted by the Contractor in terms of Clause 49 of the Conditions of Contract shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Engineer, in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit two (2) A4 size paper copies of the statement.

For the purposes of the Engineer's payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Engineer for the purposes of accurately reflecting the actual quantities and amounts which the Engineer deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Engineer within three (3) normal workings days from the date on which the Engineer communicated to the Contractor the adjustments required. The Contractor shall submit to the

Engineer five (5) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Engineer the requisite copies of the adjusted statement for the purposes of the Engineer's payment certificate will be added to the times allowed to the Engineer in terms of Subclause 49.4 of the Conditions of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the Employer is required to make payment to the Contractor.

D. Construction in restricted areas

Working space is sometimes restricted. The construction method used in these restricted areas largely depends on the Contractor's Plant. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and prices bidden will be deemed to include full compensation for any difficulties encountered by the Contractor while working in restricted areas. No extra payment nor any claim for payment due to these difficulties will be considered.

E. Notices, signs, barricades and advertisements

All notices, signs and barricades, as well as advertisements, may be used only if approved by the Engineer. The Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his bidden rates.

The Engineer shall have the right to instruct the Contractor to move any sign, notice or advertisement to another position, or to remove it from the Site of the Works if in his opinion it is unsatisfactory, inconvenient or dangerous.

F. Workmanship and quality control

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide suitably qualified and experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times.

The cost of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates bidden for the related items of work.

The Contractor's attention is drawn to the provisions of the various Standardized Specifications regarding the minimum frequency of testing required. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion and submission of every part of the work to the Engineer for examination and measurement, the Contractor shall furnish the Engineer with the results of the relevant tests, measurements and levels to demonstrate the achievement of compliance with the Specifications.

C3.4.2.6 Extension of time due to abnormal rainfall

- (a) Extension of time in respect of delays resulting from wet climatic conditions on the Site will only be considered in respect of abnormally wet climatic conditions and shall be determined for each calendar month or part thereof, in accordance with the formula given below:

MONTH	Rn(mm)	Nn(days)
January	128	15
February	149	13
March	102	12
April	30	8
May	6	3
June	12	2
July	4	1
August	14	2
September	33	4
October	72	12
November	114	15
December	151	17
TOTAL	815	104

$$V = (Nw - Nn) + (Rw - Rn)/X$$

in which formula the symbols shall have the following meanings:

V = Potential extension of time in calendar days for the calendar month under consideration:

If V is negative and its absolute value exceeds Nn, then V shall be taken as equal to minus Nn.

When the value of V for any month exceeds the number of days in the particular month, V will be the number of days in the month.

Nw = Actual number of days in the calendar month under consideration on which a rainfall of Y mm or more was recorded on the Site

Nn = Average number of days, derived from existing records of rainfall in the region of the Site, on which a rainfall of Y mm or more was recorded for the calendar month

Rw = Actual rainfall in mm recorded on the Site in an approved rain gauge for the calendar month under consideration

Rn = Average rainfall in mm for the calendar month, derived from existing records of rainfall in the region of the Site

The factor (Nw - Nn) shall be deemed to be a fair allowance for variations from the average number of days during which the rainfall exceeds Y mm.

The factor (Rw - Rn)/X shall be deemed to be a fair allowance for variations from the average number of days during which the rainfall did not exceed Y mm but wet conditions prevented or disrupted work.

- (b) The rainfall records at rainfall station number 476396 for the period 1998 to 2015 are reproduced in the accompanying table, and the monthly averages (Rn and Nn) for this period shall, for the purposes of this Contract be taken as normal and as the values to be substituted for Rn and Nn in the formula above. The values of X and Y shall be 20 and 10 respectively.

The potential extension of time V has been calculated for each month and year of the period concerned to indicate the possible effect of the rainfall formula. The values of V were obtained by

applying the rainfall formula and using the actual rainfall figures and the calculated values of Rn and Nn indicated in the table.

- (c) The Contractor shall, at his own cost, provide and erect on the Site at a location approved by the Engineer, an approved rain gauge, which shall be fenced off in a manner which will prevent any undue interference by workmen and others. The Contractor shall, at his own cost, arrange for the reading of the rain gauge on a daily basis for the duration of the Contract. The gauge readings, as well as the date and time at which the reading was taken shall be recorded in a separate record book provided by the Contractor for this purpose. All entries in the rainfall record books shall be signed by the person taking the reading and the gauge shall be properly emptied immediately after each reading has been taken. If required by the Engineer, the Engineer shall be entitled to witness the reading of the gauge.
- (d) The Contractor's claims in terms of Subclause 42.2 of the Conditions of Contract for extension of time in respect of delays resulting from wet climatic conditions on the Site during each month, shall be submitted in writing to the Engineer monthly;
provided always that
 - (i) the period allowed to the Contractor in terms of Clause 10 of the Conditions of Contract in which to submit his claim for each month shall be reduced to seven (7) days, calculated from the last day of the month to which the claim applies; and
 - (ii) the 28-day period allowed to the Engineer in terms of Subclause 5.12.1 of the Conditions of Contract in which to give his ruling on the claim, shall be reduced to fourteen (14) days.The Contractor's monthly claim shall be accompanied by a copy of the signed daily rainfall readings for the applicable month.
- (e) The extent of any extension of time which may be granted to the Contractor in respect of wet climatic conditions (whether normal or abnormal) shall be determined as the algebraic sum of the "V" values for each month between the Commencement Date and the Due Completion Date of the Contract, calculated in accordance with subclause C3.4.2.6(a) above; provided always that
 - (i) rainfall occurring within the period of the Contractor's Christmas shut-down period (referred to in Subclause 1.6 of the Conditions of Contract) shall not be taken into account in the calculation of the monthly "V" values;
 - (ii) rainfall occurring during any period during which the Contractor was delayed due to reasons other than wet climatic conditions on the Site, and for which delay an extension of time is granted by the Engineer, shall not be taken into account in the calculation of the monthly "V" values;
 - (iii) if the algebraic sum of the "V" values for each month is negative, the time for completion will not be reduced on account of subnormal rainfall, and
 - (iv) where rainfall is recorded only for part of a month, the "V" value shall be calculated for that part of the month using pro rata values for Nn and Rn.
- (f) The Engineer shall, simultaneous with granting any extension of time in terms of this clause, revise the Due Completion Date of the Contract to reflect an extension of time having been granted in respect of wet climatic conditions, to the extent of the algebraic sum of all the "V" values for all the preceding months of the Contract, less the aggregate of the "Nn" values for the remaining (unexpired) months of the Contract (viz less aggregate of the potential maximum negative "V" values for the remaining Contract Period). Thus, provided that where such period is negative, the Due Completion Date shall not be revised.
- (g) Any extension of time in respect of wet climatic conditions granted in terms of this clause shall not be deemed to take into account delays experienced by the Contractor in repairing or reinstating damage to or physical loss of the Works arising from the occurrence of abnormal climatic conditions. Extension of time in respect of any such repairs or reinstatement regarding damage

shall be the subject of a separate application for extension of time in accordance with the provisions of Clause 42 and Clause 48 of the Conditions of Contract.

C3.4.3 PLANT AND MATERIALS

C3.4.3.1 Plant and materials supplied by the employer

The Employer shall not supply any plant or materials.

C3.4.3.2 Materials, samples and shop drawings

(a) Samples

Materials or work which do not conform to the approved samples submitted in terms of Subclause 23.4 of the Conditions of Contract, will be rejected. The Engineer reserves the right to submit samples to tests to ensure that the material represented by the sample meets the specification requirements.

The costs of any such tests conducted by or on behalf of the Engineer, the results of which indicate that the samples provided by the Contractor do not conform to the requirements of the Contract, shall, in accordance with the provisions of Subclause 7.4.4 of the Conditions of Contract, be for the Contractor's account.

C3.4.4 CONSTRUCTION EQUIPMENT

C3.4.4.1 Requirements for equipment

- a) Water Tanker – Minimum Tank Capacity: 5,000 litres
- b) TLB (Tractor Loader Backhoe) – Minimum Operating Weight: 7 900 kg
- c) Light Delivery Vehicle (LDV) / Bakkie – Minimum GVM: 2 700 kg

C3.4.4.2 Equipment provided by the employer

None

C3.4.5 EXISTING SERVICES

C3.4.5.1 Known services

Wayleaves should be obtained by the Contractor for confirmation of known services with the utility owners and to obtain clearance measure allowable.

C3.4.5.2 Treatment of existing services

Existing services should be exposed by hand and be clearly marked.

C3.4.5.3 Use of detection equipment for the location of underground services

A drawing will be issued to the contractor indicating existing services detected through service detection survey.

C3.4.5.4 Damage to services

The contractor shall be responsible for repairing damage existing services at the contractors own expense.

C3.4.5.5 Reinstatement of services and structures damaged during construction

All services damaged during construction shall be repaired and reinstated to original condition at the contractor's own expense.

C3.4.6 VARIATIONS AND ADDITIONS TO SANS 1200 STANDARDIZED SPECIFICATIONS AND PARTICULAR SPECIFICATIONS

SANS 1200 A	:	General
SANS 1200 AB	:	Engineers Office
SANS 1200 C	:	Site clearance
SANS 1200 DA	:	Earthworks (Small works)
SANS 1200 DB	:	Earthworks (pipe trenches)
SANS 1200 G	:	Concrete
SANS 1200 L	:	Medium-pressure pipelines
SANS 1200 LB	:	Bedding (pipes)
SANS 1200 MH	:	Asphalt base and surfacing

VARIATIONS AND ADDITIONS TO THE STANDARDIZED SPECIFICATIONS

The following variations and additions to the SANS 1200 Standardized Specifications referred to above apply to this Contract. The prefix PS indicates an amendment to SANS 1200. The letters and numbers following these prefixes respectively indicate the relevant Standardized Specification and clause numbers in SANS 1200 to which the variation or addition thereto applies.

PROJECT SPECIFICATIONS: PSA – GENERAL (SABS 1200A)

PSA 2 INTERPRETATIONS

PSA 2.3 DEFINITIONS

a) General

ADD THE FOLLOWING DEFINITIONS:

“General conditions: The General Conditions of Contract specified for use with this Contract and the special conditions of Contract as applicable.

Specified: As specified in the standardized specifications, the Drawings or the Project Specifications. Specifications shall have the corresponding meaning.”

b) Measurement and payment

REPLACE THE DEFINITIONS FOR “fixed charge”, “time-related charge” AND “value-related charge” WITH THE FOLLOWING:

“Fixed charge: A charge that is not subject to adjustment on account of variation in the value of the Contract amount or the Contract Time of Completion.

Time-related charge: A charge, the amount of which varies in accordance with the Time for Completion of the work, adjusted in accordance with the provisions of the Contract.

Value-related charge: A charge, the amount of which varies pro rata with the final value of the measured work executed and valued in accordance with the provisions of the Contract.”

PSA 3 MATERIALS

PSA 3.1 QUALITY

"All manufactured materials supplied shall be new materials unless the contrary is specified. All materials specified in accordance with SANS Specifications shall bear the SANS mark, whether so specified or not."

PSA 3.3 ORDERING OF MATERIALS

The quantities set out in the Schedule of Quantities have been carefully determined from calculations based on data available at the time and should therefore be considered to be approximate quantities only. Before ordering materials of any kind the Contractor shall check with the Engineer whether or not the scope of the work for which the materials are required is likely to change substantially. No liability or responsibility whatsoever shall be attached to the Employer for materials ordered by the Contractor except when ordered in accordance with written confirmation issued by the Engineer."

PSA 4 PLANT

PSA 4.1 SILENCING OF PLANT

REPLACE THE CONTENTS OF SUBCLAUSE 4.1 WITH THE FOLLOWING:

"The Contractor's attention is drawn to the applicable regulations pertaining to noise and hearing conservation, framed under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) as amended.

The Contractor shall at all times and at his own cost, be responsible for implementing all necessary steps to ensure full compliance with such regulations, including but not restricted to the provision and use of suitable and effective silencing devices for pneumatic tools and other plant which would otherwise cause a noise level in excess of that specified in the said regulations.

Where appropriate, the Contractor shall further, by means of temporary barriers, effectively isolate the source of such noise in order to comply with the said regulations."

PSA 5 CONSTRUCTION

PSA 5.1 SURVEY

PSA 5.1.2 Preservation and replacement of survey beacons and pegs subject to the Land Survey Act

DELETE THE WORDS "in the vicinity of boundaries" IN THE SECOND SENTENCE OF SUBCLAUSE 5.1.2 AND REPLACE THE WORDS "under the direction of" IN THE SAME SENTENCE WITH "in consultation and liaison with."

ADD THE FOLLOWING AFTER THE SECOND SENTENCE OF SUBCLAUSE 5.1.2:

"The Contractor and the Engineer shall record on the said list, their concurrence or disagreement (as the case may be) regarding the completeness and accuracy of the details recorded therein."

REPLACE THE THIRD SENTENCE OF SUBCLAUSE 5.1.2 WITH THE FOLLOWING:

"At the completion of the Contract, the Contractor shall expose all pegs that were listed at the commencement of the construction as being in order and the Contractor shall arrange with a registered Land Surveyor for the checking of the positions of all such pegs and the replacement of those that the Land Surveyor's check reveals have become disturbed or damaged. The Contractor shall, as a precedent to the issue of the Certificate of Completion, provide to the Engineer, a certificate from the registered Land Surveyor, certifying that all the pegs listed at the

commencement of construction in accordance with the provisions of this clause, have been checked and that those found to have been disturbed, damaged or destroyed have been replaced in their correct positions, all in accordance with the provisions of the said Act.

The costs of all checking, replacement and certification as aforesaid shall be entirely for the Contractor's account. This, with the provisions always that the Contractor shall not be held liable for the cost of replacement of pegs which:

- (a) cannot reasonably be re-established in their original positions by reason of the finished dimensions of the permanent works, and
- (b) the contractor can prove beyond reasonable doubt to the satisfaction of the Engineer, were disturbed, damaged or destroyed by others beyond his control."

PSA 5.3 PROTECTION OF EXISTING STRUCTURES

REPLACE "Machinery and Occupational Safety Act, 1983 (Act No 6 of 1983)" WITH "Occupational Health and Safety Act, 1993 (Act No 85 of 1993), as amended," AND INSERT THE FOLLOWING AFTER "(Act No. 27 of 1956)": "as amended."

PSA 5.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES

REPLACE THE HEADING AND THE CONTENTS OF SUBCLAUSE 5.4 WITH THE FOLLOWING:

PSA 5.4 LOCATION AND PROTECTION OF EXISTING SERVICES

PSA 5.4.1 Location of Existing Services

Before commencing with any work in an area, the Contractor shall ascertain the presence and actual position of all services which can reasonably be expected by an experienced and competent Contractor to be present on, under, over or within the Site.

Without in any way limiting his liability in terms of the Conditions of Contract in relation to damage to property and interference with services, the Contractor shall, in collaboration with the Engineer, obtain the most up-to-date plans as are available, showing the positions of services existing in the area where he intends to work. Neither the Employer nor the Engineer offers any warranty as to the accuracy or completeness of such plans and because services can often not be reliably located from plans, the Contractor shall ascertain the actual location of services depicted on such plans by means of careful inspection of the Site.

Thereafter, the Contractor shall, by the use of appropriate methodologies, carefully expose the services at such positions as are agreed to by the Engineer, for the purposes of verifying the exact location and position of the services. Where the exposure of existing services involves excavation to expose underground services, the further requirements of sub Clauses 4.4 of GCC 2015 and 5.1.2.2 of SANS 1200 D (as amended) shall apply.

The aforesaid procedure shall also be followed in respect of services not shown on the plans but which may reasonably be anticipated by an experienced Contractor to be present or potentially present on the site.

All services, the positions of which have been determined as aforesaid at the critical points, shall henceforth be designated as 'known services' and their positions shall be indicated by the Contractor on a separate set of drawings, a copy of which shall be furnished to the Engineer without delay.

As soon as any service which has not been identified and located as described above is encountered on, under, over or within the site, it shall henceforth be deemed to be a known service and the aforesaid provisions pertaining to locating, verifying and recording its position on the balance of the site shall apply. The Contractor shall notify the Engineer immediately when any such service is encountered or discovered on the Site.

Whilst he is in possession of the Site, the Contractor shall be liable for all loss of or damage as may occur to

- (a) known services, anywhere along the entire lengths of their routes, as may reasonably be deduced from the actual locations at which their positions were verified as aforesaid, due cognizance being taken of such deviations in line and level which may reasonably be anticipated, and
- (b) any other service which ought reasonably to have been a known service in accordance with the provisions of this clause.

The Contractor shall also be liable for consequential damage in regard to (a) and (b), whether caused directly by the Contractor's operations or by the lack of proper protection.

No separate payment will be made to the Contractor in respect of any costs incurred in preparing and submitting to the Engineer the Drawings as aforesaid. These costs shall be deemed included in the Contractor's other tendered rates and prices included in the Contract.

Payment to the Contractor in respect of exposing services at the positions agreed by the Engineer and as described above will be made under the payment items (if any) as may be provided for in the respective sections of the specifications pertaining to the type of work involved.

PSA 5.4.2 Protection During Construction

The Contractor shall take all reasonable precautions and arrange its operations in such a manner as to prevent damage occurring to all known services during the period which the Contractor has occupation and/or possession of the Site.

Services left exposed shall be suitably protected from damage and in such a manner as will eliminate any danger arising there from to the public and/or workmen, all in accordance with the requirements of the prevailing legislation and related regulations.

Unless otherwise instructed by the Engineer, no services shall be left exposed after its exact position has been determined and all excavations carried out for the purpose of exposing underground services shall be promptly backfilled and compacted. In roadways, the requirements of Subclause 5.9 of SANS 1200 DB should be observed. In other areas compaction is to be to 90% modified AASHTO density.

PSA 5.4.3 Alterations and Repairs to Existing Services

Unless the contrary is clearly specified in the Contract or ordered by the Engineer, the Contractor shall not carry out alterations to existing services. When any such alterations become necessary, the Contractor shall promptly inform the Engineer, who will either make arrangements for such work to be executed by the owner of the service or instruct the Contractor to make such arrangements himself.

Should damage occur to any existing services, the Contractor shall immediately inform the Engineer, or when this is not possible, the relevant authority, and obtain instructions as to who should carry out repairs. In urgent cases, the Contractor shall take appropriate steps to minimize damage to and interruption of the service. No repairs of telecommunication cables or electric power lines and cables shall be attempted by the Contractor.

The following list of contact telephone numbers is provided for:

Service	Authority	Contact Number
Water	CoE Water	(011) 999-7264
Sewer	CoE Sewer	(011) 999-7251
Communication	Telkom	(011) 845 4688
Electricity	Eskom	(011) 871-3060
Municipal Electricity	CoE Electrical	(011) 999 5587
Provincial Road	Gautrans	(012) 310-2200
Municipal Road	CoE Roads and Stormwater	(011) 999-1506
Fibre	DFA Open Access Network	(011) 202 4700

PSA 6 TOLERANCES

ADD THE FOLLOWING SUBCLAUSE TO CLAUSE 6:

PSA 6.4 USE OF TOLERANCES

No guarantee is given that the full specified tolerances will be available independently of each other, and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work.

Except where the contrary is specified, or when clearly not applicable, all quantities for measurement and payment shall be determined from the 'authorised' dimensions. These are specified dimensions or those shown on the drawings or, if changed, as finally prescribed by the Engineer, without any allowance for the specified tolerances. Except if otherwise specified all measurements for determining quantities for payment will be based on the 'authorised' dimensions.

If work is constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the calculation of quantities will be based on the 'authorised' dimensions, regardless of the actual dimensions to which the work has been constructed.

When the work is not constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the Engineer may nevertheless, at his sole discretion, accept the work for payment. In such cases no payment shall be made for quantities of work or material in excess of those calculated for the 'authorised' dimensions, and where the actual dimensions are less than the 'authorised' dimensions minus the tolerance allowed, quantities for payment shall be calculated based on the actual dimensions as constructed."

PSA 7 TESTING

PSA 7.2 APPROVED LABORATORIES

REPLACE THE CONTENTS OF SUBCLAUSE 7.2 WITH THE FOLLOWING:

"Unless otherwise specified in the relevant specification or elsewhere in the Project Specification, the following shall be deemed to be approved laboratories in which design work, or testing required in terms of a specification for the purposes of acceptance by the Engineer of the quality of materials used and/or workmanship achieved, may be carried out:

- (a) Any testing laboratory certified by the South African National Accreditation Systems (SANAS) in respect of the nature and type of testing to be undertaken for the purposes of the Contract;
- (b) Any testing laboratory owned, managed or operated by the Employer or the Engineer;
- (c) Any testing laboratory established and operated on the Site by or on behalf of the Employer or the Engineer;
- (d) Any other laboratory that the Engineer approves in his absolute discretion."

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.1 MEASUREMENT

PSA 8.1.2 Preliminary and General Item or Section

PSA 8.1.2.1 Contents

REPLACE THE LAST SENTENCE OF SUBCLAUSE 8.1.2.1(b) WITH THE FOLLOWING:

"Separate items will be scheduled to cover the fixed, value-related and time-related components of the Contractor's preliminary and general costs."

PSA 8.2 PAYMENT

PSA 8.2.1 Fixed-Charge and Value-Related Items

REPLACE THE CONTENTS OF SUBCLAUSE 8.2.1 WITH THE FOLLOWING:

PSA 8.2.1.1 Fixed-charge Items

Payment of fixed charges in respect of item 8.3.1 will be made as follows:

- (a) TWENTY-FIVE PER CENT (25%) for providing sureties;
- (b) TWENTY-FIVE PER CENT (25%) for providing insurance of the works and plant;
- (c) TWENTY-FIVE PER CENT (25%) for providing third party and public liability insurance; and
- (d) TWENTY-FIVE PER CENT (25%) for providing compliance to Workmen's Compensation Act and COIDA.

No adjustment will be made to the sum tendered in respect of item 8.3.1 should the value of the works finally executed or the time for completion vary in any way from that specified in the tender."

PSA 8.2.2 Time-Related Items

REPLACE THE CONTENTS OF SUBCLAUSE 8.2.2 WITH THE FOLLOWING:

"Subject to the provisions of sub clauses 8.2.3 and 8.2.4, payment under item 8.4.1 (time-related item) will be made monthly in equal amounts, at the monthly tendered rates, provided always that the total of the monthly amounts so paid for the item is not out of proportion to the value of the progress of the Works as a whole."

PSA 8.2.2.1 Standing time costs due to riot, etc. for the Contractor's total operation (Provisional Quantity)
.....Unit: Sum Per Working Day

The unit for measurement shall be a working day, and a working week shall be held to consist of five working days and a working day of 9 hours, unless otherwise agreed upon. The sum per working day tendered under this time-related item shall represent that part of the Contractor's costs for standing time of whatever nature.

This payment item will only be applicable to delays in the execution of the Works and additional costs which in the opinion of the Engineer are incurred as a result of riot, commotion, politically motivated sabotage and acts of terrorism, or disorder outside the control of the Contractor.

The provision of this clause shall in no way prejudice the right of the Employer or the Contractor to terminate the Contract under the provisions of Clause 9.2 and 9.3 of the General Conditions of Contract 2015.

PSA 8.3 SCHEDULED FIXED-CHARGE AND VALUE-RELATED CHARGE

ADD THE FOLLOWING NEW SUBCLAUSES TO CLAUSE 8.3

PSA 8.3.2.1 FACILITIES FOR ENGINEER

The Contractor is to provide one furnished site office for the use of the Engineer and his representatives to the requirements of SANS 1200 AB 3.2 or similar approved. A monthly time-related provisional sum has been included in the Schedule of Quantities to cover the rental costs of accommodation for the Engineer. These amounts shall be payable by the Contractor to the Engineer according to the provisional sums allowed and upon receipt of a tax invoice for such amounts.

The Contractor shall provide and maintain one carport with waterproof roofing for the duration of the Contract for the use of the Engineer. The floor shall consist of crushed aggregate to alleviate dust and muddy conditions or similar approved.

a) Furnished Office

The Contractor shall provide, furnish and equip one or more offices (as scheduled) for the use of the Engineer. Each office shall be weatherproof, shall have a wooden boarded floor that is at least 150 mm above the ground, and

shall be provided with a ceiling and a lining to the walls, or equivalent insulation, with an acceptable type of door with a secure lock, and two opening windows of glazed. Each office shall be well ventilated and shall be so insulated as to provide comfortable working conditions.

Office building shall be painted with an approved paint after erection and the paintwork shall be maintained during the contract period. Each door shall be provided with a lock and two keys.

The sitting of all offices shall be to the Engineer's satisfaction and shall be decided upon in consultation with him/her and confirmed in writing before erection.

The offices shall comply with the following requirements.

Dimensions	Type 1 Office
Minimum floor area	30 m ²
Minimum window area	4.0 m ²
Minimum window area opening	2.4 m ²
Minimum clear height	2.5 m
Shaded parking for vehicles	2

Furniture and Equipment

Each office shall be equipped with the following:

Office desk with a surface area of at least 1.5m² with at least 3 drawers one of which can be locked.

Two office chairs.

One high back office chair.

A lockable upright steel cabinet with three shelves or a steel filing cabinet with four drawers

Refrigerator (maximum 150 litres).

Microwave oven (maximum 30 litres).

Sufficient racks and hangers for hanging contract drawings. The hangers shall be of the "Barhold" type, with one hanger to five drawings.

Double 80-watt fluorescent light fittings complete with ballast and tubes (2 per Type 1 office).

In addition to the above the Type 1 office shall be equipped with the following:

Conference table large enough to accommodate twelve people and have an area of at least 15m².

Fifteen office chairs.

The Contractor shall also supply a toilet for the exclusive use of the Engineer.

The Contractor must provide basic survey instruments: dumpy level, tripod stand and staff.

On completion of the Works, ownership of the buildings, furnishings and equipment shall revert to the Contractor who shall remove them from the Site.

b) Camera

A digital camera should be provided for the Engineer Representative for the duration of the contract. The camera should operate with an ISO or Android status and be able to take pictures and connect to the internet. The camera shall have an image sensing capacity of at least 12 megapixels. Ownership of the camera will transfer to the contract upon issue of the completion certificate. The contractor will maintain insurance cover for the camera for the duration of the contract.

c) Name Board

Two (2) nameboards will be ordered by the Contractor according to the Engineer's specifications, complete with dimensions, wording and specifications as prescribed in DWG No COE/01/VC/11, within one month from the commencement date. The Contractor shall be responsible to transport the name board to site and to erect it at the indicated position on suitable supporting posts. The Contractor shall remove the name board completely from site after construction is completed, before the last payment certificate shall be approved.

d) Survey Equipment

The Contractor shall provide the following survey equipment on the site from the commencement to the completion of the works, which shall also be available for the use of the Engineer and his representatives.

i. 1 X 100m Steel measuring tape;

ii. Steel pegs, shovels, picks etc. which the Engineers Representative may require during the contract;

- iii. Equipment to verify setting out of works as per Engineer's request.

PSA 8.3.2.2 FACILITIES FOR CONTRACTOR (FIXED-CHARGED RELATED ITEMS)

- (i) Water supply

This item will include water for Construction and consumption of all workers on site, full application fee amount for connection in which the Contractor will apply for.

- (ii) Electric Power

This item will include supply of electricity either by generator or fixed electrical connection for Construction and consumption of all workers on site, full application fee amount for connection in which the Contractor will apply for.

PSA 8.3.5 Additional Contractual Obligations

PSA 8.3.5.1 OHS Act Obligations Unit: Sum

The sum shall cover the full compensation and fixed costs for the compliance with the Occupational Health and Safety Act (85 of 1993), Construction Regulations 2017 and all the requirements stipulated in the Employer's Health and Safety Specifications."

PSA 8.3.5.2 EMP Obligations Unit: Sum

The sum shall cover the full compensation and all fixed costs for compliance with the requirements of The Employer's Environmental Management Plan.

PSA 8.4 SCHEDULED TIME-RELATED ITEMS

ADD THE FOLLOWING NEW SUBCLAUSES TO CLAUSE 8.4. The unit of measurement for all sub-items under PSA 8.4 shall be amended from "sum" to "months". The full amount for this item will be compensated for the duration of construction should the contractor complete the works within the month quantity shown or the tendered completion period of the contractor or earlier. The contractor will be paid extra at the monthly rate tendered for any extension of time granted with additional time related P&G items.

PSA 8.4.2 OPERATION AND MAINTENANCE OF FACILITIES ON SITE FOR THE DURATION OF CONSTRUCTION, EXCEPT WHERE OTHERWISE STATED

The tendered amounts for the fixed-charge items in the General Section of the Schedule of Quantities would not be subject to any variation if the actual value of the work done exceeds or falls short of the accepted tendered amount within the limit stated in Clause 6.11 of the General Conditions of Contract (2015).

PSA 8.4.2.1 FACILITIES FOR ENGINEER (TIME RELATED ITEMS)

- a) **Furnished Office**
The Contractor will be responsible for maintaining the condition of the Engineer Office monthly as specified in PSA 8.3.2.1.a.
- b) **Digital Camera**
The Contractor is responsible for maintaining the condition of the camera as specified in PSA 8.3.2.1.b.
- c) **Name boards**
The Contractor will be responsible for maintaining the condition of the name boards monthly as specified in PSA 8.3.2.1.c.
- d) **Survey Equipment**
The Contractor will be responsible for maintaining the condition of the survey equipment monthly as specified in PSA 8.3.2.1.d.

PSA 8.4.2.2 FACILITIES FOR CONTRACTOR (TIME RELATED ITEMS)

e) Water supply, electric power

Where the contractor supplies water and electricity from City of Ekurhuleni sources under formal application for such services, the contractor will be compensated at the tendered rate less the CoE utility bill amount on a monthly basis. The contractor will in the latter case not be expected to settle the CoE utility bills separately.

PSA 8.4.6 Additional Obligations

PSA 8.4.6.1 OHS Act Obligation.....Unit: Month

The sum shall cover the full compensation and all time related costs for the duration of the contract, for the compliance with the Occupational Health and Safety Act (85 of 1993), Construction Regulations 2017 and all the requirements stipulated in the Employer's Health and Safety Specifications. The cost shall include the salary for a full time OHS Officer for the project. As a minimum requirement the OHS Officer needs to be professionally registered at SACPCMP.

PSA 8.4.6.2 Security services costs Unit: Month

The sum shall cover the full compensation and all costs for a sufficient 24 hour guarded services for the duration of the contract.

PSA 8.4.6.3.a Community Liaison Officer Unit: Month

The rate shall cover full compensation and all costs payable on a monthly basis, to provide a full time suitable experienced Community Liaison Office for the duration of the contract. The rate shall also include the CLO cellphone airtime.

PSA 8.4.6.4 EMP Compliance Unit: Month

The sum shall cover the full compensation and all time related costs for the duration of the contract, for the compliance with the Environmental Management Plan, and all the requirements stipulated in the plan.

PSA 8.5 PROVISIONAL SUMS

AMEND SUBCLAUSE 8.5.b)1 AND ADD THE FOLLOWING ITEMS:

- i) Relocation of existing services.....Unit: Provisional Sum
- ii) Control tests by independent laboratory.....Unit: Provisional Sum
- iii) Provision of photographic records.....Unit: Provisional Sum
- iv) CLO and CSO appointed by Employer.....Unit: Provisional Sum
- v) Specialist underground services detection.....Unit: Provisional Sum
- vi) Operator and labor training.....Unit: Provisional Sum
- vii) Notice and warning to consumers.....Unit: Provisional Sum
- viii) Conforming to requirements of EPWP.....Unit: Provisional Sum
- ix) Air time for Engineers mobile phone.....Unit: Provisional Sum

The Contractor is responsible for both the cost of normal testing as described in the Project Specifications and for the cost of any additional test that indicates that the Specifications have not been complied with." These sums will be paid to the Contractor in equal monthly amounts."

Provisional Sums has been allowed for the supply and installation of pipeline cathodic protection by a nominated subcontractor. A separate section in the schedule of quantities has been allowed for the installation of electrical equipment by a nominated subcontractor. These subcontractors will be appointed as it is deemed necessary by means of a separate tender process. The main contractor will be allowed to charge a percentage (%) fee as a Contractors' Charge on the above mentioned.

PSA 8.7 DAYWORKS

ADD THE FOLLOWING NEW CLAUSES:

PSA 8.7.1 Scope

This section covers the method of measurement and payment for work carried out on a day work basis.

PSA 8.7.1.1 General Requirements

Work will be classified as day work only if the Engineer considers no other rate in the Bill of Quantities appropriate for payment purposes.

An instruction regarding all work to be carried out under day work in terms of Clause 6.5 of the General Conditions of Contract 2010 will be issued at the discretion of the Engineer. Some or all of the items priced under day work in the Bill of Quantities may possibly not be required for this Contract.

Before ordering any material, the Contractor shall submit quotations to the Engineer for his approval and shall submit such receipts or vouchers to the Engineer as may be necessary for proving the amount claimed.

PSA 8.7.1.2 Measurement and Payment - Day works

The day work rates submitted for vehicles and construction equipment, in the Bill of Quantities shall be a hire charge for the use of the vehicle and driver or constructional plant/equipment and operator (excluding VAT) and shall apply only to vehicles and construction equipment approved in writing by the Engineer. The rate shall include for maintenance, fuels and oils and other operating costs, establishment, insurance and other contingency costs relating to the running of the vehicle, plant or equipment. (This is all defined as the wet rate).

Where there is ambiguity between the power developed at the flywheel and mass of a machine, the power shall govern the measurement category.

The Contractor and the Engineer will agree on the method of recording the working hours prior to the commencement of the work. Any long period of idling at any one time which in the opinion of the Engineer or his representative is beyond that required for normal operating conditions will not be paid for as working time. Non-working hours for any reason shall not be measured for payment.

The ten percent allowed for overheads etc. as per Clause 6.5.1.2.3 of the General Conditions of Contract 2015 shall include full compensation for all administrative costs, supervision, overheads, liabilities and obligations related to the running of the vehicles, constructional plant and equipment. The tendered percentage shall also include for profit and shall be subject to the Contract Price Adjustment factor laid down in the Contract Data.

Skilled workers will be defined as all construction supervisors. Semi-skilled will be all the contractor's employees reporting to the skilled workers. Unskilled will be all targeted labourers.

PSA 8.8 TEMPORARY WORKS

PSA 8.8.4 Existing Services

AMEND THE SUB CLAUSE AS FOLLOWS:

PSA 8.8.4 a) Excavate by hand in soft material to expose existing services.....Unit: m3

The rate shall cover the cost for removal of premix or other surfacing where necessary, excavating in all materials, shoring, backfilling, compaction and reinstatement of surfaces except for asphalt

PROJECT SPECIFICATIONS: PSAB – ENGINEER’S OFFICE
(Applicable to SABS 1200 AB - 1986)

PSAB 1 SCOPE

PSAB 1.1 Sub-Clause 1.1

Delete the second sentence and substitute the following:

It covers a scheduled number of identical offices and allows for mobile, semi-mobile and prefabricated accommodation.

PSAB 2 INTERPRETATIONS

PSAB 2.1 Supporting Specifications

Delete the Sub-Clause (b) and substitute the following:

(b) SABS 1200 AA.

PSAB 2.3 Definitions

Delete the first two lines and substitute the following:

For the purposes of this specification the definitions give in SABS 1200 AA shall apply:

PSAB 3 MATERIALS

PSAB 3.1 Nameboards

In the 3rd line delete “South African Institution of Civil Engineers” and substitute with “Consulting Engineers South Africa”.

PSAB 3.2 Office Building(s)

Delete the first sentence and substitute the following:

"The Contractor is not required to provide an office for the Engineer. The Engineer will share the contractors office for the purposes of monthly meetings and adhoc use when visiting the site".

PSAB 4 PLANT

PSAB 4.1 Telephone

Delete the Sub-Clause and substitute the following:

The Contractor is not expected to provide any communications devices for the Engineer or the Engineers Representative..

PSAB 4.2 Survey Equipment (New Sub-Clause)

Add new Sub-Clause:

The Contractor shall provide the following survey equipment on the Site from the commencement to the completion of the Works:

- One automatic reading engineer's level plus tripod;
- One levelling staff (5 m long, 1 cm graduations);
- One staff angle bubble;
- One metal change-point for levelling;
- One separate plumb-bob;
- One spirit level (one metre long);
- One hammer (2 kg) with steel or wooden pegs as necessary;
- One 50 m steel tape; and
- One 5,0 m (or longer) retractable steel tape.

The equipment may be shared by arrangement between the Contractor and the Engineer or his representative on Site. The Contractor shall keep the equipment continuously insured against any loss, damage, or breakage and he shall indemnify the Engineer and the Employer against any claims in this regard. Upon completion of the Works the survey equipment as listed above shall revert to the Contractor.

The Contractor shall maintain the equipment in good working order and keep it clean until the completion of the Works.

PSAB 4.4 Computer (New Sub-Clause)

Add new Sub-Clause:

The Contractor shall provide an A4 printer/scanner/copier, of approved manufacture and of standard acceptable to the Engineer, for the use of the Engineer's Representative and his/her assistants for the duration of the Contract. The Contractor shall keep this equipment continuously and comprehensively insured and shall indemnify the Employer and the Engineer against any claims in this regard. The Contractor shall maintain this equipment in good working order until the completion of the Works, whereupon ownership of said hardware and software shall revert to the Contractor.

PSAB 5 CONSTRUCTION

PSAB 5.2 Engineer's Office (Refer SANS 1921-1 Clause 4.14)

Add to the Sub-Clause:

"The toilet facilities provided for the use of the Engineer or his representative(s) shall be maintained in a hygienic and sanitary condition and shall be removed on completion of the Works. The facilities provided shall conform to the local health authority's requirements as applicable and the Contractor shall pay all sanitary fees and charges."

PSAB 5.4 Telephone

Add to the Sub-Clause:

"The Engineer's Representative and his staff will each pay their own cellular and data accounts."

PSAB 5.5 Survey Assistants

Delete the first sentence and substitute the following:

The Contractor shall make available to the Engineer two suitably educated labourers for use on and about the site on survey and other work directed by the Engineer at all reasonable times.

PSAB 5.6 Computer Equipment

Add to New Sub-Clause:

"The Contractor shall ensure that adequate supplies of consumables (paper and ink cartridges) are available on site at all times.."

PSAB 8 MEASUREMENT AND PAYMENT

PSAB 8.1 Scheduled Items

Delete the 1st sentence and substitute the following:

Items will be scheduled in terms of Sub-Clauses 8.3.2 & 8.4.2 of SABS1200 AA.

PSAB 8.2.1 Fixed and Time-related Charges

Delete the 1st sentence and substitute the following:

The terms of Sub-Clause 8.2 of SABS 1200 AA shall apply.

PROJECT SPECIFICATIONS: PSC – SITE CLEARANCE
(Applicable SABS 1200 C - 1980 As Amended 1982)

PSC 3 MATERIALS

PSC 3.1 Disposal of Material

Delete the first three sentences "Material obtained.....by the Engineer" of the Sub-Clause and substitute the following:

Material obtained from clearing must be disposed of offsite by the Contractor at his expense. Disposal of combustible material by burning will not be permitted. The Contractor will be held responsible for observing the by-laws and regulations of the local authority.

PSC 5 CONSTRUCTION

PSC 5.2.3.2 Individual Trees

Delete the second sentence of the Sub-Clause and substitute the following:

The amount of the penalty payable by the Contractor for the removal or damage by him of a tree designated for preservation shall be R1000 for each tree having a girth of less than 1000 mm and R2000 for each tree having a girth of 1000 mm or more.

PSC 5.3 Clearing

Add New Sub-Clauses

PSC 5.3.1 Restoration of Fences to Servitude Boundary

Where existing fencing is encroaching on the sewer pipeline servitude, such fencing shall be removed prior to construction and re-erected to a condition no worse than that pertaining prior to the removal, on the formal cadastral boundary all as indicated on the respective land plans. For the period that the fence or wall is dismantled and not yet re-erected, the Contractor shall erect, at the end of each day's operations, a temporary fence to close the gap in the existing fence or wall and shall maintain adequate security to prevent use of the temporary fence as a point of access by unauthorised persons.

PSC 5.3.2 Temporary Fencing Closures

Where the sewer pipeline route crosses an existing fence or wall, a section of fencing or wall not exceeding 10,0 m in length may be removed temporarily during construction and thereafter reinstated to a condition no worse than the original condition as soon as the pipeline has been installed and backfilled in the immediate vicinity of the crossing. For the period while the existing fence or wall is dismantled, the Contractor shall erect, at the end of each day's operations, a temporary fence to close the gap in the existing fence or wall and shall maintain adequate security to prevent use of the temporary fence as a point of access by unauthorised persons.

PSC 5.3.3 Demarcation Fencing

Demarcation of the sewer pipeline construction servitude will be by means of wooden stakes. These stakes will be at least 1 m high, painted white and placed at least every 15 m on either side of the working area, in all areas where works are occurring. The stakes shall be moved as required as the project progresses.

The Contractor shall also supply, install and maintain temporary fencing on both sides of the working area (servitude) and around the perimeter of all agreed additional working areas during construction for prevention of unauthorised access and shall remove on completion of the works. The fencing shall comprise 1,8 m high Bonnox 4 x 4 Mesh fencing, Bonnox pattern 1972/4, with straining posts and straining wires as required and according to supplier's directions and with mesh spacing not exceeding 100 mm in both the vertical and horizontal directions. Chevron tape shall be interwoven in a zig zag pattern from the top to the bottom of the fence thereby clearly marking off the working area.

Gates shall be provided by the Contractor at all points as required for construction access purposes. The Contractor shall be held responsible for the control of access at these gates at all times, as well as to the worksite during removal and re-erection of fencing. No other opening in the fence shall be permitted and the Contractor shall be responsible for monitoring the fencing on a daily basis and repairing any such opening within the same day that it is detected. Notices in two official languages (English and isiZulu/Xhosa) shall be attached to the fence where appropriate to indicate that the site is for personnel employed on the Contract only and that unauthorised entry is forbidden.

PSC 5.3.4 Child Proof Barrier

In proximity to residential areas, and wherever ordered, the Contractor shall provide and fix to the demarcation fencing described in PSC 5.3.3 above, approved and substantial plastic square mesh to act as an additional childproof barrier and shall remove it on the completion of the works."

PSC 5.4 Grubbing

In the fourth line delete "200 mm" and substitute "300 mm".

PSC 5.6 Conservation of Topsoil

Add to the Sub-Clause:

"All topsoil shall be conserved for later use by stockpiling clear of the working area".

PSC 5.7 Landscape, Preservation and Conservation of Flora

Add to the Sub-Clause:

Where pipelines are to be laid in sensitive areas, the cleared width is not to exceed 2 m. After completion of the pipelaying, the natural bush is to be re-instated.

PSC 5.8 Demolition of Structures

New Sub-Clauses

PSC 5.8.1 Removal and Re-Erection of Structures

Where the Contractor is directed to dismantle structures to facilitate construction and thereafter to re-erect the same structures, the structure shall be erected at the same location, or such other location as may be required by the owner within the same property, using the same or similar materials as those set aside when removing the structure. The acceptance of the work by the Engineer and certification for payment shall be subject to the Contractor submitting to the Engineer documentary evidence of the owner's satisfaction with the re-erected structure, the over-riding consideration being that it shall be in a condition no worse than that pertaining prior to its removal.

The tendered rates shall include for the provision of a detailed photographic and written record of all of the affected structures before dismantling commences and following re-erection.

PSC 5.8.2 Demolition of Building Structures

Where the Contractor is directed to demolish structures, the Contractor shall provide a Method Statement for the approval of the Engineer. Entering upon the premises for the purpose of the demolition shall not commence before the Contractor has received a release form, duly authorised by representatives of the Employer and the Engineer, in which any special conditions applicable to the demolition are documented."

PSC 5.9 Remove, Temporarily Store and Replace Road Ancillaries

New Sub-Clause

Where the line of the trench crosses existing road ancillaries such as precast concrete kerbs and road signs, the Contractor will be required to dismantle, lift, store and replace the ancillary as directed by the Engineer. In-situ kerbs shall be broken out between neat cuts and after the sewer pipeline has been installed, reinstated to the satisfaction of the Engineer....Unit : N° or m

PSC 8 MEASUREMENT AND PAYMENT

PSC 8.2 Scheduled Items

PSC 8.2.10 Remove Topsoil to a Nominal Depth of 150 mm and Stockpile

Delete from the sub-clause heading the words: 'to a Nominal Depth of 150 mm'

Add to the Sub-Clause:

The topsoil, where approved by the Engineer, shall be conserved for later use by stockpiling clear of the working area.

PSC 8.2.11 Restoration of Fences to Servitude Boundary Unit: m

New Payment Item:

Separate payment will be made for dealing with fences in the manner specified in PSC 5.3.1 above as scheduled.

PSC 8.2.12 Temporary Fencing Closures.....Unit: m

New Payment Item:

Separate payment will be made for dealing with fences in the manner specified in PSC 5.3.2 above including re-instatement as scheduled.

PSC 8.2.13 Removal and Re-Erection of Structures.....Unit: No

New Payment Item:

Separate payment will be made for removing and re-erecting structures in the manner specified in PSC 5.8.1 above as scheduled, including the costs of photographic and written records.

PSC 8.2.14 Demolition of Building Structures.....Unit: No

New Payment Item:

Separate payment will be made for demolishing structures in the manner specified in PSC 5.8.2 above as scheduled, including the cost of removal of rubble to an approved spoil site, backfilling any excavations and compacting to 90% modified AASHTO density and shaping the ground level in line with the natural terrain.

PSC 8.2.15 Demarcation Fencing.....Unit: m

New Payment Item:

Payment will be made per linear metre of temporary fencing installed in the manner specified in PSC 5.3.3 above, and the rate shall include for maintaining such fencing in good condition, including daily surveillance and repair, throughout the duration of construction and removal on completion of the works.

PSC 8.2.15 Childproof Barrier.....Unit: m

New Payment Item:

Separate payment will be made as an extra-over for the installation of plastic mesh on the demarcation fencing to provide a childproof barrier in the manner specified in PSC 5.3.4 above and the rate shall include for maintaining such barrier in good condition throughout the duration of construction so as to serve its intended purpose and removal on completion of the works."

PROJECT SPECIFICATIONS: PSDA - EARTHWORKS (Small Works)
(Applicable to SABS 1200 AA – 1986)

PSDA 5.1.1 Construction: Precautions – Safety

PSDA 5.1.1.1 Barricading and Lighting

ADD THE FOLLOWING SENTENCE:

"(c) Trenches shall NOT be left open for periods longer than necessary. Refer PS 10.3 & PS 12)"

PSDA 5.1.1.2 Safeguarding of Excavations

ADD THE FOLLOWING SENTENCE:

"(g) Manholes/Chambers/trenches may not be left open unattended or without barricades."

PSDA5.1.1.3 Explosives

No blasting will be allowed without the written approval from the Engineer. Rock, boulders or concrete will be removed by means of pneumatic pave breakers, Hydraulic Pecker or chemical rock splitting agents. Blasting to be suggested to the Engineer as an absolute last means.

PSDA5.1.3 Existing Services

Before any bulk excavation, the Contractor shall obtain as-built information from all services authorities to ascertain where service are located and subsequently dig trial trenches by hand to expose services where required.

PSDA5.2 METHODS & PROCEDURES

PSDA5.2.6 Transport for Earthworks

Freehaul & Overhaul

All haulage shall be regarded as freehaul. No overhaul shall be applicable to this Contract. Rates and amounts tendered shall be deemed to have allowed for all transport and all movement by the Contractor.

PSDA6 TOLERANCES

PSDA6.2 PERMISSIBLE DEVIATIONS

In general, unless otherwise specified, a degree of accuracy II shall prevail, which shall be regarded as 3 times more accurate than a degree of accuracy III.

PSDA8 MEASUREMENT AND PAYMENT

PSDA8.3 SCHEDULED ITEMS

All rates tendered shall include for the barricading, shoring, lights, road signs and safety measures required by the relevant authorities.

PSDA8.3.1b Excavate in all materials and use for embankment or backfill or dispose as ordered.

ADD THE FOLLOWING:

"Note: This item includes for restricted excavation or backfilling.

1 Excavate and stockpile or dispose: Unit:m³

The rate shall cover all costs to excavate in all materials or dispose as ordered. Cost & time for over excavation will be for the Contractor's account.

2 Backfill or Embankment:.....Unit:m³

The rate shall cover all costs for backfill or use for embankment of all materials, compaction to 93% MOD-AASHTO density at OMC in layers not exceeding 150mm in thickness. The rate also to include for sloping and finishing the final surfaces to the satisfaction of the Engineer. Cost & time for over excavation and thus added backfilling will be for the Contractor's account."

PSDA8.3.1c Extra over PSDA 8.3.1b for

Hard Rock excavation including concrete Unit: m³

The rate shall cover the additional cost to excavate in the above.

PSDA8.3.9 Areas subject to traffic loads (motor vehicles)

ADD NEW CLAUSE:

"Soilcrete : Unit: m³

The rate shall cover all costs to supply, mix, backfill, compact, finish etc to construct soilcrete layers as specified in Particular Specification PE9."

PSDA8.3.10 Extra Over 8.3.1(Excavations): Finishing

ADD THE FOLLOWING:

"Reinstate surfaces complete with all courses to the Particular Specification PE11

KEEP A PHOTOGRAPHIC RECORD OF BEFORE AND AFTER.

- a. Asphalt 35mm minimum or more to match existing..... Unit: m²
- b. Paving to match existing.....Unit: m²
- c. Reinstate kerbing Unit: m

The rate shall cover all costs to comply with Particular Specification PE11."
PROJECT SPECIFICATIONS: PSDB: EARTHWORKS (PIPE TRENCHES)
(Applicable to SABS 1200 DB - 1989)

PSDB 3 MATERIALS

PSDB 3.1 Classes of Excavation

Add to the Sub-Clause:

"Notwithstanding the provisions of Sub-clause 3.1, the materials excavated other than hard rock shall not be classified for purposes of measurement and payment. The unit rate for excavation shall cover excavation in all materials other than hard rock and where scheduled separately boulders classes A and B (as specified in SABS 1200 DA sub-clauses 3.1.2(d) and 3.1.2(e))."

PSDB 3.3 Selected Granular Material
(for bedding material (padding) for steel pipes see PSLB 3.3)

PSDB 3.4 Selected Fill Material

Delete the sentence "The requirements..... shall apply" and replace with:

"All material up to the underside of backfill shall be measured as selected granular. The requirements for bedding material (padding) for steel pipes is given in PSLB 3.3."

PSDB 3.5(a) Backfill Material

In the third line delete "150 mm" and replace with "100 mm".

PSDB 3.5(b) Backfill Material

In the second line delete "PI not exceeding 12" and substitute "PI not exceeding 6".

PSDB 3.5(c) Cement Stabilised Backfill

Add the following new Sub-Clause:

Where scheduled, or directed by the Engineer, backfill shall be stabilised with 8% cement by mass. The backfill material shall have a plasticity index not exceeding 10 and all material must pass through a sieve of aperture size not exceeding that specified in SABS 1200 LB, Sub-Clause 3.2, as amended.

The dry materials shall first be mixed in a concrete mixer thereafter sufficient water is to be added to produce the stiffest consistency available for placing and compacting with vibrators.

PSDB 3.6 Materials for Reinstatement of Roads and Paved Areas

Delete the Sub-Clause and replace with:

Material used in the reinstatement of roadways shall fall into the following relevant categories:

(a) Foundation material recovered from the excavation of trenches across existing roadways which, if so instructed by the Engineer, shall be set aside and re-used as sub-base material.

(b) New material which shall conform to the requirements of:

Clause 3.2.1 of SABS 1200 ME for the Subbase;
Clauses 3.2 and 3.3 of SABS 1200 MF for the Basecourse;
Clause 3.2.2 of SABS 1200 ME for Gravel Wearing Course; and
Clause 3 of SABS 1200 MH for the asphalt surfacing

PSDB 3.7 Selection

Delete the second sentence and replace with the following:

The Contractor is not required to use selective methods of excavating but shall, if so instructed by the Engineer, screen or otherwise treat excavated material in order to produce material suitable for the bedding cradle or the bedding blanket.

PSDB 4 PLANT

PSDB 4.1 Excavation Equipment

In the first line delete "The Contractor" and substitute: "In sections deemed to be excavated by mechanical means, the Contractor"

Add to the Sub-Clause:

Should any portion of a pipe trench exceed the specified depth, the Contractor will be held responsible for any additional costs which may arise as a result of such over-excavation. Concrete filling or imported compacted fill may be ordered by the Engineer to be placed below the bottom of the trench.

PSDB 5 CONSTRUCTION

PSDB 5.1 Precautions

PSDB 5.1.2.3 Sloping Ground

Delete the Sub-Clause and replace with:

The Contractor shall be responsible throughout the duration of the Contract, inclusive of the Defects Liability Period, for the provision of all soil erosion preventative measures necessary to protect the trenches, pipeline(s) and land utilised by the Contractor during the Contract from any adverse effects of soil erosion, settlement, scour, etc., resulting from the construction of the Works.

Cross embankments, generally extending across the full width of the working strip, consisting of low earth mounds shaped to rounded form and so oriented as to have a fall of 1% along their length, shall be constructed with compacted material having a minimum density of 90% modified AASHTO density and minimum dimensions and maximum spacings dependent on the slope of the ground along the length of the pipeline, as indicated in the following table:

Slope of Ground	Minimum Height	Minimum Base Width	Maximum Spacing
0% - 2%	No cross-embankments required		
2% - 5%	300 mm	1,2 m	55 m
5% - 10%	300 mm	1,2 m	40 m
10% - 15%	375 mm	1,5 m	30 m
Greater than 15%	450 mm	1,7 m	20 m

The top width of all cross-embankments shall be no less than 300 mm.

The height of the cross-embankments for a distance of 1 metre on either side of the trench centreline shall be raised 150 mm above the remainder of the cross-embankment to allow for settlement. In order to form a satisfactory drainage channel upstream of each cross-embankment (at a slope of 1%) the crown over the backfilled trench shall be removed for a distance of 0,5 m upstream of the cross-embankment.

Cross-embankments shall be constructed to the same minimum standards and dimensions indicated above wherever artificial slopes have been formed on the working strip or other areas used during construction and, with the approval of the Engineer, are permitted to be so left.

Payment will be made for the construction of cross-embankments in accordance with Sub-Clause 8.3.4(c), provided construction thereof has been either ordered or approved by the Engineer prior to the commencement of such construction.

PSDB 5.1.2.4 Cross-Walls in Trenches (New Sub-Clause)

Add new Sub-Clause:

In steeply sloping trenches (longitudinal slope > 15 %) and where otherwise ordered by the Engineer, the Contractor shall place sacks of earth as sack breakers or cross walls around and above the pipe up to ground level, prior to backfilling, as a soil erosion measure. Such sacks shall be filled with selected material free of stones in excess of 50 mm maximum dimension. One sack breaker shall consist of these sacks packed tightly against the trench bottom, pipe and actual trench sides, and against each other to form a solid cross wall at least 0,5 m thick from the bottom of the trench to the surface.

Where required, an item will be included in the Bill of Quantities to cover the cost of the supply, installation and maintenance of sack breakers.

PSDB 5.2 Minimum Base Widths

Add to the Sub-Clause:

Trench sides shall be as near vertical as possible in order to minimise the quantity of backfill material required and to avoid possible difficulties where pipelines have to be installed parallel to existing services, fences, hedges, etc. and to minimise the loading on the pipe.

The base width for trenches for cables, ducts and unbedded flexible continuous piping, of external diameter less than 125 mm laid at a depth not exceeding 1,5 m, shall be equal to the external diameter of the cable, duct or pipe, plus a side allowance of 200 mm on either side.

PSDB 5.4 Excavation

Add to the Sub-Clause:

"Except where otherwise specified, trenches shall be of such depth as to result in a minimum cover over the pipes of 800 mm except at road-crossings where the minimum cover over the pipes shall be 1 000 mm.

Where the pipe trench crosses surfaced roads, the Contractor shall neatly cut two parallel grooves into and through the "black top" before excavating between the grooves. The grooves are to be set back at least 200 mm from the edge of the excavation face to prevent raveling of the cut edge. The cost of this operation, where not scheduled separately, will be held to be covered in the general rates for excavation.

PSDB 5.5 Trench Bottom

Add to the Sub-Clause:

In waterlogged conditions and/or where so instructed by the Engineer a 200 mm thick layer (See PSLB 5.2.5) of imported single sized stone (19 mm size unless otherwise instructed by the Engineer) with a geofabric filter surround ("Bidim" Grade A4 or similar approved) shall be constructed under the bedding layer specified for the pipes.

PSDB 5.5.1 Jointing Holes (New Sub-Clause)

Jointing holes shall be cut of sufficient length and depth to allow for the proper making or bolting of pipe joints and to ensure that joint collars or sleeves do not rest on the trench bottoms. After the pipework has been inspected, tested and approved by the Engineer, the jointing holes shall be refilled with selected soft material free from stone (padding materials as specified under PSLB in the case of coated steel pipes) and then rammed to provide a continuous uniform support for the pipework. No specific payment will be made for forming and refilling holes, the cost of which is deemed to be included in the tendered rates.

PSDB 5.6 Backfilling - General

PSDB 5.6.1 General

Add to the Sub-Clause:

Notwithstanding the requirements of Sub-Clauses 5.6.1 and 5.6.6, no pipe joint or pipe fitting shall be covered by either blanket or backfill material prior to the successful completion of the visual inspection and pressure testing of the relevant section of the pipeline.

All backfilling shall be carried out by hand and the Contractor must price his tender accordingly. No mechanical plant shall be used in backfilling without prior written consent of the Engineer.

PSDB 5.6.2 Material for Backfilling

Delete fourth, fifth and sixth lines and replace with the following:

Hard rock material shall not be used for, or incorporated into, the backfill above the bedding layers without the Engineer's approval.

PSDB 5.6.3 Disposal of Soft Excavation Material

Add to the Sub-Clause:

Surplus material or unsuitable material shall be disposed of offsite by the Contractor as described in C3.5.4.

PSDB 5.6.4 Disposal of Intermediate and Hard Rock Material

Add to the Sub-Clause:

Surplus intermediate and hard rock material from trench excavations shall be disposed of offsite by the Contractor as described in C3.5.4.

PSDB 5.6.8 Transport for Earthworks for Trenches

Delete the Sub-Clause and substitute:

The requirements of Sub-Clause 5.2.6 of SABS 1200 DA as amended and as applicable shall apply.

PSDB 5.7.2 Areas subject to Traffic Loads

Add at the end of the Sub-Clause:

for an extent of 2 m on either side of the carriage-way at each crossing.

PSDB 5.9.4 Bitumen Roads, Sub-Base and Base

Add to the Sub-Clause:

"Each Tenderer is required to make provision in his/her tender for allowances to cover the costs of reinstating all surfaces, inclusive of all layers to their conditions pertaining before the commencement of construction.

Items have been included in the Bill of Quantities to cover the reinstatement of certain surfaces (grassed lawns, concrete and/or asphalted/gravel driveways and/or roads) and for payment purposes, the area of those specific surfaces shall be calculated from the product of the length of the trench and the specified trench width plus 400 mm (refer PSDB 5.4)."

PSDB 8 MEASUREMENT AND PAYMENT

PSDB 8.1.4 Basic Principles

Delete Sub-Clause and substitute:

Except that the volume will be computed as specified in 8.2.3, the requirements of Sub-Clause 5.2.6.1 (Freehaul) of SABS 1200 DA as amended and as relevant, shall apply to freehaul.

No additional payment will be made for excavating and backfilling bell (fox) holes as the cost of that work will be deemed to be included in the rates for trenching.

PSDB 8.3.2 Excavation

Excavate in all material for trenches, backfill, compact and dispose of surplus material

In the second sentence delete "1,0 m" and replace with "as scheduled in the Bill of Quantities"

Add the following sub-items to Sub-Clause 8.3.2.b):

- | | | |
|------|--|------------------------|
| "(3) | Hand excavation and backfill where ordered by the Engineer | Unit: m3 |
| (4) | Backfill stabilised with 5 % cement where directed by the Engineer | Unit: m3 |
| (5) | Boulder excavation Class A | Unit: m ³ |
| (6) | Boulder excavation Class B | Unit: m ³ " |

The tendered rates for (4) above shall include full compensation for selecting, mixing, backfilling and compacting of the stabilised material to 90% of modified AASHTO density.

Measurement of Extra Over for (5) and (6) above will not apply to any length of trench in soft material more than 2 m long. Surplus boulder material from trench excavation shall where applicable, be disposed of to the designated spoil areas situated within the freehaul distance from the source of such material except where shown otherwise on the drawings.

PSDB 8.3.3.1 Deficiency in Backfill Materials

Add to the Sub-Clause:

Payment for imported, graded stone laid under pipelines in accordance with PSDB 5.5 shall be paid for under either Sub-Clause 8.3.3.1(c) or as scheduled.

PSDB 8.3.3.4 Overhaul

Delete the Sub-clause and substitute:

All haul will be regarded as free haul.

PSDB 8.3.4(c) Cross Embankments

Add new Sub-Clause

Payment for cross embankments will be paid for by volume of embankment constructed in accordance with the specification Unit:..... m³

PSDB 8.3.5 Existing Services that Intersect or Adjoin a Pipe Trench

Add to the end of the Sub-Clause:

- (v) all work involved in locating the service by hand excavation
- (vi) notifying and attending upon the owner of the service
- (vii) supporting and protecting the service while the pipeline is installed, inspected, tested and backfilled.

PSDB 8.3.6.2 Grassing (new sub-clause)

Grassing Unit : m²

Approved grass shall be planted after top soiling has been completed, with tufts being spread at not more than 150 mm centres. The planted area shall be neatly trimmed, fertilised and watered. The Contractor shall ensure that the planted areas are not permitted to dry out. Any grass that fails to grow shall be replaced by the Contractor, at his expense, with fresh grass, until satisfactory cover is obtained. The rate shall cover the supplying, planting and maintenance of grass, all in accordance with this specification.

PSDB 8.3.8 Hand Excavations to Prove Existing Services (new clause)

The Contractor will be required to prove existing services in the vicinity of the Works by careful hand excavation. These services include Telkom and electricity cables, sewers, storm water drains and existing water mains, some of which are shown on the drawings, and others of which no reliable record exists.

Services must be successfully proved prior to work commencing in an area.

An item is provided in the Bill of Quantities for hand excavation to prove services and measurement will be based on the volume of material excavated.

PSDB 8.3.9 Sack Breakers (new sub-clause)

Sack breakers shall be installed from the bottom of the bedding to 300 mm below finished ground level. Unit :
.....No

PROJECT SPECIFICATIONS: PSGA: CONCRETE (SMALL WORKS)
(As applicable to SABS 1200 GA - 1982)

PSGA 2 DEFINITIONS

PSGA 2.3(a) General

ADD TO THE SUBCLAUSE:

Adverse weather : Cold weather or weather in which :

- (a) the ambient temperature is above 25°C, or
- (b) the relative humidity is low, or
- (c) the wind velocity is high

or weather in which any combination of these three conditions occurs, and which tend to impair the quality of fresh or hardened concrete or otherwise causes the concrete to have abnormal properties.

PSGA 2.3(b) Quality

ADD TO THE SUBCLAUSE:

Consistency : The extent, as measured by the slump test, to which fresh concrete resists flow or deformation.

PSGA 2.3(d) Exposure Conditions

Add new Sub-Clause:

Mild Conditions: Conditions under which the concrete is protected from the weather and exposed only to air.

Moderate Conditions: Conditions under which the concrete is:

- (a) sheltered from severe rain and is not subject to freezing when wet, or
- (b) buried in non aggressive soil, or
- (c) continuously under fresh water.

Severe Conditions : Conditions under which the concrete is exposed or subjected to any of the following:

- (a) driving rain
- (b) alternate wetting and drying out
- (c) freezing when wet
- (d) fresh water (at the water line)
- (e) splashing or spraying with fresh water
- (f) corrosive fumes or heavy condensation of water
- (g) aggressive soil
- (h) salt laden air

PSGA 3 MATERIALS

PSGA 3.2.1 Cement

ADD TO THE SUBCLAUSE:

Unless agreed to otherwise by the Engineer, the cement used on the works shall be Ordinary Portland Cement.

PSGA 3.4.5 Sand

Add new Sub-Clause:

Sand from a source selected by the Contractor and approved by the Engineer after testing will be used under this Contract.

PSGA 5 CONSTRUCTION

PSGA 5.1.2 Fixing

ADD TO THE SUBCLAUSE:

Welding reinforcement as a means of securing it against displacement will not be permitted.

PSGA 5.1.3 Cover

Add "(with a tolerance of +10 mm 0)", between "30 mm", and "unless" in the second line of the Sub Clause.

In second line read "40 mm" for "30 mm"

PSGA 5.2.1 Classification of Finishes

Delete the eighth and ninth lines of the Sub Clause.

PSGA 5.2.1(a) Classification of Finishes

ADD TO THE SUBCLAUSE:

The finish of the concrete is to be within the tolerances of Degree of Accuracy III as set out in Sub Clause 6.4.

PSGA 5.2.1(b) Classification of Finishes

ADD TO THE SUBCLAUSE:

The finish of the concrete is to be within the tolerances of Degree of Accuracy II as set out in Sub Clause 6.4.

PSGA 5.2.5 Fixing Blocks for Reinforcing and Fixtures in Concrete

Fixing blocks for the attachment of fixtures may be embedded in concrete provided that the strength and other desirable features such as appearance of the member are not, in the opinion of the Engineer, impaired thereby.

PSGA 5.4.1.2 Consistency

Delete the third line and substitute the following:

Engineer in respect of prescribed mix and/or strength concrete.

PSGA 5.4.1.4 Prescribed Mix Concrete

Delete the Sub-Clause and substitute the following:

The grades of prescribed mix concrete are designated Grades 20, 15 and 10 and are composed of cement, sand and stone, as specified hereinbefore, proportioned as follows:

Grade	Size of Stone			
mm	Cement			
kg	Sand			
m3	Stone			
m3				
20/19	19	50	0,110	0,140
15/19	19	50	0,130	0,140
10/38	37.5	50	0,160	0,200

While the proportion of cement to the combined quantity of sand and stone must remain constant for each grade of concrete, as set out above, the relative proportions of sand and stone are to be adjusted, if required by the Engineer, so as to obtain the most suitable consistency of concrete, due allowance being made for the bulking of sand due to moisture.

The addition of water shall be regulated by the use of properly calibrated containers, only sufficient water being added as will, in the opinion of the Engineer, afford a workable mix.

The fine and coarse aggregates approved for use in strength concrete Grades 30 and 25 are to be used for prescribed concrete mixes Grades 20 and 15.

PSGA 5.4.1.5 Strength Concrete

Delete the Sub-Clause and substitute the following:

The grade of strength concrete is designated Grade 25 and is composed of cement, sand and stone, as specified hereinbefore proportioned as follows:

Grade	Size of Stone			
mm	Cement			
kg	Sand			
m3	Stone			
m3				
25/19	19	50	0,095	0,125

The concrete mix for the abovementioned grade of strength concrete is to be designed by an approved laboratory. At least four weeks before placing any concrete on the Works, the Contractor shall supply and deliver to the approved laboratory, at his own cost, samples of the aggregates he proposes to use in the concrete mix. While the proportion of cement to the combined quantity of sand and stone will remain constant for each grade of concrete, as set out above, the relative proportions of sand and stone may be adjusted to achieve the required strength. The laboratory will be bound by the requirements of this Specification which are to guide the Tenderers in pricing the grade of strength concrete. The Contractor is to allow in his rate for strength concrete an amount to cover the fees and charges levied by the approved laboratory in designing the strength concrete mix.

PSGA 5.4.1.6 Ready mixed concrete

Delete the Sub-Clause and substitute the following:

Concrete produced at a central concrete production facility other than at the site of the Works shall only be accepted for use in the Works with the prior and express approval of the Engineer. When such approval has been given the Engineer shall then decide whether or not to accept the test results obtained by the facility concerned.

PSGA 5.4.5.5 Adverse weather conditions (See PSGA 2.3.d)

Add New Sub-Clause:

Under adverse cold weather conditions, effective measures shall be taken to ensure that the temperature of the concrete, from the time of placing until it has hardened (i.e. about 24 h), is maintained at not less than 5°C. If the atmospheric temperature in the vicinity of the concrete is below 2°C or is expected to fall below 2°C during the curing period (see Sub Clause 5.4.7), water shall not be used for curing. All surfaces shall be protected from ice or frost damage.

When the ambient temperature is above 32°C, the temperature of the concrete when deposited shall not be allowed to exceed 32°C. Under adverse hot weather conditions, the Contractor shall take all reasonable steps to reduce to a minimum the placing temperature of the concrete. Stockpiles of aggregates and all metal surfaces in contact with aggregates and concrete shall be shielded from the direct rays of the sun or cooled by being sprayed with water, and windbreaks shall be erected, if necessary, to prevent the initial rapid drying out of concrete which would otherwise occur before normal curing procedures can be undertaken.

Concrete shall not be placed during periods of heavy or prolonged rainfall.

PSGA 5.4.8.2 Concrete Surfaces

Concrete surfaces shall be finished as indicated in the Schedule.

PSGA 6 TOLERANCES

PSGA 6.1.1 General

Read "Degree of Accuracy II" for "Degree of Accuracy III" in the third line.

ADD TO THE SUBCLAUSE:

The Permissible Deviations for the following elements of the Works shall be to Degree of Accuracy III :

Concrete work which is not exposed after completion of the Works.

PSGA 8 MEASUREMENT AND PAYMENT

PSGA 8.1.1.4 Formwork

Add to the first line between the words "concrete" and "and" the following:
"including forming fillets or splays up to 20 x 20 mm"

PSGA 8.4.1 Prescribed Mix Concrete

Delete from the Sub Clause all but the first sentence.

PROJECT SPECIFICATIONS: PSL: MEDIUM PRESSURE PIPELINES
(Applicable to SABS 1200 L – 1983)

PSL 1 SCOPE

PSL 1.1 In the second line, delete “2,5 MPa” and replace with “4,0 MPa”

PSL 2 INTERPRETATIONS

PSL 2.4 Abbreviations

uPVC: Unplasticised Polyvinyl Chloride
HDPE: High Density Polyethylene

Add to the Sub-Clause:

"FBMDPE. Fusion bonded medium density polyethylene".

PSL 3 MATERIALS

PSL 3.1 General

ADD TO THE SUBCLAUSE:

The types of pipe materials to be supplied and installed by the Contractor under this Contract are:

Steel Pipes;
HDPE; and
PVC.

PSL 3.2 AC Pipes and Specials

Delete the Sub-Clause in its entirety.

PSL 3.3 CI Pipes, Fittings and Specials

Delete first sentence and replace with the following:

All cast iron pipes and pipe specials are to conform to SABS 546, BS 78, Part 2 and/or BS 2035 (Class “D” pipes or Class “CD” fittings) so far as they may apply and are not amended in the Schedule of Quantities. All cast iron pipes, fittings and specials shall be hydraulically works tested to a pressure of 2700kPa.

PSL 3.4 Steel Pipes, Fittings and Specials

Delete the Sub-Clause and substitute:

PSL 3.4.1 General

ADD TO THE SUBCLAUSE:

"All steel pipes, fittings and specials supplied by the Contractor under this Contract shall be to the dimensions and details shown on the drawings or as scheduled in the Bill of Quantities. Each piece shall have its relevant item number stamped and/or painted onto the exterior surface prior to dispatch from the manufacturer's premises.

Steel pipes DN 150 and smaller shall be hot-dipped galvanised. Steel pipes and steel pipe fittings DN200 and greater are to have 300 micron DFT solvent free epoxy lining and coating.

Steel pipes larger than DN 200 and up to and including DN 500 shall have either flanged or belled and plain ends (spigot and socket) suitable for field fillet welding, as scheduled. Steel pipes greater than DN 500 shall have either flanged or plain ends prepared for field welding as scheduled.

Steel pipes DN 150 and smaller shall be manufactured in accordance with SABS 62.

Steel pipes larger than DN 150 shall be manufactured in accordance with SANS 719

PSL 3.4.2 Pipes of Nominal Bore up to 150 mm

DELETE: "medium class, shall be screwed" AND REPLACE WITH "heavy class, shall have plain ends, be galvanized,"

PSL 3.4.3 Pipes of Nominal Bore over 150 mm

DELETE THE SUBCLAUSE IN ITS ENTIRETY.

PSL 3.4.4 Fittings and Specials

ADD TO THE SUBCLAUSE:

"All bends, fittings and specials shall be manufactured from straight pipe specified elsewhere unless otherwise stated in the Bill of Quantities.

All steel bends, fittings and specials shall be fabricated to the dimensions and details shown on the drawings and/or described in the Bill of Quantities.

The sides of taper pieces shall diverge at an angle of not more than 11° to each other.

The bend, fitting, and special fabricator shall supply written confirmation that all hand welding was carried out by coded welders.

Individual bends, fittings and specials up to and including DN 150 shall be hot-dip galvanised to heavy duty grade in accordance with SABS 121:2000 after fabrication. Where a hot-dipped galvanised fitting is to be welded to a coated and lined pipe, the galvanising is to be abraded off prior to welding. The external coating at the welded joint is to be primed and coated with an approved anti-corrosion system.

Bends, fittings, and specials larger than DN 200 shall have the internal lining and external coating made continuous ('made good') as specified elsewhere for welded joints on coated and lined pipes.

Bends, fittings and specials shall be manufactured and tested in accordance with the specification for straight pipe and additionally with Section 8 of BS EN 10311: 2005 and BS 10224: 2002. The nominal dimensions of each bend, fitting and special required are itemised in the Bill of Quantities and/or on the drawings and 'exact length' tolerances shall be adhered to. All plain ends on bends, fittings and specials shall have the plain ends prepared for butt welding except those plain ends that are to be jointed with adaptor joints.

Bends shall generally be of the segmented type except where otherwise stated or shown on the drawings.

The Contractor will be responsible for the provision of strengthening webs, crotch plates, gussets, etc as may be necessary to prevent excessive deflection or deformation of fittings and specials when subjected to hydraulic pressure tests, and the tendered rates for the work will be deemed to include for the design and provision of this

reinforcing wherever necessary. All crotch plates, wrappers, collars and gussets to be provided by the Contractor under this Contract are to be manufactured from API 5L Grade X42 steel.

Bends shall be fabricated in accordance with the Table below.

Deflection of Angle

Up to and including 3° One pipe end scarfed on site

Exceeding 3° and up to and including 9° Mitre cut (two pipe ends scarfed on site)

Exceeding 9° but less than 15° 2 segment bend

15° and larger but less than 45° 3 segment bend

45° and larger but less than 60° 4 segment bend

60° and larger but less than 75° 5 segment bend

75° and larger but less than 90° 6 segment bend

Bends greater than 90° shall be fabricated from combinations of items from the table above.

Shop drawings of bends, fittings and specials shall be submitted to the Engineer for approval prior to manufacture.

All flanged bends, fittings and specials shall be hydraulically tested at the fabricator's premises to the same pressure that they will be subjected to during the hydraulic testing of the completed pipeline. No visible signs of leakage will be permitted."

PSL 3.4.6 Puddle Collars and Anchoring Flanges

Puddle collars and anchoring flanges used as pipe anchorages shall be of the same dimensions as corresponding flanges but those cast into concrete walls are to be undrilled. The collar/flange shall be capable of transmitting a longitudinal force 33% greater than the internal hydraulic pressure to be applied when testing, multiplied by the area of the bore and, under that condition, the stress in the material shall not exceed its yield stress.

Where puddle collars are shown on the drawings as being 20mm thick, those collars are not required to transmit thrust, their purpose being to assist with the waterproofing of the concrete chambers by increasing the path that ground water might have to take to enter the chambers. Puddle collars located on the rising main are intended for thrust purposes.

Where polyethylene pipes are cast into concrete structures, they shall be specially prepared and adapted by positioning a custom-made tight-fitting natural rubber sealing sleeve around the circumference of the pipe and in the case of structured-wall pipe creating shear keys through removing small segments of the outer wall. The rubber seal shall be 10 mm thick and 200 mm wide or 80% of the width of the wall and shall be 60 to 65 shore hardness, with a vulcanised joint. It shall be stretched over the pipe circumference to ensure a tight fit.

PSL 3.4.8 Welding Tests at fitting Fabrication Shop(s)

PSL 3.4.8.1 Qualification tests for welding procedures

Only appropriately coded welders may be used.

The qualification tests for welding procedures shall be carried out generally in accordance with the requirements of the American Petroleum Institute API 1104. The detailed procedure to be adopted during manufacture shall be established and the quality of the welds so produced shall be determined by carrying out one transverse tensile weld test and two guided cold bend tests on suitable coupon plates.

The tests are to be carried out either before fabrication of fittings is commenced.

The coupon plates shall be prepared either from plates of the same material as the pipe and welded in a similar manner to that used during production, or by cutting suitable specimens from a pipe selected at random by the

Engineer from the first production. The coupon plate for the tensile weld test and those for the guided cold bend tests shall be prepared in accordance with the requirements of SANS 719.

The qualification tests shall be considered satisfactory if:

- (a) The weld has a joint efficiency greater than 95% of the minimum specified tensile strength of the parent metal; and
- (b) The bend test specimens are capable of being bent around a former with a diameter equal to six times the nominal thickness of the plate to an angle of 180 degrees without developing a crack, except at the arises of the specimen, of length or width greater than 3 mm.

Failure to pass the above qualification tests shall result in the rejection of any pipes welded with the procedure used and the preparation of a new qualification of procedure test.

Any changes in the electrode case type used or change of flux used shall require a qualification test before approval of the procedure is granted.

PSL 3.4.8.2 Radiographic examination of shop welds

The Contractor shall include in his prices for the supply of fittings and specials, the cost of carrying out, under the supervision of the inspector appointed by the Employer, examination of shop welds on the following basis:

- (a) One hundred percent radiographic examination of all welds deposited manually or semi-automatically in fittings and specials which cannot be hydraulically tested prior to the fittings and specials being installed in the pipeline; and
- (b) Ten percent radiographic examination of all welds deposited manually or semi-automatically in specials and fittings that are to be tested hydraulically prior to the fittings and specials being installed in the pipeline.

The Engineer shall in all cases determine which welds are to be radiographed on the quantity basis specified above. All radiographs and records thereof made by the Contractor shall be made available to the Engineer to enable him to determine whether the welds are acceptable or not and no lining or wrapping of pipes shall be permitted until the welds have been accepted by the Engineer. To avoid unnecessary delays, at the option of the manufacturer, radiographs may be approved by the manufacturer's inspectors subject to them being subsequently approved by the Engineer.

When a section of the weld is shown by radiography to be unacceptable, and if the limits of the deficient weld are not defined by the radiograph, additional radiography shall be carried out at the Contractor's expense until the limits of the deficiency are determined.

Repairs shall be made to defective welds at the Contractor's expense. All repair welds shall be identified with a stamp marking, indicating which welder conducted the repair. Repaired welds shall be radiographed at the Contractor's expense but after any repair welder has had ten consecutive repairs approved, the extent of the

radiography of the repairs conducted by the welder may be decreased by agreement between the Engineer and the Contractor."

PSL 3.7 Other Types of Pipe

PSL 3.7.1 uPVC Pipes

DELETE THE SUBCLAUSE AND REPLACE WITH THE FOLLOWING:

"uPVC pipes shall comply with SANS 966 and be of the types and fitted with joint systems as follows:

Pipe Diameter (mm)	Type	Joint System
110	uPVC	Spigot and Socket
200	uPVC	Spigot and Socket

PSL 3.7.2 Polyethylene Pipes

ADD TO THE SUBCLAUSE:

"HDPE and LDPE pipes shall be of the classes scheduled. Jointing of pipes shall be by means of welding, by bolting up welded-on flanges or by the use of approved external compression type fittings ('Plasson' or similar approved)."

PSL 3.8 JOINTING MATERIALS

PSL 3.8.3 Flanges and Accessories

ADD NEW SUBCLAUSE:

PSL 3.8.3.1 Bolted connections

All flanges, gaskets, bolts, nuts, washers and other appurtenances required for the execution of the work under this Contract shall be supplied and installed by the Contractor and shall comply with the following:

The sizes and drillings shall generally comply with SANS 1123 as shown on the drawings or as scheduled in the Bill of Quantities;

Flanges cut from steel plate shall be machined flat on the front face;

No machining needs be carried out on the back face (except where insulating flanges are to be installed) provided that face is sufficiently flat to ensure square bedding of the bolt heads and nuts and provided that all weld reinforcement is removed;

Temporary end covers shall be provided by the Contractor for protection of flanges, and prepared plain ends of pipes and fittings to prevent damage to internal lining during transportation and during handling on site;

All piping and flanged surfaces shall be cleaned before connections are made;

The faces of flanges that are in contact with gaskets shall be masked and shall not be painted or coated. The mating flange shall then receive one coat of an approved rust inhibitor. Care shall be exercised to ensure that after the application of all coatings there are no runs or drips on the mating surfaces of the flanges and that the flange

profiling is clearly visible over the entire face. Excessive coating build up in flange bolt holes that could snag bolts will not be permitted;

Flanged joints shall be connected with the specified bolts, nuts and washers all of which shall be supplied by the Contractor;

All bolts, tie-bolts, nuts and washers shall be galvanised to SANS 121: 2011 and shall comply with the relevant requirements of SANS 135: 2011 and SANS 136: 2008 where applicable;

The length of each bolt shall be such that after the bolt has been tightened, the end of the bolt shall project beyond the outer face of the nut, but not by more than two threads. Tie-bolts on restrained/anchoring couplings shall be fitted with 'backing nuts' and washers;

Each flanged joint shall be fitted with an approved and suitably rated gasket and sealed watertight such that there will be no visible sign of leakage under the specified factory and field test pressures and under the in-service working conditions (pressures);

All bolts shall be tightened in a predetermined pattern with opposing bolts being tightened sequentially. When all bolts are tight, each bolt shall be torqued to the required/recommended torque in a predetermined pattern with opposing bolts being tightened sequentially; and

All bolt threads shall be liberally coated with 'Copper slip' or similar approved compound prior to assembly. Upon completion, bolt heads, washers and nuts shall be wrapped with the 'Denso Mastic Blanket System' comprising of a priming solution, mastic blanket, petrolatum tape and lay-flat sheeting as described in elsewhere."

PSL 3.9 CORROSION PROTECTION

PSL 3.9.2 Steel Pipes

PSL 3.9.2.1 Steel pipes of nominal bore up to 150 mm

DELETE THE SECOND PARAGRAPH OF THIS CLAUSE AND ADD:

Items that are not dipped shall be lined and coated as per PSL 3.9.2.2

PSL 3.9.2.2 Steel pipes of nominal bore over 150 mm

DELETE THE SUBCLAUSE AND REPLACE WITH:

"PSL 3.9.2.2 Steel pipes of nominal bore over 150 mm

Steel pipes shall be coated and lined as scheduled and/or as shown on the drawings. Linings and coatings shall comply with the following Particular Specifications as applicable:

PVB Solvent Free Epoxy Lining of Steel Pipes.

The supply and application of coatings and linings are not scheduled separately in the Bill of Quantities and payment for the costs of meeting the requirements of these specifications which include for the provision of all labour, plant, materials and testing necessary to carry out the complete lining and making good, etc. shall be included in the rates tendered for the supplying, laying and bedding of the pipeline as per Sub-clauses 8.2.1, 8.2.2 and 8.2.3 of SABS 1200 L."

PSL 5 CONSTRUCTION

PSL 5.1 LAYING

PSL 5.1.4 Depths and Cover

DELETE SUBCLAUSE 5.1.4.1 AND REPLACE WITH THE FOLLOWING:

"Unless otherwise shown on the drawings or scheduled in the Bills of Quantities or ordered, the depth of excavation for trenches for medium-pressure pipelines shall be such that the cover to finished ground level over the laid pipe shall not exceed 1,0 m."

DELETE FROM THE THIRD AND FOURTH LINES OF SUBCLAUSE 5.1.4.2:

"(e.g. the deflection shall not exceed 1,5‰ per joint in the case of AC pipes:)"

PSL 5.1.5 Marker Posts

ADD NEW SUB CLAUSE

Pre-cast concrete marker posts as shown on the drawings and painted red in colour shall be set at all horizontal direction changes and where otherwise indicated by the Engineer.

The standard marker post rate shall include the supply and erection of painted, inscribed posts. The rate shall be inclusive of erection and shall include for all necessary excavation, mass concrete footing and formwork."

PSL 5.2 JOINTING METHODS

PSL 5.2.2 Flanges (Steel Pipelines)

IN THE HEADING DELETE "(Steel Pipelines)"

ADD TO THE SUBCLAUSE:

Before being brought together, the ends of the pipes, fittings, couplings and flanges shall be inspected and cleaned to ensure that all parts forming the joint are undamaged and clean.

When jointing flanges, the faces shall be cleaned thoroughly and approved jointing material (compressed asbestos cement fibre or other approved gaskets on flanged joints), cut properly to size, to be inserted immediately before bringing the two flanges together. Before closing the joints, the flanges shall be parallel to each other, with all bolts inserted in the bolt holes. After the fittings have thus been aligned and well supported, the joint shall be bolted up to a uniform tightness using torque wrenches to achieve the required compression force on the gasket.

If and where full-face gaskets are used, the jointing material shall be flush with, or protrude beyond, the outer circumference of the flange. On completion of the joint, the flanges and bolts shall be protected as described in Clause PSL 3.9.4."

PSL 5.3 SETTING OF VALVES, SPECIALS, AND FITTINGS

ADD TO THE SUBCLAUSE:

"Valves shall be set correctly in the positions indicated and supported on concrete stools, except where not so required by the Engineer. Valve spindle guide brackets and stays where provided shall be secured into position against concrete work and set and carefully adjusted in order to give true vertical alignment of the spindle."

PSL 5.4 CONCRETE CASING

IN THE FIRST AND SECOND LINES DELETE "a strength 15 MPa/37,5 mm or such other strength as scheduled" AND REPLACE WITH: "concrete grade 20/19".

PSL 5.5 ANCHOR/THRUST BLOCKS AND PEDESTALS

IN THE FOURTH LINE DELETE "15 MPa/37,5 mm" AND REPLACE WITH "20/19"

ADD TO THE SUBCLAUSE:

"Steel pipelines that are to be continuously welded or flanged, do not require anchor/thrust blocks at tees, bends, terminal valves and end caps."

PSL 6 TOLERANCES

PSL 6.3 ALIGNMENT (PLAN AND LEVEL)

DELETE THE THIRD AND FOURTH LINES AND REPLACE WITH:

"Of the pipeline, shall be + 50 mm + 10% and the permissible deviation per pipe length shall be +/- 20 mm."

DELETE THE SIXTH (LAST) LINE AND REPLACE WITH:

"+ 25 mm + 5% provided that there shall be no reversal of the pipeline gradient."

PSL 7 TESTING

PSL 7.3 STANDARD HYDRAULIC PIPE TEST

ADD THE FOLLOWING PREAMBLE:

"Water used for one filling of the pipeline for hydraulic testing shall be provided by the Employer free of charge. Additional water used due to unsuccessful hydraulic tests shall be charged at the Employer's bulk rate per kilolitre that is charged to their bulk consumers. Filling of the pipeline for hydraulic testing shall be carried out slowly to enable air to escape and under the direction of the Engineer."

PSL 7.3.1 Test Pressure and Time of Test

ADD TO THE SUBCLAUSE:

"The sections in which the pipeline will be tested will be at the discretion of the Contractor, except that the pipeline shall not be tested in sections exceeding a maximum allowable length of 2000m unless otherwise agreed by the Engineer and also taking cognisance of the requirements of the project specifications. The Contractor shall make due allowance in the construction programme and in the tendered rates for the entire testing operation including for

the provision of temporary end stops (flanges or bullnoses) and any other costs incurred associated with testing the pipeline in intermediate sections.

The pipe shall not be tested until the associated structural concrete for anchorage has cured for 28 days or until such concrete has attained the specified design strength. Once filled, the pipe shall be left for 24 hours to permit maximum saturation of cement mortar linings.

The section to be tested shall be pressurised to the specified pressure and left for 24 hours, during which period, the pressure drop (if any) and the quantity of water required to be pumped in to restore the test pressure shall be measured and recorded. In addition, all flexible and flanged joints shall be visually inspected and there shall be no sign of leakage.

The permissible leakage for welded and flanged steel pipelines is zero (0) litres.

At all times when there is water in the pipeline, and particularly during filling, testing and draining of the pipeline, all air valves shall be in operation and their individual isolating valves shall be open."

PSL 7.3.4 Initial Filling of Pipeline

The entire process for filling the pipeline at any time during testing or disinfection shall be carried out under the supervision of the Engineer and will also be monitored by the Engineer and/or the Employer's personnel. Under no circumstances shall the Contractor be allowed to carry out filling of the pipeline without the supervision of the Engineer, neither shall he/she permit any other persons to carry out such filling without the written permission of the Engineer.

Any damage to the pipeline caused by non-compliance with this Sub-clause shall be rectified at the Contractor's expense.

PSL 7.3.5 Connections after Testing

The connections of the new pipework to the existing pipework shall only be carried out after the pipeline testing has been completed and accepted by the Engineer. For this reason, testing shall be carried out against a blank flange or bullnose end cap at these locations.

PSL 7.3.6 Remedial Measures

In the event that a pipe section fails a test, the Contractor shall carry out all remedial measures necessary to obtain a successful test of each individual section and the entire pipeline, at his/her own expense. Such remedial measures shall in no way compromise the original pipeline specifications.

PSL 7.3.7 Draining of the Pipeline

The pipeline may have to be drained to carry out remedial measures. The pipeline shall be drained via the scour valves in a manner that does not cause erosion of the streambeds or negatively impact on the environment in any way. All such drainage of the pipeline shall be carried out under the supervision of the Engineer's Representative."

ADD NEW SUBCLAUSES:

PSL 7.6 COMMISSIONING

The pipeline shall be considered to have been commissioned and practically complete once all the associated structures are sufficiently complete to carry out their structural and hydraulic function and the hydraulic test of the entire pipeline has been successfully completed.

PSL 7.7 WATER TIGHTNESS TEST FOR CHAMBERS

On completion of each concrete valve chamber, and prior to completion of the backfilling around the chamber, a watertightness test shall be undertaken by the Contractor. This shall be carried out by excavating a trench approximately 0,5 m deep around the periphery of the chamber and continuously (for at least 4 hours) maintaining it full of water. Should there be any noticeable leaks into the chamber, the Contractor shall carry out at his/her own expense whatever measures are necessary to waterproof the chamber to the Engineer's satisfaction."

PSL 8 MEASUREMENT AND PAYMENT

PSL 8.2 SCHEDULED ITEMS

PSL 8.2.1 Supply, Lay, and Bed Pipes Complete with Couplings

DELETE THE SUBCLAUSE AND REPLACE WITH:

"PSL 8.2.1 Supply, deliver, transport, lay, and bed pipes complete Unit: m or No

Supply, deliver, transport, fabricate, install pipes, bends, fittings, valves, etc., either per metre or 'extra over' the linear metre rate, or by number as scheduled in the Bill of Quantities.

The rates shall cover the cost of supply, delivery of the pipes and for fabricating and radiographic and/or hydraulic testing of bends, fittings specials, and supplying and installing flanges, couplings, valves and other appurtenances as scheduled, making good the coatings and linings, handling, inspecting, marking bends, fittings and specials with item numbers, transporting, holiday detection testing for coatings of steel pipes, forming joint ("fox") holes in all materials, bedding, laying, welding, jointing, cutting, all testing and disinfecting and where relevant all welding, radiographic and other testing as specified, and the completion of the internal and external corrosion protection (make good) and jointing materials (e.g. nuts, bolts, washers, gaskets, welding rods etc).

The rates for the supply and installing of valves and specials shall cover the cost of any cutting, trimming, and jointing of pipes required for the installation of valves, bend, fittings in the positions shown on the drawings. Unless specific provision is made in the Bill of Quantities, no separate payment will be made for forming of any additional joints and/or for the supply of additional jointing materials which may be required for the connection of cut pipes.

A maximum payment of 90% of the tendered rates shall be made for a completed section of pipeline which has not yet been hydraulically pressure tested and disinfected. A further payment of 10% of the tendered rates shall be made upon successful completion of the pressure testing for the relevant section of pipeline.

The rates tendered for the laying and bedding of pipes, bends, fittings, and valves, shall be included into the costs associated with the field pressure testing and disinfection of the pipeline.

PROJECT SPECIFICATIONS: PSLB: BEDDING (PIPES)
(Applicable to SABS 1200 LB - 1983)

PSLB 2 INTERPRETATIONS

PSLB 2.3 DEFINITIONS

Main fill:

Delete "150 mm" in second line and substitute "300 mm".

PSLB 3 MATERIALS

PSLB 3.1 SELECTED GRANULAR MATERIAL

In the second line delete "19 mm" and substitute "10 mm".

Add to the Sub-Clause:

"Where scheduled and/or shown on the drawings, bedding material (padding) as specified in PSLB 3.3 shall be used in place of selected granular material."

PSLB 3.2 SELECTED FILL MATERIAL

ADD TO THE SUBCLAUSE:

"Where scheduled and/or shown on the drawings, bedding material (padding) as specified in PSLB 3.3 shall be used in place of selected fill material."

PSLB 3.3 BEDDING

Add to the Sub-Clause:

"All PVC and HDPE pipes and fittings and steel pipes and fittings greater than DN500 are deemed to be flexible pipes.

Where scheduled or shown on the drawings, bedding (selected granular and selected fill material) shall be fine sand or fine non-cohesive soil, carefully selected, with maximum particle size of 5 mm and which shall not cake nor form lumps when drying. Material complying with the above requirements may also be referred to in this document as "padding". Samples of bedding (padding) material shall be submitted by the Contractor to the Engineer for approval well in advance of construction. Only after the Contractor has received written approval from the Engineer, may he/she proceed with placing bedding (padding) material as selected granular and/or selected fill material.

No sharp-edged stones shall be allowed to come into contact with the pipes or fittings. Joint holes (pockets) shall be provided in the trench bottom and bedding, at each pipe joint to facilitate welding, and tape wrapping, and no extra payment will be made for forming or filling the joint holes (pockets) with padding sand.

All "padding" material used for the cradle beneath and surrounding the coated steel pipes shall comply with the following requirements:

GRADING ANALYSIS RANGE

SIEVE SIZE (mm)	PERCENTAGE PASSING
6,7	98 to 100
4,76	85 to 100
2,36	55 to 95
1,18	30 to 75
0,60	20 to 50
0,425	16 to 38
0,30	13 to 27
0,15	5 to 18
0,075	0 to 12

The material shall be free of organic matter and shall have a compatibility factor of not more than 0.4. The material should be classified as silty to fine sand having a stiffness ratio of not less than 5,0 MPa. Furthermore, the origin of

the materials should, preferably, be river transported since it is preferable that the larger grains (3,0 to 4,8 mm in size) be rounded and not sharp and angular.

The Contractor will be required to carry out his/her own quality control testing of the material to ensure that it meets the padding sand requirements and complies with this specification at all times. At least one grading analysis shall be carried out for every 100 lineal metres of bedding placed. The results of these tests shall be forwarded to the Engineer within 24 hours of completion of the test. Should the material not comply with the specification, the Contractor shall remove and replace it with approved material at his/her own cost.

Depending on the actual material supplied by the Contractor, the moisture content may be critical to enable satisfactory placing and compaction and the Contractor will be deemed to have allowed in his tendered rate for any and all adjustments required to the moisture content of the padding material at all times.

Where applicable, items have been provided in the Bill of Quantities for the provision of approved bedding sand from approved Commercial or other approved off-site sources for padding sand.

No extra payment shall be made for forming or filling joint holes/bell holes/fox holes (pockets)."

PSLB 3.4 SELECTION

PSLB 3.4.1 Suitable Material Available from Trench Excavation

Delete the Sub-Clause and substitute the following:

The excavation of a pipe trench shall comply with the requirements of Sub-Clause 5.4 of SABS 1200 DB and the provisions of Sub-Clause 3.7 of SABS 1200 DB (in terms of which, for the purposes of providing bedding materials, the Contractor is not required to use selective methods of excavating) shall apply. Nevertheless, the Contractor shall take every reasonable precaution to avoid burying or contaminating material that is suitable and is required for bedding or covering the pipeline. If, in the opinion of the Engineer, bedding material can be produced from the excavated material, the Contractor shall, if so ordered by the Engineer, screen or otherwise treat (as scheduled) the excavated material in order to produce material suitable for bedding (see also Sub-Clause PSLB 8.2.1).

PSLB 5 CONSTRUCTION

PSLB 5.1 General

Add to the Sub-Clause:

All the steel pipelines are to be bedded and protected in accordance with the details described in PSLB 3.3 except in certain sections where Class A bedding or stone bedding (as a drainage layer) or concrete encasing is to be provided as shown on the drawings or where ordered by the Engineer.

PSLB 5.1.2 Details of Bedding

Add to the Sub-Clause:

The pipeline is to be laid on the class of bedding indicated in the Bill of Quantities and/or on the drawings.

PSLB 5.1.2.1 Stone Drainage Layer Beneath Bedding (New Sub-Clause)

Add new Sub-Clause:

Where indicated on the drawings, or as otherwise indicated by the Engineer, a 200 mm thick layer of 19 mm stone shall be placed beneath the bedding layer to act as a drainage channel for excessive groundwater. This layer shall

be wrapped in approved geofabric and provided with outlet pipes if and where required or indicated by the Engineer's Representative.

PSLB 5.1.4 Compacting

Delete the second line and substitute:

top of the pipeline) shall be 93% mod AASHTO.

Add to Sub-Clause 5.1.4:

Steps will have to be taken by the Contractor to ensure that flexible pipes do not deform excessively in cross-section during and after construction and backfilling operations. The maximum deflection which will be acceptable at any stage during or after construction is 2% of the pipe diameter horizontally or vertically. The Contractor will be required to provide the necessary apparatus and to monitor deflection during construction.

Pipe deformations will only be maintained within the specified tolerances by correct backfilling practice. No heavy compaction equipment will be permitted for compaction of any pipe bedding, only pneumatic or hand rammers being acceptable. To this end, and to achieve the 93% compaction specified it is required that the bedding material be brought up evenly on either side of the pipe. The use of complete saturation of the material as a method of achieving the specified compaction may, subject to the Engineer's approval, be used. However, in this regard, Tenderers are advised that the presence of excessive quantities of water in the pipe trench could lead to flotation of the pipe.

Prior to the commencement of pipe laying the Contractor will be required to submit, to the Engineer, for his approval, his proposed methods of placing, and compacting methods which he proposes to implement in order to ensure compliance with the specification.

PSLB 5.1.5 Testing (New Sub-Clause)

Flexible and flanged joints shall be left exposed with a minimum of 100 mm clearance around the bottom of the pipe during hydraulic pressure testing of the pipe to facilitate inspection.

PSLB 5.2 Placing and Compacting Rigid Pipes

PSLB 5.2.2 Class 'C' Bedding

Delete the third, fourth and portion of the fifth lines and substitute the following:

The pipes shall be bedded on a layer of compacted granular bedding material on which a 25 mm thick layer of uncompacted granular bedding material has been placed and spread. Loose granular bedding material lying next to the pipe shall be placed into the haunch area and compacted with suitable hand tools, and additional selected granular material shall be added and compacted in layers until levels for the bedding cradle as shown on Dwg LB - 1 (c) are reached. The remainder of the bedding i.e. the selected fill blanket, shall be placed in layers up the sides of the pipe, each layer being compacted until levels are reached as shown on Dwg LB-1 (c).

PSLB 5.2.5 Stone Bedding (New Sub-Clause)

In areas where waterlogged conditions exist or where ordered by the Engineer, special drains consisting of a 200 mm thickness (See PSDB 5.5) of single sized stone with a geofabric filter surround ("Bidim" Grade A4 or similar approved) extending the full width of the trench shall be provided below the bedding to the pipes. The excavation for these drains will be measured in cubic metres at the contract rate applying to unsuitable excavation below the bottom of the trench. The stone filling will be paid for per cubic metre and the geofabric filter will be paid for per square metre. All measurements in this connection will be to a width equal to the base widths and depths ordered.

PSLB 5.3 Placing and Compacting Flexible Pipes

PSLB 5.3 (a) Bedding Cradle

Delete the sub-clause and substitute the following:

The pipes shall be bedded on a minimum 100 mm thick layer of compacted granular bedding material on which a 50 mm thick layer of uncompacted granular bedding material has been placed and spread. Loose granular bedding material lying next to the pipe shall be placed into the haunch area and compacted with suitable hand tools (covered with rubber to prevent damage to the pipe coating), and additional selected granular material shall be added and compacted in layers up to the midpoint of the pipe diameter in the vertical plane. The remainder of the bedding i.e. the selected fill blanket, shall be placed in layers up the sides of the pipe, each layer being compacted until a level of 300 mm above the crown of the pipe is reached.

All bell (fox) holes shall be filled with bedding material.

PSLB 5.3(b) Selected Fill Blanket

Delete "200 mm" from the title as shown above.

PSLB 6 TOLERANCES

PSLB 6.1 Moisture Content and Density

Add to the Sub-Clause:

The permissible deviations applicable are to be those for Degree of Accuracy II class of work.

PSLB 8 MEASUREMENT AND PAYMENT

PSLB 8.1 PRINCIPLES

PSLB 8.1.3 Volume of Bedding Materials

Add to the Sub-Clause:

- (c) The volume of bedding material shall be measured net i.e. the volume of the pipe is to be deducted; and
- (d) No additional payment will be made for bedding material placed in bell (fox) holes

PSLB 8.1.5 Disposal of Displaced Material

Delete the Sub-Clause and substitute the following:

"Material displaced by the pipeline and by imported material from sources other than trench excavation, shall be disposed of by the Contractor at an approved site(s). No haulage shall be paid."

PSLB 8.1.6 Freehaul

Delete the Sub-Clause and substitute the following:

All haul will be regarded as free haul. No overhaul will be paid for under this Contract.

PSLB 8.2 SCHEDULED ITEMS

PSLB 8.2.1 Provision of Bedding from Trench Excavation

Delete the Sub-Clause and substitute the following:

Without the need for screening:

- | | | |
|-----|---------------------------------|----------|
| i) | Selected granular material..... | Unit: m3 |
| ii) | Selected fill material..... | Unit: m3 |

The rates shall cover the cost of acquiring, from any point along the trench excavation as may be selected by the Engineer, bedding that complies with the relevant requirements of the specification, of delivering it to points alongside the trench spaced to suit the Contractor's methods of working, of making good any backfill deficiency from points where backfill has been acquired, and of disposing of displaced material.

Including for screening:

- | | | |
|-----|-----------------------------|-----------|
| i) | Selected granular material | Unit : m3 |
| ii) | Selected fill material..... | Unit: m3 |

The rates shall cover the cost of screening or otherwise treating excavated material, at any point along the trench excavation as may be selected by the Engineer, in order to produce bedding that complies with the relevant specification, delivering it to points alongside the trench, spaced to suit the Contractor's methods of working, of making good any backfill deficiency there may be from points where screened backfill material has been acquired, and of disposing of displaced material."

PSLB 8.2.2 Supply Only of Bedding by Importation

DELETE THE SUBCLAUSE AND REPLACE WITH THE FOLLOWING:

"PSLB 8.2.2 Provision of Bedding by Importation:

Including for screening and/or other treatment:

- | | | |
|------|--|-----------|
| (i) | Selected granular material | Unit : m3 |
| (ii) | Padding sand to specified bedding dimensions | Unit : m3 |

The rates shall cover the cost of acquiring, loading, transporting, off-loading, screening or otherwise treating excavated material in order to produce bedding that complies with the relevant specification, delivering it to points alongside the trench spaced to suit the Contractor's methods of working and of disposing of displaced material.

NOTE: The rate for the supply and laying of pipelines covers the cost of handling the bedding material from alongside the trench, placing it under the pipeline, forming joint holes and completing the bedding around and over the pipeline."

PSLB 8.2.3 Concrete Bedding Cradle

Add the following paragraph to the Sub-Clause:

All concrete bedding to pipes will require formwork. The rate for concrete bedding shall include for the supply, installation and stripping of all formwork.

PSLB 8.2.4 Encasing of Pipes in Concrete

Delete the fifth and sixth lines and substitute the following:

encasing the pipe in concrete 150mm thick each side of the pipe and to 150mm above the crown of the pipe including the cost of formwork, (if any), etc. and the cost of formwork to form stop ends on either side of collars, couplings, joints etc. if instructed by the Engineer.

ADD TO THE SUBCLAUSE

The rate for concrete encasing shall include for the supply, installation and stripping of all formwork.

PSLB 8.2.5 Overhaul of Material for Bedding Cradle and Selected Fill Blanket

DELETE THE SUBCLAUSE.

ADD NEW SUBITEM:

PSLB 8.2.6 Drainage Layer

- | | | |
|-----|---|-----------|
| (a) | Stone filling | Unit : m2 |
| (b) | Geofabric filter material (Bidim Grade A4 or similar) | Unit : m2 |

Supply and place beneath pipe, 150 mm crushed stone layer as ground water drainage layer. The excavation for these drains shall be measured in cubic metres at the tendered rate applying to unsuitable excavation below the bottom of the trench (SABS 1200 DB 8.3.2 c).

The rate for stone filling shall be per cubic metre of stone fill, measured according to a width equal to the base widths and depths ordered.

Supply and installation of geofabric filter material (BIDIM Grade A4 or similar) around stone. The rate shall be per square metre of geofabric to enclose the stone material, measured net according to a width equal to the base widths and depths ordered."

PROJECT SPECIFICATIONS: PSMH: ASPHALT BASE AND SURFACING
(Applicable to SABS 1200 MH - 1996)

PSMH ASPHALT BASE AND SURFACING

PSMH8.5 MEASUREMENT AND PAYMENT

PSMH8.5.1 Prime coat

Change the unit of measurement from m² to litre. The quantity measured shall be the actual quantity applied to the areas specified.

PSMH8.5.3 Track coat

Change the unit of measurement from m² to litre. The quantity measured shall be the actual quantity applied to the areas specified.

PSMH8.5.10 Masking all kerbing and channelling with 150 micron PVC sheeting during application of the prime coat, the tack coat and curing coat Unit: m

New clause:

The unit of measurement shall be the metre of kerbing and channelling properly masked. A specific length of kerbing and channelling shall be measured once only for both the prime and tack coat applications.

The rate shall cover all cost to properly mask the kerbing and channelling to prevent contamination of the kerbing and channelling with prime, tack coat and curing materials.

(e) PARTICULAR SPECIFICATIONS
PLI: GENERIC LABOUR-INTENSIVE SPECIFICATION
B 1231LABOUR BASED CONSTRUCTION METHODS

Bidders must take into consideration that the following works may only be constructed using labour-based construction methods

- (a) Excavation to expose existing services.
- (b) Hand excavation for concrete lined open drains.
- (c) Concrete lining for open drains.
- (d) Construction of all edge beams.
- (e) Preparation of bedding material for water pipes.
- (f) Finishing of road reserve.

Where Bidders propose to use additional labour-based methods, the methods must be stated as well as the activities. It will reflect positively on the Bidder's bid if he should use more labour-based methods

PLI 1 Scope

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- (a) trenches having a depth of less than 1,5 metres
- (b) storm water drainage
- (c) low-volume roads and sidewalks

PLI 2 Precedence

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail.

PLI 3 Hand excavate able material

Hand excavate able material is material:

Granular materials:

- i. whose consistency when profiled may in terms of table 1 be classified as very loose, loose, medium dense, or dense; or
- ii. where the material is a gravel having a maximum particle size of 10 mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100 mm.

Cohesive materials:

- i. whose consistency when profiled may in terms of table 1 be classified as very soft, soft, firm, stiff and stiff / very stiff; or
- ii. where the material is a gravel having a maximum particle size of 10 mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100 mm;

Note:

- (1) A boulder, a cobble and gravel is material with a particle size greater than 200 mm, between 60 and 200 mm.
- (2) A dynamic cone penetrometer is an instrument used to measure the insitu shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400 mm and drives a cone having a maximum diameter of 20 mm (cone angle of 60° with respect to the horizontal) into the material being used.

Table 1: Consistency of materials when profiled

Granular materials Cohesive materials

Consistency Description Consistency Description

Very loose Crumbles very easily when scraped with a geological pick. Very soft Geological pick head can easily be pushed in as far as the shaft of the handle.

Loose Small resistance to penetration by sharp end of a geological pick. Soft Easily dented by thumb; sharp end of a geological pick can be pushed in 30 - 40 mm; can be moulded by fingers with some pressure.

Medium dense Considerable resistance to penetration by sharp end of a geological pick. Firm Indented by thumb with effort; sharp end of geological pick can be pushed in upto 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.

Dense Very high resistance to penetration by the sharp end of geological pick; requires many blows for excavation. Stiff Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.

Very dense High resistance to repeated blows of a geological pick. Very stiff Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

PLI 4 Trench excavation

All hand excavates able material in trenches having a depth of less than 1,5 metres shall be excavated by hand.

PLI 5 Compaction of backfilling to trenches (areas not subject to traffic)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100 mm. Each layer shall be compacted using hand stampers

a) to 90% Proctor density;

b) such that in excess of 5 blows of a dynamic cone penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10 mm and contains no isolated boulders, or

c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

PLI 6 Excavation

All hand excavates able material including topsoil classified as hand excavate able shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand.

The excavation of any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

PLI 7 Clearing and grubbing

Grass and small bushes shall be cleared by hand.

PLI 8 Shaping

All shaping shall be undertaken by hand.

PLI 9 Loading

All loading shall be done by hand, regardless of the method of haulage.

PLI 10 Haul

Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150 m.

PLI 11 Offloading

All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilised for haulage.

PLI 12 Spreading

All material shall be spread by hand.

PLI 13 Compaction

Small areas may be compacted by hand provided that the specified compaction is achieved.

PLI 14 Grassing

All grassing shall be undertaken by sprigging, sodding, or seeding by hand.

PLI 15 Stone pitching and rubble concrete masonry

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must be collected, loaded, off loaded and placed by hand.

Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150 m.

Grout shall be mixed and placed by hand.

PLI 16 Manufactured elements

Elements manufactured or designed by the contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320 kg. In addition, the items shall be large enough so that four workers can conveniently and simultaneously acquire a proper handhold on them.

SCHEDULE OF QUANTITIES

Note: Labour-intensive works must be highlighted in the schedules/bills of quantities for the payment items relating to labour-intensive works.

The following wording, as appropriate, may be included in the preamble or pricing instructions to the schedules/bills of quantities in the contract with the contractor:

1. 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 filled in 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 work, is a variation to 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.

2. 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.

Training allowance paid to targeted labour in terms of formal training

Extra over for the administration of payment of training allowances to targeted labour

Transport and accommodation of workers for training where it is not possible to undertake the training in close proximity to the site.

(Provisional sum) Person days

PTT TRENCHLESS TUNNELING

PTT1 SCOPE

This specification covers the insertion, by jacking / auger boring / directional drilling / or other trenchless tunnelling techniques of pipelines of diameter not exceeding ND300mmØ under roads, railways, and the like without disturbing the surface or interfering with the normal flow of traffic.

NOTE: The standards referred to in the specification are listed in appendix A as well as SANS ISO 4427 of 1996.

PTT2 INTERPRETATIONS

Supporting specifications:

SANS ISO 4427 of 1996.

SANS 1200A, SANS 1200AA

SANS 1200D, SANS 1200DA

SANS 1200DB

SANS 1200G, SANS 1200GA

SANS 1200L

SANS 1200LD

SANS 1200LB

Definitions:

Directional boring: Insertion of a pipe by trenchless methods without disturbing the surface or traffic.

PTT3 MATERIALS

PIPES

Pipes for slip lining, directional boring and pipe cracking shall be High density polyethylene (HDPE) to SANS ISO 4427 of 1996 class 10 (SDR21) PE 80, to be butt-welded. Steel pipes (4.5mm wall thickness) to SANS 1123 (1600/3), hot-dipped galvanised to SANS ISO 1461 and SANS EN 10240.

PTT4 PLANT

Specialised equipment by the Contractor. All plant shall be in a good working order and safe for use by staff. All plant and equipment to be adequate with regard to size and quantity for the work under consideration. The Contractor shall provide adequate lighting to conduct work. Trained and experienced staff shall operate plant.

PTT5 CONSTRUCTION

a. Approval:

No trenchless tunnelling shall be done without the correct and written proof of the Third Party authority -who's asset is to be traversed. The Contractor shall implement and adhere to all the requirements of all relevant authorities, i.e. electricity, water, sewage, gas, telecoms, storm water, cables, petroleum, etc.

b. Competence:

All aspects of the trenchless tunnelling shall be supervised by competent and trained personnel.

c. Contractor solely responsible:

The Contractor shall be sole responsible – due to the specialised nature of the work, any approval given to proceed or allowing work to proceed shall at no stage be construed as acceptance.

d. Depth:

All trenches shall be tunnelled at a depth of minimum 1,2 m below any road surface. The Engineer may only allow exceptions through written consent only in reply to motivation from the Contractor or based on known circumstances. -

e. Sleeved or grouted:

All trenches, both unsuccessful and successful, shall at least be sleeved or grouted with a material of at least 80% of the cross sectional area of the trench.

f. Launch pits:

Shall be backfilled under the supervision of Council and at least at 150 mm layers to a compaction similar to that of the surrounding soil conditions.

The engineer may, as he deems it necessary, take CBR-test measurements to ensure that proper compaction was achieved and if not conforming, the contractor shall be held responsible for ensuring that such compaction is achieved.

g. Inform on completion:

The Contractor shall inform the Engineer or his authorised representative when the operations are to commence and when it is completed.

PTT6 SAFETY

Trenchless tunnelling may at no stage compromise safety.

The contractor shall before any work take place on site:

a. Assure that the necessary written permission is obtained to commence

- b. Assure that existing services are known by obtaining the as built information from all service providers such as water, sewage, storm water, electricity, gas, telecoms, petroleum, etc.
- c. Existing services shall be exposed by hand excavations and other locating techniques (non – destructive or non-harmful). Exact levels and positions shall be determined by the Contractor to assure that no services intersect the operations or will be damaged / impaired once the trenchless tunnelling commences.
- d. Levels shall be taken on the surface by the contractor before, during and after the tunnelling operations as proof that no subsidence has taken place. Structures close or above the position of tunnelling shall be examined before any work commences.
- e. Records of levels, inspections, risk assessments, photographs, etc., shall be maintained for at least 3 years after the end of the Contract.
- f. No blasting shall be permitted.

PTT7 INSERTION

The pipe (HDPE unless specifically specified as steel) shall be inserted by trenchless tunnelling techniques for the following cases:

Directional boring / Auger boring.

- (a) Receive written instruction to proceed.
- (b) Obtain as-built information of relevant authorities regarding exiting services.
- (c) Locate as-built services in the section under consideration and mark on the surface.
- (d) Obtain construction way-leaves and any other approval to proceed with physical work.
- (e) Located manholes within section under consideration.
- (f) Temporary installation of diversion pumping (if required).
- (g) Excavate launch pit, intermediate pits, reception pits and junction points (existing and new). All materials and equipment needed to be available before commencement with directional drilling or auguring.
- (h) Commence with diversion pumping (if required).
- (i) Drilling and insertion of pipe.
- (j) Test sewer pipe, check levels and calculated slopes.
- (k) Backfill and restore surfaces
- (l) Submit as-built information to the Engineer or his authorised representative.

PTT8 TOLERANCES

For sewer lines

Maximum deviation from given position and levels:

Position : $\pm 150\text{mm}$ over every 50m.

Level : $\pm 50\text{mm}$ over every 50m.

Since sewer lines are at stake the Contractor shall apply as much control as possible to assure accuracy especially with regard to required levels. To this end more frequent reception pits may be required.

PTT9 TESTING

The inserted pipe shall be pressure tested at $1\frac{1}{2}$ times the expected working pressure as instructed by the Engineer or his authorised representative.

PTT10 MEASUREMENT & PAYMENT – Scheduled Items

(For sleeves of 10m to 50m pipe length)

PTT10.1 Establishment.....Unit: Sum

NB: Only applicable for sleeves less than 50m Same wording applies as for SANS 1200 LG Clause 8.2.1 except that the term “jacking” be replaced by “trenchless tunnelling”.

PTT10.2 Launch / reception pit

PTT10.2.1 Excavate, backfill construct and make good launch or reception pit in all materials.....Unit: No.

The rate shall cover all costs to excavate, maintain, shore, barricade, protect, safeguard, backfill, compact, restore the surface (paving / grass / topsoil / asphalt), finish to a standard at least as before any work, dispose debris, etc. to successfully install the sleeve.

PTT10.3 Supply of pipes to be inserted:

The rate shall cover all costs to supply the pipe to be inserted into the tunnel created by the trenchless tunnelling technique. The pipe material shall be as listed and specified in the schedule of quantities.

ND _____ mm.....Unit: m

The rate tendered shall cover all costs to procure, transport and supply the pipe material in length requested to the point of insertion.

PTT10.4 Insertion of pipes supplied under item PTT10.3: 10m - 50m long

PTT10.4.1 Trenchless tunnelling method:

The Tenderer to provide information on method per diameter of pipe to be inserted.

ND _____ Ø(Method.....Unit : m

The rate shall cover all costs to install, complete with all appurtenances, the pipes supplied under PTT10.3, except for the launch pits, reception pits, and pipe material. Payments shall only be made for crossings or a part thereof that could be put to use for the purpose it was requested.

This rate shall include for dealing with rock, dealing with traffic, standing time due to inclement weather, supervision, establishment, and all other costs of a general and provisional nature.

PTT10.5 Standing Time.....Unit: Hr

Same wording applies as for SANS 1200 LG Clause 8.2.10 except that the term “jacking” be replaced by “trenchless tunnelling”.

PM MATERIALS

PM1 SCOPE

This specification details the specific requirements for the City of Ekurhuleni with regard to Materials associated with the Works.

PM2 GENERAL

All materials incorporated in the Works shall be the best of their respective kinds, new, sound and undamaged and shall conform strictly with the appropriate South African Standard Specifications (S.A.N.S.) or British Standard Specifications (B.S.) and any amendments thereto. Samples of material to be used upon the Works not drawn from the Council's stores are, when required, to be submitted to the Engineer for his approval by the Contractor at his own cost. Any material which is not of the standard of the sample so submitted and approved or in the opinion of the Engineer is unsuitable for the purpose for which it is to be used will be ordered by the Engineer to be rejected. Upon delivery to site and again before being built into the Works all material is to be examined by the Contractor and any defective or damaged material is to be set aside for inspection by the Engineer's Representative who shall, under the Engineer's direction, determine whether the material is to be rejected. The Contractor shall at his own cost, immediately remove material which has been rejected and replace it with material complying with the Specification.

The Bidder shall complete the schedule giving particulars of the materials he intends to supply and shall submit any further details required to clarify or illustrate his bid.

PM2 DELAY DUE TO SUPPLY OF MATERIAL

The Contractor shall ensure that the work is not delayed, due to the lack of materials on the site of the works, by placing orders with suppliers for the materials required under this Contract as soon as possible after the acceptance of this tender. The ordering of material must be done with the approval of the Engineer.

The Contractor shall, by producing copies of written orders or written enquiries for supplies, prove to the satisfaction of the Engineer that any delay occasioned by non-availability of materials has been caused by the inability of suppliers to supply and not by his own lack of timely ordering or lack of exhaustive enquiry or supplies, before any extensions of the Contract time shall be allowed due to such delays.

PM4 STEEL PIPES AND FITTINGS

Inspection at factory - The Contractor or the Manufacturer on his behalf shall carry out the necessary inspection and testing to ensure that the materials employed and the finished product complies with the requirements of these Specification.

The Engineer or his representative will carry out periodic inspections of pipes and fittings during manufacture and testing. The Contractor or Manufacturer shall give adequate notice of intention to test, and no pressure test carried out in the absence of the Inspector shall be recognised unless the Inspector in reply to the notice indicates that he will not witness the tests and authorises them to be carried out in his absence.

Manufacture and testing - Steel pipes shall be plain ended and prepared for field welding except where spigot and socket, flanges or flexible couplings are specifically called for. Steel pipes shall be in accordance with SABS 719.

Fittings:

a) Screwed Tubes and Related Pipe Fittings

Screwed tubes shall conform with S.A.N.S. 763 medium class, and shall be galvanised. Screwed pipe fittings shall conform with S.A.N.S. 763 (light weight) and shall be galvanised. The outlets of tees and crosses are specified in accordance with S.A.N.S. 763.

b) Flanges

Unless otherwise specified, flanges shall conform with SANS 1123 Table 1600/3, unless otherwise shown for the corresponding nominal imperial bore. They shall be machined flat and drilled off centres. Hydrant flanges, referred to as "FH", shall comply with the dimensions and drilling specified for 3½" diameter Table D flanges, i.e. they shall

be 203mm diameter with 4 No. 17,5mm diameter holes at 165,1mm P.C.D. Flange faces shall be protected from rust by an approved composition. Bolts and nuts shall comply with SANS 135 and shall be grade 304 Stainless Steel.

PM5 uPVC PIPES AND FITTINGS

uPVC pipes to SANS 966 Supraflo

uPVC pipes to SANS 1283/1982 Supratuff

Fittings

The standard jointing is with the Supraflo Z-lok which will fit onto SUPRAFLO uPVC and Ultratuff MPVC piping. The SUPRAMYN HDS Victaulic jointing system will be used on the high-impact SUPRATUFF and SUPRAMYN uPVC pipes. This system is mainly used for conditions where maintenance is a problem such as in central business areas.

The Z-lok jointing system joins onto all uPVC fittings and Gate valves with ends manufactured to SANS 966. These fittings are only manufactured up to 250mm dia. and all larger pipes up to 400mm dia. connect with plain ended steel manufactured fittings connected with V.J. Couplings or Klamflex.

Construction

With the exception of high-impact uPVC pipes with Victaulic jointing all other pipes require anchor blocks at bends, valves and at end caps. UPVC pipes must not be used at temperatures exceeding 60 degrees centigrade. Padding and bedding must be a fine selected material with no stones or pebbles larger than approximately 6mm. Backfilling adjacent to pipes must be properly compacted with hand-rammers up to the crown of the pipe. Small plate compactors may be used on the backfill of the 300 mm padding layer.

PM6 JOINTING MATERIAL

All pipes are to be supplied with one coupling per pipe of the same material as the pipe. All valves and fittings are to be supplied without couplings or jointing material, unless otherwise specified. The jointing material for valves and fittings is scheduled separately and is to comply with the following requirements:

PM6.1 Plain ended joints

All materials used in the manufacture of couplings shall comply with the relevant S.A.N.S. or B.S. specifications. Couplings shall be capable of withstanding test pressures equal to or greater than the test pressures applicable to the class of pipe for which they are intended. All couplings used shall be subject to the approval of the Engineer.

Long and short collar C.I. detachable joints, suitable for use with fibre cement pipes, shall be of robust construction and shall be protected against corrosion. C.I. detachable joints shall be supplied complete with rubber rings and galvanized bolts and nuts. Long collar C.I. joints shall be tapped the specified B.S.P. thread. F.C. couplings shall be supplied complete with rubber rings.

Couplings of the Viking Johnson type, without central register, shall be used with steel pipes or larger diameter uPVC pipes where called for.

Where special couplings to join plain ended steel pipe to fibre cement pipe are called for, they shall be either of the following:

- (a) Couplings of the Viking Johnson type without central register with one end sized for steel pipe and the other end sized for fibre cement pipe.
- (b) Short collar C.I. couplings for use with fibre cement pipes or F.C. couplings as called for, complete with steel sleeves of suitable dimensions welded to the pipes; the rate quoted shall include for welding the sleeves to the pipes.

PM6.2 Flanged joints

Insertion rings shall be of rubber to B.S. 2494 Class C or D, 3mm thick, cut to suit the flanges specified in Clause 3.8 of this Specification. Bolts and nuts of the sizes specified are to conform with S.A.N.S. 61 and be screwed B.S.W. thread, with hexagon heads and nuts.

PM6.3 Screwed joints

Ends of screwed pipe and fittings shall be to SANS 1109 male ends being screwed taper and female ends parallel thread.

PM7 CAST IRON PIPES AND FITTINGS

C.I. fittings having plain ends and flanges shall comply with S.A.N.S. 546 except that flanges shall be provided as called for in the Bill of Quantities.

PM8 SCREWED TUBES AND RELATED PIPE FITTINGS

Screwed tubes shall conform with S.A.N.S. 763 medium class, and shall be galvanised. Screwed pipe fittings shall conform with S.A.N.S. 763 (light weight) and shall be galvanised. The outlets of tees and crosses are specified in accordance with S.A.N.S. 763.

PM9 FIRE HYDRANTS

Fire hydrants shall be approved underground type hydrants complying with B.S.750 as far as it is not superseded by any special requirements of this Contract.

The direction of rotation of the spindle shall be anti-clockwise for closing when viewed from above.

PM10 VALVES

For Gate valves, Air Valves and Butterfly Valves refer to relevant Particular Specifications. Only valves of proven quality manufactured by an approved manufacturer will be accepted.

Lifting Eyes - a lifting eye at the top of the valve body, where the combined mass of the valve bypasses and actuator exceeds 75 kg.

Mounting feet - Valves with a nominal bore of 450mm and greater used are to be provided with stainless steel jacking screws.

Testing of Valves: Test Certificates - A test certificate shall be provided with each valve in which it is certified that the valve has been inspected and tested and that it complies with the specification. Where an independent inspector may be appointed by the Employer to witness the testing, the inspector must also sign the test certificate. At least three working days' written notice must be given of the date and time of the test. In the event that the valve(s) to be tested are not ready the Employer reserves the right to deduct any fruitless inspection costs from moneys due to the Contractor.

In General Corrosion Protection of Valves (Unless specifically specified)- The cleaning and corrosion protection of the valves must be carried out at the factory prior to despatch to the Site. Non-ferrous metal or stainless steel surfaces must not be painted. The protection to be applied must comply with the following:

Material to be protected	Surface Preparation	Coating	Coating Thickness	Typical Product
Steel or Cast Iron:	Shot blast to Sa3, & Chemical treatment.		3 Coats High Build Epoxy for underwater use.	

Alternatively

Fusion Bonded epoxy powder coated, applied by electrostatic spray.

DFT min 250 μm.

DFT max 400 μm.

DFT min 300 μm.

DFT max 500 μm.

Full chemical cure

Chemrite Coatings:
Carboline 891.

Spec-coats:
Cupon EP 2300WB

International Paints:
Valspar D 1003 LD

or similar approved in writing by the Engineer.

Material to be protected	Surface Preparation	Coating	Coating Thickness	Typical Product
Galvanized Steel:	Degrease & Abrade	1 Coat 2-pack epoxy primer.		

1 Coat Epoxy for underwater.

DFT min 150 μm.

DFT max 250 μm. Chemrite Coatings:

Carboline 891.

Speccoats: Copon EP 2300WB

or similar approved in writing by the Engineer.

After erection on site all valves must be cleaned and the paintwork refurbished where necessary to restore the condition to that at the time of leaving the factory.

PM11 SADDLES

Saddles are to be suitable for use with water pipes to S.A.N.S. 286 or S.A.N.S. 946 as called for. They shall be of approved manufacture, complete with bolts, nuts and rubber gaskets and shall be tapped the specified B.S.P. thread.

PM12 STOPCOCKS

Stopcocks are to conform with S.A.N.S. 226 and be screwed female B.S.P. thread. They shall be clockwise closing.

PM13 TAPS

Taps are to conform with S.A.N.S. 226 and shall be screwed male B.S.P. thread.

PM14 C.I. COVERS, FRAMES AND STEP IRONS

All cast iron covers and frames supplied by the Contractor shall be from an approved manufacturer, comply with S.A.N.S. 558 and be coated by immersion in a hot bath of suitable bituminous compound.

Covers shall be attached to the frames or boxes as shown hereafter and shall have the following letters embossed thereon:

TYPE OF COVER	ATTACHMENT	LETTERING
Manhole Covers	Loose	
Hydrant Boxes	Chain	F.H.
Valve Boxes	Hinge	B.M.
Airvalve boxes	Chain	A.V.
Meter Boxes	Hinge	METER
Pressure Relief Valve Boxes	Hinge	P.R.V

PM15 PRESSURE GAUGES

Pressure gauges shall comply with B.S. 1780. They shall be screwed 3/8" B.S.P. thread or metric equivalent and shall have dials calibrated in Bars over the required range of head.

PM16 FERRULES

The materials and workmanship employed in the manufacture of ferrules shall be of a standard equal to that specified in S.A.N.S. 226 for stop cocks or to the appropriate British Standard Specification. Ferrules shall be manufactured of gunmetal, brass or equal. Swivelling outlets shall be screwed female B.S.P. thread and inlets shall be screwed male B.S.P. taper thread. The ferrule shall incorporate an integral isolating device.

PM17 H.D.P.E. PIPES AND FITTINGS

The SANS ISO 4427 of 1996 specification will be applicable.

PM18 PROTECTION AND TESTING OF STEEL PIPES

The Steel Pipes must be lined externally with bitumen wrapped fibreglass coating and internally with cement mortar. The lining must be applied in the following thickness:

Mortar Lining

PIPE O.D. (mm)		THICKNESS OF LINING (mm)			
From	Up to and including	Nominal	Minimum	Maximum	
168	Up to	324	8	6	11
324	Up to	610	10	8	13
610	Up to	1620	12	10	16

Length of Lining - Pipes with flanged ends, the ends of the linings shall be slightly rounded to prevent the linings of the pipes to be jointed from touching.

Pipes are to be butt-welded insitu, the lining shall terminate 40mm back from the end of each pipe and shall be chamfered at approximately 85 degrees to the pipe wall in order to form a dovetail joint for the insitu repair to the lining after the welding is completed.

For pipes that are to be sleeve jointed and filled welded, the spigot end shall be lined to the end of the pipe and finished off square to the pipe. The sleeve end shall have the lining finished approximately 60mm from the end of the sleeve with a chamfer at 85 degrees to the pipe wall.

Testing - Radiographic Testing in the Field - 10% of all welds made in the field shall be tested radiographically by an independent specialist firm. The welds to be tested shall be selected by the Engineer or his representative. The standard of acceptance shall be in accordance with API Standard 1104. All costs of testing and retesting will be borne by the Contractor.

Joint protection on Steel Pipes - Joints on steel pipes must be protected using "Densotherm" or approved equivalent. The work must be done strictly according to the specifications of the supplier. After thoroughly cleaning the pipe, removing all loose scale and other coatings, the entire surface to be wrapped must be primed with Denso primer D and allowed to dry. Apply tape by wrapping spirally around pipe in two layers. (Minimum thickness 3mm and overlap 100mm)

PV VALVES

PV1 CORROSION PROTECTION

Material to be protected	Surface Preparation	Coating	Coating Thickness	Typical Product
Steel or Cast Iron:	Shot blast to Sa3, & Chemical treatment.		3 Coats	High Build Epoxy for underwater use.

Alternatively

Fusion Bonded epoxy powder coated, applied by electrostatic spray.

DFT min 250 µm.

DFT max 400 µm.

DFT min 300 µm.

DFT max 500 µm.

Full chemical cure

Chemrite Coatings:

Carboline 891.

Spec-coats:

Copon EP 2300WB

International Paints:

Valspar D 1003 LD

or similar approved in writing by the Engineer.

Galvanized Steel: Degrease & Abrade 1 Coat 2-pack epoxy primer.

1 Coat Epoxy for underwater.

DFT min 150 µm.

DFT max 250 µm. Chemrite Coatings:

Carboline 891.

Speccoats:

Copon EP 2300WB

or similar approved in writing by the Engineer.

Galvanized Steel: Degrease & Abrade 1 Coat 2-pack epoxy primer.

1 Coat Epoxy for underwater.

DFT min 250 µm.

DFT max 400 µm. Primer: Plascon Gehopon Primer GW5

Chemrite Coatings:

Carboline 891.

or similar approved in writing by the Engineer.

PV2 GATE VALVES

PV2.1 Type

Gate valves shall be double flanged, resilient or wedge type, with a non-rising spindle. The gate shall be completely clear of the waterway in the fully open position and capable of withstanding the nominal pressure and test pressures from both sides.

PV2.2 Specification

Manufactured in accordance with SANS 664 and SANS 191.

PV2.3 Operation

The valve shall be able to withstand and to open and close satisfactorily under the specified flow rate and pressure. All gate valves shall be of the 'anti - clockwise-closing' type.

PV2.4 Resilient Seal Gate valves (ND 50mm Ø to ND 400mm Ø)

PV2.4.1 Body, Gearbox & Guides

The body shall be of sufficient strength to withstand stresses and distortion of operation (including testing) and gearing. The valve gearbox (if required) shall be supported by its own brackets and not be fitted to the valve's stuffing box.

Gate guides shall be deep and offer support in all positions without protruding into the flow path.

The rubber shall accurately fit the body guide profile to allow smooth operation of the gate without shudder.

PV2.4.2 Gate

Gates, encapsulated in rubber, shall be manufactured to assure drop tightness in both directions over the whole specified pressure range (including testing).

PV2.5 Wedge Gate valves (ND 350mm Ø to ND 1200mm Ø)

PV2.5.1 Body, Gearbox & Guides

The body shall be of sufficient strength to withstand stresses and distortion of operation (including testing) and gearing. The valve gearbox (if required) shall be supported by its own brackets and not be fitted to the valve's stuffing box.

Channel guides on the body shall be as deep and as long as possible as necessary to support and minimize shudder of the gate. Over-travel shall not be allowed in the opening and closing.

PV2.6 Material

PV2.6.1 Valve Components

a) Resilient Seal Gate Valve (ND 50mm - 300mm Ø)

Pressure Ratings:

1000 kPa

1600 kPa

2500 kPa

Hydraulic test:

Structural = 1.5 x Pressure Rating

Seat = Pressure Rating

Component	Material
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Body	SG Iron
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Gate	SG Iron, Coated Vulcanized EPDM
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Bonnet & Stuffing Box	SG Iron
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Stem	Stainless Steel Grade 304
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Stem Nut	Bronze (Gunmetal)
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Stem Bush	Plastic (Nylon)
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Bush / Stem Stuffing Box Seals Nitrile
 Profile Scraper Ring Nitrile
 Friction Ring Plastic
 Hand Wheel / Stem Cap SG Iron
 External Fasteners Steel to SABS 135
 Internal Fasteners Steel to SABS 135

b) Wedge Gate Valve (ND 350mm - 1200mm Ø)

Pressure Ratings:

1000 kPa (ND 350mm - 1200mm Ø)
 1600 kPa (ND 350mm - 1000mm Ø)

Hydraulic test:

Structural = 1.5 x Pressure Rating
 Seat = Pressure Rating

Component	Material
Body	SG Iron / Ductile Iron
Gate	Ductile Iron with EPDM rubber coat
Seat & Gate Ring	Bronze (Gunmetal)
Bonnet & Stuffing Box	Ductile Iron – epoxy coated internal and external.
Stem	Stainless Steel
Stem and Yoke Nut	Bronze (Gunmetal)
Gate Nut	Bronze (Gunmetal)
Thrust Bearings	Polyamid.
Seals	EPDM/NBR Rubber
Hand Wheel / Stem cap	Ductile Iron
External Fasteners	Stainless steel
Internal Fasteners	Stainless Steel

PV3 AIR RELEASE AND VACUUM CONTROL VALVES (CYLINDER FLOAT TYPE)

PV3.1 Type

Air release or vacuum break valves shall be of the compact single chamber type with solid cylindrical polyethylene floats in a tubular stainless steel housing with fusion bonded epoxy powder coated mild steel ends secured by means of stainless steel tie rods.

The valve shall have an integral surge alleviation mechanism which shall operate automatically to limit transient pressure rise or shock induced by closure due to high velocity air discharge or the subsequent re-joining of separated water columns. The limitation of pressure rise must be achieved by deceleration of approaching water prior to valve closure. Relief mechanisms that act subsequent to valve closure cannot react in the low millisecond time span required and are therefore unacceptable.

Discharge of pressurized air shall be controlled by the seating and unseating of a small orifice on a natural rubber seal affixed to the control float.

The intake/discharge orifice area shall be equal to the nominal size of the valve, e.g., a 200mm (8") valve shall have a 200mm (8") intake/discharge orifice.

The valve construction shall be proportioned with regard to material strength characteristics, so that deformation, leaking or damage of any kind does not occur when it is tested to 1.5 times the designed working pressure.

The valve design shall incorporate an over pressure safety feature that will fail without an explosive effect, such as is normally the case when highly compressed air is released suddenly. The feature shall consist of easily replaceable components such as gaskets, seals or the like.

PV3.2 Functional requirements:

The required valves shall provide any of the functions, or combination of functions, described below and as specified in the schedule of quantities.

- Pipeline filling

Uninterrupted high volume air discharge through the large orifice.

- Pipeline draining or Column Separation

Uninterrupted high volume air intake through the large orifice.

- Pipeline full and operating

Discharge of entrained pressurized air through the small orifice.

Rapid Filling/Column Separation

The valve must incorporate an integral surge alleviation mechanism which will automatically dampen surge pressures due to rapid air discharge or the subsequent re-joining of separated water columns.

All valve functions shall be housed in a single valve chamber.

PV3.3 Body

Tubular stainless steel housing with fusion bonded epoxy powder coated mild steel ends secured by means of stainless steel tie rods.

PV3.4 Float

Solid cylindrical polyethylene floats. Hollow spherical floats are not acceptable.

PV3.5 Seat & Drainage

Large orifice sealing shall be effected by the flat face of the control float seating against a nitrile rubber 'o' ring housed in dovetail groove circumferentially surrounding the large orifice. The large orifice seal shall be of a dynamic type, adjusting automatically to the pressure exerted on it to reduce wear on the seal.

For maintenance purposes, it must be possible to drain the valve.

PV3.6 Maintenance

The eventual configuration shall be such that the air valve can be isolated for maintenance purposes.

PV3.7 Material (ND 50mm - 200mm Ø)

Pressure Ratings:

1600 kPa (PN 16)

2500 kPa (PN25)

4000 kPa (PN40)

Hydraulic test:

Structural	= 1.5 x Pressure Rating
Seat	= Pressure Rating
Component	Material
Upper Body Flange	Mild steel fusion bonded epoxy
Lower Body Flange	Mild steel fusion bonded epoxy.
Barrel	Stainless Steel – 304
Barrel Seals	Compressed Fibre Gasket
Internal Seals	O ring (Nitrile)
Top Cover	Aluminium / Stainless Steel / ABS Plastic
Anti Shock Orifice	HDPE
Floats	HDPE
Baffle Spacers	PVC
Nozzles	Stainless Steel
Nozzle Seat	Natural Rubber 4
Baffle Plates	Stainless Steel – 304
Tie Rods	Stainless Steel – 304
Internal Fasteners	Stainless Steel – 304
External Fasteners	Stainless Steel – 304

PV4 CONTROL VALVES – PRESSURE REDUCING (PRV)

PV4.1 General

The upstream pressure of this type of valve can vary from the full static head in the pipeline to the minimum head under maximum anticipated flow.

Closing – the valve shall have a linear flow velocity reduction to reduce pressure surges. Alternatively, the closing cycle shall be inversely proportional to the increase in dynamic pressure.

Surge relief / surge oppression capability will be a major advantage, since exceeding the design pressure shall not be allowed.

PV4.2 Material (ND 50mm - 400mm Ø)

Pressure Ratings:

1600 kPa (PN 16)

2500 kPa (PN 25)

Hydraulic test:

Structural = 1.5 x Pressure Rating

Seat = Pressure Rating

Component	Material
Body	SG Iron / Ductile Iron
Bonnet Cover	SG Iron / Ductile Iron
Bearing Disc	SG Iron
Cover and drain plugs	High tensile brass
Cover Body and Diaphragm seal O Ring	NBR – Nitrile Butadiene Rubber
Diaphragm	Nylon Reinforced
Diaphragm Washer	Stainless Steel
Shaft	Stainless Steel
Inner Spring	Spring Steel
Needle Valve	Manufacturers standard supply
Cock Valve	Manufacturers standard supply
Filter	Manufacturers standard supply
Pressure Reducing Pilot Valve	Manufacturers standard supply
Pressure Relief Pilot Valve	Manufacturers standard supply
Pressure Gauge	Manufacturers standard supply
External Fasteners	Stainless Steel
Internal Fasteners	Stainless Steel

PV4.3 Compatibility

Pressure reducing control valves shall be compatible with loggers, controllers, control software, modems, and other necessary appurtenances, with:

Loggers / control equipment nominated in writing. The Contractor to assure compatibility before commencement with any work on the contract.

Items proposed by the Tenderer (thus no specification in the Project Specification).

PV5 DATA LOGGERS AND OTHER CONTROL EQUIPMENT TO DO EFFECTIVE PRESSURE MANAGEMENT CONTROL

PV5.1 Purpose

The main purpose of data logging shall be to:

Do effective pressure and flow measurements at predefined locations, nonstop, or at certain intervals, in order to determine pressure and flow extremes linked to time. With this information PRV's can be adjusted to protect the water pipe network and to reduce excessive leakage's due to very high pressures.

To monitor the effect of adjustments to the PRV's.

PV5.2 Compatibility

Data Loggers shall be compatible with PRV's, Modems, controllers, control software, modems, and other necessary appurtenances, with:

Items specified in the Project Specification.

Items proposed by the Tenderer (thus no specification in the Project Specification).

Data logging & control equipment shall mainly consist of:

PRV controller.
GSM Data Logger.
Software.
GSM Modem.
Antenna.

Necessary appurtenances.

PV5.3 Power supply

Batteries shall be the long life type (3-year life expectancy minimum) and shall be rechargeable, and batteries shall be compatible to all other equipment where relevant.

PV6 NON-RETURN VALVES

PV6.1 General

The purpose of the non-return valve is to prevent reverse flow. Should reverse flow however occur, closure shall be quick but without slam.

For maintenance purposes, doors, discs and seals must be removable without removing the valve body. Non-return valves shall be of the swing-check type.

PV6.2 Materials

Pressure Ratings:

1600 kPa (PN 160)

Hydraulic test:

Structural = 1.5 x Pressure Rating

Seat = Pressure Rating

Component	Material
Body	SG Iron / Cast Steel
Cover	SG Iron / Cast Steel
Hinge	SG Iron / Cast Steel
Hinge Shaft	Stainless Steel
Stopper	Hard Rubber
Seat	Stainless Steel
Cover Seal	O Ring (Nitrile rubber)
External Fasteners	Steel (Hot dip Galvanised)
Internal Fasteners	Stainless Steel
Clack Plate	Steel

PV7 SAFETY RELIEF VALVE

PV7.1 General

The safety relief valve shall be adjustable to release pressure beyond the set point. Pressure release shall be such that it poses no danger to personnel or equipment and assets. The pressure relief valve shall be isolated with a gate valve, for maintenance purposes. It shall be possible for valves to be vented to remove pressure build-up.

PV7.2 Material

Pressure Ratings:

1030 Kpa
2060 Kpa
4130 Kpa
6200 Kpa
10340Kpa

Hydraulic test:

Structural = 1.5 x Pressure Rating
Seat = Pressure Rating

Component	Material
Body	SG Iron / Carbon Steel / Ductile Iron
Disc	Stainless Steel
Stem	Stainless Steel
Spring	Alloy Steel
Fasteners:	Screws & Nuts Stainless Steel
Seals	Suppliers Specification

PC CONCRETE, BRICKWORK ETC.

PC1 SCOPE

This refers to specific requirements with regard to concrete, brickwork and building work.

PC2 CONCRETE & CONCRETE STRENGTH

The Engineer reserves the right to take whatever steps are considered necessary to ensure the safety of any structure in the event of the crushing strength of concrete proving less than specified above.

All concrete shall be mixed in approved concrete mixers except where hand mixing is specifically permitted by the Engineer.

Where hand mixing is permitted the quantity of cement (CEM 1) shall be increased by 10%. Hand mixing shall take place on suitable steel or wooden mixing platforms. The materials shall be mixed dry until the mass is of uniform colour, after which water shall be added and mixing continued until uniform consistency is attained.

On Site Mixing, Concrete shall be of various qualities and shall be referred to as Class A,B or C as shown in the schedule below (parts by volume) :

CLASS	28 DAYS DESIGN WORKS CUBE (150mm) STRENGTH (MPa)	CEMENT	SAND	STONE
	MAXIMUM GAUGE OF STONE			
A	20	1 Part 50kg	2 Parts	
0,07m3	3 Parts			
0,14m3	20mm			
B	20	1 Part 50kg	3½ Parts	
0,12m3	5 Parts			
0,175m3	20mm			
C	15	1 Part 50kg	3 Parts	
0,10m3	6 Parts			
0,21m3	20mm			

The concrete will be referred to as in the schedule, the stone shall be well-graded up to the maximum gauge as shown above. Materials for the concrete are to be accurately and separately gauged in the proportions specified and measured in proper gauging boxes made of wood, with close fitting joints of suitable size for each type of ingredient. Cement shall be measured by 50kg pockets. Concrete mixing shall be done by an approved mixing machine unless otherwise allowed in writing by the Engineer.

Slump - The quantity of water used must be such that the concrete shall have a slump of 50mm, except where otherwise ordered by the Engineer. All concrete must be placed in position within 20 minutes from the time of mixing.

Concrete drop - Concrete shall not be dropped from a height greater than 2 metres. If the height is greater than 2 metres, chutes must be used. The concrete must be mechanically vibrated.

Any honeycomb pockets or concrete from which cement paste has leaked out, or which in the opinion of the Engineer is in any way defective, shall be dealt with as directed by the Engineer.

PC3 PLACING CONCRETE

The concrete shall be placed as soon as possible after mixing, and on no account be incorporated in the work after initial set has taken place. The concrete shall be properly and thoroughly puddled into the forms and around the reinforcement during placing, so as to leave a compact mass without voids or honeycombing.

After placing the concrete in the forms, all floors and flats shall be levelled off with a wooden screed.

All concrete shall be protected against damage due to frost, inclement weather, imposed loads or from any other cause until it has thoroughly hardened.

All exposed surfaces of the concrete shall be wetted for 12 hours after setting and be continually moistened and covered with suitable material to prevent drying out for at least seven days for such further period as may be required by the Engineer.

The Engineer shall have the right to reject any concrete which is not in accordance with this specification or is otherwise unsatisfactory whereupon the Contractors shall remove such rejected work and substitute it by satisfactory work or else execute such remedial measures as may be prescribed by the Engineer. No remedial work shall be commenced before the work has been inspected by the Engineer.

PC4 STAGING AND SHUTTERING

All formwork, mould, shuttering and staging shall be properly adapted in every respect to the forms and dimensions of the structure and to the required finish of the work. All shuttering shall be true to lines and levels, of sufficient thickness to prevent bulging and securely propped and braced so as to be able to satisfactorily withstand all loads to which it is subjected. All joints shall be watertight and chamfered as required.

Immediately before concreting is commenced all formwork and casing shall be carefully cleaned (by brushing and by washing with a hose) to ensure that all dirt, shavings, sawdust and other refuse has been removed.

On no account shall any forms be removed without the consent of the Engineer who will determine the minimum times when all shuttering may be removed but the responsibility for the removal of forms and casing shall rest entirely with the Contractor.

Pier and beam sides generally may have their shuttering removed three days after concreting, while the shuttering for slabs may be removed in 10 days' time and that for beam bottoms and supporting props generally may be removed 21 days after concreting.

PC5 FINISHED SURFACE OF CONCRETE

All concrete surfaces on completion shall be clean, hard, entirely free from honeycombing and projections of any sort, nonporous and not plastered, except as directed. Exposed soffits of beams and slabs, sides of beams and exposed surfaces of piers and retaining walls shall be rubbed down with carborundum blocks and all projections and board marks removed.

PC6 CEMENT MORTAR

Cement mortar shall be composed of 1-part cement to 3 parts sand or as called for, properly mixed together, with water added to give the required consistency and thoroughly worked into condition immediately before use.

PC7 C.I. COVERS TO MANHOLES

Frames of manhole covers shall be bedded in 3:1 cement mortar. On completion all exposed metal shall be cleaned and painted with one coat of approved bitumen. In roadways Type 2A roadway manhole covers (approximate mass 195 kg) shall be installed. The covers shall be set flush with the finished road surface and the roadway foundation material consolidated round the cover.

On pavements, private property and in open country Type 6 manhole covers (approximate mass 95 kg) with the recesses in the covers filled with Class C concrete and trowelled smooth shall be installed to cast in-situ manholes and Type 4 pavement manhole covers (approximate mass 77 kg) shall be installed to precast manholes. The frames shall have Class 20/19 concrete surrounds, rendered 12mm thick with 2:1 cement mortar and trowelled smooth with bevelled edges. Covers on pavements shall be set flush with the surface; other covers shall be set level to project 75mm above ground surface.

PE EXCAVATIONS

PE1 SETTING OUT

The Contractor is responsible for the setting out of the works as well as checking and verifying the Bench Marks and reference levels. Any discrepancy must be reported to the Engineer immediately.

Water mains in townships are generally not pegged and are to be set out at the appropriate distance from stand pegs. Before excavation is commenced sight rails shall be erected at all points where existing or proposed services determine the depth and at intervals as necessary to ensure that the required depths are provided. Boring rods for use with the sight rails shall be accurately made to the various lengths required.

PE2 EXCAVATION

Excavation measured will be either soft or rock. No intermediate excavation will be paid. Boulder excavation will only be paid if it is included in the schedule of quantities. Where boulder excavation is not included in the schedule of quantities the Contractor will be paid under the Item for rock excavation. Rock will be defined as material

removed by blasting or jack hammers. Before commencing excavation, the Contractor shall remove from the surface of the area to be excavated all debris, rubble, rubbish, coarse vegetation and any other material not suitable for backfilling. Such material is to be disposed of by the Contractor to the approval of the Engineer.

The excavation shall be carried out in the positions and to the lines and levels shown on the drawings, or as directed by the Engineer.

In depositing spoil from the excavations care shall be taken not to damage trees, fences, buildings or property. Excavated material shall be kept trimmed up as closely as possible to the trench, but a footway 300mm wide shall be maintained between the edge of the trench and the spoil.

Across cultivated land, farmland, residential property and other similar places or where directed by the Engineer the top soil shall be removed, stacked separately and subsequently replaced at the top of the trench.

Where excavations are carried out in paved roads and footpaths or in the line of kerbs and channels, the Contractor shall remove and place on one side of the trench, apart from other spoil, all road material, paving material, kerbs and channels.

Sandy soil, fine gravel, similar material free from heavy clay and stones shall be considered to be fine material.

All fine material which are encountered in the excavations shall be kept separate from the rest of the excavated material for use in refilling around the pipes. If due to the negligence of the Contractor, such material should become contaminated with stones, clay or other material so as to render it unsuitable for refilling around the pipes, the Contractor shall replace it with approved fine material and remove the surplus excavated material from the site all at his own expense.

Trench width: Minimum 600mm, DN plus 2 x 250mm. The Contractor will not be paid for over excavation.

Backfilling – Shall be to 93% Mod AASHTO density (TRH14) if not stated otherwise in the schedule of quantities.

Maintenance - The Contractor shall be responsible for making good all effects which may arise for a period of six months from the date of completion or handing over to the Engineer. Should any subsidence occur subsequently of the replaced tarmac or other surfaces where the Contractor has excavated, the making good shall be done at the Contractor's expense.

PE3 BOTTOMS OF TRENCHES

The bottoms of trenches in loose or soft ground shall be well rammed and consolidated before pipes or bedding are laid. Should the presence of ground water make it impossible to provide a stable bottom, the Contractor, if instructed by the Engineer, shall introduce a 150mm thick layer of 20mm concrete aggregate to form a firm foundation to the bedding.

Should the Contractor excavate the trenches to greater depth than necessary he shall refill the bottom of the trench with fine material or soilcrete which shall be thoroughly consolidated and trimmed to correct grades before laying the pipes, all at the Contractor's expense.

The bottoms of water main trenches shall be taken out true to line and the floor of the trench boned in and trimmed to even grades so as to provide an even support for the pipe along its whole length when laid directly on the trimmed trench floor.

PE4 OBSTRUCTION OF STREETS

The Contractor shall not occupy or obstruct by his operations roads or streets for a width of more than 5 metres.

When the excavations are carried across streets at least 4 metres of carriageway and 1,2 metres of the footpath on either side shall be left clear for vehicular and pedestrian traffic. The partial obstruction which is thus permitted shall not continue for more than fourteen days in any one case.

The Contractor shall obtain the consent of the Engineer in writing before closing any road to vehicular traffic but in every case a footpath shall be left clear.

Where house connections must be laid across a street those connections located between adjacent cross-streets shall be completed before those in another block are commenced.

In order to cause minimum interference to traffic, construction in any one street shall be confined to a length of two blocks or 300 metres, whichever is the lesser, unless the Engineer shall give his permission to additional lengths being under construction at the same time.

PE5 EXCAVATION BY MACHINE

Where in the opinion of the Engineer the use of excavation machinery may cause damage to services and improvements on public or private property, or may cause undue inconvenience to the service authorities or property owners the Contractor shall excavate by means of hand labour.

Where moving existing services or new mains at the Contractor's request to facilitate machine excavation would result in additional cost to the Council such alteration in position if agreed to by the Engineer will only be permitted on the written undertaking by the Contractor to bear the additional costs involved.

The Contractor's methods of excavation shall at all times be subject to the approval of the Engineer.

PE6 TIMBERING, SHORING AND SLOPING

The Contractor shall be responsible for the safety of all excavations, and shall, at his own cost, take all measurements required to secure this end, either by timbering and shoring. The Engineer may direct the alteration of any timbering or shoring which he considers to be impeding the work.

Where the Contractor considers that, for the protection of the new work or efficient execution of the work, it is necessary that supports or timber be left in, no extra price shall be paid to the Contractor, the cost of such leaving in being deemed to be included in the prices given in the Bill of Quantities for excavation. The removal of any support or timber will be entirely at the responsibility of the Contractor and he shall have no claim for the protection and safety of the work on the grounds that the Engineer has not directed that such material shall be left in.

Timber used in the construction, that the Engineer may direct to be left in as an integral part of the finished work, shall not be removed, but will be paid for, and a price for any such material left in must be inserted by the tenderer in the Bill of Quantities.

Trenches to be shored which is deemed dangerous. Shoring shall be deemed to be included in rates tendered unless specifically provided for in the schedule of quantities.

PE7 SLIPS, FALLS, ETC.

The Contractor shall be responsible for making good any fall of earth or rock due to careless or insufficient support, or due to rains, floods, wind or other causes, and at his own cost shall refill any cavities so formed as required by the Engineer.

PE8 BLASTING

No blasting shall be undertaken without the written consent of the Engineer. Before blasting commences all properties in the vicinity shall be inspected by the Contractor and the Engineer or his representative and a record (including photographic) shall be made of all defects in the buildings. A Photographic record shall be kept for at least 3 years after such blasting.

The Contractor shall conform to all government and other regulations respecting blasting and the handling and storage of explosives and shall make his own arrangements for the supply, transport and storage of all explosives.

All blasting shall be done under the control of persons holding blasting certificates from accredited institutions.

Only light charges shall be used for blasting. Approved hoop iron mats or other suitable means shall be used to prevent flying debris and all approaches to the blast shall be guarded by men with red flags. Sufficient warning shall be given to oncoming traffic to enable it to pull up to a safe distance from the blast. Householders in the immediate vicinity shall be warned of the intention to blast immediately prior to the firing of the shots.

The Contractor shall in all cases be entirely responsible for any damage whatsoever caused by blasting operations and shall indemnify the Council in respect thereof and settle all claims resulting therefrom and make good any damage at his own expense.

PE9 SOILCRETE BACKFILLING

Where directed by the Engineer, excavations shall be backfilled with soilcrete. Soilcrete shall consist of 1-part cement to 12 parts of selected soil, with a moisture content such that a handful of the mixture when squeezed tightly in the hand just binds without crumbling or dripping moisture. The soilcrete shall be thoroughly mixed to ensure even distribution of cement and water throughout the mass, and compacted with power rammers in layers not exceeding 300mm uncompacted thickness.

PE10 DISPOSAL OF SURPLUS MATERIAL

During the construction of the works any material from the excavations that is not required for refilling shall be removed without delay.

As each excavation is refilled the surplus spoil, bricks and other rubble or waste matter shall be removed, the surface restored and the site left clean.

Surplus spoil, rubble and waste matter shall be deposited in borrow pits, except where the Contractor is instructed by the Engineer to stockpile surplus spoil for use by the Council. The surfaces of such dumps shall be left in a tidy condition on completion of the work.

The Contractor shall be entirely responsible for deciding whether or not excavated material is surplus to that required for refilling and reinstatement of the works. Should it be necessary to reclaim material previously disposed of in order to complete the works, the transport and labour required for such reclamation shall be provided by the Contractor at his own cost.

PE11 REINSTATEMENT OF SURFACES

The foundations of all roadways, pavements, dished crossings, etc., disturbed by the excavations shall before be reinstated to their original state and to correct levels and grades as soon as possible.

The Contractor shall be responsible for reinstating lawned areas. In these cases, the top 300mm of the trench shall be refilled with sifted topsoil before the sods are replaced or grass planted.

The surrounding lawned area shall be broomed clear of all small stones, earth and other foreign material and this together with the reinstated area shall be watered and if necessary, rolled and cut so as to re-establish the lawn as soon as possible.

Leave the site in a neat state - Apart from the reinstatement of specific surfaces as defined above, the Contractor shall leave the area of the excavations and any adjoining areas disturbed or damaged by his activities in a clean and orderly state. He shall remove all traces of concrete, surplus stone, sand cement and other materials from the site of the works, remove all coarse vegetation from sidewalks and rake all sidewalks so that they are free of loose stones and provide a reasonable walking surface. The surface of refilled excavation in unsurfaced roads and sidewalks shall be neatly rounded off so that the surface along the centre line of the excavation is nowhere more than 75mm above the surrounding ground.

Where the Contractor fails to carry out the reinstatement and general cleaning up, the work will be undertaken by the Council at the Contractor's expense.

PE11.1 REINSTATE ASPHALT

a. Reinstatement of Roadway

All premix taken up in roadways shall be reinstated by the Contractor to a depth similar to the existing premix with a minimum depth of 35mm. No batch of premix shall be placed where the temperature of the mix falls below 1000C. Unless instructed by the Engineer all premix is to be reinstated by the Contractor.

b. Reinstatement of Footways / Pavements

All patches (around meter boxes, valve and hydrant boxes etc.), as well as trenches in footways, shall be reinstated by the Contractor to a depth of 35mm using cold premix. Premix patches around the boxes shall be to the correct line and slope of the surrounding surface to avoid ponding of water.

c. Testing of Premix

The compacted density of premix in roadways and footways shall be a minimum of 93% of Marshall density.

d. Maintenance

All premix surfaces which have subsided 10mm or more within 6 months of completing the said surfaces, must be reinstated to the satisfaction of the Engineer, and shall be re-reinstated in accordance with this Specification. This shall be to the Contractor's account.

PE11.2 REINSTATEMENT OF CONCRETE PAVED SURFACES:

Footways consisting of interlocking blocks, paving slabs or bricks shall be reinstated by the Contractor. Wherever possible, the existing blocks, slabs or bricks shall be cleaned and re-used.

Prior to final reinstatement, blocks slabs or bricks which have been taken up shall be stacked in a safe manner without restriction to vehicular or pedestrian traffic. Blocks, slabs or bricks around meter boxes, valve boxes, and hydrant boxes shall be finished to the correct line and slope of the surrounding surface.

Where filler spaces are left between the paving blocks and boxes, these spaces must be filled with a 1:3 mixture of cement-plaster sand and finished with a wooden float.

The filler spaces shall not be greater than 25% of the paving block. If the space is greater, then a paving block must be cut to fit.

Additional interlocking blocks, paving slabs or bricks required to complete the reinstatement, over and above those taken up and stacked shall be provided by the Contractor – payment shall be made under “new” paving or in the absence of relevant rates/items in the schedule of quantities, paid as day works.

If, however, in the opinion of the Engineer, additional blocks, slabs or bricks are necessary as a result of the Contractor not having exercised due care in the recovery of blocks, slabs or bricks the cost of such additional blocks, slabs or bricks shall be for the Contractor's account.

PE11.3 REINSTATEMENT OF VARIOUS SURFACES

The Contractor will be responsible for the reinstatement of the following surfaces, and no payment will be made for the following type of surfaces:

- | | | |
|-----|---------|------------------|
| (a) | Soil | No extra payment |
| (b) | Grassed | No extra payment |

PE11.4 REINSTATEMENT OF KERBING

Where kerbing has been removed, it shall be cleaned and stacked in a safe manner without restriction to vehicular or pedestrian traffic. The Contractor shall replace the kerbing to line and level. Payment will be per measured lineal metre, which will include for the removal, cleaning, re-laying and any incidentals to complete the work, including all hauching with concrete, jointing etc.

PBW BUILDING WORK ON WATER INFRASTRUCTURE (MANHOLES, ETC)

PBW1 SCOPE

This specification covers the basis component of requirements regarding building work when constructing or repairing water infrastructure building components.

PBW2 BRICKWORK

Bricks prescribed: Solid, Hard Burnt Clay masonry units to SANS 227 (1986) Class FBSE40 (Engineering Brick)

All brickwork shall be accurately set out and built true and plumb in sound and workmanlike manner to the dimensions and details indicated on the Drawings, or ordered by the Engineer and shall be well and regularly bonded with no false headers and new but whole bricks used except where closers are legitimately required.

Brickwork 110mm deep shall be constructed in stretcher bond. Brickwork 230mm deep shall be constructed in staggered stretcher bond with a header course every fifth course.

Brickwork 345mm deep shall be laid in a bond consisting of alternate courses of headers and stretchers on each face of the wall, with headers courses staggered.

All joints shall be filled solid with mortar to their full width and depth, and flushed with mortar worked well down into all vertical joints before the succeeding course is laid. Finished joints shall be uniform in thickness and shall be between 5mm and 6mm. All internal and external joints above ground level shall be trowel struck.

Unless otherwise called for, all brickwork shall be laid in freshly mixed cement mortar. Exposed internal brickwork shall be finished off smooth and fair and shall be treated as face work. The joints of exposed external faces shall be flushed trowelled, and shall be rubbed hard and smooth for the full width of the joints as the work proceeds to give a hard polished finish. Wiping with sacking or rages will not be permitted.

Bricks shall be well soaked in water before use.

All cutting of bricks shall be neatly carried out.

No wet grouting of brickwork joints will be allowed. Faces of bricks in contact shall be buttered or the bricks shall be squeezed up one against the other. Where bricks are squeezed up, a sufficient thickness of mortar shall be applied to completely fill the joints, irrespective of trade custom, and to protrude from all joints beyond the brickwork face. All protruding mortar shall be struck off with a trowel.

PBW3 CEMENT MORTAR

Cement mortar shall be one-part cement to three parts sand (1:3) by volume properly mixed together, with water added to give the required consistency and thoroughly worked into condition immediately before use.

PBW4 TYPICAL FINISHES

PBW4.1 PLASTER

All work to be plastered shall be clean, free from dirt, dust and oil and shall be sufficiently rough to provide a good bond. The joints in brickwork to be plastered out as bricklaying proceeds. Plaster shall be applied in coats not exceeding 10mm thickness, well worked to provide a dense impervious product. Plaster which is to be covered by subsequent work (tiling etc.) shall be roughened to provide a good bond. Exposed external plaster shall be finished smooth with a steel float.

PBW4.2 GRANOLITHIC FINISH

Granolithic finish to concrete surfaces shall be composed of one-part cement to one-part plaster sand to two parts river sand (1:1:2) by volume with sufficient water added to give a stiff mix.

The finish shall not be less than 12mm thick. It shall be applied while the concrete surface is still green (fresh), screeded and wood floated to the required thickness and finally steel trowelled to a glass finish. In order to obtain this finish a light dusting of neat cement will be permitted. After the finish has hardened, it must be kept damp for at least three days.

PPL PIPELAYING, JOINTING AND TESTING OF PIPES AND PIPE FITTINGS

PPL1 SUPPLY OF MATERIAL

The Contractor shall be responsible for stacking, handling, transporting, laying and jointing of all pipes, fittings, specials etc. In addition, the Contractor shall take delivery of certain items to be supplied by the Council, and shall be responsible for their installation.

PPL2 PIPELAYING

All pipes and fittings are to be laid true to line, level and position as indicated on the drawings or directed by the Engineer and shall be uniformly supported throughout their length except at joint holes. Every pipe and fitting is to be cleaned out before laying and at all times except when pipe laying is actually in progress the end of the last pipe laid is to be fitted with a cap or plug to prevent the entry of water or loose material. Cut pipes shall be used only where permitted by the Engineer or where required to join to fittings. Should the Engineer not be satisfied with the care taken by the Contractor in cleaning out the pipework and excluding foreign material, the Engineer shall have the right to order the Contractor to scour out the pipelines to the satisfaction of the Engineer at the Contractor's expense.

All pipes shall be uniformly supported throughout their length either on the undisturbed trench bottom or on compacted earth bedding of uniform depth. In the case of coupled joints, the trench shall be refilled to the mid-height of the pipe, except at joints, to maintain the pipework in correct alignment for inspection and approval by the Engineer or his representative. Thereafter the trench shall be refilled as specified.

Where pipes and fittings are too heavy to permit lifting by means of manual labour, fabric slings shall be used in all handling operations. Pipes, fitting and valves shall not be dragged or rolled over the ground. Care shall be taken in handling pipework so that bumping during handling is reduced to a minimum.

No metal tools or heavy objects shall be permitted unnecessarily to come into contact with pipework, and, in the case of epoxy coated pipework, the Contractor shall not permit his workmen to walk on the pipework.

Trenches shall be kept drained and free from water at all times. If any pipe should move after having been laid in the trench due to flotation because of flooding of the trench or any other cause, the pipe shall be lifted from the trench, cleaned and examined for damage. After examination all damage to the pipe shall be repaired or the pipe replaced as the Engineer may direct and to his satisfaction. Thereafter the pipe shall be relayed and jointed at no additional cost to the Council.

PPL3 UPVC and FIBRE CEMENT PIPES

Where UPVC or fibre cement pipes have to be cut, the cut end shall be dressed off square and turned down to the correct external diameter for the detachable joint by means of a special turning tool made by the pipe manufacturers and to be supplied by the Contractor. Prior to joining the ends of the pipes shall be thoroughly cleaned.

The pipes shall be joined by means of the approved couplings from the manufacturer or short or long collar types of coupling in accordance with the jointing instruction of the pipe manufacturer so as to leave a gap of 5mm to 10mm between the pipe ends. On completion of the joint, the metal work shall be painted with two coats of bituminous paint.

PPL4 CAST IRON PIPES AND FITTINGS

Cutting, trimming or welding of cast iron pipes will not be permitted. Jointing of such pipework by means of flanges shall be as described in these Specifications, except that the flange faces need not be painted with bituminous paint. All flexible joints shall be achieved with short collar cast iron flexible couplings unless otherwise specified.

PPL5 SCREWED STEEL PIPEWORK

Where screwed and socketed steel pipes have to be cut, the cut end shall be dressed off square, have all burrs removed and screwed B.S.P. taper thread or its metric equivalent. Prior to joining, the threads shall be cleaned and coated with approved jointing compound. The pipes and fittings shall be brought into correct alignment and the joints screwed well home. Tightness of the joints must be obtained by means of screwing only and caulking of the threads will not be allowed except where specifically permitted by the Engineer. Care is to be taken to avoid damage to the surface of pipes and fittings.

PPL6 CONCRETE BEDDING AND PROTECTION:

Where in the opinion of the Engineer the pipes are likely to be damaged due to great depth of refill, traffic loads, soil erosion and the like, the pipes shall on the instruction of the Engineer be bedded on concrete screed or partly or fully encased as shown on the drawings, or protected in such other manner as the Engineer may order.

PPL7 REINSTATEMENT OF DAMAGED PIPES, COATINGS AND LININGS

If, for any reason, pipes, coatings or linings are damaged during the tenure of this contract, the Contractor shall at his own cost, and at the sole discretion of the Engineer, either replace or repair such pipes to the approval of the Engineer.

PPL8 ALTERATIONS TO EXISTING WORK

All alterations to existing work shall be carefully planned in consultation with the Engineer to minimise inconvenience to the public, and the Engineer's approval shall be obtained before commencing alterations.

The Contractor shall give every consumer whose supply will be interrupted timely notice of the proposed time and probable duration of the interruption. Where valves and/or fittings or assemblies have to be inserted into an existing main the following procedure shall be followed:

Fibre cement mains shall be exposed between the couplings on either side of the proposed alteration and the length of pipe determined. A replacement length incorporating the alteration shall be pre-assembled to the required length, allowing about 10mm clearance on either side.

The terminal couplings shall then be removed, the existing main lifted and the replacement length laid, using short collar cast iron flexible couplings or couplings approved by the Engineer.

Steel mains shall be exposed over a length sufficient to install the alteration. A length corresponding to the overall length of the alteration to be inserted shall be cut out of the main, allowing about 12mm clearance on either side. Burrs shall be removed and the alteration inserted, using Johnson type flexible couplings.

Where existing pipes have to be recovered, they shall be carefully exposed and disconnected to avoid damage. Damaged ends shall be reconditioned and the pipes cleaned fit for re-use. Recovered pipes shall remain the property of the Council and shall be stacked adjacent to the trench for removal by the Council.

PPL9 BUILDING IN PIPEWORK

Where pipework is to pass through or be set into concrete work, any external coating on the portion of pipe within the concrete work shall be removed, and the surface thoroughly cleaned.

The pipework shall be set into exact position in the shutters before the concrete is placed and the concrete thoroughly compacted and worked around the pipework. Alternatively, at the discretion of the Engineer and at no extra cost unless specifically provided for in the Bill of Quantities, holes may be left in the concrete into which the pipework shall be set, whereupon the space around the pipework shall be caulked with mortar having just sufficient water to ensure cohesion and water tightness and thereafter the caulking shall be properly cured. Pipework for final alignment may only be built into concrete by the alternative method.

PPL10 THRUST, ANCHOR AND SUPPORT BLOCKS

Except where plain ends are to be joined by field welding, concrete thrust blocks to the shape and where valves and/or fittings or assemblies have to be inserted into an existing main the following procedure shall be followed:

Fibre cement mains shall be exposed between the couplings on either side of the proposed alteration and the length of pipe determined. A replacement length incorporating the alteration shall be pre-assembled to the required length, allowing about 10mm clearance on either side. The terminal couplings shall then be removed, the existing main lifted and the replacement length laid, using short collar cast iron flexible couplings, or fitting approved by the Engineer.

PPL11 TESTING, DISINFECTING AND SCOURING

This clause must be read in conjunction with clause 5.10 of SANS 1200L. Before trenches are filled in over joints, all pipelines are to be hydraulically tested by the Contractor to a pressure fixed by the Engineer, but not exceeding 75% of the pipe test pressure at the factory. All such tests are to be carried out in the presence of the Engineer at such times and in such sections as the Engineer may direct. The Engineer shall be given not less than three days' notice of readiness to test.

The Contractor shall provide the force pumps, pressure gauge, all necessary tools and fittings and the labour required for testing. He shall ensure that all valves in the section under the test are properly secured and closed and that no pipe or fitting will move.

The section to be tested shall be filled with water, care being taken that all air is expelled. The test pressure shall then be applied slowly by means of the force pump and shall be maintained by continuous pumping for at least 30 minutes or such longer period as may be necessary to permit thorough examination of all joints and fittings. There shall be no perceptible leak throughout the whole length under test and the amount of water pumped into the pipeline to maintain the test pressure shall not exceed one litre per hour per 10mm diameter of pipe per kilometre of length being tested. Any defect revealed by the test shall be made good and the section shall be re-tested until a satisfactory test is obtained.

The length of pipe laid but not satisfactorily tested shall not exceed 600 metres, except with the permission of the Engineer.

Should the Engineer not be satisfied with the care taken by the Contractor in cleaning out the pipework before laying and excluding foreign material, the Contractor shall, after completion of testing, scour out the pipelines to remove foreign matter to the satisfaction of the Engineer and thereafter disinfect the pipelines by filling them with heavily chlorinated water containing not less than 10 p.p.m. (parts per million by weight) of available chlorine, which shall be kept in the pipe for 24 hours. The Contractor shall provide the necessary chlorine (Chlorine gas, chlorinated lime, calcium hypochlorite or other approved compound), all plant equipment and labour required to introduce the chlorine into the pipelines and do everything necessary for disinfecting the pipelines and refilling them with potable water. On completion of disinfecting the pipelines shall be scoured out, using at least twice the volume of water contained in the pipework.

On completion the pipelines shall be left full.

Only potable water obtained from an approved source shall be used for filling, testing, disinfecting and scouring the pipelines.

PPL12 WORK ON LIVE MAINS

The Council will provide guidance and assistance of a practical nature for the Contractor in matters related to the closing down and recharging of the existing water system when it is necessary for him to work on the system.

The Contractor shall give 24 hours written notice to the Engineer of his intention to operate on the live water system, stating fully the proposed plan for isolating, draining, cutting, connecting, recharging and opening up the mains.

The Contractor shall also provide each affected consumer with at least 24 hours written notice in advance of his intention to close the system down. The total period of shut down including drainage and re-charging may not exceed 4 hours. All such work must be carried out between the hours of 8 a.m. and 4 p.m. The extent and frequency of the shutdown must be to the satisfaction of the Engineer.

Included in the reasons for a shut-down as required by the Contractor will be the cutting out or installing of a valve or fitting, the cutting and plugging of a main, the installation of temporary mains or connections, and so on.

(F) PARTICULAR SPECIFICATIONS (TECHNICAL)

It should be noted that the requirements of the following particular specifications take precedence over any requirements that are related to the standard specifications.

- PPS Service, Set and Repair PRVs, Boundary Valves, Meters & Pipework
- PPA Site Audits and Zone Discreteness Testing
- PPGL GSM Loggers
- PPEC Repair Existing Civil Infrastructure

Any differences in the requirements of the above specifications should be referred to the Engineer for a decision on the actual requirement. In general, however the Contractor should assume that the most onerous requirement will govern.

(B) PPS: SERVICE, SET, REPAIR: PRVS, BOUNDARY VALVES METERS, AND PIPEWORK

PPS 1 Scope

This specification covers the servicing, setting and repairing of Pressure Reducing Valves (PRVs), Boundary Valves, Meters and Pipework that have been installed in the water reticulation system. The work on these items which are important for the management of the water distribution system must be undertaken with minimal disruption of water supply to the consumers.

PPS 2 Interpretations

PPS 2.1 Application

This specification contains clauses that are applicable to the maintenance of PRVs, Boundary Valves, Meters and related Pipework.

PPS 2.2 Definitions

For the purposes of this specification the following definitions shall apply:

Control valves: Valves that are used in the water supply system to control certain parameters. In this specification they refer to Pressure Reducing Valves.

Accredited Laboratory/Workshop: A laboratory that has been certified to do relevant tests or calibration.

PPS 3 Materials

PPS 3.1 General

The items that are to be attended to under this specification are important components in managing the water distribution system. Thus all materials to be used must be the original manufacturer spare part for the valve or other infrastructure which is being serviced or maintained. Only genuine parts manufactured or approved by the original equipment manufacturer and purchased from authorised dealers shall be accepted. Where the required genuine part is not available within the region, the Contractor shall source the genuine part from an alternative authorised dealer or region, subject to approval by the Engineer prior to installation. Generic or non-genuine parts shall not be accepted.

Only suitably qualified and experienced control valve service technicians are eligible to undertake servicing of control valves on this project. The CV or credentials of proposed PRV service technicians must be submitted to CoE for evaluation and approval prior to the technician conducting any auditing or servicing of any control valves.

PPS 3.2 Replacement Parts for PRVs

The PRV makes specified, including Bernad, Cla-Val, Baker and Singer, represent existing equipment currently installed within the City of Ekurhuleni water distribution network. The reference to these makes is therefore for compatibility, servicing and maintenance of existing infrastructure and is not intended to restrict competition. All replacement parts shall be genuine OEM parts compatible with the existing installed equipment and shall be sourced from authorised dealers.

In addition various sizes of PRVs for each of the makes are installed in the water distribution system. Thus the contractor must ensure that the relevant authorized suppliers are identified and that the parts are available. The initial list of replacement parts for each valve to be serviced will be identified during the audit process. However additional parts may be identified during the servicing of the PRVs which the contractor will have to acquire in a short period.

PPS 3.2 Boundary Valves

Boundary valves are valves that are closed off during normal operation of the system so as to isolate water supply zones for various reasons. The City of Ekurhuleni only uses certain specific valves. All parts used for the servicing or replacement of these valves shall be genuine OEM parts purchased from authorised dealers. The original manufacturer's spare parts shall be used for servicing and maintenance. Generic or non-genuine parts shall not be accepted.

PPS 3.3 Meters

Various meter makes have been installed within the CoE water distribution network. The replacement parts for these meters will be identified in the audit process, however, it maybe that during field work additional parts or even total replacement of the meter may be required. When servicing existing meters, the original manufacturer spare part must be utilised.

PPS 3.4 Related Pipework

Any pipework to be replaced should be according to the relevant SABS standard specified in this document

PPS 4. Plant

The Contractor shall provide such vehicles, small plant and equipment that may be required during the work to be undertaken. No heavy plant will be required for work under this contract. However lifting equipment may be required where an item has to be removed from chambers to facilitate working on the item.

PPS 5 Construction

PPS 5.1 General

The contractor is to take particular note that work will be undertaken on live water supply systems supplying water to customers. Thus it is imperative that all work be undertaken speedily and that any unnecessary delays be avoided. In this regard planning of the work is important and the contractor will be asked for his detailed programme for all work which will be closely monitored. All equipment required to complete a task must be available on site prior to shutting any water.

Staff that are allocated by the contractor to undertake the work are to be knowledgeable of the different items and the proper working of these in addition to being experienced in working on these items. The contractor will be required to submit documents to this effect. It is advised that the contractor acquire the services of specialists to advise and assist in undertaking the work.

The contractor is also to acquire the proper tools and equipment to undertake the work. Suppliers of the items normally recommend tools and equipment required.

As the work to be undertaken will be on live water systems the contractor is required to liaise and work closely with CoE staff especially the operations and maintenance staff. CoE is to be kept informed of all proposed work so that they are able to respond to their customers. Only CoE staff are permitted to operate the opening and closing of valves. The contractor will be required to assist CoE staff during these operations.

The contractor is also required to inform all customers affected by the proposed work. This must be done timeously and be in accordance with CoE policy where such services are to be disrupted due to planned work. Notifications of planned shutdowns must be communicated to CoE at least seven days prior to any shutdowns in order that the CoE can inform residents of any planned water disruptions.

The contractor is to ensure that all records of work done and changes made to the items are properly documented. Information required by the CoE which have financial implications such as meter changes must be addressed timeously. The contractor must take photographs of all equipment removed, replaced or installed. Such photographs must be suitable named and dated so that the location and time where the photograph was taken can easily be determined. Photographs of work undertaken must be submitted with the contractors claim as supporting documentation. All photographs in original format must be provided to the engineer.

PPS 5.2 Control Valves

PPS 5.2.1 Servicing, Setting and Repairing of Control Valves

The details of the control valves and the work to be undertaken on these will be identified during an audit of all the control valves prior to the work to be done under this contract. However additional work may be identified when the work is being actually done.

It is important for the contractor to obtain servicing information from the suppliers of these valves and to do the work in accordance with the supplier specifications and guidelines. The work under this clause will include the actual control valve and excludes ancillaries such as pilots, stopcocks and tubing.

The work to be undertaken by the contractor in servicing, setting and repairing the control valve is to include but not be limited to the following;

- The complete control valve must be stripped and cleaned in accordance with the maintenance procedure described by the relevant supplier.
- Replacement of damaged and corroded parts and all elastomers. All remaining parts must be cleaned (where required polished) and be in good condition before reassembling the valve. Damaged diaphragms must be replaced and brought under the attention of the Engineer. All replaced components should be handed to the Engineer in charge of the region in the same week it was replaced. Digital photos indicating the damaged part whilst in position will be taken and handed with the damaged components.
- Where required, seat screws must be tightened properly”.
- All leaks on the control valve must be repaired before the contractor leaves the site.
- Repair of external damages to any component of the items
- A tagging system must be inserted into the cover by means of a water-resistant glue. The Engineer will provide the contractor with the code to be inserted.
- A service form must be completed after every service and the forms are to be handed in at the office of the Engineer at least once a week.

If the control valve is deemed to be unserviceable or if the control valve is not manufactured anymore the contractor shall inform the Engineer. The CoE will decide where a new control valve will be sourced.

The rate shall be per diameter of valve and shall include full compensation for transport, supervision, site establishment, labour, materials, fittings, plant and equipment and all incidentals necessary for the completion of the work.

It is advised that the contractor acquires the services of a specialist to assist with the servicing and setting of the PRVs as this is crucial to the proper functioning of the PRVs. The contractor is to work systematically, neatly and efficiently on the PRVs to ensure that the work is done correctly the first time and in the shortest possible time.

PPS 5.2.2 Spares Replacement on control valves

The rate shall be for parts, additional labour and transport required to install replacement parts. Initial site establishment is claimed under the section “Basic Service of Control Valve” and cannot be reclaimed when replacement parts are installed. Only genuine parts from the specified valve manufacturer may be used.

PPS 5.2.3 New and Replacement of Control Valves

Control valves must be a hydraulically operated, diaphragm actuated, automatic control valves. (Cla-Val, Bermad Baker, Singer or approved similar by Engineer). The valve shall consist of three major components such as the body, cover, and the diaphragm assembly. The pressure rating of control valves must be at least Class 16. Class 25 may also be tendered if required by the Engineer. The control valve body and cover shall be ductile iron (SG42) to SABS 936, the stem and stem nut shall be stainless steel, sealing disc shall be nitrile rubber and the diaphragm shall be nylon reinforced rubber. The complete body and cover shall be coated with an electro statically applied fusion bonded epoxy coating, internally and externally to a minimum dry film thickness of 250µm. Valve flanges shall to be drilled to SANS 1123 Table 1600 unless otherwise indicated by the Engineer.

The upstream pressure of this type of valve can vary from the full static head in the pipeline to the minimum head under maximum anticipated flow. Valves to be drilled to SANS 1123 Table 1600 unless otherwise indicated by the Engineer.

Control valves shall be compatible with loggers, controllers, control software, modems, and other necessary appurtenances.

The rate shall be per diameter of valve and where replacement is stipulated the price shall also include for the removal of existing valves. The valve shall be exposed (excavate or uncover) and shall be removed and replaced.

The rate shall cover all costs to expose/uncover, remove valve, temporary measures, backfilling after replacement, all transport, commissioning and provision of portfolio of evidence to the Engineer or his representative, etc.

PPS 5.3 Pilot Valves

PPS 5.3.1 Servicing of Pilot Valves and Control Circuits

The details of the Pilot Valves and the work to be undertaken on these will be identified during an audit prior to the servicing work being undertaken.

The contractor must obtain servicing information from the various valve suppliers and conduct servicing and maintenance to supplier guidelines. The work will include pilot valves, stopcocks, tubing and the control circuit. The Engineer will decide whether the pilot valves and control pipe circuits should be serviced or replaced. The Engineer may decide to instruct the contractor to undertake any of the following servicing tasks:

The complete control system must be stripped and checked for blockages and any other defects in accordance with the maintenance procedure as described by the relevant supplier.

The Contractor shall check and maintain all restrictors, needled valves, y-strainers, shut-off valves, control piping systems and position indicators.

Pilot valves must be stripped and the diaphragm and seat must be checked. Damaged parts should be replaced where required.

The control circuit should be re-assembled according to the configuration provided by the Engineer. Existing control circuit components should be re-used as far as possible. Where components are damaged or missing new control circuit components should be installed (SS ball valves, y-strainer, restrictor fittings, control tubing).

Each control circuit should allow for a T-piece with an additional 15mm ball valve on the upstream and downstream of the control circuit to allow for the connection of a data logger / controller.

Commissioning and setting of the control valve to function as intended. The valve must be operational and functional after the commissioning. All leaks on the control valve must be repaired before the contractor leaves the site.

A service form must be completed after every inspection and the forms are to be handed in at the office of the Employer at least once a week.

The rate for servicing pilot valves and control pipe circuits shall include full compensation for transport, supervision, labour, materials, fittings, plant and equipment and all incidentals necessary for the completion of the work.

PPS 5.3.2 Spares Replacement on pilot valves

The rate shall be for parts, additional labour and transport (if parts are not onsite) required to install replacement parts. Initial site establishment is claimed under the section "Basic Service of Control Valve" and cannot be reclaimed when replacement parts are installed. Only original parts from the specified valve manufacturer may be used unless parts are no longer available in South Africa, in such circumstances the Contractor will require written approval from the Engineer to provide alternative parts

PPS 5.3.3 New and Replacement of Pilot Valves

All pilot valves shall be cast in bronze to ASTM-B62.

Pilot valves shall be of the same make as the main control valve unless otherwise indicated by the Engineer.

All auxiliary control systems will be supplied with brass fittings and copper tubing, or stainless steel fittings and stainless steel tubing

The rate shall cover all costs to remove pilot, temporary measures, clearing after replacement, all transport, commission, proof to the Engineer or his representative, etc.

PPS 5.4 Servicing and Repairing of Boundary Valves

Boundary valves isolate zones such that water is not transmitted across zones. Thus it is important that these valves are functioning properly and do not pass water between zones. Valves that need to be serviced or repaired will be identified during the audit process.

There will be different sizes of valves and of different types such gate valves, resilient seat valves and butterfly valves. The contractor is to ensure that his personnel that will be doing this work are experienced in undertaking such tasks and have experience in the different types of valves.

The work to be undertaken is to be done efficiently and speedily to ensure minimum disruption to the water supply to the consumers.

PPS 5.4.1 Packing of Stuffing Box

The rate shall be per diameter of valve and shall cover all costs for the packing of stuffing boxes complete with all labour, plant, material, accessories and transport to complete the work as follows:

- Remove all old packing from the stuffing box, clean box and shaft with a solvent thoroughly and examine shaft for any wear or scouring.
- The shaft must be polished with a fine emery cloth.
- The correct size of coil packing must be used.
- The packing must always be cut into separate rings. It is not acceptable to wind a coil of packing into the stuffing box.
- The cut rings must fit into the stuffing box, and fill the space properly, with no gap between the jointing faces.
- The packing rings must be seated firmly in place. The joints of each successive ring must be staggered and rotate at 90 degrees. Each individual ring must be firmly seated with a tamping tool. After the last ring has been installed, tighten the bolts finger tight and install the hydrant or valve, and then tighten the bolts until leakage has stopped.

PPS 5.4.2 Repack Gland and Operate Valve

The rate shall be per diameter of valve and shall cover all costs for re-packing the glands, replacing the T-bolts with new stainless steel T-bolts and operating the valve. The rate shall cover all costs for the packing of stuffing boxes complete with all labour, plant, material, accessories and transport to complete the work.

PPS 5.4.3 New and Replacement of Zone Valves, Air Valves and Non Return Valves

The rate shall be per diameter of valve. The valve shall be exposed (excavate or uncover). The valve shall be removed and replaced.

The rate shall cover all costs to expose/uncover, remove valve, temporary measures, backfilling after replacement, all transport, commission, proof to the Engineer or his representative, etc. Some valves might be cast in concrete. No separate payment will be made for the removal of valves cast in concrete, the removal of concrete around valve prior to refurbishment and the transport of such valves. Replacement valves must be recast in 15 MPa concrete unless otherwise instructed by Engineer. Separate payment will be made for the placement of concrete.

PPS 5.5 Meters

PPS 5.5.1 Servicing and Repairs of Meters

The work to be undertaken for servicing and repairs of meters will be identified during the site audit programme. However additional work may arise during the contract. There are various makes, types and sizes of meters that have been installed. The contractor is to ensure that the suppliers of these meters are known so that information on servicing meters can be obtained.

The work to be done on meters will affect the CoE customers and thus the contractor is undertake the work efficiently and speedily to minimize disruption to the customers.

The servicing and repair work to be undertaken on meters generally covers:

- Removal of measuring unit from the body of the meter
- Cleaning of the measuring unit
- Cleaning of the body of the meter
- Replacement of the meter register
- If required by the engineer the meter will be sent to an accredited workshop for calibration

The rate will cover the removal of the measuring unit and cleaning both the body. Chemicals, sharp objects or high-pressure cleaners must not be used for cleaning. Replacement and calibration of the meters will be paid as extra over items.

PPS 5.5.2 New and Replacement of Water Meters

Water meters to be replaced will be similar to the meters being replaced. All new water meters will be in accordance with the specification indicated as follows:

The meter must be a woltman type mechanical water meter

The meter must be flanged to SABS 1123 Table 16

The meter must be class 16 (PN 16)

The meter must be capable of producing a pulse output by attaching a reed switch or pulsar.

The meter must be SABS approved.

Meter must comply to 2% accuracy at flow rate between the transitional flow rate and the Maximum flow rate

Meter must comply to 5% accuracy between the minimum Flow Rate and the Transitional flow Rate

The performance measurement capability of the meter must comply with the table below

Meter Performance Criteria

Unit	50mm	80mm	100mm	150mm	200mm	250mm	300mm	400mm
Max Flow / overload flow m3/h	90	200	250	600	1000	1600	2000	3000
Continuous Flow Rate m3/h	50	120	180	450	700	1000	1400	2000
Transitional Flow (horizontal) m3/h	1	2	2	4	6	11	15	50
Minimum Flow Rate (Horizontal) m3/h	0.35	0.5	0.6	1.8	4	6	12	25

All new meters installed must provide a pulse output facility for Data logging purposes.

The rate to include for all costs to install such meter including to expose/uncover, remove meter, temporary measures, backfilling after replacement, all transport, commission, proof to the Engineer or his representative, etc.

PPS 5.6 Related Pipework

There may be situations where the existing pipework in the chambers requires replacement or modification to facilitate the replacement or installation of an item. The work to be undertaken is to be in accordance with the relevant SABS standard for pipework.

PPS 5.7 Air Valves

PPS 5.7.1 On Site Maintenance of Air Valves

Valves must be cleaned and serviced and damaged parts replaced if necessary (O-ring seals and gasket's)

The rate shall be per diameter of valve. The rate shall include full compensation for transport, supervision, labour, materials, fittings, plant and equipment and all incidentals necessary for the completion of the work.

PPS 5.7.2 New or Replacement of Air Valves

All air valves shall be of the Vent-o-Mat type or approved similar by the Engineer.

The type single small orifice or double orifice- utilized shall be designed to allow for the optimal operation. The function of single orifice valves is for pressurized discharge and pipeline operating. The functions for the double orifice valves are for pipeline filling, draining and operating. The valve body and bonnet shall be of Cast Iron and sintered epoxy powder coated. The valve shall be fitted with a stainless steel dirt inhibitor cover or polycarbonate basket. All fastening bolts shall be galvanized and the nozzle shall be of 304 stainless steel.

A nitrile seal shall be fitted between the body and the bonnet with a natural rubber seat of float. The float shall be of a high density polyethylene material. The inlet size shall be 25mm.

PPS 5.8 Non Return Valves

The Engineer will instruct the contactor which Non-Return Valve should be used. The following types of non- return valves may be considered:

- Swing Check Type
- Diaphragm type
- Double Door Swing type

PPS 5.9 Strainers

PPS 5.9.1 Servicing of Dirt Boxes ("Strainers")

- The complete valve must be stripped and cleaned.
- The basket must be inspected for any damage.
- Cover screws must be tightened properly to prevent damage to the seal of the top cover.
- An inspection form must be completed and handed in at the office of the Employer after the cleaning of dirt boxes.

(The cleaning of small strainers in the control circuit of a control valve is covered under the servicing of the control valve). The rate shall be per diameter of valve for servicing dirt boxes and shall include full compensation for transport, supervision, labour, materials, fittings, plant and equipment and all incidentals necessary for the completion of the work.

PPS 5.9.2 New Strainers

The element shall be manufactured from heavy duty 3CR12 stainless steel or better. It must be securely supported at both the top and bottom of the strainer body to prevent large suspended solids from breaking through the sieve element. The sieve element to be of such a shape and design to provide strength and to provide the largest possible area of sieve element for low head loss. It should be possible to remove the element from the top for cleaning without disturbing the flange joints.

Flanges:

Strainer flanges to be drilled to SABS 1123 Table 16 flanges.

Strainer body: Maximum working pressure of 1 600kPa

Body length (flange to flange dimension) of the strainer shall be as follow:

1. 050mm Inline strainer – 200mm body length
2. 080mm Inline strainer – 200mm body length
3. 100mm Inline strainer – 250mm body length
4. 150mm Inline strainer – 300mm body length
5. >150mm Inline Strainer – At least twice the Nominal Diameter

PPS 5.10 Valve Markers

A concrete/impregnated polymer (plastic) valve marker shall be placed within 500mm from closest erf boundary. Powder blue impregnated valve markers with blue caps with a 'V' moulded into the marker shall be positioned opposite normal isolating valves. Powder blue impregnated valve markers with red caps with a "ZV" moulded into the marker shall be positioned opposite zone isolating valves.

PPS 5.11 Valve Box

Reticulation isolation valves shall be installed in valve boxes. The valve boxes shall be supplied complete: assembled and tested and boxes and lids shall be manufactured to the specifications of SABS 558. Valve boxes and lids shall be of ultraviolet proof, polypropylene thermoplastic material. Built-in stainless steel cables shall secure all lids.

PPS 8.6 Tolerances

The materials and the finish of the work shall be to Degree of Accuracy I which is the highest degree as the work involves items that have an impact on the water supply system and subsequently on the level of service to CoE customers. The contractor is to ensure that the work is carried out efficiently, systematically and speedily and where applicable in accordance and to the tolerances specified by the suppliers of the items.

PPS 8.7 Testing

PPS 8.7.1 Principles

PPS 8.7.1.1 Checking

The Contractor shall carry out sufficient checks to satisfy himself that the materials used and the workmanship comply consistently with the specified requirements and the results of those checks shall, if so ordered, be made available to the Engineer. The Engineer may carry out such checks as he deems necessary and the Engineer's checks shall be made available to the Contractor.

PPS 8.7.1.2 Standard of Finished Work not to Specification

Where the Engineer's checks reveal that the material used or the construction standard achieved does not comply with the applicable requirements of the specification, the Contractor shall so rectify the work that the materials, construction or tolerance standard, as applicable, comply with the said requirements.

PPS 8.7.2 Methods of Test

The PRVs, Valves and meters installed will be tested in accordance with the manufacturers' specifications.

PRVs will be tested to ensure that they function as specified for opening, closing and regulating status. The PRVs are to be set to function at the pressures stated and must be undertaken by a specialist.

Meters registering flows must be tested to ensure they function within the accuracy stated by the manufacturers.

Boundary valves will be tested after they have been serviced or repaired to ensure zone discreteness and that the valves shut water tight.

PPS 8.8 Measurement and payment

PPS 8.8.1 Principles

The principles and computation of quantities will be as set out in the following clauses.

PPS 8.8.2 Scheduled items

PPS 8.8.2.1

a) Servicing of Basic Control Valve Body Unit: No

Different rates shall apply for different size of valves and shall include for labour, transport, equipment and supervision for servicing each valve within the chamber to the specifications. The same rate will apply to valves of the same size although the make may differ.

b) Servicing of Pilot Valves and complete Control Circuits Unit: No

Different rates shall apply for different types of pilot valves and shall include for labour, transport, equipment and supervision for servicing each pilot valve within the chamber to the specifications. The price to include for minor fittings and control tubing which will not be paid for separately.

c) Spares Replacement on Control Valves Unit: No

Different rates will apply for each make of control valve and for each size of valve. The rate to include the price of the parts and additional labour and transport required for installing the spares.

d) Spares Replacement on Pilot Valves Unit: No

Different rates will apply for each make of pilot valve and for each type of valve. The rate to include the price of the parts and additional labour and transport required for installing the spares.

e) General Fittings Unit: No

These are for fittings that are used generally and not necessarily as part of any of the above items and include stopcocks, strainers and pressure gauges.

f) Replacement of Pilot Valves Unit: No

Different rates shall apply for different makes of pilot valves and for different types and to include for all costs associated with supply and installing the pilot valve. A separate item is also included for the supply and installation of a complete auxiliary control hook up system.

g) Replacement of PRVs Unit: No

Different rates shall apply for different makes of PRVs and for different sizes and to include for all costs associated with supply and installing the PRV.

h) Advanced PRV Controller Unit: Site

The rate shall apply for the specified advanced controller complete for supply, install, and commissioning. Include in the rate for undertaking field measurements for 48 hours post commissioning and two way communication and a web based data monitoring hosted for four years.

(C) PPA SITE AUDITS AND ZONE DISCRETENESS TESTING

PPA 1 Scope

This specification covers the work to be undertaken by the contractor during the site audit programme of the Pressure Reducing Valves (PRVs) and chambers and testing of the zones for discreteness in the North East Sector water reticulation system. The Professional Services Provider (PSP) will also provide a team to undertake the audit

and the testing. The PSP team will be made up of a technician and a PRV specialist. The contractor's team will assist the PSP team in undertaking the audit and testing.

The work done during these programmes are important for the management of the water system and must be undertaken with minimal disruption of water supply to the consumers.

PPA 2 Interpretations

PPA 2.1 Application

This specification contains clauses that are applicable to the PRV chambers audit programme and testing of the PRV zones for discreteness.

PPA 3 Materials

There are no materials to be supplied for this scope of work.

PPA 4 Labour, Plant and Equipment

The Contractor shall provide such labour, vehicles, small plant and equipment that may be required during the work to be undertaken. No big plant will be required for work under this contract. The contractor is to supply the following minimum resources:

- A plumber artisan who will also be the driver of the vehicle. the artisan should be experienced with PRVs, valves and meters. The artisan should also have good recording and writing skills.
- At least one labourer who will assist the teams.
- A vehicle that is in good working condition and that will be expected to go off road and carry the necessary equipment.
- Equipment for locating covered chambers, clearing the top of chambers, opening the covers to access the chambers, accessing chambers (ladders), lighting where the light is poor in chambers, cleaning of the chambers, draining of chambers where water has filled the chamber, recording as requested by the PSP team and closing of the chambers.
- A metal detector for locating valves boxes and chamber covers where these are buried and cannot be found by other means.

PPA 5 Construction

PPA 5.1 General

The contractor is to take particular note that the work to be undertaken on water supply systems that are alive and water is being supplied to customers. Thus it is imperative that all work be undertaken speedily and that any unnecessary delays be avoided. Any undue delays will lead to penalties being applied.

Staff that are allocated by the contractor to undertake the work are to be knowledgeable of water distribution systems and experienced in working on such systems. The contractor will be required to submit documents to this effect. The contractor is also to acquire the proper tools and equipment to undertake the work.

As the work to be undertaken will be on live water systems the contractor is required to liaise and work closely with CoE staff especially the operations and maintenance staff. CoE is to be kept informed of all proposed work so that they are able to respond to their customers. Only CoE staff are permitted to operate the closing and shutting of valves. The contractor is required to assist the CoE during such operations.

The contractor is also required to inform all customers affected by the proposed work. This must be done timeously and be in accordance with CoE policy where such services are to be disrupted due to planned work.

The contractor is to ensure that all records of work done and changes made to the items are properly documented. Information required by the CoE which have financial implications such as meter changes must be addressed timeously.

PPA 5.2 Audit of PRVs and chambers

The contractor's team will assist the PSP team in undertaking the audit of the PRVs, chambers and boundary valves. The contractor must supply the resources as per Clause 4 to assist the PSP team.

The work of the contractor will include but not limited to the following:

- Locating the PRV chamber
- Where the chamber is under covered by soil or other material, remove such material and uncover the chamber
- Use of the metal detector to locate the chamber where it is not visible by inspection
- Excavation to gain access to the chamber
- Open the access to the chamber
- Where required set up a ladder to access the chamber
- Cleaning of the chamber of all dirt so that the audit can be done
- Pumping out water where water is present in the chamber
- Assist the PSP team in doing the audit including taking readings, recording and testing on the items
- Doing minor works such as opening and closing of valves and tightening of bolts
- Closing the access to the chamber ensuring that the cover sits properly on the frame

The contractor will be paid for supplying the team and the equipment on a daily rate as per the Bill of Quantities. It is envisaged that work will be continuous over a period. However there may arise reasons for a break in the work for which the contractor should make allowance in the rate. There could be other work that may be identified during the audit programme which will be paid under dayworks if applicable.

PPA 5.3 Locating and testing of Boundary Valves

Zones are separated by boundary valves so as to ensure that the required pressures are provided to the customers. These valves are used in emergencies to supply across zones. However the valves must be returned to the closed position as soon as possible.

The contractor is to assist the CoE staff and PSP team to check that these valves are in a closed position and are operating properly. The work of the contractor will include but not limited to the following:

- Locating of the valves either visually or by the use of a metal detector
- Removal of the valve box cover to access the valve if required
- Removal of debris from the valve box to expose the operating nut on the valve
- Pumping out of water where present to access the operating nut
- Excavation where necessary to expose the valve
- Assist the CoE staff in opening and closing of the valves as instructed by the PSP team
- Installing of the valve box and or cover where these have been removed. The contractor must ensure that the valve box is clean and the operating nut is accessible.
- Assist in recording the activities undertaken and the findings

The contractor will be paid for supplying the team and the equipment on a daily rate as per the Bill of Quantities. It is envisaged that work will be continuous over a period. However, there may arise reasons for a break in the work for which the contractor should make allowance in the rate. There could be other work that may be identified during this work which will be paid under dayworks if applicable.

PPA 5.4 Zero pressure tests

Zero pressure test are undertaken to ensure that water is entering the zone only through the desired point or points. The boundary valves are used to ensure that water is not entering from other zones. However, these valves maybe faulty or water may be entering the zone through an unknown source. In order to check for entry of water from other zones zero pressure tests are done.

The contractor is to assist the PSP team to undertake these tests. The work of the contractor will include but not limited to the following:

- Assist in closing of the water supply into the zone
- The installation of a pressure logger/gauge at the point instructed by the PSP team
- Where a point is not available to do the pressure logging, excavating and installing a saddle on the pipe to provide such point
- Assist in opening of the water supply into the zone.

It should be noted that the actual tests will be done out of working hours and preferably from 23h00 to 04h00. Thus the contractor is to price in his rate for providing the team and equipment outside of working hours. The rate will be based on per hour as per the Bill of Quantities.

The installation of the saddle will be done during normal working hours and the rate will be per saddle for the different pipe sizes. The price must include for excavation and backfilling, supply of the saddle and installation.

PPA 6 Tolerances

Not applicable

PPA 7 Testing

Not applicable

PPA 8 Measurement and payment

PPA 8.1 Principles

The principles and computation of quantities will be as set out in the following clauses.

PPA 8.2 Scheduled items

PPA 8.2.1

a) Assist the PSP team with undertaking the Audit Unit: Day

The contractor is to supply the team and the equipment as specified in this specification. The rate shall include for all resources required and will paid per day as instructed by the PSP

b) Assist the PSP team with the locating and testing of Boundary valves. Unit: Day

The contractor is to supply the team and the equipment as specified in this specification. The rate shall include for all resources required and will paid per day as instructed by the PSP

c) Assist the PSP with undertaking the zero pressure tests. Unit: Hour

The contractor is to supply the team and the equipment as specified in this specification. The rate shall include for all resources required and will paid per hour as instructed by the PSP. It must be noted that the test will be done outside of normal hours and preferably between 23h00 and 04h00

d) Supply and install saddles to measure pressures. Unit: No

Different rates will apply for each size of pipe. The rate to include the price of the materials, equipment, labour for excavation, installing and backfilling.

(D) PPGL GSM LOGGERS

PPGL 1 Scope

This specification covers the supply, installing and commissioning of GSM loggers and controllers in control valve chambers to permanently monitor network pressure and/or flows and relay of this information to a web-based data acquisition and display platform.

The work done during these programmes are important for the management of the water system and must be undertaken with minimal disruption of water supply to the consumers.

PPGL 2. Specifications

Data logging & control equipment shall mainly consist of:

GSM Data Logger

PRV controller.

Software.

GSM Modem.

Antenna.

Necessary appurtenances

GSM data loggers, controlling equipment must comply to the following minimum specifications;

PPGL 2.1 GSM Data Loggers

- Data Loggers shall be compatible with PRV's, Modems, controllers, control software, modems, and other necessary appurtenances.
- GSM data loggers must be battery operated with a battery life of minimum 4 years and must be user replaceable.
- GSM data loggers and controllers must transmit data to the same web based platform
- The rate tendered for the data loggers must include for installation in the PRV chambers. The data logger housing must be at least IP65 rated.

PPGL 2.2 Controllers

- The controller must be a multistage pressure controller
- The controller must be capable of logging flow and pressure data and sending this data to a web based platform where the data can be accessed by the City of Ekurhuleni.
- The controller must be capable of receiving instruction remotely to change the pressure settings. Ekurhuleni must be provided access to a web-based facility where these changes can be effected on the pressure controllers.
- The controller must be battery operated with a battery operational life of at least 2 years. Batteries must be replaceable.
- The rate tendered for the control equipment must include for installation in the PRV chambers.
- The Two stage hydraulically operated time based pressure controller, Singer Valve type or similar, must provide a means of operating the PRV at two user selectable pressure settings based on a user selectable time schedule. The price must include the retrofitting of the controller onto various existing PRV control circuits and must accommodate various makes of existing pilot valves. The cost must cover all hydraulic and electronic equipment required for the successful installation and commissioning of the two stage controller. The controller must be equipped with a battery with a minimum battery life of 18 months. The batteries must be user replaceable.

PPGL 2.3 Web Based Platform

- The web based platform where the data is stored must be capable of generating daily, weekly and monthly reports and to report the recorded data via email to multiple designated City of Ekurhuleni officials.
- The pressure and flow logging information which is to be hosted on an online data acquisition and display platform, must additionally be accessible via the IMQS platform. Data must be uploaded to the platform once a day at 07:00.
- The cost of installation of the GSM loggers and controllers should include all costs associated with the provision of logged data. for the period specified in the Bill of Quantities.
- The Contractor rate to include for permanent monitoring of upstream pressure, downstream pressure and flow at each PRV via GSM data loggers and hosting of this data on a web based platform integrated with IMQS and the provision of PRV Controllers at stipulated chambers.

(E) PPEC REPAIR EXISTING CIVIL INFRASTRUCTURE

PPEC 1 Scope

This specification covers the repair of existing infrastructure related to the Pressure Management Programme and more specifically the programme to audit and for servicing or maintaining of pressure reducing valves (PRV) and establishing the discreteness of the area supplied by the PRV. The existing civil infrastructure consists mainly of the PRV chambers and pipework in around the chambers. Occasionally where required the contractor will be instructed to do repairs on leaking or burst pipes.

PPEC 2. Supporting specifications

PPEC 2.1 The specifications for the work under this particular specification is covered by the applicable Standard and Project Specifications mentioned previously in the document. These include the following specifications

- a) Project specifications;
- b) SABS 1200 AA General (small works)
- c) SABS 1200 DA Earthworks (Small works)
- d) SABS 1200 DB Earthworks (pipe trenches)
- e) SABS 1200 GA Concrete (Small Works)
- f) SABS 1200 L Medium pressure pipelines
- g) SABS 1200 LB Bedding (pipes)

PPEC 3. Materials

All materials are to be in accordance with the specification stated above or previously in the document.

PPEC 4. Plant

The Contractor shall provide such vehicles, cranes and pumps as are necessary to undertake the work specified and to place materials in the manner specified.

PPEC 5. Construction

During the audit programme various existing infrastructure will be identified that will need repairs. These repairs are to be done as part of this contract and generally will include concrete work, brickwork and pipework.

a) Concrete Work

Nonstructural Cracks Repair Procedure:

- Clean the area if necessary using a grease remover
- Chisel the crack clean
- Brush and vacuum the crack thoroughly
- Fill the crack with a concrete filler completely and smooth with a trowel
- Allow the repair to cure
- Seal and patch the concrete

Structural Cracks Repair

For structural cracks repair the procedure will be same as for nonstructural crack repair except an approved epoxy resin will be injected into the crack and in compliance with the manufacturer's instructions.

Concrete Slabs:

For concrete slabs any of the following repair work may be necessary:

- In situ concrete of part of a slab including bonding epoxy and dowels
- In situ concrete of the full slab
- Installation of a Precast slab
- Demolition of the existing slab and installing a new slab
- Installing the access cover onto the slab

All concrete work will be done according to SABS 1200 GA: Concrete (Small Works) and any related project specification.

Payment for repairing cracks in concrete will be made per linear meter for structural and nonstructural cracks and will include for all materials, preparation and filling of the cracks.

Payment for concrete slabs will be made per m3 for in situ concrete or per m2 for precast slabs and will include for complete installation of the slab. For in situ concrete formwork and reinforcement will be paid separately.

The access cover and frame will be a 600x600 Type 9A Class B125 by Fiberite or similar approved.

b) Brickwork

Any damage to existing brickwork of the PRV chambers will need to be repaired. All masonry work will comply to National Building Regulations, SANS 2001-CM1 Masonry walling and SANS 10400–The application of the national building regulations as relevant.

Solid clay masonry units (bricks) shall be of nominal dimensions 222 x 106 x 73 mm, shall comply with SANS 227. Sand for mortar shall comply with SANS 1090 and be well graded from 5 mm down in accordance with Table 1. Sand shall not contain an excess of dust or fine material. Cement shall be Portland Cement Type CEM.I 42,5 to SABS ENV 197-1. Cement mortar shall be in the proportion 1 part Portland cement to 4 parts sieved sand in the case of face brickwork, and 1 part cement to 5 parts sand for all other brickwork.

All loose brickwork will be removed and the surfaces prepared for the addition of new brickwork. All bricks to be the same as the existing bricks of the chamber or a similar match.

Brickwork will be paid per m² either for a single skin or a double skin as per the existing brickwork. The contractor is to ensure that the brickwork is to be water tight and if required water tightness test will be done.

c) Pipework

All pipework is to comply with SABS 1200 L: Medium pressure pipelines and project specifications of this document. The scope of work will cover the repair of existing pipework as instructed by the engineer, the modification to existing pipework to accommodate new items and the installation of new pipework.

The rate is to cover all materials, installation and coating as per the specifications.

d) Cleaning of Chambers

Where chambers require to be cleaned out of debris or water to be pumped out, the contractor is to ensure that such work will be done in a manner that the infrastructure within the chamber is not be damaged. All debris is to be disposed off at approved disposal sites. Pumped water is to be directed such that it drains into natural waterways or the stormwater system and the contractor is to ensure no damage is caused to the environment or any item.

The payment for this item will be done on dayworks.

e) Repairing or Replacing of Metalworks and Sundry items

This will include items such as locks, manhole covers, stepirons and ladders. Where these items have been damaged they shall be removed and replaced with similar items approved by the Engineer. Where these are missing they shall be replaced with similar items as approved by the Engineer. The method of fixing these items will be as per specification of the manufacturer.

The rate shall be per number and is to include for all costs in installing the item.

(g) PARTICULAR SPECIFICATIONS (REGULATORY)

It should be noted that the requirements of the following particular specifications take precedence over any requirements that are related to the standard specifications.

C.1	PEPWP	Expanded Public Works Programme: Conditions & Specifications
C.2	PSAA	Dayworks Schedule
C.3	POHSA	Occupational Health and Safety information for Bidders

Any differences in the requirements of the above specifications should be referred to the Engineer for a decision on the actual requirement. In general, however the Contractor should assume that the most onerous requirement will govern.

(C) EPWP: PARTICULAR SPECIFICATION: EXPANDED PUBLIC WORKS PROGRAMME - CONDITIONS AND SPECIFICATION

EPWP 1 EMPLOYMENT TARGETS

The contractor needs to provide a realistic estimate on the number of jobs that the project has the potential to create throughout the project duration as the project will be implemented using Labour Intensive Construction methods on elements where it is economical and feasible for this construction method.

EPWP 2 EMPLOYMENT REQUIREMENTS

Tenderers are advised that this contract will be subject to the Expanded Public Works Program (EPWP) aimed at alleviating and reducing unemployment.

Tenderers must allow for any costs for the following employment requirements of the EPWP:

1. 55% of unskilled labour to be women;
2. 40% of unskilled labour to be youth aged between 18 and 35 years; and
3. 5% of unskilled labour to be people living with disability.

100% unskilled labour utilized must reside within the boundaries of the Municipality. Wherever possible local skilled tradesmen are to be employed on this contract with the view to maximize utilization of local resources.

EPWP 3 LABOUR RATE AND PAYMENT INTERVALS – section C3.2.8 Table 1

The contractor should ensure that labour rate paid to unskilled local labour is commensurate to the daily task. When determining the rate, consideration should be given to that EPWP beneficiaries are mostly bread winners in their families, as the program intends alleviating poverty. There should also be consideration that the labour rate promotes creation of expanded number of jobs created and person days of work.

Contractors should make endeavours to ensure that labourers, particularly unskilled are remunerated on fortnight basis and prior notification be made should there be a shortfall on their wages.

The labour rate for local unskilled shall also be determined in consideration of the location of the project, i.e. for projects implemented in urbanized municipalities will not be the same as that for rural municipalities, but the rates to be used must be the prevailing rates as gazetted by the Department of Labour or SAFCEC whichever is the greater.

Labour Intensive Construction (LIC) method

On site there must be a person(s) having competency in managing and implementing LIC methods.

*Foreman @ NQF Level 4 the Unit Standard on Implementing LIC methods on site.

*Site Agent/ Managers @ NQF level 5 the Unit Standard on Manage Labour-Intensive Skills Programme both must be CETA accredited

EPWP 4 LABOUR INTENSIVE CONSTRUCTION METHOD

Those parts of the contract to be constructed using Labour Intensive methods will be marked in the BoQ with letter LI (indicating Labour Intensive) against every item so designated. Such works will only be constructed using method so indicated.

Reference to be made to Guidelines for the implementation of Labour Intensive Infrastructure projects under EPWP.

"Scope of Work in Respect of Work Relating to the Expanded Public Works Programme (EPWP)"

PEPWP 5 RECORD KEEPING

Every employer must keep in the project site office the site progress minutes; contractors' monthly site progress reports; accurately recorded attendance register; proof of payment as means to verify authenticity of data in the EPWP Beneficiary form submitted with payment certificates. Copies of submitted EPWP beneficiary data forms should also be kept in the site office.

The employer must keep this record for a period of at least three (3) years after the completion of the project in his/her office as the project site office would have been relocated.

This should be safely kept for job creation data verifications and periodical audits on projects conducted by National and City of Ekurhukeni after one (1) or two (2) quarters of submitting captured EPWP Data to the National EPWP coordinating Department.

PEPWP 6 EPWP REPORTING AS PER EPWP DATA FORM

At the end of each month as part of site progress report and to be attached to every contractors' progress payment certificate; the contractor shall provide the principal agent with a written record, as per EPWP data form; which will be reflecting, beneficiaries full name & surname; ID No and job description of labour employed by main contractor and sub-contractors on site.

NOTE:

- Upon Contract award, the Municipality will issue data collection tool that needs to be completed and submitted to the Municipality on the 5th day of every month;
- All details of the contract must be captured in full on the data collection tool (under registration form and business form sections);
- Beneficiary information must be accurately captured onto the data collection tool, that is, identity numbers, names, etc. (under beneficiary information section);
 - The payment upload on the data collection tool must be updated on monthly basis by the Contractor;
- Certified copies of identity documents of each employee must be scanned, named and e-mailed to the EPWP official of the Municipality; and
- Should an employee be laid-off the contract, this must be captured next to that particular employees name.

EPWP 7 EPWP PROMOTION/SIGNBOARDS

EPWP Program at the project level shall always be promoted through having the projects signage board that embrace EPWP logo at the bottom, correct measurement for this signage board will be provided by the project leader during the site handing over meeting.

Contractor & Sub-contractors' labourers shall be provided with EPWP branded Personal Protective Equipment (PPE), reflector vest with EPWP wording at the back is an ideal and cost-effective means of promoting program on site.

The contractor is then advised to price for both item above.

EPWP 8 COMMUNITY LIAISON OFFICER (CLO)

EPWP 8.1 UTILISATION OF A COMMUNITY LIAISON OFFICER

The Contractor shall allow for and pay any and all costs necessary for the engagement of the services of a Community Liaison Officer (CLO) for the full duration of this contract

A CLO will be identified by the local structures of the ward areas and appointed following fair and transparent interviewing process, to be conducted in the presence of local structures and the contractor representative, in order to assist the Contractor in the procurement of any local labour, etc. required for this project. The Contractor is to liaise with the CLO and afford him any assistance needed in ensuring sound working relations with the local community.

Key Responsibilities of the CLO are envisaged to include and not necessary be limited to:

1. Assisting local leadership in conducting skills and resources audit which facilitates sourcing labour from within the ward or targeted areas for employment, as required by contractor
2. Assisting in sourcing labour-only domestic sub-contractors and the procurement of materials from local resources, as required by the contractor.
3. Assisting the contractor by identifying areas of potential conflict and or threats to the project or to stakeholders in the project and recommend appropriate action to the contractor.
4. Assisting contractor and stakeholders in the project in the resolution of any conflict which may arise.
5. Establishing and ensuring that sufficient and open communication channels between the contractor and the work force are maintained.
6. Establish and ensuring that efficient and open communication channels between the contractor and the community are maintained
7. Identifying and reporting to the Contractor regarding issues where communication between stakeholder is necessary, recommend courses of action and facilitate such communications
8. Assisting the Contractor and the work force in the establishment of grievance procedures and necessary recommendation to the Contractor regarding the grievances and solution thereto.
9. Attending to site meetings and project implementation meetings as required by the Contractor and prepare periodic reports as may be required by the Contractor from time to time.
10. Attending to such other duties which are consistent with the functions of a CLO, as may be required by the Contractor from time to time.

Tenderers are to price twice the rate of unskilled local labour rate against this item for any and all costs arising out of compliance with the foregoing and in the event of a Tenderer failing to price against this item or making inadequate financial provision against this item for compliance as aforesaid, then no claim for costs or additional cost incurred will be entertained by the Head: Works

EPWP 9 SKILLS DEVELOPMENT ON SITE

Contractor in conforming to the object of EPWP that its beneficiaries need to be capacitated with skills that will render them employable in the future. It is then the responsibility of the contractor that mandatory life skills are provided to 100% of workforce on site and on the job training to labourers from whom the potential for further development has been identified. The latter is not mandatory to all as it covers technical skills.

Contractor should also make provision for the possibility that there might be local youth that will need to be placed on the project with an intention to be provided support towards improving their level of competency and productivity.

Contractor shall also provide all necessary on-the-job training to targeted labour to enable such labour to master and advance on techniques required to undertake the work in accordance with requirements of the contract in a manner that does not compromise workers' health and safety.

Labour Only Sub Contracting for local emerging enterprises

Tenderers are advised that this contract is subject to the Expanded Public Works Programme (EPWP) and the following criteria will apply:

African Equity Ownership

- a) The Tenderer is to allow for 5% of the total value of works to be undertaken by a Priority Population Group. This percentage excludes the costs of employing local unskilled labour. The allocation of this percentage from the Project, the screening of people, the selection of skills, will be for the Contractor to adjudicate.
- b) The Priority Population Group consists of women, youth and disabled people.
- c) The Contractor is to give first option for prospective PPG's from the surrounding areas of the Project. Should there be insufficient suitable people fitting the criteria of PPG's, the Contractor may hire people from further afield. This is to be done only after consultation with the ISD EPWP Co-ordinator and the Community Liaison Officer (CLO),
- d) A Mentor with health and safety skills is to be employed by the Contractor, in consultation with the ISD for the purposes of quality control and liaison between the Contractor and the selected PPG's on site. The mentor will be responsible for ensuring an acceptable level of quality workmanship and that such work carried out by the PPG's is executed within the time frames stipulated.

In so far as possible, the Contractor is encouraged to expand the PPG's skills, knowledge and performance levels.

EPWP 10 TENDERER'S TO NOTE CONDITIONS

- a) The contract to be entered into between the Contractor and the PPG's will be a LABOUR ONLY sub-contract.
- b) The Contractor will be responsible for ensuring that all materials for use by the PPG's in the works are to be on site timeously. The Contractor shall liaise with the Mentor and PPG to determine the nature and extent of materials required and the lead time necessary.
- c) The Contractor shall be responsible for the overall programming of the Works and he is to allow for monitoring the PPG's programme and progress.
- d) In conjunction with the Mentor, he is to allow for the supervision and mentoring (where necessary) of the PPG to ensure quality and adherence to standard building practice
- e) The Contractor is to allow for extra storage facilities on site for the PPG's tools and equipment.
- f) Basic tools shall be provided by the PPG's and where these are not available; the Contractor will supply him/her with the necessary tools and equipment and deduct the costs thereof from the interim claims made by the PPG.
- g) Work requiring specialized tools, tools will be provided free of charge by the Contractor with the provision that these be returned upon completion of the Work.

EPWP 11 CO-ORDINATION

The Contractor is to co-ordinate the work of all the PPG's, Sub-Contractors and Nominated Sub-Contractors appointed direct by the Employer in such a manner and at all times as will suit the building programme and he is to allow adequate access, for the PPG's, where required, to carry out their work in an efficient manner as no claims for extras in this connection will be entertained.

EPWP 12 ATTENDANCE

The Contractor may allow for attendance upon the PPG's concerned to execute the work. The Contractor is to allow the PPG's the use of any scaffolding belonging to him while it remains so erected on the site.

Where scaffolding is necessary for the use by any PPG and the Contractor has not erected any for his own use or has removed same after his own use, the Contractor shall supply sufficient scaffolding to the PPG to be erected and dismantled by the PPG and returned to the Contractor.

This attendance upon PPG's to execute the work is to include for the scaffolding provisions as aforesaid and, in addition, is to include for co-operating to the fullest extent with all the parties, attending on off-loading materials, providing suitable storage for tools and materials used by the PPG's, use of general facilities such as latrines, etc., supply and cost of power, lighting, water and the like.

EPWP 13 EPWP CONTRACT FOR LABOUR

It is compulsory that shortly after the contractor and or sub-contractor has appointed local labour, the employment contract should be signed by both parties, prior to commencement with works on site. The employment contract forms part of the Ministerial Determination or from the regional EPWP officials.

EPWP 14 EPWP Scope of Work

Note:

Contractors are to price any item on the Bill of Quantities having below, bearing in mind that they are regarded as main sources of job creation, whether sub contracted or undertaken by the main contractor.

Elements on the scope of work where application of Labour Intensive Construction methods as will be indicated with letters (LI) are regarded feasible are as follows:

- i) Excavating trenches for foundations and any other civil works with the depth not more than 1.5 m
- ii) All masonry works which include concrete mixing on site; brickwork; plastering; screed works; jointing; etc.
- iii) Painting, Plumbing, Ironmongery; roof cladding; glazing; tiling; carpentry; flooring; waterproofing; etc.
- iv) External works such as landscaping; cleaning; paving; fencing; tarmac; etc.

Note

It is a general requirement of this contract that persons normally reside in the ward of the works (local labour) be given preference for employment on the contract. Provided, however, that should adequate and appropriate labour not be available within the ward, others may be employed subject to satisfactory proof being provided that every reasonable endeavour has been made to employ local labour (Local Sub-contractor(s); Skilled; Semi-Skilled and Unskilled). The contractor shall in consultation with the local community leaders with the purpose of negotiating with them regarding the utilization of local resources in the construction process. In this regard, the contractor shall furthermore give preference, wherever possible to the employment of single heads of households, women and youth as well as families declared as most indigent by War on Poverty/ Sukuma Sakhe program profiling process. The contractor should aim, in general, to maximise the involvement of the local community, however workers from other communities should not exceed 20% of all persons working on the project, where local employees possess skills at level of competency that meet contractor's requirements.

(D) PSAA: PARTICULAR SPECIFICATION: DAYWORKS SCHEDULE

PSAA 1 GENERAL

In cases where the Engineer orders any variation in the form, quality or quantity of the work or any extra work to such an extent that the tendered rates for specific items are no longer applicable, or where a combination of tendered rates cannot be applied to compensate for such work, the Engineer may, in terms of the General Conditions of Contract, order that the amended or extra work be carried out as daywork at the cost of labour, plant and materials. For that purpose, provision is made for the Contractor to tender his rates for labour and plant in the Daywork Schedule which forms part of this contract.

No work will be measured as daywork unless:

- (a) the Engineer agrees that the varied work is not in accordance with the specification or scope of a measured item in the contract;
- (b) the Engineer has issued an order in writing for the execution of such varied work; and
- (c) statements of plant and labour are submitted daily to the Engineer for his consideration and approval.

All work valued at the tendered rates in the Daywork Schedule will be subject to contract price adjustment as applicable to the Contract.

PSAA 2 SALARIES AND WAGES OF WORKMEN

The amount to be paid for labour will be based on the rates tendered in the Daywork Schedule for the workers executing the work. The tendered rates shall be all-inclusive and shall be held to cover all charges for the Contractor's profits, timekeeping, clerical work, insurance, establishment, superintendence, the use of hand tools, etc., and no additional surcharge over and above the tendered rates will be applicable.

PSAA 3 CONSTRUCTIONAL PLANT

The rates for constructional plant as tendered in the Daywork Schedule shall cover all costs, overheads and profit for the contractor and no further surcharge will be payable on the tendered rates. The cost of operators shall be included in the tendered rates except where otherwise specified in Clause PSAA 5 (Measurement and Payment) hereafter.

Where plant or equipment for which no rates exist in the Daywork Schedule are employed, the cost thereof shall be determined as agreed with the Engineer in terms of the General Conditions of Contract. In such case contract price adjustment will only be applicable if the agreed cost is based on rental rates at the time of the base month before closing of tenders, or if the ruling rates current at the time of the execution of the work are de-escalated to the base month.

The Contractor will be paid for the transport to and from the site of constructional plant not on site and specially ordered by the Engineer to be brought on site. No payment will be made for transport of equipment listed in the Contractor's Schedule of Constructional Plant in the tender document, or for equipment which has been removed from the site on request of the Contractor, or for equipment already on site, regardless of whether it appears on the Schedule of Constructional plant or not.

PSAA 4 MATERIALS

Materials required for daywork items which cannot be compensated under existing rates and have to be purchased, will be paid for at cost, excluding VAT, plus a surcharge of 15%. The cost of materials provided for daywork at current rates at the time when the work is executed, will not be subject to contract price adjustment unless the prices of the materials are de-escalated to the base month for escalation.

PSAA 5: MEASUREMENT AND PAYMENT

Items as per bill of quantities.

The unit of measurement is the hour or part thereof during which workers were engaged in daywork.

The tendered rate shall include full compensation for all salaries, wages, bonuses, pension, insurance, medical aid and other benefits as well as overheads arising from administrative personnel, site agents, supervisors, tools and profit. No surcharge will be paid on the tendered rates

The cost of operators included in the rates for constructional plant, will not be measured again under Labour.

(E) POSHA: PARTICULAR SPECIFICATION: OCCUPATIONAL HEALTH AND SAFETY INFORMATION FOR BIDDERS

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

1. Proof of Registration with the Compensation Commissioner.
2. Letter of "Good Standing" with Compensation Commissioner.
3. Certified copy of first aid certificate.
4. Physical address where contract is taking place (on Company letterhead).
5. Detailed description of intended work (on Company letterhead).
6. List of all Personal Protective Equipment issued to employees (company letterhead).
7. List of ALL employees on site (on company letterhead).
8. Detailed Health and Safety Plan (on company letterhead).
9. Comprehensive Risk Assessment (Qualification and Contact details of Risk Assessor).
10. Public Liability and Commercial Insurance Certificate.
11. All related statutory appointments.
12. Certificates of relevant Training.

The above list represents the minimum content of a safety file in terms of the Construction Regulations, 2014 (the regulations) as promulgated in Government Gazette No 37307 and Regulation Gazette No 10113 of 7 February 2014.

The City of Ekurhuleni Water and Sanitation Department Health and Safety Specification is included in Section C3.5 MANAGEMENT OF THE WORKS.

C3.5 MANAGEMENT OF THE WORKS

C3.5.1 GENERIC SPECIFICATIONS

The SABS 1200 Standardized Specifications listed in C3.4.1.1 are applicable.

C3.5.2 CONSTRUCTION PROGRAM AND REPORTING

The Employer will take no responsibilities for any work done outside the site of works without approval by the Engineer.

Immediately after the handing over of the site the Engineer and the Contractor shall discuss the order of procedure and methods in which the Contractor shall carry out the works, after which the Contractor shall compile and submit to the Engineer, within 14 days of the commencement date, the construction programme.

The programme shall be in the form of a bar chart only, and shall clearly show the anticipated quantities, the production rates and value of work to be performed each month.

A network-based programme according to the precedence method shall also be provided showing the various activities and critical path in such detail as may be required by the Engineer. The programme shall be updated monthly in accordance with the progress made by the Contractor.

It is a prerequisite of this contract that minimal disruption of the public is ensured during construction. Construction methods must be of such a nature that no property or life is endangered. The Employer accepts no responsibility for any work done outside the site boundaries without the Engineer's approval.

Sufficient digital photographs of all structures and obstructions in the pipeline route must be taken by the Contractor, compiled electronically, indexed and handed over to the Engineer before construction commences.

Failure to comply with these requirements will entitle the Engineer to use a programme based on his own assumptions for the purpose of evaluating claims for extension of time or additional payments.

The compilation of the construction program and any amendments thereto during the course of construction shall be at the cost of the Contractor and shall not be measured elsewhere in the contract.

C3.5.2.1 Construction Programme

The Contractor must submit his construction programme within the time stated in the Tender Data. The programme is subject to the Engineer's approval and remains so for the duration of the contract.

The programme shall be in the form of a sloping bar chart or other time/activity form acceptable to the Engineer. The unit of measurement in respect of the periods of activities will be a week.

The programme shall reflect at least the following information:

- a) A description of each of the major activities that are to be carried out during the contract and the sequence in which they will be done;
- b) The programmed time for carrying out each activity;
- c) The dependencies that exist between the various activities and whether these are time-related or resources-limited or both;
- d) The critical path of activities on which final completion of the Work is dependent;
- e) The amount of slack time for non-critical activities.

The following is a list of activities that the Contractor is required to indicate on his programme which shall not be considered as being comprehensive but rather as the minimum information required by the Engineer;

1. Establishment on site
2. Setting out of Works
3. Locating of existing services
4. Clearing and grubbing
5. Excavation of pipe trench
6. Pipe laying
7. Chambers
8. Electrical Documents (drawings, control philosophy, etc.)
9. Formwork
10. Reinforcing

11. Concrete
12. Testing of civil works
13. Fabrication and inspection of pipework
14. Pipework installation
15. Electrical and Electronic installation
16. Testing of Electrical and electronic works (factory tests and preliminary testing)
17. Practical Completion
18. Hand-over
19. As-Built drawings

The following details shall also accompany the programme:

- a) Proposed number of working hours per day, working days per week, "pay weekends"; if any and any proposed holiday or other shut down periods;
- b) Schedule of proposed labour resources (giving a breakdown of description and number of units) for each major activity;
- c) Schedule of proposed plant resources (giving a breakdown of description and number of units) for each major activity;
- d) The rate of production on which the programmed time for carrying out the work is based.

It is in the Contractor's interest to give as much information as possible about times allowed for construction as well as resource or other limitations on programme times, since this programme will form the basis for any contractual negotiations about extensions of time once the contract is commenced. Failure to comply with any of these requirements will entitle the Engineer to use a programme based on his own assumptions to evaluate claims for extension of time for the completion of the work and/or for additional compensation.

Once approved by the Engineer in writing, this programme shall be known as the contract programme and shall be revised only as described below. Minor revisions to the contract programme may be introduced from time to time by mutual agreement between the Contractor and the Engineer. Should the Engineer require a major revision to the contract programme for whatever reason, the Contractor shall be notified in writing and such revision shall be submitted for approval to the Engineer within two weeks of receipt of such notification.

If a revised programme is issued, the effect on the initial path must be clearly indicated to the Engineer as must the steps required to be taken to ensure the completion of the contract within the stated Time of Completion.

The Contractor shall submit to the Engineer, at least three working days before each monthly site meeting, one paper print of the contract programme with detailed programme duly marked up to reflect the actual progress up to that date. The compilation of the construction program and any amendments thereto during the course of construction shall be at the cost of the Contractor and shall be covered under the Preliminary and General items.

C3.5.2.2 Detailed Programme

Detailed programmes (used to amplify certain aspects of the contract programme and submitted monthly):

1) Detailed bar charts

An extract from the updated contract programme covering the forthcoming two-month period with major activities broken down into daily activities.

2) Production graphs

Sloping bar graphs where the “unit” (ex m³, km, no) is shown on the vertical axis, “time” (in days) is on the horizontal axis and the graph line reflects the “activity”. These are to be produced for the following month and will cover all activities of a repetitive nature such as excavation and backfill, removal of pipes, disposal of pipes, reinstatement of roads, etc.

C3.5.2.3 Reporting

The Contractor shall submit to the Engineer at least three days before each monthly site meeting a monthly progress report that shall include the following:

- 1) A summary of progress on site over the month immediately preceding the monthly site meeting. This shall be in the form of a detailed narrative to the contract programme;
- 2) Marked-up construction programme (refer to C3.5.2.2).
- 3) Highlight activities running late, indicating what steps have (or will) be taken (ex reprogramming, additional plant and/or labour resources, etc.) to ensure that the specified date of completion is not overrun;
- 4) Status report of all plant employed on site;
- 5) Status report of all labour resources employed on site;
- 6) Status report of all material on site.
- 7) Cash flow

No separate payment will be made for observing these requirements as it is deemed to be included in the amounts tendered.

C3.5.2.4 Methods and Procedures

The construction methods must make provision for progressive and systematic finishing and trimming of the works that will form an essential part of this contract.

C3.5.2.4.1 Method Statements

The purpose of a Method Statement is to enable the Engineer and/or Service Provider to assess whether the Contractor’s proposed procedures and requirements (including restrictions) are in accordance with the Contract, the Service Provider’s requirements and/or will not result in unacceptable impacts on the biophysical and socio-economic environment.

The Method Statements shall cover applicable details with regard to:

- Construction procedures.
- Designs, where applicable (e.g. trenchless crossings), including drawings and specifications.
- Materials and equipment to be used.
- Getting the materials and equipment to and from Site.
- Sampling, sourcing and disposal of material.
- How the equipment/material will be moved while on Site.
- How and where material will be stored.
- Potential environmental impact and mitigation thereof (e.g. the containment or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur.
- Programming, timing and location of activities.
- Temporary Works, e.g. access roads, bypasses, shoring.
- Dealing with groundwater and storm water.
- Dealing with existing services.
- Maintaining access to the Works and properties of others.
- Where required, survey of levels and locations of services and structures.
- Any other information deemed necessary by the Engineer.
- Tie-ins and connections to existing pipelines (e.g. Existing water reticulation) and structures (termination manhole).
- In-situ, precast and prestressed concrete and structural steel (sampling and testing, construction methods, storage, curing, transporting and placement).
- Construction joints.
- Earthworks (excavation, selection. Sampling and testing, stabilised soil).
- Pipelines, fittings, valves, etc. (e.h field welding, corrosion protection, pipe jacking, testing)
- Mechanical and electrical plant, instrumentation, automation, communication, etc.
- Activities detailed in the Construction Phase Environmental Management Plan and Health and Safety Specification.
- For service providers and Wayleave applications (refer to Clause C3.4.2.4) if required.

The cost of method statements shall be deemed to be included in the rates of the relevant scheduled items.

C3.5.2.4.2 Procedures

The procedures for provision of Method Statements and the relevant obligations are as follows:

- a) The Contractor shall submit Method Statements in accordance with this Clause to the Engineer at least three weeks prior to commencing with the relevant activity. The activity shall not commence until approval has been obtained from the Engineer.
- b) The Engineer may require changes to a Method Statement if the proposed procedure does not comply with the Contractual requirements and obligations or service provider's requirements or if, in the reasonable opinion of the Engineer, the procedure may result in negative impact on the biophysical and/or socio-economic environment.
- c) Approved Method Statements shall be readily available on the site and shall be communicated to all relevant personnel.

The Contractor shall carry out the works in accordance with the approved Method Statement.

Approval of the Method Statement shall not absolve the Contractor from any obligations or responsibilities in terms of the Contract and/or Service Provider's requirements.

- d) Any damage caused to the surrounding biophysical and/or socio-economic environment by activities undertaken without prior Method Statement approval shall be rehabilitated at the Contractor's cost.

C3.5.2.5 Testing and Commissioning

C3.5.2.5.1 Testing Principles

Once the Contractor has satisfied himself with the standard of his work, he shall notify the Engineer at least 24 hours in advance to enable the Engineer to witness the Contractor's checks and/or tests or to perform his own checks, inspections and/or tests.

When giving notification, the Contractor shall provide the Engineer with the results of his own checks and tests indicating that the work is to specification.

Failure by the Contractor to notify the Engineer or to provide the required information or, where specified, to perform the required checks or tests, will be grounds for the Engineer not to certify the work as being complete, as well as any subsequent affected work.

The Engineer shall be under no obligation to the Contractor to perform checks, inspections and/or tests.

If the Engineer elects not to perform a particular check, inspection and/or test after notification by the Contractor, he will notify the Contractor in writing after which the Contractor can proceed with the relevant work without the Engineer's checks, inspections and/or tests having been performed.

Nothing contained in this Clause shall relieve the Contractor of his responsibilities under the Contract or in any way limit the checks, inspections and/or tests which the Engineer may request or perform in terms of the Scope of Works.

The Contractor shall make due allowance for his own and the Engineer's checking, inspection and/or testing procedures in the rates of scheduled payment items and in the construction programme.

Failure by the Contractor to notify the Engineer or to provide the required information or, where specified, to perform the required test, will be grounds to exempt the Employer from payment for the associated work and for all subsequent work which would be affected by the failure of the work to be tested.

A Provisional Sum is included for factory inspections and testing by the Engineer in the Bills of Quantities.

C3.6 HEALTH AND SAFETY

C3.6.1 HEALTH AND SAFETY REQUIREMENTS AND PROCEDURES

This annexure forms part of the written agreement between CITY OF EKURHULENI (hereinafter referred to as the EMPLOYER)

And

(hereinafter referred to as the CONTRACTOR, and in the Act referred to as “the mandatory”), setting out the arrangements and procedures agreed to in order to ensure that the CONTRACTOR complies with the Occupational Health and Safety Act no. 85 of 1993, (herein referred to as the Act) as amended from time to time.

1. If the inspector gave a direction in terms of section 7 of the Act to the CONTRACTOR to prepare a health and safety policy as contemplated in that section, the CONTRACTOR shall forward within 30 days of the date of the awarding of his contract, a copy of such a policy document to the EMPLOYER and hereby undertakes to display a copy as contemplated in section 7(3) of the Act.
2. The CONTRACTOR shall throughout the duration of the contract, provide the EMPLOYER with the necessary information in order for the EMPLOYER to establish the CONTRACTOR'S compliance with the Act.
3. The CONTRACTOR shall comply with the following in the execution of this contract:-
 - (a) provide and maintain as far as is reasonably practicable, systems of work, plant and machinery that, are safe and without risks to health;
 - (b) take such steps as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard to the safety of health of employees, before resorting to protective equipment;
 - (c) make arrangements to ensure, as far as is reasonably practicable, the safety and absence of risks to health in connection with the production, processing, use, handling, storage or transport of articles and substances, where applicable;
 - (d) establish, as far as is reasonably practicable, what hazards to the health or safety of persons are attached to any work which is performed in terms of this contract, any article or substance which is used, handled, stored or transported and any plant or any machinery which is used in the contract and the CONTRACTOR shall as far as is reasonably practicable, further establish what precautionary measures should be taken with respect to such work, article, plant or machinery

where applicable, in order to protect the health and safety of persons on the contract works and the CONTRACTOR shall provide the necessary means to apply such precautionary measures;

- (e) provide such information, instructions, training and supervision as may be necessary to ensure, as far as is reasonably practicable, the health and safety at the contract works of his, the EMPLOYER'S and any sub-contractor's employees, involved in the contract works;
 - (f) as far as is reasonably practicable, not permit any employee to do any work or to produce, process, use, handle, store, or transport any article or substance, where applicable, or to operate any plant or machinery, unless the necessary precautionary measures contemplated in this clause 3 of this annexure or prescribed by the chief inspector, have been taken;
 - (g) take all the necessary measures to ensure that the requirements of the Act are complied with by every person in his employment or on the site of the contract works where plant or machinery is used;
 - (h) enforce such measures as may be necessary, in the interest of health and safety;
 - (i) ensure that work is performed and that plant or machinery is used under the general supervision of a person trained to understand the hazards associated with it and who has the authority to ensure that precautionary measures taken by the EMPLOYER and the CONTRACTOR are implemented; and
 - (j) cause all employees to be informed regarding the scope of their authority in the execution of the contract and in terms of the act.
4. The CONTRACTOR shall execute this contract in such a manner as to ensure, as far as is reasonably practicable, that persons other than those in his or her employment who may be directly affected by the CONTRACTOR'S activities, are not thereby exposed to hazards to health or safety.
5. The CONTRACTOR who erects or installs any plant, article or machinery for use at the EMPLOYER or on the EMPLOYER'S premises, shall ensure, as far as is reasonably practicable, that nothing about the manner in which it is directed or installed makes it unsafe or creates a risk to health and safety when properly used.
6. The CONTRACTOR shall:
- (a) as far as is reasonably practicable, cause every employee to be made conversant with the hazards to such employee's health and safety attached to the work to be performed at the EMPLOYER, as well as with the precautionary measures which should be taken and observed with respect to those hazards;
 - (b) inform the EMPLOYER beforehand of any inspections, investigations or formal inquiries of which he has been notified by an inspector in terms of the Act and of any application for exemption made by him in terms of the Act; and

- (c) inform the EMPLOYER as soon as reasonably of the occurrence of an incident in the workplace or section of the workplace where the CONTRACTOR is performing work in terms of the contract.
7. The CONTRACTOR shall ensure that its employees and any sub-contractor's employees comply with the following:
- (a) take reasonable care for the health and safety of any employee and of other persons who may be affected by the employee's act or omission;
 - (b) co-operate with the EMPLOYER or any person designated for this purpose by the EMPLOYER to enable the EMPLOYER to comply with any duty or requirement to be performed or complied with in terms of the Act;
 - (c) carry out any lawful order given to him or her and obey the health and safety rules and procedures laid down by the EMPLOYER or any person authorised thereto by the EMPLOYER or the CONTRACTOR in the interest of health and safety;
 - (d) if any situation which is unsafe or unhealthy comes to the employee's attention, as soon as reasonably practicable report such situation to the CONTRACTOR as well as to the EMPLOYER;
 - (e) if such an employee is involved in any accident which may affect his or her health or which has caused an injury to him or her, report such incident to the CONTRACTOR as well as the EMPLOYER or anyone authorised thereto by the EMPLOYER as soon as reasonably practicable;
 - (f) intentionally or recklessly interfere with, damage or misuse anything, which is provided in the interest of health or safety.
9. The CONTRACTOR hereby confirms that its Chief Executive Officer, as defined in the Act, has as far as is reasonably practicable ensure that the duties of the CONTRACTOR in the execution of this contract and as contemplated in the Act, have been properly discharged.
10. If the number of employees employed by the CONTRACTOR in terms of this contract exceeds 20 (twenty), the CONTRACTOR shall within 14 (fourteen) days of the commencement of the contract works provide the EMPLOYER with full particulars of the safety representatives at the contract works. The CONTRACTOR shall simultaneously confirm that it complied with section 17(2) of the Act in the appointment of the safety representatives and that such safety health and safety representatives received the necessary facilities, assistance and training to fulfil their duties and functions as health and safety representatives.
11. If there are two or more health and safety representatives involved in the contract works, the CONTRACTOR shall, within 7 (seven) days from the date of a meeting of such health and safety representatives, send a copy of the minutes of such a meeting, as well as a copy of any recommendation made by the health and safety committee.

12. The CONTRACTOR shall not make any deduction from any employee's remuneration or require or permit any employee to make any payment to him or her or any other person in respect of anything which the CONTRACTOR is in terms of the Act, or this contract, required to provide or to do in the interest of the health and safety of any employee on the contract works.
13. The CONTRACTOR shall immediately report to the EMPLOYER any incidents occurring at the place or places where the CONTRACTOR performs any work in terms of this contract, in which or in consequence of which:
 - (a) any person dies, becomes unconscious, suffers the loss of a limb or part of a limb or is otherwise injured or becomes ill to such a degree that he or she is likely either to die or to suffer a permanent physical defect or is likely to be unable for a period of at least 14 (fourteen) days either to work or to continue with the activity for which such employee was employed or is usually employed;
 - (b) an occurrence of catastrophic proportions, as defined in the Act and resulting from the use of plant or machinery or from any activity in the performance of this contract; or
 - (c) the health or safety of any person was endangered and where:
 - (i) the uncontrolled release of any substance or pressure took place;
 - (ii) machinery or any part thereof fractured or failed, resulting in flying, falling or uncontrolled moving objects; or
 - (iii) machinery ran out of control.
14. The CONTRACTOR or any of the CONTRACTOR'S employees shall not without the consent of an inspector disturb the site on which any incident occurred in which a person died or was injured to such an extent that that person is likely to die or suffer the loss of a limb or part of a limb, provided that such action may be taken as is necessary to prevent a further incident, to remove the injured or dead or to rescue a person from danger.
15. The CONTRACTOR shall in no way whatsoever victimize any of its employees because the CONTRACTOR suspects or believes, whether or not the suspicion or belief is justified or correct, that one of his employees has given information to the EMPLOYER in respect of any matter concerning the health and safety of employees.
16. If an inspector of the Department of Labour wishes to perform any of his or her duties in terms of the Act at the contract works, the CONTRACTOR shall at all times provide such facilities as are reasonably required by the inspector to enable him or her and his or her assistant (if any) to perform effectively and safely his or her function under the Act.
17. The CONTRACTOR or any of its employees shall in no way interfere with or remove any blocking, bar, barricade or fence placed on the instruction of an inspector in terms of the Act.

18. The CONTRACTOR shall forthwith bring to the EMPLOYER'S attention the contents of any prohibition, direction or notice given by an inspector to the CONTRACTOR or a sub-contractor or any of the CONTRACTOR'S or sub-contractor's employees in terms of the Act.
19. The CONTRACTOR shall fully co-operate in respect of any investigation or inquiry by an inspector and provide all necessary assistance, as envisaged in section 34 of the Act in the event of such an inspector investigating or inquiring into any matter related to the CONTRACTOR'S or sub-contractor's execution of the contract work.
20. The CONTRACTOR shall not disclose any information concerning the affairs of the EMPLOYER without the prior approval of the EMPLOYER, which shall not be unreasonably withheld.
21. The CONTRACTOR shall not:
 - (a) In any record, application, statement or other document, referred to in the Act, wilfully furnish information or make a statement which is false in any material respect;
 - (b) hinder or obstruct an inspector in the performance of his or her functions;
 - (c) refuse or fail to comply to the best of his or her ability with any requirement or request made by an inspector in terms of the Act;
 - (d) refuse or fail to answer to the best of his or her ability any question which an inspector in the performance of his or her functions in terms of the Act, put to him or her;
 - (e) give himself out as an inspector;
 - (f) tamper with or discourage, threaten, deceive or in any way unduly influence any person with regard to evidence to be given with regard to any investigation in terms of the Act;
 - (g) prejudice, influence or anticipate the proceedings of any finding or inquiry in terms of the Act;
 - (h) tamper with or misuse any safety equipment installed or provided to any person by the EMPLOYER or the CONTRACTOR;
 - (i) fail to use safety equipment at any work place in terms of this contract or in the cause of his or her employment or in connection with the use of plant or machinery;
 - (j) wilfully or recklessly do anything at a workplace in terms of this contract or in connection with the use of plant or machinery which threatens the health or safety of any person.
22. Words used in this annexure shall have the same meaning as words defined in the contract.

4. POHAS 1 SCOPE

This specification details the health and safety requirements associated with the Works.

5. POHAS 2 INTERPRETATIONS

Occupational Health and Safety Act, Act 85 of 1993 shall apply to this Contract. Construction Regulations, 2014 (the regulations) as promulgated in Government Gazette No 37307 and Regulation Gazette No 10113 of 7 February 2014 apply to any person involved in construction work. These regulations are hereinafter referred to as “the Construction Regulations” and the said Act as “the Act”.

With regards to Regulation 5 (7) (b) “An agent contemplated in sub regulations (5) and (6) must be registered with a statutory body approved by the Chief Inspector as qualified to perform the required functions”, proof of SACPCMP registration to be provided.

Construction work is defined as:

“Any work in connection with: -

- a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- b) the installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;
- c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
- d) the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work”

POHAS 3 GENERAL

POHAS 3.1

The employer will appoint the contractor in writing for execution of the works.

The Contractor shall accept its appointment under the terms and Conditions of Contract. The Contractor shall sign and agree to those terms and conditions and shall, before commencing work, notify the Department of Labour of the intended construction work in terms of Regulation 4 of the Construction Regulations. The Contractor shall submit the notification in writing prior to commencement with work.

POHAS 3.2

The contractor shall ensure that it is fully conversant with the requirements of this specification.

This Specification is not intended to supersede the Act nor the Construction Regulations. Those sections of the Act and the Construction Regulations which apply to the scope of work to be performed by the Contractor in terms of this Contract continue to be a legal requirement of the Contractor.

POHAS 3.3

Should the contractor at any stage in execution of the works -

- a) fail to implement or maintain his health and safety plan;
- b) execute construction work which is not in accordance with his health and safety plan; or
- c) act in any way which may pose a threat to the health and safety of persons, the Employer or the Engineer will, by written order, suspend the progress of the Works.

The Contractor shall, during such suspension, properly protect the Works so far as is necessary.

POHAS 3.4

The Contractor shall provide proof of his registration and good standing with the Compensation Fund or with a licensed compensation insurer prior to commencement with the Works.

POHAS 3.5

The Contractor shall, in submitting his BID, demonstrate that he has made provision for the cost of compliance with the specified health and safety requirements, the Act and the Construction Regulations, all in terms of sub-clause 5(1)(g) of the Construction Regulations.

POHAS 3.6

The Contractor shall consistently demonstrate his competence and adequacy of resources to perform the duties imposed on the Contractor in Terms of this Specification, the Act and the Construction Regulations.

POHAS 3.7

The Contractor shall, throughout execution of the Contract, ensure that all conditions imposed on his sub-contractors in terms of the Act and the Construction Regulations are complied with, as if they were the Contractor.

POHAS 4 GENERAL REQUIREMENTS

POHAS 4.1 CONTRACTOR'S HEALTH AND SAFETY PLAN

a) The Contractor shall provide and demonstrate to the Employer a suitable and sufficiently documented health and safety plan, based on this Specification, the Act and the Construction Regulations, which shall be applied from the date of commencement of and for the duration of execution of the Works.

b) The Contractor's health and safety plan shall include the following principles:

- A proper risk assessment of the construction work.
- Pro-active identification of potential hazards and unsafe working conditions.
- Informing and/or training of employees in hazards and risk areas.
- Provision of a safe working environment and safety equipment.
- Ensure the safety of his sub-contractors through their safety plans.
- Monitoring the health and safety on the construction works on a regular basis.
- Use of competent safety officers.

c) The Contractor's health and safety plan should cover the following detail:

(i) Methods to ensure the approval, implementation and maintenance of all health and safety aspects regarding his sub-contractors.

(ii) Supervision of construction work, with:

- Details of the construction supervisor as well as his appointed assistants.
- Details of the construction safety officer.

- Details of the suitability and competency of the above persons regarding the health and safety aspects of the construction works.
- Details of a proper risk assessment on which the health and safety plan is based.
- Details of the design, management, responsibilities, procedures, work methods, commissioning, maintenance and any other requirement necessary for his and his sub-contractor to work safely and in a healthy environment.
- Ways in which all construction employees are informed, instructed and trained regarding hazards and the related work procedures.

d) The Contractor shall ensure that a copy of his health and safety plan is available on request to the Employer, an inspector, employee or sub-contractors.

e) The Employer will take reasonable steps to ensure that the Contractor's health and safety plan is implemented and maintained. The steps taken will include periodic audits at intervals once every month.

POHAS 4.2 CONTRACTOR'S HEALTH AND SAFETY FILE

The Contractor shall ensure that a health and safety file, which shall include all documentation required in terms of the provisions of this Specification, the Act and the Construction Regulations, is opened and kept on site and made available to the Employer or inspector upon request.

Upon completion of the Works, the Contractor shall hand over a consolidated health and safety file to the Employer.

POHAS 4.3 CONTRACTOR'S CONSTRUCTION SUPERVISOR

The Contractor shall appoint in writing a full-time construction supervisor with the duty of supervising construction of the Works.

POHAS 4.4 CONTRACTOR'S CONSTRUCTION SAFETY OFFICER

Before commencing work, the Contractor shall designate a competent construction safety officer (CSO) who shall be acceptable to the Engineer, to represent and act for the Contractor.

The Contractor shall inform the Engineer in writing of the name and address of the Contractor's CSO and of any subsequent changes in the name and address of the officer, together with the scope and limitations of the CSO's authority to act for the Contractor.

POHAS 4.5 LOG BOOKS

The Contractor shall keep the following log books and shall make them available to the Engineer on request:

- POHAS4.5.1 A record of the weekly inspection of first aid boxes.
- POHAS4.5.2 A record of the weekly inspections of ladders.
- POHAS4.5.3 A record of the weekly inspections of fire-fighting equipment.

- POHAS4.5.4 A record of the names and addresses of its employees who are registered as trained fire-fighting personnel.
- POHAS4.5.5 A record of the monthly inspections of welding machines.
- POHAS4.5.6 A record of the monthly inspections of oxy-acetylene equipment.
- POHAS4.2.7 A record of the weekly inspections of scaffolding structures.
- POHAS4.5.8 A record of the monthly inspections of builder's hoists.
- POHAS4.2.9 A record of the monthly inspections of mobile and tower cranes.
- POHAS4.5.10 A record of the monthly inspections of lifting gear.
- POHAS4.5.11 A record of the inspections of electrical equipment.
- POHAS4.5.12 A record of the monthly tests of earth leakage units.

POHAS 4.6 FIRST AID

POHAS 4.6.1 Safety Notice Board

The Contractor shall provide a safety notice board where safety notices, site regulations concerning safe working practices and information on the location of the nearest first aid station, can be conspicuously displayed to all its staff. The size of the notice board shall be at least 600 mm x 800 mm.

POHAS 4.6.2 First Aid Equipment

The Contractor shall provide for its employees a stretcher for emergencies and an approved first aid box. The first aid box shall be checked weekly by a responsible person, who shall be appointed by the Contractor, and a record shall be kept of the contents. Any deficient medical supplies shall be promptly replenished by the Contractor.

POHAS 4.6.3 Hazard Notices

The Contractor shall display hazard notices in all areas where hazardous conditions prevail or may occur.

POHAS 4.6.4 Reporting of Incidents and/or Injuries

All incidents in respect of damage to Works, property or machinery, or injury to persons, shall be reported by the Contractor's Safety Officer or Site Representative to the Engineer by the quickest means possible.

A mandatory incident report form, containing full details of the incident, shall be completed and submitted to the Engineer within twenty-four (24) hours of the occurrence of the incident.

The Engineer shall have the right to make all or any enquiries as to the cause and result of any such incident. The Contractor shall provide the Engineer with full facilities for carrying out such enquiries.

POHAS 4.7 GOOD HOUSEKEEPING AND SAFETY POLICY

The Contractor shall at all times carry out the Works in a manner to avoid the risk of bodily harm to persons or risk of damage to any property. The Contractor shall take all precautions which are necessary and adequate to eliminate any conditions which contribute to the risk of injury to persons or damage to property. The Contractor shall continuously inspect all work, materials and equipment to discover and determine any such conditions and shall be solely responsible for the discovery, determination and elimination of such conditions.

During the period of this Contract, the Contractor shall be responsible for the safe storage of all materials and equipment required for execution of the Contract, and for disposal of all non-usable waste material in an orderly manner.

All materials, whether stored on the construction site or within the Contractor's designated area, shall be stored neatly and safely to prevent possible injury to any personnel. The material shall be stored to facilitate safe access to, and removal of the material from the storage area.

Any flammable material, such as paint, diesel fuel and oil, shall be stored in lockable non-combustible structures, which shall be clearly marked to indicate the hazardous nature of the materials stored within. The flammable materials store shall be located in safe areas away from hazardous surroundings and adequate and suitable fire-fighting equipment shall be provided within easy reach of the materials stores.

POHAS 4.8 EXPOSED DANGER AREAS

All exposed danger areas shall be demarcated with appropriate barrier tape and hazard notices to prevent unauthorized persons entering the danger area.

POHAS 4.9 PERSONAL PROTECTIVE CLOTHING

The Contractor shall provide the necessary personal protective clothing for its employees in hazardous areas, appropriate to the nature of the hazard.

POHAS 4.9.1 Hard Hats

All employees of the Contractor shall wear hard hats in areas where appropriate hazard notices are displayed. The Engineer shall have the right to ban certain colours if they are similar to the Employer's identifying colours. Hard hats shall not be painted or otherwise defaced.

POHAS 4.9.2 Eye Protection

Suitable eye protection shall be worn in areas where appropriate hazard notices are displayed, or when grinding, chipping, breaking, drilling, arc-welding, cutting with oxy-acetylene equipment or similar activities are taking place.

POHAS 4.9.3 Hearing Protection

Suitable hearing protection shall be worn in areas where appropriate hazard notices are displayed.

POHAS 4.9.4 Foot Wear

All employees of the Contractor shall wear undamaged, laced-up safety boots or safety shoes, suitable for the intended purpose, in prescribed areas where appropriate hazard notices are displayed.

POHAS 4.9.5 Gloves

All employees of the Contractor shall wear suitable protective gloves in areas where appropriate hazard notices are displayed, or when handling hot or hazardous materials or chemicals.

POHAS 4.9.6 Clothing

All employees of the Contractor shall wear suitable protective clothing when working in proximity of machinery, power tools, hazardous materials or chemicals.

POHAS 4.10 ROAD TRAFFIC / TRANSPORTATION

10.1 The Contractor shall ensure that drivers of motor vehicles are in possession of a driver's licence, valid for the class of vehicle which they are required to drive, and shall produce the licence on request.

10.2 The Contractor shall not permit any driver to be in control of a vehicle at the Works while under the influence of alcohol or drugs.

10.3 All vehicles of the Contractor shall display a name board bearing the Contractor's name. Hired vehicles shall bear an identifying sticker.

POHAS 4.11 OVERHEAD POWERLINES

Regulations of the Electricity Supply Authority in connection with prohibition of operations in the vicinity of overhead power lines shall be observed by the Contractor at all times.

POHAS 4.12 MACHINE GUARDING

All power tools and machinery driven by belts, gears, ropes, chains, couplings and similar drives shall be adequately guarded. The Contractor shall prohibit the use of any equipment with a damaged, missing or inadequate guard.

POHAS 5 SPECIAL REQUIREMENTS

POHAS5.1 FORMWORK AND SUPPORT WORK

The Contractor shall ensure that -

a) all formwork and support work operations are carried out under the supervision of a competent person who has been appointed by the Contractor in writing for that purpose;

b) all formwork and support work structures are adequately designed, erected, supported, braced and maintained so that they will be capable of supporting all anticipated vertical and lateral loads that may be applied to them and also that no loads are imposed onto the structure that the structure is not designed to withstand;

c) the foundation conditions are and remain suitable to withstand the load caused by the formwork and support work structure and any imposed loads such that the formwork and support work structure are stable;

d) all formwork and support work structures are inspected by a competent person, who has been appointed by the Contractor in writing for that purpose, immediately before, during and after the placement of concrete or any other imposed load and thereafter on a daily basis until the formwork and

support work structure has been removed and the results have been recorded in a register and made available on the site of the Works; and

e) upon casting concrete, the support work or formwork structure should be left in place until the concrete has acquired sufficient strength to support safely, not only its own load, but also any imposed loads and not removed until authorisation has been given by the competent person contemplated in sub-paragraph (a).

POHAS 5.2 PREVENTION OF UNCONTROLLED COLLAPSE

The Contractor shall ensure that -

a) all reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work; and

b) no structure or part of a structure is loaded in a manner that would render it unsafe.

POHAS 5.3 SAFE WORKING LOADS

The Contractor shall ensure that -

a) the safe working loads of hoists, load-bearing beams and cranes are prominently displayed at all times.

b) the safe working loads are not exceeded under any circumstances.

c) all lifting gear is marked with a unique identity number and recorded in a register.

POHAS 5.4 COMMISSIONING SAFETY PRECAUTIONS

The Contractor shall ensure that wherever repairs, adjustments or any other work are undertaken on any plant or machinery, that the power supply is switched off, disconnected or the plant / machinery disengaged until the work or repairs have been completed.

POHAS 5.5 TOXIC MATERIALS

The Contractor shall exercise all necessary care in the handling of toxic compounds and shall be able to identify the major chemical components in the event of medical treatment being required.

POHAS 5.6 HAZARDOUS CHEMICALS AND MATERIALS

a) The Contractor shall provide suitable and adequate protective equipment when working in an area where hazardous chemicals and materials are being used.

b) The Contractor shall ensure that its employees have familiarised themselves with the hazardous material data sheets applicable to the specific site as well as the location of firefighting equipment, safety showers / baths and other washing facilities, prior to commencement of work.

POHAS 5.7 INDEMNITY OF EMPLOYER AND HIS AGENTS

a) The annexure to this Contract Document contain a "Mandatory Form of Authority and Agreement in terms of Section 37(2) of the Occupational Health and Safety Act, No. 85 of 1993" which agreement shall

be entered into and duly signed by both the Employer and Contractor prior to commencement with work. A copy of the signed agreement shall be included in the Contractor's health and safety plan.

b) Any acceptance, approval, check, certificate, consent, examination, inspection, instruction, notice, observation, proposal, request, test or similar act by either the Employer, any of his agents or the Engineer (including absence of disapproval) shall not relieve the Contractor from any responsibility he has under the Contract, the Act and the Construction Regulations, including responsibility for errors, omissions, discrepancies and non-compliances.

C3.6.2 PROTECTION OF THE PUBLIC

Not applicable to this project.

C3.6.3 BARRICADES AND LIGHTING

Not applicable to this project.

C3.6.4 TRAFFIC CONTROL ON ROADS

The Contractor shall implement and maintain temporary road markings, road signs, safety barriers, traffic cones, delineators, flagmen, lights, drums, and whatever is required according to Road Note 13 from CSRA: Road Traffic Signs Sub-Committee, to assure safety to road users, bait vehicles or pedestrians.

All rates and amounts quoted shall include for all cost associated with temporary road markings, road signs, safety barriers, traffic cones, delineators, flagmen, lights, drums, and whatever is required according to Road Note 13 from CSRA: Road Traffic Signs Sub-Committee.

C3.6.5 MEASURES AGAINST DISEASE AND EPIDEMICS

As per Occupational Health & Safety Act.

C3.6.6 AIDS AWARENESS

Not applicable.

CITY OF EKURHULENI

DEPARTMENT NAME: WATER AND SANITATION

CONTRACT NO: A-WS 08 - 2026

THE APPOINTMENT OF CONTRACTORS FOR PRESSURE MANAGEMENT, LEAK DETECTION, VALVE REPLACEMENT AND REMEDIAL WORKS IN THE CITY OF EKURHULENI ON AN AS AND WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2029

PART C4 SITE INFORMATION

1 NATURE OF GROUND AND SUBSOIL CONDITIONS

Geotechnical investigations have been completed for certain informal settlements within the City. These Reports will be shared for specific projects upon specific project appointment/s.

Generally, through reference is always made to the geological map based on the 1:250 000 Geological Map titled "2628 – East Rand" as compiled by the South African Geological Survey, 1978, the geology on site comprises sandstone and quartzite of the Witwatersrand Supergroup.